



Regional Joint Development Assessment Panel Agenda

Meeting Date and Time: Thursday, 8 September 2022; 9:30am
Meeting Number: RJDAP/67
Meeting Venue: Electronic Means

To connect to the meeting via your computer -
<https://us06web.zoom.us/j/82850907213>

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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 Tony Arias (Presiding Member)
Ms Kanella Hope (Deputy Presiding Member)
Mr Justin Page (Third Specialist Member)

Item 8.2

Cr Sheryl Botting (Local Government Member, Shire of Coolgardie)
Cr Tracey Rathbone (Local Government Member, Shire of Coolgardie)

Officers in attendance

Item 8.1

Mr Chris Sayer (City of Karratha)
Ms Lee Reddell (City of Karratha)

Item 8.2

Ms Francesca Lefante (Shire of Coolgardie)

Minute Secretary

Ms Zoe Hendry (DAP Secretariat)

Applicants and Submitters

Item 8.1

Mr Alan Stewart (Lateral Planning)

Item 8.2

Mr Harry Norman (CLE Town Planning + Design)
Mr Daniel Martinovich (CLE Town Planning + Design)

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

Cr Kelly Nunn (Local Government Member, City of Karratha)
Cr Margaret Bertling (Local Government Member, City of Karratha)

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

Member	Item	Nature of Interest
Cr Kelly Nunn	8.1	Indirect Pecuniary Interest – The Salvation Army (WA) is a financial member of Volunteering WA who Cr Nunn is employed by.

7. Deputations and Presentations

The City of Karratha and Shire of Coolgardie 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 1701 (No.6) and Lots 4543 & 4563 (No.2) Bond Place, Pegs Creek

Development Description:	Community Use (Crisis Support Accommodation)
Applicant:	Lateral Planning
Owner:	The Salvation Army (WA) Property Trust
Responsible Authority:	City of Karratha
DAP File No:	DAP/22/02249

8.2 Lot 201 Kambalda East, Durkin Road

Development Description:	Workforce Accommodation Expansion
Applicant:	CLE Town Planning & Design
Owner:	Compass (Australia) Catering & Services P/L
Responsible Authority:	Shire of Coolgardie
DAP File No:	DAP/22/02262

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
DP/14/00039 DR 65/2020	Shire of York	Lots 4869 (2256), 5931, 9926 (2948) and 26934 Great Southern Highway, St Ronans	Construction and Use of Allawuna Farm for the purposes of a Class II Landfill	28 July 2020
DAP/21/02063 DR241/2021	Shire of Dardanup	Lot 2 Banksia Road, Crooked Brook	Cleanaway Dardanup Landfill Facility	5 November 2021
DAP/21/02120 DR49/2022	City of Busselton	Lot 400 (No.24) Dunn Bay Road, Dunsborough	Proposed six storey mixed use (Restaurant/Cafe and Multiple Dwellings) Development	23 March 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

Form 1: Responsible Authority Report
(Regulation 12)

**LOT 1701(NO.6) AND LOTS 4543 & 4563 (NO.2) BOND PLACE,
PEGS CREEK –
COMMUNITY USE (CRISIS SUPPORT ACCOMMODATION)**

DAP Name:	Regional JDAP	
Local Government Area:	City of Karratha	
Applicant:	Alan Stewart, Lateral Planning	
Owner:	The Salvation Army (WA) Property Trust	
Value of Development:	\$6.8 Million <input type="checkbox"/> Mandatory (Regulation 5) <input checked="" type="checkbox"/> Opt In (Regulation 6)	
Responsible Authority:	City of Karratha	
Authorising Officer:	Director Development Services	
LG Reference:	DA22088	
DAP File No:	DAP/22/02249	
Application Received Date:	20 May 2022	
Report Due Date:	26 August 2022	
Application Statutory Process Timeframe:	90 Days	
Attachment(s):	1. Location Plan 2. Site Plans and Architectural Drawings 3. Earthworks and Drainage Plan 4. Landscape Plan 5. Revised Bushfire Management Plan 6. Submitted Planning Report 7. Waste Service Vehicle Swept Path Diagram 8. Schedule of Submissions – Authority Responses 9. Schedule of Submissions – Internal Service Unit Comments	
Is the Responsible Authority Recommendation the same as the Officer Recommendation?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A	Complete Responsible Authority Recommendation section
	<input type="checkbox"/> No	Complete Responsible Authority and Officer Recommendation sections

Responsible Authority Recommendation

That the Regional JDAP resolves to:

- Approve** DAP Application reference DAP/22/02249 and accompanying plans

Site Plan: A1.01(rev2): Issue date 5/8/22

(Part) Site Plan North: A1.02(rev2): Issue Date 22/8/22

(Part) Site Plan South: A1.03(rev2): Issue Date 22/8/22

Admin.Block BLDG.No.1 Floor Plan: A2.01: Issue Date 10/5/22
Group Rooms BLDG. No's 2,3 and 6 Floor plans: A2.02(rev1): Issue Date 5/8/22
1 x Bed Units BLDG. No's 4 & 5 Floor Plan: A2.03: Issue Date 10/5/22
2 x Bed Units BLDG. No's 7-10 Floor Plan: A2.04(rev1): Issue Date 5/8/22
3 x Bed Units BLDG. No's 11 & 12 Floor Plan: A2.05(rev1): Issue Date 5/8/22
Site Elevations: A3.00(rev2): 22/8/22
BLDG. No's 1 & 6 Elevations: A3.01: Issue Date 10/5/22
Group Rooms BLDG. No's 2 & 3 Elevations: A3.02: Issue Date 10/5/22
1 x Bed Units BLDG. No's 4 & 5 Elevations: A3.03: Issue Date 10/5/22
2 x Bed Units BLDG. No's 7-10 Elevations: A3.04: Issue Date 10/5/22
3 x Bed Units BLDG. No's 11 & 12 Elevations: A3.05: Issue Date 10/5/22

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 Karratha Local Planning Scheme No. 8, subject to the following conditions:

Conditions

1. This decision constitutes planning approval only and is valid for a period of 4 years from the date of approval. If the subject development is not substantially commenced within the specified period, the approval shall lapse and be of no further effect.
2. Prior to the commencement of works, a detailed Stormwater Management Plan is to be submitted to and approved by the City of Karratha. The approved Stormwater Management Plan shall be implemented to the satisfaction of the City of Karratha.
3. Prior to occupation of the development, a revised detailed Landscaping Plan, showing no landscaping/plantings of the Asset Protection Zone shown outside of the property boundary and required under the approved Bushfire Management Plan, is to be submitted to and approved by the City of Karratha and the landscaping in accordance with the approved Landscaping Plan is to be installed prior to occupation of the development and thereafter maintained to the satisfaction of the City of Karratha.
4. Prior to occupation of the development, detailed fencing plans are to be submitted to and approved by the City of Karratha and thereafter installed and maintained to the satisfaction of the City of Karratha.
5. Prior to occupation of the development, car parking areas, vehicle access and vehicle circulation areas shown on the approved plan are to be constructed (sealed), drained and line marked and thereafter maintained to the satisfaction of the City of Karratha.
6. No goods, materials or vehicles are to be stored or parked permanently in the designated parking bays, landscaped areas or within accessways.
7. Six (6) parking bays to be made available at all times for staff of the approved development within the 35 bay Church car park on Lot 4543. Should any future subdivision and/or ownership change occur that prevents access to these bays for the approved development, then another arrangement is to be submitted to

and approved by the City that would provide for 6 alternative bays in a nearby location.

8. Prior to occupation of the development, a revised Emergency Evacuation Plan is to be submitted to and approved by the City of Karratha. The approved Emergency Evacuation Plan is to address evacuation procedures in the event of a major storm surge event and shall be implemented to the satisfaction of the City of Karratha.

9. Prior to occupation of the development, Section 70A notifications, pursuant to the *Transfer of Lands Act 1893* (as amended) are to be placed on the Certificates of Title of the proposed lot(s), at the proponent's cost, advising that:

"This land is subject to potential storm surge inundation. Residents and visitors should be made aware of the Emergency Evacuation Plan."

"This land is within a bushfire prone area as designated by an Order made by the Fire and Emergency Services Commissioner. The approval of the Community Use is conditional upon the details contained within the Bushfire Management Plan (BMP) prepared by Ecosystem Solutions dated 11 August 2022 (as amended) and the accompanying Bushfire Emergency Evacuation Plan (BEEP)."

10. Prior to occupation of the development, appropriate legal mechanisms being put in place to provide for the on-going management of the Asset Protection Zone over the adjoining lot to the west (Reserve 40081).
11. Prior to occupation of the development, a revised Bushfire Management Plan is to be submitted to and approved by the City of Karratha. The approved Bushfire Management Plan shall be implemented to the satisfaction of the City of Karratha.
12. Prior to occupation of the development, an Asset Protection Zone in accordance with the approved Bushfire Management Plan is required to be established within the adjacent City of Karratha Reserve 40081 at a width of 9 metres from the western boundary of the site and is to be maintained by the owner of the site in accordance with the Bushfire Management Plan to the satisfaction of the City of Karratha.
13. Prior to occupation of the development, an External Lighting Plan is to be submitted to and approved by the City of Karratha and thereafter maintained to the satisfaction of the City of Karratha. External lighting must avoid distracting passing motorists or causing nuisance to neighbours.
14. Prior to occupation of the development, detailed plans of screening or window treatments to windows and any ramps and/or decking areas within 7.5m of the boundary of the site and the adjoining property at No.8 Bond Place, Pegs Creek are to be submitted to and approved by the City of Karratha and thereafter installed and maintained to the satisfaction of the City of Karratha.

15. Prior to occupation of the development, an Operational Management Plan is to be submitted to and approved by the City of Karratha and thereafter implemented to the satisfaction of the City of Karratha.
16. Prior to works commencing on site, a Construction Environmental Management Plan is to be submitted to and approved by the City of Karratha and thereafter implemented during construction to the satisfaction of the City of Karratha.
17. Damage to road pavements, kerbing, footpaths or City assets (as applicable) caused by construction activity including but not limited to vehicle movements associated with the approved development, shall be repaired at the proponent's cost in accordance with specifications and works supervision and scheduling arrangements to be approved by the City of Karratha.

Advice Notes

1. A Building Permit is required for the approved development in accordance with the *Building Act 2011*. To be able to gain a Building Permit, amalgamation of the lots may be required. The proponent should undertake their own investigations to determine this.
2. With respect to Condition 2, the City requests the following information to be sufficiently detailed within the Stormwater Management Plan:
 - a. Lot contour levels and finished levels
 - b. Floor levels – demonstrate 500mm freeboard from the 1% AEP (Annual Exceedance Probability) flood level
 - c. Pre and post catchment areas
 - d. Pre and post-development flows
 - e. Drainage flow paths
 - f. Flow velocities of stormwater are to be no greater than 2m per second
 - g. The City requires that all calculations are for a 20% AEP critical event
 - h. Stormwater runoff to be directed to a drain adjoining the lot or where there is no drain the runoff can be directed onto the roads
 - i. Drainage discharge points to include scour protection
 - j. Large lots may require detention basins
 - k. Roofs shall not contain down gutters or pipes and will discharge directly to the lot
3. With respect to Condition 7, should a subdivision and/or ownership change occur that prevents access to the parking bays at the church for the staff and caretaker of the women's refuge administration building and a nearby parking solution could not be achieved, an alternative may be the requirement for an easement for reciprocal parking over Lot 4543.
4. With respect to Condition 11, under Section 5 of the Bushfire Management Plan rewording and/or deletion of Action 6 and 7 of Table 3 are required.
5. With respect to Condition 15, the Operational Management Plan is to outline management measures that will mitigate potential impacts to the adjoining and surrounding residential properties on Bond Place during the operational phase of development. The OMP should address:

- a. onsite waste management and cleanliness, including bin collection method and replacement of bins to the bin compound;
 - b. cyclone preparation and procedures
 - c. noise minimisation
 - d. incident and complaint response
 - e. any other matter relevant to the operation of the site that may impact surrounding properties.
6. With respect to Condition 16, the Construction Environmental Management Plan is to outline management measures that will mitigate potential impacts to the adjoining and surrounding residential properties on Bond Place during the construction phase of development. At a minimum the CEMP should address:
 - a. Noise
 - b. Waste
 - c. Site contamination
 - d. Demolition/asbestos
 - e. Air emissions/dust control
7. The development will need to be connected to scheme water and reticulated sewerage, in accordance with the *Government Sewerage Policy 2019* and will require approval by the Water Corporation's Building Services section prior to the commencement of works.
8. Compliance with all legislative and regulatory requirements relating to asbestos must be achieved in the demolition of an existing dwelling. Advice should be sought from the Department of Mines, Industry Regulation and Safety's WorkSafe Division regarding compliance.
9. The landowner should note that compliant fire walls are required between all joined residential units, and a fire wall is required to separate the accommodation unit (caretaker's dwellings) in the main administration building.
10. The City's Animals, Environment and Nuisance Local Law 2012 regulates the use of exterior lights, including lighting towers in communal areas. This Local Law requires that floodlights or other exterior lights must not shine directly onto any other premises, which is a factor that needs consideration in preparing the External Lighting Plan for the development.
11. Under the City's Animals, Environment and Nuisance Local Law, 2012, during the construction phase, if dust is deemed to be a nuisance by an Environmental Health Officer, 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 of Karratha.
12. Construction work must be carried out in accordance with practices set out in Section 6 'Control of noise' in Australian Standard 2436-1981 *Guide to Noise Control on Construction, Maintenance and Demolition Sites*. The applicant must submit a noise management plan if construction work will occur outside the hours of 7am to 7pm on Monday to Saturday, or is likely to disrupt nearby residents.
13. All waste and recycling materials should be contained within bins. These must be stored within the buildings or within an external enclosure located and constructed to the satisfaction of the City of Karratha. The external enclosure must be able to contain all waste bins, at least 1.5 m high, fitted with a gate and

graded to a 100mm diameter industrial floor waste with a hose cock, all connected to sewer/onsite effluent disposal system.

14. Under the City's Health Local Law 2012, the facility must comply with requirements under Part 8. Registration as a Lodging House. An application for registration should be submitted to the City. Specifically, clause 8.10(1)(a)(ii) requires that laundry facilities be provided at a ratio of at least 1 laundry unit per 15 residents.
15. Should the proponent be aggrieved by this decision, or any of the conditions imposed, there is a right of review under the *Planning and Development Act 2005*. An application for review must be submitted in accordance with Part XIV of the *Planning and Development Act 2005* within twenty-eight (28) days of the date of this decision to: the State Administrative Tribunal, GPO Box U1991 Perth, WA 6845. Further information regarding this right of review is available on the SAT website www.sat.justice.wa.gov.au or by phoning 1300 306 017.

Reasons for Responsible Authority Recommendation

N/A

Details: outline of development application

Region Scheme	N/A
Region Scheme - Zone/Reserve	N/A
Local Planning Scheme	City of Karratha Local Planning Scheme No.8
Local Planning Scheme - Zone/Reserve	Public Purposes: Community and Residential.
Structure Plan/Precinct Plan	N/A
Structure Plan/Precinct Plan - Land Use Designation	N/A
Use Class and permissibility:	Community Use is an 'A' use in the Residential zone. Use permissibility over land that is within a Scheme Reserve is at Council's discretion.
Lot Size:	5,388m ² in total
Existing Land Use:	Church, car parking and hardstand areas (No.2) and single house (No.6)
State Heritage Register	No
Local Heritage	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Heritage List <input type="checkbox"/> Heritage Area
Design Review	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Local Design Review Panel <input type="checkbox"/> State Design Review Panel <input type="checkbox"/> Other
Bushfire Prone Area	Yes
Swan River Trust Area	No

Proposal:

The City of Karratha has received an application for a proposed 'Community Use' on the existing Salvation Army site (subject site). The applicant stated the application was for a 'Residential Building' when applying. However, City officers consider the proposal is more aligned with the defined land use of 'Community Use' in accordance with the City's Local Planning Scheme No.8 (the Scheme). This was conveyed to the applicant and the applicant has confirmed their agreeance with this consideration.

The subject site comprises three lots:

Lot 4543 (No.2 Bond Place)

Contains the existing Church building (which includes an 'op shop' to the northern side of the building). Vehicle access to this building is off Bond Place to the east with car parking areas to the east and north of the building. There is a bitumen fenced and gated area to the west of the Church building that is largely unused but it does provide space for storage and waste collection.

Lot 4563 (Also No.2 Bond Place)

Situated to the west of Lot 4543 and is largely covered by concrete hardstand.

Lot 1701 (No.6 Bond Place)

Fronts Bond Place to the south and contains an existing single dwelling.

The applicant is proposing to demolish the existing single dwelling on Lot 1701 and the existing hardstand areas over the northern portion of Lot 4563 and the western portion of Lot 4543. These demolition works will clear the way for construction of the proposed development. The balance of Lot 4543 containing the existing Church building, 'op shop' and car park is not proposed to be altered. A lot of the bitumen area to the west of the Church building will be taken up by the proposed development

The proposed Community Use comprises the following:

- Administration Building/Caretakers Residence fronting Bond Place to the south, wholly contained within Lot 1701;
- Residential Accommodation (14 units) over Lot 4563 to the west and the western portion of Lot 4543, including four one-bedroom units, eight two-bedroom units and two three-bedroom units;
- Recreation Facilities, including external private decks, two stand-alone communal buildings and external communal recreation areas;
- Utilities Building, comprising a store and communal laundry;
- Bin Store, located adjacent to the car park; and
- Car Parking for 11 vehicles, with access obtained from Bond Place to the south.

The proposed development will provide crisis support accommodation for women and children subject to family and domestic violence from 1 day to 12 months, with an average stay of 3 months expected. A permanent caretaker for the site will be accommodated within the proposed Administration Building/Caretaker's Residence.

Proposed Land Use	Community Use
Proposed Net Lettable Area	N/A
Proposed No. Storeys	One
Proposed No. Dwellings	14 Residential Accommodation units

Background:

The subject site is known in the local community as The Salvation Army church and 'op shop' site. This development was originally approved in 1990. The original approval included the Church building, 35 car parking bays east and north of the building and 21 car parking bays west of the building. The single storey house located on No.6 Bond Place to the south west of the Church building is currently occupied by The Salvation Army's District Officer. The Church and 'op shop' are accessed via Bond Place to the east, while the single storey house is accessed via Bond Place to the south.

The subject site fronts onto Bayview Road to the north but does not have vehicle access to it. Bayview Road is a district distributor road and provides convenient access from all parts of Karratha to the Karratha City Centre, approximately 2 kilometres to the east.

Land to the west of Lot 1701 is zoned Residential R20 with existing single dwellings. Land to the west of Lot 4563 is reserved for Parks, Recreation and Drainage and is used principally for drainage purposes. Land to the south is zoned a mix of Residential R30 and R20 and contains grouped and single dwellings respectively. Cattrall Park is on the eastern side of Bond Place near the intersection with Bayview Road. Further south, there is a grouped dwelling development and the Karratha Tavern. This land is zoned Residential R30 and Commercial respectively (see Attachment 1).

The subject site has largely been cleared of vegetation. The topography of the site incorporates a 1 metre fall from south to north being 7.8 metres AHD near the southern boundary and 6.8 metres AHD towards the northern boundary.

Legislation and Policy:

Legislation

- *Planning and Development Act 2005*
- *Planning and Development (Local Planning Schemes) Regulations 2015*
- *Planning and Development (Development Assessment Panels) Regulations 2011*
- City of Karratha Local Planning Scheme No.8
- City of Karratha Local Planning Strategy 2021

State Government Policies

- State Planning Policy 2.6 – State Coastal Planning
- State Planning Policy 3.4 – Natural Hazards and Disasters
- 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

N/A

Local Policies

- Local Planning Policy DP19 – Storm Surge Risk

An assessment of the proposed development against the applicable State and Local Planning Policies is provided below.

Consultation:

Public Consultation

The development proposal was advertised for a period of 14 days from 16 June 2022 to 30 June 2022. Advertising occurred via notification (letters) to adjoining landowners and occupiers and the City's website.

During the public advertising period, there were no submissions received from members of the public.

Referrals/consultation with Government/Service Agencies

The development application was forwarded to the following authorities for comment:

- Department of Health (DoH)
- Horizon Power (HP)
- Water Corporation (WC)
- Department of Water and Environmental Regulation (DWER)
- Department of Fire and Emergency Services (DFES)
- Department of Communities (Housing)

All matters raised by the respondents are summarised and presented in Attachment 8 – 'Summary Authority Response – Schedule of Submissions', including Officer responses and recommendations.

Other Advice

The proposed development was also referred to relevant internal departments within the City of Karratha, including Parks and Gardens, Building, Environmental Health, and Technical Services.

All matters raised are summarised and presented in Attachment 9 – 'Summary Internal Service Units – Schedule of Submissions' including Officer responses and recommendations.

Planning Assessment:

The proposed development has been assessed against the relevant legislative requirements of the City's Scheme, and State and Local Planning Policies, as outlined in the Legislation and Policy section of this report.

Land Use Permissibility

The assessment of land use permissibility in the context of the proposed development comprises two parts:

1. An assessment of the small portion of the subject site (Lot 1701) that is zoned Residential R20; and
2. An assessment of the larger portion of the subject site (Lot 4563 and Lot 4543) reserved for Public Purposes – Community.

1. Lot 1701 (Residential R20)

This portion of the subject site comprises 720m² and is proposed to incorporate the administration building, comprising a reception area, offices, staff facilities, ablutions and a caretaker's overnight stay room.

It is considered that this part of the development would fall under the use class of 'Community Use', which is an 'A' use in the Residential zone. In the case of the caretaker's overnight stay room component of the building, this would be considered an 'I' use in the Residential zone.

With regard to the caretaker's component of the proposal, Clause 5.14 of the City's Scheme applies. This clause states that only one caretaker's dwelling per lot is permitted, which is to be sited at the rear of other buildings on the lot, and is to contain one bedroom only (with the total not exceeding 100m²). The proposed caretaker's overnight stay room is incidental to the primary Community Use proposed for the site and sufficiently meets this Clause, given its size (at less than 25m²), location at the rear of the proposed administration building and single bedroom nature.

The R-Codes do not apply to this component of the proposed development as it is not residential development.

2. Lot 4563 and Lot 4543 (Public Purposes – Community)

This portion of the subject site comprises 4,668m². This portion contains the existing Church building and carpark to the east and is proposed to incorporate the 1, 2 and 3-bedroom units, recreational blocks and spaces, and utilities block to the west. This part of the development could be defined as 'Residential Buildings' in isolation but better fits within the definition for 'Community Use' when considered in the context of the entire development.

This land is reserved under the City's Scheme for Public Purposes – Community. Clauses 2.2 and 2.3 of the Scheme deal with development and use of reservations and matters to be considered by the local government in considering development within reservations.

Under Clause 2.2, no development other than a boundary fence can occur within a reservation without first applying for and subsequently obtaining the written development approval of the City. Under Clause 2.3, the City is required to have regard to the ultimate intent of the reservation and consult any relevant organisations in the context of both the purpose of the reservation and its proposed use or development in considering a development proposal over land within a reservation.

The current use of the land and development thereon relates to The Salvation Army and associated incidental development. The Salvation Army is a religious and charitable organisation and aims to assist those in need in the community. The proposed use and development of the subject site is directly related to and associated with The Salvation Army's community assistance activities and is thus considered to align with the intent of the reservation.

Car Parking

Clause 5.11 of the Scheme contains provisions for car parking and access. The Planning Report submitted with the application concludes that the parking requirement for the accommodation component of the proposed development (using the car parking requirements for a Residential Building under the City's Scheme) would be 11 bays. Car parking requirements for a 'Community Use' under the Scheme are at the City's discretion. Given there are 14 accommodation units proposed, the 11 bays

proposed are considered acceptable for the residential component of the development. However, there would also be car parking requirements associated with the caretaker's accommodation and the administration staff. The administration building floor plan submitted by the applicant indicates that there could be up to 5 administration staff at peak times. It is considered that one bay per administration staff member, plus one bay for the caretaker's dwelling should be provided in addition, or 6 additional bays.

In response to the City raising this with the applicant, they advised that staff could use the existing 35 car parking bays in the church car park. The applicant advised that the church has limited use for worship and congregational services. It is considered that church services would not normally occur during normal office hours of the proposed development. The church car park is located a short walk from the proposed administration building. This internal reciprocal parking arrangement is considered acceptable. It is recommended that a condition of approval be imposed requiring an additional six (6) parking bays to be made available within the church car park for staff of the proposed development at all times once the development is operational and that should any future subdivision or change of ownership of the site occur that may prevent access to those bays, then another arrangement must be approved by the City that would provide 6 replacement bays in a nearby location.

Clause 5.11.15 of the Scheme requires parking bays to be a minimum of 2.7m width by 5.5m length. The applicant submitted revised plans achieving this provision of the Scheme.

The City raised the concern with the applicant that existing access for rubbish trucks to the bin storage area to the west of the church building may be compromised by the eastern extent of the proposed development. The applicant has provided a Swept Path Diagram (refer to diagram below) which confirms that the area being left between the existing church building and the eastern extent of the proposed development is sufficient to provide access by a 7.1 metre Rigid Commercial Vehicle to pick up skip bins.

Storm Surge Risk

The City's adopted Local Planning Policy DP19 (Storm Surge Risk) identifies land likely to be affected by a modelled 500-year ARI storm surge event and provides guidance for the assessment of planning applications proposing development in affected areas against State Planning Policies 3.4 and 2.6.

The subject site is likely to be affected by a modelled 500 year ARI storm surge event, as per mapping provided in Schedule 1 of DP19. The applicant engaged a coastal engineering consultancy to provide further clarification on this matter, which advises that potential *"...inundation levels across the site would vary between approximately 2.8 metres at the northern boundary to around 2 metres at the southern boundary, which equate to an inundation level of 9.2 metres AHD."*

DP19 provides both mitigation and design responses for development over land likely to be affected by a modelled 500 year ARI storm surge event, as well as a Risk Assessment Matrix and Risk Assessment Checklist. Clause 5.1 of DP19 recommends Finished Floor Levels above the modelled 500 year ARI storm surge level as an 'As of Right' design response for modelled inundation levels exceeding 2 metres. The proposed development is founded on a storm surge risk management strategy of filling the majority of the site to 7.8 metres AHD and elevating the FFL of all habitable buildings above that Finished Ground Level to a height of 8.7 metres AHD by floating

the bearers on posts. However, this still results in FFLs that are 0.5 metres below the modelled 500 year ARI storm surge level.

The applicant was required to apply a Performance Based Approach in accordance with Clause 5.2 of DP19. This requires the landowner to complete and sign the aforementioned Risk Assessment Matrix and Risk Assessment Checklist. Upon signing this Checklist, the landowner acknowledges and accepts the level of risk from potential storm surge inundation and is responsible for suitably mitigating the risk.

The applicant has advised that the Salvation Army is prepared to revise the current Emergency Evacuation Plan for the facility to address the risk of storm surge inundation. It is recommended a condition be imposed requiring a revised Emergency Evacuation Plan to be adhered to for the operational phase of the development.

The mitigation measures proposed and the level of risk accepted by the proponent are considered acceptable in accordance with DP19. However, in accordance with the policy, it is also recommended a condition of approval be imposed requiring the proponent to place a S70 notification on title alerting current and future landowners of the potential risk of storm surge in this location.

Bushfire Management

The subject site is located within an identified Bushfire Prone Area and is considered 'Vulnerable Development'. As a result, SPP 3.7 – Planning in Bushfire Prone Areas requires a Bushfire Management Plan (BMP) to accompany the development proposal. The applicant has submitted a BMP and an Emergency Evacuation Plan.

The key consideration in assessing the proposed development from a bushfire perspective is whether it can achieve a rating of BAL-29 or less. The BMP notes that to achieve BAL-29, vegetation will need to be managed within an APZ that extends over the adjacent Reserve 40081 at a width of 9 metres from the western boundary of the subject site. Reserve 40081 is under Management Order to the City for the purpose of Drainage and Parkland and is principally used for drainage purposes.

While, in this case, the City is prepared to accept the on-going management of vegetation within the adjacent reserve to lower the BAL rating on the site to a suitable level, given the APZ will be required in perpetuity (or for as long as the site is identified as a Bushfire Prone Area) an appropriate mechanism to allow the proponent access to and maintenance of the vegetation in the adjoining City Reserve is required. A fairly generic condition, requiring a suitable legal arrangement being in place prior to occupation has been proposed in response to this matter to allow the City, in discussion with the proponent, time to determine what form this agreement should take.

Stormwater Management

The applicant proposes to discharge stormwater via both an existing drainage swale to the immediate north of the site (adjacent to Bayview Road) and a proposed drainage swale to the west of the site (within Reserve 40081).

In the initial proposal documents, the applicant submitted a one-page Earthworks and Drainage Strategy. Upon preliminary assessment of this Strategy, the City's Technical Services advised that a more detailed Stormwater Management Plan (SWMP) would be required to demonstrate design surface levels, stormwater flow paths and the method for stormwater disposal from the site. A condition requiring a Stormwater Management Plan has been recommended as a condition of approval.

Impacts on Adjoining Properties

With regard to potential impacts on adjoining properties, there are several matters to consider including setbacks, height and potential overlooking. It is noted from the plans submitted that a portion of the proposed development – comprising Buildings 1, 2 and 4 – would be situated immediately adjacent to an existing residential dwelling at 8 Bond Place.

Buildings 1, 2 and 4 encompass the Administration Block, Group Room and 1 Bedroom Units respectively. The buildings all have FFLs of 8.7m AHD to address storm surge risk. This results in Buildings 2 and 4 having finished floor levels of 1.5m and 1.6m in height above natural ground level respectively. Building 1 is proposed at a height of approximately 0.8m above natural ground level. At these finished floor levels this means that a person standing on decked areas, ramps or within rooms with windows facing toward 8 Bond Place will be overlooking the rear yard and potentially into windows of rooms within the dwelling on 8 Bond Place.

The architectural drawings submitted with the application show the following setbacks to the boundaries for 8 Bond Place:

Building 1 (Administration) – 3.375 metres from the eastern boundary of 8 Bond Place to the edge of the building, but only 0.675 metres to the edge of the decking and ramp.

Building 2 (Group Room) – 3 metres from the northern boundary of 8 Bond Place to the edge of the building.

Building 4 (1 Bedroom Units) – 2.743 – 2.780 metres from the northern boundary of 8 Bond Place to the edge of the building.

The submitted plans show screening to major opening windows on Building 4 and to the ramps and decking to the rear of Building 1 that face 8 Bond Place. Building 2 has one major opening to an office/meeting room which faces 8 Bond Place. The plans do not provide for screening on this window.

It is considered reasonable to use the R-codes privacy separation distances as a guide to setbacks required to mitigate adequately any visual privacy impacts to the single dwelling at No.8 Bond Place. The R-codes requires a 7.5m setback to unenclosed outdoor active habitable spaces, 6m to habitable rooms, and 4.5m to bedrooms. As this proposal is a combination of administration and accommodation units and is not a standard single dwelling development as is located on No.8 Bond Place it is considered appropriate that all windows (with the exception of highlight windows), decked spaces and ramps to decked spaces on these buildings facing No.8 Bond Place be adequately screened or treated to prevent overlooking. To ensure an adequate level of privacy is maintained at 8 Bond Place, it is recommended a condition be imposed requiring that prior to occupation of the development, screening or window treatments for major openings, ramps and decking areas of Buildings 1, 2 and 4 that face onto 8 Bond Place be installed to the satisfaction of the City of Karratha and that revised plans showing details of the screening be submitted.

Design of Buildings

The buildings being elevated on posts above the finished ground level, is not a common approach to building design in Karratha in recent times. However, this design outcome is presented as an option to mitigation against storm surge risk as

outlined in the City's Local Planning Policy DP19 and is considered to be an acceptable design outcome in the context of the site and surrounds. Further to this, the building appearance, materials, colour selection, lot layout is considered appropriate in the local context.

The City has reviewed the proposal against the ten design principles of Schedule 1 of State Planning Policy 7.0 – Design of the Built Environment and considers that the proposal achieves an appropriate design quality and built form outcome.

Landscaping, Fencing, External Lighting

Clause 5.2 of the Scheme requires applications for development approval to indicate landscaping elements including species of plants and information on external lighting. The applicant provided the City with a revised detailed landscaping concept, spatial and species plan. These plans indicate that the shared path to the north will not be impacted by proposed landscaping.

In regard to landscaping within the APZ proposed within Reserve 40081, the species plan that forms part of the overall Landscape Plan identifies the APZ will incorporate the following:

APZ Planting –

- *Maintained regularly. Removal of dead plants & potential fuel load*
- *Planted with 1m² spacing*
- *Predominantly rushes & sedges & ground covers*

The City considers that the area of the APZ within the drainage reserve should not be landscaped as proposed, so as to avoid issues with maintenance of the land area for drainage into the future. It is recommended that a condition of approval be imposed to require the submission of a revised landscape plan that reflects this.

Clause 4.8(r) of the Scheme “*encourages boundary fencing (within the Karratha Precinct) immediately abutting parks, recreation and drainage reserves to be visually permeable so as to improve surveillance.*”

With regard to boundary fencing, the revised landscaping plan shows the southern and western boundary fences would be the same type. The detail of the type of fencing is not clear on the plans. The northern boundary fence which has the most impact on the appearance of the site to the public domain (parallel to Bayview Road) is proposed in a staggered format. The fencing to all boundaries is not permeable. The applicant notes that a visually permeable boundary fence would compromise the safety, security and wellbeing of residents of the facility.

The applicant has proposed murals to the western boundary fence. To the northern boundary fence, the applicant has proposed a tree to be positioned within the setback of each stagger within the fence line, which will assist in breaking up the appearance of the fence to the public domain.

Considering the operational needs of a women's refuge accommodation facility, the proposed fencing concept is generally considered acceptable, however it is recommended that a condition be imposed requiring detailed fencing plans to be submitted to and approved by the City prior to the construction of the fencing to ensure the design, materials, appearance and murals are properly considered and appropriate to the surrounds.

In regard to external lighting, the plans submitted do not provide detail pertaining to the location and type of external lighting. As the site is adjacent and in close proximity to residential dwellings and Bayview Road, it is considered appropriate to ensure lighting at the site does not impact traffic safety on Bayview Road nor impact on the residential amenity of surrounding residents. It is recommended a condition be imposed requiring the approval of an External Lighting Plan.

Conclusion:

The proposed development is considered to be an appropriate land use for the subject site, given the zoning and land use permissibility and the reservation for 'Community Purposes' under the Scheme. The proposed development is also considered to accord with the development requirements of the Scheme.

The applicant has provided a design and, where required, appropriate mitigation measures within the design of the development to demonstrate the proposed development is consistent with requirements of the local and State planning framework.

It is considered that the submitted site plan, elevation plans and management plans, in conjunction with the recommended conditions of approval, will ensure that the strategic objectives and provisions of the Scheme, as well as local and State planning policies will be adhered to.

Recommended conditions of approval will ensure development standards are met and potential impacts are well managed. It is recommended that the proposed development be approved subject to the conditions and advice notes contained in this report.







CLIENT
The Salvation Army Corps

PROJECT
Karratha (Safe Places)
No. 2-6 Bond Place, Pegs Creek
Karratha WA 6714

ISSUE DATE
11.05.2022

REVISION / NOTES
DEVELOPMENT APPLICATION

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KARRATHA
(SAFE PLACES)



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05.08.2022

REVISION / NOTES

DEVELOPMENT APPLICATION
DA - REVISION 1
DA - REVISION 2

SITE PLAN

A1.01 (rev 2)

0M 5.0M 10.0M 25.0M

ASSET PROTECTION ZONE
TO BE ESTABLISHED AND MAINTAINED
IN ACCORDANCE WITH THE STATE
PLANNING POLICY 3.7 - PLANNING IN
BUSHFIRE PRONE AREAS AND THE
GUIDELINES FOR PLANNING IN
BUSHFIRE PRONE AREAS

Reserve 40081
Parkland & Drainage

A1-02

A1-03

LOT
4563

LOT
4543

LOT
1701

LOT
1702

BOND PLACE

BOND PLACE



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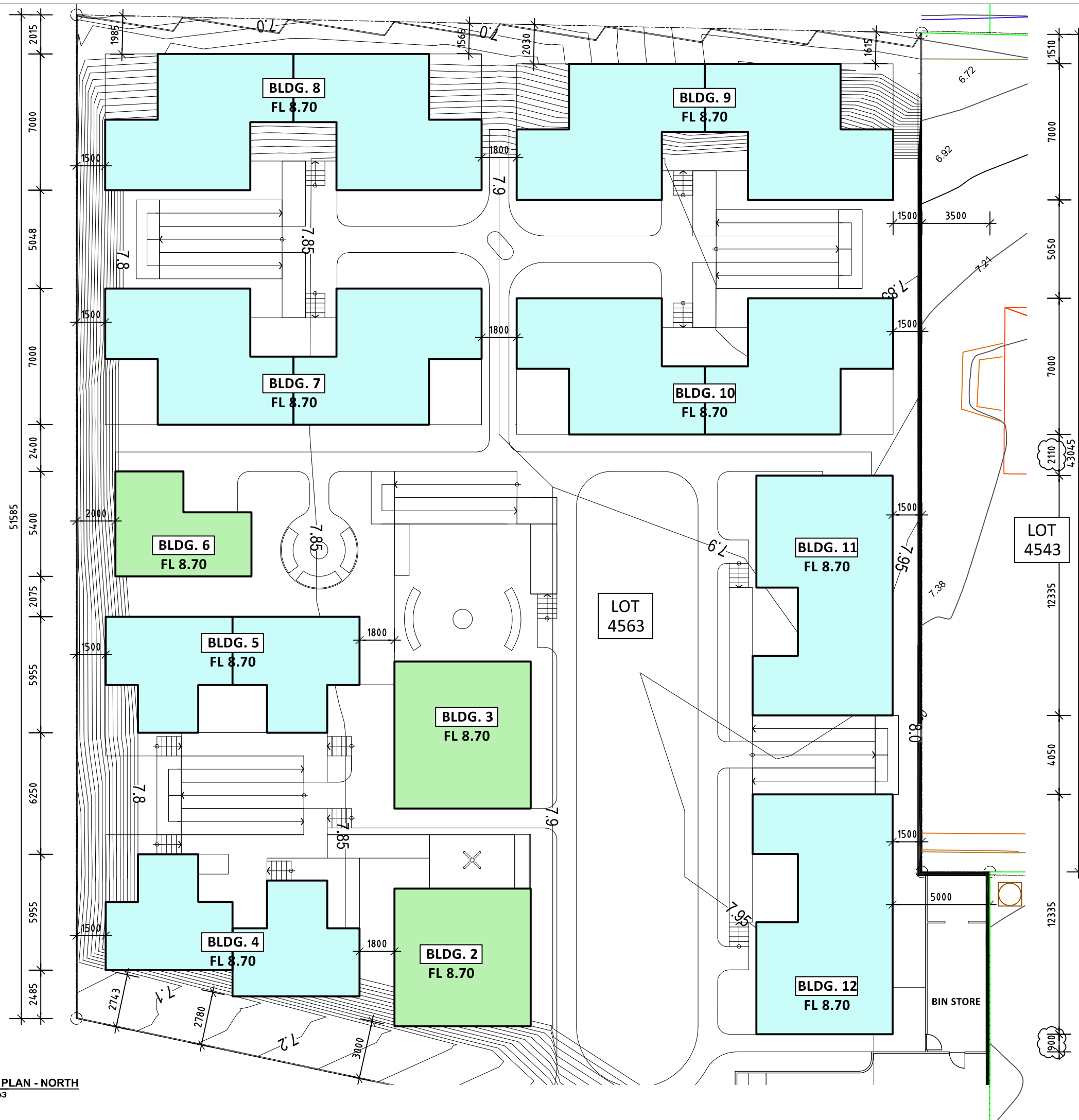
05.08.2022

22.08.2022

REVISION / NOTES
DEVELOPMENT APPLICATION
DA - REVISION 1
DA - REVISION 2

**(PART) SITEPLAN
NORTH**

A1.02 (rev 2)





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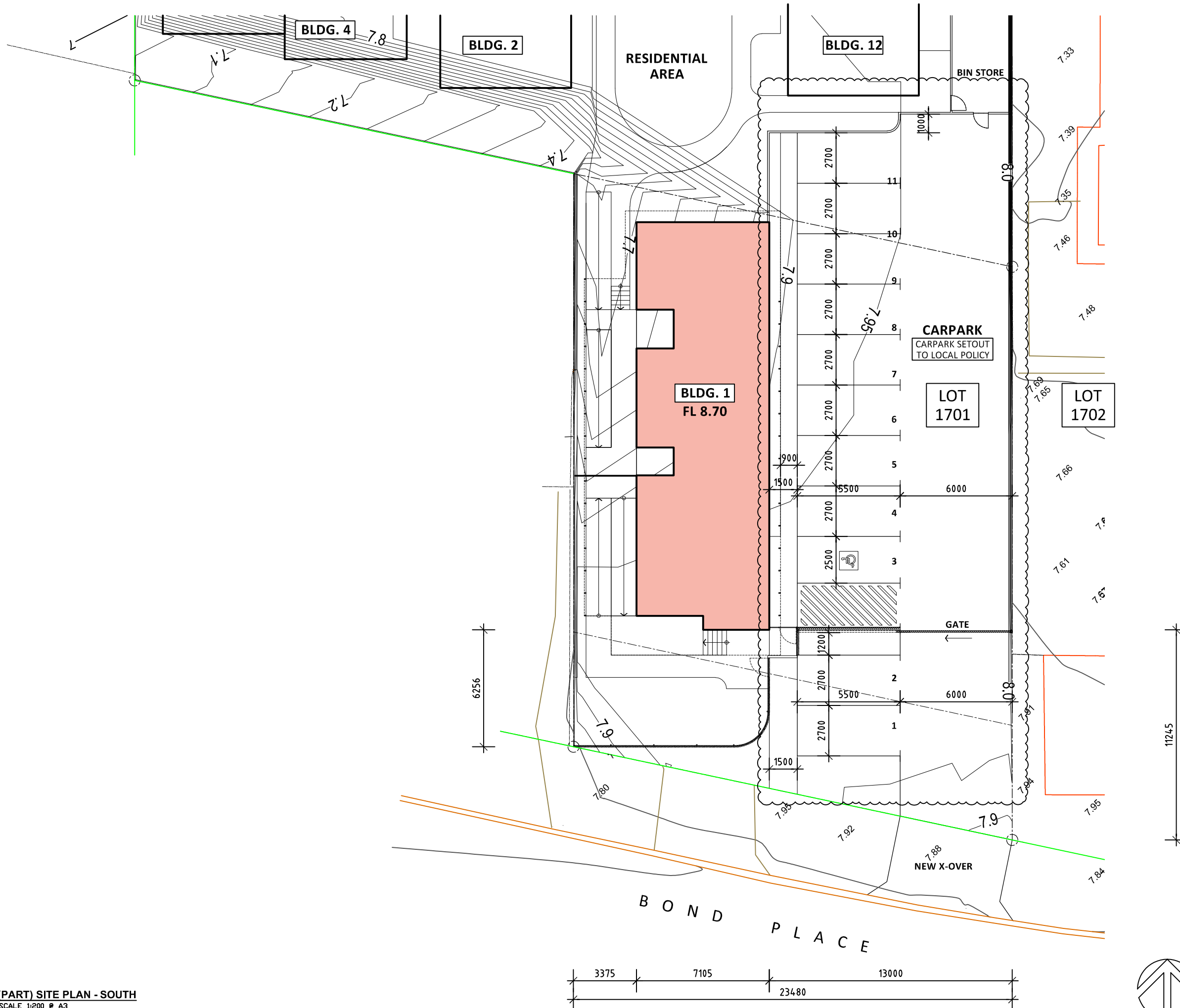
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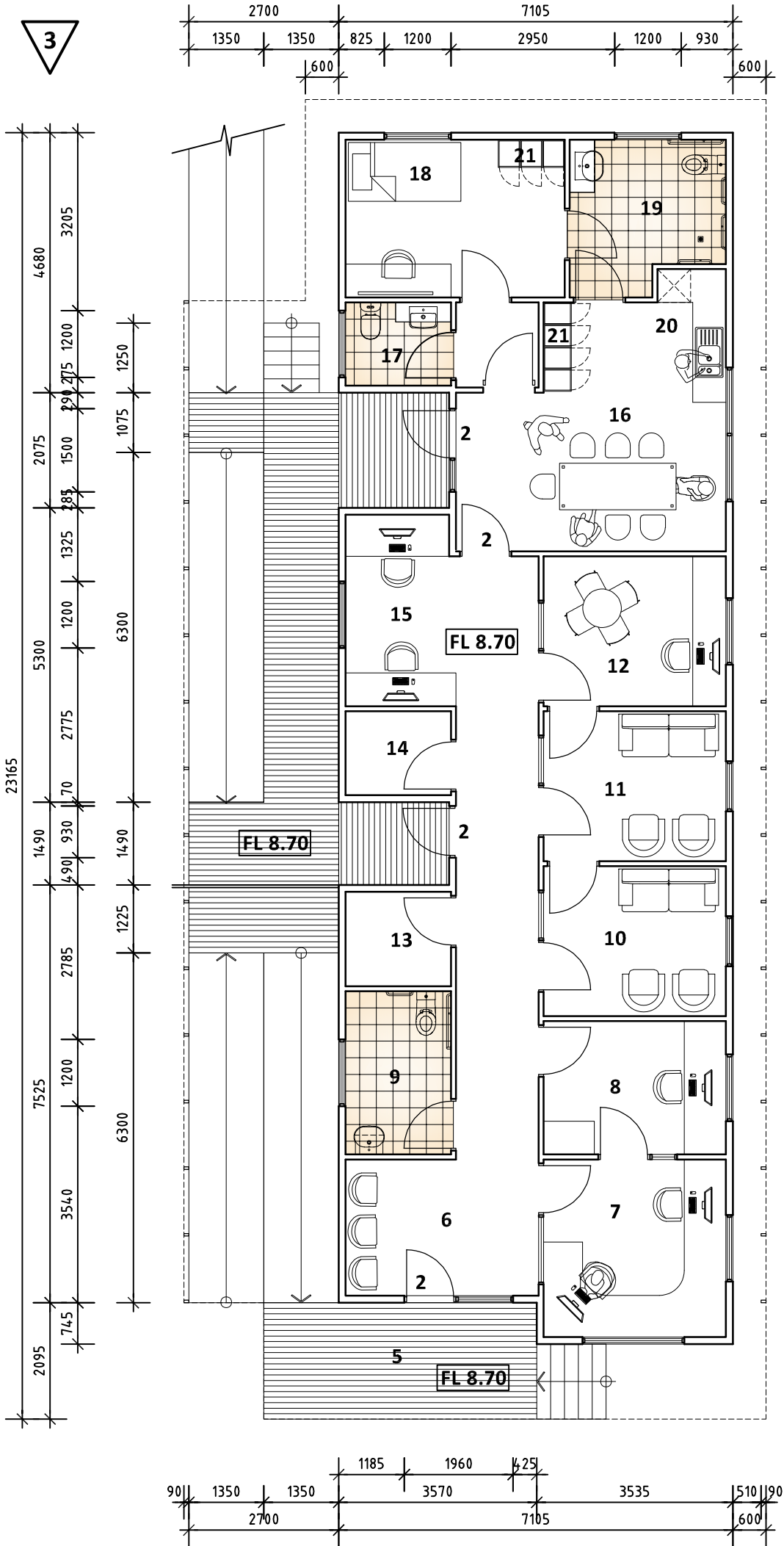
DEVELOPMENT APPLICATION
DA - REVISION 1
DA - REVISION 2

(PART) SITEPLAN SOUTH

A1.03 (rev 2)

0M 2.0M 4.0M 10.0M





LEGEND - ADMIN BLOCK

1. VISITOR CARPARK
2. SECURE GATE / DOOR
3. SECURE CARPARK
4. COURTYARD
5. ENTRY / DECK
6. RECEPTION
7. OFFICE 1
8. OFFICE 2
9. UAT (VISITORS)
10. INTAKE 1
11. INTAKE 2
12. PROGRAM MANAGER
13. STATIONARY / P'COPY
14. STOREOOM
15. CASE WORKER
16. STAFF ROOM
17. WC (STAFF)
18. OVERNIGHT STAY
19. UAT + SHOWER
20. TEA PREP
21. LOCKERS

AREAS - GFA

1.	1 BED UNITS	30.5m2
2.	2 BED UNITS	50.8m2
3.	3 BED UNITS	79.5m2
4.	REC BLOCK 1	49.5m2
5.	REC BLOCK 2	52.5m2
6.	ADMIN BLOCK	146.7m2



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DEVELOPMENT APPLICATION

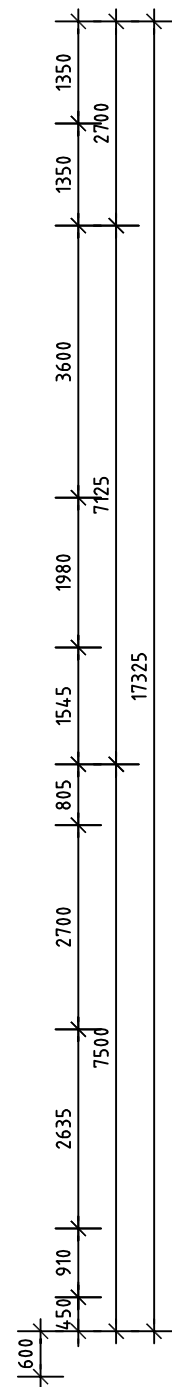
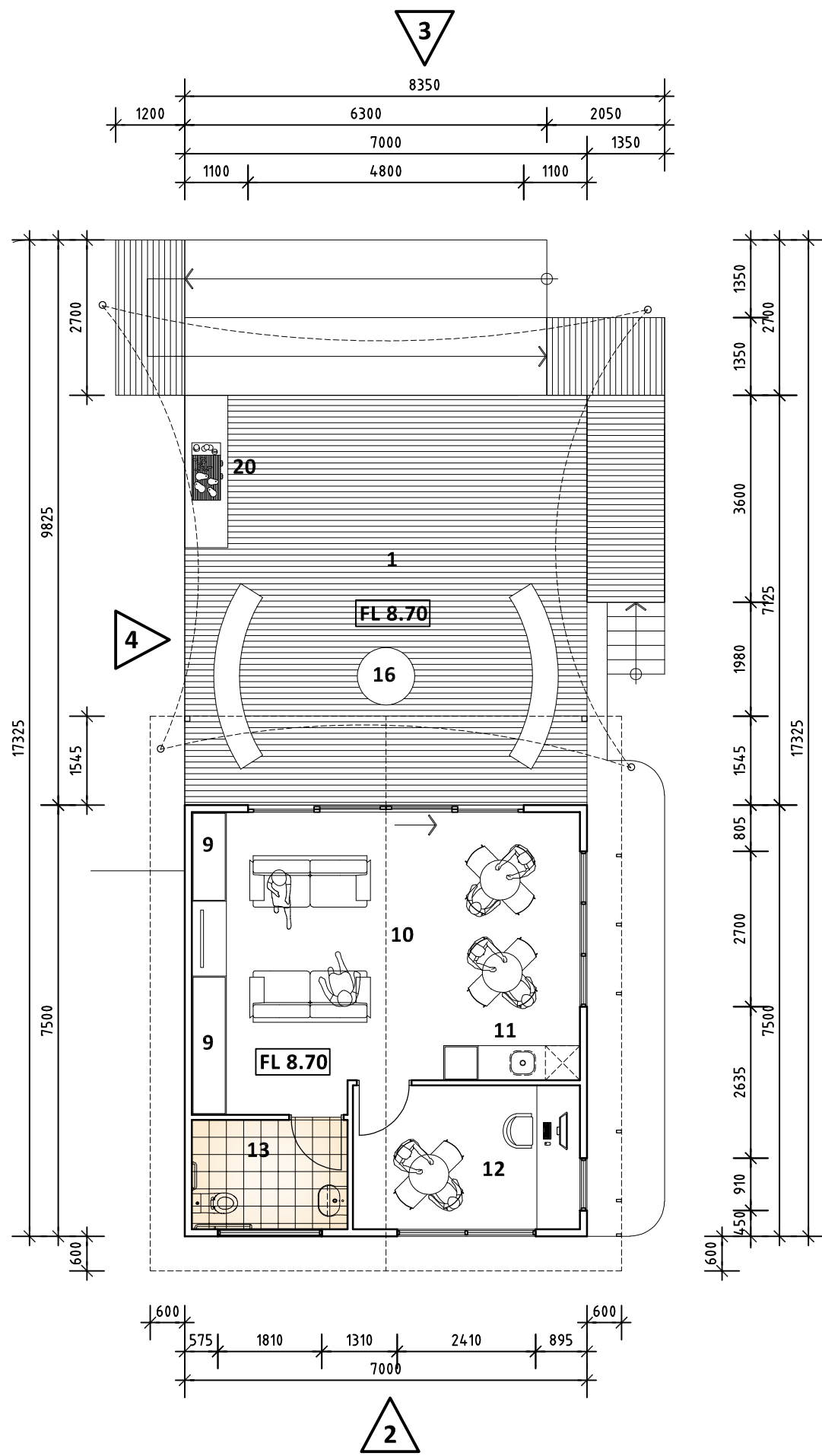
ADMIN. BLOCK
BLDG. No. 1

FLOOR PLAN

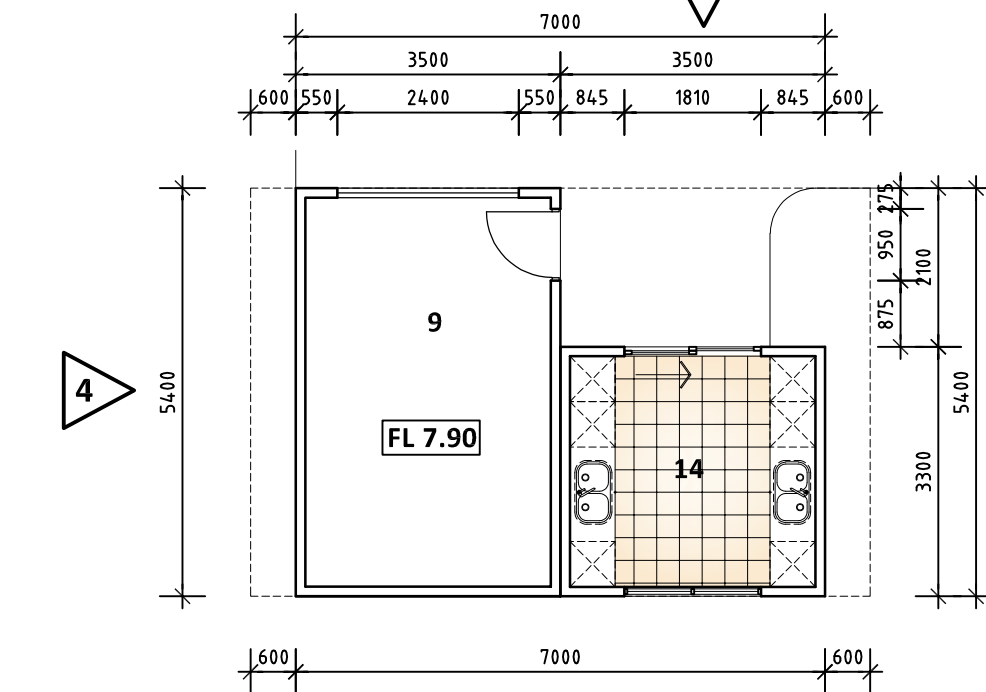
A2.01



0M 1.0M 2.0M 5.0M



2 BUILDING No. 2 PLAN - GROUP ROOM
SCALE 1:100 @ A3



3 BUILDING No. 6 PLAN - UTILITY
SCALE 1:100 @ A3

LEGEND - RESIDENTIAL

1. DECK
2. ENTRY
3. DINING
4. KITCHEN
5. LIVING
6. BEDROOM
7. BATHROOM
8. CLOTHESLINE
9. STORE
10. GROUP ROOM / TV
11. TEA PREP
12. CASE WORKER
13. UAT
14. LAUNDRY
15. LANDSCAPE
16. YARNING CIRCLE
17. PLAYGROUND
18. BIN STORE
19. CAR PARK
20. BBQ
21. SMOKERS
22. BIN STORE

AREAS - GFA

1.	1 BED UNITS	30.5m2
2.	2 BED UNITS	50.8m2
3.	3 BED UNITS	79.5m2
4.	REC BLOCK 1	49.5m2
5.	REC BLOCK 2	52.5m2
6.	ADMIN BLOCK	146.7m2

CLIENT

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No. 2 - 6 Bond Place, Pegs Creek
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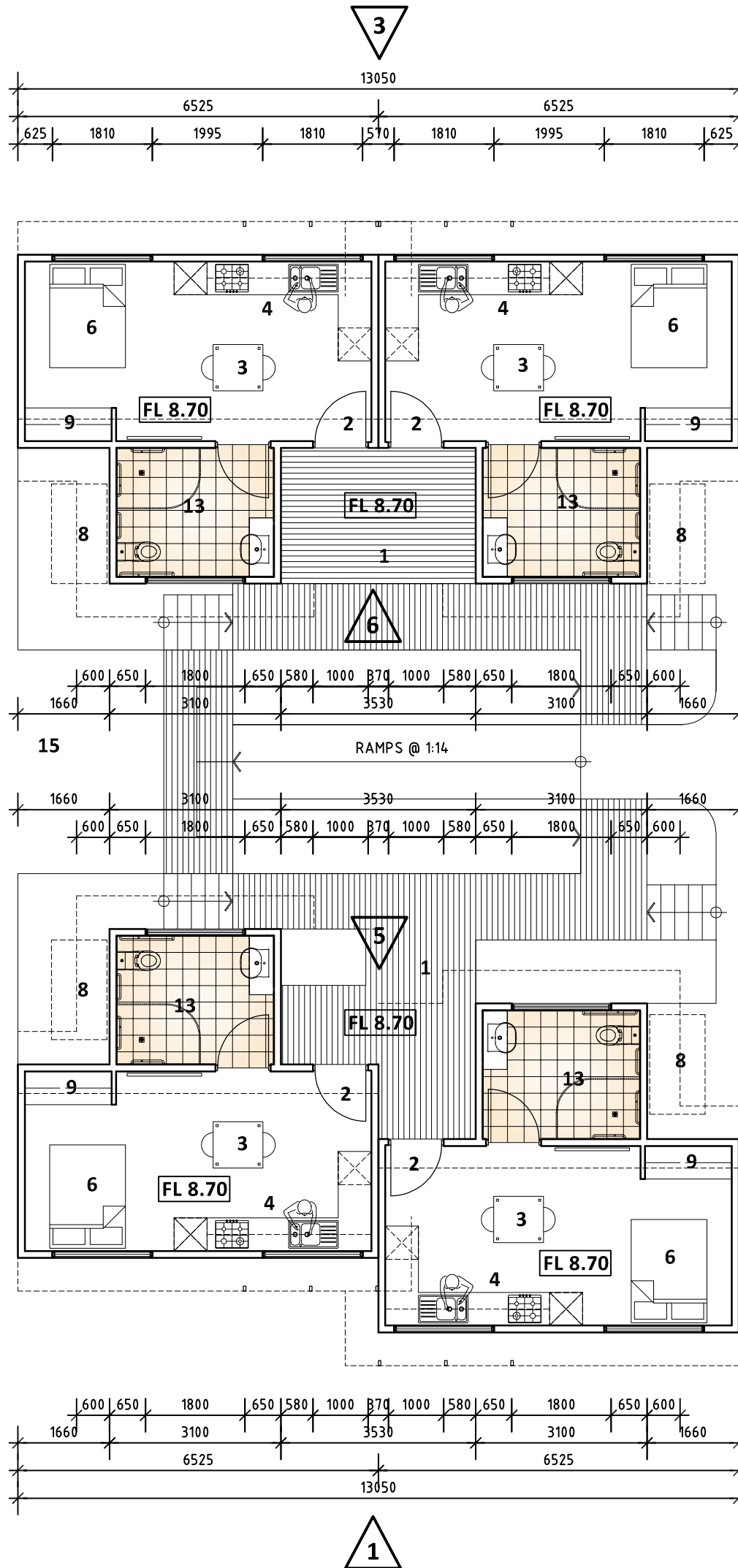
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05.08.2022

REVISION / NOTES

DEVELOPMENT APPLICATION
DA - REVISION 1

GROUP ROOMS
BLDG No's 2,3 & 6

FLOOR PLANS
A2.02 (rev 1)



LEGEND - RESIDENTIAL

- 1. DECK
- 2. ENTRY
- 3. DINING
- 4. KITCHEN
- 5. LIVING
- 6. BEDROOM
- 7. BATHROOM
- 8. CLOTHESLINE
- 9. STORE
- 10. GROUP ROOM / TV
- 11. TEA PREP
- 12. CASE WORKER
- 13. UAT
- 14. LAUNDRY
- 15. LANDSCAPE
- 16. YARNING CIRCLE
- 17. PLAYGROUND
- 18. BIN STORE
- 19. CAR PARK
- 20. BBQ
- 21. SMOKERS
- 22. BIN STORE

AREAS - GFA

1.	1 BED UNITS	30.5m2
2.	2 BED UNITS	50.8m2
3.	3 BED UNITS	79.5m2
4.	REC BLOCK 1	49.5m2
5.	REC BLOCK 2	52.5m2
6.	ADMIN BLOCK	146.7m2



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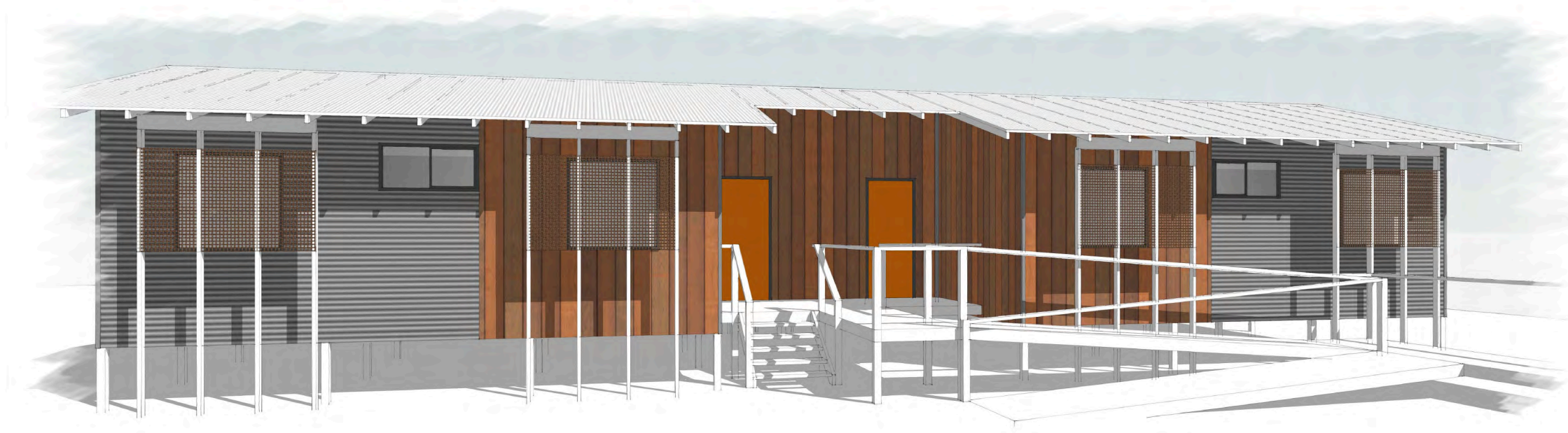
DEVELOPMENT APPLICATION

1 x BED UNITS
BLDG. No's 4 & 5

FLOOR PLAN

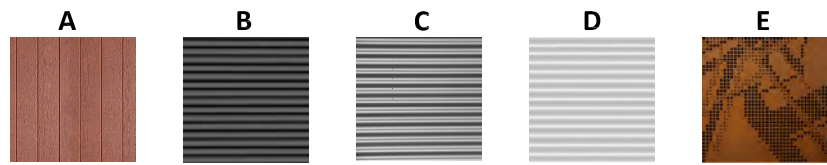
A2.03





EXTERNAL FINISHES SCHEDULE

A	9.5mm WEATHERTEX 'WEATHERGROOVE' NATURAL FINISH
B	COLORBOND CUSTOM-ORB SHEET - COLOUR 'MONUMENT'
C	COLORBOND CUSTOM-ORB SHEET - COLOUR 'ZINCALUME'
D	COLORBOND CUSTOM-ORB SHEET - COLOUR 'SURFMIST'
E	CORTEN PERFORATED STEEL SOLAR/PRIVACY SCREEN



LEGEND - RESIDENTIAL

- 1. DECK
- 2. ENTRY
- 3. DINING
- 4. KITCHEN
- 5. LIVING
- 6. BEDROOM
- 7. BATHROOM
- 8. CLOTHESLINE
- 9. STORE
- 10. GROUP ROOM / TV
- 11. TEA PREP
- 12. CASE WORKER
- 13. UAT
- 14. LAUNDRY
- 15. LANDSCAPE
- 16. YARNING CIRCLE
- 17. PLAYGROUND
- 18. BIN STORE
- 19. CAR PARK
- 20. BBQ
- 21. SMOKERS
- 22. BIN STORE

AREAS - GFA

1.	1 BED UNITS	30.5m2
2.	2 BED UNITS	50.8m2
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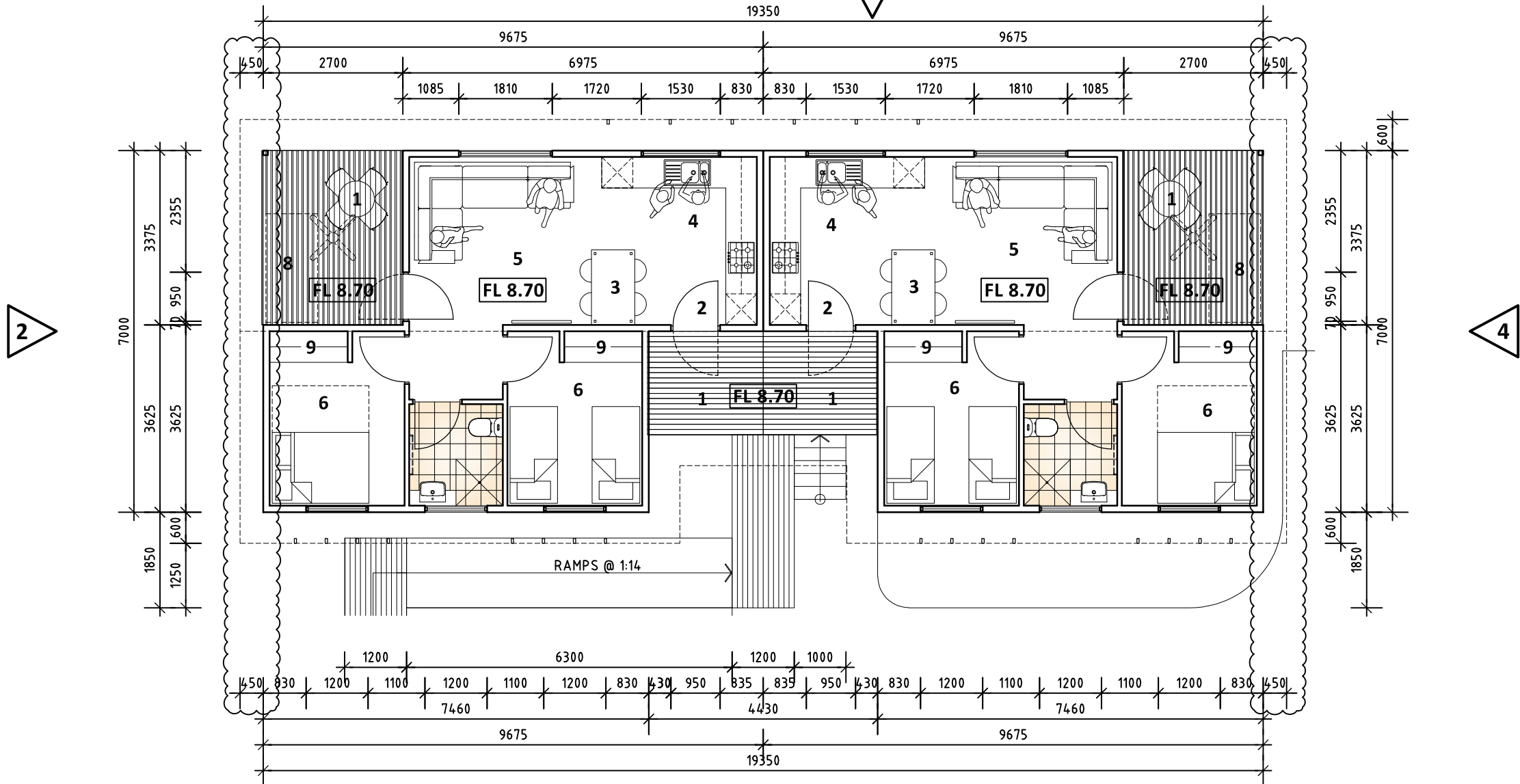
PROJECT
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REVISION / NOTES
DEVELOPMENT APPLICATION
DA - REVISION 1

2 x BED UNITS
BLDG. No's 7-10

FLOOR PLAN
A2.04 (rev 1)





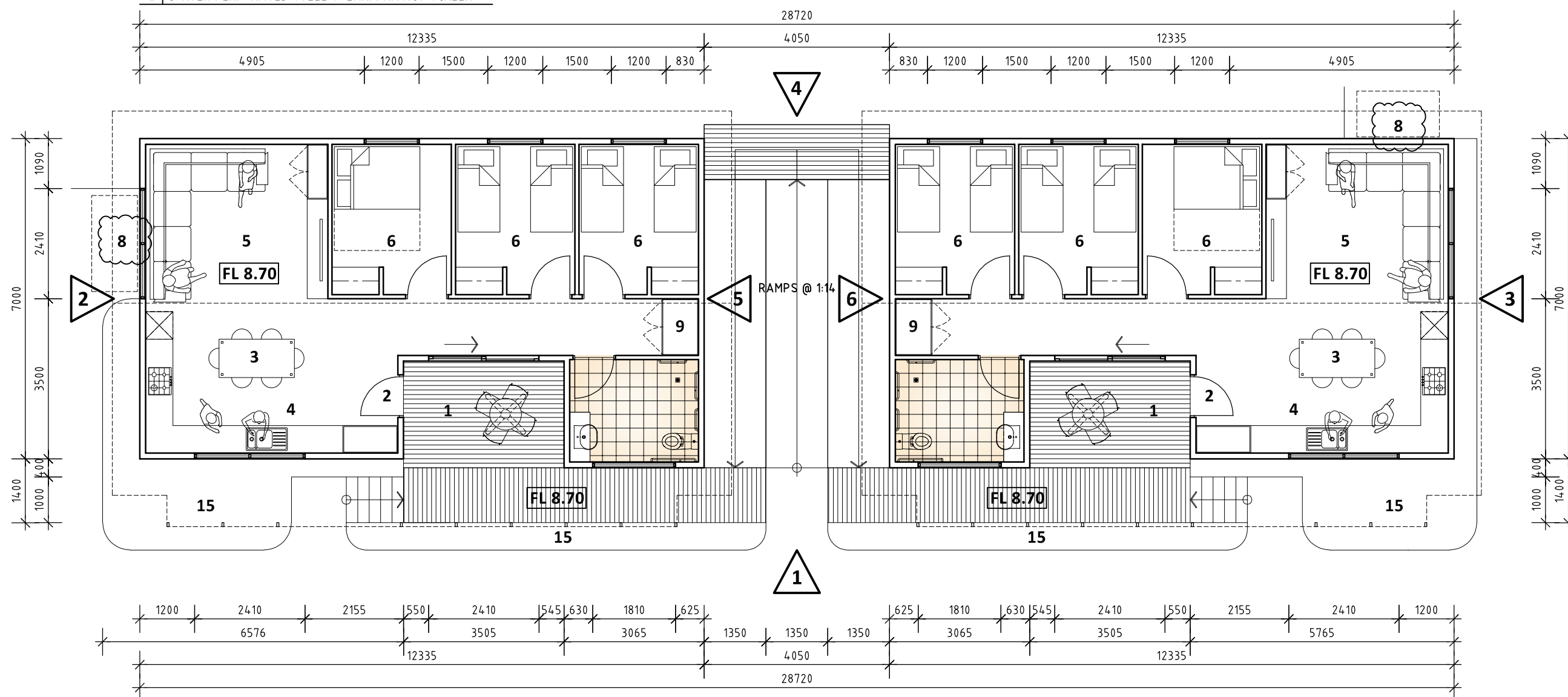
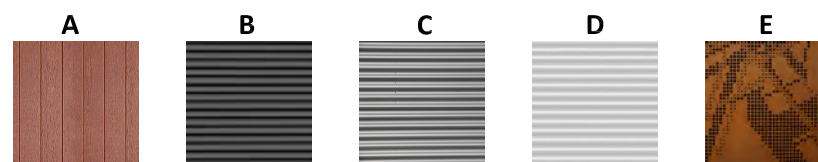
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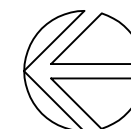
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West Perth WA 6005

EXTERNAL FINISHES SCHEDULE

A	9.5mm WEATHERTEX 'WEATHERGROOVE' NATURAL FINISH
B	COLORBOND CUSTOM-ORB SHEET - COLOUR 'MONUMENT'
C	COLORBOND CUSTOM-ORB SHEET - COLOUR 'ZINCALUME'
D	COLORBOND CUSTOM-ORB SHEET - COLOUR 'SURFMIST'
E	CORTEN PERFORATED STEEL SOLAR/PRIVACY SCREEN



1 BUILDING No. 11 & 12 - FLOOR PLAN
SCALE 1:100 @ A3



CLIENT
The Salvation Army Corps

PROJECT
Karratha (Safe Places)
No. 2 - 6 Bond Place, Pegs Creek
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REVISION / NOTES
DEVELOPMENT APPLICATION
DA - REVISION 1

3 x BED UNITS
BLDG No's 11 & 12

FLOOR PLAN
A2.05 (rev 1)

0M 1.0M 2.0M 5.0M



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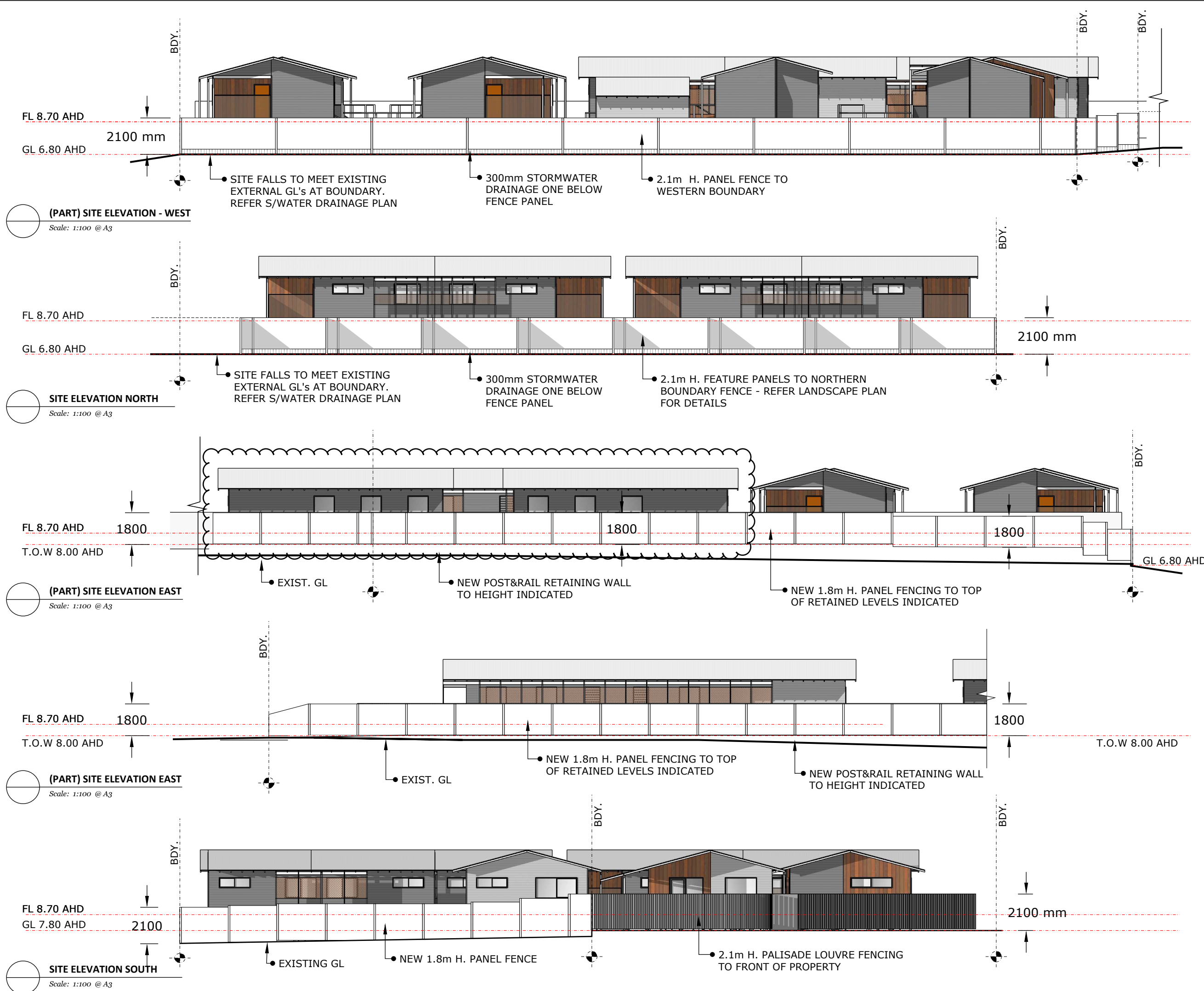
REVISION / NOTES

DEVELOPMENT APPLICATION
DA - REVISION 2

SITE ELEVATIONS

A3.00 (rev 2)

0M 2M 4M 10M



CLIENT
The Salvation Army Corps

PROJECT
Karratha (Safe Places)
No. 2-6 Bond Place, Pegs Creek
Karratha WA 6714

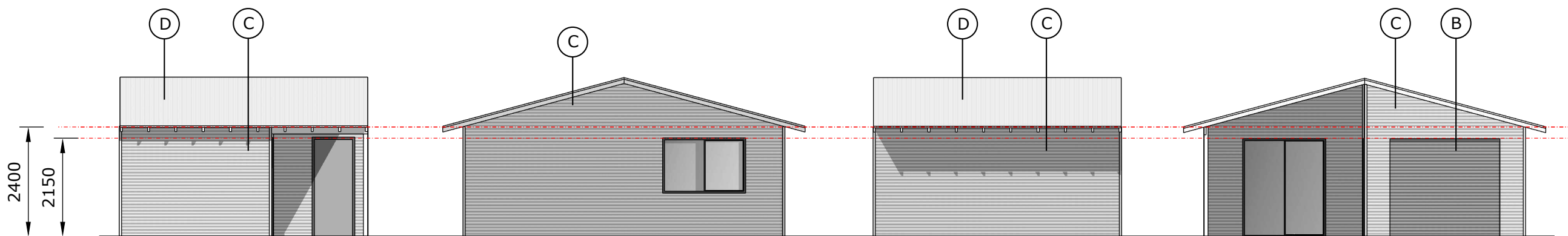
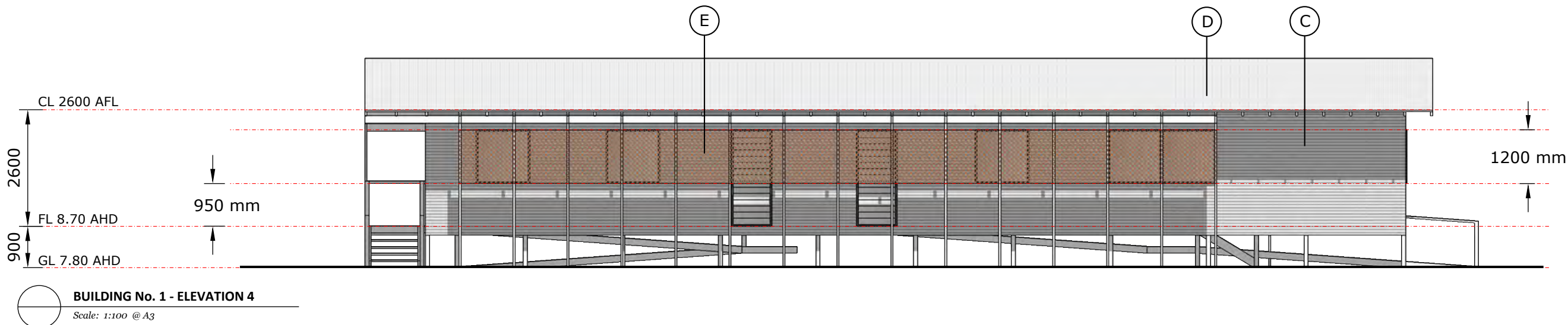
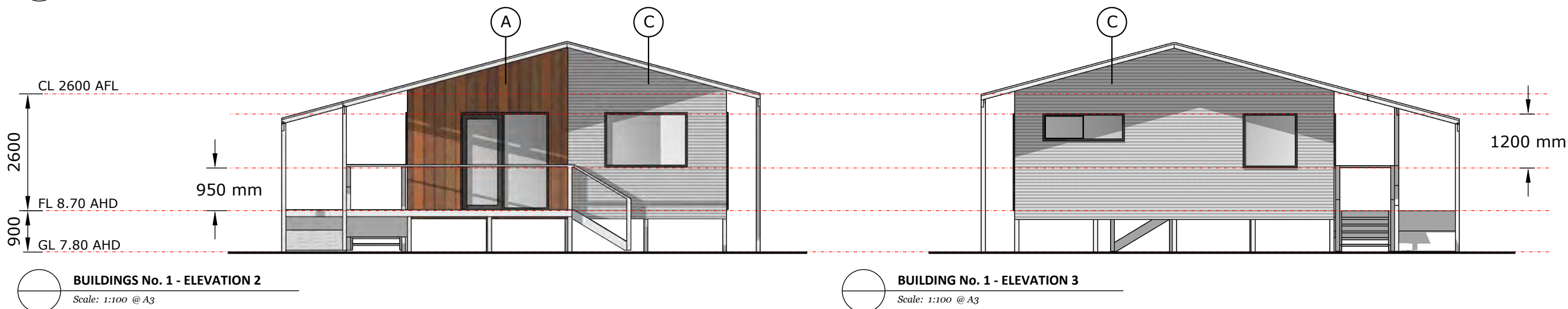
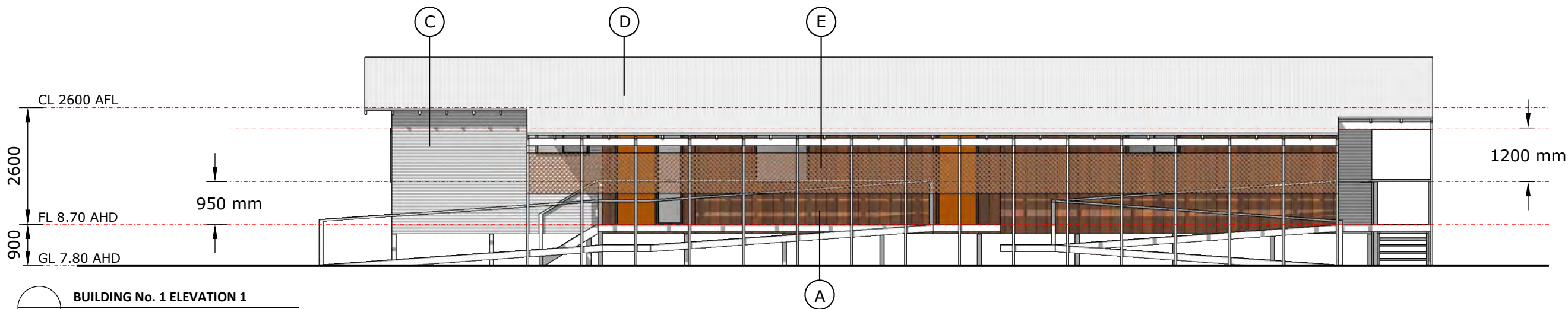
ISSUE DATE
10.05.2022

REVISION / NOTES
DEVELOPMENT APPLICATION

**BLDG. No. 1 + 6
ELEVATIONS**

A3.01

0M 1M 2M 5M



CLIENT
The Salvation Army Corps

PROJECT
Karratha (Safe Places)
No. 2-6 Bond Place, Pegs Creek
Karratha WA 6714

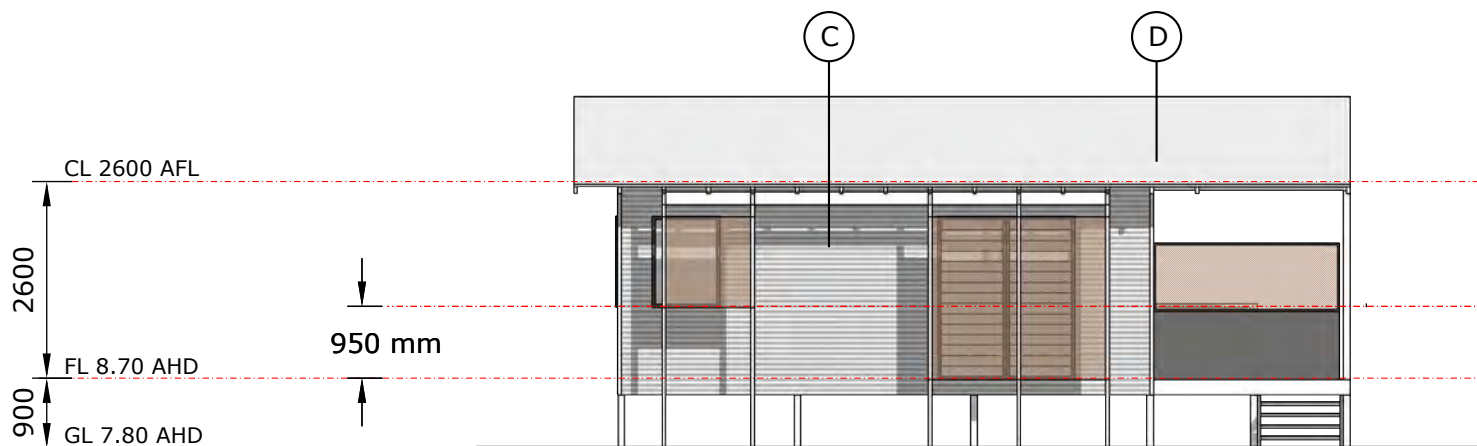
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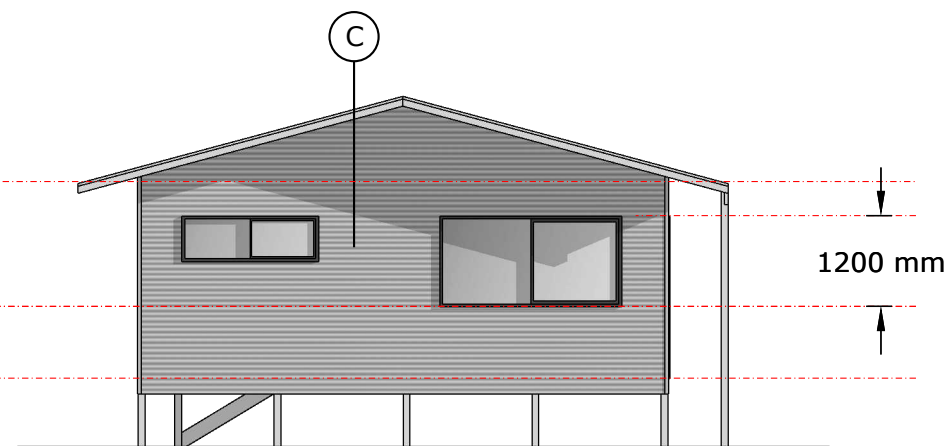
GROUP ROOMS
BLDG No's 2 & 3

ELEVATIONS
A3.02

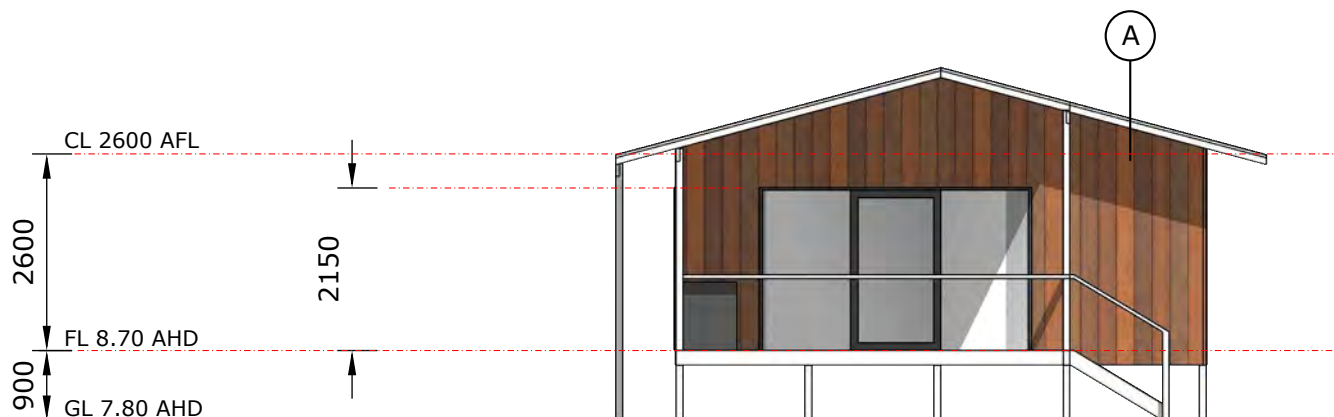
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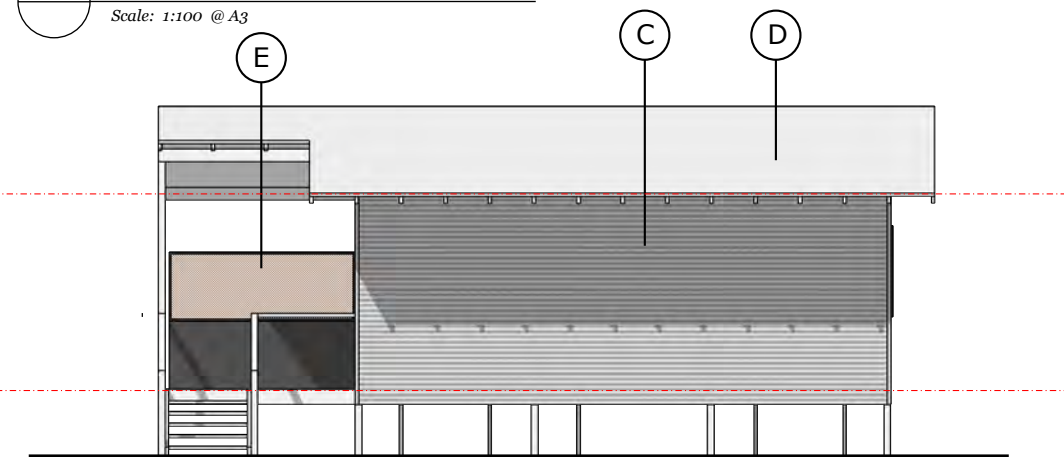
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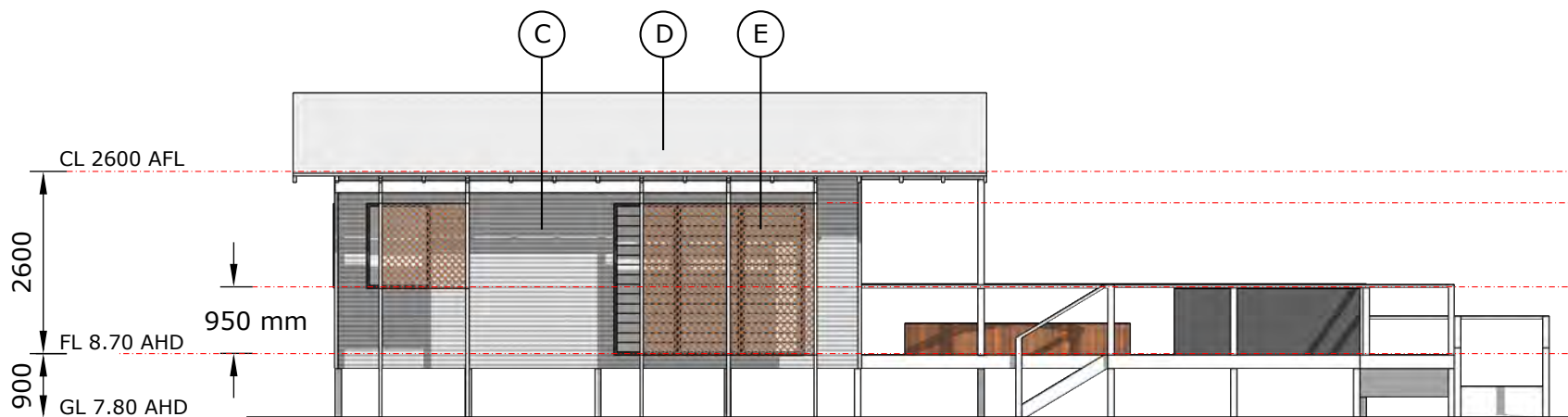
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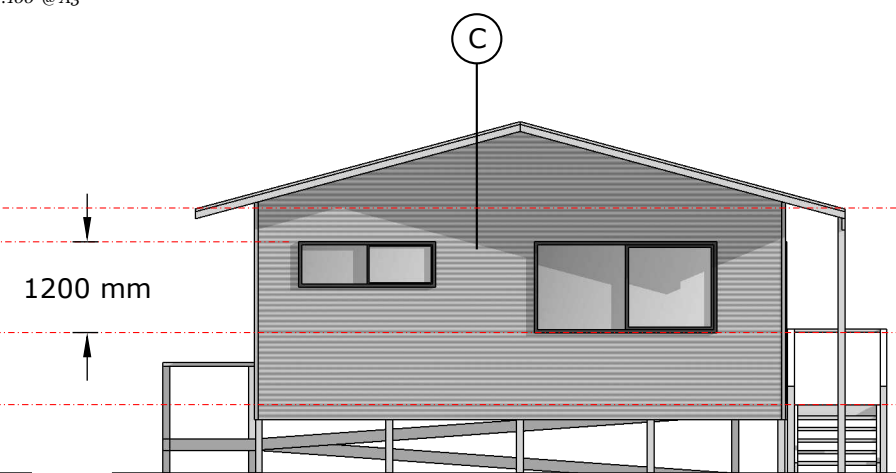
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Scale: 1:100 @ A3



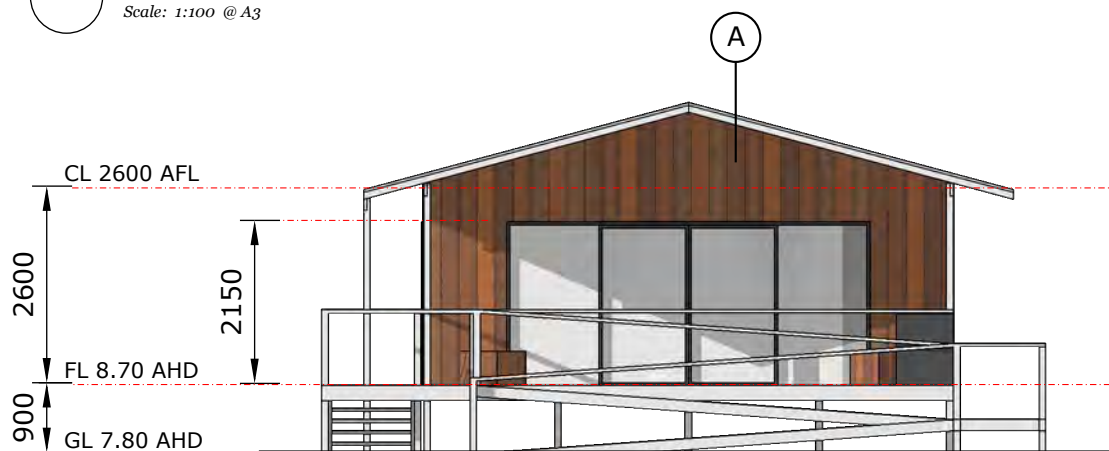
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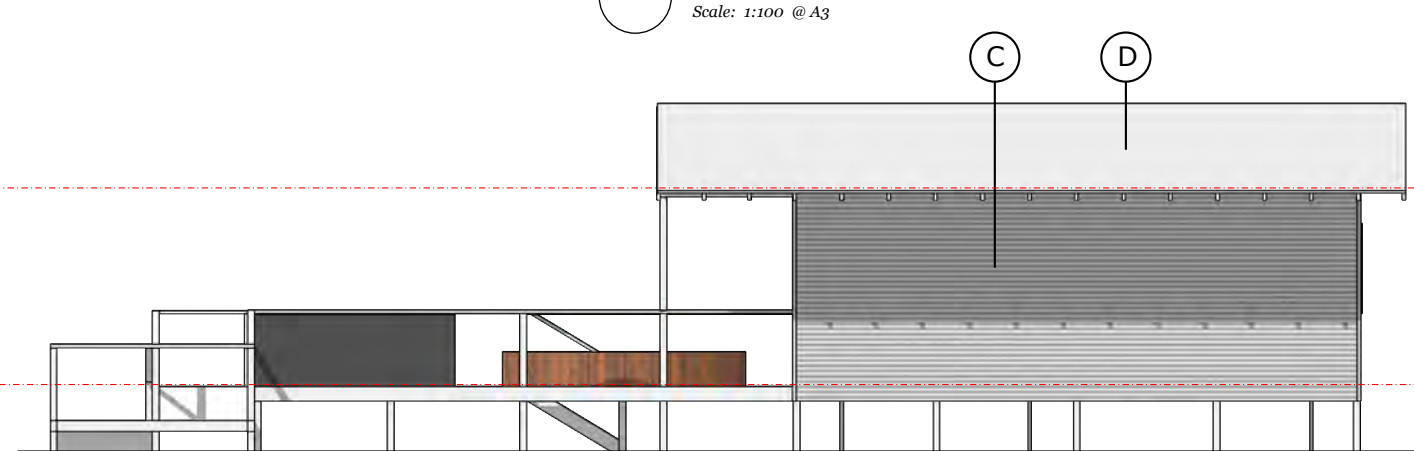
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BUILDING No.3 - ELEVATION 2
Scale: 1:100 @ A3



BUILDING No.3 - ELEVATION 3
Scale: 1:100 @ A3



BUILDING No.3 - ELEVATION 4
Scale: 1:100 @ A3



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PROJECT

Karratha (Safe Places)
No. 2-6 Bond Place, Pegs Creek
Karratha WA 6714

ISSUE DATE

10.05.2022

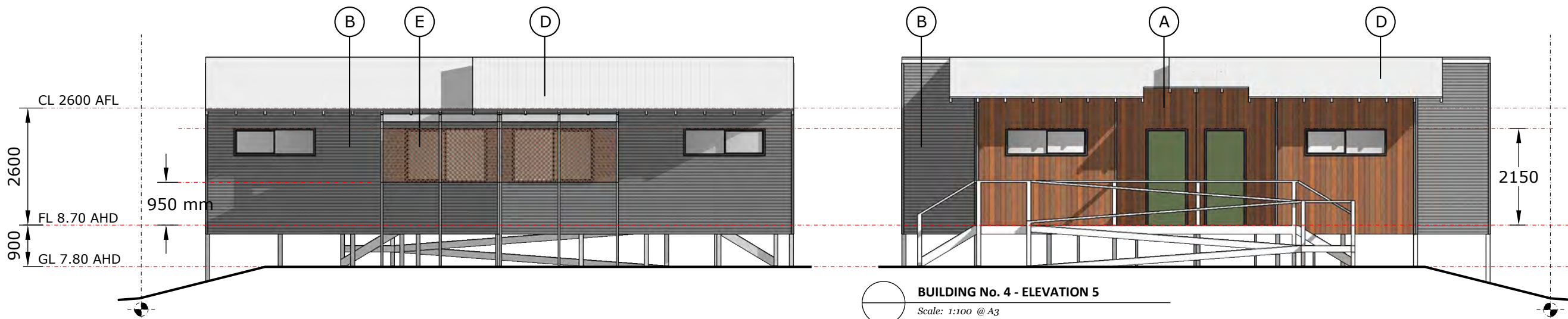
REVISION / NOTES

DEVELOPMENT APPLICATION

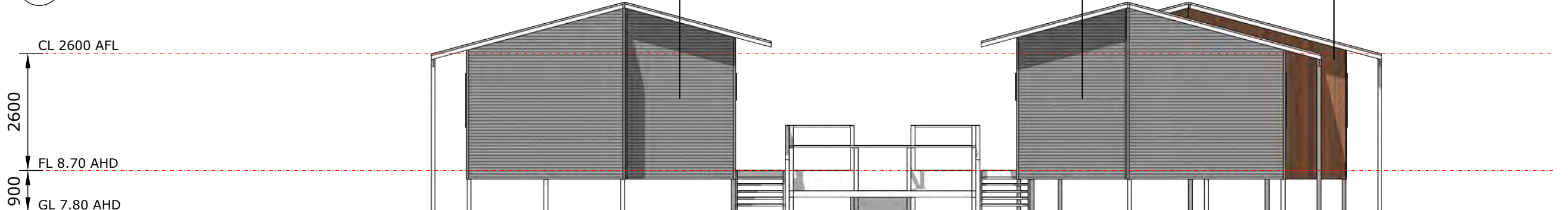
1 x BED UNITS
BLDG No's 4 & 5

ELEVATIONS
A3.03

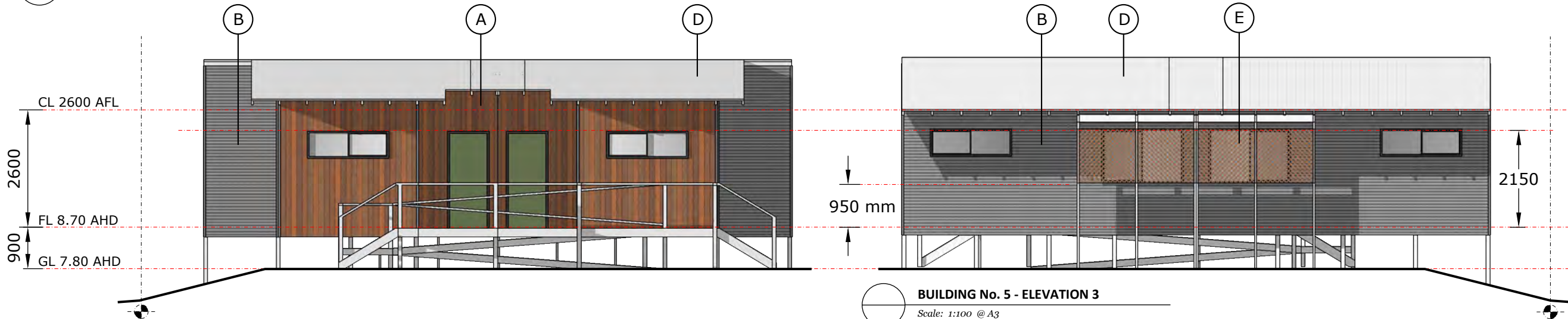
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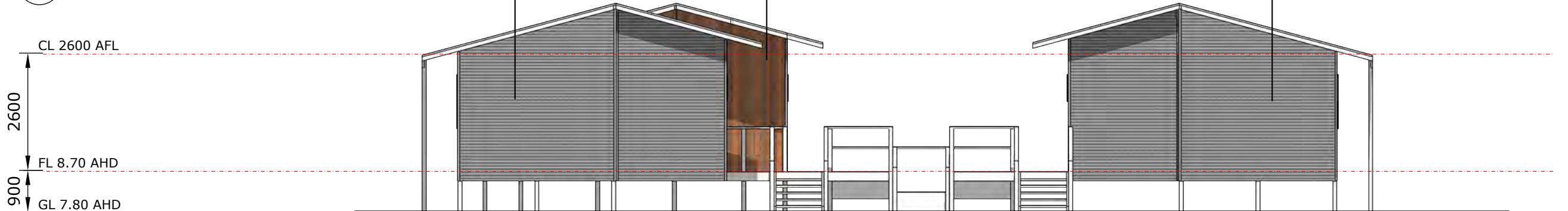
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BUILDINGS No.'s 4 & 5 - ELEVATION 2)
Scale: 1:100 @ A3



BUILDING No. 5 - ELEVATION 6
Scale: 1:100 @ A3



BUILDINGS No.'s 4 & 5 - ELEVATION 4
Scale: 1:100 @ A3



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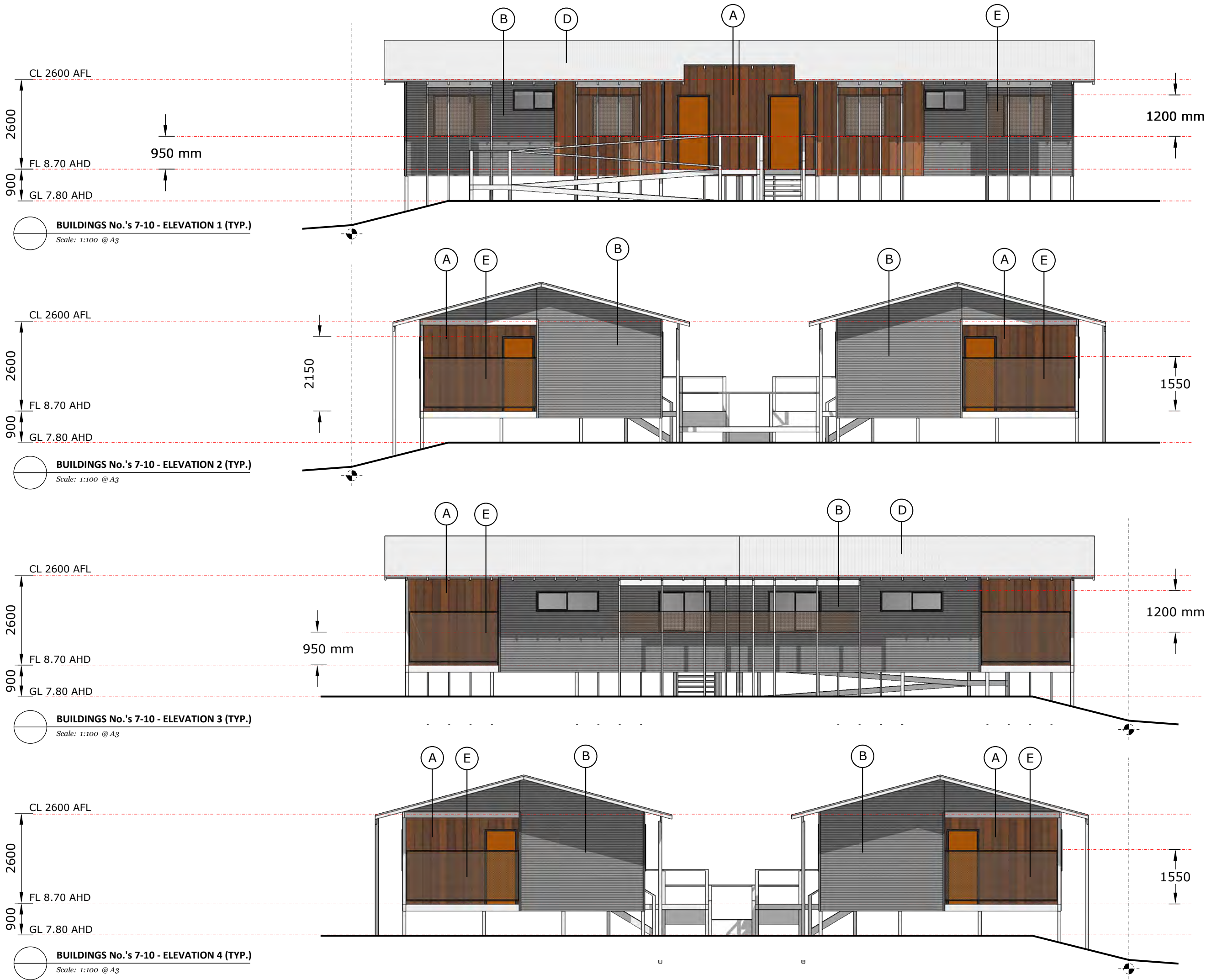
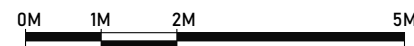
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REVISION / NOTES

DEVELOPMENT APPLICATION

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BLDG No's 7-10

ELEVATIONS
A3.04



CLIENT
The Salvation Army Corps

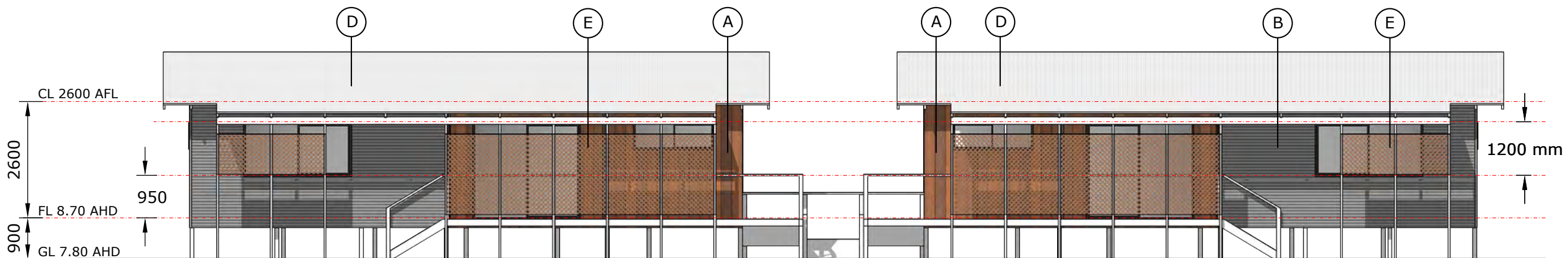
PROJECT
Karratha (Safe Places)
No. 2-6 Bond Place, Pegs Creek
Karratha WA 6714

ISSUE DATE
10.05.2022

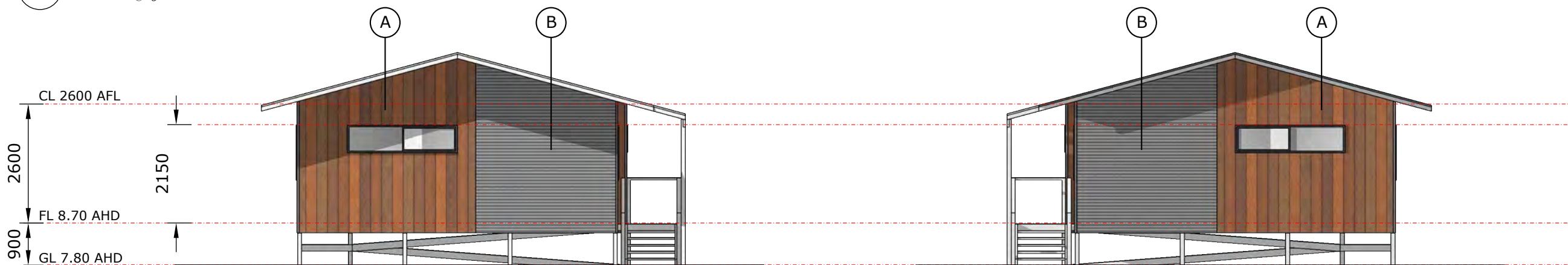
REVISION / NOTES
DEVELOPMENT APPLICATION

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BLDG No's 11 & 12

ELEVATIONS
A3.05

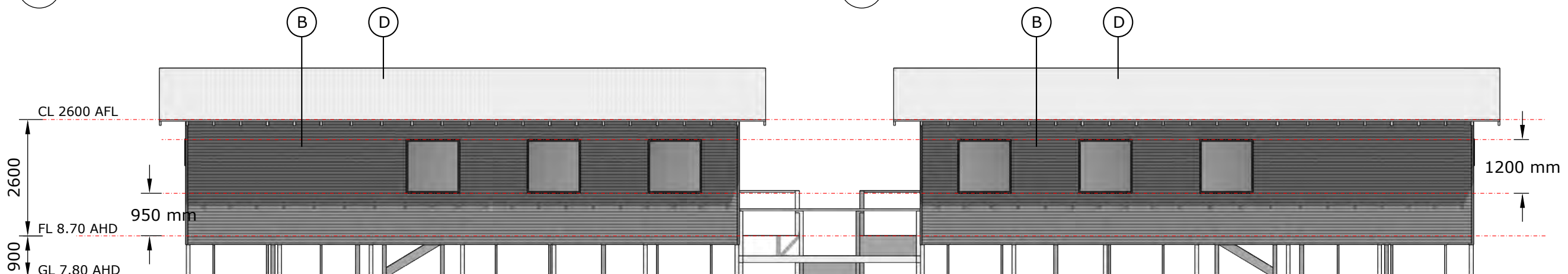


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Scale: 1:100 @ A3

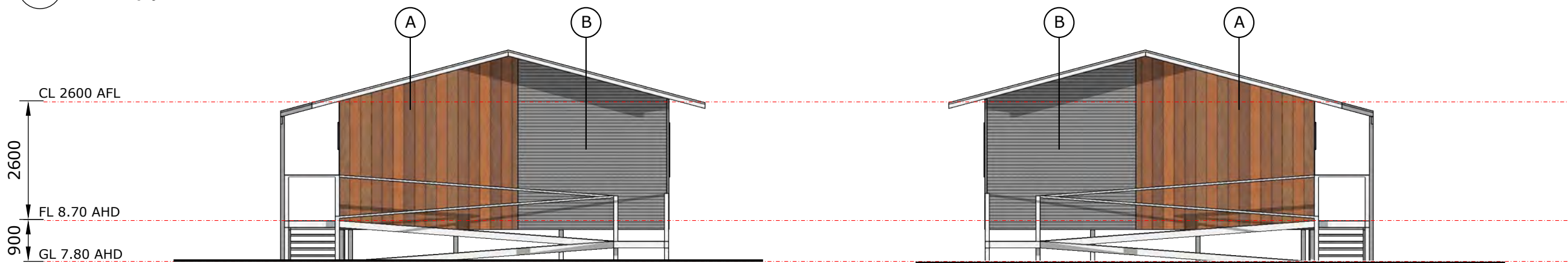


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BUILDINGS No. 11 & 12 - ELEVATION 3
Scale: 1:100 @ A3

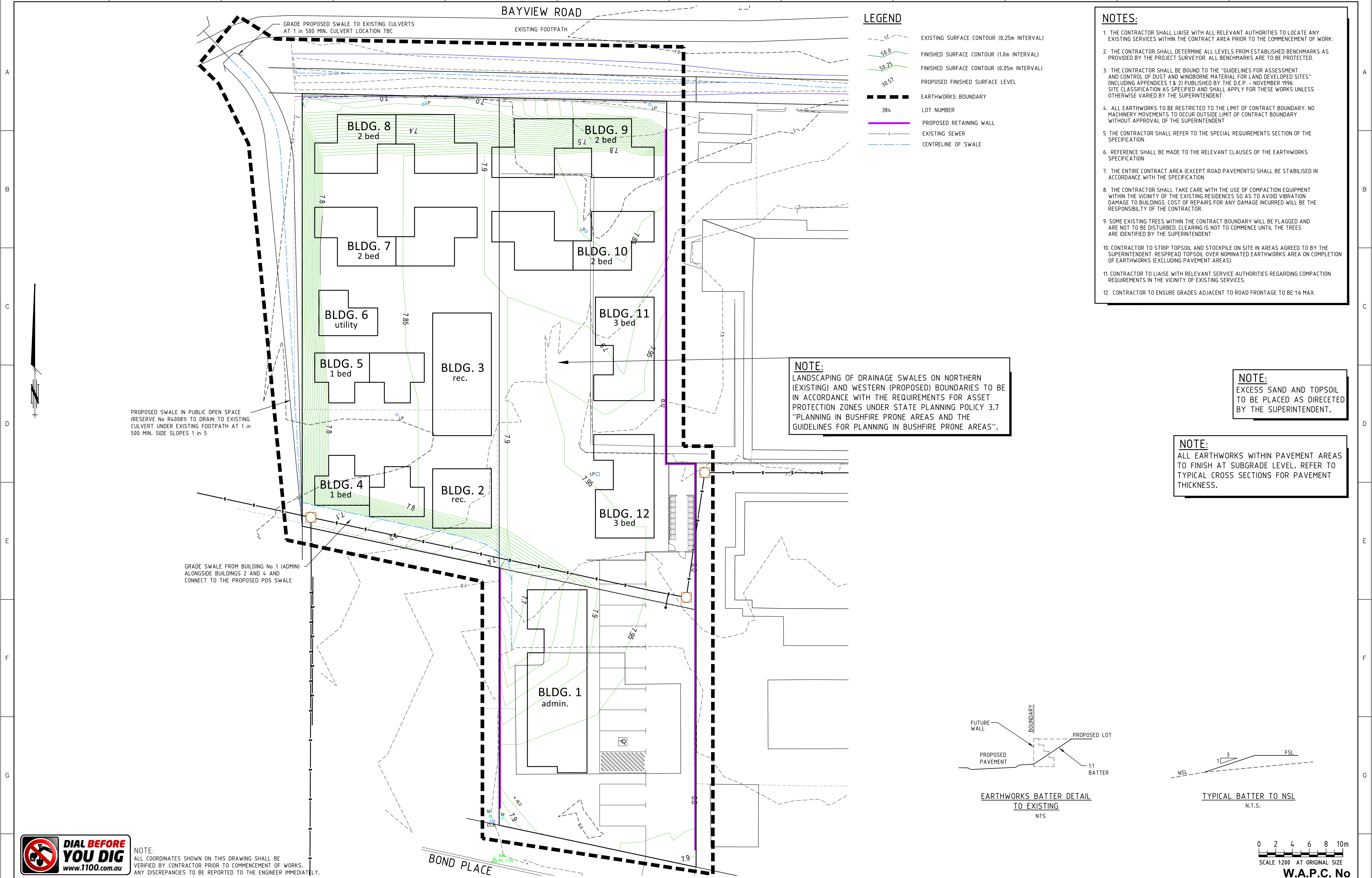


BUILDINGS No. 11 & 12 - ELEVATION 4
Scale: 1:100 @ A3



BUILDINGS No. 11 & 12 - ELEVATION 5
Scale: 1:100 @ A3

BUILDINGS No. 11 & 12 - ELEVATION 6
Scale: 1:100 @ A3



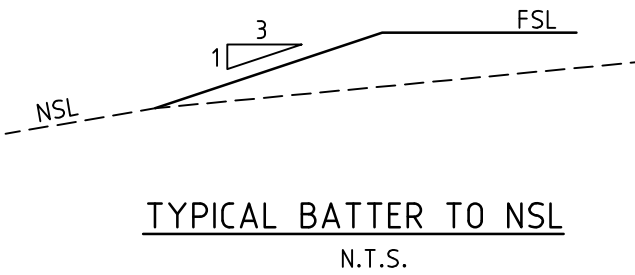
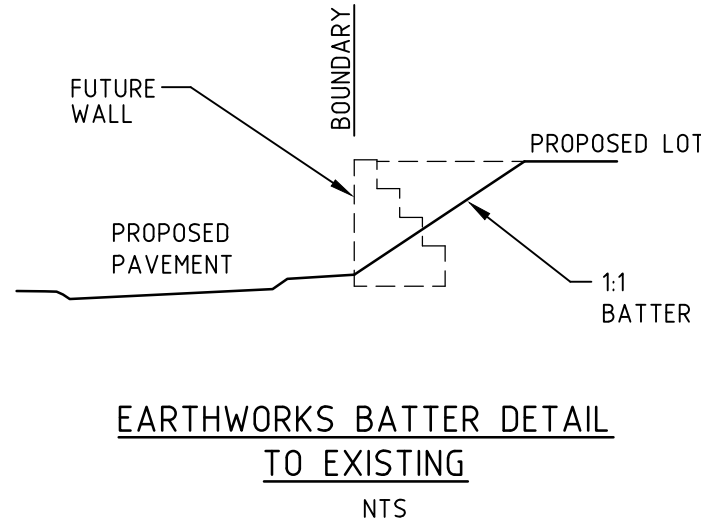
- LEGEND**
- EXISTING SURFACE CONTOUR (0.25m INTERVAL)
 - FINISHED SURFACE CONTOUR (1.0m INTERVAL)
 - FINISHED SURFACE CONTOUR (0.05m INTERVAL)
 - PROPOSED FINISHED SURFACE LEVEL
 - EARTHWORKS BOUNDARY
 - LOT NUMBER
 - PROPOSED RETAINING WALL
 - EXISTING SEWER
 - CENTRELINE OF SWALE

- NOTES:**
- THE CONTRACTOR SHALL LIAISE WITH ALL RELEVANT AUTHORITIES TO LOCATE ANY EXISTING SERVICES WITHIN THE CONTRACT AREA PRIOR TO THE COMMENCEMENT OF WORK.
 - THE CONTRACTOR SHALL DETERMINE ALL LEVELS FROM ESTABLISHED BENCHMARKS AS PROVIDED BY THE PROJECT SURVEYOR. ALL BENCHMARKS ARE TO BE PROTECTED.
 - THE CONTRACTOR SHALL BE BOUND TO THE "GUIDELINES FOR ASSESSMENT AND CONTROL OF DUST AND WINDBORNE MATERIAL FOR LAND DEVELOPED SITES" (INCLUDING APPENDICES 1 & 2) PUBLISHED BY THE D.E.P. - NOVEMBER 1996. SITE CLASSIFICATION AS SPECIFIED AND SHALL APPLY FOR THESE WORKS UNLESS OTHERWISE VARIED BY THE SUPERINTENDENT.
 - ALL EARTHWORKS TO BE RESTRICTED TO THE LIMIT OF CONTRACT BOUNDARY. NO MACHINERY MOVEMENTS TO OCCUR OUTSIDE LIMIT OF CONTRACT BOUNDARY WITHOUT APPROVAL OF THE SUPERINTENDENT.
 - THE CONTRACTOR SHALL REFER TO THE SPECIAL REQUIREMENTS SECTION OF THE SPECIFICATION.
 - REFERENCE SHALL BE MADE TO THE RELEVANT CLAUSES OF THE EARTHWORKS SPECIFICATION.
 - THE ENTIRE CONTRACT AREA (EXCEPT ROAD PAVEMENTS) SHALL BE STABILISED IN ACCORDANCE WITH THE SPECIFICATION.
 - THE CONTRACTOR SHALL TAKE CARE WITH THE USE OF COMPACTION EQUIPMENT WITHIN THE VICINITY OF THE EXISTING RESIDENCES SO AS TO AVOID VIBRATION DAMAGE TO BUILDINGS. COST OF REPAIRS FOR ANY DAMAGE INCURRED WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - SOME EXISTING TREES WITHIN THE CONTRACT BOUNDARY WILL BE FLAGGED AND ARE NOT TO BE DISTURBED. CLEARING IS NOT TO COMMENCE UNTIL THE TREES ARE IDENTIFIED BY THE SUPERINTENDENT.
 - CONTRACTOR TO STRIP TOPSOIL AND STOCKPILE ON SITE IN AREAS AGREED TO BY THE SUPERINTENDENT. RESPREAD TOPSOIL OVER NOMINATED EARTHWORKS AREA ON COMPLETION OF EARTHWORKS (EXCLUDING PAVEMENT AREAS).
 - CONTRACTOR TO LIAISE WITH RELEVANT SERVICE AUTHORITIES REGARDING COMPACTION REQUIREMENTS IN THE VICINITY OF EXISTING SERVICES.
 - CONTRACTOR TO ENSURE GRADES ADJACENT TO ROAD FRONTAGE TO BE 1:6 MAX.

NOTE:
LANDSCAPING OF DRAINAGE SWALES ON NORTHERN (EXISTING) AND WESTERN (PROPOSED) BOUNDARIES TO BE IN ACCORDANCE WITH THE REQUIREMENTS FOR ASSET PROTECTION ZONES UNDER STATE PLANNING POLICY 3.7 "PLANNING IN BUSHFIRE PRONE AREAS AND THE GUIDELINES FOR PLANNING IN BUSHFIRE PRONE AREAS".

NOTE:
EXCESS SAND AND TOPSOIL TO BE PLACED AS DIRECTED BY THE SUPERINTENDENT.

NOTE:
ALL EARTHWORKS WITHIN PAVEMENT AREAS TO FINISH AT SUBGRADE LEVEL. REFER TO TYPICAL CROSS SECTIONS FOR PAVEMENT THICKNESS.



0 2 4 6 8 10m
SCALE 1:200 AT ORIGINAL SIZE

W.A.P.C. No



NOTE:
ALL COORDINATES SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

				CLIENT
				THE SALVATION ARMY
A	ISSUED FOR APPROVAL	27.04.22	JSG	
REV	REVISION	DATE	APPROVED	

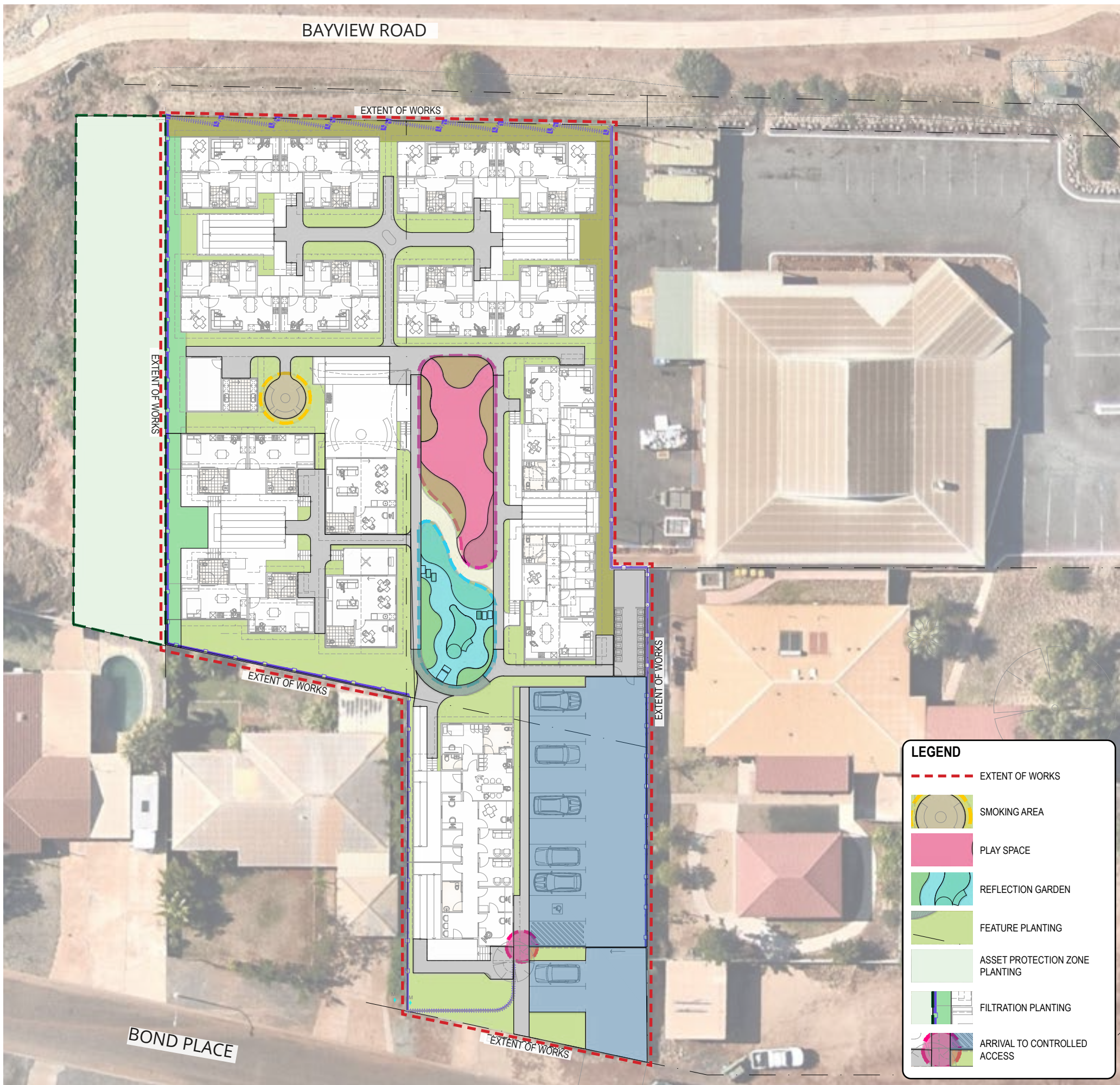
DRAWN	J. Barram
DESIGNED	J. Barram
CHECKED	J. Grierson
APPROVED	
DATE	

TITLE
KARRATHA SAFE PLACES
2-6 BOND PL PEGS CREEK KARRATHA
EARTHWORKS & DRAINAGE STRATEGY
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ORIGINAL SHEET SIZE	SCALE 1:200 UNO
A1	LEVEL DATUM : AHD
DO NOT SCALE	SHEET 1 OF 1
	DRAWING No
	8106-1-C101 A

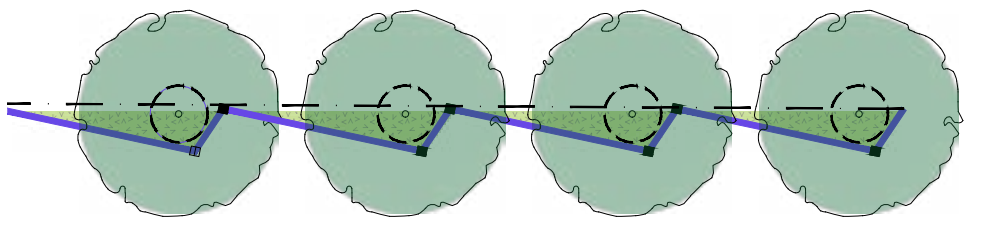


LEGEND

- EXTENT OF WORKS
- SMOKING AREA
- PLAY SPACE
- REFLECTION GARDEN
- FEATURE PLANTING
- ASSET PROTECTION ZONE PLANTING
- FILTRATION PLANTING
- ARRIVAL TO CONTROLLED ACCESS



SMOKING AREA.



NORTHERN FENCE DESIGN



ARTWORK TO FENCING



NATURE PLAY.



PROPOSED ELEVATION EXAMPLE.



NATURE PLAY



ARTWORK TO FENCING



SEATING

LEGEND	
	EXTENT OF WORKS
	FEATURE PLANTING
	PROPOSED TREES
	ASSET PROTECTION ZONE PLANTING
	ART LOCATION
	COMMUNITY GARDEN
	PLAY SPACE
	PATH
	FENCE TYPE 1
	FENCE TYPE 2



PLANTING PALETTE

The proposed plant species are to be predominantly endemic in composition and / or known to be waterwise and tolerant to the harsh Pilbara conditions. Plants provide a variety of experiences for the healing purposes. The following images display some of the plants qualities that can be used to enrich these experiences. These plants are examples of plants that have been used in previous projects of the area.

- 1
- COLOURFUL - Plants that are colourful for a long time.
- 2
- TOUCH - Plants that have unique textures.
- 3
- SMELL - Aromatic plants
- 4
- CREATING SPACES - Structural plants that can be used to create walls, tunnels fences and rooms
- 5
- PROPS- Plants with interesting seed pods, stalks or twigs that can be used for play.
- 6
- MOVE IN THE WIND - Plants that act like “flags” and visually move in the wind.
- 7
- SEASONAL CHANGE - Plants that have year round interest with distinct qualities in each season.
- 8
- EDIBLE - Plants that can be eaten and that have interesting tastes.
- 9
- APZ Planting -
 - Maintained regularly. Removal of dead plants & potential fuel load
 - Planted with 1/m² spacing
 - Predominantly rushes &sedges& ground covers



Swainsona pterostylis - Dampier Pea



Triraphis mollis- Needle Grass



Dipteracanthus australasicus - Desert Petunia



Delonix regia - Poinciana



Eucalyptus vitrix - Collibah



Swainsona formosa - Sturt Desert Pea



Russelia equisetiformis - Firecracker plant



Eremophila glabra 'Kalbarri Carpet' - Emu Bush



Peltophorum pterocarpum - Yellow Poinciana



Corymbia hamersleyana - Pilbara Bloodwood



Helianthus annuus - Sun flower



Conostylis candicans - Grey Cottonheads



Grevillea stenobotrya - Dune Grevillea



Tabebuia rosea - Pink Trumpet Tree



Bougainvillea



Ptilotus axillaris - Mat Mulla Mulla



Pennisetum alopecuroides 'Nafray' - Fountain



Ptilotus exaltatus - Tall Mulla Mulla

Bushfire Management Plan Coversheet

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

Bushfire Management Plan and Site Details

Site Address / Plan Reference: 2 & 6 Bond Place

Suburb: Pegs Creek

State: WA

P/code: 6714

Local government area: City of Karratha

Description of the planning proposal: Constuction of a Women's Refuge

BMP Plan / Reference Number: 221297

Version: Rev B

Date of Issue: 11/08/2022

Client / Business Name: The Salvation Army (WA) Property Trust

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

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

Constuction of a Women's Refuge

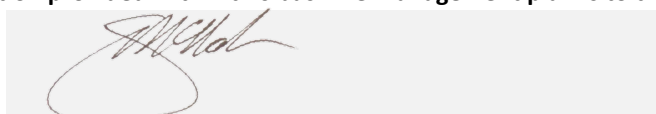
Note: The decision maker (e.g. local government or the WAPC) should only refer the proposal to DFES for comment if one (or more) of the above answers are ticked "Yes".

BPAD Accredited Practitioner Details and Declaration

Name	Accreditation Level	Accreditation No.	Accreditation Expiry
Gary McMahon	Level 3	35078	11/2022
Company	Contact No.		
Ecosystem Solutions	(08) 9759 1960		

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

Signature of Practitioner



Date 11/08/2022



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Bushfire Management Plan and Bushfire Emergency Evacuation Plan

2 & 6 Bond Place, Pegs Creek

11 August 2022

Prepared for:
The Salvation Army (WA) Property Trust
Attn: Simon Mallabone



Limitations Statement

This report has been prepared in accordance with the Agreement between Ecosystem Solutions Pty Ltd and The Salvation Army (WA) Property Trust (**Client**). It has been solely prepared for a vulnerable development 2 & 6 Bond Place, Pegs Creek (**Site**).

Information

In undertaking this work the authors have made every effort to ensure the accuracy of the information used. Unless otherwise stated in the report, Ecosystem Solutions Pty Ltd has not independently verified such information and cannot guarantee its accuracy or completeness.

Conclusions

Within the limitations imposed by the scope of work, preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted practices and using a degree of skill and care ordinarily exercised by reputable bushfire consultants under similar circumstances. No other warranty, expressed or implied, is made.

Reliance

This report is solely for the use of the Client and any reliance on this report by third parties will be at such party's sole risk. This report must only be presented in full and may not be used to support any other purpose than those set out in the report and the Agreement, except where prior written approval with comments are provided by Ecosystem Solutions Pty Ltd. All intellectual property rights in documents created by Ecosystem Solutions Pty Ltd remain the property of Ecosystem Solutions Pty Ltd.

Other parties should not rely on the report or the accuracy or completeness of any conclusions and should make their own enquiries and obtain independent advice in relation to such matters. Ecosystem Solutions Pty Ltd accepts no Liability, or responsibility whatsoever for or in respect of any use or reliance upon this report and its supporting material subsequently used by others. Please note that the contents of this report may not be directly applicable towards another organisation's needs and may not contain sufficient information for purposes of other parties or for other uses.

Ecosystem Solutions Pty Ltd will not be liable to update or revise the report to take into account any events or emergent circumstances or facts occurring or becoming apparent after the date of this report.

Other limitations

The measures contained in this report cannot guarantee that a structure or building will not be damaged or would survive a bushfire event on every occasion. This is due to the degree of vegetation management, the

unpredictable nature of fire behaviour (knowledge in this field continues to develop) and the unpredictable nature of extreme weather conditions.

The growth, planting or removal of vegetation, poor maintenance of any fire prevention/mitigation measures, addition of structures not included in this report, or other activity can and will change the bushfire threat to all properties detailed in this report. The implementation of fire precautions will depend on the actions of the landowner or occupiers of the land, over which Ecosystem Solutions Pty Ltd has no control. Should changes be made to the Site, a new Bushfire Management Plan is required.

Ecosystem Solutions Pty Ltd accepts no Liability, including Liability for any Loss in connection with:

- a Claim, damage, or injury to property, or persons caused by fire;
- further growth, planting or removal of vegetation on the Site;
- poor maintenance of any fire protection measures;
- additional structures not included in this assessment; or
- any other activity that may change the bushfire threat level.

The Client and owner of the Site each acknowledge that they have been made aware of the exclusions above and that such exclusion of Liability is reasonable in all the circumstances.

This report is valid for a period of two years only from the date of its issue. All BAL ratings identified in this report are indicative and are required to be verified at the time of construction of individual buildings to ensure appropriate setbacks identified in the Site/building have been achieved.

STATEMENT OF CONFORMITY - PLANNING AND DEVELOPMENT ACT 2005



Gary McMahon

B.Sc. M. Env Mgmt. PG Dip Bushfire Protection. C.EnvP, BPAD Level 3 (35078)

The signatory declares that this Bushfire Management Plan meets the requirements of State Planning Policy 3.7 and the Guidelines for Planning in Bushfire Prone Areas V1.4.

DISCLAIMER

**All capitalised terms used in the Limitations Statement above that are not defined are defined in the Agreement between Ecosystem Solutions Pty Ltd and the Client.*

*** The limitations above are subject to any relevant rights or remedies that the Client may be entitled to under legislation, including Schedule 2 of the Competition and Consumer Act 2010 (Cth).*

Document Control

Client - The Salvation Army (WA) Property Trust

Site - 2 & 6 Bond Place, Pegs Creek

Version	Revision	Purpose	Author	Reviewer	Submitted	
					Form	Date
Draft Report	Rev A	Initial Report	DC (BPAD48409 Level 1)	GM (BPAD35078 Level 3)	Electronic (email)	3/05/2022
Report	Rev B	DFES Comments	DC (BPAD48409 Level 1)	GM (BPAD35078 Level 3)	Electronic (email)	11/08/2022

Filename: \\ecosever\Data\PROJECTS\221297 2 & 6 Bond Place, Pegs Creek BMP BEEP\Reports\2 & 6 Bond Place, Pegs Creek BMP BEEP.docx

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Appendices

Appendix A

BAL Assessment

Appendix B

Risk Analysis

Appendix C

Emergency Evacuation Plan

SUMMARY

Site Details						
Address		2 & 6 Bond Place, Pegs Creek				
Local Government Area		City of Karratha				
Development Application						
Application	Information Requirements			Occupants		
Women’s Refuge (Safe Places) <ul style="list-style-type: none">Vulnerable DevelopmentMinor Development	Bushfire Management Plan Bushfire Emergency Evacuation Plan		TBC			
Determined BAL						
AS 3959 Assessment Procedure	Vegetation Classification	FDI	Effective Slope	Separation Distance	BAL	
Method 1	Class C Shrubland	80	Upslope/Flat	1 m	BAL-FZ	
Achievable BAL - Post Development						
AS 3959 Assessment Procedure	Vegetation Classification	FDI	Effective Slope	Separation Distance	BAL	
Method 1	Class C Shrubland	80	Upslope/Flat	9 m*	BAL-29	

*With approval by the City of Karratha, this separation distance must be managed, in perpetuity, to the Standards of the Guidelines for Planning in Bushfire Prone Areas as an Asset Protection Zone by the landowner of 2 & 6 Bond Place, Pegs Creek.

PROPOSAL

1.1 Introduction

This Bushfire Management Plan (BMP) has been prepared in accordance with the procedure for a simple development application document. An assessment of the proposal against the requirements of *State Planning Policy (SPP) 3.7* and *Guidelines for Planning in Bushfire Prone Areas* ('Guidelines', WAPC, V1.4 December 2021) is included.

The Bushfire Emergency Evacuation Plan (BEEP) (Appendix C) is preceded by a Risk Analysis (Appendix B) to determine the best approach to be followed in the event of a bushfire. This includes considering the safety of the evacuation route and determined Bushfire Attack Level (BAL).

The purpose of this BMP and BEEP is to detail the fire management methods and requirements that will be implemented within and around the Site to reduce the threat to occupants, residents, and fire fighters in the event of a fire.

1.2 Background

The Site is located at 2 & 6 Bond Place, Pegs Creek, within the City of Karratha (hereafter referred to as the 'Site'). The landowner proposes to construct multiple residential and recreation buildings and an administration building, to be utilised for a Women's Refuge, with the Site Plan provided in Figure 1.

The application is considered Minor Development, being a vulnerable land use within an existing residential development.

The Site is located within a bushfire prone area, as declared by *State Planning Policy 3.7: Planning in Bushfire Prone Areas* (Figure 2). The highest classified vegetation to the Site is Class C Shrubland Upslope/Flat, resulting in some structures achieving a BAL-FZ (Appendix A). The City of Karratha advise that there may be opportunities to reduce the fuel load in a small area of the adjoining reserve abutting the subject site, subject to environmental approvals and a legal agreement with the City, to achieve a BAL-29 rating, with maintenance in perpetuity the responsibility of the landowner of 2 & 6 Bond Place.

Access to the Site is from Bond Place which provides safe evacuation routes through wide, well-constructed public roads with minimum 6 m trafficable surface.

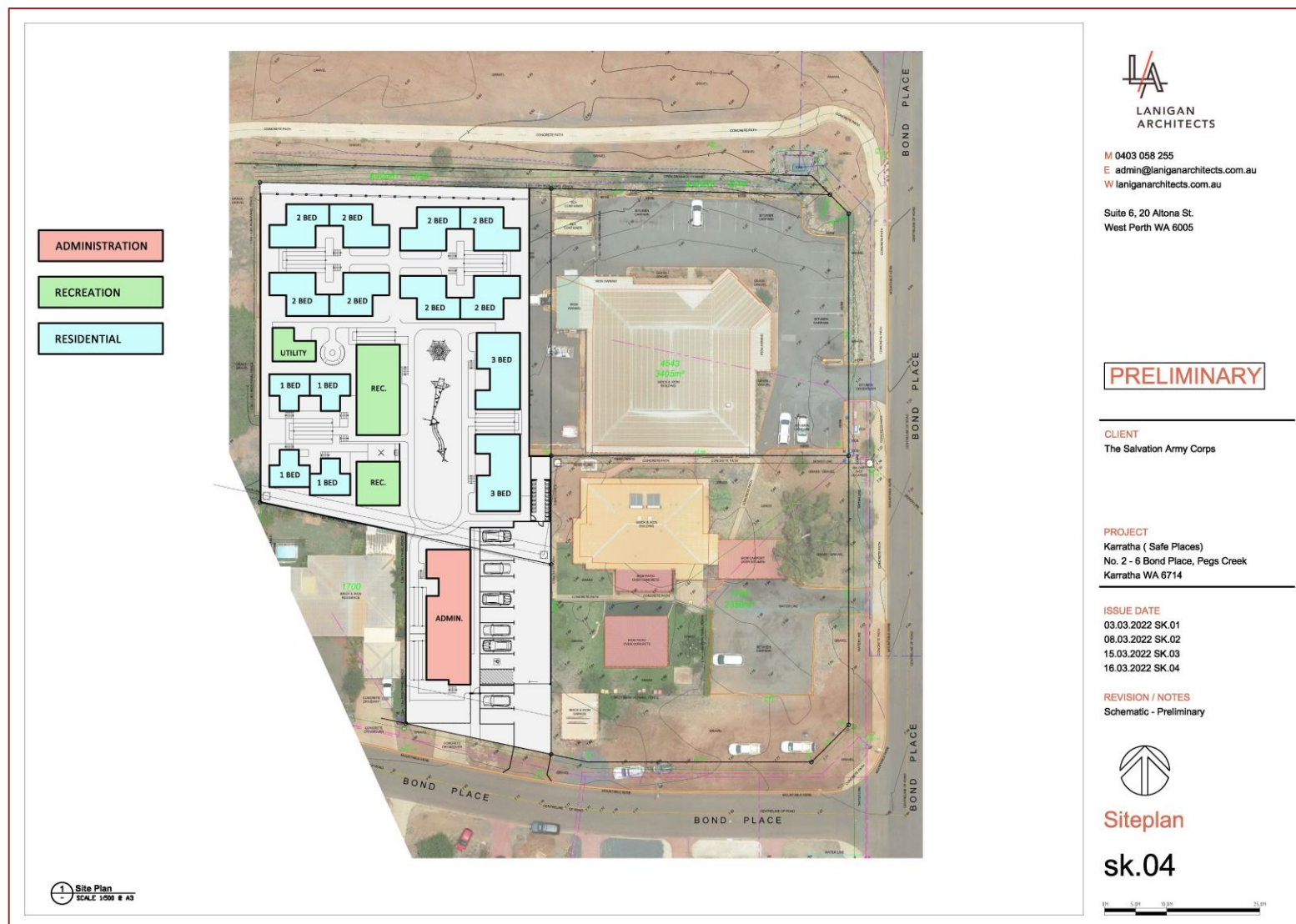


Figure 1 Proposed Site Plan for 2 & 6 Bond Place, Pegs Creek

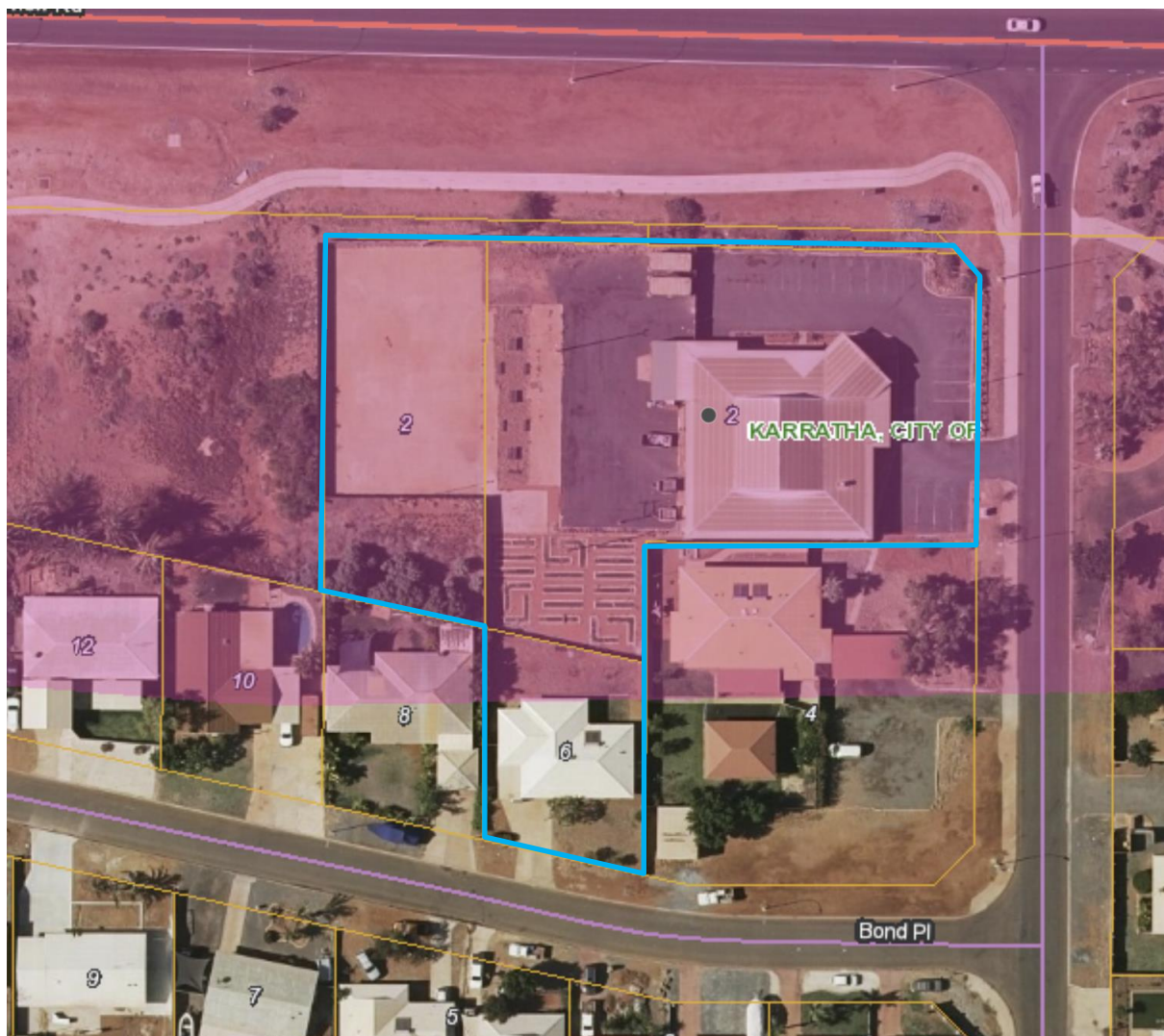


Figure 2 Extract Map of Bushfire Prone Areas with 2 & 6 Bond Street, Pegs Creek, shown in the blue polygon

1.3 Regulatory Compliance Requirements

1.3.1 Planning and Development Act 2005

On 7 December 2015, the State Government introduced by Gazette, a state map of Bushfire Prone Areas by order under the *Fire and Emergency Services Act 1998* and introduced development controls in bushfire prone areas through the *Planning and Development Act 2005*. These controls were in turn guided by *Planning in Bushfire Prone Areas* and *Guidelines for Planning in Bushfire Prone Areas* (Guidelines).

The State Planning Policy (SPP) 3.7 and Guidelines now form the foundation for fire risk management planning in WA at a community and land development level.

The SPP 3.7 recognises that whilst bushfire is now an important consideration in subdivision design and protecting the community, there are many lots not yet developed and many buildings that do not comply with contemporary construction requirements for bushfire prone areas.

Vulnerable Land Uses

Vulnerable land uses according to the Guidelines for Planning in Bushfire Prone Areas V1.4 applies to:

“Land uses designed to accommodate people who are less physically or mentally able and are likely to present evacuation challenges. Examples may include the elderly, children (under 18 years of age), and the sick or injured, in dedicated facilities such as aged or assisted care, nursing homes, education centres, education establishments, schools, child care centres, hospitals and rehabilitation centres.”

Consideration should be given to an Emergency Evacuation Plan and included within the statement against the bushfire protection criteria.

The proposed development should address the bushfire protection criteria with the aim of achieving BAL-29 or less for the Site. If BAL-29 cannot be achieved, the proposed development should be assessed against clause 6.7.1 of SPP 3.7 and any other planning matters as appropriate.

1.3.2 Building Act 2011

The *Building Act 2011* applies the construction standards of the *Building Code of Australia* which refers to *AS3959-2018 Construction of Buildings in Bushfire Prone Areas*. AS3959 includes the deemed to satisfy solutions which demonstrates compliance with the bushfire performance requirements. AS3959 applies to the construction of Class 1, 2, 3 buildings and associated 10a buildings and decks.

Exemptions for minor work and minor alterations from AS3959-2018 requirements are provided. AS3959 does not operate retrospectively to existing buildings, if the use does not change.

Environmental Considerations

2.1 Native vegetation - modification and clearing

The proposal is to construct a group of buildings to be utilised for a Women's Refuge including residential buildings, recreational buildings and an administration building.

To achieve a BAL-29 rating, vegetation modification to the standards of an Asset Protection Zone will be required within the adjoining City of Karratha Reserve. Any vegetation modification within the City's reserve is subject to environmental approvals and the City's consent. A legal agreement is required to be established between the City of Karratha and the landowners of 2 & 6 Bond Place, Pegs Creek, to ensure that this area can be managed by the landowners as an Asset Protection Zone, in perpetuity.

This Bushfire Management Plan assumes that environmental and City of Karratha's approvals for any vegetation modification will be achieved prior to the commencement of any vegetation modification.

A basic desktop assessment for environmental values has been completed. Data provided through the Protected Matters Search Tool (PMST), accessed 11th April 2022, a number of Threatened Fauna species or species habitat that may occur within the area (Table 1).

Table 1 Significant Environmental Values within 1 km of the Site (PMST Report)

Significant Environmental Values	Yes / No	If Yes, describe
Conservation Covenant	No	Nil
Bushforever	No	Nil
Conservation Wetland or Buffer	No	Nil
Threatened Ecological Communities	No	Nil
Threatened Flora	No	Nil
Threatened Fauna	Yes	There are a number of declared rare fauna species or species habitat that are known to occur within the area.
Environmentally Sensitive Area	No	Nil
Significant for Conservation Local Strategy	No	Nil

2.2 Re-vegetation / Landscape Plans

No active revegetation is required. Any future planting of vegetation, or failure to maintain the Asset Protection Zone to the standard detailed in this BMP, can change the BAL rating significantly.

BUSHFIRE ASSESSMENT

3.1 Bushfire Attack Level Assessment

See Appendix A.

3.2 Determined Bushfire Attack Level

The determined Bushfire Attack Level (Highest BAL) for the Site has been determined in accordance with clause 2.2.6 of AS3959-2018

Determined Bushfire Attack Level	BAL-FZ
Achievable Bushfire Attack Level	BAL-29*

*A legal agreement between the City of Karratha and the owners of 2 & 6 Bond Place is required to be established as a condition of this Bushfire Management Plan, to ensure this separation distance must be managed, in perpetuity, to the Standards of the Guidelines for Planning in Bushfire Prone Areas as an Asset Protection Zone by the landowners of Lot 2 & 6 Bond Place, Pegs Creek.

BUSHFIRE RISK CONTROLS

4.1 Bushfire Protection Criteria

ELEMENT 1: LOCATION	
Intent: To ensure that strategic planning proposals, subdivision and development applications are located in areas with the least possible risk of bushfire to facilitate the protection of people, property and infrastructure.	
Acceptable Solution	Compliance
<p>A1.1 Development location</p> <p><i>The strategic planning proposal, subdivision and development application is located in an area that is or will, on completion, be subject to either a moderate or low bushfire hazard level, or BAL-29 or below.</i></p>	<p>The BAL Assessment has determined proposed buildings to be BAL-FZ (Appendix A).</p> <p>Subject to the City of Karratha’s approval, BAL-29 can be achieved with this implementation of an Asset Protection Zone maintained to the standards of <i>The Guidelines for Planning in Bushfire Prone Areas</i> (Figure 3) in perpetuity, as described in Element 2.1 below.</p> <p>Further justification against SPP 3.7 clause 6.7.1 is not required.</p>

ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT

Intent: To ensure that the siting and design of development minimises the level of bushfire impact

Acceptable Solution

A2.1 Asset Protection Zone

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

Width: Measured from any external wall or supporting post or column of the proposed building, and of sufficient size to ensure the potential radiant heat impact of a bushfire does not exceed 29kW/m² (BAL-29) in all circumstances.

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

Management: the APZ is managed in accordance with the requirements of 'Standards for Asset Protection Zones' (Figure 3).

Compliance

An Asset Protection Zone can be maintained to the standards in the *Guidelines for Planning in Bushfire Prone Areas* (Figure 3) surrounding the proposed structures.

The width of the Asset Protection for BAL-29 is:

- 9 m to the Class C Shrubland Upslope/Flat.

This Asset Protection Zone will extend into the adjoining City of Karratha's Reserve. A legal agreement between the City of Karratha and the landowners of 2 & 6 Bond Place is required to be established as a condition of this Bushfire Management Plan. This is required to be established prior to any vegetation modification, to ensure that the Asset Protection Zone can be maintained, in perpetuity, to the Standards of the *Guidelines for Planning in Bushfire Prone Areas* by the landowners of Lot 2 & 6 Bond Place, Pegs Creek.

This Asset Protection Zone (Figure 4) will reduce the radiant heat levels to the greatest extent possible.

Residential lots adjacent to the Site require management to the City's Local Fire Information (which may be subject to review from time to time) for Town-Site Land, ensuring these areas will also be managed to APZ standards in perpetuity.

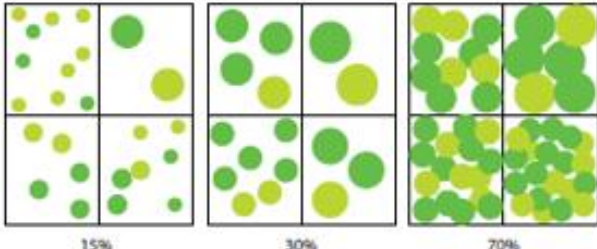
OBJECT	REQUIREMENT
Fences within the APZ	<ul style="list-style-type: none"> Should be constructed from non-combustible materials (for example, iron, brick, limestone, metal post and wire, or bushfire-resisting timber referenced in Appendix F of AS 3959).
Fine fuel load (Combustible, dead vegetation matter <6 millimetres in thickness)	<ul style="list-style-type: none"> Should be managed and removed on a regular basis to maintain a low threat state. Should be maintained at <2 tonnes per hectare (on average). Mulches should be non-combustible such as stone, gravel or crushed mineral earth or wood mulch >6 millimetres in thickness.
Trees* (>6 metres in height)	<ul style="list-style-type: none"> Trunks at maturity should be a minimum distance of six metres from all elevations of the building. Branches at maturity should not touch or overhang a building or powerline. Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation. Canopy cover within the APZ should be <15 per cent of the total APZ area. Tree canopies at maturity should be at least five metres apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided that the total canopy cover within the APZ will not exceed 15 per cent and are not connected to the tree canopy outside the APZ. <p>Figure 19: Tree canopy cover – ranging from 15 to 70 per cent at maturity</p>  <p>15% 30% 70%</p>
Shrub* and scrub* (0.5 metres to six metres in height). Shrub and scrub >6 metres in height are to be treated as trees.	<ul style="list-style-type: none"> Should not be located under trees or within three metres of buildings. Should not be planted in clumps >5 square metres in area. Clumps should be separated from each other and any exposed window or door by at least 10 metres.
Ground covers* (<0.5 metres in height. Ground covers >0.5 metres in height are to be treated as shrubs)	<ul style="list-style-type: none"> Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above. Can be located within two metres of a structure, but three metres from windows or doors if >100 millimetres in height.
Grass	<ul style="list-style-type: none"> Grass should be maintained at a height of 100 millimetres or less, at all times. Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation.
Defendable space	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Should be located on the side of a building furthest from the likely direction of a bushfire or on the side of a building where surrounding classified vegetation is upslope, at least one metre from vulnerable parts of a building. The pressure relief valve should point away from the house. No flammable material within six metres from the front of the valve. Must sit on a firm, level and non-combustible base and be secured to a solid structure.

Figure 3 Asset Protection Zone Requirements from Guidelines for Planning in Bushfire Prone Areas (WAPC, Dec 2021)

ELEMENT 3: VEHICULAR ACCESS

Intent: To ensure that the vehicular access serving a subdivision/development is available and safe during a bushfire event.

Acceptable Solution

A3.6 Two access routes

There are no private driveway technical requirements where the private driveway is:

- *Within a lot serviced by reticulated water;*
- *No greater than 70 metres in length between the most distant external part of the development site and the public road measured as a hose lay; and*
- *Accessed by a public road where the road speed is not greater than 70km/h/*

In circumstances where all of the above conditions are not met, or the private driveway is in a non-reticulated water area, the private driveway is to meet all the following requirements:

- *Requirements in Table 6, Column 4;*
- *Passing bays every 200 metres with a minimum length of 20 metres and a minimum additional trafficable width of two metres (i.e. the combined trafficable width of the passing bay and constructed private driveway to be a minimum six metres); and*
- *Turn-around area as shown in Figure 28 and within 30 metres of the habitable building.*

Compliance

Compliance with this acceptable solution has been met.

No technical requirements for the private driveway apply to this Site, as the Site is serviced by a reticulated water supply, the most distance external part of the development and the public road is less than 70 m and the Site is access via a public road where the road speed in less than 70km/h.

ELEMENT 4: WATER

Intent: To ensure that water is available to the subdivision, development or land use to enable people, property and infrastructure to be defended from bushfire.

Acceptable Solution

A4.2 Provision of water for firefighting purposes

Where a reticulated water supply is existing or proposed, hydrant connection(s) should be provided in accordance with the specifications of the relevant water supply authority. Where the specifications cannot be met, then the following applies:

- The provision of a water tank(s), in accordance with the requirements of Schedule 2; and*

Where the provision of a strategic water tank(s) is applicable, then the following requirements apply:

- Land is to be ceded free of cost to the local government for the placement of the tank(s);*
- The lot or road reserve where the tank is to be located is identified on the plan of subdivision;*
- Tank capacity, construction, and fittings, provided in accordance with the requirements of Schedule 2; and*
- A strategic water tank is to be located no more than 10 minutes from the subject site (at legal road speeds).*

Where a subdivision includes an existing habitable building(s) that is to be retained, a water supply should be provided to this existing habitable building(s), in accordance with the requirements listed above.

Compliance

Compliance with the Acceptable Solution has been met.

The Site has reticulated water to the Water Corporation's 'No. 63 Water Reticulation Standard'.

Two existing fire hydrants are located on Bond Street, within 80 m of the Site, therefore the provision of water tank(s) are not required.

Spatial representation of the proposed risk management measures



NOTES

An Asset Protection Zone to the Lot Boundary is required to be managed to the standards of the Guidelines (Figure 3).

The proposed APZ to achieve BAL-29 is 9 m in width and extends into the adjoining Reserve. A legal agreement between the City of Karratha and the owners of 2 & 6 Bond Place is requiring to be established as a condition of this Bushfire Management Plan, prior to any vegetation modification, to ensure at the Asset Protection Zone is maintained, in perpetuity, to the Standards of the Guidelines for Planning in Bushfire Prone Areas by the landowners of Lot 2 & 6 Bond Place, Pegs Creek

The Site has a reticulated water supply, with multiple existing fire hydrants located on Bond Place.

Installation and upkeep of the APZ is the responsibility of the landowner. The measures listed above shall be implemented prior to the occupation of the site and shall continue to be maintained in perpetuity.

LEGEND

- Lot Boundary
- Proposed Structure**
 - Administration
 - Recreation
 - Residential
- Hydrant
- Asset Protection Zone
- APZ - Subject to City approvals
- Distance Post

PROPERTY / ASSESSMENT DETAILS

Property Address: 2 & 6 Bond Place, Pegs Creek
 Project No: 221297
 Prepared by: D Cuthbert
 Accreditation Level: Level 1
 Accreditation Number: 48409
 Accreditation Expiry Date: 02/23



0 15 30
Meters



www.ecosystemsolutions.com.au
 (08) 9759 1960

Figure 4

Bushfire Management Strategies

4.2 Vulnerable Development Emergency Evacuation (cl6.6)

The Bushfire Emergency Evacuation Plan, Appendix C, has followed the State Government of Victoria *CFA Guide to Developing a Bushfire Emergency Plan* to determine whether evacuation or shelter presents the safest option. It has followed the *NSW Rural Fire Service - Guide to Developing a Bush Fire Emergency Management Plan*, the *Bushfire Protection Guidelines WA*, and AS 3745-2010 to identify the triggers for Evacuation.

The following assumptions have been made:

- The Site will be hosted.
- The Site host can see and smell smoke and can see a fire.
- The Site host can read and understand the English language.
- A vehicle/s with capacity for all occupants and licenced driver will be available at all times in case evacuation is required.

The **primary and best course of action is to evacuate early in the event of a bushfire**. Any evacuation from the Site should be by vehicle, because a vehicle will provide a level of protection and minimise the time exposed to extreme conditions compared to travel as a pedestrian. While evacuation is preferred, the buildings should be able to provide adequate protection during a bushfire if no alternative exists.

Key feature to achieve occupant life safety include:

- Establishing alert triggers for evacuation and shelter;
- Establishing an evacuation and shelter procedure; and
- A clear display of evacuation and shelter in place locations.

Note: the fire front will be preceded by an ember attack for a period longer than the passage of the fire front itself, with a relatively quick decay after its passage. Secondary fires in structures can pose a longer duration of hazard. Buildings within the Site used to shelter within may be ignited, although it is expected that sufficient time is provided after the fire front has passed to safely escape the building. Importantly, any person taking shelter must monitor conditions and be prepared to evacuate the building when safest to do so - after the fire front has passed.

5 Responsibilities for Implementation and Management of the Required Bushfire Measures

The responsibilities for the Landowner and City of Karratha are outlined in Table 2 and Table 3, respectively.

Table 2 Landowner / Occupier Responsibilities

Number	Action	Due
1	Establish a legally binding agreement with the City of Karratha to allow for vegetation modification to the Standards of an Asset Protection Zone, in perpetuity, within the adjoining Reserve, by the Salvation Army.	Prior to Planning approval, Prior to vegetation modification & Ongoing
2	Establish and maintain the Asset Protection Zone (APZ) to the dimensions and standard stated in the Bushfire Management Plan, specified in Section 2.1 Native Vegetation - modification and Clearing and Section 4.1 Element 2: Siting and design of development.	Post Planning approval, Prior to building permit & Ongoing
3	Be familiar with this BMP and in particular the Bushfire Emergency Evacuation Plan (Appendix C) and ensure that appropriate arrangements are in place at all times for the BMP and the Bushfire Emergency Evacuation Plan to be complied with.	During use as a Women's Refuge
4	Review and update the Bushfire Emergency Evacuation Plan	Annually
5	Install the Emergency Evacuation Diagram on the inside face of all external doors, ensuring it is clearly visible to all staff and occupants.	Prior to use as Women's Refuge
6	Install and/or maintain firefighting equipment, conduct Seasonal and Daily (during the fire season) preparations (refer to Appendix C).	Prior to use as Women's Refuge & Annually / Daily

7	Notification to be placed on the title in the form of a Section 70a notifying future purchasers that the lot is within a designated bushfire prone area and the development is to comply with the Bushfire Management Plan. Wording to be provided by the City of Karratha.	Prior to use as Women's Refuge
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Table 3 *City of Karratha's Responsibilities*

Number	Action	Due
1	Monitor landowner compliance with the annual Firebreak Notice.	Ongoing
2	Develop and maintain district bushfire fighting services and facilities.	Ongoing
3	Promote education and awareness of bushfire prevention and preparation measures through the community.	Ongoing
4	Administer the requirements of the <i>Bush Fires Act 1954, Planning and Development Act 2005</i> and the <i>Building Act 2011</i> .	Ongoing
5	Maintain public roads in proximity to the Site according to the Guidelines.	Ongoing
6	Establish a legally binding agreement with the landowner to allow for vegetation modification to the Standards of an Asset Protection Zone, in perpetuity, within the adjoining Reserve.	Prior to Planning approval, Prior to vegetation modification & Ongoing
7	Monitor landowner compliance with the Bushfire Management Plan	Ongoing

Conclusion

The qualitative assessment comparing the proposal with the bushfire threat against the Bushfire Protection Criteria has identified practical solutions to achieve occupant life safety and minimise the damage to buildings.

This justification is based upon:

- The Site maintaining an Asset Protection Zone, with public road exit routes and a reticulated water supply for firefighting purposes.
- The buildings can be used to shelter within, as a last resort.
- Landowners implementing their ongoing management responsibilities outlined in this BMP and BEEP and to assist occupants and staff in preparing for and responding to a bushfire event as may be made by the City or the Department of Fire and Emergency Services.

The Landowners acknowledges that:

- A BAL-29 is a high radiant heat rating, with an increasing ember attack and radiant heat.
- Bushfire protection is their responsibility, assistance from emergency services in a bushfire event should not be relied upon.
- Early evacuation is the primary and best option in the event of a bushfire.
- Damage to buildings and grounds will occur during a bushfire event.

Glossary

AS3959: Australian Standard 3959 Construction of Buildings in Bushfire Prone Areas.

Asset Protection Zone (APZ): A low fuel area immediately surrounding a building, as defined in the Guidelines.

BAL: Bushfire Attack Level (BAL) as set out in the Australian Standards 3959 Construction of Buildings in Bushfire Prone Areas (AS3959, as referenced in the Building Code of Australia (as amended).

BAL Assessment: An assessment prepared in a manner and form set out in AS3959 to determine a BAL. It is strongly recommended that BAL Assessments are prepared by accredited Level 1 BAL Assessors, unless otherwise exempt in these Guidelines.

Bushfire: An unplanned fire burning vegetation. A generic term which includes grass fires, forest fires and scrub fires both with or without a suppression objective.

Bush Fire Season: Dates determined by the Local Government each year where compliance with the Firebreak Notice is required under Part 3 Division 6 Section 33 of the *Bush Fires Act 1954*. The Firebreak Notice also includes dates where burning is prohibited and dates where burning is restricted with an approved burning permit required.

Bushfire Hazard: The potential or existing flammability of vegetation that, in association with topography and slope, when ignited may cause harm to people and/or damage to property and/or infrastructure.

Bushfire Management Plan (BMP): A document that sets out short, medium and long term risk management strategies for the life of the development. It is strongly recommended that Bushfire Management Plans are prepared by accredited Bushfire Planning Practitioners in accordance with the requirements set out in the Guidelines on behalf of the landowner/proponent with the assistance of the responsible authority for emergency services where required.

Bushfire Planning Practitioner: A person who holds Level Two or Level Three accreditation under the Western Australian Bushfire Association Framework.

Bushfire Prone Area: An area that has been designated by the Fire and Emergency Services Commissioner under s.18P of the Fire and Emergency Services Act 1998 as an area that is subject, or likely to be subject, to bushfires. Such areas are identified on the Map of Bush Fire Prone Areas and can be found on the Department of Fire and Emergency Services website.

Bushfire Risk: The chance of a bushfire igniting, spreading and causing damage to people, property and infrastructure.

Bushfire Risk Management: Means the application of the bushfire protection criteria contained in the Guidelines.

Development Application: An application for approval to carry out development or change a land use under either a local planning scheme or regional planning scheme. This includes local development plans but excludes application for single house and ancillary dwellings on a lot or lots less than 1,100m².

Guidelines: Refers to the Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015), as amended (currently V1.3, Dec 2017).

Minor Development: Refers to applications in residential built-out areas at a scale which may not require full compliance with the relevant policy measures. Classes of development considered under this definition, with the exclusion of applications for unavoidable development, are;

- A single house on an existing lot 1,100m² or greater;
- An ancillary dwelling on a lot of 1,100m² or greater;
- Change to vulnerable land use in an existing residential development.

Residential Built out Area: A lot that has access to reticulated water and is within or contiguous with, urban area of town (or similar)

Short Term Accommodation: Temporary accommodation provided either continuously or from time to time with no guest accommodation for more than three months in any 12-month period.

Vulnerable Land Use: A land use where persons may be less able to respond in a bushfire emergency. Examples of what constitutes a vulnerable land use are provided in the Guidelines.

WAPC: Western Australian Planning Commission

Appendix A BAL Assessment

Bushfire Attack Level Assessment Report

Prepared by a BPAD Accredited Practitioner



Fire Protection Association Australia Life Property Environment



AS 3959 BAL Assessment Report

This report has been prepared by an Accredited BPAD Practitioner using the Simplified Procedure (Method 1) as detailed in Section 2 of AS 3959 - 2018. FPA Australia makes no warranties as to the accuracy of the information provided in the report. All enquiries related to the information and conclusions presented in this report must be made to the BPAD Accredited Practitioner.

Property Details and Description of Works

Address Details	Unit no	Street no	Lot no	Street name / Plan Reference		
		2 & 6		Bond Place		
Local government area	Suburb			State		Postcode
	Pegs Creek			WA		6714
Main BCA class of the building	City of Karratha					
	Class 1a	Use(s) of the building	Women's Refuge			
Description of the building or works	Construction of buildings to be utilised as a Women's Refuge					

Report Details

Report / Job Number	Report Version	Assessment Date	Report Date
221297	A	21 April 2022	22 April 2022

BPAD Accredited Practitioner Details

Name Dani Cuthbert	 BPAD Accreditation Number: 48409
Company Details  www.ecosystemsolutions.com.au (08) 9759 1960	

Reliance on the assessment and determination of the Bushfire Attack Level contained in this report should not extend beyond a period of 12 months from the date of issue of the report. If this report was issued more than 12 months ago, it is recommended that the validity of the determination be confirmed with the Accredited Practitioner and where required an updated report issued.

SITE ASSESSMENT

The assessment of the Site was undertaken on 21st April 2022, by a BPAD Accredited Practitioner for the purpose of determining the Bushfire Attack Level in accordance with AS 3959-2018 Simple Procedure (Method 1). The current extent of the vegetation is provided in Figure 1, with the Post Development Vegetation provided in Figure 2. The BAL Contour provided in Figure 3 & detailed view in Figure 4 is based on the Post Development Vegetation. The BAL Rating for each structure is provided in Figure 5.

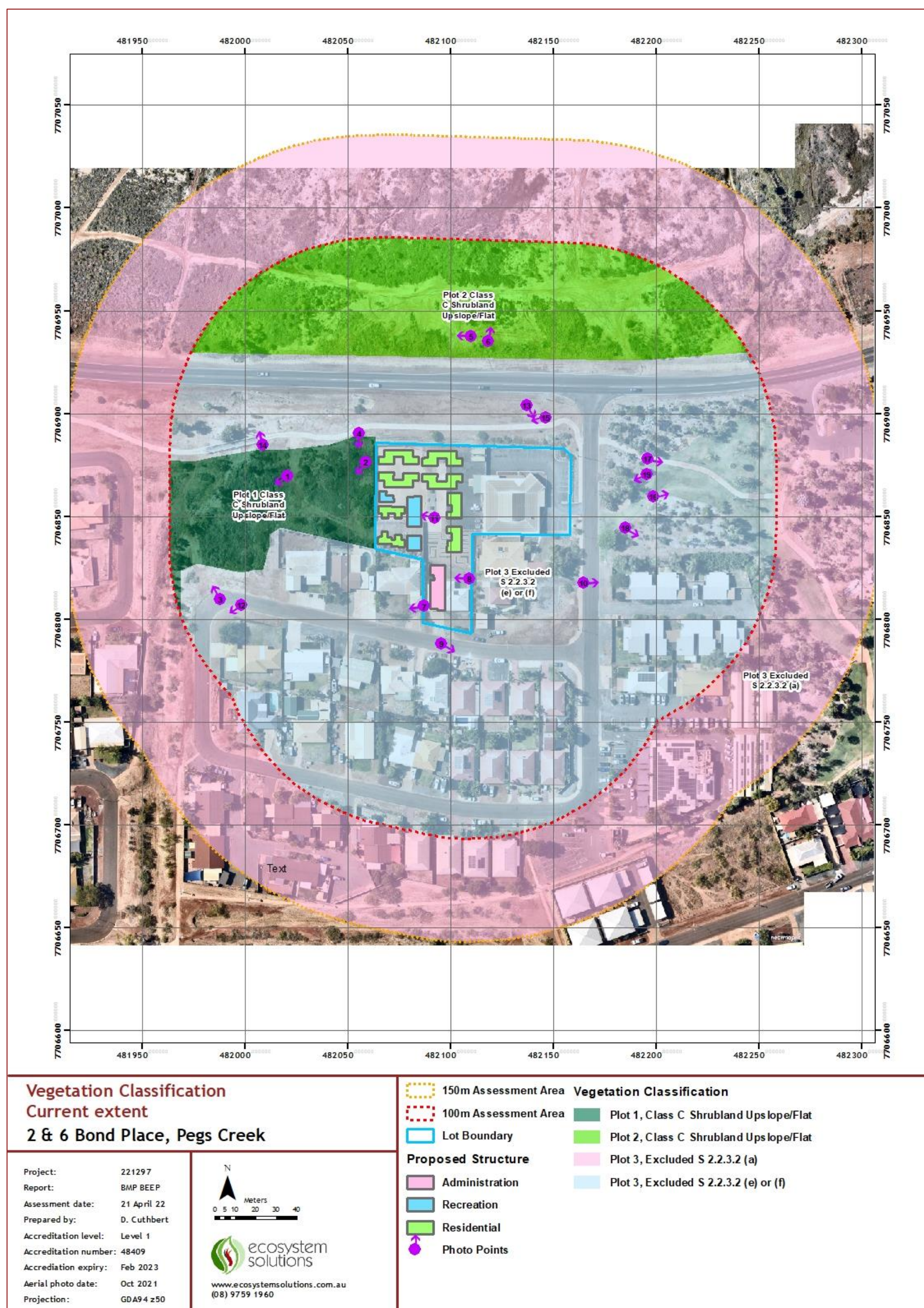


Figure 1 Vegetation Classification - Current Extent Map for 2 & 6 Bond Place, Pegs Creek

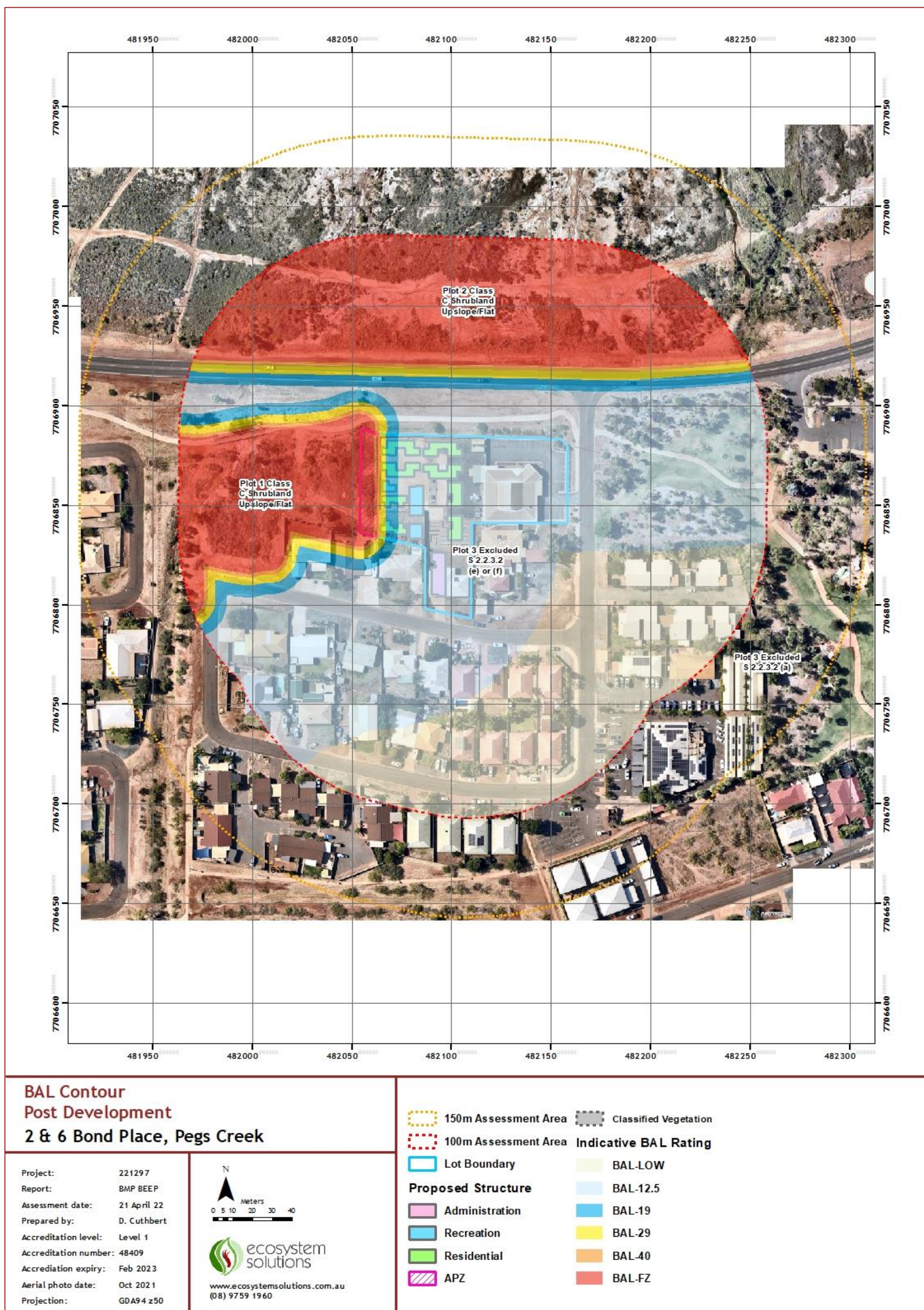


Figure 3 BAL Contour Map for 2 & 6 Bond Place, Pegs Creek

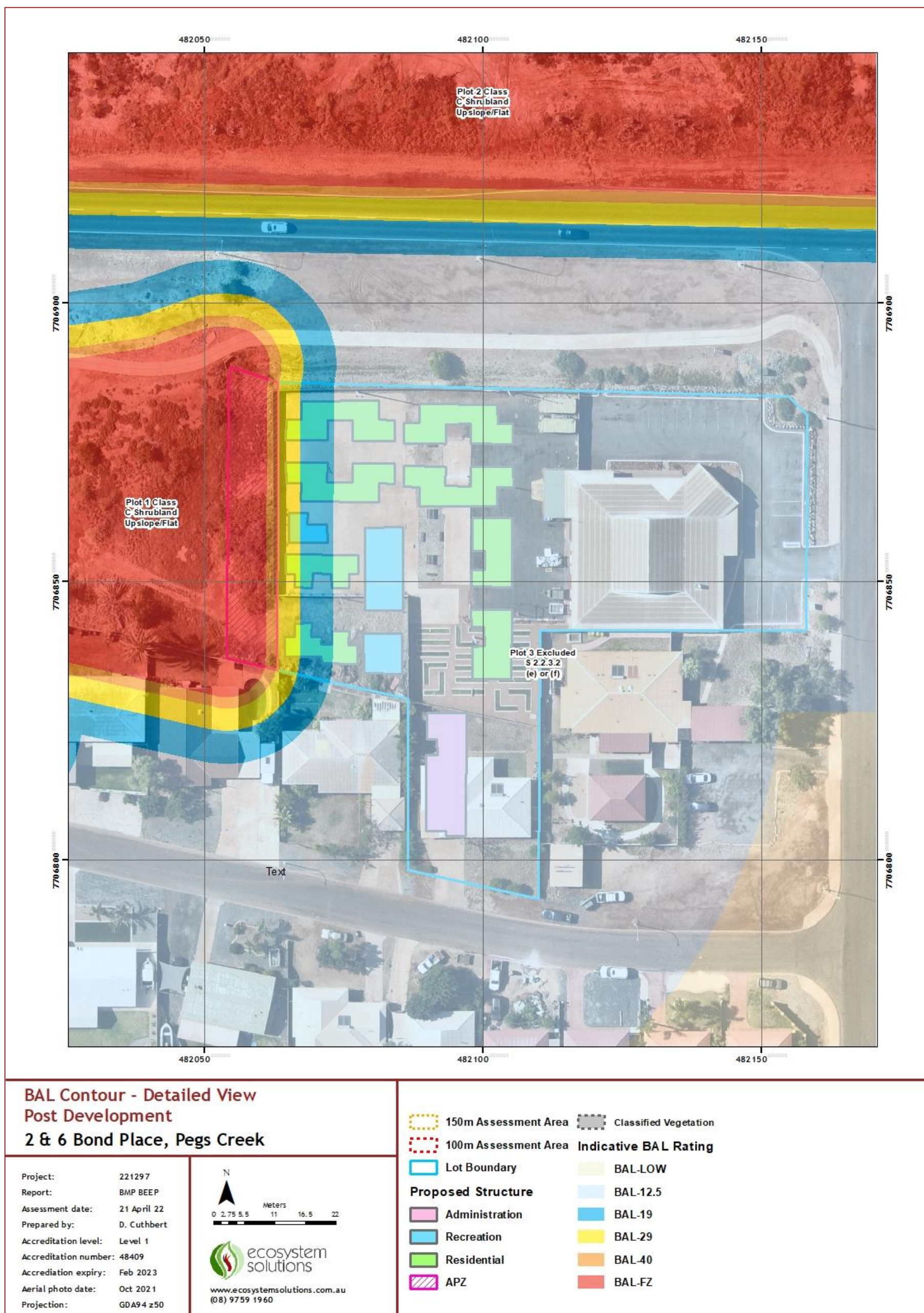


Figure 4 BAL Contour Map - Detailed View for 2 & 6 Bond Place, Pegs Creek

VEGETATION CLASSIFICATION

All vegetation within 150 m of the Site was classified in accordance with Clause 2.2.3 of AS 3959-2018. Each distinguishable vegetation plot with the potential to determine the Bushfire Attack Level is identified below.


Photo ID:	1	Plot:	1
Vegetation Classification or Exclusion Clause			
Class C Shrubland - Open heath C-11			
Slope Under Vegetation			
Upslope/Flat			
Description / Justification for Classification			
<p>Open Shrubland vegetation up to two meters in height. This Plot contains scattered trees with trees with a canopy cover of less than 10%.</p> <p>The Vegetation Classification - Post Development mapping is based on an area of this Plot being managed to Asset Protection Zone standards by the Salvation Army, with approval by the City of Karratha, and therefore this area will be excludable under S 2.2.3.2 (f) post development.</p>			
			

Photo ID:	2	Plot:	1
Vegetation Classification or Exclusion Clause			
Class C Shrubland - Open heath C-11			
Slope Under Vegetation			
Upslope/Flat			
Description / Justification for Classification			
<p>Open Shrubland vegetation up to two meters in height. This Plot contains scattered trees with trees with a canopy cover of less than 10%.</p> <p>The Vegetation Classification - Post Development mapping is based on an area of this Plot being managed to Asset Protection Zone standards by the Salvation Army, with approval by the City of Karratha, and therefore this area will be excludable under S 2.2.3.2 (f) post development.</p>			

DIRECTION
222 deg(T)
50K 482058
7706876
ACCURACY 10 m
DATUM WGS84

Bond place
21/4/2022, 1:39:45 pm


Photo ID:	3	Plot:	1
Vegetation Classification or Exclusion Clause			
Class C Shrubland - Open heath C-11			
Slope Under Vegetation			
Upslope/Flat			
Description / Justification for Classification			
<p>Open Shrubland vegetation up to two meters in height. This Plot contains scattered trees with trees with a canopy cover of less than 10%.</p>			

DIRECTION
331 deg(T)
50K 481987
7706809
ACCURACY 7 m
DATUM WGS84

Bond place
21/4/2022, 2:03:10 pm

Photo ID:	4	Plot:	1
Vegetation Classification or Exclusion Clause			
Class C Shrubland - Open heath C-11			
Slope Under Vegetation			
Upslope/Flat			
Description / Justification for Classification			
Open Shrubland vegetation up to two meters in height. This Plot contains scattered trees with trees with a canopy cover of less than 10%.			


DIRECTION
180 deg(T)
50K 482055
7706890
ACCURACY 6 m
DATUM WGS84



Bond place
21/4/2022, 1:45:14 pm

Photo ID:	5	Plot:	2
Vegetation Classification or Exclusion Clause			
Class C Shrubland - Open heath C-11			
Slope Under Vegetation			
Upslope/Flat			
Description / Justification for Classification			
Open Shrubland vegetation up to two meters in height. This Plot contains scattered trees with trees with a canopy cover of less than 10%.			


DIRECTION
272 deg(T)
50K 482110
7706937
ACCURACY 5 m
DATUM WGS84



Bond place
21/4/2022, 1:56:41 pm

Photo ID:	6	Plot:	2
Vegetation Classification or Exclusion Clause			
Class C Shrubland - Open heath C-11			
Slope Under Vegetation			
Upslope/Flat			
Description / Justification for Classification			
Open Shrubland vegetation up to two meters in height. This Plot contains scattered trees with trees with a canopy cover of less than 10%.			

DIRECTION
7 deg(T)
50K 482118
7706934
ACCURACY 5 m
DATUM WGS84



Bond place
21/4/2022, 1:56:29 pm


Photo ID:	7	Plot:	3
Vegetation Classification or Exclusion Clause			
Excludable - 2.2.3.2(e) Non Vegetated Areas			
Description / Justification for Classification			
<p>Areas over 100 m from the Site are excluded under S 2.2.3.2 (a). Non vegetated areas including roads, firebreaks, and existing buildings are excluded under S 2.2.3.2 (e). Low threat vegetation including managed grasses and gardens are excluded under S2.2.3.2 (f). Town-site land where the area is 2,024m² or less are required to remove all flammable material on the land, except living trees, as per the City of Karratha's Local Fire Information, ensuring that these areas are maintained in a low fuel state in perpetuity.</p> <p>The Post Development Vegetation Map (Figure 2) shows that the Asset Protection Zone extends into the adjoining reserve. This area is required to be managed to Asset Protection Zone standards by the Salvation Army, with the approval of the City of Karratha, in perpetuity, ensuring that this area is excludable under S 2.2.3.2 (f).</p>			
			


Photo ID:	8	Plot:	3
Vegetation Classification or Exclusion Clause			
Excludable - 2.2.3.2(e) Non Vegetated Areas			
Description / Justification for Classification			
<p>Areas over 100 m from the Site are excluded under S 2.2.3.2 (a). Non vegetated areas including roads, firebreaks, and existing buildings are excluded under S 2.2.3.2 (e). Low threat vegetation including managed grasses and gardens are excluded under S2.2.3.2 (f). Town-site land where the area is 2,024m² or less are required to remove all flammable material on the land, except living trees, as per the City of Karratha's Local Fire Information, ensuring that these areas are maintained in a low fuel state in perpetuity.</p> <p>The Post Development Vegetation Map (Figure 2) shows that the Asset Protection Zone extends into the adjoining reserve. This area is required to be managed to Asset Protection Zone standards by the Salvation Army, with the approval of the City of Karratha, in perpetuity, ensuring that this area is excludable under S 2.2.3.2 (f).</p>			
 <p>DIRECTION 273 deg(T) 50K 482108 7706819 ACCURACY 5 m DATUM WGS84</p> <p>Bond place 21/4/2022, 1:49:49 pm</p>			



Photo ID:	9	Plot:	3
Vegetation Classification or Exclusion Clause			
Excludable - 2.2.3.2(f) Low Threat Vegetation			
Description / Justification for Classification			
<p>Areas over 100 m from the Site are excluded under S 2.2.3.2 (a). Non vegetated areas including roads, firebreaks, and existing buildings are excluded under S 2.2.3.2 (e). Low threat vegetation including managed grasses and gardens are excluded under S2.2.3.2 (f). Town-site land where the area is 2,024m2 or less are required to remove all flammable material on the land, except living trees, as per the City of Karratha's Local Fire Information, ensuring that these areas are maintained in a low fuel state in perpetuity.</p> <p>The Post Development Vegetation Map (Figure 2) shows that the Asset Protection Zone extends into the adjoining reserve. This area is required to be managed to Asset Protection Zone standards by the Salvation Army, with the approval of the City of Karratha, in perpetuity, ensuring that this area is excludable under S 2.2.3.2 (f).</p>			
			

Photo ID:	10	Plot:	3
Vegetation Classification or Exclusion Clause			
Excludable - 2.2.3.2(f) Low Threat Vegetation			
Description / Justification for Classification			
<p>Areas over 100 m from the Site are excluded under S 2.2.3.2 (a). Non vegetated areas including roads, firebreaks, and existing buildings are excluded under S 2.2.3.2 (e). Low threat vegetation including managed grasses and gardens are excluded under S2.2.3.2 (f). Town-site land where the area is 2,024m2 or less are required to remove all flammable material on the land, except living trees, as per the City of Karratha's Local Fire Information, ensuring that these areas are maintained in a low fuel state in perpetuity.</p> <p>The Post Development Vegetation Map (Figure 2) shows that the Asset Protection Zone extends into the adjoining reserve. This area is required to be managed to Asset Protection Zone standards by the Salvation Army, with the approval of the City of Karratha, in perpetuity, ensuring that this area is excludable under S 2.2.3.2 (f).</p>			

DIRECTION
84 deg(T)

50K 482164
7706817

ACCURACY 38 m
DATUM WGS84



Bond place21/4/2022, 1:53:50 pm


Photo ID:	11	Plot:	3
Vegetation Classification or Exclusion Clause			
Excludable - 2.2.3.2(f) Low Threat Vegetation			
Description / Justification for Classification			
<p>Areas over 100 m from the Site are excluded under S 2.2.3.2 (a). Non vegetated areas including roads, firebreaks, and existing buildings are excluded under S 2.2.3.2 (e). Low threat vegetation including managed grasses and gardens are excluded under S2.2.3.2 (f). Town-site land where the area is 2,024m² or less are required to remove all flammable material on the land, except living trees, as per the City of Karratha's Local Fire Information, ensuring that these areas are maintained in a low fuel state in perpetuity. The Post Development Vegetation Map (Figure 2) shows that the Asset Protection Zone extends into the adjoining reserve. This area is required to be managed to Asset Protection Zone standards by the Salvation Army, with the approval of the City of Karratha, in perpetuity, ensuring that this area is excludable under S 2.2.3.2 (f).</p>			
			


Photo ID:	12	Plot:	3
Vegetation Classification or Exclusion Clause			
Excludable - 2.2.3.2(f) Low Threat Vegetation			
Description / Justification for Classification			
<p>Areas over 100 m from the Site are excluded under S 2.2.3.2 (a). Non vegetated areas including roads, firebreaks, and existing buildings are excluded under S 2.2.3.2 (e). Low threat vegetation including managed grasses and gardens are excluded under S2.2.3.2 (f). Town-site land where the area is 2,024m² or less are required to remove all flammable material on the land, except living trees, as per the City of Karratha's Local Fire Information, ensuring that these areas are maintained in a low fuel state in perpetuity.</p> <p>The Post Development Vegetation Map (Figure 2) shows that the Asset Protection Zone extends into the adjoining reserve. This area is required to be managed to Asset Protection Zone standards by the Salvation Army, with the approval of the City of Karratha, in perpetuity, ensuring that this area is excludable under S 2.2.3.2 (f).</p>			
			


Photo ID:	13	Plot:	3
Vegetation Classification or Exclusion Clause			
Excludable - 2.2.3.2(f) Low Threat Vegetation			
Description / Justification for Classification			
<p>Areas over 100 m from the Site are excluded under S 2.2.3.2 (a). Non vegetated areas including roads, bare earth, firebreaks, and existing buildings are excluded under S 2.2.3.2 (e). Low threat vegetation including managed grasses and gardens are excluded under S2.2.3.2 (f). Town-site land where the area is 2,024m2 or less are required to remove all flammable material on the land, except living trees, as per the City of Karratha's Local Fire Information, ensuring that these areas are maintained in a low fuel state in perpetuity.</p> <p>The Post Development Vegetation Map (Figure 2) shows that the Asset Protection Zone extends into the adjoining reserve. This area is required to be managed to Asset Protection Zone standards by the Salvation Army, with the approval of the City of Karratha, in perpetuity, ensuring that this area is excludable under S 2.2.3.2 (f).</p>			
			


Photo ID:	14	Plot:	3
Vegetation Classification or Exclusion Clause			
Excludable - 2.2.3.2(f) Low Threat Vegetation			
Description / Justification for Classification			
<p>Areas over 100 m from the Site are excluded under S 2.2.3.2 (a). Non vegetated areas including roads, bareearth, firebreaks, and existing buildings are excluded under S 2.2.3.2 (e). Low threat vegetation including managed grasses and gardens are excluded under S2.2.3.2 (f). Town-site land where the area is 2,024m2 or less are required to remove all flammable material on the land, except living trees, as per the City of Karratha's Local Fire Information, ensuring that these areas are maintained in a low fuel state in perpetuity.</p> <p>The Post Development Vegetation Map (Figure 2) shows that the Asset Protection Zone extends into the adjoining reserve. This area is required to be managed to Asset Protection Zone standards by the Salvation Army, with the approval of the City of Karratha, in perpetuity, ensuring that this area is excludable under S 2.2.3.2 (f).</p>			
			



Photo ID:	15	Plot:	3
Vegetation Classification or Exclusion Clause			
Excludable - 2.2.3.2(f) Low Threat Vegetation			
Description / Justification for Classification			
<p>Areas over 100 m from the Site are excluded under S 2.2.3.2 (a). Non vegetated areas including roads, bare earth, firebreaks, and existing buildings are excluded under S 2.2.3.2 (e). Low threat vegetation including managed grasses and gardens are excluded under S2.2.3.2 (f). Town-site land where the area is 2,024m² or less are required to remove all flammable material on the land, except living trees, as per the City of Karratha's Local Fire Information, ensuring that these areas are maintained in a low fuel state in perpetuity.</p> <p>The Post Development Vegetation Map (Figure 2) shows that the Asset Protection Zone extends into the adjoining reserve. This area is required to be managed to Asset Protection Zone standards by the Salvation Army, with the approval of the City of Karratha, in perpetuity, ensuring that this area is excludable under S 2.2.3.2 (f).</p>			
			

Photo ID:	16	Plot:	3
Vegetation Classification or Exclusion Clause			
Excludable - 2.2.3.2(f) Low Threat Vegetation			
Description / Justification for Classification			
<p>Areas over 100 m from the Site are excluded under S 2.2.3.2 (a). Non vegetated areas including roads, firebreaks, and existing buildings are excluded under S 2.2.3.2 (e). Low threat vegetation including managed grasses and gardens are excluded under S2.2.3.2 (f). Town-site land where the area is 2,024m2 or less are required to remove all flammable material on the land, except living trees, as per the City of Karratha's Local Fire Information, ensuring that these areas are maintained in a low fuel state in perpetuity.</p> <p>The Post Development Vegetation Map (Figure 2) shows that the Asset Protection Zone extends into the adjoining reserve. This area is required to be managed to Asset Protection Zone standards by the Salvation Army, with the approval of the City of Karratha, in perpetuity, ensuring that this area is excludable under S 2.2.3.2 (f).</p>			

DIRECTION
74 deg(T)

50K 482198
7706859

ACCURACY 7 m
DATUM WGS84



Bond place21/4/2022, 1:59:53 pm


Photo ID:	17	Plot:	3
Vegetation Classification or Exclusion Clause			
Excludable - 2.2.3.2(f) Low Threat Vegetation			
Description / Justification for Classification			
<p>Areas over 100 m from the Site are excluded under S 2.2.3.2 (a). Non vegetated areas including roads, firebreaks, and existing buildings are excluded under S 2.2.3.2 (e). Low threat vegetation including managed grasses and gardens are excluded under S2.2.3.2 (f). Town-site land where the area is 2,024m² or less are required to remove all flammable material on the land, except living trees, as per the City of Karratha's Local Fire Information, ensuring that these areas are maintained in a low fuel state in perpetuity.</p> <p>The Post Development Vegetation Map (Figure 2) shows that the Asset Protection Zone extends into the adjoining reserve. This area is required to be managed to Asset Protection Zone standards by the Salvation Army, with the approval of the City of Karratha, in perpetuity, ensuring that this area is excludable under S 2.2.3.2 (f).</p>			
			


Photo ID:	18	Plot:	3
Vegetation Classification or Exclusion Clause			
Excludable - 2.2.3.2(f) Low Threat Vegetation			
Description / Justification for Classification			
<p>Areas over 100 m from the Site are excluded under S 2.2.3.2 (a). Non vegetated areas including roads, firebreaks, and existing buildings are excluded under S 2.2.3.2 (e). Low threat vegetation including managed grasses and gardens are excluded under S2.2.3.2 (f). Town-site land where the area is 2,024m2 or less are required to remove all flammable material on the land, except living trees, as per the City of Karratha's Local Fire Information, ensuring that these areas are maintained in a low fuel state in perpetuity.</p> <p>The Post Development Vegetation Map (Figure 2) shows that the Asset Protection Zone extends into the adjoining reserve. This area is required to be managed to Asset Protection Zone standards by the Salvation Army, with the approval of the City of Karratha, in perpetuity, ensuring that this area is excludable under S 2.2.3.2 (f).</p>			
			

Photo ID:	19	Plot:	3
Vegetation Classification or Exclusion Clause			
Excludable - 2.2.3.2(f) Low Threat Vegetation			
Description / Justification for Classification			
<p>Areas over 100 m from the Site are excluded under S 2.2.3.2 (a). Non vegetated areas including roads, firebreaks, and existing buildings are excluded under S 2.2.3.2 (e). Low threat vegetation including managed grasses and gardens are excluded under S2.2.3.2 (f). Town-site land where the area is 2,024m2 or less are required to remove all flammable material on the land, except living trees, as per the City of Karratha's Local Fire Information, ensuring that these areas are maintained in a low fuel state in perpetuity.</p> <p>The Post Development Vegetation Map (Figure 2) shows that the Asset Protection Zone extends into the adjoining reserve. This area is required to be managed to Asset Protection Zone standards by the Salvation Army, with the approval of the City of Karratha, in perpetuity, ensuring that this area is excludable under S 2.2.3.2 (f).</p>			
			

RELEVANT FIRE DANGER INDEX

The fire danger index for this site has been determined in accordance with Table 2.1 or otherwise determined in accordance with a jurisdictional variation applicable to the site.

Fire Danger Index			
FDI 40 <input type="checkbox"/>	FDI 50 <input type="checkbox"/>	FDI 80 <input checked="" type="checkbox"/>	FDI 100 <input type="checkbox"/>
<i>Table 2.7</i>	<i>Table 2.6</i>	<i>Table 2.5</i>	<i>Table 2.4</i>

POTENTIAL BUSHFIRE IMPACTS

The potential bushfire impact to the site from each of the identified vegetation plots are identified below.

The Determined Bushfire Attack Level (highest BAL) for the buildings have been determined in accordance with clause 2.2.6 of AS3959-2018 with BAL Contour Map (Figure 3) provided based on the Post Development Vegetation (Figure 2) and detailed BAL Contour Map provided in Figure 4.

Table 1 Site Assessment Results

Method 1 BAL Determination				
Fire Danger Index - 80 (AS3959-2018 Table 2.1)				
Plot	Vegetation Classification	Effective Slope Under the Classified Vegetation (degrees)	Separation Distance to the Classification Vegetation (metres)	Bushfire Attack Level
1	Class C Shrubland	Upslope/Flat	9 m*	BAL-29
2	Class C Shrubland	Upslope/Flat	45 m	BAL-12.5
3	Excluded S. 2.2.3.2 (a), (e), or (f)	N/A	N/A	BAL-LOW
Determined Bushfire Attack Level				BAL-29

*With approval by the City of Karratha, this separation distance must be managed, in perpetuity, to the Standards of the Guidelines for Planning in Bushfire Prone Areas as an Asset Protection Zone by the Salvation Army.



Figure 5 BAL Rating for Proposed Structures at 2 & 6 Bond Place, Pegs Creek

BUSHFIRE ATTACK LEVEL ASSESSMENT EXPLAINED

A Bushfire Attack Level (BAL) Assessment is a means of measuring the severity of a building's potential exposure to ember attack, radiant heat, and direct flame contact in a bushfire event, and thereby determining the construction measures required for the building.

The methodology used to determine the BAL rating is AS3959-2018 which came into effect on 1 May 2019. Subsequent building construction standards to be applied are directly referenced from Australian Standard AS3959-2018 Construction of Buildings in Bushfire Prone Areas.

The BAL rating is determined through identification and assessment of the following parameters:

- Fire Danger Index (FDI) rating; assumed to be FDI - 80 for Western Australia;
- All classified vegetation **within 100 and 150 m** of the Site;
- Separation distance between the building and the classified vegetation source(s); and
- Slope of the land under the classified vegetation.

Appendix B Risk Analysis

RISK ANALYSIS

NSW Rural Fire Service, 2014, Development Planning: A guide to developing a Bushfire Emergency Management and Evacuation Plan

Site Information		
Type of premise	Women’s Refuge (Safe Place)	
Occupants	Vulnerable Occupants	
Needs	Occupants may have high support need.	
Special health considerations	Occupants may suffer asthma/breathing difficulty in the presence of smoke.	
Facility is in a bushfire prone area	Yes	
Evacuation		
How accessible is the premise	Bond Place is a loop road and effectively an existing compliant cul-de-sac, approximately 130m in length. Bayview Road provides two access and egress routes to the Site.	Suitable ✓
Quality of roads	Nearby roads have a minimum 6 m wide horizontal and 6 m vertical clearance.	Suitable ✓
Does the transport route go through a bush fire prone area	The Site and surrounding area are within a bushfire prone area, however the egress route travels away from the main source of bushfire threat.	Suitable ✓

Shelter

Building conditions	The proposed Administration building is required to be constructed to the requirements of the Guidelines for Planning in Bushfire Prone Areas and to AS3959 standards for BAL-12.5.	Suitable ✓
Is the premise likely to be affected by significant radiant heat	Areas of the Site are rated as BAL-29; however the Administration Building is located within BAL-12.5, which complies with the <i>Guidelines for Planning in Bushfire Prone Areas</i> .	Suitable ✓
Is a defensible space available	Yes, an Asset Protection Zone as detailed in the BMP shall be implemented and maintained in a low fuel state in perpetuity.	Suitable ✓
Is there a designated assembly point	No, evacuation or shelter within building are the recommended actions.	Suitable ✓
Are ground conditions maintained	Yes, Asset Protection Zone will be maintained in a low fuel state in accordance with the <i>Guidelines for Planning in Bushfire Prone Areas</i> .	Suitable ✓
Are there amenities provided	Yes, the building will be used as a Women's Refuge (Safe Place).	Suitable ✓
Is there disabled access to the area	Yes, individual care must include evacuation, i.e., the vehicle for arrival must be available.	Limited !
Is there sufficient supervision of occupants	The Women's Refuge will be hosted. Occupants may require a high level of support and will be unfamiliar with bushfire and may become distressed. Adequate supervision and assistance is required.	Limited !

CONCLUSION

Early Evacuation - Summary

Are occupants needs better suited to evacuation	Evacuation early in the development of the fire is the best course of action. In the event of early evacuation to a townsite has failed or is not possible, the Manager will direct occupants to shelter-within-building.
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Destination	<p>Karratha township</p> <p>The size and location of the bushfire will determine any evacuation center that is activated by emergency services.</p> <p>For the purposes of this plan, the recommended welfare centre that is approved by the City of Karratha is the Karratha Leisureplex, Dampier Road, Millars Well. This location has been chosen as it provides a safe distance between the Site and the likely location of a bushfire threatening the Site.</p>
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Transport	Private Vehicle
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Are special needs addressed	Individual care must include evacuation, i.e., the vehicle for evacuation must be available.
------------------------------------	--

Shelter-within-building- Summary

Is the area fit for purpose	<p>The Administration Building has been calculated to experience a BAL-12.5 (radiant heat less than 12.5 kW/m²) in a bushfire event.</p> <p>Sheltering within the buildings should be used as a last resort only, when evacuation is unsafe.</p>
------------------------------------	---

Appendix C Emergency Evacuation Plan

EMERGENCY EVACUATION PLAN

This Plan has been designed to assist in the protection of life and property in the event of a bushfire, storm surge or flooding. This plan outlines procedures for both evacuation and shelter-within-building to enhance the protection of occupants from the threat of a bushfire, storm surge or flooding. The Landowner/Manager is to review this Plan on an annual basis.

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

EVACUATE ☒ SHELTER-WITHIN-BUILDING ☐

FACILITY DETAILS

Location: 2 & 6 Bond Street, Pegs Creek
Contact Person: TBC
Position: TBC
Phone: TBC
Occupants: TBC
Shelter capacity: TBC

Table 1 Emergency Contact Details

Name of Organisation	Service Provided	Phone Number/Website
Fire Brigade	Report a fire/receive assistance	000
Department of Fire & Emergency Services (DFES)	Alerts and Warnings Fire Danger Ratings Total Fire Bans Storm Surge & Flood Mapping	13 3337 www.dfes.wa.gov.au twitter.com/dfes.wa
Bureau of Meteorology	Fire Danger Ratings Storm Surge & Flood Mapping Weather Seasonal Forecast	bom.gov.au/weather/wa http://www.bom.gov.au/climate/outlooks/#/overview/video
ABC Local Radio Pilbara	News and Updates	Radio frequency 702 AM http://www.abc.net.au/pilbara/
Emergency WA	Alerts and Warnings	https://www.emergency.wa.gov.au/

Name of Organisation	Service Provided	Phone Number/Website
Karratha Health Campus	Emergency Medical Service	62 Balmoral Road, Karratha 9144 7777

PREPARATION

Equipment

Install and/or maintain the following equipment (Landowner/Manager):

1. A 4kg dry chemical Fire Extinguisher with instructions of use.
2. Smoke Alarms in accordance with the Building Code of Australia.
3. External water (standard garden hoses), capable of applying water to each part of the building.
4. A Radio, with batteries, and instructions to tune into Radio Frequency 702 AM for news and updates in the event of a bushfire.
5. Containers for storing drinking water and hessian bags for sandbags
6. A copy of the Emergency Evacuation Diagram displayed on the internal face of all external doors of every structure.

Seasonal preparation

It is important to become ready for an evacuation in the event of a bushfire, storm surge or flood. The Bureau of Meteorology produces a quarterly climate outlook video which includes an assessment on the potential for a bushfire or extreme weather event. It is recommended to watch the BOM video prior to each bushfire season which provides a seasonal forecast, provided in Table 1.

Conduct seasonal works, to be undertaken (Landowner/Manager):

1. Ensure all access ways have the appropriate vertical and horizontal clearances in good traversable condition.
2. Ensure the Asset Protection Zone is maintained in a low-fuel state.
3. Ensure all buildings are free of flammable materials, none located within 5 m.
4. Ensure all objects attached to the buildings are non-combustible or easily removable, and the removing mechanism is in working order.
5. Ensure all gas cylinders are positioned with pressure relief valve facing away from the building and not within 6m of any flammable material.
6. Ensure fire hoses and firefighting equipment is in working order. Check the charge level on all fire extinguishers is adequate.

7. Identify where and how to turn off electricity, gas and water mains.
8. Ensure the plan and evacuation details are clearly displayed and conveniently located for all staff and occupiers.
9. Review the Emergency Evacuation Plan, procedures and that all contact phone numbers are correct.
10. Ensure that the nominated on-site and off-site welfare centre locations and routes to both are still a safe option.

Daily preparation

Conduct daily preparation in the morning (Landowner):

1. Check the DFES website for any alerts.
2. Ensure Staff and occupants are bushfire and flood aware and familiar with the importance of early evacuation to a townsite and that the use of the building as a Shelter is a last resort only, as well as being aware of the evacuation procedures.
3. Ensure evacuation logistics and resourcing are fully provided for and immediately accessible, including a suitable vehicle immediately accessible to evacuate all occupants.
4. Inspect grounds to:
 - a. Ensure flammable materials are not stored adjacent to buildings.
 - b. Ensure firefighting equipment and access-ways are clear of any obstructions.
5. Ensure shelter areas are in a ready state.

CARING FOR VULNERABLE PEOPLE

The maximum Bushfire Attack Level that will be experienced at the peak of the fire is high (BAL-29 which is a radiant heat up to 29 kW/m²). This is well above the level of human tolerance (BAL-3 or 3 kW/m²).

Fire typically has a progressive build up to a peak followed by a progressive decay; the peak (fire front) lasting between two to five minutes. People at the Site will need to evacuate early or take shelter in a bushfire event.

Conditions during a fire can be hazardous and frightening. Ignited embers and heavy smoke can be expected, visibility can be significantly reduced, and it can be extremely windy and noisy. Unless prepared, and as may be expected - people can become frightened and make dangerous choices. For this reason, **early evacuation to a townsite is the best option.**

Shelter-within-building is a last resort option as there is no guarantee a building will withstand a bushfire attack and the proposed Administration building is subject to a BAL-12.5 rating. Importantly though, sheltering within a building may provide an important delay between the fire front passing and internal conditions becoming untenable, that can enable a safe evacuation. Assembly at a quick exit point whilst the fire front passes is therefore essential.

Restricted Fire Season

Restricted fire season exists all year within the City of Karratha. Fire permits are required at all times for any open-air fires.

Lighting of fires in the open area within the City of Karratha for the purpose of camping or cooking is prohibited on days of very high, severe, extreme or catastrophic fire danger forecast (including gas cooking appliances).

To find out the fire danger rating in place visit www.bom.gov.au/wa/forecasts/fire-danger-ratings.

Fire Danger Rating

The Department of Fire and Emergency Services (DFES) provides community and emergency advice about predicted and current conditions that advise about the level of bushfire threat.

The Fire Danger Index Rating (FDR) is based on the weather conditions forecast by the Bureau of Meteorology. These rating provide advice about the level of the bushfire threat on a particular day (up to four days in advance) and how dangerous and difficult to conditions will be if a fire starts. The level of warning and their meanings are detailed below in Table 4.

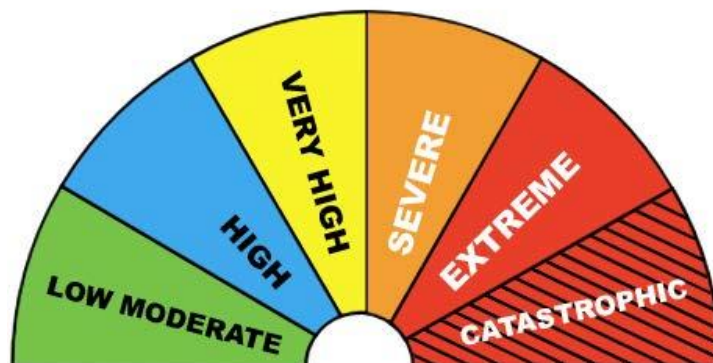





Table 4 Fire Danger Index Ratings - Bureau of Meteorology Issues

Rating	Meaning
<u>Catastrophic</u>	<p>These are the worst conditions for a bush or grass fire.</p> <p>Buildings are not designed or constructed to withstand a fire in these conditions.</p> <p>The safest place to be is away from high bushfire risk areas.</p>
Extreme	<p>Expect extremely hot, dry and windy conditions.</p> <p>If a fire starts and takes hold, it will be uncontrollable, unpredictable and fast moving.</p> <p>Spot fires will start, move quickly and come from many directions.</p>
Severe	<p>Expect hot, dry and possibly windy conditions.</p> <p>If a fire starts and takes hold, it may be uncontrollable.</p>
Very High	<p>If a fire starts, it can likely be controlled in these conditions and buildings can provide safety.</p> <p>Be aware of how fires start and minimise the risk.</p>
High	<p>If a fire starts, it can likely be controlled in these conditions and buildings can provide safety.</p> <p>Be aware of how fires start and minimise the risk.</p>
Low/Moderate	<p>If a fire starts, it can likely be controlled in these conditions and buildings can provide safety.</p> <p>Be aware of how fires start and minimise the risk.</p>

Bushfire Warning System

During a bushfire, DFES and the Department of Biodiversity, Conservation and Attractions (DBCA) issue community alerts and warnings for bushfires that threaten lives and property. They are only issued once firefighters have arrived at the scene and have determined that there is a threat, or potential threat to the community. The level of warnings and their meanings are detailed below in Table 5.





Table 5 Bushfire Warnings - DFES and DBCA Issued

Warning	Meaning
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.
Watch and Act 	A fire is approaching and there is a possible threat to lived and homes. Put your plan into action. If your plan is to leave, make sure you leave area. If you plan to stay, check all your equipment is ready. Only stay and defend if you are mentally and physically prepared.
Emergency Warning 	An out-of-control fire is approaching fast, and 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.
All Clear	The danger has passed, and the fire is under control, but you need to remain vigilant in case the situation changes.

Storm Surge & Flooding Warning System

The Department of Fire and Emergency Services will provide storm surge and flood mapping if the threat of a storm surge is possible. Information will be provided 48 hours prior to the expected impact.

Table 6 Flood Alerts and Warnings - DFES Issued

Warning	Meaning
 <p>Prepare now for flooding</p>	<ul style="list-style-type: none"> • Prepare for a flood by reviewing your flood plan. • Ensure your emergency kit is complete and start preparing your home inside and out. • Never walk, swim or play in floodwaters, as they are dangerous. Do not park or camp adjacent to rivers.
 <p>Take action now for flooding</p>	<ul style="list-style-type: none"> • Watch for changes in water levels so you are ready if you need to evacuate. • Relocate equipment and livestock. • Prepare pet food and stockfeed in case you cannot return home for a few days. • Obey road closure signs and be careful at crossings and floodways as river levels may rise rapidly.
 <p>Prepare to evacuate</p>	<ul style="list-style-type: none"> • Know where you will go and have your emergency kit ready to take with you. • Make sure everyone in your household is wearing strong shoes and suitable clothing. • Secure loose objects and raise furniture off the floor. • Disconnect electricity, water and gas main supply (if instructed by emergency services). • Create sandbags and be ready to place them in toilets and over drains to prevent sewerage backflow.
 <p>Evacuate now</p>	<ul style="list-style-type: none"> • Go immediately to a safer place and take your emergency and relocation kits with you. If you cannot leave, place sandbags across doorways and over drainage holes and in toilets to prevent backflow. Seek shelter in the highest safe area of the house. • Obey road closure signs and be careful at crossings and floodways as river levels may rise.



Take care after
rising water
levels

- Watch for changes in water levels so you are ready if you need to act.
- Never walk, swim or play in floodwaters as they are dangerous and avoid storm drains, ditches and ravines.
- Obey road closure signs and do not drive into water of unknown depth and current.

EVACUATION PROCEDURE

Primary evacuation location:

Location:	Karratha City centre or the closest primary welfare centre when declared by DFES
Karratha Welfare Centre:	Karratha Leisureplex Dampier Road, Millars Well
Primary route to location:	East on Bond Street, north on Bond Street, west on Bayview Road and south west on Broadhurst Road.
Transportation:	A vehicle/s with capacity for all occupants and licenced driver is to be always available in case evacuation is required.
Estimated travel time:	5 minutes (when there is a lot of smoke and conditions are hazardous drive slower and expect greater travelling time)

Secondary evacuation location:

Location:	Roebourne town centre or Roebourne Welfare Centre when declared by DFES
Roebourne Welfare Centre:	Roebourne Community Hub Scholl Street, Roebourne
Primary route to location:	East on Bond Place, north on Bond Place, east on Bayview Road, south east on Balmoral Drive, east on Dampier Highway, south on De Witt Road, east on North Western Highway and south on Scholl Street.
Transportation:	A vehicle/s with capacity for all occupants and licenced driver is to be available at all times in case evacuation is required.
Estimated travel time:	30 minutes (when there is a lot of smoke and conditions are hazardous drive slower and expect greater travelling time)

The primary action to follow with an imminent bushfire or flood threat is EVACUATE. The evacuation locations detailed above have been supplied as they are likely options and provide a safe distance from the location of a likely bushfire or flood threatening the building, however INSTRUCTION FROM EMERGENCY SERVICES SHOULD ALWAYS BE FOLLOWED IF IT IS AVAILABLE.

Controlled Evacuation

A Controlled Evacuation is defined as an evacuation of all personnel and occupants where there is adequate time to allow occupants to pack up and leave with their belongings. Sufficient time needs to be allowed for the likelihood of the congestion of roads from many other residents likely evacuating at the same time. An evacuation can also trigger an emotive response and allowing enough time for occupants to gather their belongings and evacuate to a secure location, away from the risk of fire or flood is the preferred course of action. It should be noted that a bushfire or flood situation can change rapidly, and an emergency evacuation may need to be triggered during a controlled evacuation. Regular communication to occupants should be maintained at all times to ensure the evacuation type is adequately communicated and to ensure the evacuation is carried out in a safe way.

Emergency Evacuation

An Emergency Evacuation is defined as an evacuation of personnel and occupants where there is insufficient time to collect their belongings, and they must evacuate immediately to a secure location, away from the risk of the bushfire or flood. Clear communication to occupants is required to ensure the evacuation is carried out in a safe way.

Shelter-within-building

Shelter-within-building should only be used as a LAST RESORT ONLY, when evacuation during a bushfire or flood event becomes unsafe. The Administration Building is exposed to a BAL-12.5 rating and sheltering within the building may not be safe but is a better option than remaining outside in a bushfire event.

Designated building:

Administration Building

Table 3 *Evacuation and shelter-within-building actions according to triggers*

Trigger	Action - BUSHFIRE & FLOOD	Responsible Person
<ul style="list-style-type: none"> • Direct advice or Watch and Act Warning from Emergency services (DFES, Police); • Bushfire within 3 km of the Site. • Prepare to evacuate due to flooding warning issued 	<ol style="list-style-type: none"> 1. Upon a direct instruction from Emergency Personnel aware of your circumstance, follow their evacuation instructions. 2. The manager will maintain contact with Emergency Services and take directions accordingly. Conditions may change rapidly, and an emergency evacuation or shelter-within-building may need to be enacted during a controlled evacuation. 3. Initiate a Controlled Evacuation to the Primary Evacuation Location, via the primary route. 	Manager
Action - BUSHFIRE		Action - FLOOD
<ol style="list-style-type: none"> a) Notify all personnel and occupants, ask occupants to quickly gather their belongings; b) Account for all persons; c) Advise for all windows & doors to be closed; d) Determine if the Welfare Centres are open, if they are not, travel to the town centre. e) Drive to the Primary Evacuation location, if the roads are blocked utilize the secondary route or Secondary Evacuation Location. f) Drive slowly as there could be people, excessive vehicles, fire appliances and livestock on the road. Turn your car headlights and hazard lights on. Close windows and outside vents. If you cannot see clearly, pull over and wait until the smoke clears. If you become trapped by a fire, park the vehicle off the road where there is little vegetation, with the vehicle facing towards the oncoming fire. Turn the engine off. Call 000 and stay covered with blankets until the fire front has passed. 		<ol style="list-style-type: none"> a) Notify all personnel and occupants, ask occupants to quickly gather their belongings; b) Account for all persons; c) Advise for loose objects & furniture of be raised off the floor if possible; d) Disconnect electricity, water and gas main supply, if instructed by emergency services. e) Create sandbags and place them in toilets and over drains. f) Determine if the Welfare Centres are open, if they are not, travel to the town centre. g) Drive to the Primary Evacuation location, if the roads are blocked utilize the secondary route or Secondary Evacuation Location. h) Drive slowly as there could be people, excessive vehicles, emergency services on the road. Turn your car headlights and hazard lights on. Do not drive through flood water. If the evacuation route is impacted by flood water, seek an alternative route or an area of higher ground.

Trigger	Action - BUSHFIRE & FLOOD		Responsible Person
<ul style="list-style-type: none"> • Direct advice from Emergency services (DFES, Police); • Signs of smoke arising from the immediate surrounds; or • Bushfire within 1 km of the Site. • Evacuate now due to flooding warning. 	<ol style="list-style-type: none"> 1. Upon a direct instruction from Emergency Personnel aware of your circumstance, follow their evacuation instructions. 2. The manager will maintain contact with Emergency Services and take directions accordingly. Conditions may change rapidly, and a shelter-within-building may need to be enacted during an emergency evacuation. 3. Initiate an Emergency Evacuation to the Primary Evacuation Location, via the primary route. 		Manager
Action - BUSHFIRE		Action - FLOOD	
<ol style="list-style-type: none"> a) Notify all personnel and occupants that an Emergency Evacuation has been initiated and that there is insufficient time to collect belongings; b) Account for all persons; c) Advise for all windows & doors to be closed and turn on any external sprinklers; d) Determine if the Welfare Centres are open, if they are not, travel to the town centre. e) Drive to the Primary Evacuation location, if the roads are blocked utilize the secondary route or Secondary Evacuation Location. f) Drive slowly as there could be people, excessive vehicles, fire appliances and livestock on the road. Turn your car headlights and hazard lights on. Close windows and outside vents. If you cannot see clearly, pull over and wait until the smoke clears. If you become trapped by a fire, park the vehicle off the road where there is little vegetation, with the vehicle facing towards the oncoming fire. Turn the engine off. Call 000 and stay covered with blankets until the fire front has passed. 		<ol style="list-style-type: none"> a) Notify all personnel and occupants than an Emergency Evacuation has been enacted and they must immediately evacuate. b) Account for all persons; c) Place any sandbags in toilets and over drains. d) Determine if the Welfare Centres are open, if they are not, travel to the town centre. e) Drive to the Primary Evacuation location, if the roads are blocked utilize the secondary route or Secondary Evacuation Location. f) Drive slowly as there could be people, excessive vehicles, emergency services on the road. Turn your car headlights and hazard lights on. Do not drive through flood water. If the evacuation route is impacted by flood water, seek an alternative route or an area of higher ground. 	

Trigger	Action - BUSHFIRE & FLOOD	Responsible Person
<ul style="list-style-type: none"> Uncontrolled fire observed in or adjacent to the Site; or DFES Emergency Warning to Stay in Place has been issued. Floodwaters in proximity to the Site or evacuation route. 	<ol style="list-style-type: none"> 1. Initiate Shelter-within-building (AS A LAST RESORT ONLY) 2. Call - 000 - DFES and notify them of your actions, and the number of people taking shelter. 3. The Manager will maintain contact with emergency services and take directions accordingly. 	Manager
Action - BUSHFIRE		Action - FLOOD
<ol style="list-style-type: none"> a) Notify all personnel and occupants that it is unsafe to evacuate and to take shelter within the Administration building. b) Account for all persons. c) Turn on any external sprinklers surrounding the building. d) Close all windows and doors and turn any air conditioners off. e) Take shelter, within the building, next to an exit. f) Wet towels and place at the foot of doors to stop smoke ingress. g) Monitor the condition of the building; h) When safe to do so inspect around the building or spot fires and put them out (there is no obligation upon any personnel to take action to defend the building from bushfire attack); and i) Evacuate the Site when emergency services advise that it is safe to do so. j) Be alert to fire for up to 24 hours after the fire event. 		<ol style="list-style-type: none"> a) Notify all personnel and occupants that it is unsafe to evacuate and to take shelter within the Administration building. b) Account for all persons; c) Advise for loose objects & furniture of be raised off the floor, if possible; d) Disconnect electricity, water and gas main supply, if instructed by emergency services. e) Place sandbags in toilets, over drains and across doorways. f) Seek Shelter in the highest safe area of the Administration Building. g) Evacuate the Site when emergency services advise that it is safe to do so.

RECOVERY

Emergency Services will need to ensure conditions within the Site and surrounding area are safe and all services including power, water and access can be guaranteed prior to allowing the use of the building as a Women's Refuge to resume. Landowners/Managers will take directions from Emergency Services personnel with regards to any activity on the Site post bushfire or flood event.

A bushfire or flood event can be traumatic for everyone involved. If anyone was present on site during a bushfire event, then they may require support. Lifeline, 13 11 14, is available 24/7 to help anyone struggling.

EVACUATION DIAGRAM



Address: 2 & 6 Bond Place, Pegs Creek
Contact Person:
Contact Number:

PRIMARY EVACUATION ADVICE WILL BE PROVIDED BY EMERGENCY SERVICES.

Below are the recommended routes to Welfare Centre's in proximity to the Site.

On **Extreme** or **Catastrophic Fire Danger Rating days**, it is recommended to vacate the building and **stay within a lower bushfire risk area** (Karratha town centre) **during the hottest part of the day** (10 am to 4 pm)
Monitor the ABC Local Radio, **702 AM**, or the DFES website for updates.



Option 1: Karratha town centre or Karratha Leisureplex (Welfare Centre). East on Bond Street, north on Bond Street, west on Bayview Road and south west on Broadhurst Road.
Travel Time: 5 Minutes

Option 2: Roebourne town centre or Roebourne Community Hall (Welfare Centre). East on Bond Place, north on Bond Place, east on Bayview Road, south east on Balmoral Drive, east on Dampier Highway, south on De Witt Road, east on North Western Highway and south on Scholl Street.
Travel Time: 30 Minutes

The primary action to follow in a bushfire event is to EVACUATE

Controlled Evacuation – Early evacuation to allow occupants to gather their belongings prior to evacuating. Enact if bushfire is within 3 km, DFES Watch & Act Warning or Signs of smoke from the nearby area.

Emergency Evacuation – Account for all occupants and immediately evacuate.
Enact if bushfire is within 1 km, or signs of smoke arising from the immediate surrounds.

Shelter-within-building - Last resort option only, close all windows/doors and turn off air conditioner. Account for all occupants and remain within the building, near an external door.
Evacuate when safe to do so or if Shelter catches fire.

Enact if uncontrolled fire observed in or adjacent to the Site or DFES Emergency Warning to Stay in Place.
Register with **Register.Find.Reunite** to let your family and loved ones know that you are ok, redcross.org.au

Town Planning Statement

Residential Building

Nos.2 and 6 Bond Place, Pegs Creek



prepared by

LATERAL
PLANNING

on behalf of

The Salvation Army (WA) Property Trust

15 May 2022

1.0 Introduction

Lateral Planning acts for The Salvation Army (Western Australia) Property Trust ('TSA'), the registered proprietor of Nos.2 and 6 Bond Place, Pegs Creek ('site').

This Town Planning Statement ('Statement') has been prepared in support of an Application for Development Approval ('Application') to demolish existing buildings and construct a new Residential Building adjacent to an existing Church on the site.

The Statement provides a detailed assessment of the proposed development against the applicable town planning framework and demonstrates the proposal is consistent with the amenity and orderly and proper planning of the locality.

Technical Reports

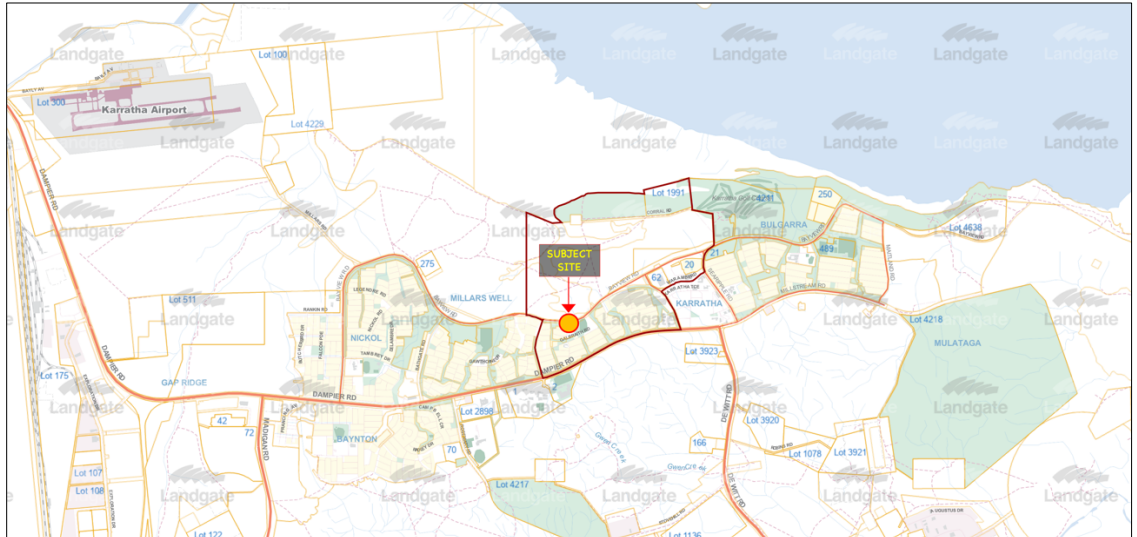
In support of the Application, the following technical documents have been prepared.

Report	Consultant
Feature Survey	Land Surveys
Architectural Drawings	Lanigan Architects
Landscape Concept Plan	Emerge
Stormwater Concept Plan	The Civil Group
Bushfire Management Plan	Ecosystem Solutions
Town Planning Statement	Lateral Planning

2.0 Site Description

Site Context

The site is located 1.7 kilometres west of Karratha town centre, near the south-west corner of Bond Place and Bayview Road in the locality of Pegs Creek, in the City of Karratha ('City').



Regional Context

Bond Place is a cul-de-sac accessed from Bayview Road and characterised by low to medium density housing / short-stay accommodation. A tavern is situated on Bond Place to the south-east of the site. To the west is Reserve 40081: a Parks and Drainage Reserve managed by the City. A portion of Reserve 40081 runs parallel to the site's northern boundary and separates the site from Bayview Road. The south-west boundary of the site abuts an existing residential property occupied by a single storey dwelling, while the abutting land to the south-east at No.4 Bond Place is owned by TSA and occupied by an administration building and community facility.



Local Context

Legal Description

The Pegs Creek land owned by TSA comprises four separate landholdings, as follows.

Address	Lot	Survey Plan	Land Area	Certificate of Title
No.2 Bond Place	4543	Deposited Plan 189345	3,405m ²	2979 / 519
	4563	Deposited Plan 192089	1,263m ²	2979 / 523
No.4 Bond Place	1702	Deposited Plan 214195	2,351m ²	1663 / 872
No.6 Bond Place	1701	Deposited Plan 214195	720m ²	1923 / 418

The land the subject of this Application includes Lots 4543 and 4563 (No.2) Bond Place and Lot 1701 (No.6) Bond Place, comprising a total land area of 5,388m², with frontages to Bond Place of 39 metres (No.2) and 24 metres (No.6). Lot 1702 (No.4) Bond Place does not form part of this Application.



Site Plan

Site Characteristics

A church occupies No.2 Bond Place with access obtained from Bond Place on the site's eastern boundary. The church was approved in 1990 and comprises a worship hall (340m²) and thrift shop (60m²). The 1990 approval depicts 35 car bays east and north of the church, with an additional 21 car bays depicted as overflow parking west of the church. A single-storey house at No.6 Bond Place is occupied by TSA's district officer. Access to the dwelling is provided from Bond Place to the south of the site.

The majority of the site has been cleared of vegetation to accommodate the church, dwelling and hardstand areas. Limited vegetation remains around the dwelling at No.6 Bond Place. The topography of the site falls by approximately 1 metre in a south to north direction, from a level of 7.8 metres AHD near the southern boundary abutting Bond Place to a level of 6.8 metres AHD at the northern boundary abutting Reserve 40081. The existing hardstand area in the north-west portion of the site has a level of 7 metres AHD.

3.0 Description of Proposed Development

This Application proposes the construction of a Residential Building on the site. TSA will manage the facility and employ a permanent caretaker at the premises. TSA has provided the following description of the facility:

The proposed development provides crisis support accommodation for women and children subject to family and domestic violence. The development includes emergency family and single accommodation units, administration, management and staff areas, communal facilities including lounge, dining, kitchen, laundry, outdoor play and common areas. The accommodation units provide bridging accommodation from 1 day to 12 months prior to resettling into more permanent housing. On average, accommodation is provided for 3 months.

The dwelling at No.6 Bond Place will be demolished and all hardstand areas to the rear (west) of the Church will be removed to make way for the new development. The Church will be retained, along with existing driveways and parking areas to the east and north of the Church. Parking for 25 cars will be retained for the Church.

The Residential Building will comprise the following elements:

- Administration Building / Caretakers Residence fronting Bond Place;
- Residential Accommodation (14 units) to the rear (west) of the Church, including four one-bedroom units, eight two-bedroom units and two three-bedroom units;
- Recreation Facilities, including external private decks, two stand-alone communal buildings and external communal recreation areas;
- Utilities Building, comprising a store and communal laundry;
- Bin Store, located adjacent to the car park; and
- Car Parking for 11 vehicles, with access obtained from Bond Place to the south.

Earthworks are proposed to achieve a finished ground level of 7.8 metres AHD across the majority of the site to match the existing level near its southern boundary. The most amount of fill (up to 1 metre) will occur over the northern portion of the site, where the existing level is 6.8 metres AHD. From the proposed finished site level of 7.8 metres AHD, batters will be established to allow the site to grade down toward the existing Natural Ground Level of 6.8 to 7.0 metres AHD at the site's northern and western boundaries abutting Reserve 40081.

The Residential Accommodation, including the external private decks and communal buildings, will be constructed on 'stilts' to achieve a finished floor level of 8.7 metres AHD (0.9 metres above the finished ground level). The Administration Building will have a finished floor level of 8 metres AHD. Stairs and ramps will be integrated into the architecture to provide high quality pedestrian access to buildings.

Landscaping will comprise soft planting, decking and pedestrian paths. The ground will be carefully contoured to allow for overland flow of stormwater toward drainage swales in Reserve 40081.

The drainage swale in Reserve 40081 abutting the site's northern boundary will be retained while a new drainage swale is proposed in the portion of Reserve 40081 running parallel to the site's western boundary. Planting throughout the development will comprise species selected for local climate conditions, whilst also taking into consideration security, drainage and bushfire requirements.

Perimeter fencing will be installed, whilst allowing stormwater to flow overland into the drainage swales. Low level retaining walls are proposed along the eastern side of the development (west of the Church) and the boundary west of the Administration Building.

4.0 Town Planning Considerations

4.1 State Planning Policies

In accordance with Deemed Provision 67 of the City's Local Planning Scheme No.8 ('LPS8'), due regard must be given to all relevant State Planning Policies.

State Planning Policy 2.6 – State Coastal Planning Policy

The Objectives of State Planning Policy 2.6 – State Coastal Planning Policy ('SPP2.6') are to:

1. *ensure that development and the location of coastal facilities takes into account coastal processes, landform stability, coastal hazards, climate change and biophysical criteria;*
2. *ensure the identification of appropriate areas for the sustainable use of the coast for housing, tourism, recreation, ocean access, maritime industry, commercial and other activities;*
3. *provide for public coastal foreshore reserves and access to them on the coast; and*
4. *protect, conserve and enhance coastal zone values, particularly in areas of landscape, biodiversity and ecosystem integrity, indigenous and cultural significance.*

SPP2.6 contains a series of policy measures including coastal hazard risk management and infill development in existing urban areas. In response to SPP2.6, the City has adopted a Storm Surge Risk Local Planning Policy, which is discussed below.

State Planning Policy 3.7 – Planning in Bushfire Prone Areas

State Planning Policy 3.7 – Planning in Bushfire Prone Areas ('SPP3.7') applies to land in a Bushfire Prone Area declared under the Fire and Emergency Services Act 1998.

The site is within a declared Bushfire Prone Area and for this reason the Application is accompanied by a Bushfire Management Plan ('BMP') prepared in accordance with SPP3.7 and the Guidelines for Planning in Bushfire Prone Areas ('Guidelines'). As the Application proposes a Vulnerable Land Use, as defined in SPP3.7, the BMP includes an Emergency Evacuation Plan.

To achieve a bushfire attack level of BAL-29, an Asset Protection Zone ('APZ') is proposed to be established within Reserve 40081 abutting the site's northern and western boundaries. The APZ will have a width of up to 9 metres and be maintained in accordance with Schedule 1 – Standards for Asset Protection Zones of the Guidelines. Landscaping within the APZ will comprise low threat native vegetation and any retained trees will satisfy the Guidelines with respect to required minimum separation distances from buildings and maximum canopy coverage.

The proposed buildings will be constructed in accordance with Australian Standard AS3959 – Construction of Buildings in Bushfire Prone Areas ('AS3959').

State Planning Policy 5.4 – Road and Rail Noise

The purpose of State Planning Policy 5.4 – Road and Rail Noise ('SPP5.4') is:

to minimise the adverse impact of road and rail noise on noise-sensitive land-use and / or development within the specified trigger distance of strategic freight and major traffic routes and other significant freight and traffic routes.

The term 'noise-sensitive land use and/or development' is defined in SPP5.4 and includes residential accommodation. The site is not within the trigger distance (300 metres) of any strategic freight / major traffic routes, with Dampier Road being over 450 metres away. The site is not within the trigger distance (200 metres) of any other significant freight / traffic routes as the volume of traffic on Bayview Road does not exceed 23,000 vehicles per day or 100 Class 7 to 12 Austroads vehicles (refer Main Roads Traffic Map which indicates Bayview Road carried an average of 6,491 vehicles per day with 28 Class 7 to 12 Austroads vehicles in 2020/21).

Whilst the site is not within the trigger distances under SPP5.4, consideration has been given to the noise exposure forecast table in the Road and Rail Noise Guidelines of SPP5.4. This assessment suggests a maximum noise exposure category of 57dB for the portion of the development closest to Bayview Road, with the remainder of the development expected to achieve a noise exposure category of less than 55dB, being the target noise level. With suitable boundary treatments, the entire development can be expected to achieve the target noise levels.

Accordingly, an Acoustic Assessment has not been prepared and implementation of measures to mitigate the effects of traffic noise is not likely to be required.

State Planning Policy 7.0 – Design of the Built Environment

State Planning Policy 7.0 – Design of the Built Environment ('SPP7.0') contains 10 Design Principles to be applied to built form development proposals, including:

1. Context and Character;
2. Landscape Quality;
3. Built Form and Scale;
4. Functionality and Build Quality;
5. Sustainability;
6. Amenity;
7. Legibility;
8. Safety;
9. Community; and
10. Aesthetics.

The development has been designed having regard to the Design Principles under SPP7.0 and it is considered the intent of each Design Principle has been achieved.

Other State Planning Policies

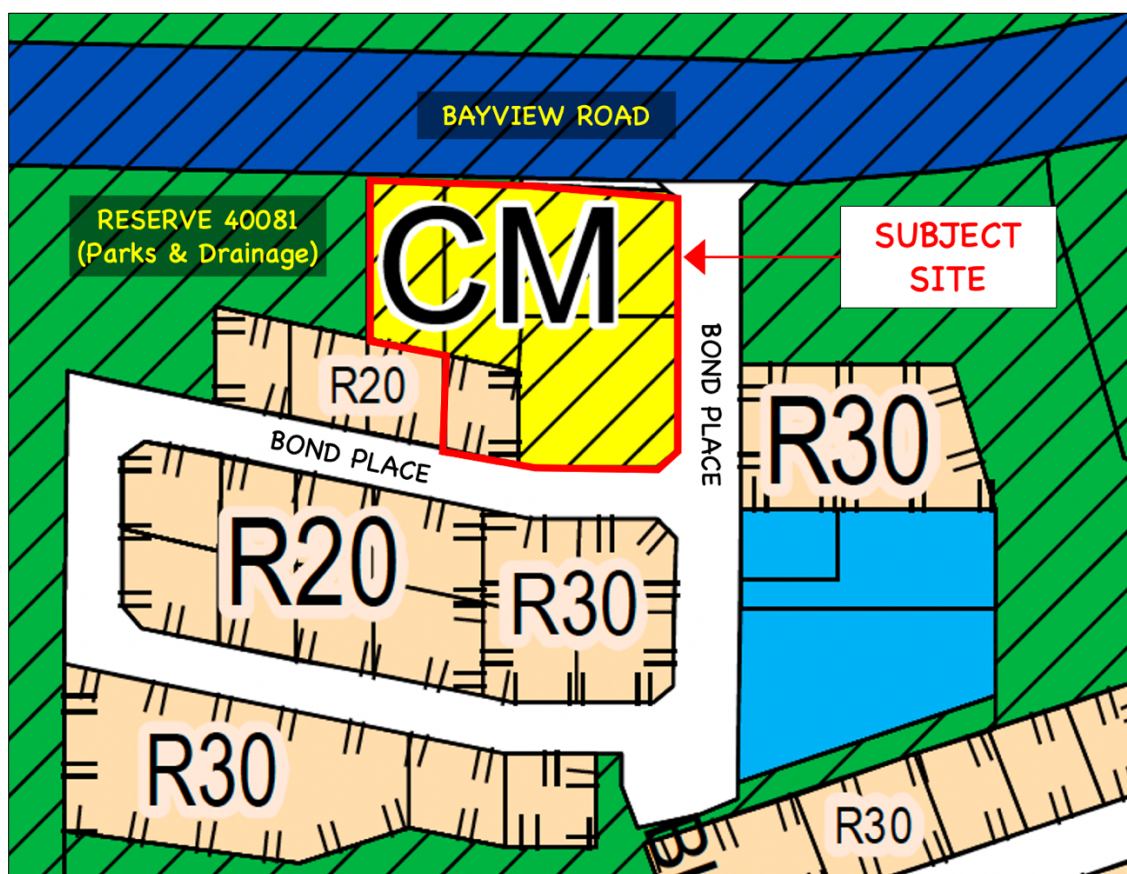
No other State Planning Policies are relevant to the consideration of this Application.

4.2 City of Karratha Local Planning Scheme

Zones and Reserves

LPS8 divides the scheme area into zones and reserves. No.2 Bond Place, together with adjacent No.4 Bond Place, is reserved for 'Public Purposes – Community' while No.6 Bond Place is zoned 'Residential' under LPS8.

The Residential Accommodation and Recreation Facilities are situated on the reserved portion of the site, while the portion of the development within the Residential zone includes the Administration Building / Caretakers Residence and Car Park.



Local Planning Scheme Zoning Map

Land Use

Reserved Land (No.2 Bond Place)

Pursuant to Clause 2.3 of LPS8, when considering an Application for Development Approval, the City shall have regard to the ultimate purpose intended for the reserve. The development is consistent with the purpose of the reserve, given that:

- the site will continue to be owned and managed by TSA;
- an existing Church and Thrift Shop occupy the eastern portion of the reserve;
- the facility will offer occupants a range of social / community support services;
- a crisis accommodation facility occupies the reserve at No.4 Bond Place; and
- the development is effectively an expansion of the existing community purposes established on the site.

Zoned Land (No.6 Bond Place)

The permissibility of uses on zoned land is determined by the use class designations under the Zoning Table. To determine the applicable use class, it is necessary to consider the land use definitions set out in Appendix 1 of LPS8. The development has the potential to fall within the use class of either a Community Use or Residential Building, which are defined in LPS8 as follows:

Community Use

land or buildings designed or adapted primarily for the provision of educational, social or recreational facilities and services by organisations involved in activities for community benefit.

Residential Building

a building or portion of a building, together with rooms and outbuildings separate from such building but ancillary thereto; such building being used or intended, adapted or designed to be used for the purpose of human habitation:

- (a) temporarily by two or more persons, or*
- (b) permanently by seven or more persons,*

who do not comprise a single family; but does not include a hospital or sanatorium, a corrective institution or juvenile detention centre, a hotel, motel, short-stay accommodation, tourist resort or residential school.

The term 'residential building' is also defined in the Residential Design Codes ('RD Codes') as follows:

Residential Building

a building or portion of a building, together with rooms and outbuildings separate from such building but ancillary thereto; such building being used or intended, adapted or designed to be used for the purpose of human habitation:

- temporarily by two or more persons, or*
- permanently by seven or more persons, who do not comprise a single family; but does not include a hospital or sanatorium, a corrective institution or juvenile detention centre, a hotel, motel, short-stay accommodation, tourist resort or residential school.*

Whilst the above definitions of a 'residential building' are similar, the LPS8 definition suggests that the occupation of a residential building on a temporary basis applies only to two or more persons who do not comprise a single family, whereas the RD Codes definition allows for the occupation of a residential building on a temporary basis by two or more persons who do comprise a single family.

Clause 1.9.2 of LPS8 reads:

Where a word or term is defined in the R-Codes then notwithstanding anything else in the Scheme that word or term when used in respect of residential development has the meaning given to it in the R-Codes, unless the word has been specifically redefined by Appendix 1.

Whilst LPS8 includes a definition of a 'residential building' that is structurally different to the definition in the RD Codes, it is not considered the intent of the LPS8 definition is to limit the temporary occupation of a 'residential building' to two or more persons who do not comprise a single family. The intent is to allow for temporary occupation by two or more persons, regardless of whether they comprise a single family.

Having regard to the characteristics of the development, including the configuration of the development, the accommodation and occupancy mix, the expected length of stay, and the facilities and services that will be provided by TSA, it is considered the proposed use falls within the definition of a 'Residential Building'.

In accordance with the LPS8 Zoning Table, a 'Residential Building' is a 'D' use in the Residential zone, meaning the use may be approved at the discretion of the decision-maker, having regard to all relevant planning considerations. There is no statutory requirement to advertise a 'D' use.

Precinct

The site is within the Karratha Precinct under LPS8. The proposed development does not conflict with the Karratha Precinct Objectives listed in Clause 4.8 of LPS8.

Special Control Area

The site is not within a Special Control Area under LPS8.

Deemed Provisions

Deemed Provision 67 of LPS8 sets out the range of matters that a decision-maker is required to consider in determining an Application for Development Approval. The table below explains how the Application addresses Deemed Provision 67.

Deemed Provision 67		Response
(a)	Local Planning Scheme	The Application satisfies the relevant provisions of, and is capable of approval under, LPS8.
(b)	Orderly and proper planning	The proposed use is consistent with the Public Purposes – Community reserve and the intent of the Residential zone. There are no draft planning proposals relevant to the consideration of this Application.
(c)	State Planning Policies	State Planning Policy 2.6 – State Coastal Planning Policy 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
(d)	Environmental Protection Policies	None applicable
(e)	Any policy of the WAPC	None applicable
(f)	Any policy of the State	None applicable
(g)	Local Planning Policies	Local Planning Policy 19 - Storm Surge Risk Policy ('LPP19'). The Application satisfies LPP 19. A Risk Assessment Matrix has been completed pursuant to the Performance Based Approach of LPP19.

(h)	Structure Plans, Centre Plans and Local Development Plans	Not applicable.
(i)	Review of Local Planning Scheme	Not applicable.
(j)	Reserved land	The proposed use is consistent with the intent of the 'Public Purposes – Community' reserve over No.2 Bond Place.
(k)	Built heritage conservation of any place of cultural significance	Not applicable.
(l)	Cultural heritage significance	The development does not have any effect on the cultural heritage significance of the area. The site is not within a place of Aboriginal heritage significance.
(m)	Compatibility with setting	The scale and design of the development is compatible with other buildings in the locality and will reinforce the residential character of the area. The setting of the development will be enhanced by the provision of landscaping, including to the verge and drainage swales. Open fencing is proposed to the Bond Street frontage of the site to maintain the residential streetscape.
(n)	Amenity of the locality:	
	(i) Environmental impacts	The proposal will not have any adverse environmental impacts.
	(ii) Character of locality	The design will reinforce the character of the area and satisfies the Design Principles of SPP7.0.
	(iii) Social impacts	The development will not have any adverse social impacts and will provide improved access to safe accommodation for women in Karratha and surrounding areas.
(o)	Effect on natural environment	The development will not have an adverse effect on the natural environment.
(p)	Landscaping and tree retention	The premises will be set within a high-quality landscaped setting with species selected for local climate conditions. The Application is accompanied by a Landscape Plan.
(q)	Environmental risks	None
(r)	Risk to human health or safety	The Application is accompanied by a Bushfire Management Plan and Emergency Evacuation Plan. The Application satisfies LPP19 – Storm Surge Risk Policy.
(s)	Access and parking	Parking for 11 cars is provided, consistent with LPS8. Access is proposed via Bond Street.
(t)	Traffic impacts	The traffic generated by the development will not have an adverse effect on traffic flow and safety.
(u)	(i) Public Transport	Bus services run along Dampier Highway while school bus services operate along Bayview Road and Galbraith Road.
	(ii) Public Utilities	All utilities required to service the development are available, including water, sewer, and power.
	(iii) Waste Management	A bin store is proposed of sufficient capacity to meet the needs of the proposed development. The caretaker will be responsible for managing waste, including placement of bins on the verge ready for collection.

	(iv) Pedestrian & Cyclist Access	A pedestrian path is provided to Bond Place, which connects to existing pedestrian / cycle paths in the locality.
	(v) Elderly & Disability Access	One 'ACROD' bay is provided.
(v)	Loss of community benefit or service	The Application will not result in the loss of a community service. The development will improve access to safe and secure accommodation for women in the region, with TSA offering health and welfare services to the occupants.
(w)	History of the site	No relevant site history.
(x)	Impact on the community	The development will not have any adverse community impacts but will enhance access to accommodation services for women in the local community and surrounding areas.
(y)	Submissions on the proposal	To be determined
(za)	Comments from agencies	To be determined
(zb)	Other planning considerations	None

Development Standards

Residential Design Codes

Clause 5.2 of LPS8 states that the development of land for any of the residential purposes dealt with by the RD Codes shall conform to the provisions of the RD Codes. The portion of the site zoned Residential is subject to a density code of R20 while the reserved portion is not allocated a density code.

The term 'residential development' is defined in the RD Codes as:

Development of permanent accommodation for people, and may include all dwellings, the residential component of mixed-use development, and residential buildings proposing permanent accommodation.

The deemed-to-comply provisions of the RD Codes apply to dwellings, being buildings designed for permanent accommodation. The primary purpose of the development is to provide temporary accommodation, with the majority of occupants being mothers with children (families). Whilst some occupants will stay longer than three months, the intent is to provide temporary accommodation until the occupants are ready to return to the community and reside in a dwelling on a permanent basis.

For these reasons, the deemed-to-comply provisions of the RD Codes do not apply. Furthermore, none of the accommodation is proposed on the portion of the site subject to the R20 density code. If the RD Codes were to apply, the development would satisfy the deemed-to-comply provisions (as applicable to grouped dwellings on land coded R20), including street setbacks, lot boundary setbacks, visual privacy setbacks, building height, open space, earthworks and retaining walls (noting that earthworks and retaining proposed within 1 metre of the lot boundary do not exceed a height of 0.5 metres above existing ground level).

Car Parking

Appendix 3 of LPS8 stipulates a parking requirement for a 'Residential Building' of one car bay for every two sleeping units plus two car bays for visitor / staff use for every seven units. With a total of 14 accommodation units, 11 car bays are required. The Application provides 11 car bays consistent with LPS8. LPS8 also requires a car bay to be provided for the Caretaker's Dwelling, however, this is unnecessary because the parking standard for a Residential Building already makes provision for staff parking.

Caretaker's Dwellings

In accordance with Clause 5.14 of LPS8, the Caretaker's Dwelling is situated in the Administration Building, comprises one bedroom and has a floor area less than 100m².

Storm Surge Risk

Clause 5.16 of LPS8 states that the City is required to maintain a local planning policy on storm surge risk, including mapping that identifies land vulnerable to storm surge inundation. Land identified as being vulnerable to storm surge inundation shall be subject to the requirements of the local planning policy (refer below).

4.3 Local Planning Policies

Local Planning Policy 19 – Storm Surge Risk Policy

The Objectives of Local Planning Policy 19 – Storm Surge Risk Policy ('LPP19') are to:

1. *Establish procedures for the assessment of development applications that relate to land that has been identified as being vulnerable to a 500-year ARI Storm Surge event;*
2. *Clarify the circumstances in which 500-year ARI Storm Surge information is required;*
3. *Guide applicants in relation to the Storm Surge information required to support development applications depending on the situation of the site and the management measures proposed;*
4. *Provide development standards, assessment procedures and decision guidelines for development proposals on land identified as being vulnerable to a 500-year ARI Storm Surge event;*
5. *Ensure adequate provision is made for the management of risk for all land identified as being vulnerable to a 500-year ARI Storm Surge event.*

Schedule 1 of LPP19 contains mapping that confirms the site is in an area vulnerable to inundation in a 500-year ARI storm surge event.

To clarify the potential inundation at the site, TSA engaged MP Rogers and Associates, the coastal engineering consultancy that prepared the storm surge inundation mapping for the City's LPP19. The advice from MP Rogers indicates that inundation levels across the site would vary between approximately 2.8 metres at the northern boundary to around 2 metres at the southern boundary, which equates to an inundation level of 9.2 metres AHD.

Clause 5.1 of LPP19 contains 'As of Right' Mitigation Measures and states:

If the site (or portion of the site) is identified as being vulnerable to a 500-year ARI storm surge event, then the applicant may incorporate the following 'as of right' design responses within their application for planning approval which are considered to sufficiently address the level of risk associated with storm surge:

- a) *elevating finished floor levels of habitable rooms and net lettable area above the 500-year ARI storm surge event level...*
- b) *or by locating the development on a portion of the site that would not be vulnerable to a 500-year ARI storm surge event.*
- c) *Where filling is proposed, suitable retaining is required to prevent erosion and undermining of the substrate and foundations beneath the dwelling.*

For an inundation level exceeding 2 metres, Clause 5.1 specifies the following 'As of Right' Design Response:

- *Raise height of the finished floor level for all habitable rooms (dwellings) or net lettable area for a commercial / community building above the identified storm surge level through a structural / building design response (i.e. Elevated 'Queenslander' style housing); or*
- *A combination of fill/retaining (to a maximum of 0.5m) and stilt construction.*

It is proposed to fill the majority of the site to achieve a ground level of 7.8 metres AHD, with all buildings constructed on posts to achieve a finished habitable floor level of 8.7 metres AHD (0.9 metres above the proposed site level). This results in a habitable floor level that is 0.5 metres below the estimated storm surge inundation level of 9.2 metres AHD. As the development will not achieve the 'As of Right' Mitigation Measures in Clause 5.1 of LPP19, a Performance Based Approach pursuant to Clause 5.2 of LPP19 is required. Clause 5.2 reads:

Should an applicant choose not to incorporate the 'as of right' design responses outlined in Section 5.1 above, the applicant will be required to complete the risk assessment matrix contained at Schedule 2 of this Policy in order to define the level of risk relating to the proposal and determine appropriate mitigation measures to ensure an acceptable level of risk is achieved.

Once the risk assessment matrix has been completed, the applicant and landowner will then be required to complete, sign and attach the Applicant's Risk Checklist contained at Schedule 3 to this policy. This is to ensure that the landowner/applicant acknowledges and accepts the level of risk in relation to the proposed development or land use and takes responsibility for appropriately mitigating that risk.

The completed Risk Assessment Matrix and Risk Assessment Checklist are shown in Appendix 1. The Risk Assessment Matrix results in a total score of 14, with the highest risk (7) being damage to private property. With respect to public safety (5), access to the property is from Bond Place, a cul-de-sac with the only point of egress being Bayview Road. With respect to public infrastructure (2), there is a risk of damage to the drainage swales that the development intends to utilise for stormwater runoff.

As evident in the Risk Assessment Checklist, the Applicant deems the overall risk to be moderate and does not oppose a requirement for a Section 70A Notification to be placed on the land. To mitigate the risks from a 500-year ARI storm surge event, the following measures are identified in the Risk Assessment Checklist.

Emergency Evacuation Plan

The facility will be managed by TSA and a caretaker will reside at the premises. TSA will prepare an Emergency Evacuation Plan that can be implemented in the event of an imminent risk to residents, including (for example) storm surge and bushfire. An example of an Emergency Evacuation Plan, for reducing risks associated with a bushfire, is provided in the Bushfire Management Plan accompanying the Application. The Emergency Evacuation Plan will be submitted to the City prior to occupation of the development, pursuant to a suitable condition of approval.

Structural Design

The development will be structurally designed to withstand the effects of storm surge and other weather / climate events. Structural engineering drawings can be submitted prior to issue of a Building Permit, pursuant to a suitable condition of approval.

5.0 Conclusion

This Town Planning Statement has been prepared in support of an Application for Development Approval of a Residential Building at Nos.2 and 6 Bond Place, Pegs Creek. The Residential Building will be managed by The Salvation Army and is adjacent to an existing Church at No.2 Bond Place and accommodation facility at No.4 Bond Place.

The Residential Building is a complementary land use to the existing services offered by The Salvation Army at the site. The use is consistent with the purpose for which No.2 Bond Place is reserved under the Local Planning Scheme and is a discretionary ('D') use in the Residential zone applicable to No.6 Bond Place.

The Application satisfies the relevant considerations listed in Deemed Provision 67 of the Local Planning Scheme, is consistent with the principles of orderly and proper planning, and will not have any detrimental impact on the amenity of the locality.

Attachment 1

Storm Surge Risk Assessment Matrix and Risk Assessment Checklist

APPLICANT RISK ASSESSMENT MATRIX

RISK CATEGORY	RISK DESCRIPTION	APPLICABLE TO DEVELOPMENT APPLICATION (TICK)	500 YEAR ARI STORM SURGE			TREATMENT OPTIONS
			Consequence	Likelihood	Level of Risk	
Public Safety	Flooding from a storm surge event resulting in harm to public due to hindered emergency capacity, response and recovery.	Y	2	1	2	<ul style="list-style-type: none"> • Ensure evacuation plans are as good as they can be • Encourage as many developers to build above 500yr ARI as possible • Suitable construction standards to withstand the force of 500yr ARI storm surge event • Suitable controls on electricity supply to avoid electrocution in 500yr ARI event
Public Safety	Flooding from a storm surge event resulting in harm to public due to lack of access / egress from residential lots.	Y	3	1	3	<ul style="list-style-type: none"> • Ensure evacuation plans are as good as they can be • Encourage as many developers to build above 500yr ARI as possible • Suitable construction standards to withstand the force of 500yr ARI storm surge event • Suitable controls on electricity supply to avoid electrocution in 500yr ARI event
Private Property	Flooding from a storm surge event impacts residential property.	Y	3	1	3	<ul style="list-style-type: none"> • Encourage as many developers to build above 500yr ARI as possible • Suitable construction standards to withstand the force of 500yr ARI storm surge event
Private Property	Flooding from a storm surge and storm water event impacts commercial property including accommodation, retail, petrol station and industrial locations resulting in property damage and uncontrolled release of waste.	Y	3	1	3	<ul style="list-style-type: none"> • Encourage as many developers to build above 500yr ARI as possible • Suitable construction standards to withstand the force of 500yr ARI storm surge event
Private Property	The proposed development may impact on the modelled storm surge event impacting on City maintained landscaping and streetscaping adjacent to the development.	Y	1	1	1	<ul style="list-style-type: none"> • Consider consequences of losing landscaping to storm surge when planning landscaping in storm surge affected area
Public Infrastructure	Flooding from a storm surge event impacts road and transport infrastructure adjacent to the development site or proposed by the development.	N/A		1		<ul style="list-style-type: none"> • Identify alternative emergency access arrangements to properties within 500yr ARI storm surge affected area • Where roads have been damaged, formalise interim access arrangements as soon as possible • Install protection measures where necessary to protect roads and other infrastructure at risk of removal from coastal processes
Public Infrastructure	Flooding from a storm surge event will impact the capability and/or the capacity of drainage infrastructure proposed by the development.	Y	2	1	2	<ul style="list-style-type: none"> • Make sure drains are regularly inspected and cleaned • Identify elements of drainage network that need to be improved • Schedule upgrades on drainage infrastructure most critical to effective drainage network
Public Infrastructure	Flooding from a storm surge event impacts recycled effluent irrigation ponds and tanks.	N/A		1		<ul style="list-style-type: none"> • Tanks constructed inside 500yr ARI storm surge affected area should be built having regard for the possibility of such an event and consideration of mitigation required

APPLICANT RISK ASSESSMENT MATRIX

RISK CATEGORY	RISK DESCRIPTION	APPLICABLE TO DEVELOPMENT APPLICATION (TICK)	500 YEAR ARI STORM SURGE			TREATMENT OPTIONS
			Consequence	Likelihood	Level of Risk	
Public Infrastructure	Flooding from a storm surge event impacts community emergency management infrastructure.	N/A		1		<ul style="list-style-type: none"> Need to ensure there is sufficient capacity of available emergency management infrastructure and services to accommodate evacuated households
Environmental	Flooding could potentially result in contamination as a result of proposed development on site (i.e. industrial storage, effluent treatment).	N/A		1		<ul style="list-style-type: none"> Ensure identified environmental / contamination issues are addressed in development application and take into account and respond to risk from storm surge
Environmental	The proposed development may result in other potential environmental factors being exposed to the risk of storm surge (i.e. asbestos, acid sulfate soils, other).	N/A		1		<ul style="list-style-type: none"> Ensure identified environmental / contamination issues are addressed in development application and take into account and respond to risk from storm surge
Community	Flooding from a storm surge event impacts local registered heritage sites and other important heritage sites on the property.	N/A		1		<ul style="list-style-type: none"> Be conscious of infrastructure within 500yr ARI storm surge affected area in planning development at local heritage sites Minimise financial losses as a consequence of 500yr ARI storm surge event
TOTAL ASSESSED RISK (Total Score)			14	6	14	
TOTAL ASSESSED RISK PER CATEGORY (being the highest rated risk in each of the relevant categories)						
Public Safety			5	2	5	
Private Property			7	3	7	
Public Infrastructure			2	1	2	
Environmental			0	0	0	
Community			0	0	0	
INSTRUCTIONS FOR COMPLETING RISK ASSESSMENT MATRIX 1) Applicant to select risk row(s) that are applicable to the proposal. 2) Applicant to assign a rating of 1 - 5 for 'Consequence', with a rating of 1 being Insignificant and a rating of 5 being Catastrophic. 3) Likelihood rating set at low (ie. 1) due to the low probability of a 1 in 500 year ARI storm surge event. 4) Level of risk = Consequence x Likelihood. 5) Should an application have more than one Risk Category the higher risk consequence rating shall apply.				MEASURES OF FINANCIAL CONSEQUENCES		
				1	Insignificant	Less than \$10,000
				2	Minor	\$10,000 - \$100,000
				3	Moderate	\$100,000 - \$2,000,000
				4	Major	\$2,000,000 - \$5,000,000
				5	Catastrophic	More than \$5,000,000

Applicant Storm Surge Risk Checklist

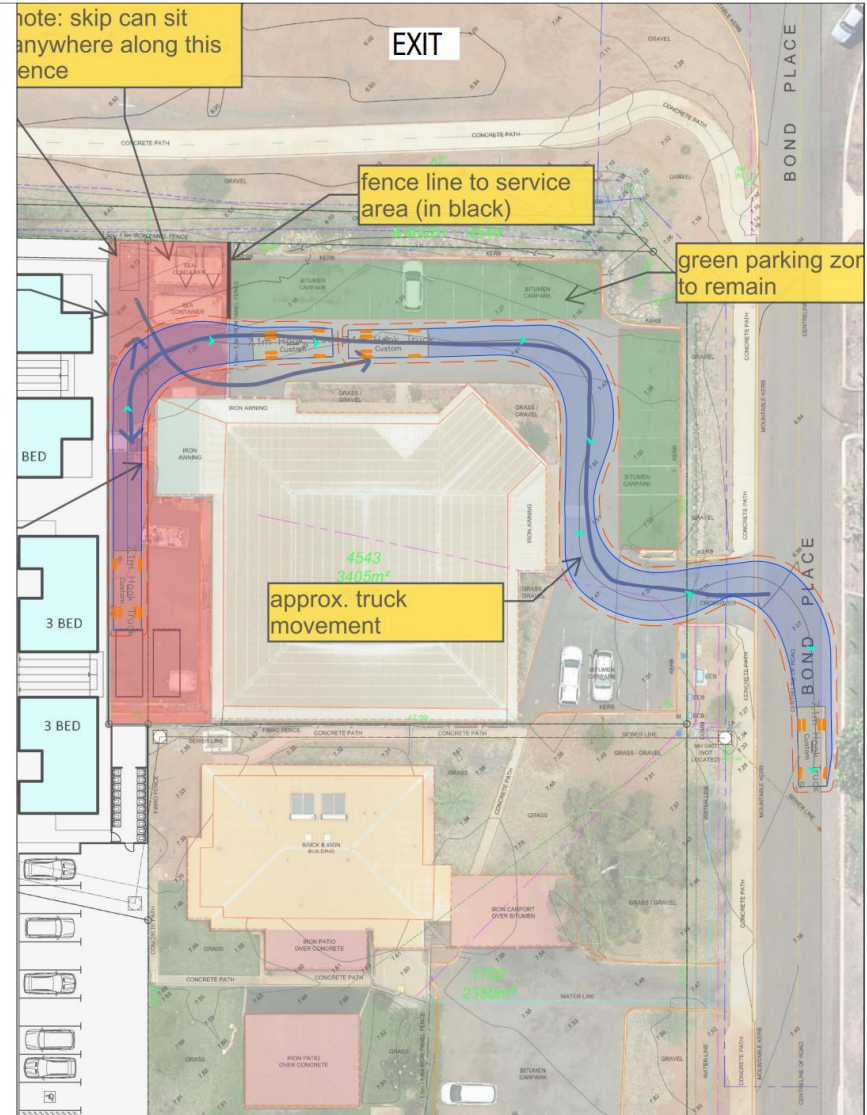
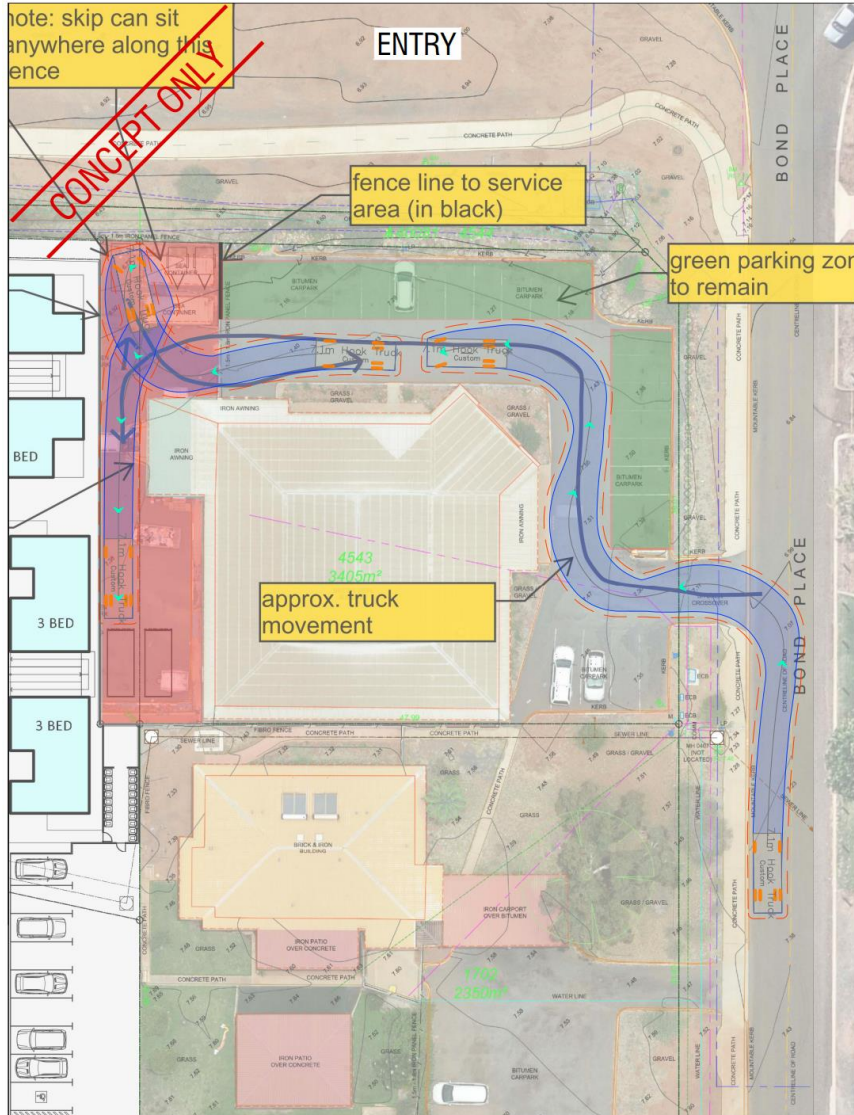
Q #	Risk Assessment Question	Check
1	Does the development propose a habitable room or net lettable floor area with a finished floor level below the identified 500 year event storm surge level?	<input checked="" type="checkbox"/>
2	To what depth would the finished floor level of this room/development be below the 500 year storm surge event level?	
	• Between 0m and 250mm?	<input type="checkbox"/>
	• Between 250mm and 500mm?	<input checked="" type="checkbox"/>
	• Between 500mm and 1 metre?	<input type="checkbox"/>
	• Greater than 1 metre?	<input type="checkbox"/>
3	The applicant has completed the Shire's Risk Assessment Matrix and has deemed the risk to the proposed development to be:	
	• Insignificant - Minor	<input type="checkbox"/>
	• Moderate	<input checked="" type="checkbox"/>
	• Major to Catastrophic	<input type="checkbox"/>
4	Is the landowner/applicant prepared to accept the level of risk of damage to the proposed development in the event of a 500 year storm surge event?	<input checked="" type="checkbox"/>
5	Is the landowner/applicant prepared to place a section 70A notification identifying potential purchasers of the risk of damage to the property in the event of a 500 year storm surge event?	<input checked="" type="checkbox"/>
6	What mitigation measures are proposed to address the risk of storm surge, if any?	
	• The development has been located on the least hazardous portion of the site.	<input type="checkbox"/>
	• A storm surge protection wall/barrier is proposed to defend the proposed development from the event of storm surge.	<input type="checkbox"/>
	• An emergency evacuation plan has been prepared by a suitably qualified consultant and forms part of the application for planning approval.	<input checked="" type="checkbox"/>
	• The proposed development is deemed to be a low value (Cost) asset.	<input type="checkbox"/>
	• Structures below the identified storm surge flood level are constructed of flood resistance materials and designed to withstand water forces as determined by a suitably qualified structural engineer.	<input checked="" type="checkbox"/>
	• The proposal relates to the design of a temporary or relocatable structure(s) that could be readily repaired or reinstated (at low cost) following the impacts of the identified 500 year storm surge event?	<input type="checkbox"/>
7	Other. Please Specify.	<input type="checkbox"/>

Landowner Signature

Dated

Applicant Signature

Dated



SUMMARY AUTHORITY RESPONSES - Schedule of Submissions		
Summary of Comments Received	Officer Response	Officer Recommendation
1. Dept of Health		
<ul style="list-style-type: none"> a) Supports the proposal. b) Connection to scheme water and reticulated sewerage, in accordance with the <i>Government Sewerage Policy 2019</i>, is required. c) Compliance with all legislative and regulatory requirements in relation to asbestos in the demolition of an existing dwelling. Advice should be sought from the Department of Mines, Industry Regulation and Safety's WorkSafe Division regarding compliance in this regard. 	Noted - No impacts to proposed development, site or surrounds	Comments b) & c) to be reflected as advice notes.
2. Horizon Power		
<ul style="list-style-type: none"> a) Supports the proposal. b) Reminder that a supply abolishment form can be found on the Horizon Power website to make safe for demolition, with a subsequent new connection application for the new facility when required. 	Noted - No impacts to proposed development, site or surrounds	Forward information to applicant.
3. Water Corporation		
<ul style="list-style-type: none"> a) No objection to the proposed development. b) The proposed development does not appear to affect Water Corporation assets. Should the Water Corporation's assets be affected, then the developer may be required to fund new works or upgrade/protect existing works. c) Water and wastewater are available to the site. d) The proposal will require approval by the Water Corporation's Building Services section prior to the commencement of works. 	Noted - No impacts to proposed development, site or surrounds	Comments b) & d) to be reflected as advice notes
4. Dept. Water and Environmental Regulation		
<ul style="list-style-type: none"> a) Notes the results of the Karratha Coastal Vulnerability Study and the applicability of this to the subject site, including that the proposed habitable floor level will be constructed 0.1m and 0.2m below the 2060 and 2110 future predicted 1 in 500 AEP storm surge levels respectively. b) Advises that the subject site's stormwater management system should align with best practice Water Sensitive Urban Design principles, consider any overarching planning documents, and 	<p>The applicant has addressed the City's Local Planning Policy DP19 – Storm Surge Risk and mitigation measures proposed to ensure significant impacts to the development are proposed to an acceptable level in accordance with policy and are considered appropriate.</p> <p>The information submitted by the applicant for stormwater management of the proposed development requires further</p>	Condition of approval be imposed requiring A detailed stormwater management plan be submitted to and approve by the City.

SUMMARY AUTHORITY RESPONSES - Schedule of Submissions		
Summary of Comments Received	Officer Response	Officer Recommendation
ensure adequate land is set aside for stormwater management purposes.	detail. It is recognised by the City that there is adequate scope within the proposed site layout and design to achieve stormwater management solutions suitable to the development and the City's requirements.	
5. Department of Fire and Emergency Services		
<p>a) Additional photographs of existing vegetation types are required in the BAL assessment.</p> <p>b) Vehicle access – the BMP has not addressed the acceptable solutions of the Guidelines in this regard.</p> <p>c) It is important that an enforceable mechanism is in place to ensure the Asset Protection Zone (APZ) can be maintained in perpetuity.</p> <p>d) The proposed development is not supported as the development design has not demonstrated compliance to Element 1: Location and Element 2 Siting and Design.</p>	<p>The applicant has revised the Bushfire Management Plan (BMP) to provide information DFES indicated was lacking.</p> <p>The revised BMP states no technical requirements for the private driveway apply to this site for the following reasons:</p> <ol style="list-style-type: none"> 1. The site is serviced by a reticulated water supply; 2. The most distant external part of the development is less than 70m from a public road; and 3. The site is accessible via a public road where the maximum road speed is less than 70km/h. <p>As a result, the proposal meets relevant Acceptable Solutions of A3.6 in relation to vehicle access.</p> <p>Section 5 Table 2 of the BMP provides landowner/occupier responsibilities that include the landowner entering into an agreement with the local government to ensure the Asset Protection Zone (APZ) is in place in accordance with BMP at all times and that this is the responsibility of the owner of the land the proposed development is located on.</p>	<p>A specific condition requiring a suitable arrangement being entered into with the City for this purpose is recommended along with conditions relating to requirement for a Section 70A Notification on title and to provide a revised BMP (refer to text of report for more detailed consideration).</p>
6. Dept. of Communities (Housing) – no response		

Internal Service Units Comments - Schedule of Submissions		
Summary of Comments Received	Officer Response	Officer Recommendation
1. Building Services		
<p>a) Compliant fire walls are required between all joined residential units;</p> <p>b) Site plan indicates that Units 7 and 10 and 8 and 9 do not achieve minimum building separations for Class 1a buildings on the same site. They require a minimum 1800mm between external walls and 900mm between eaves;</p> <p>c) Buildings 2 and 3 are required to be accessible;</p> <p>d) No setbacks provided on site plan between Buildings 2 and 3 from Buildings 4 and 5. Fire separation requirements need to be achieved;</p> <p>e) No boundary setbacks provided for the admin building. Need to be a minimum 3m to side boundary;</p> <p>f) Admin building is on Lot 1701. Unless the two lots are being amalgamated, it is technically required to achieve a 3m setback to the rear boundary;</p> <p>g) The proposed buildings currently sit over the lot boundary between Lots 4563 and 4543. Is this boundaries being changed?</p> <p>h) Is the utility building a communal laundry? No laundry facilities have been provided in the individual units, also no drying areas have been indicated on the plans;</p> <p>i) A fire wall is required to separate the accommodation unit in the main admin building. The facilities required for the exclusive use of the occupant will be dependent on the building classification they intend to apply to this part.</p>	<p>The City advised the applicant in writing of the matters raised by the City's Building Services including setbacks between buildings, accessibility and boundary setbacks. The applicant provided amended architectural drawings that demonstrate appropriate setbacks between buildings, an access ramp to Building 2 and confirmation that the boundary between Lot 4543 and Lot 4563 is proposed to be amended to reflect the boundary between the existing development and the proposed new development.</p>	<p>It is recommended an advice note be included stating that to be able to gain a Building Permit, amalgamation of the lots may be required and that the proponent should undertake their own investigations to determine this.</p>
2. Environmental Health Services		
<p>a) Security, building, signage and carpark lighting must be located, designed and installed to prevent excess light spillage from the development. Reference should be made to <i>AS4282 Control of the obtrusive effects of outdoor lighting</i> and other relevant lighting standards.</p> <p>b) The Animals, Environment and Nuisance Local Law 2012 regulates the use of exterior lights, including lighting towers in communal areas. This Local Law requires that floodlights or other exterior lights must not shine directly onto any other premises, which is a factor that needs consideration in the lighting design for the development.</p> <p>c) With regard to road traffic noise, given the proximity of some of these accommodation units, the applicant should give some consideration</p>	<p>External lighting is considered later in further detail in the body of the RAR.</p> <p>It is noted that the plans submitted provide for an external bin compound. Bin collection and general waste management could be appropriately dealt with through an Operational Management Plan (OMP) for the site. The OMP would also include onsite management relating to cyclone preparedness and day to day operations to mitigate any impacts to surrounding residential properties.</p>	<p>Condition recommended for an external lighting plan.</p> <p>It is recommended that a condition of approval be imposed requiring the submission and approval of an OMP to be adhered to</p>

Internal Service Units Comments - Schedule of Submissions		
Summary of Comments Received	Officer Response	Officer Recommendation
<p>to noise attenuation in the construction of the units, especially in the row closest to Bayview Road. The units are raised above ground and a fence alone might not be sufficient.</p> <p>d) Construction work must be carried out in accordance with practices set out in Section 6 'Control of noise' in Australian Standard 2436-1981 <i>Guide to Noise Control on Construction, Maintenance and Demolition Sites</i>. The applicant must submit a noise management plan if construction work will occur outside the hours of 7am to 7pm on Monday to Saturday, or is likely to disrupt nearby residents.</p> <p>e) Regarding waste management, refuse bins shall be provided adequate to service the development and the bins are to be screened from view to the satisfaction of the City before the development is occupied or used. All refuse containers must be presented to the Bond Place frontage for collection on the designated collection day.</p> <p>f) Further to the above, all waste and recycling materials must be contained within bins. These must be stored within the buildings or within an external enclosure located and constructed to the satisfaction of the City. The external enclosure must be able to contain all waste bins, at least 1.5 m high, fitted with a gate and graded to a 100mm diameter industrial floor waste with a hose cock, all connected to sewer/onsite effluent disposal system. The minimum provisions for internal bin storage are a concrete wash-down pad of at least 1m² graded to a 100mm diameter industrial floor waste with a hose cock, all connected to sewer. This can be centrally located within the development.</p> <p>g) The development site must be connected to the Water Corporation's reticulated mains sewerage system before commencement of any use.</p> <p>h) Under the Health Local Law 2012, the facility must comply with requirements under Part 8 and registration as a Lodging House is required. An application for registration should be submitted to the City. Specifically, clause 8.10(1)(a)(ii) requires that laundry facilities be provided at a ratio of at least 1 laundry unit per 15 residents.</p> <p>i) Under the City's Animals, Environment and Nuisance Local Law, 2012 during the construction phase, if dust is deemed to be a nuisance by an Environmental Health Officer, 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 Environmental Health team.</p>		<p>during the operational phase of development.</p> <p>Where relevant, comments from Environmental Health Services are recommended as advice notes to any approval granted.</p>

Internal Service Units Comments - Schedule of Submissions		
Summary of Comments Received	Officer Response	Officer Recommendation
3. Technical Services		
<p>a) Further details are required regarding whether the proposed landscaping may impact the shared path to the north of the site;</p> <p>b) Further to the above, more detail is required of the landscaping proposed beyond the property boundary, within the intended APZ. Landscaping should not block the drain to the north of the subject site;</p> <p>c) Further details are required regarding crossover demolition and construction. Upon demolition of the existing crossover, the verge is to be reinstated, with kerbing to portion of the road affected. City approval is required before undertaking any construction works for the new crossover, which constitutes a separate approval process;</p> <p>d) With regard to parking and access within the site, the following information is required:</p> <ul style="list-style-type: none"> - Aisle widths in the context of car parking bays; - Dimensions of car parking bays (where applicable, wheel stops are required so that vehicles do not intrude into footpath); - The last car parking bay to the north may have issues reversing out – please provide turning movements. <p>e) In addition to the above, Technical Services requested the submission of a Stormwater Management Plan (SWMP), with the following requisite information:</p> <ul style="list-style-type: none"> - Lot contour levels and finished levels - Floor levels – demonstrate 500mm freeboard from the 1% AEP (Annual Exceedance Probability) flood level - Pre and post catchment areas - Pre- and post-development flows - Drainage flow paths - Flow velocities of stormwater are to be no greater than 2m/per second - The City require that all calculations are for a 20% AEP critical event - Stormwater runoff to be directed to a drain adjoining the lot or where there is no drain the runoff can be directed onto the roads 	<p>Revised landscaping plans submitted by the applicant show landscaping will not impact on the public pathway running parallel to the northern boundary of the site.</p> <p>The City is not seeking any landscaping in the APZ. This will require revision to the landscaping plans as the plans currently show ground cover landscaping in the APZ.</p> <p>The applicant will be required to lodge an application for approval of a new crossover with the City's Infrastructure Services section and the existing crossover will be required to be removed.</p> <p>The applicant provided revised plans to provide dimensions for parking aisle widths and parking bay dimensions. These are now deemed adequate.</p> <p>Stormwater Management is discussed in further detail in the body of the RAR.</p>	<p>Advice note relating to c) to notify the proponent of the need to gain approval from the City for new crossover.</p> <p>Detailed SWMP to be submitted to and approved by the City.</p>

Internal Service Units Comments - Schedule of Submissions		
Summary of Comments Received	Officer Response	Officer Recommendation
<ul style="list-style-type: none"> - Drainage discharge points to include scour protection - Large lots may require detention basins - Roofs shall not contain Down gutters & pipes and will discharge directly to the lot 		
4. Parks & Gardens		
<ul style="list-style-type: none"> a) No objection to the landowner using the area identified on the plans for the APZ and to maintain it themselves. b) Insufficient detail of what is planted in the APZ – further clarification required. c) Some of the plant species identified may not have a high success rate, but if are planted inside the landowner's fence line, then that is up to them to do their due diligence on success rates. 	The City is not seeking any landscaping in the APZ. This will require revision to the landscaping plans as the plans currently show ground cover landscaping in the APZ.	Condition requiring revised landscaping plan.

DURKIN ROAD, LOT 201, KAMBALDA EAST – WORKFORCE ACCOMMODATION EXPANSION

Form 1 – Responsible Authority Report (Regulation 12)

DAP Name:	Regional Joint Development Assessment Panel	
Local Government Area:	Shire of Coolgardie	
Applicant:	CLE Town Planning & Design	
Owner:	Compass (Australia) Catering & Service P/L	
Value of Development:	\$30 million <input checked="" type="checkbox"/> Mandatory (Regulation 5) <input type="checkbox"/> Opt In (Regulation 6)	
Responsible Authority:	Shire of Coolgardie	
Authorising Officer:	Consultant Planner – Francesca Lefante	
LG Reference:	PA 22/13	
DAP File No:	DAP/22/02262	
Application Received Date:	12 July 2022	
Report Due Date:	30 August 2022	
Application Statutory Process Timeframe:	60 Days	
Attachment(s):	1. Location Map & Site Aerial 2. Development Plans – 23 3. Applicants Planning Report 4. Update DA Form 5. Applicant additional comments 6. Update Traffic Impact Assessment (TIA) 7. Shawmac – Traffic Review (Shire) Response 8. Main Roads Response 9. Water Corporation Response 10. DFES Response – TBA 11. Council Minutes	
Is the Responsible Authority Recommendation the same as the Officer Recommendation?	<input type="checkbox"/> Yes	Complete Responsible Authority Recommendation section
	<input checked="" type="checkbox"/> No	Complete Responsible Authority and Officer Recommendation sections

Responsible Authority Recommendation

That the Regional Joint Development Assessment Plan resolves to:

1. **Accept** that the DAP Application reference DAP/22/02262 is appropriate for consideration as a “Workforce Accommodation” land use and compatible with the objectives of the zoning table in accordance with Clause no. of the Coolgardie Local Planning Scheme No. 5;
2. **Approve** DAP Application reference DAP/22/02262 and accompanying plans (Attachment 2 – Development Plans 29 August 2022) in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of the Shire of Coolgardie Local Planning Scheme No. 5, subject to the following conditions:

Conditions

1. This decision constitutes planning approval only and is valid for a period of 4 years from the date of approval. If the subject development is not substantially commenced within the specified period, the approval shall lapse and be of no further effect.
2. This decision constitutes planning approval only and is valid for a period of 4 years from the date of approval. If the subject development is not substantially commenced within the specified period, the approval shall lapse and be of no further effect.
3. Development shall be in accordance with the attached approved plans and subject to any modifications required as a consequence of any condition(s) of this approval.
4. Prior to lodging an application for a building permit, thoroughfares during construction.
5. Prior to the commencement of any site works, a Construction Waste Management Plan prepared by a suitably qualified person in consultation with the Local Government, must be submitted to the Local Government. The Plan must address, but not be limited to, the following matters:
 - a. Recycling of demolition materials including concrete;
 - b. Removal of hazardous materials and disposal at an approved waste disposal facility in accordance with the requirements of the relevant legislation, codes, standards and guidelines, prior to the commencement of any building works;
 - c. Details demonstrating compliance with the relevant legislative requirements, associated with the removal of hazardous waste, particularly the method of containment and control of emission of fibres to the air, are to be submitted to the satisfaction of the Local Government prior to the removal of any hazardous materials.
6. Prior to occupation a Noise management plan is prepared, and any mitigation measures identified to be implemented.

7. Prior to occupation, an amended Bushfire Management Plan be submitted to the satisfaction of the Shire of Coolgardie in consultation with DFES: -
 - a. Addressing BMP safer area designation and calculation method.

Once approved the Bushfire Management Plan & Evacuation Plan any mitigation measures identified to be implemented to the satisfaction of the Shire of Coolgardie.
8. Prior to occupation or use of the development, the crossover/s and the verge and kerb reinstated to the specification and satisfaction of the Shire of Coolgardie.
9. Existing trees located within the verge are a Local Government asset and as such must be retained except where otherwise approved for removal by the Local Government.
10. All vehicle parking, access ways, footpaths and external lighting shall be constructed and maintained in accordance with the Australian Standards AS2890 in the form and layout depicted on the approved plans to the satisfaction of the Shire of Coolgardie.
11. That the applicant to the prepare and provide a traffic management study on the Durkin Road Intersection to reflect and address any road changes required as part of the Shires strategic Durkin Road upgrade.

Advice Notes

1. This Determination Notice is not a Building Permit or Health Approval, nor authorise such works. All separate applications and approvals must be obtained prior to the commencement of construction on site, whichever occurs first.
2. No building or construction activities shall be carried out before 7.00am or after 7.00pm, Monday to Saturday, and not at all on Sunday or Public Holidays. Extension of construction hours beyond the above timeframes will require separate request to the Shire for consideration

Details: outline of development application

Region Scheme	N/A
Region Scheme - Zone/Reserve	N/A
Local Planning Scheme	Shire of Coolgardie Local Planning Scheme No 5
Local Planning Scheme - Zone/Reserve	Special Use SU16 – Workforce Accommodation
Structure Plan/Precinct Plan	N/A
Structure Plan/Precinct Plan - Land Use Designation	N/A
Use Class and permissibility:	Workforce Accommodation - Permitted
Lot Size:	24.5 ha – 245,000 sqm
Existing Land Use:	Workforce Accommodation

State Heritage Register	No
Local Heritage	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Heritage List <input type="checkbox"/> Heritage Area
Design Review	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Local Design Review Panel <input type="checkbox"/> State Design Review Panel <input type="checkbox"/> Other
Bushfire Prone Area	Yes
Swan River Trust Area	No

Proposal:

The proposal seeks modifications and expansion of the existing Kambalda Village Workforce Accommodation facilities as follows:

- Demolition of 56 existing rooms that are at their end of life.
- Construction of 264 new rooms, resulting in a net increase of 208 rooms.
- A replacement dining hall and kitchen facility which is intended to replace the existing dining facility.

The proposal new buildings comprise: -

- A mix of three- and four-bedroom blocks, with each room including a separate shower and bathroom facility.
- The accommodation blocks are co-located in groups of eight rooms, with a 3.5m high shade structure.
- 4 laundry blocks are proposal
- The existing cafeteria will be relaced with a new dining hall and kitchen, with a capacity of 250 seat. The facility will primarily service occupants of the Village but will also continue to be open to the public.
-

A new pickup and set down area are proposed to the south of the dining hall. To accommodate buses to and from the village for resident's pickup and drop off.

Proposed Land Use	Workforce Accommodation
Proposed Net Lettable Area	N/A
Proposed No. Storeys	1
Proposed No. Dwellings	208 rooms

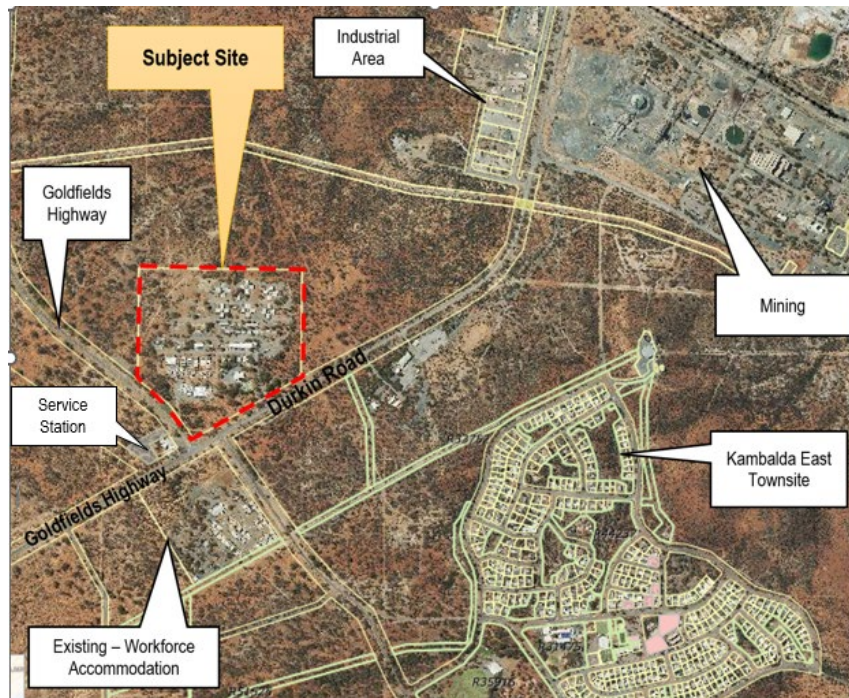
Background:

The site is located on Lot 201 Durkin Road, Kambalda East. (**Refer Attachment 2**) The Site contains an existing Workforce Village which comprising 574 rooms, communal facilities, bar, cafeteria, gym and laundries. Car parking areas and vehicles access is via Durkin Road.

The following activities and land uses adjoin the site: -

- West of the site is Goldfields Highway with a service station on the opposite corner.

- North of the site is Unallocated Crown Land.
- East of the site is unallocated crown land, with general industrial and mining activities accessed via Durkin Road.
- To the South is the existing workforce accommodation site and Kambalda East townsite which is accessed via Gordon Adams Road, opposite the site.



Council Meeting 23 August 2022

Council at its meeting on 23 August 2022 supported the proposal with the following changes

- Additional Condition be applied to the proposed development: -

That the applicant to the prepare and provide a traffic management study on the Durkin Road Intersection to reflect and address any road changes required as part of the Shires strategic Durkin Road upgrade.

The additional condition is requested to ensure the vehicle access point for the site is designed to ensure safe movements from Durkin Road, associated with the traffic volume and type including increased heavy vehicles, buses, local traffic and proximity to the Gordon Adams Road intersection.

- Advice Note 2 changes

No building or construction activities shall be carried out before 7.00am or after 7.00pm, Monday to Saturday, and not at all on Sunday or Public Holidays. Extension of construction hours beyond the above timeframes will require separate request to the Shire for consideration

The Council provisions as contained in the Minutes (**Attachment 11**) are included in the RAR recommendation.

Legislation and Policy:

The development assessment has been undertaken in accordance with the legislation and policies listed below.

Legislation

Planning and Development Act 2005

Planning and Development (Local Planning Schemes) Regulations 2015

Planning and Development (Development Assessment Panels) Regulations 2011

Shire of Coolgardie Local Planning Scheme No 5 (LPS 5)

State Government Policies

State Planning Policy 5.4 – Road and Rail Noise

State Planning Policy 3.7 – Planning in Bushfire Prone Areas

Structure Plans/Activity Centre Plans

N/A

Local Policies

N/A

Consultation:

Public Consultation

N/A

Referrals/consultation with Government/Service Agencies

- *Main Roads WA (MRWA) (Attachment 8)*
The subject site abuts Goldfields Highway but does not have any vehicular access to a Primary Regional Road reserve. Main Roads WA raised no objections.
- *Water Corporation – (Attachment 9)*
Water Corporation is responsible for water, sewer and wastewater treatment in Kambalda, have advised

There is currently sufficient wastewater treatment capacity at the Kambalda WWTP to accept the additional wastewater flows that will result from the proposed development. There is also adequate capacity in the local water mains network that currently services the site and surrounding areas.

However, the bulk water supply to Kambalda comes from the Goldfields main conduit (the GAWS) in Kalgoorlie. The capacity of the entire GAWS system is limited and is currently nearing its maximum capacity. The Water Corporation has become aware of several mining and industry related development proposals in

Kalgoorlie, Coolgardie and Kambalda. The GAWS conduit does not have the conveyance capacity to serve all these developments.

- **DFES (Attachment 10)**

DFES notes the area designated as a 'safer area' in Figure 6 of the BMP is stated as being subject to 2KW/m2. The calculation of 2KW/m2 requires a Method 2 however, no Method 2 has been supplied with the BMP. The 'safer area' therefore cannot be validated. This area should either be removed from the BMP, or the Method 2 used to calculate it should be referred to DFES for validation.

DFES advises the proponent has adequately identified issues arising from the bushfire risk assessment and considered how compliance with the bushfire protection criteria can be achieved within the submitted BMP.

Recommendation - The proposal will need to be lodged with DFES Built Environment Branch (BEB) for assessment, as required by Regulation 18B of the Building Regulations 2012 (as amended). DFES BEB will be able to provide more specific and detailed commentary in due course as part of the plan assessment process.

The agency responses are contained in full in attachment

Design Review Panel Advice

Not Applicable

Planning Assessment:

Zoning and Land Use Permissibility

The site is zoned Special Use – Workforce Accommodation under Local Planning Scheme No 5. The conditions that apply under SU16 are “*Compliance with the Council’s approval*”.

The objectives of the Special Use zone are to:

- *To facilitate special categories of land uses which do not site comfortably with any other zone.*
- *To enable the Council to impose specific conditions associated with the special use.*

The expansion of the Workforce Accommodation use on this site is consistent with Special Use zoning.

Local Planning Strategy

The Shire's Local Planning Strategy was endorsed by WAPC in October 2016. Under the Strategy Kambalda East will continue to provide a key role for residential development, with the focus on consolidation, supported by cultural, recreation, business, social and administrative uses.



The subject site is identified as retaining its existing workers accommodation use.

Built Form and Design

The design, bulk and scale of the proposed new accommodation blocks are similar in massing, height and orientation of the existing developments. The proposal is an expansion of the existing workforce accommodation. The new buildings are single level and located centrally within the existing Kambalda Village footprint, an area which is currently occupied by vacant accommodation blocks at the end of their lifecycle.

The proposed accommodation blocks include a mix of three and four room blocks, with each room including a separate shower and bathroom facility. The proposed development has been designed to respond to the local climate and site conditions, including verandah connected to the walkways through the site, with a central landscaping with informal parking. New communal facilities are considered to provide a high level of amenity to the residents and visitors. **(Attachment 2 & 3)**

Setbacks

There are no specific development standards that apply under the scheme. There is no change to street setback. All new works are centrally located on the site. The proposal at its closest point is more the 100m.

Landscape and vegetation

The perimeter of the property contains predominantly woodland vegetation including scattered eucalypt trees and shrubs. The existing site contains various scatter native trees. The Bushfire Management Plan includes Asset Protection zone and vegetation

management. The proposal provides landscaping opportunities around the new accommodation units.

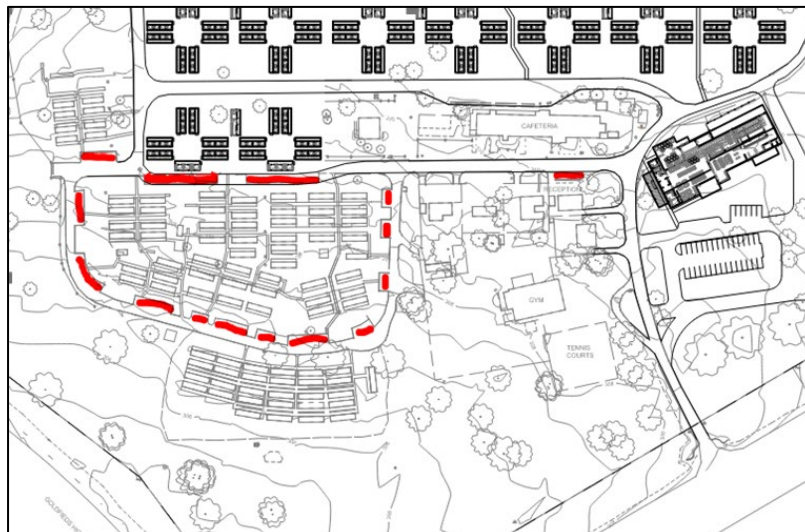
Parking

Local Planning Scheme No 5 parking provisions are detailed in Schedule 3. Where a use is not specifically mentioned, the appropriate number of parking bays is to be determined by the local government. There are no prescribed parking standards for workforce accommodation.

The Shawmac assessment assumed that the motel parking provision from *Scheme No.5 (LPS5)* was to be used (1 space per unit plus 1 space per 10 m² dining room area). This led to the observation that more parking bays might be required noting that the final decision to be determined by the Shire.

The applicant has advised (**Attachment 5**) that:-

- The proposed development includes an additional 36 bays, located just south of the proposed dining hall facility.
- The informal, unsealed areas located adjacent the proposed accommodation blocks will not be constructed to accommodate formal parking bays. Despite this, there remains opportunity to accommodate informal parking in these areas if required, however, as noted previously it is unlikely this will be required given the relatively low demand for private parking with the majority of those staying at the site travelling by bus.
- In terms of existing parking, there are several dedicated parking areas which provide a total of 70 hardstand bays (see highlighted red). Note that these areas are not definitively line marked.



- Ultimately, the parking arrangements on site are consistent with the operational requirements of the facility which currently function effectively.

The Shire has previously accepted that occupants at the Workforce accommodation camps predominantly move to and from the site via bus, with few private vehicles, carrying single occupants, with parking bays being reflected of the transport arrangements for the villages.

The site currently has existing 70 parking provided in various location on the site. The proposal includes: -

- Additional 36 bays for passenger vehicles are proposed to accommodate those travelling to Kambalda Village by private vehicle as well as the public customers of the new dining facility, including the provision of two ACROD bays.
- A new pick up and set down area is proposed to the south of the new dining hall. This area will accommodate buses parking that bring village residents, and service parking trucks and smaller vehicles. Access is from the existing internal access road.
- Informal parking were initially shown near the accommodation blocks, whilst these are not intended to being constructed as part of the proposal, there is sufficient space for additional onsite parking.

The addition of a further 36 on-site formal parking bays, with opportunity for addition parking within the site to cater for demand the number of bays, proposed is supported.

Traffic and Access

The site (in part) abuts Goldfields Highway; accordingly, the application was referred to Main Roads WA (MRWA). There is no direct vehicle access to Goldfields Highway. MRWA raised no objections to the proposal.

A Traffic Impact Statement (TIS) was prepared by Urbii (June 2022) and following initial comments updated TIA dated August 2022 (**Attachments 5 & 6**). The TIS focused on traffic generation and distribution of the development, access and egress movement patterns, car parking and traffic analysis of the site access on Durkin Road. The TIS states: -

- The vehicle access to the external road network is proposed to be retained.
- Minor changes to the internal circulation roads are proposed, with additional roads and car parking to be constructed around the relocated dining hall.
- Approximately 36 car bays will be provided for the dining hall. The proposed car parking provision is influenced by the operational requirements of the facility.
- There is presently some informal parking within the site near allocated rooms.

The TIA concludes that: -

- The traffic analysis undertaken in this report shows that the traffic generation of the proposed development is minimal (less than 100vph on any lane) and as such would have insignificant impact on the surrounding road network.
- The car parking supply is satisfactory and can accommodate the car parking demand of the proposed development.
- It is concluded that the findings of this Traffic Impact Statement are supportive of the proposed development.

Vehicle access to the site is via the existing crossover on Durkin Road for all vehicles including light vehicles, service vehicles and buses. Durkin Road is classified as a local road under the care and control of the Shire of Coolgardie. The road provides access to the Kambalda East townsite, general industrial area and various mining sites.

The TIS was reviewed by Shire Traffic consultants. Shawmac Traffic Consultants have reviewed the initial and updated TIA (**Attachment 7**) concluded the following: -

- Proposed development, services vehicles - assessment information is supported.
- Parking, the consultant assumed that motel parking ratios as set out in the *Scheme* was to be used (being 1 space per unit plus 1 space per 10 m² dining room area). Which lead to the observation that more parking bays might be required, with the final decision to be determined by the Shire.
- Daily traffic volumes and vehicle Types – The updated SIDRA analysis shows that the traffic impact at the access is minor as the level of service is within good operating conditions, with the assessment information is supported.
- After undertaking the review of the Traffic Impact Assessment in accordance with the WAPC Transport Impact Assessment Guidelines and Australian Standard applied together with assessment of assumptions made, the traffic impact assessment was supported with the observation that more parking bays might be required for the additional rooms proposed.

Main Roads considered the proposal impact on Goldfields Highway. No objections were raised for this proposed development (**Attachment 8**).

Water and Sewerage Infrastructure

Kambalda water and sewerage being supplied and managed by Water Corporation, via the Goldfields Water Scheme (GAWS) and reticulated sewer to a waste treatment located approximately 500m west of the site. Given concerns over capacity and capability of the system, the proposal was referred to Water Corporation.

In discussions with Water Corporation the Shire has been advised that: -

- The townsites of Kambalda East and Kambalda West are connected to the Kambalda WWTP be different sewer lines.
- There are different hydraulic capacity in the sewer pipe network which is a gravity fed sewer.
- The hydraulic capacity impacts the sewer design flow capacity
- Kambalda West load includes the townsite load, which is greater than Kambalda East.
- The ESS Site (camp expansion) has an existing approved system that includes private pumping system and approved discharge rate into the Kambalda East line.

Water Corporation has advised (**Attachment 9**) that:

There is currently sufficient wastewater treatment capacity at the Kambalda WWTP to accept the additional wastewater flows that will result from the proposed development. There is also adequate capacity in the local water mains network that currently services the site and surrounding areas.

However, the bulk water supply to Kambalda comes from the Goldfields main conduit (the GAWS) in Kalgoorlie. The capacity of the entire GAWS system is limited and is currently nearing its maximum capacity. The Water Corporation has become aware of several mining and industry related development proposals in

Kalgoorlie, Coolgardie and Kambalda. The GAWS conduit does not have the conveyance capacity to serve all these developments.

Accordingly, the aspect is supported, it is however noted that the applicant will require design approval during at Building Permit stage.

Community amenities

The proposal includes a new dining hall (with capacity of 250 seats) located at the eastern side of the internal access road. The dining facility will continue to be open to the public as is currently the case with the existing facility. The retention of this public accessible dining facility is considered to maintain local community amenities within Kambalda.

Proximity and impact on other Land Uses

The site is opposite an existing workforce camp on corner Durkin & Gordon Adams Road, and service station on the corner of Goldfields Highway. Durkin Road provides access to industrial and mining activities east of the site. The proposal is an expansion of the existing use and is not considered to result in any impacts or conflicts with these uses.

State Planning Policy 5.4 – Road and Rail Noise

The site adjoins Goldfields Highway, which is classified as a State Freight Route, trigger consideration under SPP5.4 for the proposal.

The applicant has advised that an initial screening assessment mentioned in Section 4.1.2 of SPP5.4 has been undertaken, and it was deemed there were no road noise impacts from Goldfields Highway on the proposed development as demonstrated below.

Goldfields Highway is identified in the SPP 5.4 map database as a trigger for SPP 5.4, being an 'strategic freight or major traffic route'. The associated 300m policy trigger distance only covers the western portion of the subject site. SPP 5.4 (Section 4.1.2) states that: *"Where any part of the lot is within the specified trigger distance, an assessment against the policy is required to determine the likely level of*

- *transport noise and management / mitigation required. An initial screening assessment (guidelines: Table 2: noise exposure forecast) will determine if the lot is affected and to what extent".*
- The "initial screening assessment" is the first step in a potentially 3-step process described from Sections 6.2 to 6.4 of SPP 5.4, inclusive. The first step uses *Table 2 – Noise exposure forecast* in the Guidelines to clarify whether, for a specific site within the generic trigger distance, there is any noise issue requiring further investigation. With reference to Table 2 in the SPP5.4 Guidelines (Guidelines), we note that Goldfields Highway would be a 2-4 lane strategic freight or major traffic route. The distance between the western boundary of the proposed building envelope and the nearest Goldfields Highway carriageway is approximately 180 metres. Using these inputs, Table 2 suggests that noise exposure for those lots would be 54 decibels, which equates to 'no further measures'.

- It is also noted that noise mitigation measures were not deemed necessary for existing buildings on site which are currently located closer to the Goldfields Highway carriageway. These existing buildings as well as the vegetation fronting Goldfields Highway will also provide for further noise reductions from Goldfields Highway as provided for in section 3.3.1 of the Guidelines.
- As such, the preparation of a noise level contour map and noise management plan was not deemed necessary given the considerable separation between the proposed development and Goldfields Highway which is unlikely to result in any noise related impacts for the site.

Bushfire Management

The site is identified as being bushfire prone by the Department of Fire and Emergency Services. In accordance with SPP 3.7, a Bushfire Management Plan and Bushfire Emergency Evacuation Plan is required. The plan details indicate the development complies with the Acceptable Solutions and Performance Principles, with the buildings achieving a BAL rating of BAL-29 or lower, with the majority of which exposed to BAL-12.5 or BAL-LOW.

The development plans have been referred to DFES and the following comments provided

- DFES notes the area designated as a 'safer area' in Figure 6 of the BMP is stated as being subject to 2KW/m². The calculation of 2KW/m² requires a Method 2 however, no Method 2 has been supplied with the BMP. The 'safer area' therefore cannot be validated. This area should either be removed from the BMP, or the Method 2 used to calculate it should be referred to DFES for validation.
- DFES advises the proponent has adequately identified issues arising from the bushfire risk assessment and considered how compliance with the bushfire protection criteria can be achieved within the submitted BMP.
- Recommendation - The proposal will need to be lodged with DFES Built Environment Branch (BEB) for assessment, as required by Regulation 18B of the Building Regulations 2012 (as amended). DFES BEB will be able to provide more specific and detailed commentary in due course as part of the plan assessment process.

As these comments were received after the Council meeting the DFES requirements have been incorporated in the officer recommendation. (**Attachment 10**)

It is recommended a condition of approval include Compliance and Implementation to the Bushfire Management Plans and Bushfire Emergency Evacuation Plan.

Conclusion:

The proposed expansion of the Kambalda Village workforce accommodation is consistent with the Special Use zoning and the Local Planning Strategy No 5

The development is centrally located on the site setback from the existing roads. The traffic analysis indicated that the proposal does not create any traffic impacts on Durkin Road. The land use, building form and parking is considered consistent with planning framework and location for this type of development. Approval of the proposal is recommended inclusive of relevant planning conditions.

Officer Recommendation

The officer recommendation is support of the proposal.

That the Regional Joint Development Assessment Plan resolves to:

1. **Accept** that the DAP Application reference DAP/22/02262 is appropriate for consideration as a “Workforce Accommodation” land use and compatible with the objectives of the zoning table in accordance with Clause no. of the Coolgardie Local Planning Scheme No. 5;
2. **Approve** DAP Application reference DAP/22/02262 and accompanying plans (Attachment 2 – Development Plans 29 August 2022) in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of the Shire of Coolgardie Local Planning Scheme No. 5, subject to the following conditions:

Conditions

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3. Development shall be in accordance with the attached approved plans and subject to any modifications required as a consequence of any condition(s) of this approval.
4. Prior to lodging an application for a building permit, thoroughfares during construction.
5. Prior to the commencement of any site works, a Construction Waste Management Plan prepared by a suitably qualified person in consultation with the Local Government, must be submitted to the Local Government. The Plan must address, but not be limited to, the following matters:
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 - b. Removal of hazardous materials and disposal at an approved waste disposal facility in accordance with the requirements of the relevant legislation, codes, standards and guidelines, prior to the commencement of any building works;
 - c. Details demonstrating compliance with the relevant legislative requirements, associated with the removal of hazardous waste, particularly

the method of containment and control of emission of fibres to the air, are to be submitted to the satisfaction of the Local Government prior to the removal of any hazardous materials.

6. Prior to occupation a Noise management plan is prepared, and any mitigation measures identified to be implemented.
7. Prior to occupation, an amended Bushfire Management Plan be submitted to the satisfaction of the Shire of Coolgardie in consultation with DFES: -
 - a. Addressing BMP safer area designation and calculation method.

Once approved the Bushfire Management Plan & Evacuation Plan any mitigation measures identified to be implemented to the satisfaction of the Shire of Coolgardie

8. Prior to occupation or use of the development, the crossover/s and the verge and kerb reinstated to the specification and satisfaction of the Shire of Coolgardie.
9. Existing trees located within the verge are a Local Government asset and as such must be retained except where otherwise approved for removal by the Local Government.
10. All vehicle parking, access ways, footpaths and external lighting shall be constructed and maintained in accordance with the Australian Standards AS2890 in the form and layout depicted on the approved plans to the satisfaction of the Shire of Coolgardie.

Advice Notes

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2. No building or construction activities shall be carried out before 7.00am or after 7.00pm, Monday to Saturday, and not at all on Sunday or Public Holidays. Extension of construction hours beyond the above timeframes will require separate request to the Shire for consideration

AERIAL

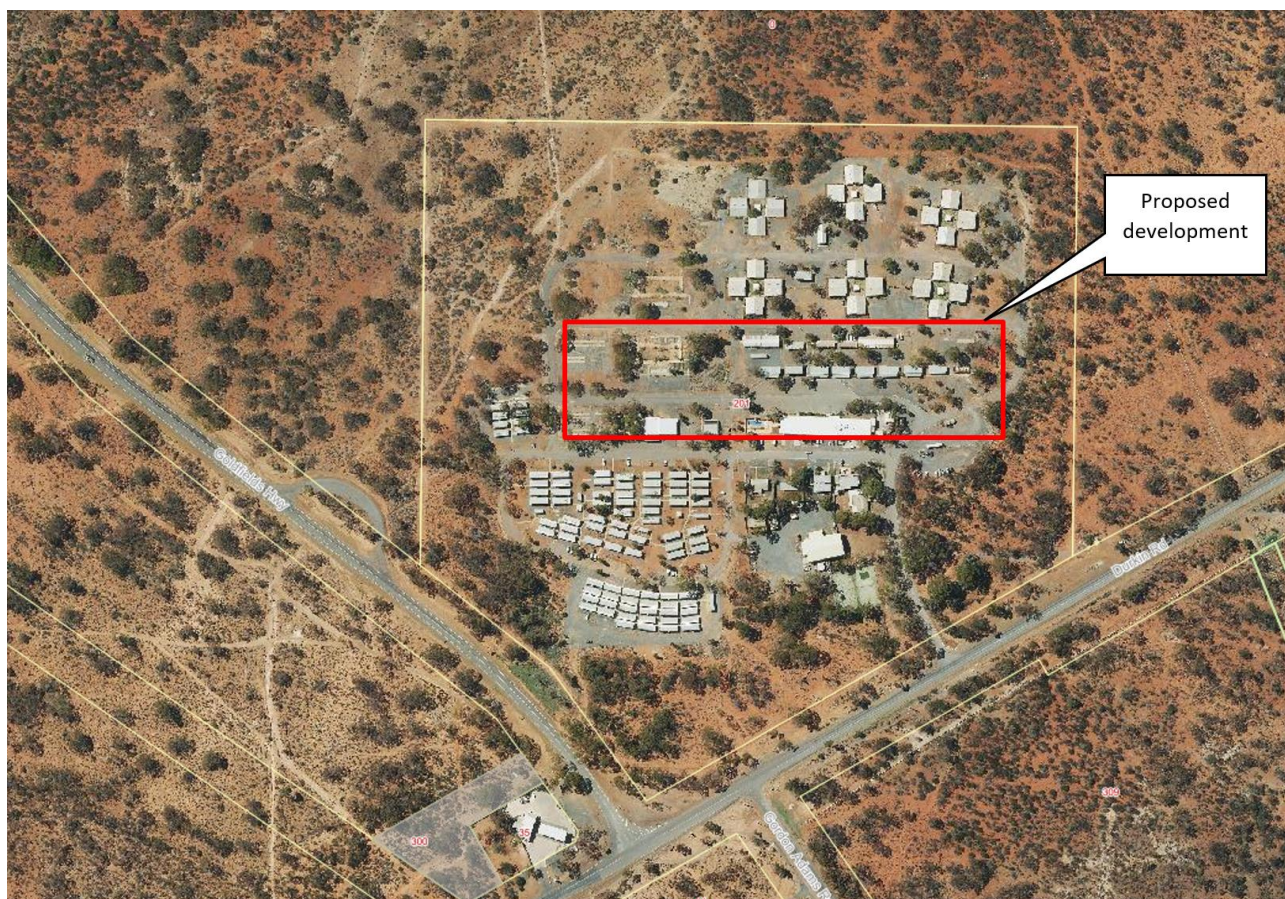
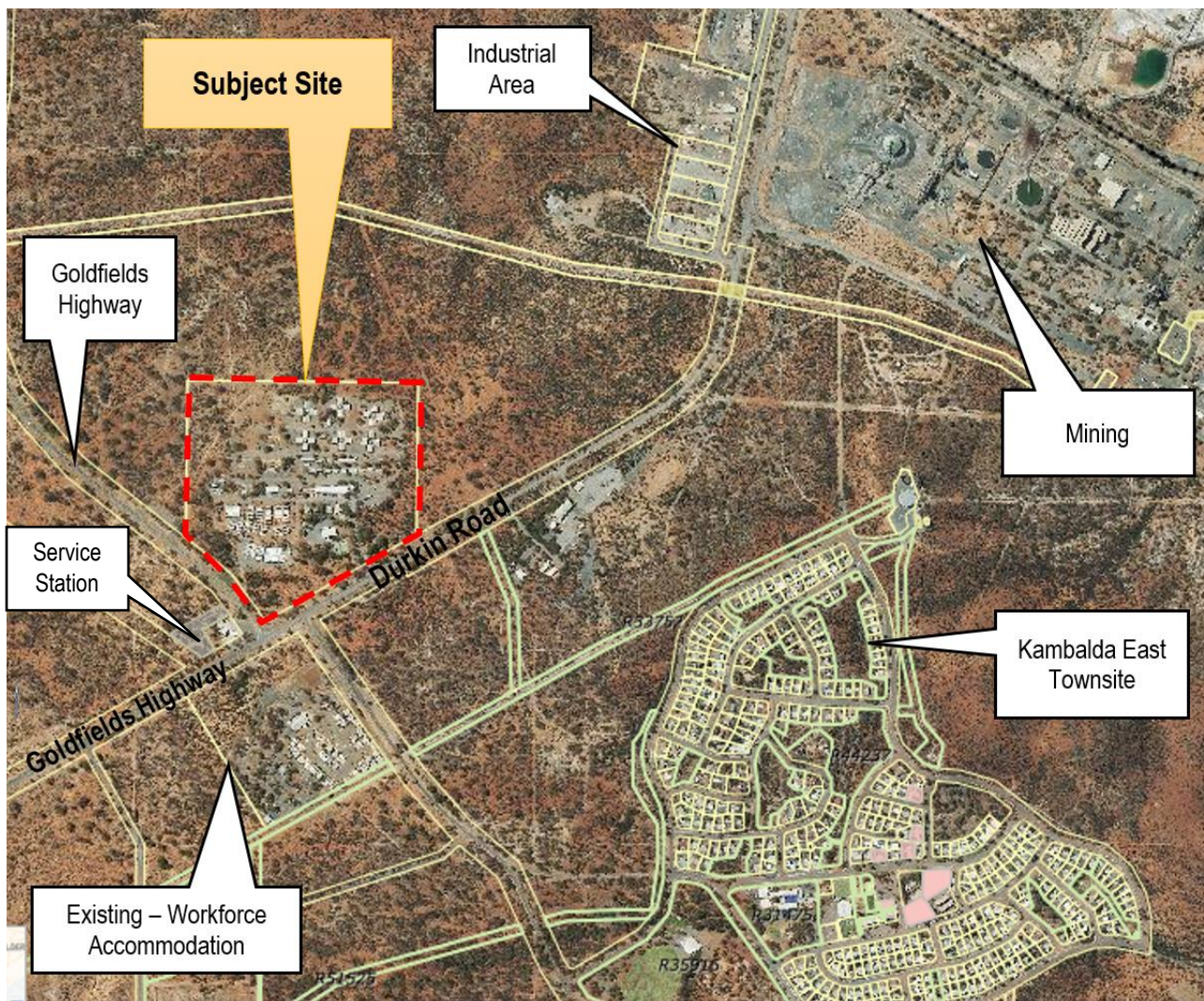
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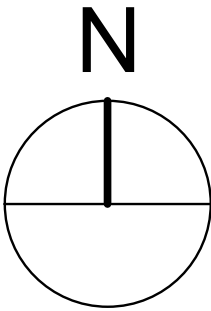


LOCAL PLANNING SCHEME NO 5 – ZONING

SPECIAL USE – WORKFORCE ACCOMMODATION







BOUNDARY

NOT FOR CONSTRUCTION

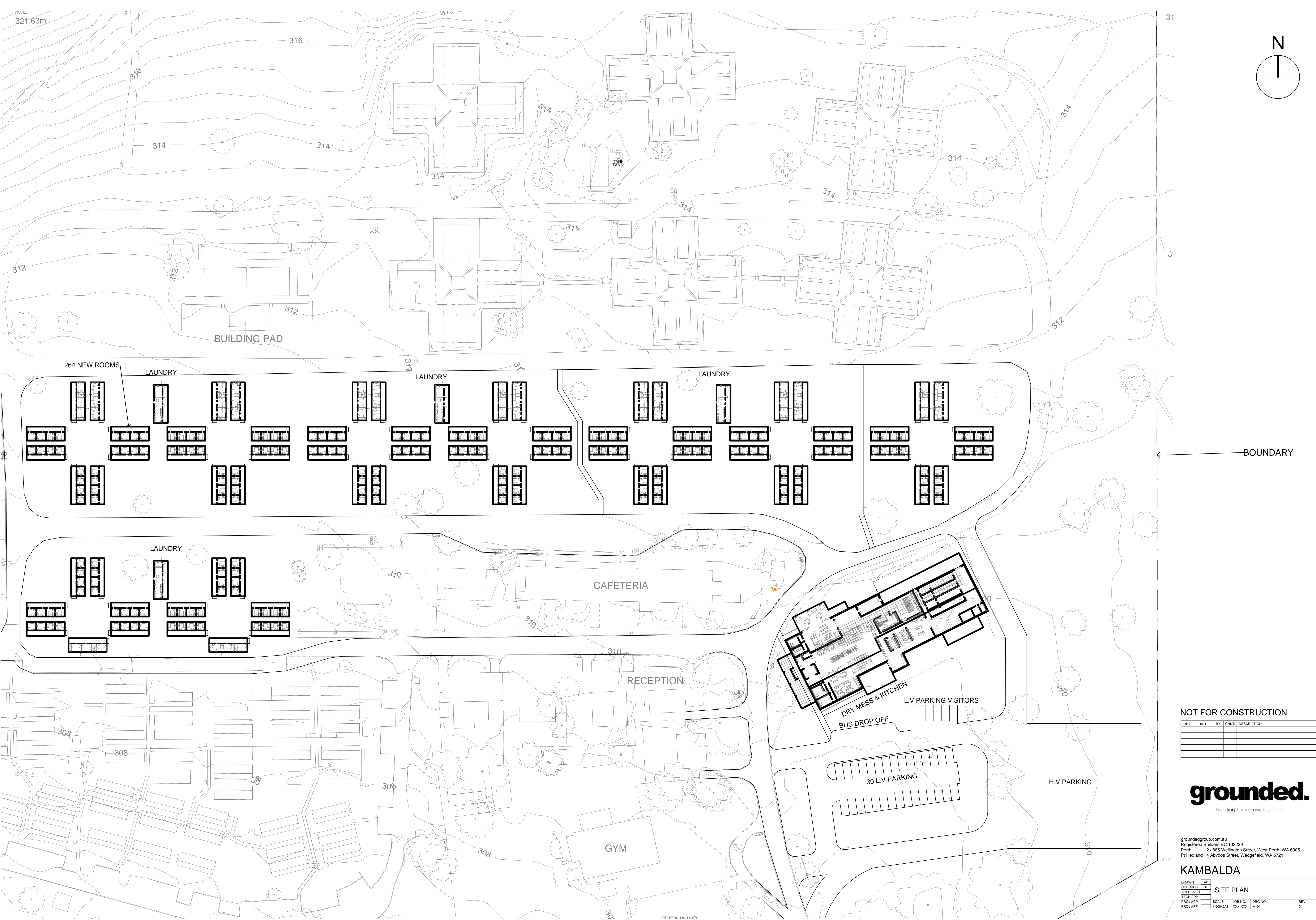
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groundedgroup.com.au
Registered Builders BC 102229
Perth 2 / 885 Wellington Street, West Perth, WA 6005
Pt Hedland 4 Abydos Street, Wedgefield, WA 6721

KAMBALDA

DRAWN	AB	OVERALL SITE PLAN		
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APPROVED				
TECH APP				
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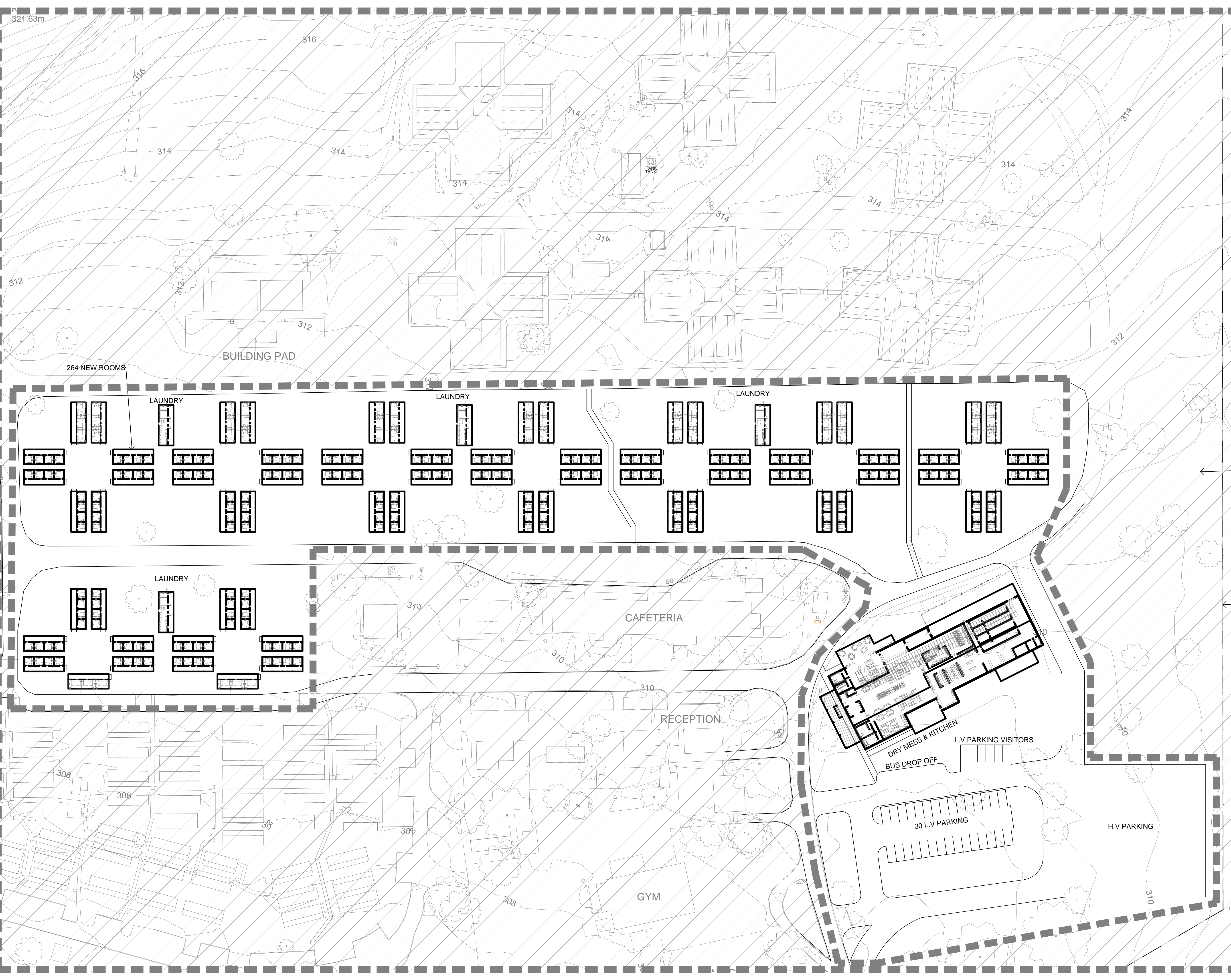
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Pt Hedland 4 Abydos Street, Wedgefield, WA 6721

KAMBALDA

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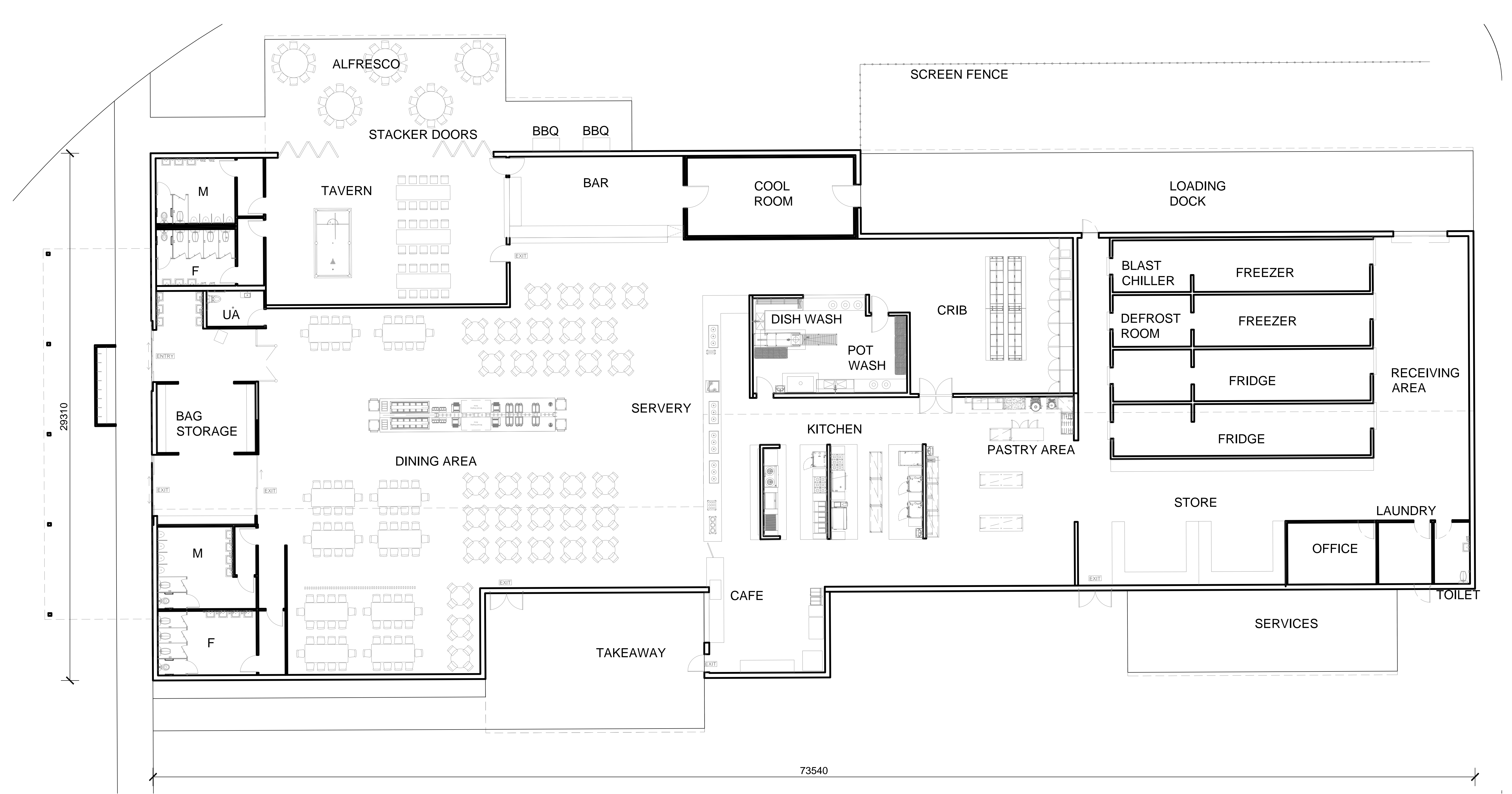
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Pt Hedland 4 Abydos Street, Wedgefield, WA 6721

KAMBALDA

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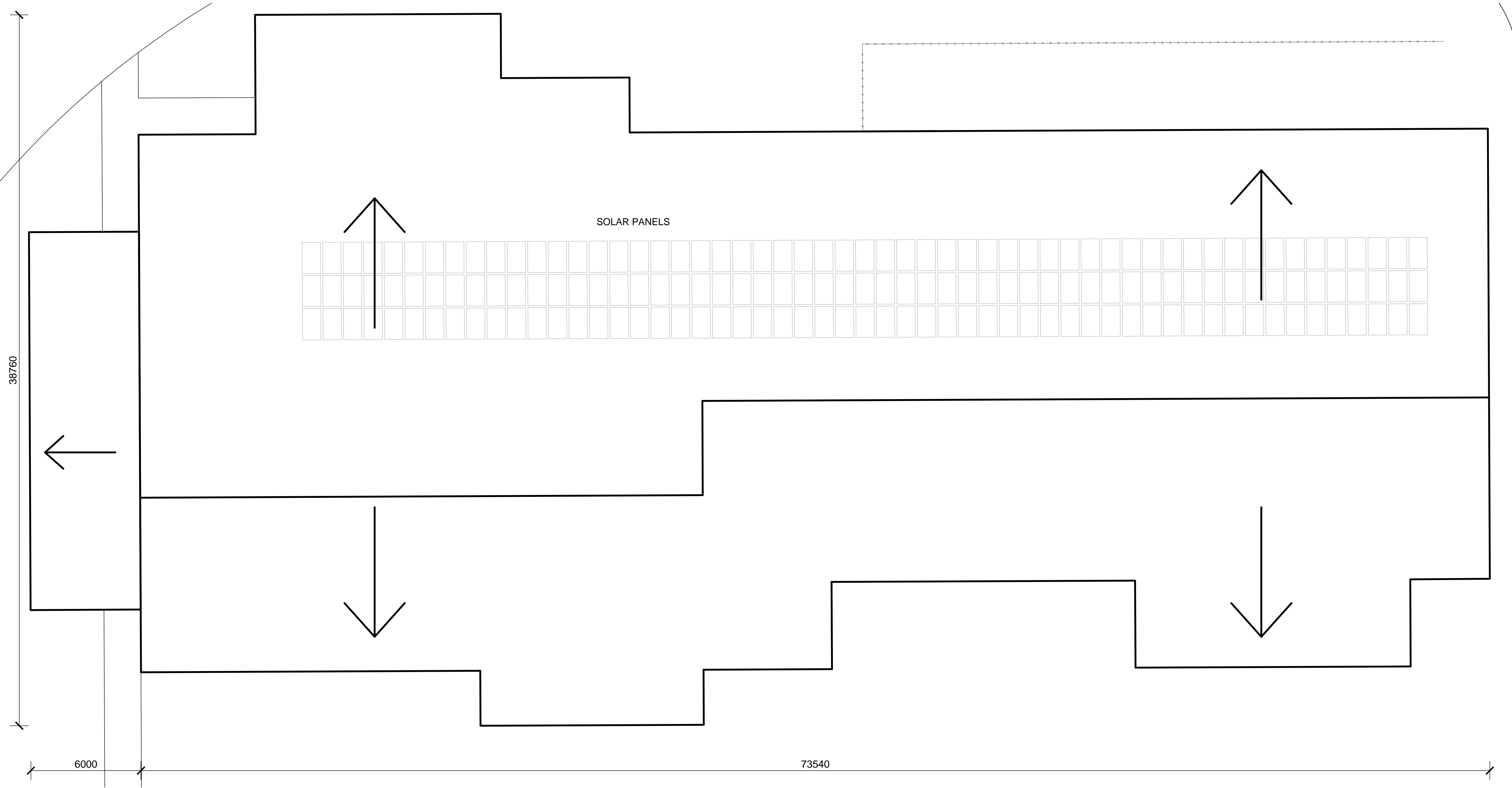
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Perth 2 / 885 Wellington Street, West Perth, WA 6005
Pt Hedland 4 Abydos Street, Wedgefield, WA 6721

KAMBALDA

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PROJ APP				X



NOT FOR CONSTRUCTION				
REV.	DATE	BY	CHKD	DESCRIPTION



building tomorrow, together

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Registered Builders BC 102229
Perth 2 / 885 Wellington Street, West Perth, WA 6005
Pt Hedland 4 Abydos Street, Wedgefield, WA 6721

DRAWN

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DINING HALL FLOOR PLAN

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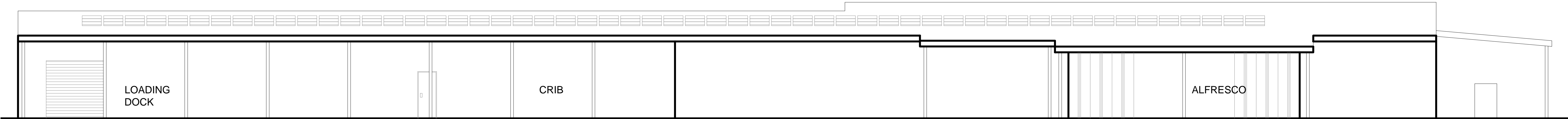
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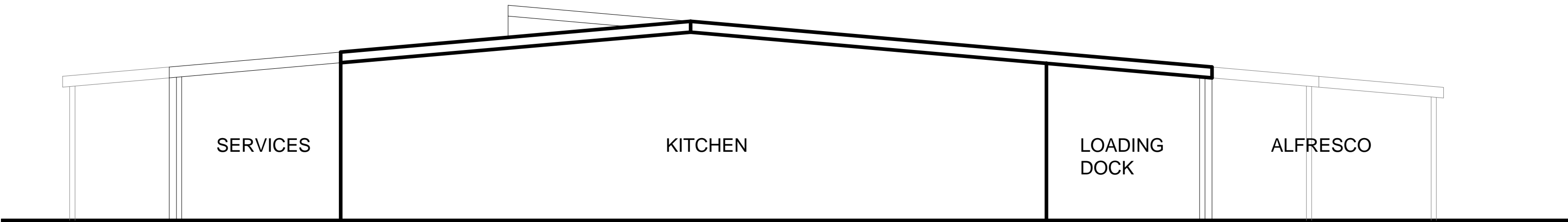
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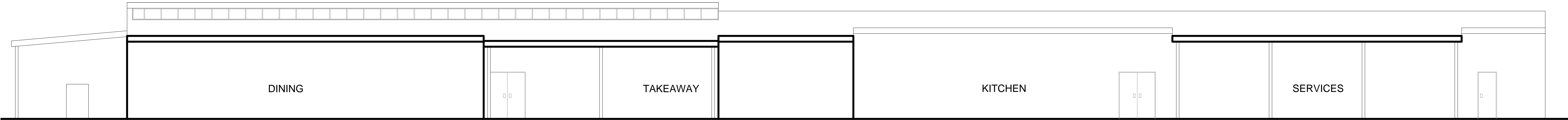
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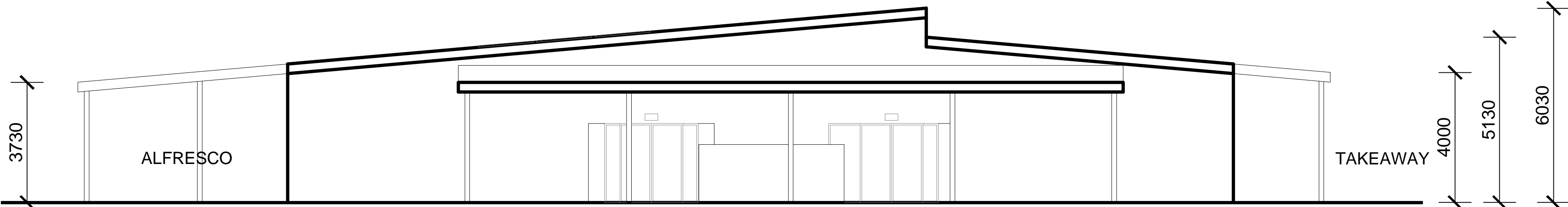
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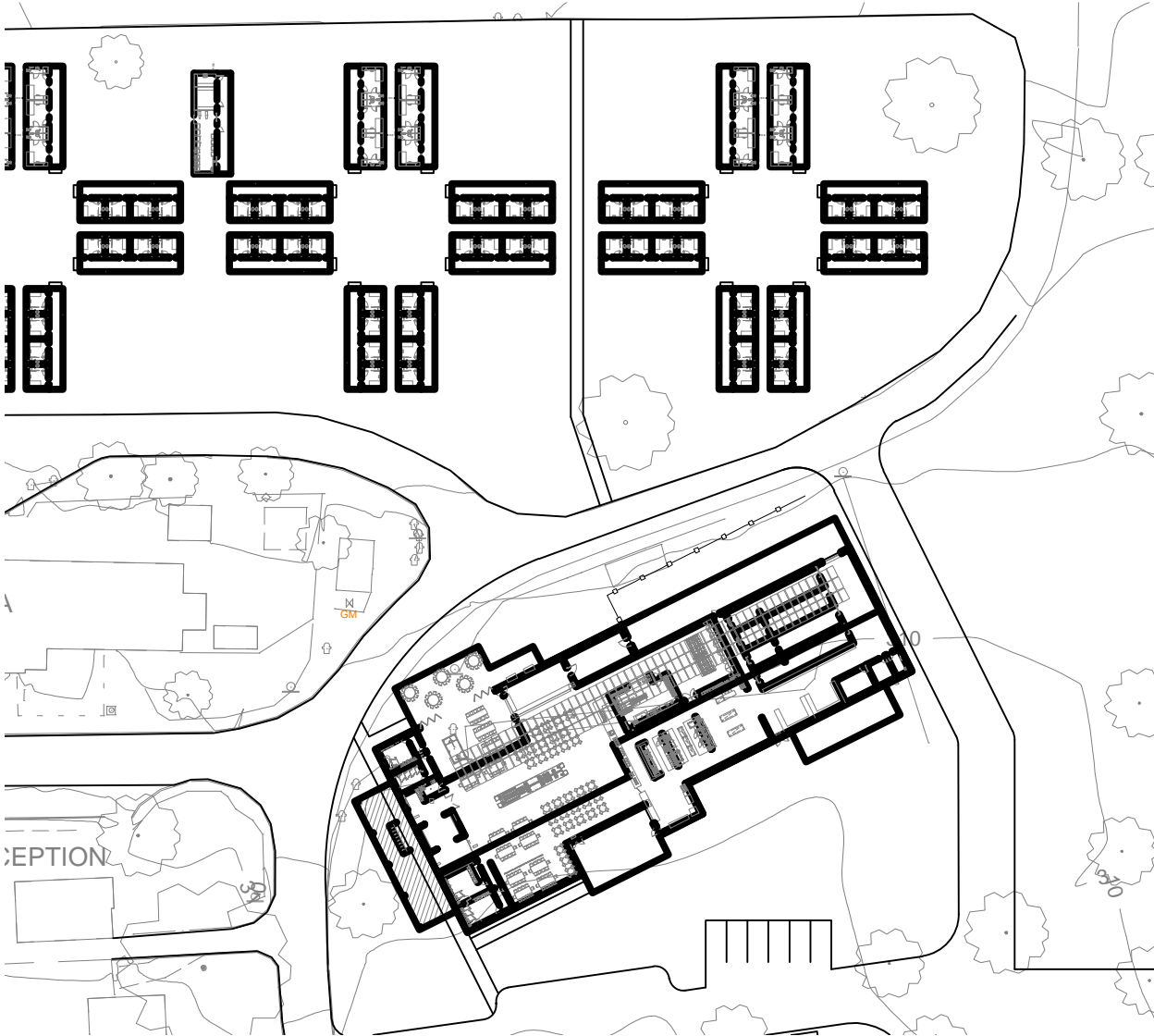
EAST ELEVATION



SOUTH ELEVATION

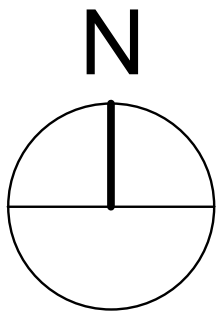


WEST ELEVATION



NOT FOR CONSTRUCTION

REV.	DATE	BY	CHKD	DESCRIPTION



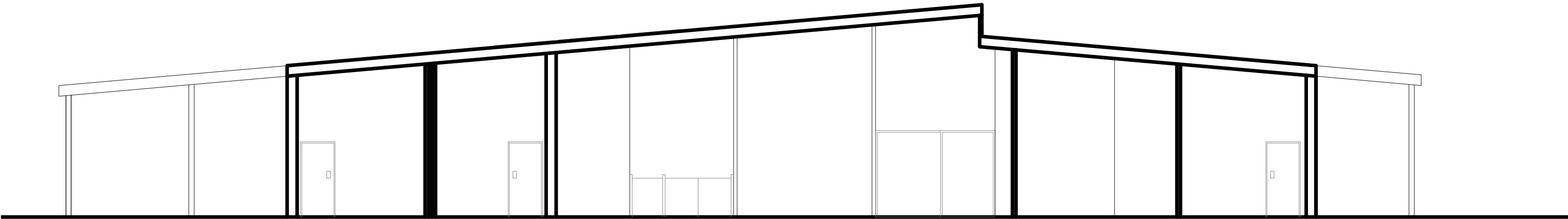
grounded.

building tomorrow, together

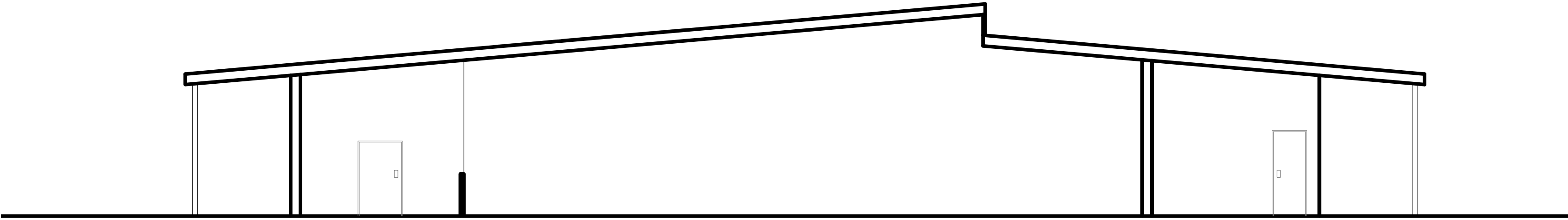
groundedgroup.com.au
Registered Builders BC 102229
Perth 2 / 885 Wellington Street, West Perth, WA 6005
Pt Hedland 4 Abydos Street, Wedgefield, WA 6721

KAMBALDA

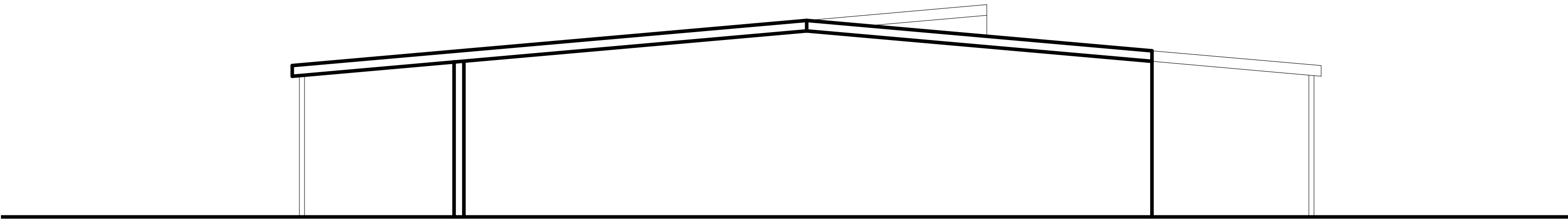
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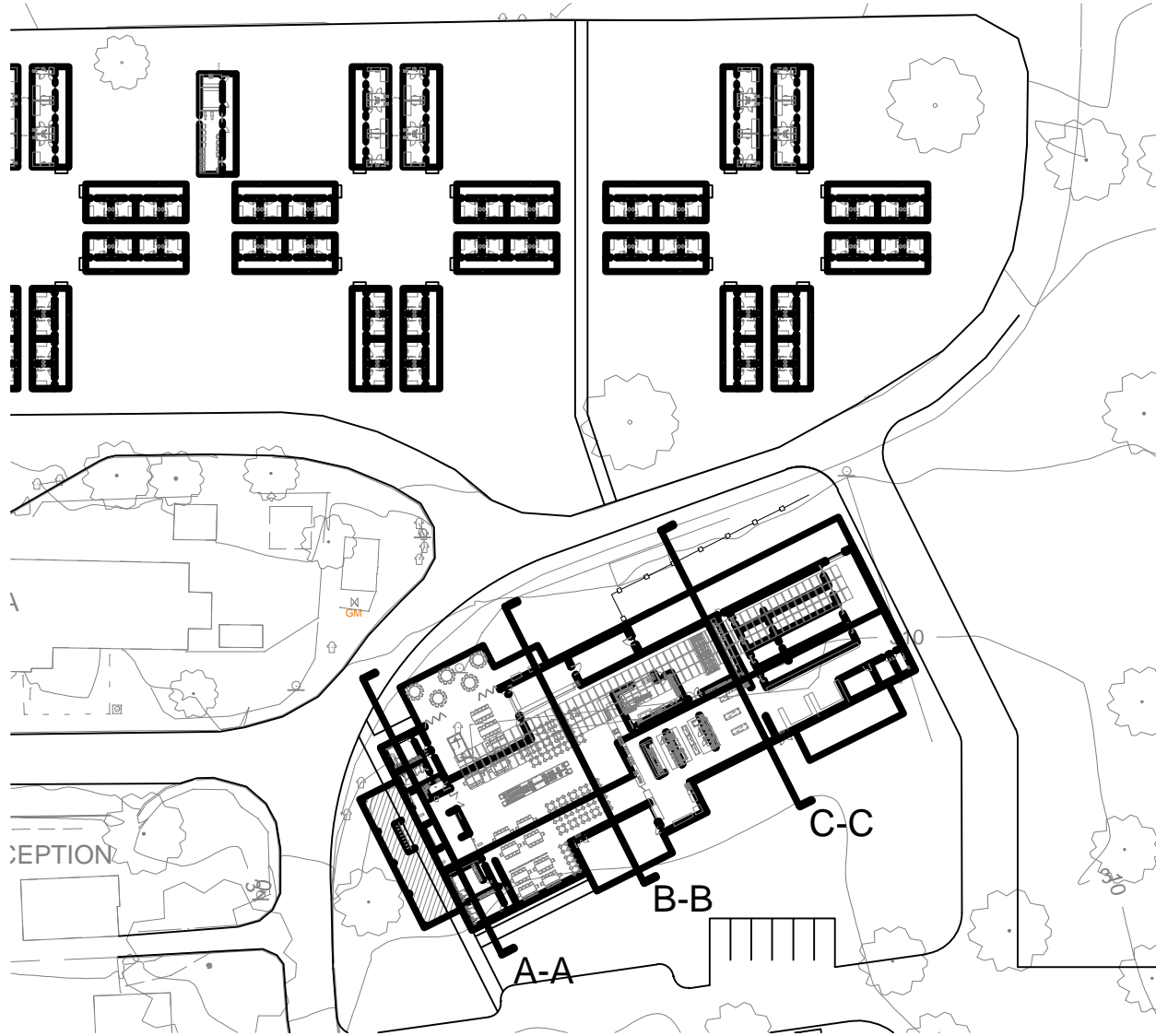
SECTION A-A



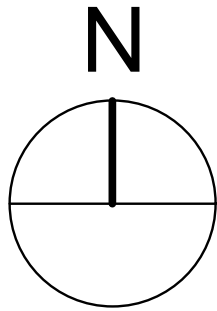
SECTION B-B



SECTION C-C



LOCATION PLAN
SCALE 1:1000



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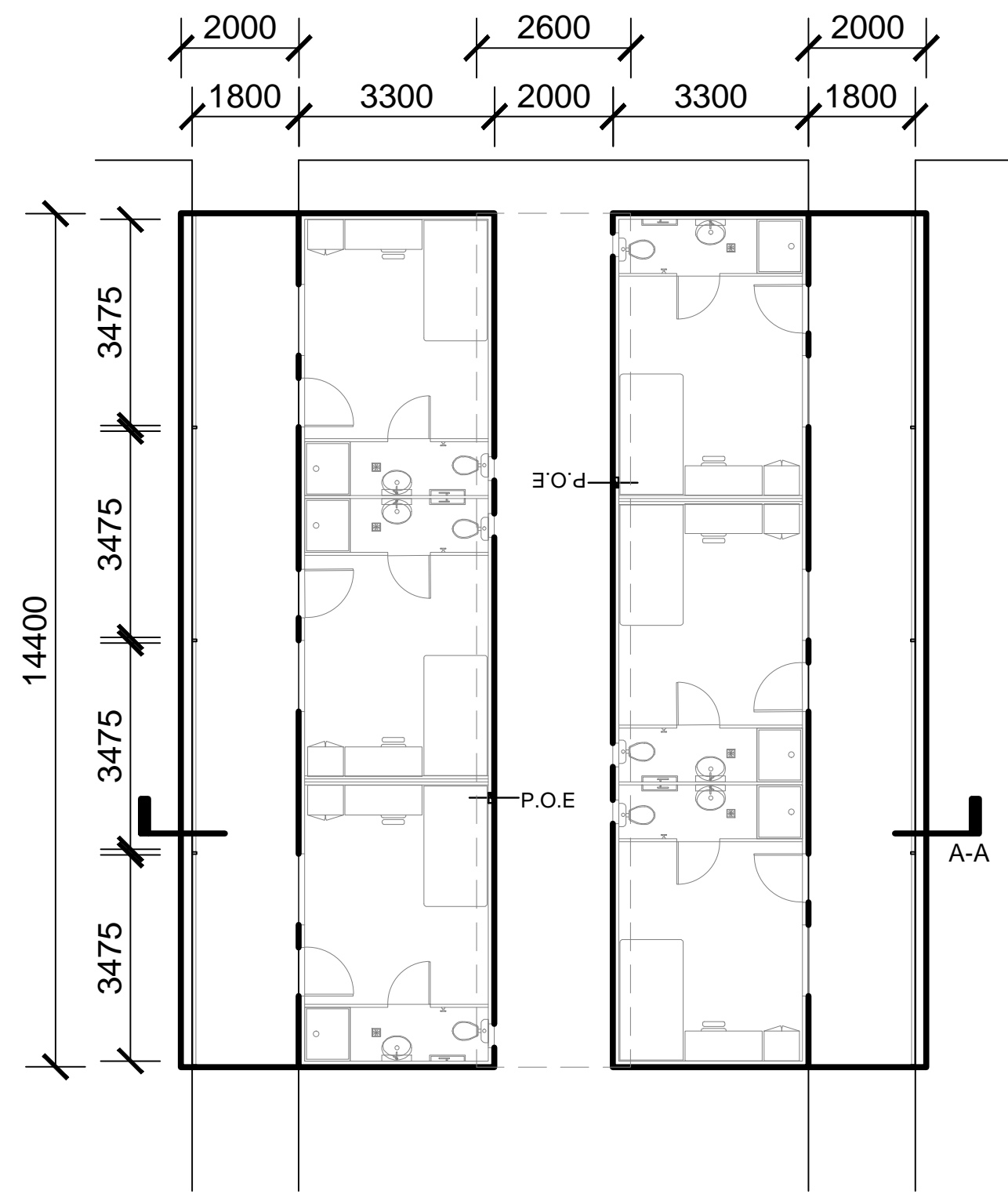
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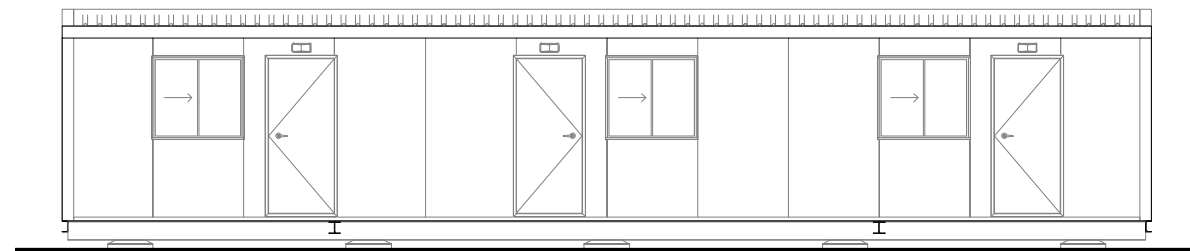
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Registered Builders BC 102229
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KAMBALDA

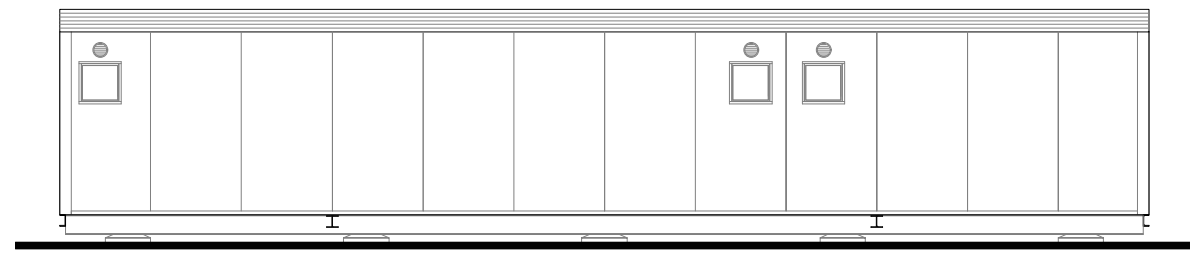
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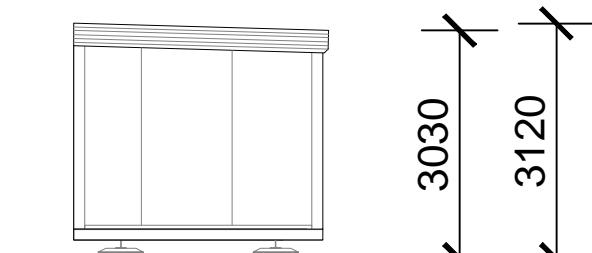
ACCOMMODATION FLOOR PLAN
(3 ROOM)



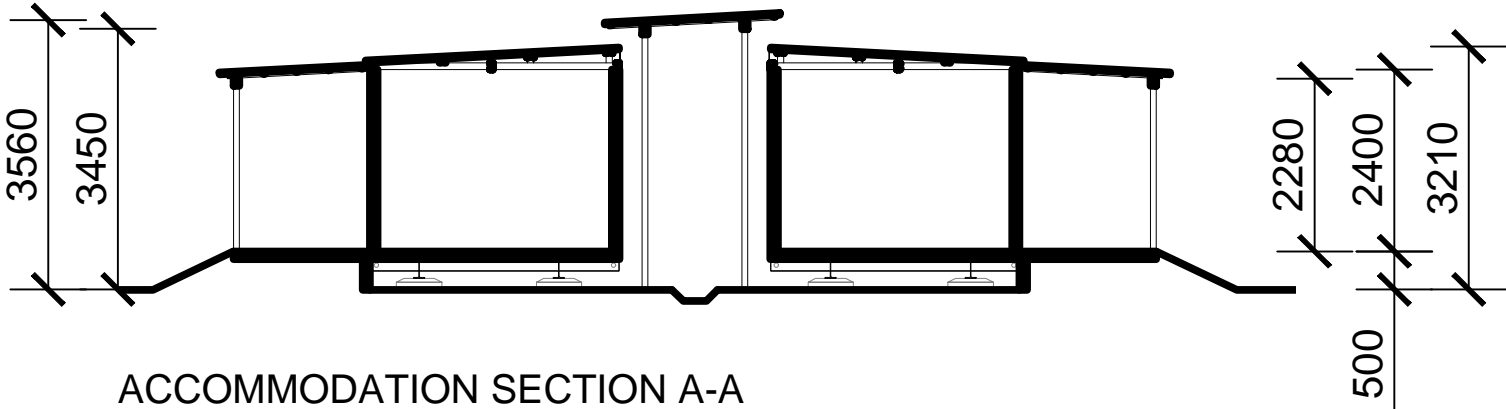
FRONT ELEVATION (3 ROOM)



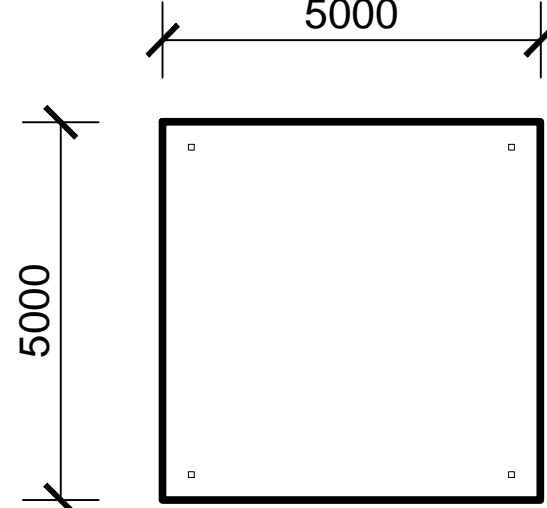
BACK ELEVATION (3 ROOM)



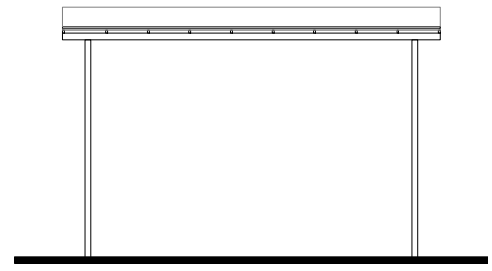
SIDE ELEVATION (TYPICAL)



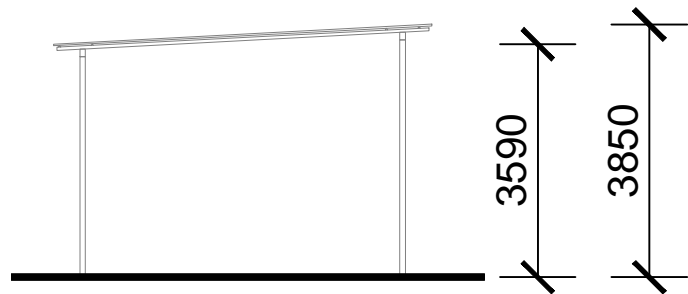
ACCOMMODATION SECTION A-A



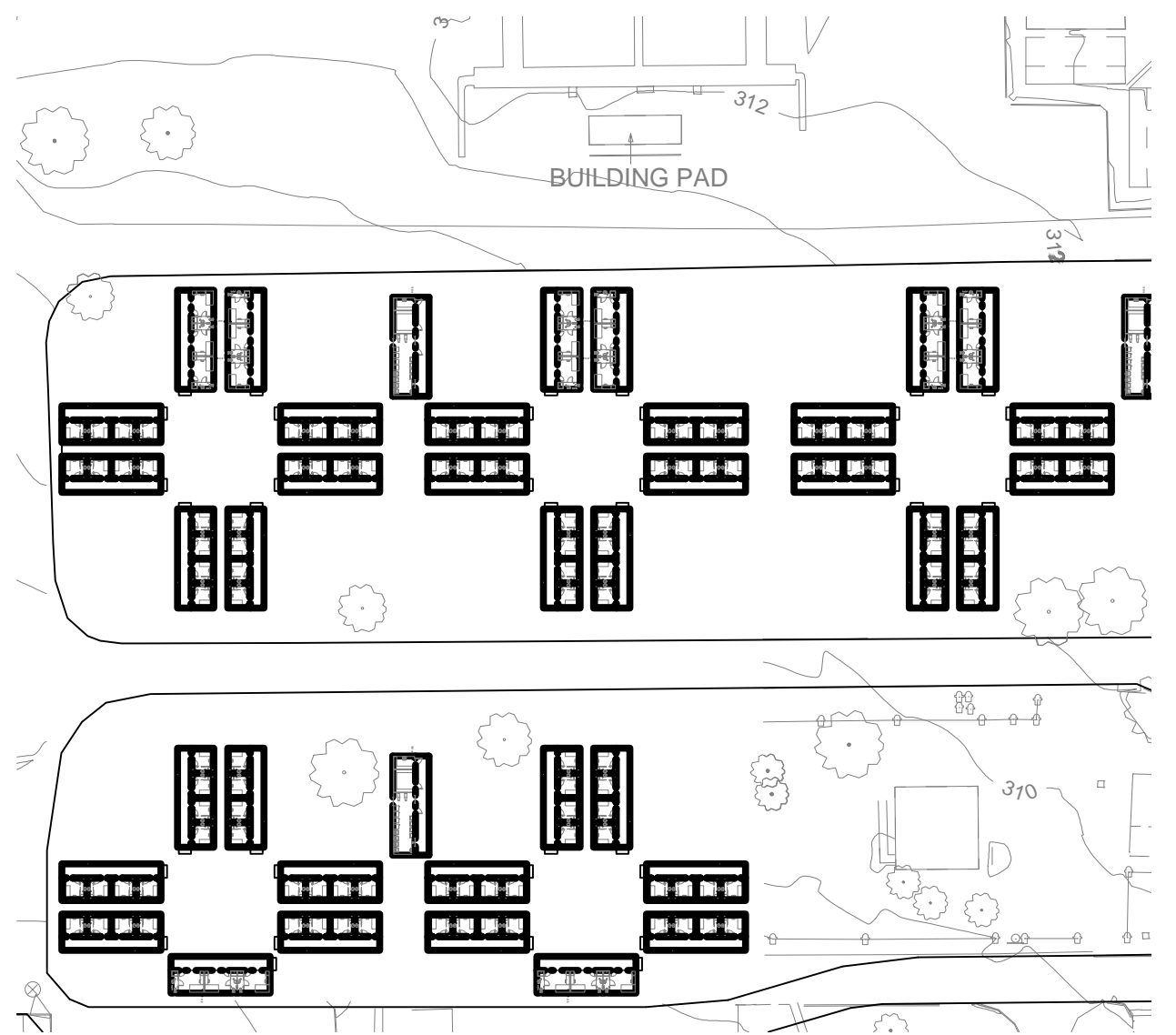
GAZEBO FLOOR PLAN



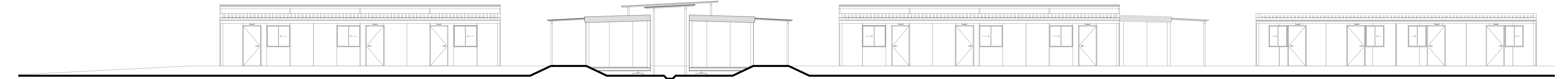
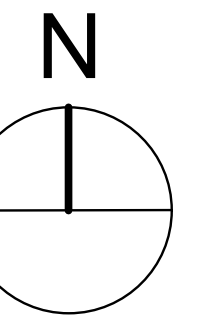
FRONT ELEVATION



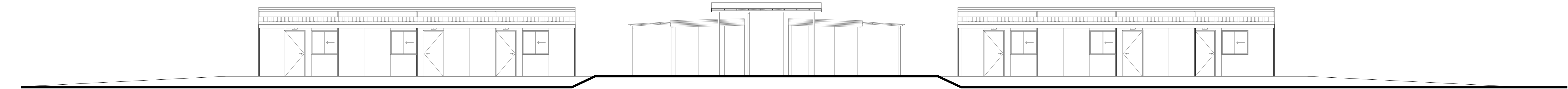
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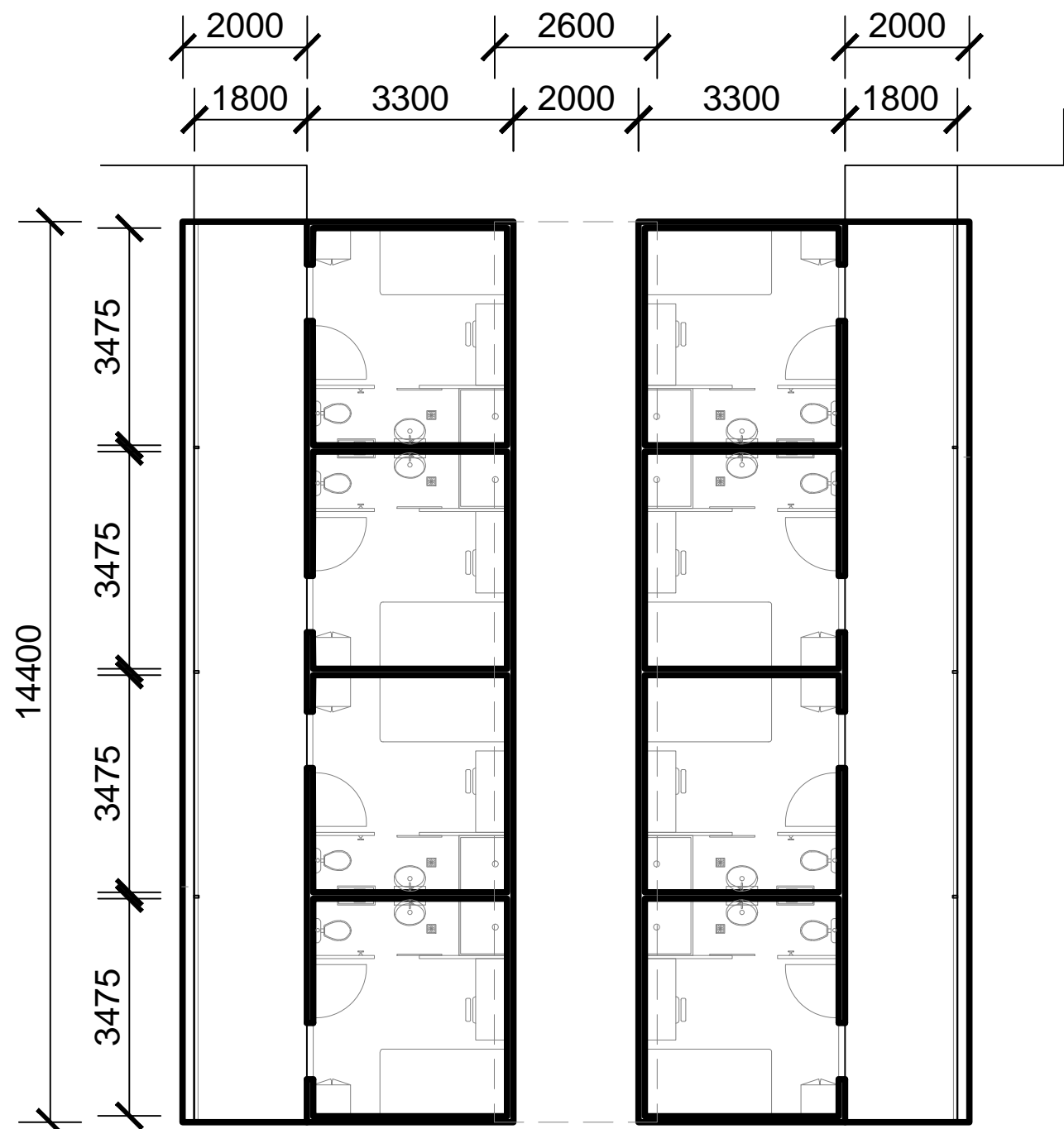
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SCALE 1:1000



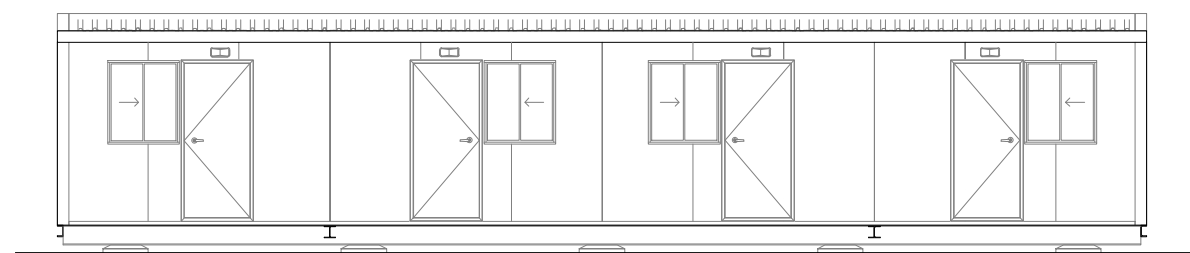
ACCOMMODATION SOUTH ELEVATION
(TYPICAL)



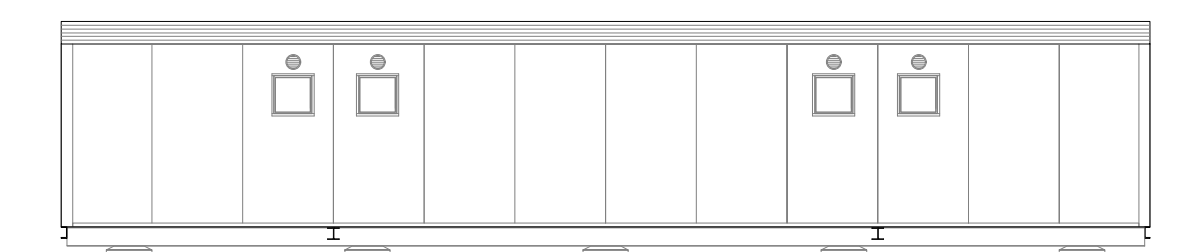
ACCOMMODATION WEST ELEVATION
(TYPICAL)



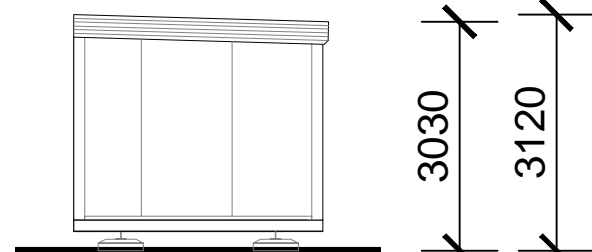
ACCOMMODATION FLOOR PLAN
(4 ROOM)



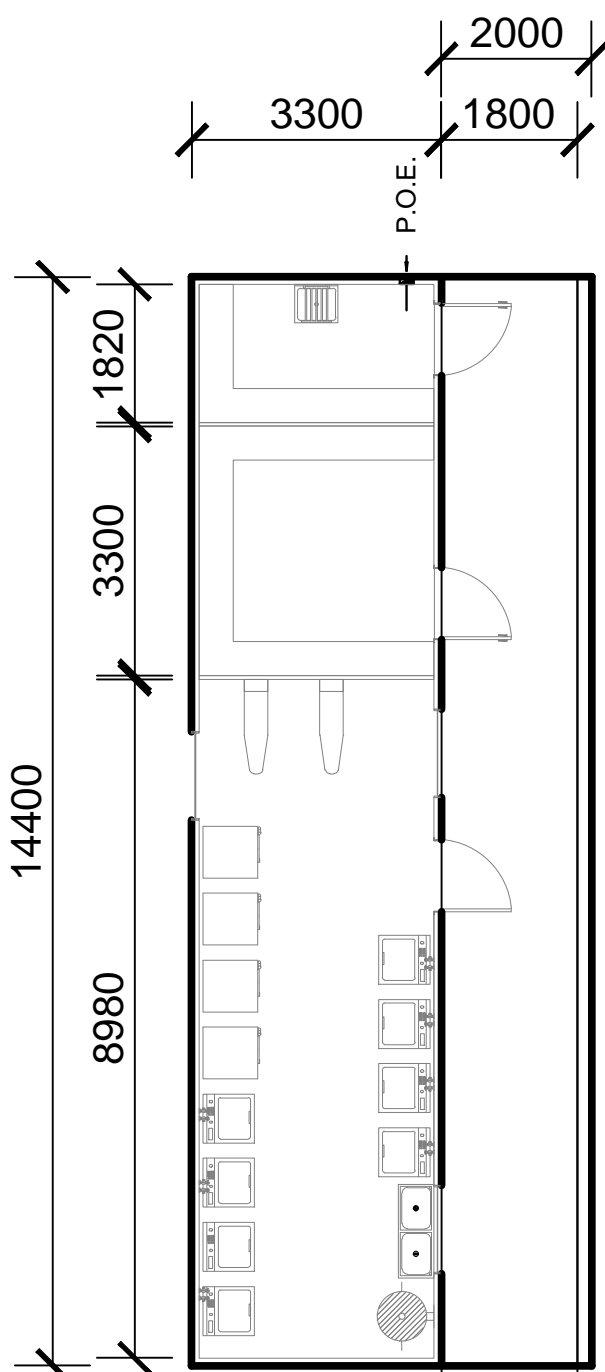
FRONT ELEVATION (4 ROOM)



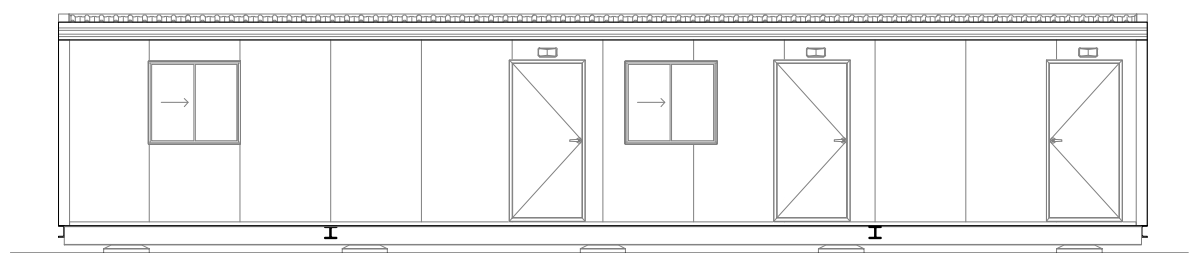
BACK ELEVATION (4 ROOM)



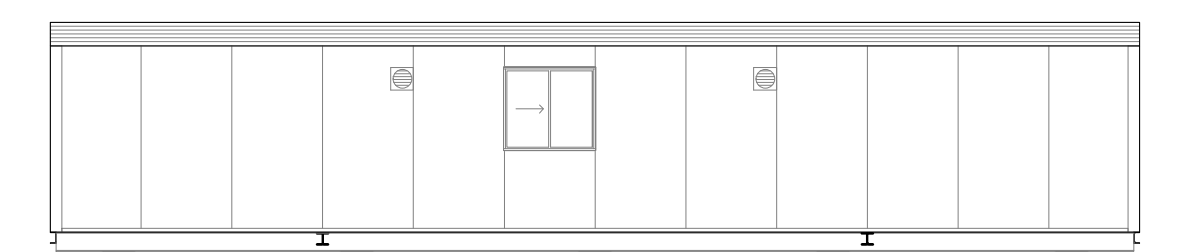
SIDE ELEVATION (TYPICAL)



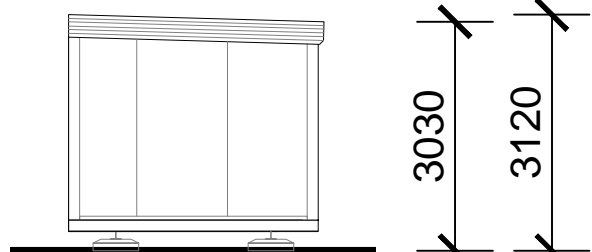
LAUNDRY FLOOR PLAN



FRONT ELEVATION (LAUNDRY)



BACK ELEVATION (LAUNDRY)



SIDE ELEVATION (TYPICAL)

NOT FOR CONSTRUCTION

REV.	DATE	BY	CHKD	DESCRIPTION

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Perth 2 / 885 Wellington Street, West Perth, WA 6005
Pt Hedland 4 Abydos Street, Wedgefield, WA 6721

KAMBALDA

DRAWN	AB	FLOOR PLANS, ELEVATIONS & SECTIONS
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APPROVED		
TECH APP		
PROJ APP		
PRGJ APP		
SCALE	JOB NO.	DRG NO.
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		REV
		X

Our Reference: 3702Ltr8
Enquiries: Harry Norman

16 June 2022

Chief Executive Officer
Shire of Coolgardie
Irish Mulga Drive
Kambalda WA 6442

Attention: James Trail

Dear James

**RE: DEVELOPMENT APPLICATION
KAMBALDA VILLAGE WORKFORCE ACCOMMODATION EXPANSION
LOT 201 DURKIN ROAD, KAMBALDA**

On behalf of Compass Group, CLE are lodging a development application at Lot 201 Durkin Road, Kambalda for an expansion to the existing workforce accommodation facility.

Please find enclosed the following within this application for planning approval:

- Application forms (DAP and Shire).
- Certificate of Title.
- Development Application Report, including relevant plans and attachments (CLE Ref. 3702Rep5).

It is our understanding that the application fees are payable once the application has been lodged with the Shire and JDAP. Upon the Shire receiving and confirming receipt of the development application, if this amount could be confirmed, payment will be arranged.

We would appreciate if you would consider this application in a favourable manner. Should you have any queries regarding this application please contact Harry Norman on 9382 1233 or via harry@cleplan.com.au.

Yours faithfully



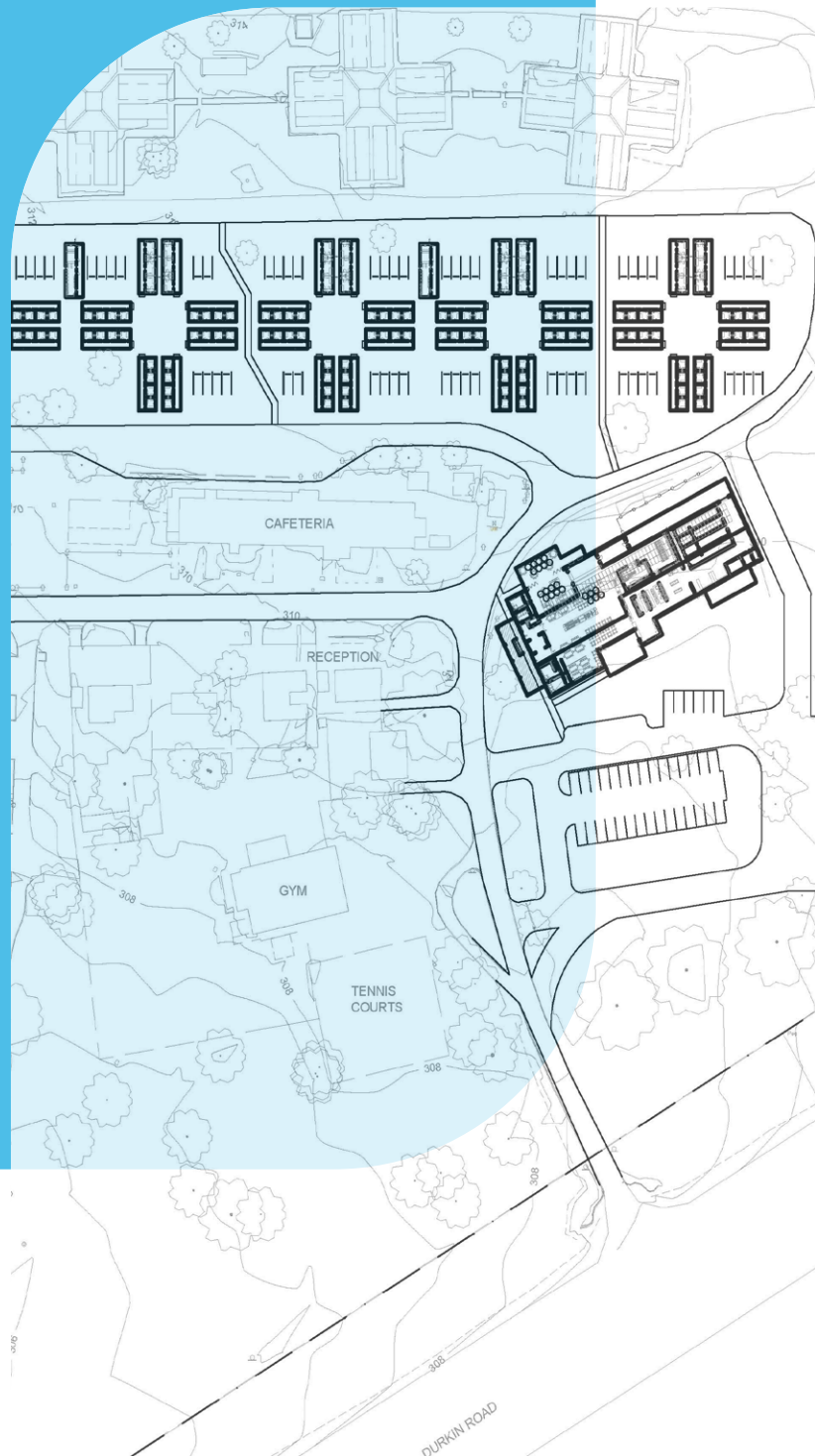
**HARRY NORMAN
PLANNER
CLE TOWN PLANNING + DESIGN**

Encl: Attachment 1 - Development Application (CLE Ref. 3702Rep5)

DEVELOPMENT APPLICATION

Kambalda Village Workforce Accommodation Expansion

JUNE 2022



Title	Development Application Kambalda Village Workforce Accommodation Expansion
Prepared for	Compass Group
CLE Reference	3702Rep5
Date	16 June 2022
Status	Final
Prepared by	CLE Town Planning + Design - Town Planning Bushfire Safety Consulting - Bushfire Grounded Construction - Architecture Urbii - Traffic MNG - Survey

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EXECUTIVE SUMMARY

This development application proposes to expand the existing Kambalda Village Workforce Accommodation facility by proposing an additional 208 rooms as well as a replacement dining facility. The application is lodged on behalf of Compass Group who own and operate the existing 574 room facility.

As the operators of the facility, Compass Group has a trusted and proven reputation in the management and operation of workforce accommodation services in a range of formats throughout Australia, including Kambalda. Compass has identified an opportunity to expand and upgrade the existing Kambalda facility which will significantly improve the presentation of the site and enhance the amenity offerings. The additional 208 rooms will help increase the patronage of local services and amenities by increasing the resident population, contributing to economic growth and development in the region. The proposal aims to maximise the operational efficiencies of the existing accommodation facility whilst continuing to offer services to the local community.

The estimated cost of development means that the proposal is a mandatory Joint Development Assessment Panel ('Regional JDAP') application and will therefore be determined by the Regional JDAP on the advice of the Shire of Kambalda.

This planning report sets out the details of the proposal and the background considerations relevant to the Shire's assessment, demonstrating consistency with, and responding to, the relevant aspects of the planning framework.

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1.3.2	<i>Local Planning Policies</i>
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4.0	BUSHFIRE MANAGEMENT
5.0	TRAFFIC
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7.0	SUMMARY

Attachments

Attachment 1	Application Forms (Shire of Coolgardie and DAP Forms)
Attachment 2	Certificate of Title
Attachment 3	Site Plans and Elevations (Grounded Construction)
Attachment 4	Feature Survey (MNG)
Attachment 5	Bushfire Management and Emergency Evacuation Plan (Bushfire Safety Consulting)
Attachment 6	Traffic Impact Assessment (Urbii)

1.0 SITE CONTEXT

1.1 Location

Kambalda Village (from here on in referred to as the 'site') is located approximately 3.5km from the Kambalda West townsite and 1.6km west from Kambalda East. The site is situated north of the intersection at Durkin Road and Goldfields Highway. Civeo Kambalda Village, an existing operational workforce accommodation site, is located approximately 500m south of the site. A service station is also located approximately 300m from the site, west of the intersection at Durkin Road and Goldfields Highway.

1.2 Site Details

Kambalda Village is situated on Lot 201 Durkin Road, Kambalda which is owned and operated by Compass Group.

No boundary modifications to the parent lot or changes in ownership are proposed, with lot 201 to remain as shown on the current certificate of title.

The site is approximately 24.5 hectares in area and comprises the following:

- Total of 574 rooms (comprising a mix of ensuite and rooms);
- Communal facilities including tavern, cafeteria, gym and laundries; and
- Incidental areas used for car parking areas, vehicle circulation areas and water tanks.

The site is currently accessed from Durkin Road along the south-east boundary, which provides the sole access to the facility via an internal access road.

The spatial footprint of existing and proposed buildings is shown on Figure 1 – Site Plan as below. Specific details on the proposed development are provided in Section 3 of this report.

1.2.1 Bushfire

The site is identified as being bushfire prone by the Department of Fire and Emergency Services 'Map of Bush Fire Prone Areas'. In accordance with State Planning Policy 3.7 Planning in Bushfire Prone Areas, a Bushfire Management Plan and Bushfire Emergency Evacuation Plan have been prepared to minimise bushfire risk to Kambalda Village.

Section 5 of this report details how the proposal manages bushfire risk.

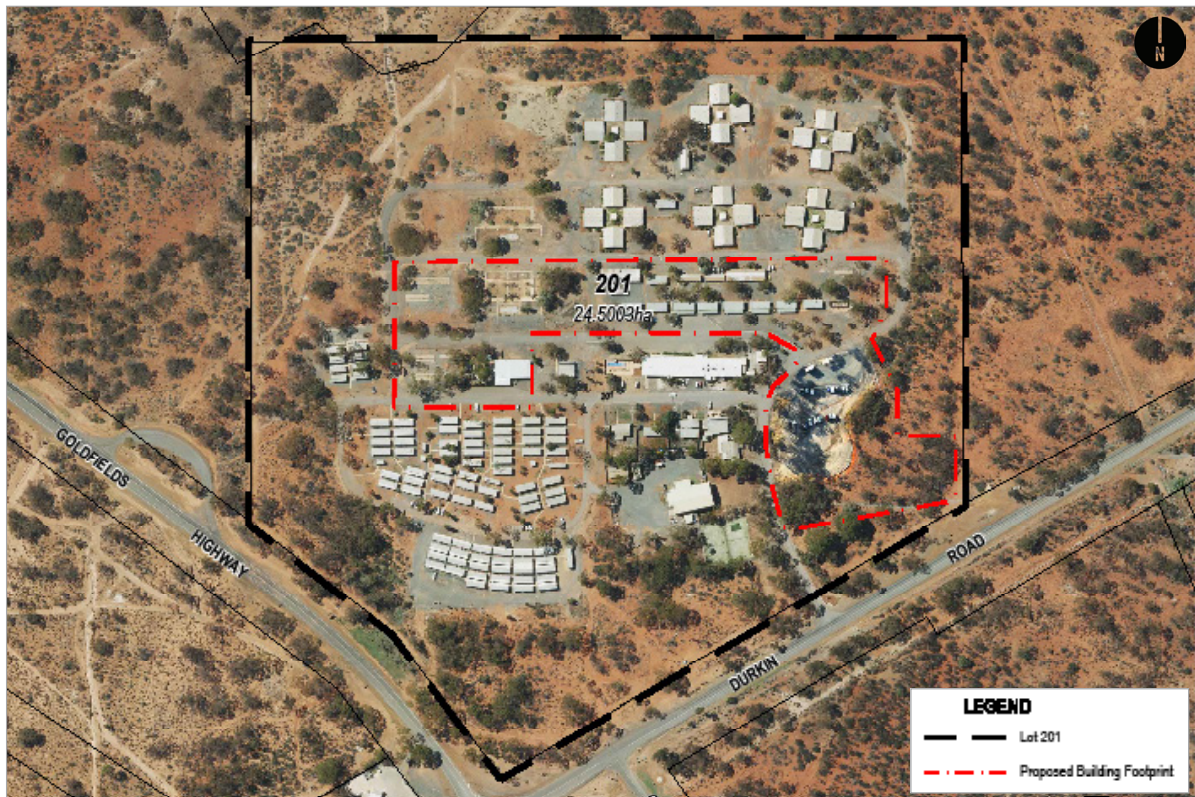


Figure 1 - Site Plan

Source: Nearmap

1.3 Planning Framework

1.3.1 Shire of Coolgardie Local Planning Scheme No. 5 (LPS5)

The proposed use of 'Workforce Accommodation' is permitted on the site and is entirely consistent with the 'Special Use – Workforce Accommodation' zoning under LPS5. The proposed expansion reflects the intent of the local planning framework of the site and is entirely in keeping with the existing and planned use of the site.

The objectives of the Special Use zone are to:

- *"To facilitate special categories of land uses which do not site comfortably with any other zone.*
- *To enable the Council to impose specific conditions associated with the special use."*

Table 5 of LPS5 identifies the classes of special use that are permissible and the conditions that apply in respect to specific Special Use zones across the Shire. Lot 201 Goldfields Highway is identified within Special Use Area No.16 'Workforce Accommodation' (SU16). The only condition that applies to SU16 is *"Compliance with the Council's approval"*. Further discussion is provided under the 'Planning Assessment' section below.

1.3.2 Local Planning Policies

There are no applicable local planning policies that apply to the proposed expansion of Kambalda Village.

2.0 PROPOSAL

This development application proposes the redevelopment and expansion of the existing 574 room Kambalda Village workforce facility as follows:

- Demolition of 56 existing rooms that are at their end of life.
- Construction of 264 new rooms, resulting in a net increase of 208 rooms.
- A replacement dining hall and kitchen facility which is intended to replace the existing dining facility which has come to its end of life.

The headings below provide a detailed discussion of the various components that are proposed as part of this development application.

Rooms

A total of 264 new rooms are proposed as part of the expansion, with 56 rooms to be demolished to facilitate these works. The proposal will increase the overall number of rooms across the Kambalda Village from 574 to 782 (net increase of 208 rooms).

The new rooms will be located centrally within the existing Kambalda Village footprint, an area which is currently occupied by vacant accommodation blocks at the end of their lifecycle. The proposed works will replace these dilapidated facilities within the existing development footprint.

The proposed accommodation blocks include a mix of three and four room blocks, with each room including a separate shower and bathroom facility. The blocks are of modular construction and the only civil works required on site is the installation of the concrete pads and foundations. The standard dimensions of the proposed accommodation blocks are:

- 14.4m long
- 5.3m wide (3.3m block and 2m veranda)
- 3.1m high

Accommodation blocks are co-located in groups of eight rooms, with each provided with a 3.5m high shade structure.

Further detail is provided on the floor plans, elevations and sections as provided as part of this application (refer Attachment 3).

Laundries

A total of four additional laundry blocks are proposed to accommodate the 208 room expansion. Each laundry block includes standard laundry facilities such as washing machines, dryers, ironing boards and sinks.

Further detail is provided on the floor plans, elevations and sections as provided as part of this application (refer Attachment 3).

Dining Hall and Kitchen

The existing cafeteria servicing Kambalda Village residents is proposed to be replaced with a new dining hall and kitchen, at a new location on the site. The new facility will be located on the eastern side of the internal access road and built over an existing car parking area. The building footprint is already cleared and level and no significant site works are required to facilitate its development.

The new facility will have a maximum capacity of 250 seats and will primarily service residents at the Kambalda Village. It will also continue to be open to the public as is currently the case with the existing facility, thereby maintaining and enhancing the service offerings to the local community. The dining hall also includes the following features:

- Servery
- Crib facilities
- Café and takeaway facilities
- Bag store facilities
- Toilets

The dining hall will be open to residents and visitors at the following times:

- 4:00am – 8:00am (Crib until 10am Monday to Friday)
- 4:00pm – 8:00pm

Bar

The proposed dining facility incorporates a new bar facility which is planned to replace the existing tavern on site. The proposed bar has been designed to be separate from the publicly accessible dining hall by including separate access points independent of the dining hall. The proposed bar includes an 84sqm alfresco area, directly connected to the bar facility.

The bar will not be open to the public and access will be restricted to residents of Kambalda Village. Opening hours will be the same as the current tavern, summarised as follows:

- 6:30am – 8:00am
- 5:30pm – 9:00pm

The proposed bar will continue to operate under the current liquor license.

Parking

A new pick up and set down area is proposed to the south of the new dining hall. This area will accommodate buses traveling to and from site to pick up and drop off village residents as well as parking facilities for trucks and smaller vehicles. Access to this area is from the existing internal access road.

To support the proposed dining hall facility, a total of 36 bays for passenger vehicles are proposed to accommodate those travelling to Kambalda Village by private vehicle as well as the public customers of the new dining facility. It is expected that two ACROD bays will be provided for the relocated dining hall facility.

Informal parking areas will be provided at each of the accommodation blocks for those travelling in private vehicles. These areas will be unsealed and are distributed throughout the facility as depicted on the site plan. These areas will provide for approximately 2.3 bays per room which is consistent with current operational requirements of the facility which function satisfactorily. As the majority of those staying at the Kambalda Village travel to site by bus, these areas are expected to be more than adequate to satisfy the relatively low demand for private parking on site.

3.0 PLANNING ASSESSMENT

Table 5 of LPS5 includes the following condition for SU16 applicable to the site:

- *“Compliance with the Council’s approval”*

The proposed expansion is entirely consistent with SU16 of LPS5 and the intended ‘Workforce Accommodation’ land use which “means premises, which may include modular or relocatable buildings, used:

- a. primarily for the accommodation of workers engaged in construction, resource, agricultural or other industries on a temporary basis; and*
- b. for any associated catering, sporting and recreation facilities for the occupants and authorised visitors.”*

The proposed expansion will improve Kambalda Village’s existing facilities consistent with the intent of the site’s Special Use zoning under TPS5. The additional accommodation proposed as part of this application will be occupied by workers from the WMC Kambalda Mine Site. The associated catering facilities are also intended for occupants of the Kambalda Village but will also continue to be open to the public. It is noted that the number of people currently utilising the dining facilities who do not reside at the Kambalda Village is negligible in the context of occupant demand for the dining facilities.

This proposal will expand the existing operations of Kambalda Village to accommodate additional workforce demand in Kambalda and improve the appearance and amenity offering of the existing workforce accommodation facility. As a result, the proposal will benefit existing and future occupants of the facility as well as the wider Kambalda community by enhancing accommodation and dining offerings.

4.0 BUSHFIRE MANAGEMENT

The site is identified as being bushfire prone by the Department of Fire and Emergency Services ‘Map of Bush Fire Prone Areas’ and is classified as a “vulnerable land use” as defined by State Planning Policy 3.7 Planning in Bushfire Prone Areas (SPP3.7). SPP3.7 sets out considerations for the assessment of development within bushfire prone areas.

In accordance with SPP 3.7, a Bushfire Management Plan and Bushfire Emergency Evacuation Plan (BMEEP) have been prepared to accompany the application (refer Attachment 5). As demonstrated by the BMEEP, the development is fully compliant with the Acceptable Solutions and Performance Principles of SPP3.7. Specifically, it demonstrates that like the existing development, all proposed buildings achieve a BAL rating of BAL-29 or lower – the majority of which exposed to BAL-12.5 or BAL-LOW. Table 4 of the BMEEP outlines the requirement to maintain an additional Asset Protection Zone area between the new development, perimeter buildings and areas of bushfire threat.

Compliance with, and implementation of the BMEEP is therefore expected to be a required as a condition of development approval.

5.0 TRAFFIC

A Traffic Impact Assessment (TIA) has been prepared by Urbii (Attachment 6) demonstrating that the proposed development will not result in traffic movements above 100 vehicles per hour (vph) on any roads adjacent to the site. The proposed development is estimated to generate a total of 917 vehicles per day (vpd) and 193 vph for the expanded Kambalda Village during the PM peak hour. The net increase in site traffic is estimated to be +213vpd and +45vph when traffic generation of the existing and proposed building facilities is compared. The assessment concludes that the impact on the surrounding road network is minor in accordance with the WAPC's Traffic Impact Assessment Guidelines.

The proposal will utilise existing internal circulation and access areas with no new roads or driveways required. All vehicle movement areas are bitumen sealed and any potholes or similar deterioration in the surfaces will be repaired as part of the refurbishment. The existing crossover onto Durkin Road will provide a consolidated point of access and the TIA demonstrates that it is capable of functioning safely to accommodate any additional trip movements associated with the expansion. The only changes proposed to internal parking and circulation areas are adjacent the relocated dining hall and kitchen facility, as outlined above.

6.0 WASTE MANAGEMENT

Waste management services will be provided as per the current operation of the facility. The TIA (refer Attachment 6) demonstrates that service vehicles including waste collection trucks are able to continue to operate as per the existing arrangements. These arrangements are considered adequate relative to the anticipated increase in expected waste generation volumes.

7.0 SUMMARY

The proposed expansion to the existing Kambalda Village workforce accommodation is entirely consistent with the Shire's local planning scheme and planning framework. The proposal responds to an identified demand for additional workforce accommodation in the region and will be delivered with minimal disruption to the site with the development accommodated within existing building footprints. The proposal has a negligible impact on the movement network, with traffic able to be accommodated adequately by existing roads and intersections. The new accommodation and dining facilities will generate jobs and economic activity as well as provide an improved service offering to the community.

Attachments

- Attachment 1 Application Forms (Shire of Coolgardie and DAP Forms)
- Attachment 2 Certificate of Title
- Attachment 3 Site Plans and Elevations (Grounded Construction)
- Attachment 4 Feature Survey (MNG)
- Attachment 5 Bushfire Management and Emergency Evacuation Plan (Bushfire Safety Consulting)
- Attachment 6 Traffic Impact Assessment (Urbii)

Attachment 1

Application Forms (Shire of Coolgardie and DAP Forms)



Shire of Coolgardie

Our Community, Our People, Our Future

(Schedule 111(A), File 13.3.13)

APPLICATION FOR PLANNING CONSENT

FORM 1

Compass (Australia) Catering & Services Pty Ltd, formally known as Eures (Australia) Catering & Services Pty Ltd by its authorised representative and company secretary:

Name of Owner of Land) Surname Murray
on which development) Christian Names Bart
proposed) Address in Full Level 2, 35-51 Mitchell Street, McMahon's Point, NSW, 2060

Submitted by CLE Town Planning + Design

Contact telephone numbers: H) W) 9382 1233 M)

Address for Correspondence 2 Abbotsford Street
West Leederville WA 6007
PO Box 796 Subiaco WA 6904

Locality of Development Kambalda

Title Office Description of Land

Lot No 201 Street Durkin Road Loc No

Plan of Diagram 28380 Certificate of Title Vol 2218 Folio 617

The type of development and the nature of the proposed buildings are as follows:

Additions to Existing Workforce Accommodation

The approximate cost of proposed development is \$30 Million
05/2023

The estimated time of completion is 47

The approximate number of person to be employed when the development is completed

Three copies of the Site Plan and other necessary plans of the proposals are submitted with this application.


Signed by the Owner of the Land

NOTE: A separate application is required to be submitted to the Council for a building licence (where applicable).

APPLICATION FOR PLANNING CONSENT

Every application for Planning Consent shall be made in the form prescribed on the reverse side of this sheet.

GENERAL:

Unless Council waives any particular requirement every Application for Planning Consent shall be accompanied by:

- (a) A plan or plans to scale of not less than 1:500 showing
 1. Street names, lot numbers, north point, dimensions of site.
 2. Location and proposed use of any existing buildings to be retained and the location and use of buildings proposed to be erected on the site.
 3. The existing and proposed means of access for pedestrians and vehicles to and from the site.
 4. The location, number, dimensions, layout of all car parking spaces intended to be provided.
 5. The location and dimensions of any area proposed to be provided for the loading and unloading of vehicles carrying goods or commodities to and from the site and the means of access to and from these areas.
 6. The locations, dimensions and design of any open storage or trade display area and particulars of the manner in which it is proposed to develop the same.

- (b) Plans elevations and sections of any building proposed to be erected or altered and of any building it is intended to retain;

- (c) Industrial Development
A landscaping plan detailing the layout, planting schedule and proposed method of maintaining the landscaped area in a condition acceptable to Council. The plan should demonstrate compliance with District Town Planning Scheme No. 4, Table II Development Table and Clauses 5.10.2, 5.10.3, 5.10.4.
 - 5.10.2 The front setback area may be used only for the purposes of landscaping, visitors car parking or access. The Council may approve the use of the front setback area for display or for loading and unloading of vehicles. No material or product may be stored within the front setback area.
 - 5.10.3 Where an open storage area is visible from a public place or street, and is not of a display nature, it shall be screened to the satisfaction of the Council.
 - 5.10.4 Street setback areas shall be landscaped, including an area of not less than one metre wide adjacent to each side boundary, except where an access is shared between adjacent lots. Areas other than the front setback that are visible from a public street or place shall be developed with landscaped open space or screened to the approval of Council.



DAP FORM 1

Notice of Development Application to be Determined by a Development Assessment Panel

Planning and Development Act 2005

Planning and Development (Development Assessment Panel) Regulations 2011 – regulations 7, 10 and 21

Application Details

To	Name of local government and/or Western Australian Planning Commission Shire of Coolgardie	
Planning Scheme(s)	Name of planning scheme(s) that applies to the prescribed land Shire of Coolgardie Local Planning Scheme No.5	
Land	Lot number, street name, town/suburb Lot 201 Durkin Rd, Kambalda East	
Certificate of Title (provide copy)	Volume Number 2218	Folio 617
	Location Number	Plan / Diagram Number 28380
Details of development application made to responsible authority	Summary of Proposal Expansion to Existing Workforce Accommodation	
Development Use	Residential / Commercial / Industrial / Rural / Mixed Use / Other Special Use - Workforce Accommodation	
Estimated cost of development (GST Exc)	\$30 million	

Part A – Acknowledgement by Applicant and Landowner

Mandatory Application	<input checked="" type="checkbox"/> I give notice that I understand that this is a mandatory Development Assessment Panel application (regulation 5)
Optional Application	<input type="checkbox"/> I give notice that I have elected to have the development application that accompanies this form determined by a Development Assessment Panel (regulation 6)
Delegated Application	<input type="checkbox"/> I give notice that I understand that this is an application of a class delegated to a Development Assessment Panel for determination (regulation 9)

Applicant Details (to be completed and signed by applicant)

- By completing this notice, I declare that all the information provided in this application is true and correct.
- I understand that the information provided in this notice, and attached forming part of the development application will be made available to the public on the Development Assessment Panel and local government websites.

Name	Harry Norman	
Company	CLE Town Planning + Design	
Address	Street Number/PO Box number, street name, suburb, state, postcode 2 Abbotsford Street, West Leederville, WA 6007	
Contact Details	Email harry@cleplan.com.au	Phone 08 9382 1233
Signature		Date

Landowner Details (to be completed and signed if landowner is different from applicant) <ul style="list-style-type: none"> By completing this notice, consent is provided to submitting this application. If there are more than two landowners, please provide all relevant information on a separate page. Signatures must be provided by all registered proprietors or by an authorised agent as shown on the Certificate of Title. Alternatively, a letter of consent, which is signed by all registered proprietors or by the authorised agent, can be provided. Companies, apart from sole directors, are required to provide signatories for two directors, a director and the company seal or a director and a company secretary. 		
Company (if applicable)	COMPASS (AUSTRALIA) CATERING & SERVICES PTY LTD	
Contact Details	Email bartmurray@compass-group.com.au	Phone 0420845637
Address	Street Number/PO Box number, street name, suburb, state, postcode Level 3, 12 Newcastle Street	
Name/s	Bart Murray	
Title/s	Landowner/Sole Director/Director (2 signatures required) Co sec of Landowner	Additional Landowner/ Director/Secretary (if applicable)
Signature/s		
Date	10 June 2022	10 June 2022

Part B – Local government acceptance for assessment

Responsible Authority	<input type="checkbox"/> Local Government (LG) <input type="checkbox"/> * Western Australian Planning Commission (WAPC) <input type="checkbox"/> * Dual – Local Government and Western Australian Planning Commission <input type="checkbox"/> Building Management and Works (Department of Finance) – <i>Public Primary School Applications</i>	
* WAPC/DUAL reporting details	If WAPC or DUAL is selected, please provide details of relevant provision (or within covering letter)	
Fees for applications (DAP Regulations - Schedule 1)	\$ Amount that has been paid by the applicant \$ Amount to be paid by local government (delegated applications only - regulation 22)	
Statutory Timeframe (regulation 12)	<input type="checkbox"/> 60 days (advertising not required) <input type="checkbox"/> 90 days (advertising required or other scheme provision)	
LG Reference Number		
Name of planning officer (Report Writer)		
Position/Title		
Contact Details	Email	Phone
Planning Officer's Signature		Date accepted for assessment

Attachment 2

Certificate of Title

WESTERN



AUSTRALIA

REGISTER NUMBER

201/DP28380DUPLICATE
EDITION**2**

DATE DUPLICATE ISSUED

4/9/2002**RECORD OF CERTIFICATE OF TITLE**
UNDER THE TRANSFER OF LAND ACT 1893VOLUME
2218FOLIO
617

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

BGRoberts
REGISTRAR OF TITLES**LAND DESCRIPTION:**

LOT 201 ON DEPOSITED PLAN 28380

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

EUREST (AUSTRALIA) CATERING & SERVICES PTY LTD OF LEVEL 2, 737 NEW SOUTH ROAD, ROSE BAY, NEW SOUTH WALES

(T 1219304) REGISTERED 29/8/2002

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

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

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

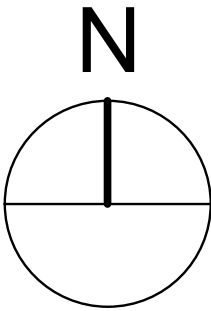
STATEMENTS:

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

SKETCH OF LAND: LR3125-195 (201/DP28380)
PREVIOUS TITLE: LR3125-195
PROPERTY STREET ADDRESS: LOT 201 DURKIN RD, KAMBALDA EAST.
LOCAL GOVERNMENT AUTHORITY: SHIRE OF COOLGARDIE

Attachment 3

Site Plans and Elevations (Grounded Construction)



BOUNDARY

NOT FOR CONSTRUCTION

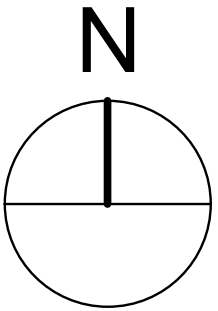
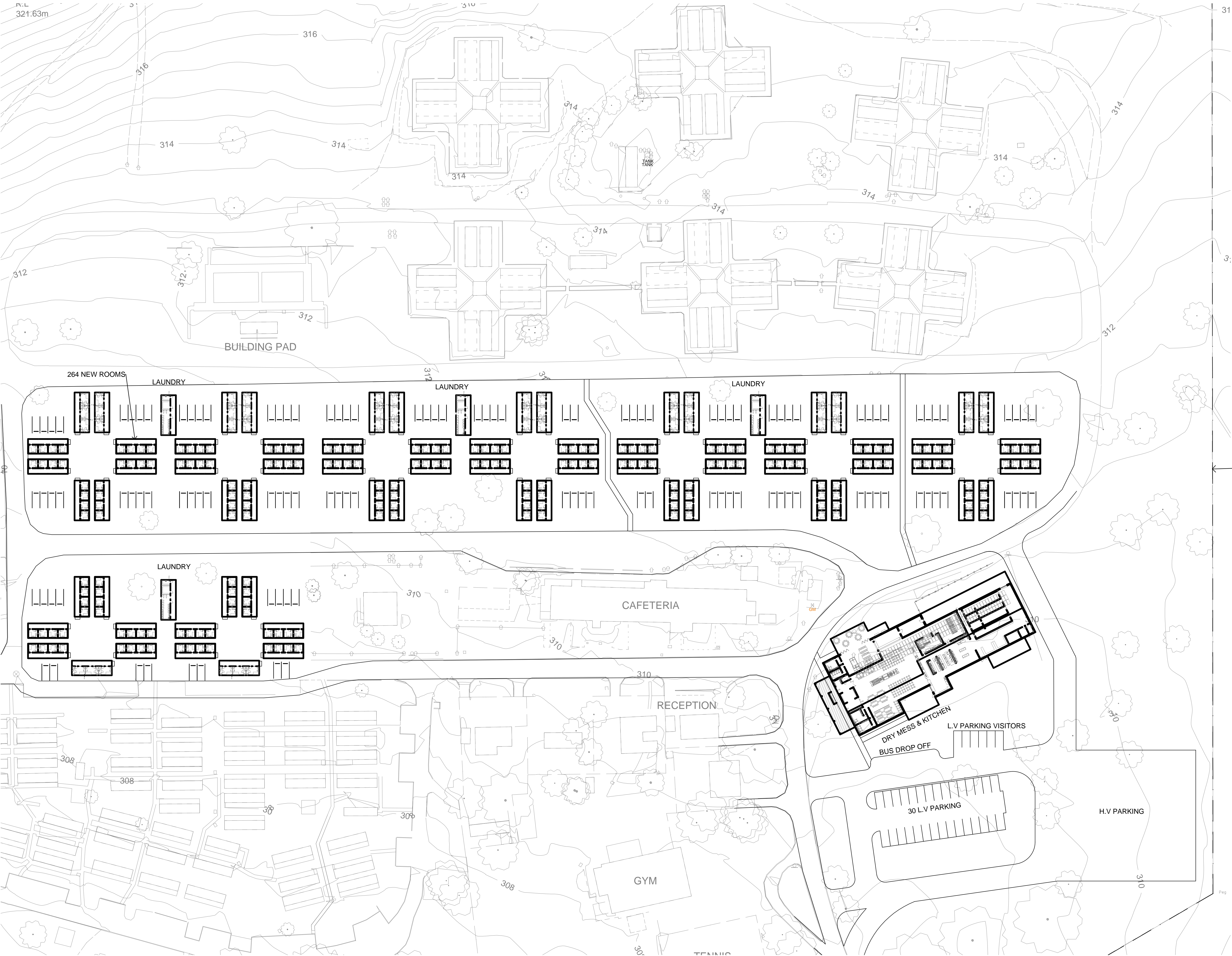
REV.	DATE	BY	CHKD	DESCRIPTION



groundedgroup.com.au
Registered Builders BC 102229
Perth 2 / 885 Wellington Street, West Perth, WA 6005
Pt Hedland 4 Abydos Street, Wedgefield, WA 6721

KAMBALDA

DRAWN	AB	OVERALL SITE PLAN		
CHECKED	BL			
APPROVED				
TECH APP				
PROJ APP		SCALE	JOB NO.	DRG NO.
PROJ APP		1:1000(BA1)	XXXX-XXXX	A101
				REV
				X



NOT FOR CONSTRUCTION

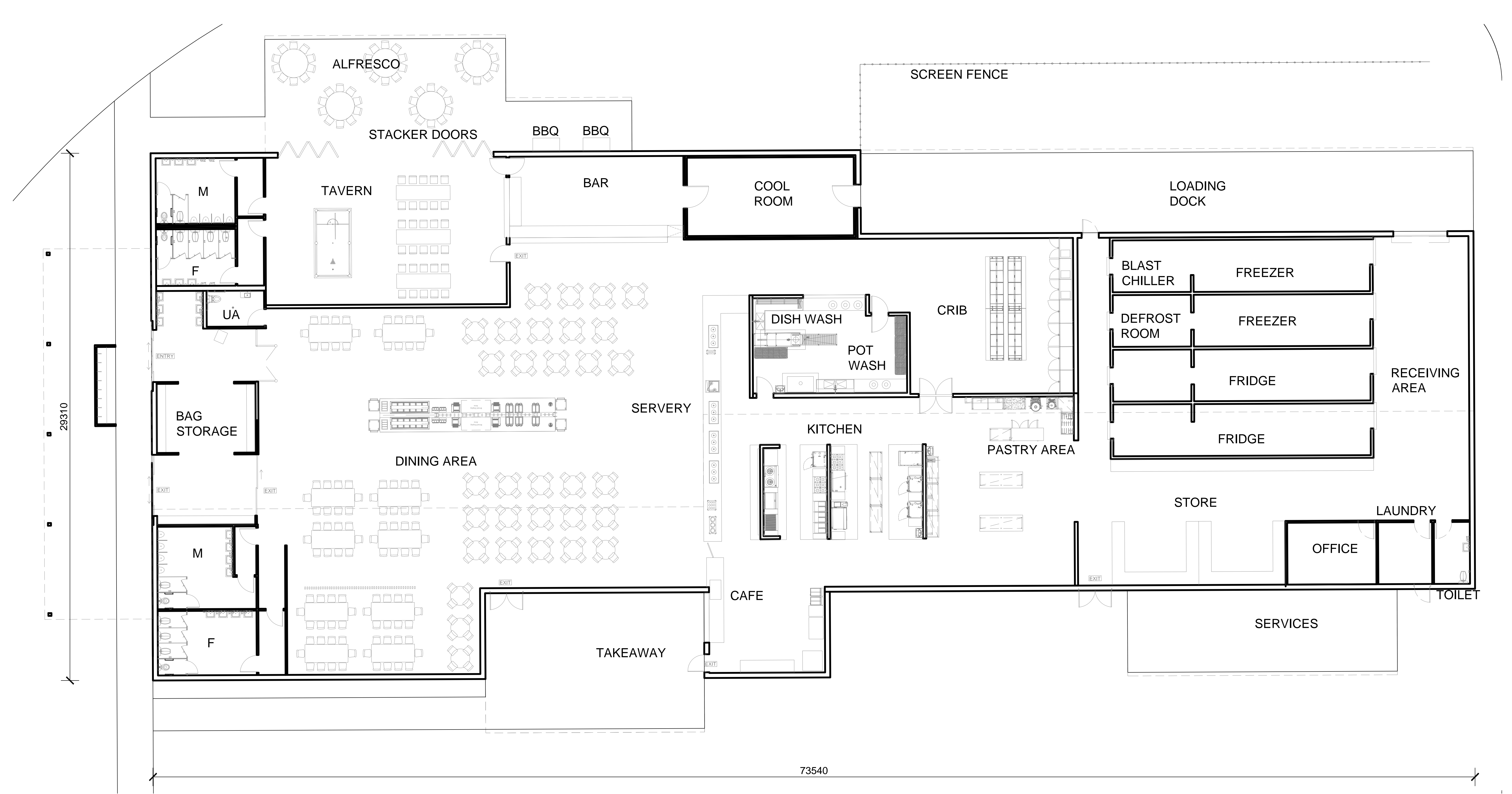
REV.	DATE	BY	CHKD	DESCRIPTION

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building tomorrow, together

groundedgroup.com.au
Registered Builders BC 102229
Perth 2 / 885 Wellington Street, West Perth, WA 6005
Pt Hedland 4 Abydos Street, Wedgefield, WA 6721

KAMBALDA

DRAWN	AB	SITE PLAN			
CHECKED	BL				
APPROVED					
TECH APP					
PROJ APP					
PRGJ APP					
		SCALE	JOB NO.	DRG NO.	REV
		1:600/BA1	XXXXXXX	A101	X



NOT FOR CONSTRUCTION				
REV.	DATE	BY	CHKD	DESCRIPTION

grounded.
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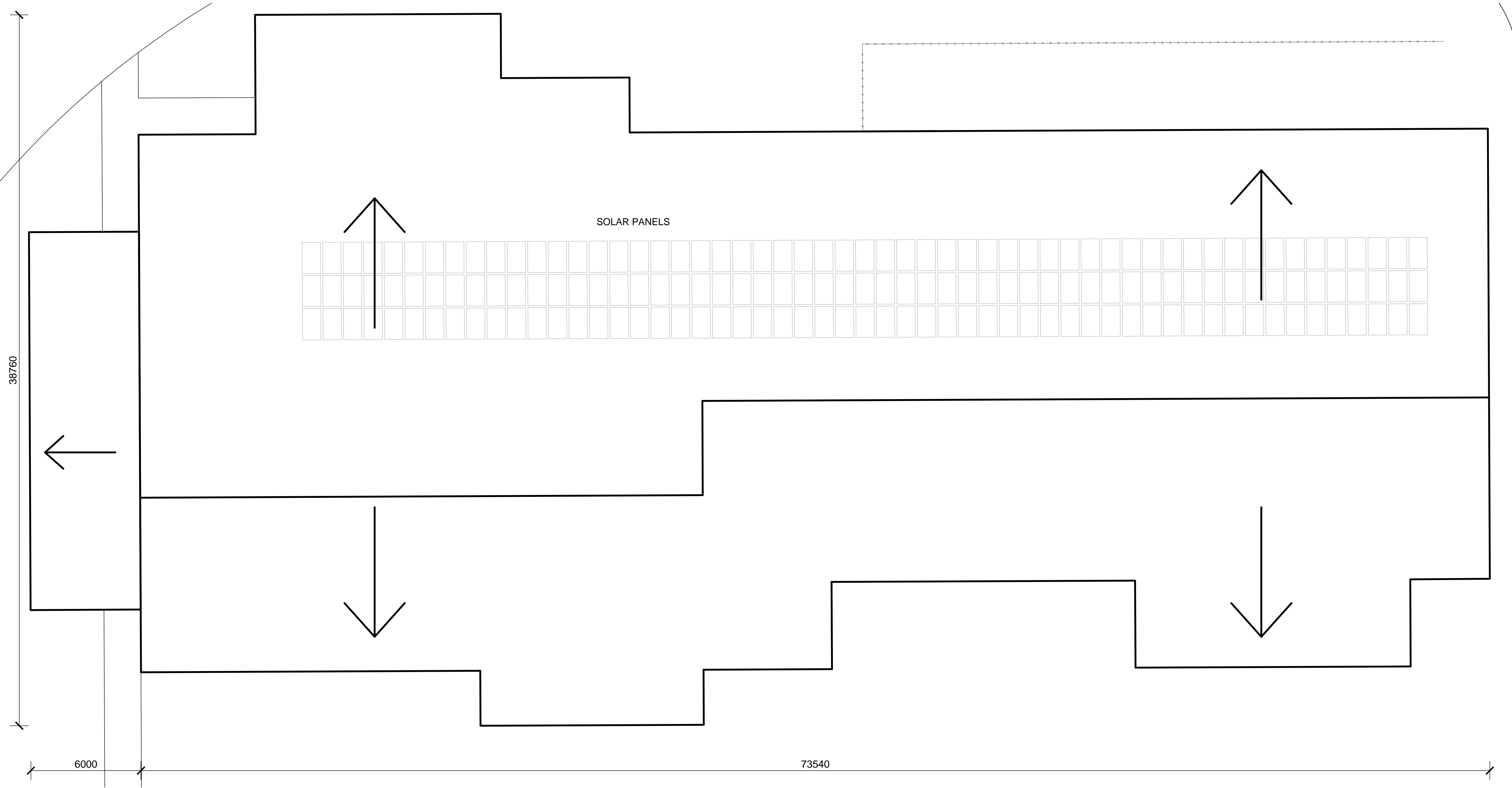
Registered Builders BC 102229

Perth 2 / 885 Wellington Street, West Perth, WA 6005


Pt Hedland 4 Abydos Street, Wedgefield, WA 6721

KAMBALDA

DRAWN	AB	DINING HALL FLOOR PLAN		
CHECKED	BL	SCALE	JOB NO.	DRG NO.
APPROVED		1:100/BA1	XXXX-XXXX	A101
TECH APP				REV
PROJ APP				X



NOT FOR CONSTRUCTION				
REV.	DATE	BY	CHKD	DESCRIPTION



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groundedgroup.com.au

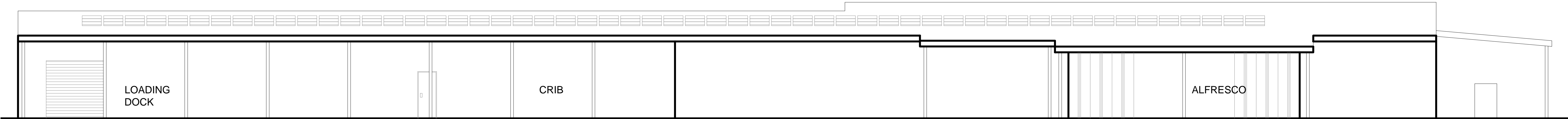
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Perth 2 / 885 Wellington Street, West Perth, WA 6005

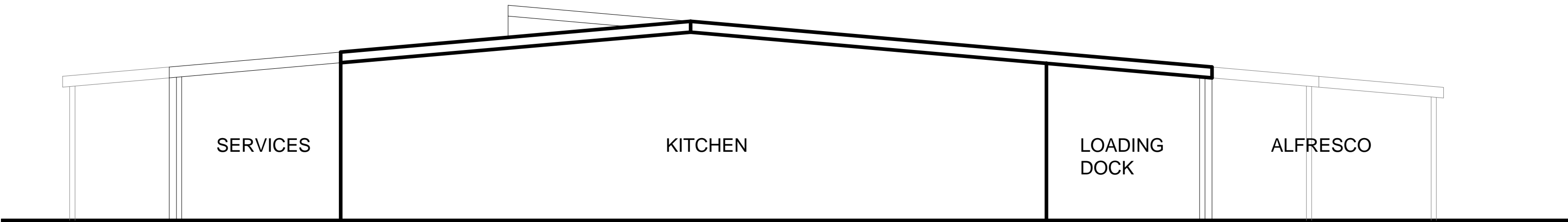
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KAMBALDA

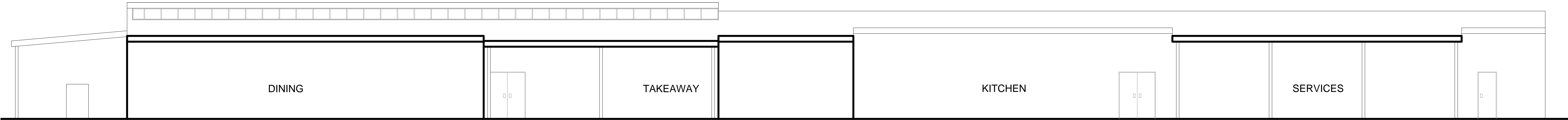
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CHECKED	BL			
APPROVED				
TECH APP				
PROJ APP		SCALE	JOB NO.	DRG NO.
PROJ APP		1:100 @ A1	XXXX-XXXX	A101
				REV
				X



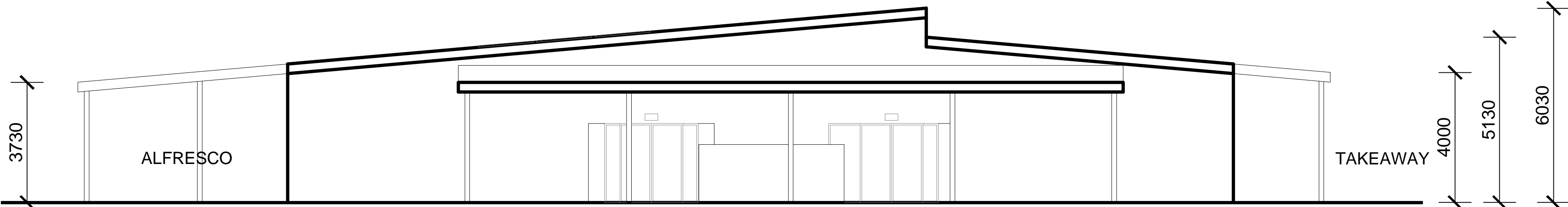
NORTH ELEVATION



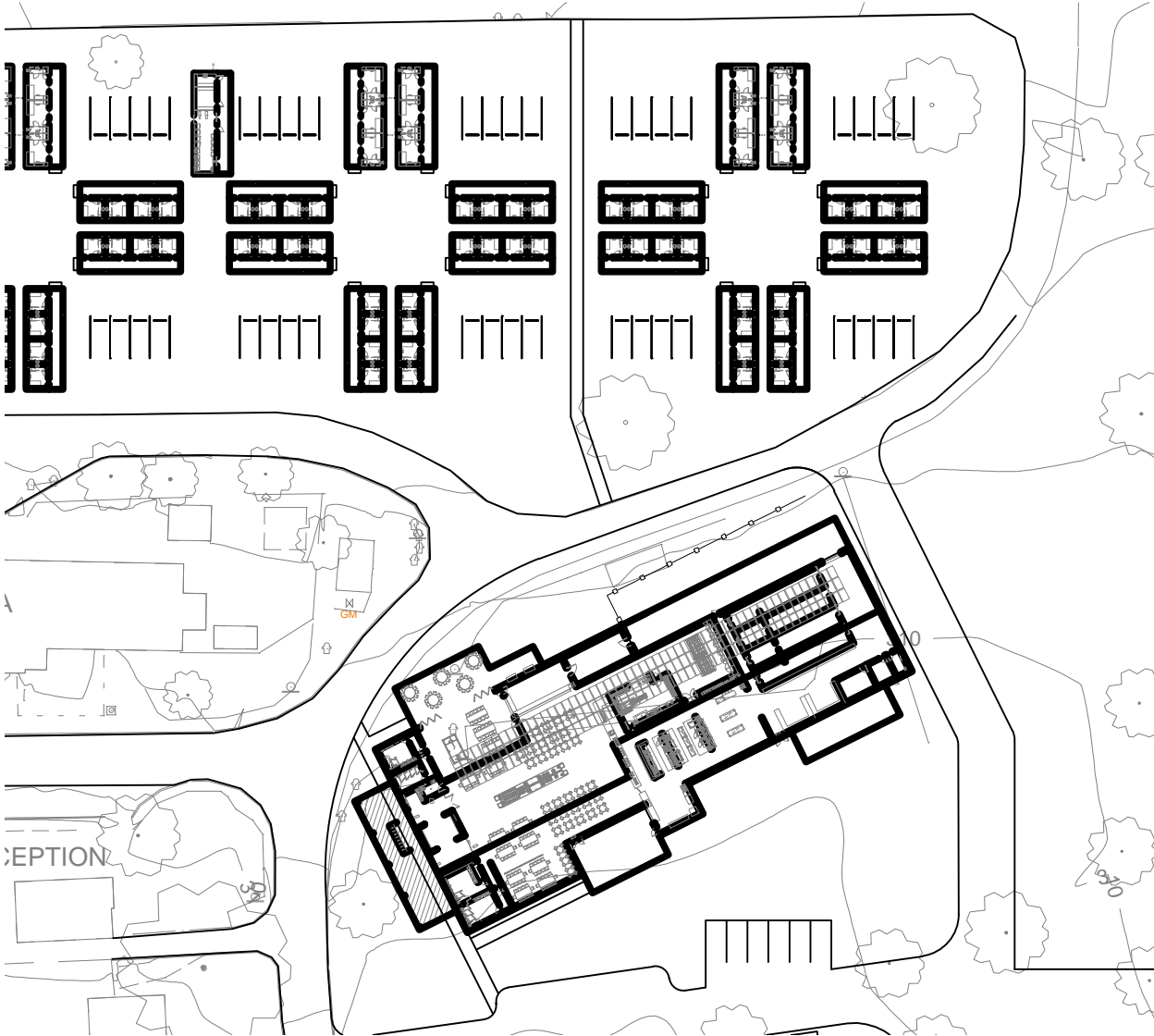
EAST ELEVATION



SOUTH ELEVATION

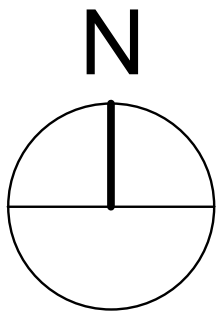


WEST ELEVATION



NOT FOR CONSTRUCTION

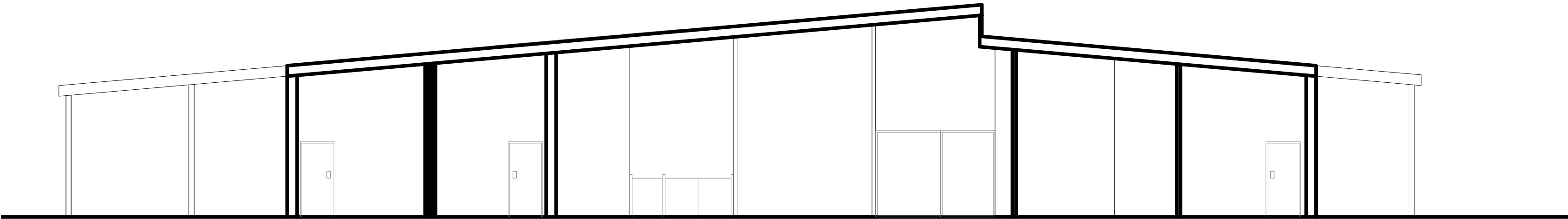
REV.	DATE	BY	CHKD	DESCRIPTION



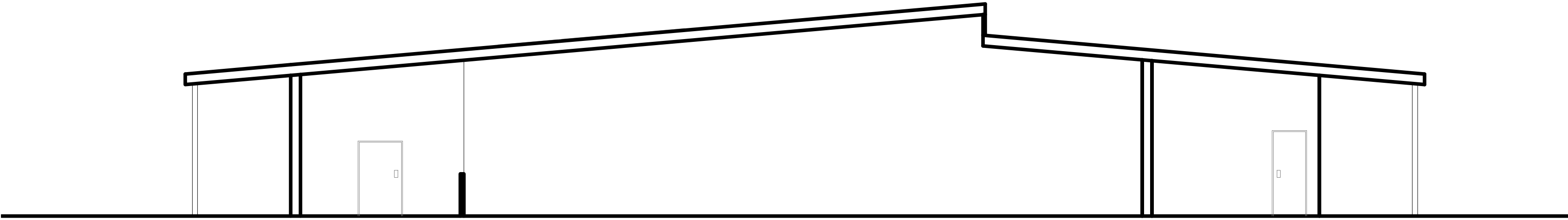
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Registered Builders BC 102229
Perth 2 / 885 Wellington Street, West Perth, WA 6005
Pt Hedland 4 Abydos Street, Wedgefield, WA 6721

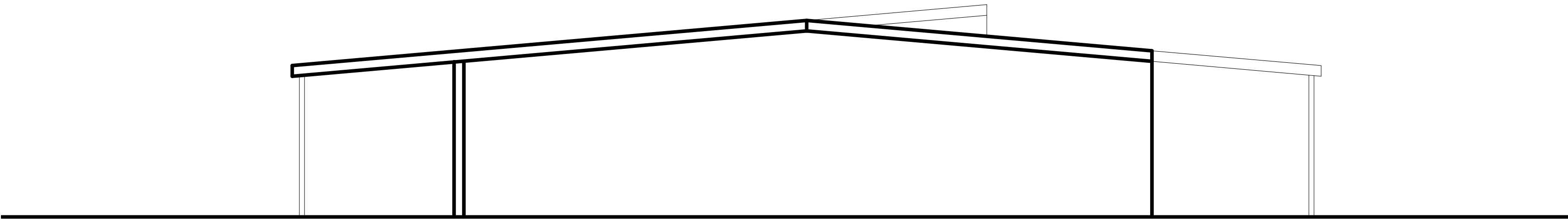
KAMBALDA				
DRAWN	AB	DINING HALL		
CHECKED	BL	ELEVATIONS		
APPROVED				
TECH APP				
PROJ APP	SCALE	JOB NO.	DRG NO.	REV
PROJ APP	1:100/BA1	XXXXXXX	A101	X



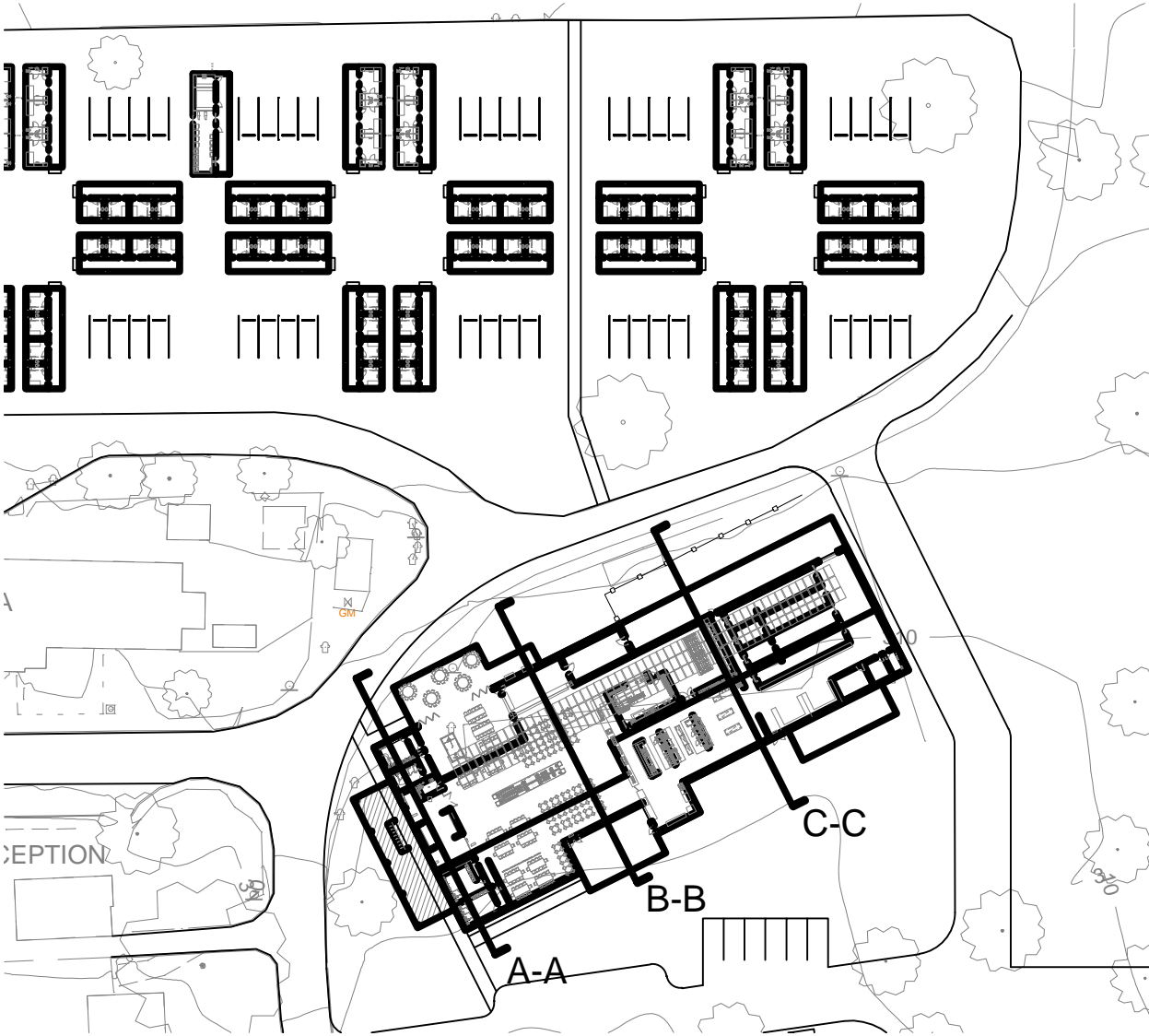
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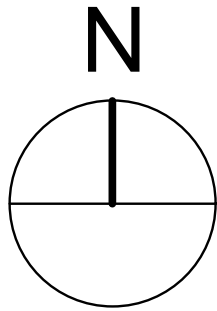
SECTION B-B



SECTION C-C



LOCATION PLAN
SCALE 1:1000



NOT FOR CONSTRUCTION

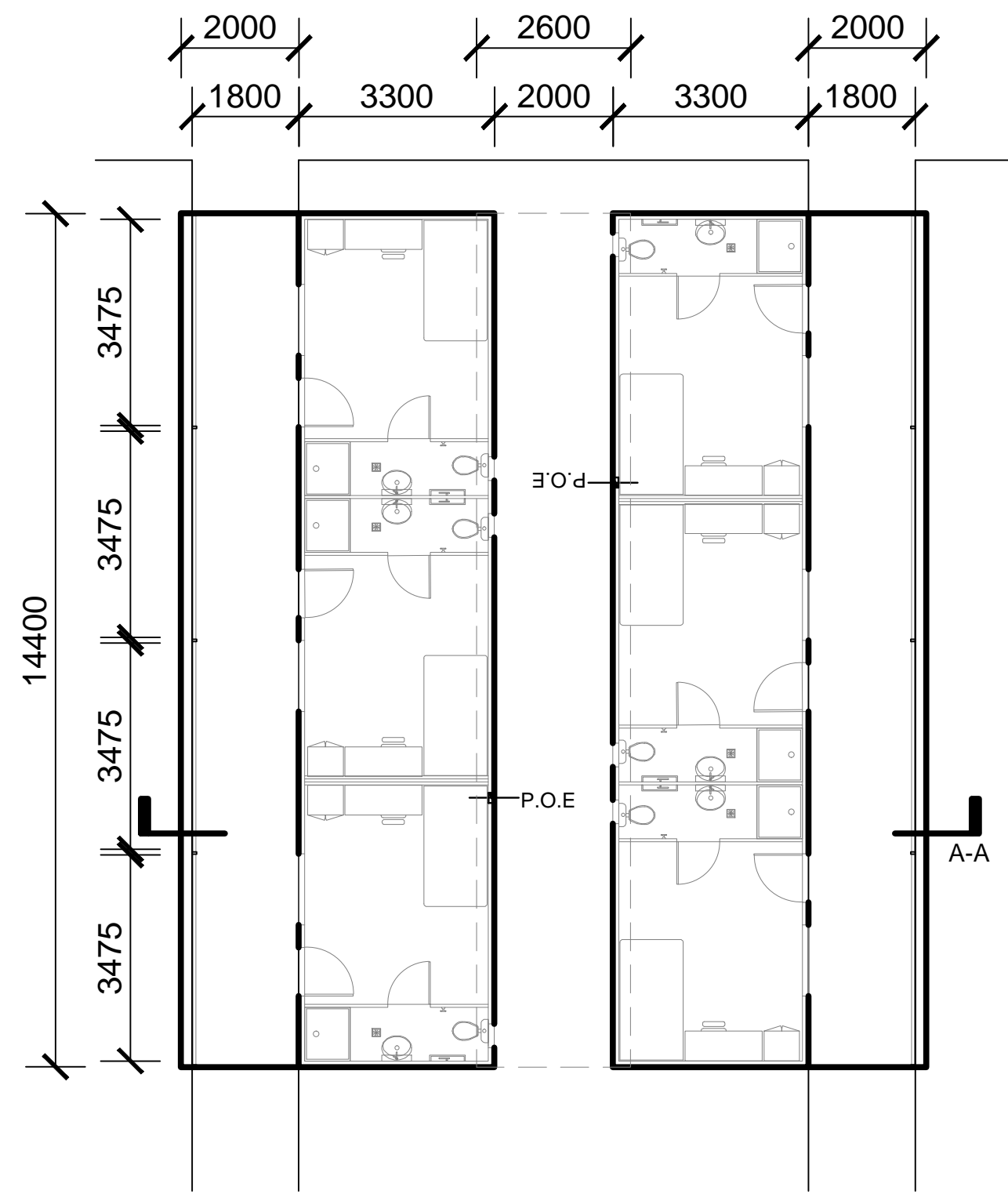
REV.	DATE	BY	CHKD	DESCRIPTION



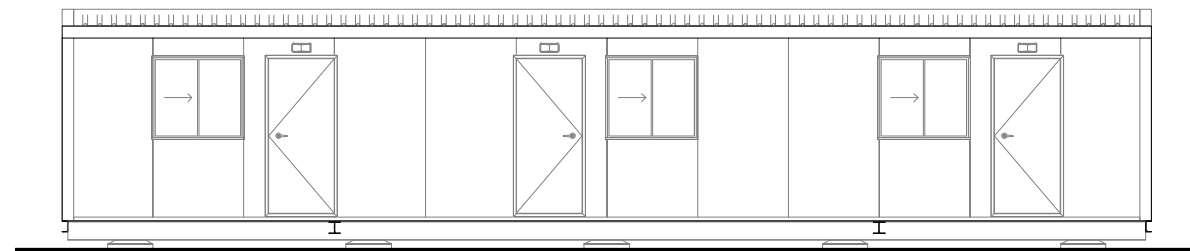
groundedgroup.com.au
Registered Builders BC 102229
Perth 2 / 885 Wellington Street, West Perth, WA 6005
Pt Hedland 4 Abydos Street, Wedgefield, WA 6721

KAMBALDA

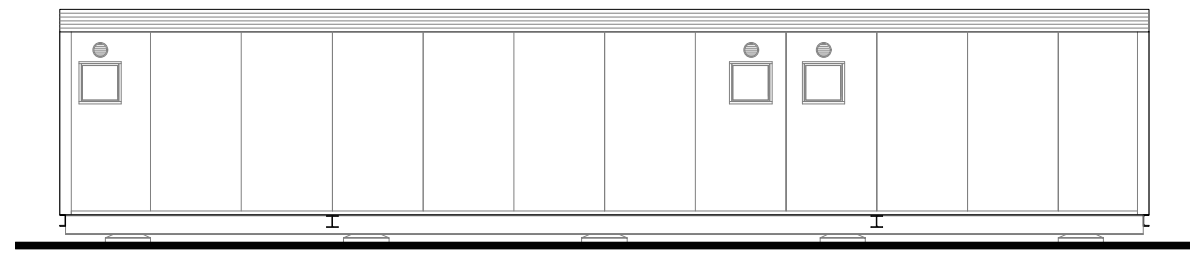
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CHECKED	BL			
APPROVED				
TECH APP				
PROJ APP	SCALE	JOB NO.	DRG NO.	REV
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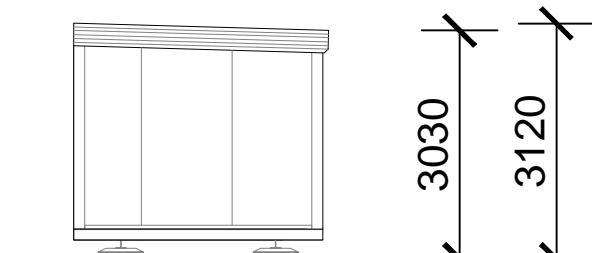
ACCOMMODATION FLOOR PLAN
(3 ROOM)



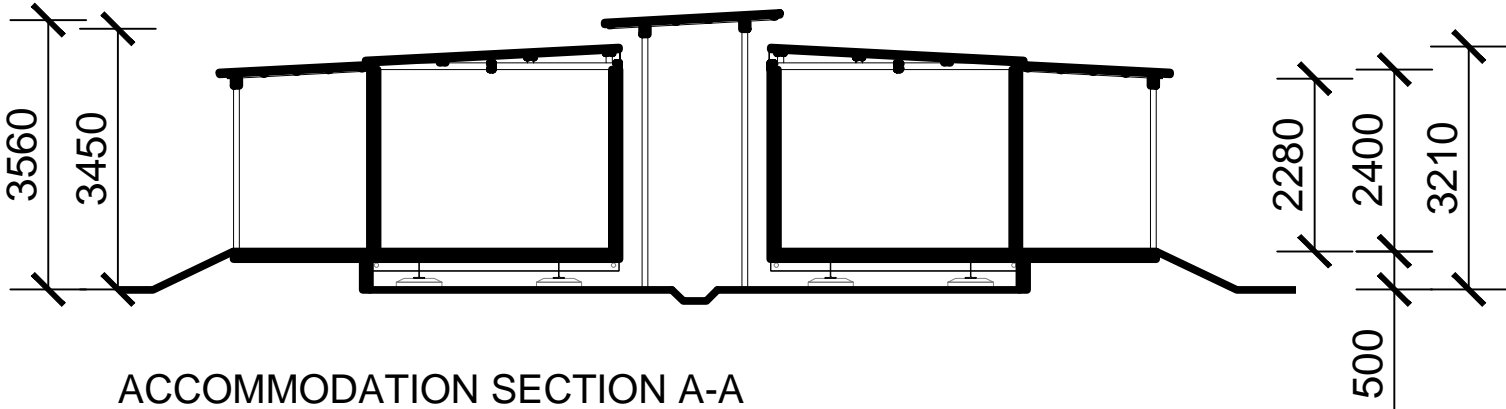
FRONT ELEVATION (3 ROOM)



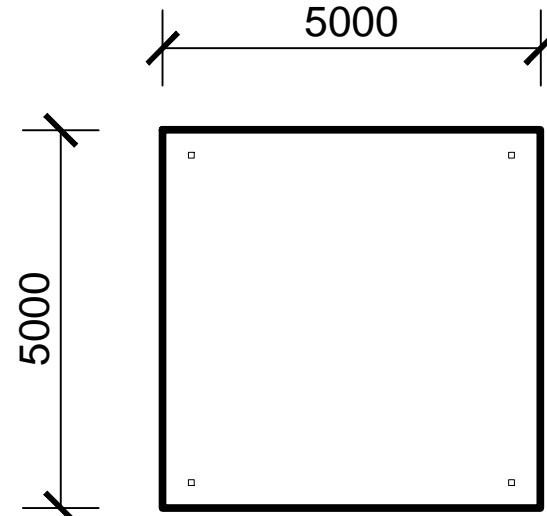
BACK ELEVATION (3 ROOM)



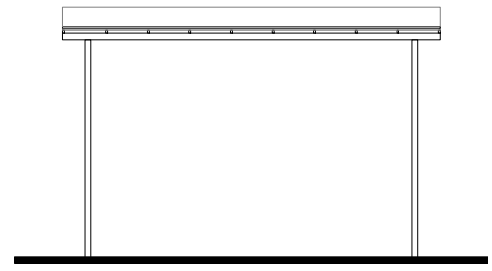
SIDE ELEVATION (TYPICAL)



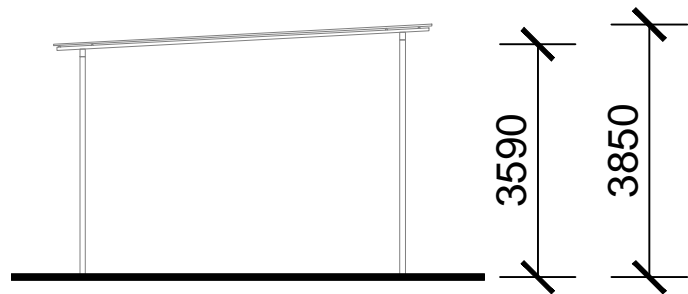
ACCOMMODATION SECTION A-A



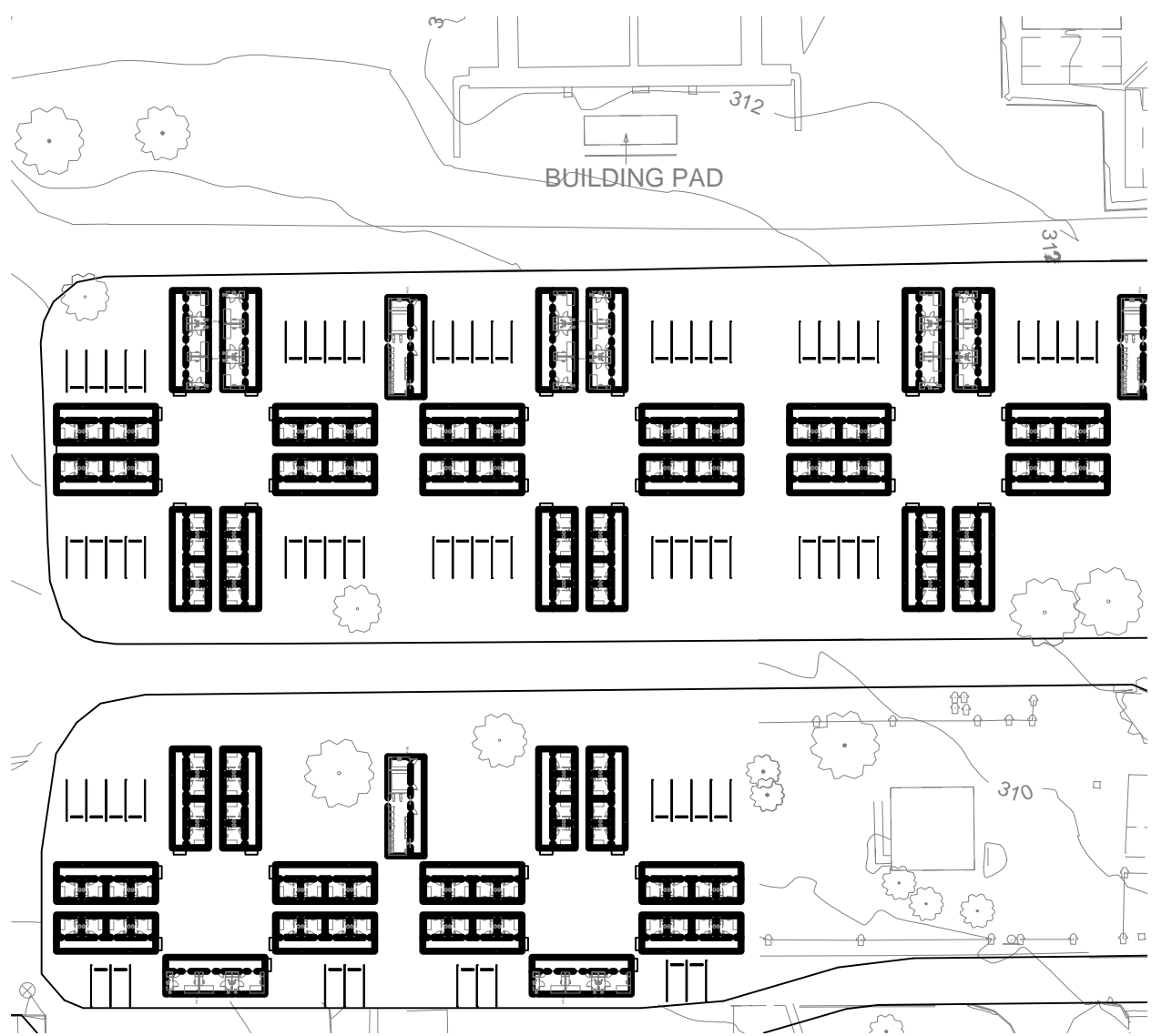
GAZEBO FLOOR PLAN



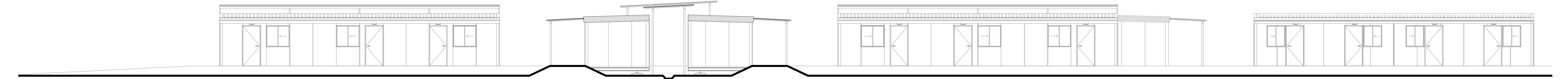
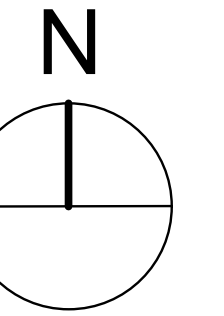
FRONT ELEVATION



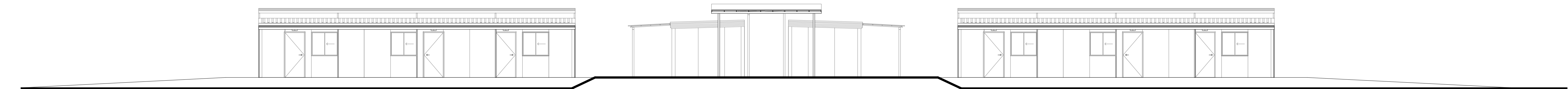
SIDE ELEVATION



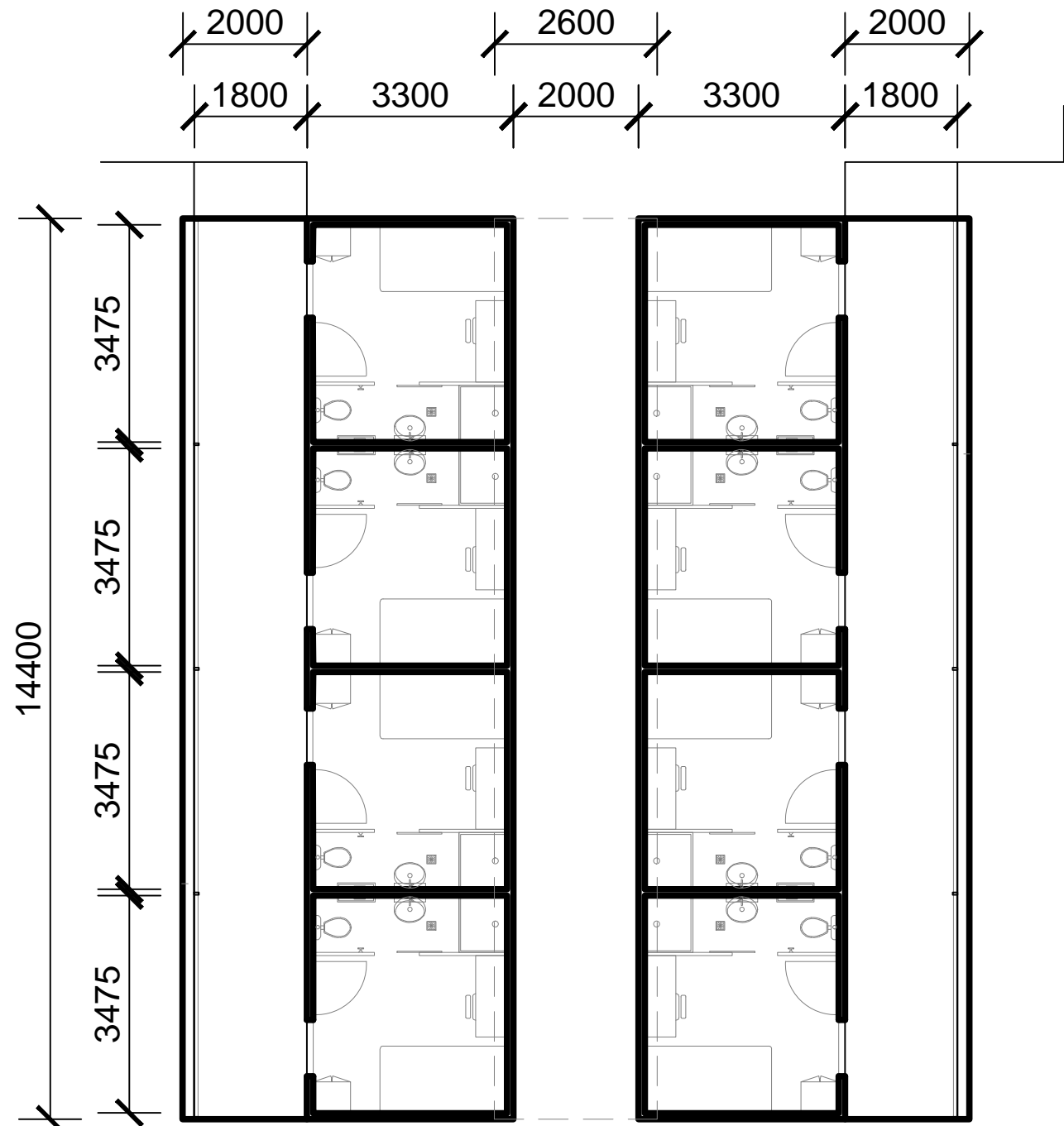
LOCATION PLAN
SCALE 1:1000



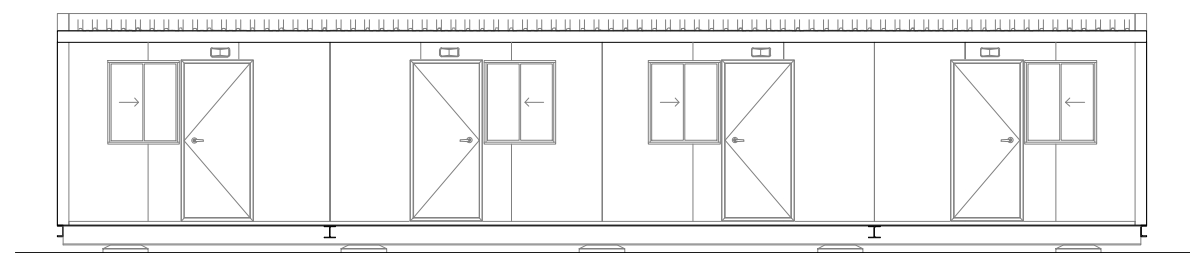
ACCOMMODATION SOUTH ELEVATION
(TYPICAL)



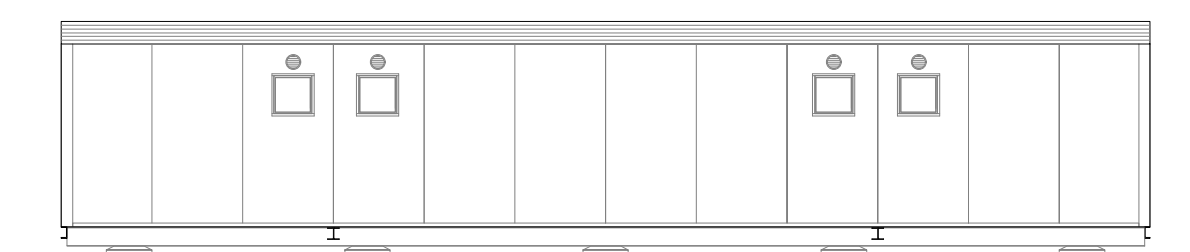
ACCOMMODATION WEST ELEVATION
(TYPICAL)



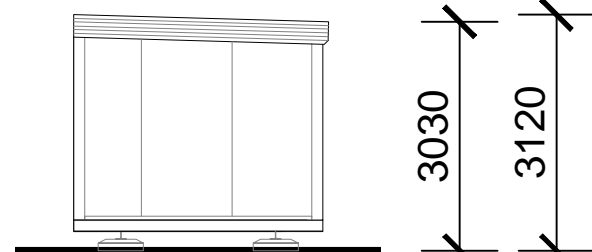
ACCOMMODATION FLOOR PLAN
(4 ROOM)



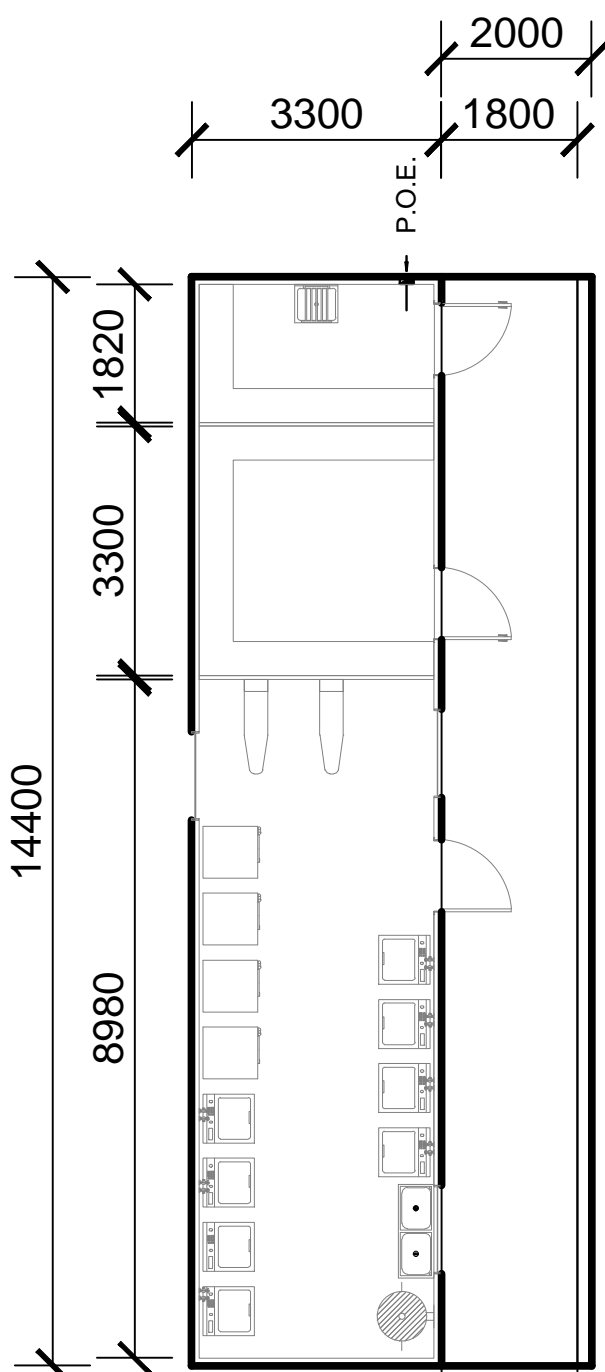
FRONT ELEVATION (4 ROOM)



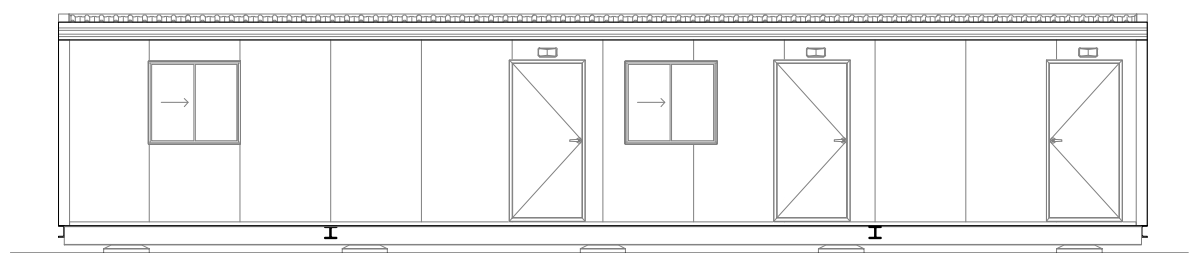
BACK ELEVATION (4 ROOM)



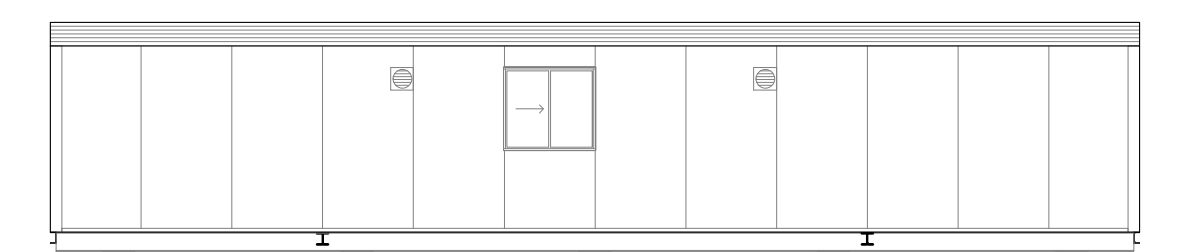
SIDE ELEVATION (TYPICAL)



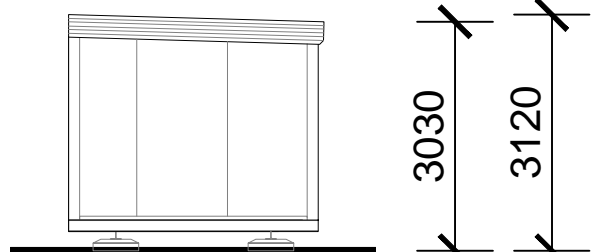
LAUNDRY FLOOR PLAN



FRONT ELEVATION (LAUNDRY)



BACK ELEVATION (LAUNDRY)



SIDE ELEVATION (TYPICAL)

NOT FOR CONSTRUCTION

REV.	DATE	BY	CHKD	DESCRIPTION

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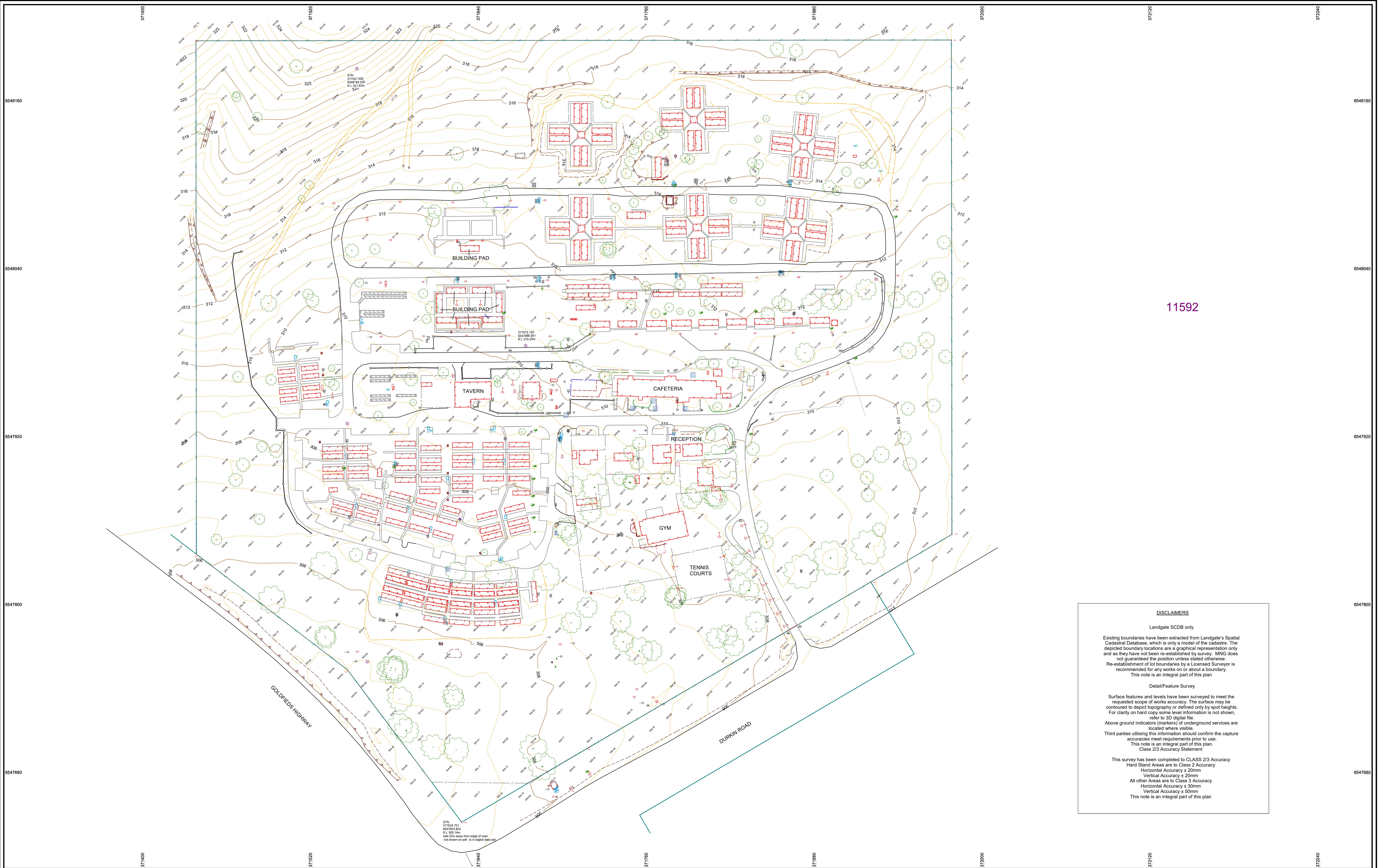
REV.	DATE	BY	CHKD	DESCRIPTION

FLOOR PLANS, ELEVATIONS
& SECTIONS

DRAWN	AB	FLOOR PLANS, ELEVATIONS & SECTIONS	REV
CHECKED	BL		
APPROVED			
TECH APP			
PROJ APP			
PRGJ APP			

Attachment 4

Feature Survey (MNG)



DISCLAIMERS

Landgate SCDB only

Existing boundaries have been extracted from Landgate's Spatial Cadastral Database, which is only a model of the cadastre. The depicted boundary locations are a graphical representation only and as they have not been re-established by survey. MNG does not guarantee the position unless stated otherwise. Re-establishment of lot boundaries by a Licensed Surveyor is recommended for any works on or about a boundary. This note is an integral part of this plan.

Detail/Feature Survey

Surface features and levels have been surveyed to meet the requested scope of works accuracy. The surface may be contoured to depict topography or defined only by spot heights. For clarity on hard copy some level information is not shown, refer to 3D digital file.

Above ground indicators (markers) of underground services are located where visible.

Third parties utilising this information should confirm the capture accuracies meet requirements prior to use. This note is an integral part of this plan.

Class 2/3 Accuracy Statement

This survey has been completed to CLASS 2/3 Accuracy

Hard Stand Areas are to Class 2 Accuracy

Horizontal Accuracy $\pm 20\text{mm}$

Vertical Accuracy $\pm 20\text{mm}$

All other Areas are to Class 3 Accuracy

Horizontal Accuracy $\pm 30\text{mm}$

Vertical Accuracy $\pm 50\text{mm}$

This note is an integral part of this plan

Rev.	Initial Issue	Description	Drawn	Date	Checked
A	Initial Issue		SAH	24/02/2022	MAD

SCALE 1:1200 @ A1

0 20 40 60 80 100 120

ALL DISTANCES ARE IN METRES

For a true to scale reproduction of this plan, plot it to A1 with the Paging Scaling set to None.

The contents of this plan are current and correct as of the date stated within the revision panel. All consultants and persons wishing to utilise this data should satisfy themselves of this plan currency by contacting the McMullen Nolan Group.

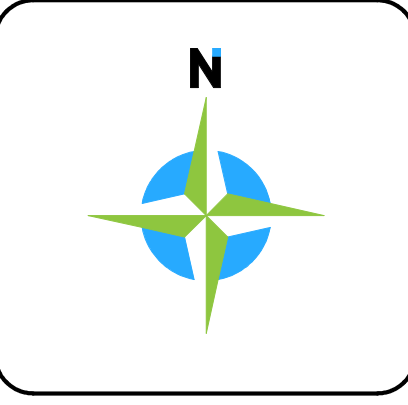
Surveyor:- TSO

Survey Date:- 07/02/2022

Precal/Cad:- 30/01/2022

ISO 9001 AS/NZS 4801 ISO 14001

Global-Mark.com.au®



The boundaries shown on this plan were not re-established as part of this survey, therefore this plan does not guarantee their accuracy. Existing easements, encumbrance or interest are not depicted and a title search is recommended to obtain this information. Re-establishment of the cadastral boundaries is recommended for any proposed works on or near existing boundaries.

McMULLEN NOLAN GROUP

Level 1, 2 Sabre Crescent

Jandakot, W.A. 6164

PO Box 3526, Success

W.A. 6964, Australia

Offices in: Perth | Melbourne | Kimberley | South West WA

Tel: (08) 6436 1599

Fax: (08) 6436 1500

info@mngsurvey.com.au

www.mngsurvey.com.au

ABN 90 009 363 311

KAMBALDA

KAMBALDA ACCOMODATION VILLAGE

FEATURE SURVEY

CLIENT:

Project Mngr: Mark Dobson

Datum: MGA50 / AHD

104674 - DE - 001 - A

Job Number Type Plan Number Revision

COMPASS GROUP

Attachment 5

Bushfire Management and Emergency Evacuation Plan (Bushfire Safety Consulting)

Bushfire management plan/Statement addressing the Bushfire Protection Criteria coversheet

Site address: 210 Durkin Road Kambalda - Kambalda Village

Site visit: Yes ☒ No ☐

Date of site visit (if applicable): Day 10th Month February Year 2022

Report author or reviewer: Rohan Carboon (BPAD 23160)

WA BPAD accreditation level (please circle):

Not accredited ☐ Level 1 BAL assessor ☐ Level 2 practitioner ☐ Level 3 practitioner ☒

If accredited please provide the following.

BPAD accreditation number: 23160 Accreditation expiry: Month January Year 2023

Bushfire management plan version number: 3.0

Bushfire management plan date: Day 10 Month June Year 2022

Client/business name: Compass Group Australia

	Yes	No
Has the BAL been calculated by a method other than method 1 as outlined in AS3959 (tick no if AS3959 method 1 has been used to calculate the BAL)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Have any of the bushfire protection criteria elements been addressed through the use of a performance principle (tick no if only acceptable solutions have been used to address all of the bushfire protection criteria elements)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Is the proposal any of the following (see [SPP 3.7 for definitions](#))?

	Yes	No
Unavoidable development (in BAL-40 or BAL-FZ)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Strategic planning proposal (including rezoning applications)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
High risk land-use	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Vulnerable land-use	<input checked="" type="checkbox"/>	<input type="checkbox"/>

None of the above ☐

Note: Only if one (or more) of the above answers in the tables is yes should the decision maker (e.g. local government or the WAPC) refer the proposal to DFES for comment.

Why has it been given one of the above listed classifications (E.g. Considered vulnerable land-use as the development is for accommodation of the elderly, etc.)?

Bushfire Emergency Evacuation plan developed because the camp has large numbers of workers stay while working in nearby mines.

The information provided within this bushfire management plan to the best of my knowledge is true and correct:

Signature of report author or reviewer



Date 10/06/2022



Bushfire Management and Evacuation Plan

Kambalda Village


210 Durkin Road, Kambalda

Shire of Coolgardie

© 2022 Bushfire Safety Consulting Pty Ltd.

Document Information

Prepared for: Kambalda Village
Project Name: Bushfire Management and Emergency Evacuation Plan
Address: 201 Durkin Road, Kambalda, Western Australia 6442
Prepared by: Rohan Carboon
Bushfire Safety Consulting Pty Ltd

I hereby declare that I am a BPAD accredited bushfire practitioner.	
Accreditation No.	23160
Signature	
Date	10/06/2022



Document Control

Kambalda Village - Bushfire Management & Emergency Evacuation Plan			
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Front cover photo: Kambalda Village Layout

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EXECUTIVE SUMMARY

This Bushfire Management and Emergency Evacuation Plan (BMEEP) has been prepared to support a Development Application for a proposed Dry Mess and Kitchen, accommodation buildings and parking bays at Kambalda Village (the Village).

The Village can accommodate up to 700 people and on any given work day 450 of those people are away from the site at a surrounding work site. The site currently contains 574 ensuite rooms, a dining room, guest take away, tavern, swimming pool and gymnasium. The proposed development is for a dry mess and new kitchen, new carparking area and an additional 264 new ensuite rooms, while removing 56 rooms. The total number of rooms after construction is 782.

The Village is located at 210 Durkin Road, Kambalda, the developed area contains a well established driveway network, fire hydrant and hose system and facilities that are centrally located on the property. The perimeter of the property contains predominantly woodland vegetation including scattered eucalypt trees and shrubs. The property also has an established perimeter trafficable firebreak.

The Village is leased and managed by Compass Group Australia and most of the property except a central area is declared Bushfire Prone on the map of bushfire prone areas of WA. Access to the Village is via Durkin Road and the property is also located on the intersection of the Goldfields Highway. There are multiple access ways on surrounding public roads and sealed roads through mining leased areas.

An Asset Protection Zone (APZ) is largely established around existing buildings, there are some additional works required to fully establish the APZ around the proposed buildings and to further increase the setback to the Safer Sheltering Area on-site that may be used in the event of a bushfire or multiple fires making safe evacuation of the site not possible.

A Method 1 BAL assessment has been undertaken to determine predicted radiant heat flux level for the proposed development and the existing buildings. The proposed dry mess and kitchen are exposed to BAL-12.5. All other proposed and existing buildings are exposed to a maximum BAL rating of BAL-29. A large area in the centre of the Village is exposed to BAL-LOW.

Scheme water is provided, and the Village has an extensive fire hydrant and fire hose system, the new buildings are being assessed to ensure they comply with minimum requirements.

The proposed development complies with the definition of “vulnerable land use” in the *State Planning Policy 3.7: Planning in Bushfire Prone Areas (SPP 3.7)*, Policy Clause 6.6, and therefore requires a Bushfire Management Plan which includes a Bushfire Emergency Evacuation Plan for all occupants.

The proposed development achieves all the Acceptable Solutions and Performance Principles in the *Guidelines for Planning in Bushfire Prone Areas V1.4 (2021)*. The Village management is responsible for ensuring requirements for the provision of water and vehicular access are met, and to establish and maintain the Asset Protection Zone (APZ).

It is expected that the implementation of this BMEEP will reduce the threat to guests, staff and fire fighters in the area addressed by this BMEEP. The proposal complies with the *State Planning Policy No. 3.7: Planning in Bushfire Prone Areas (SPP 3.7)* and the *Guidelines for Planning in Bushfire Prone Areas (WAPC 2021 V1.4)*.

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1 PROPOSAL DETAILS

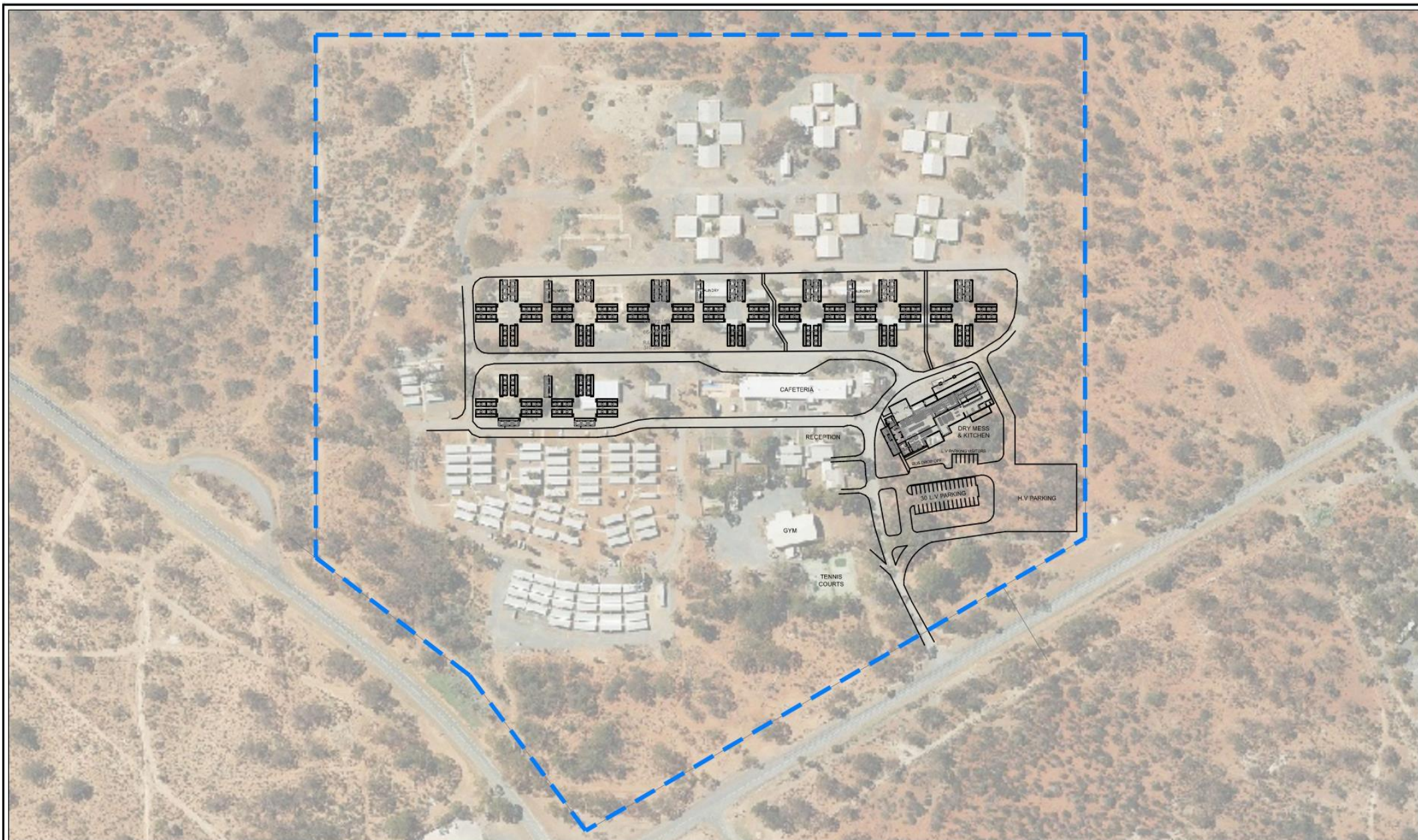
The Kambalda Village is located at 210 Durkin Road, Kambalda, the existing facility contains an established driveway network, fire hydrant and hose system and all facilities that are centrally located on the property. The perimeter of the property contains scrub and woodland vegetation including scattered eucalypt trees and shrubs. The property has an established trafficable perimeter firebreak.

The Village contains 574 ensuite rooms, a dining room, guest take away, tavern, swimming pool and gymnasium. The proposed development is for a dry mess and new kitchen, new carparking area and an additional 264 new ensuite rooms, while removing 56 rooms. The total number of rooms after construction is 782 (Figure 1).

The Village accommodates workers that are employed at surrounding mines and contractors. Up to 700 people can be accommodated and usually on any given day, 450 of those workers are not at the site as they are at their work places.

The Village is leased and managed by Compass Group Australia and most of the property except a central area is declared Bushfire Prone on the map of bushfire prone areas of WA.

The site is located in the Shire of Coolgardie, approximately 52 kilometres south of the Town Centre of Kalgoorlie. It is located near the intersection of Goldfields Highway and Durkin Road and is positioned between the residential areas of Kambalda West and Kambalda East (Figure 2).



Location details: Durkin Road
Kambalda

Assessment date: February, 2022

Prepared by: Bushfire Safety Consulting

Accreditation level: Level 3 BPAD Practitioner

Accreditation number: BPAD 23160

Accreditation expiry date: 31st January, 2023

Date aerial photo: February 2021

FIGURE 1
PROPOSED DEVELOPMENT

0 20 40 60 80 100m

SCALE 1:2500 @ A3
DATE: MAY 2022



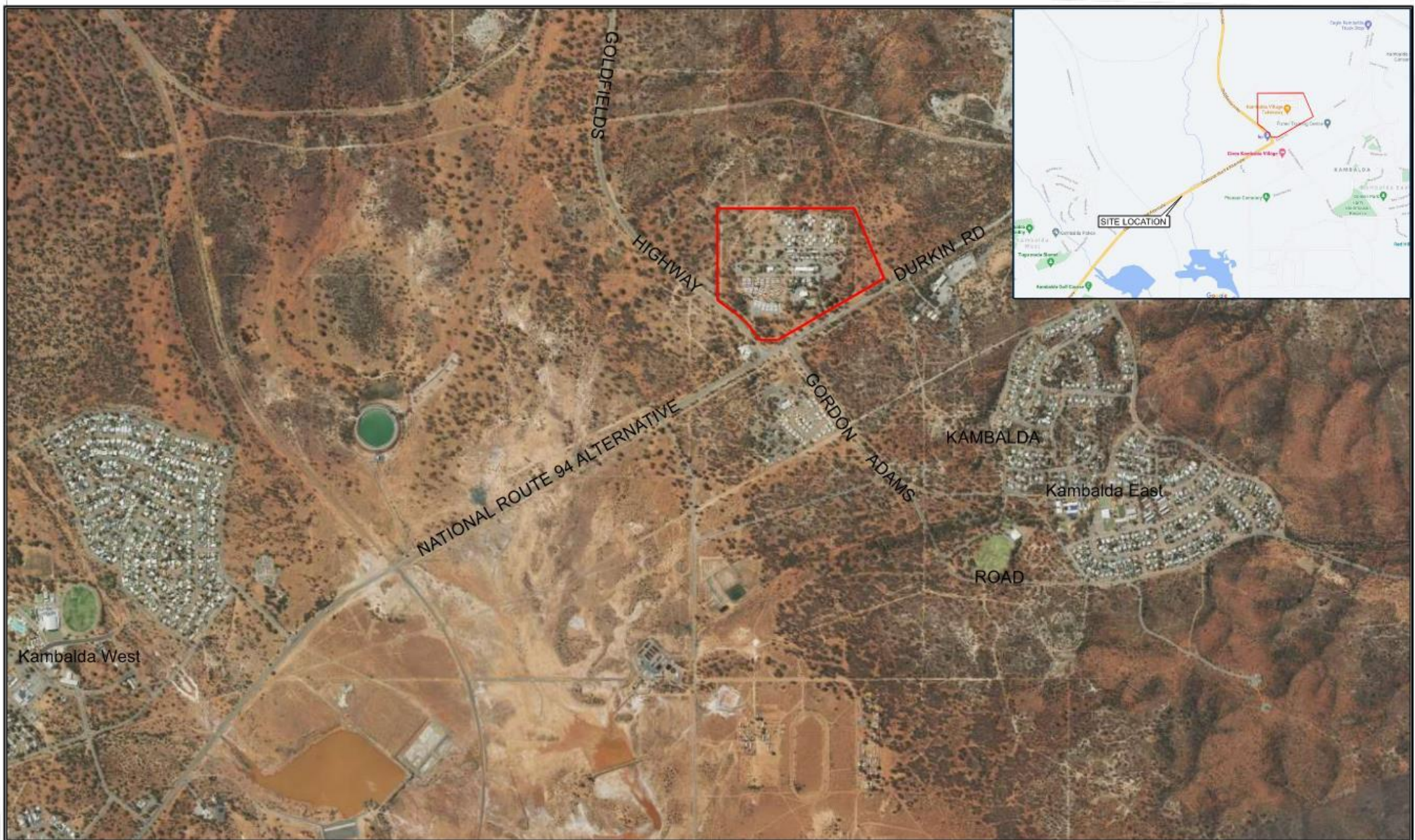
LEGEND:
SUBJECT LAND

SOURCE OF PHOTOGRAPHY: NEARMAP

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FIGURE 2
SITE LOCATION PLAN


0 200 400 600m

SCALE 1:20 000 @ A4

DATE: FEBRUARY 2022

NORTH

LEGEND

 SUBJECT LAND

Base mapping supplied by Landgate & Google Maps

1.1 Policy and Guidelines

1.1.1 Application of SPP 3.7

The *State Planning Policy No. 3.7: Planning in Bushfire Prone Areas (SPP 3.7)* provides the foundation for land use planning to address bushfire risk management in Western Australia. It is used to inform and guide decision makers, referral agencies and land owners to help achieve acceptable bushfire protection outcomes.

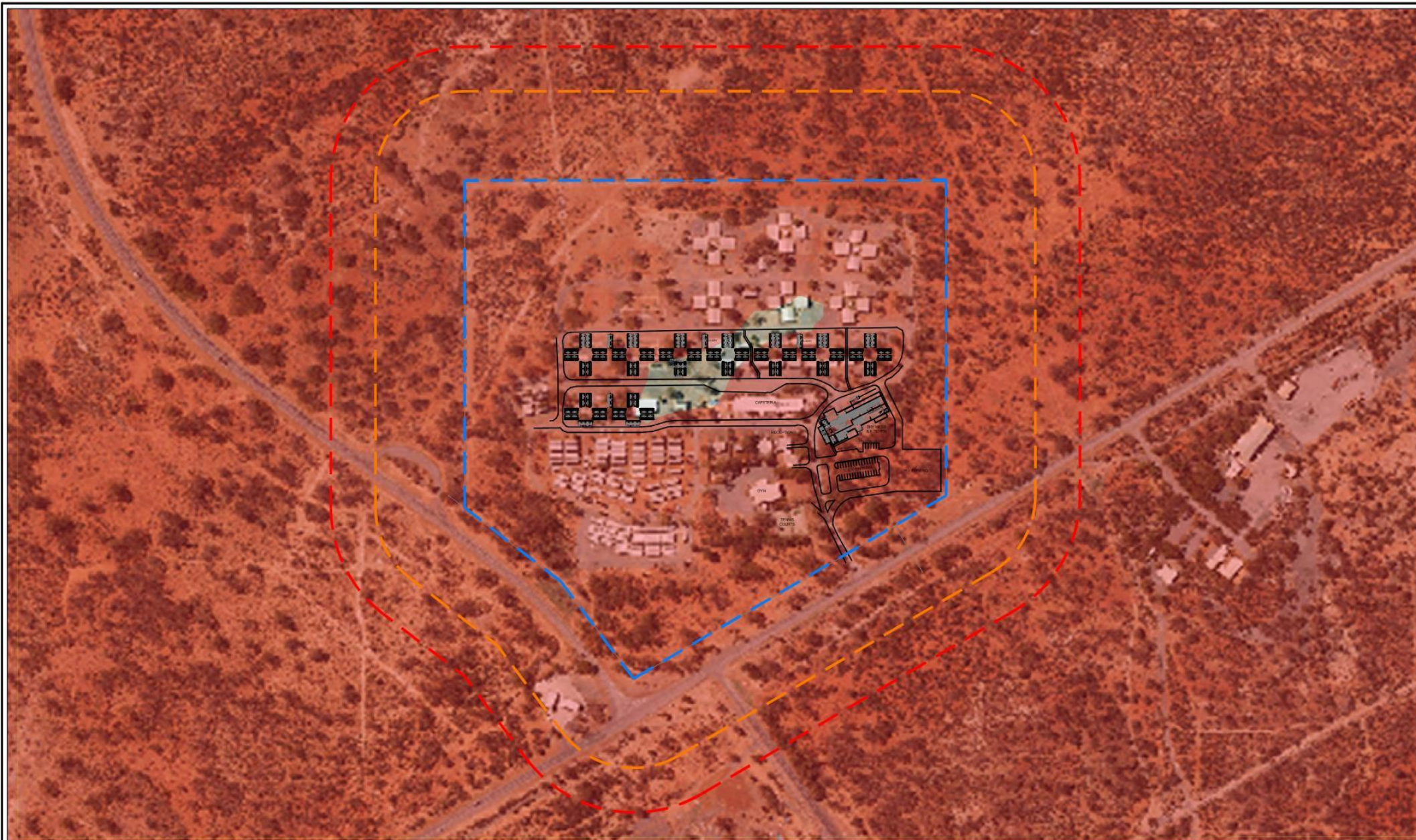
The policy contains objectives and policy measures as well as reference to the Bushfire Protection Criteria as outlined in the Guidelines for Planning in Bushfire Prone Areas (WAPC 2021 V1.4; the Guidelines). The policy applies to this facility and development because the site is located in a designated bushfire prone area on the WA Map of Bushfire Prone Areas (Figure 3). The following policy measures will need to comply with SPP 3.7:

Table 1. Policy measures

Policy Measure 6.2	The vast majority of the property is located within a designated Bushfire Prone Area (BPA) except for a small central area. The proposed development is within the BPA and the site does have a Bushfire Hazard Level above low and a Bushfire Attack Level rating above BAL-LOW.
Policy Measure 6.4	Policy measure 6.4 applies, meaning the assessment will include a Bushfire Management Plan that contains the following: <ul style="list-style-type: none"> - BAL Contour Plan - BAL ratings - Identification of relevant issues; and - Demonstration of compliance with the Guidelines
Policy Measure 6.6	Policy Clause 6.6 applies to vulnerable land use applications. The Village is considered a vulnerable land use under the policy because the users of the site are less able to respond in a bushfire emergency. The report therefore includes a comprehensive Emergency Evacuation Plan which specifically reflects the users' needs and circumstances.

1.1.2 Guidelines for Planning in Bushfire Prone Areas V1.4 (2021)

The Department of Planning have recently released the Guidelines for Planning in Bushfire Prone Areas V1.4 (2021). The requirements of this document are accommodated within this BMEEP. The Guidelines for Planning in Bushfire Prone Areas V 1.4 (2021) is intended to inform and guide decision makers, referral authorities and proponents to achieve acceptable bushfire protection outcomes, including expectations at the different stages of planning.



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FIGURE 3
BUSHFIRE PRONE
AREAS

0 20 40 60 80 100 120 140 160 180m

SCALE 1:4000 @ A3
DATE: MAY 2022



LEGEND:

- SUBJECT LAND
- ASSESSMENT AREA (150m) FROM THE EXTERNAL BOUNDARY OF THE SUBJECT SITE
- ASSESSMENT AREA (100m) FROM THE EXTERNAL BOUNDARY OF THE SUBJECT SITE
- BUSHFIRE PRONE AREAS

SOURCE OF PHOTOGRAPHY: NEARMAP

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2 ENVIRONMENTAL CONSIDERATIONS

2.1 Native Vegetation – Modification and Clearing

Some native vegetation clearing and modification is required to accommodate the development of the dry mess and kitchen and new carpark areas. The Asset Protection Zone (APZ) is also required around the new and existing buildings to ensure compliance with BAL-29 and lower is achieved.

A small amount of internal fuel load works are required to establish the APZ.

2.2 Revegetation/ Landscape Plans

There are no revegetation plans for the Village. Any future landscaping will be established and maintained in perpetuity in a low threat condition to minimum APZ standards (see Figure 6 and standards in Appendix 1).

3 BUSHFIRE ASSESSMENT RESULTS

Bushfires are common in the broader western woodlands area and large landscape scale bushfires occasionally occur. In their original state, woodland communities probably burnt less frequently than shrubland and mallee communities because of the discontinuous fuels on the ground and widely spaced trees, but clearing for mine timber and subsequent fire after harvesting has resulted in regrowth with closer spaced trees and increased ground litter which can carry more fires at greater intensity (DEC, 2010).

Given the bushfire threat in the area, this BMEEP plays a critical role in ensuring that the development of the land appropriately mitigates the risk from bushfire.






3.1 Assessment Inputs


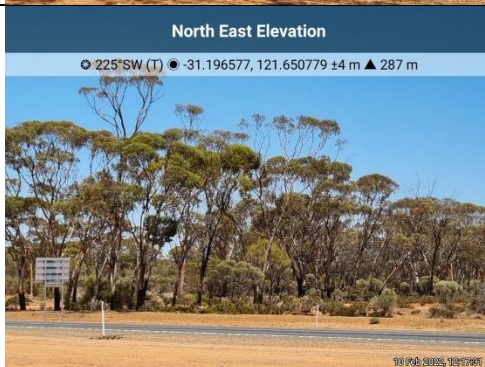



The methodology used to assess the site is outlined in the *Guidelines for Planning in Bushfire Prone Areas V1.4 (2021)*. The Village and bushland areas can be seen in Figure 4 and a BAL Contour Map (Figure 5) is provided in accordance with Appendix 3 of the guidelines. Assessing bushfire hazards at the site-specific level accounts for the predominant class of vegetation on the site and surrounding area for a minimum of 150 m.




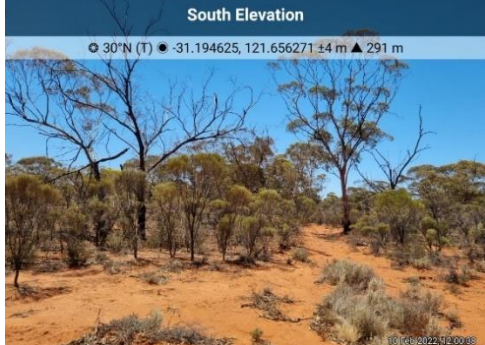

3.1.1 Vegetation Classification



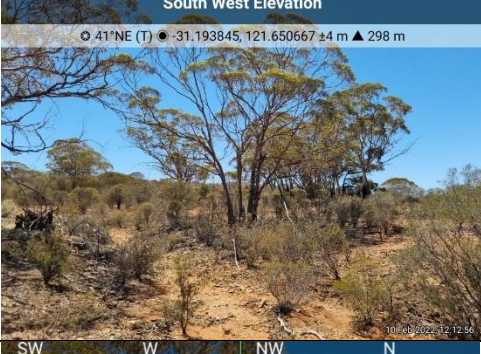


Classified vegetation on the site surrounding the development is in the form of Class B Woodland and Class D Scrub. A small area of Class A forest due to the density of trees and canopy cover. Most of the woodland photos (plots 2 and 3) show areas of mineral earth between trees and shrubs highlighting the patchiness of fine fuels on the ground.




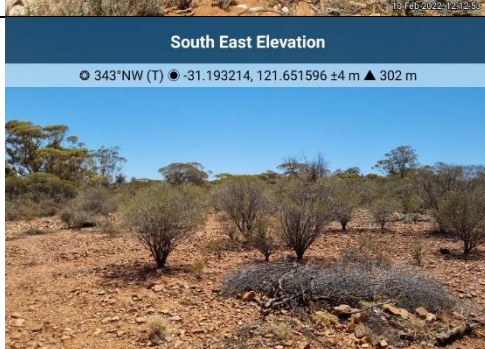

The vegetation plots on and surrounding the site and within 150 metres of the site boundary are found in the plot descriptions below and in Figure 4.

<p>Photo ID: 1</p> <p>Plot Number: 1</p> <p>Vegetation classification or exclusion clause: Class A Forest</p> <p>Description/justification of classification: Overstorey of eucalypt trees to 14m high; 30 – 70% foliage cover with significant accumulated dry fine fuels.</p>	 <p>South Elevation 31°N (T) • -31.197655, 121.652114 ±4 m ▲ 288 m 10 Feb 2022 10:20:51</p>
<p>Photo ID: 2</p> <p>Plot Number: 1</p> <p>Vegetation classification or exclusion clause: Class A Forest</p> <p>Description/justification of classification: Overstorey of eucalypt trees to 14m high; 30 – 70% foliage cover with significant accumulated dry fine fuels.</p>	 <p>255°SW (T) • -31.196444, 121.651618 ±4 m ▲ 288 m 10 Feb 2022 11:23:34</p>
<p>Photo ID: 3</p> <p>Plot Number: 2</p> <p>Vegetation classification or exclusion clause: Class B Woodland</p> <p>Description/justification of classification: 8 metre tall eucalypt trees; 10 – 30% foliage cover with scattered shrubs and some leaf litter under areas of canopy.</p>	 <p>East Elevation 261°W (T) • -31.197258, 121.654582 ±16 m ▲ 295 m 10 Feb 2022 10:25:46</p>
<p>Photo ID: 4</p> <p>Plot Number: 2</p> <p>Vegetation classification or exclusion clause: Class B Woodland</p> <p>Description/justification of classification: 8 metre tall eucalypt trees; 10 – 30% foliage cover with scattered shrubs and some leaf litter under areas of canopy.</p>	 <p>92°E (T) • -31.194657, 121.655822 ±6 m ▲ 291 m 10 Feb 2022 10:40:00</p>
<p>Photo ID: 5</p> <p>Plot Number: 2</p> <p>Vegetation classification or exclusion clause: Class B Woodland</p> <p>Description/justification of classification: 8 metre tall eucalypt trees; 10 – 30% foliage cover with scattered shrubs and some leaf litter under areas of canopy.</p>	 <p>82°E (T) • -31.194585, 121.656294 ±6 m ▲ 292 m 10 Feb 2022 10:41:43</p>


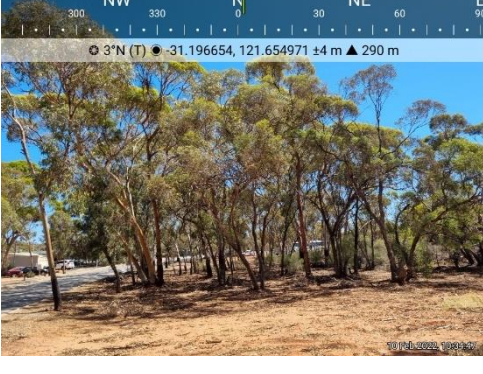
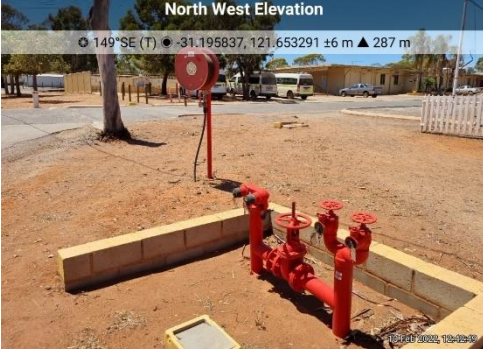

<p>Photo ID: 6</p> <p>Plot Number: 2</p> <p>Vegetation classification or exclusion clause: Class B Woodland</p> <p>Description/justification of classification: 8 metre tall eucalypt trees; 10 – 30% foliage cover with scattered shrubs and some leaf litter under areas of canopy.</p>	 <p>East Elevation 266°W (T) • -31.196577, 121.650779 ±6 m ▲ 287 m 10 Feb 2022, 12:17:59</p>
<p>Photo ID: 7</p> <p>Plot Number: 2</p> <p>Vegetation classification or exclusion clause: Class B Woodland</p> <p>Description/justification of classification: 8 metre tall eucalypt trees; 10 – 30% foliage cover with scattered shrubs and some leaf litter under areas of canopy.</p>	 <p>North East Elevation 225°SW (T) • -31.196577, 121.650779 ±4 m ▲ 287 m 10 Feb 2022, 12:17:59</p>
<p>Photo ID: 8</p> <p>Plot Number: 2</p> <p>Vegetation classification or exclusion clause: Class B Woodland</p> <p>Description/justification of classification: 8 metre tall eucalypt trees; 10 – 30% foliage cover with scattered shrubs and some leaf litter under areas of canopy.</p>	 <p>S 150 180 210 SW 240 270 W 300 NW 229°SW (T) • -31.196926, 121.651882 ±4 m ▲ 286 m 10 Feb 2022, 12:25:59</p>
<p>Photo ID: 9</p> <p>Plot Number: 2</p> <p>Vegetation classification or exclusion clause: Class B Woodland</p> <p>Description/justification of classification: 8 metre tall eucalypt trees; 10 – 30% foliage cover with scattered shrubs and some leaf litter under areas of canopy.</p>	 <p>S 180 210 SW 240 270 W 300 NW 330 260°W (T) • -31.197035, 121.652055 ±4 m ▲ 285 m 10 Feb 2022, 12:26:07</p>
<p>Photo ID: 10</p> <p>Plot Number: 3</p> <p>Vegetation classification or exclusion clause: Class B Woodland</p> <p>Description/justification of classification: Eucalypt trees up to 12 m tall; 10 – 30% foliage cover with scattered shrubs and some leaf litter under areas of canopy.</p>	 <p>North West Elevation 148°SE (T) • -31.197714, 121.653541 ±6 m ▲ 288 m 10 Feb 2022, 12:26:07</p>

<p>Photo ID: 11</p> <p>Plot Number: 3</p> <p>Vegetation classification or exclusion clause: Class B Woodland</p> <p>Description/justification of classification: Eucalypt trees up to 12 m tall; 10 – 30% foliage cover with scattered shrubs and some leaf litter under areas of canopy.</p>	
<p>Photo ID: 12</p> <p>Plot Number: 3</p> <p>Vegetation classification or exclusion clause: Class B Woodland</p> <p>Description/justification of classification: Eucalypt trees up to 12 m tall; 10 – 30% foliage cover with scattered shrubs and some leaf litter under areas of canopy.</p>	
<p>Photo ID: 13</p> <p>Plot Number: 3</p> <p>Vegetation classification or exclusion clause: Class B Woodland</p> <p>Description/justification of classification: Eucalypt trees up to 12 m tall; 10 – 30% foliage cover with scattered shrubs and some leaf litter under areas of canopy.</p>	
<p>Photo ID: 14</p> <p>Plot Number: 3</p> <p>Vegetation classification or exclusion clause: Class B Woodland</p> <p>Description/justification of classification: Eucalypt trees up to 12 m tall; 10 – 30% foliage cover with scattered shrubs and some leaf litter under areas of canopy.</p>	
<p>Photo ID: 15</p> <p>Plot Number: 3</p> <p>Vegetation classification or exclusion clause: Class B Woodland</p> <p>Description/justification of classification: Eucalypt trees up to 12 m tall; 10 – 30% foliage cover with scattered shrubs and some leaf litter under areas of canopy.</p>	

<p>Photo ID: 16</p> <p>Plot Number: 3</p> <p>Vegetation classification or exclusion clause: Class B Woodland</p> <p>Description/justification of classification: Eucalypt trees up to 12 m tall; 10 – 30% foliage cover with scattered shrubs and some leaf litter under areas of canopy.</p>	 <p>South West Elevation</p> <p>43°NE (T) • -31.19325, 121.654551 ±4 m ▲ 296 m</p> <p>10 Feb 2022, 10:03:02</p>
<p>Photo ID: 17</p> <p>Plot Number: 3</p> <p>Vegetation classification or exclusion clause: Class B Woodland</p> <p>Description/justification of classification: Eucalypt trees up to 12 m tall; 10 – 30% foliage cover with scattered shrubs and some leaf litter under areas of canopy.</p>	 <p>East Elevation</p> <p>299°W (T) • -31.194229, 121.650674 ±16 m ▲ 295 m</p> <p>10 Feb 2022, 12:15:12</p>
<p>Photo ID: 18</p> <p>Plot Number: 3</p> <p>Vegetation classification or exclusion clause: Class B Woodland</p> <p>Description/justification of classification: Eucalypt trees up to 12 m tall; 10 – 30% foliage cover with scattered shrubs and some leaf litter under areas of canopy.</p>	 <p>South West Elevation</p> <p>41°NE (T) • -31.193845, 121.650667 ±4 m ▲ 298 m</p> <p>10 Feb 2022, 12:12:56</p>
<p>Photo ID: 19</p> <p>Plot Number: 3</p> <p>Vegetation classification or exclusion clause: Class B Woodland</p> <p>Description/justification of classification: Eucalypt trees up to 12 m tall; 10 – 30% foliage cover with scattered shrubs and some leaf litter under areas of canopy.</p>	 <p>SW 240 W 270 NW 330 N 0</p> <p>294°W (T) • -31.194161, 121.651868 ±4 m ▲ 290 m</p> <p>10 Feb 2022, 11:13:07</p>
<p>Photo ID: 20</p> <p>Plot Number: 3</p> <p>Vegetation classification or exclusion clause: Class B Woodland</p> <p>Description/justification of classification: Eucalypt trees up to 12 m tall; 10 – 30% foliage cover with scattered shrubs and some leaf litter under areas of canopy.</p>	 <p>SW 240 W 270 NW 330 N 0</p> <p>302°W (T) • -31.195159, 121.651586 ±4 m ▲ 288 m</p> <p>10 Feb 2022, 10:05:01</p>

<p>Photo ID: 21</p> <p>Plot Number: 4</p> <p>Vegetation classification or exclusion clause: Class D Scrub</p> <p>Description/justification of classification: Scattered Acacia and Cassia shrubs with areas of mineral earth and grasses.</p>	
<p>Photo ID: 22</p> <p>Plot Number: 4</p> <p>Vegetation classification or exclusion clause: Class D Scrub</p> <p>Description/justification of classification: Scattered Acacia and Cassia shrubs with areas of mineral earth and grasses.</p>	
<p>Photo ID: 23</p> <p>Plot Number: 4</p> <p>Vegetation classification or exclusion clause: Class D Scrub</p> <p>Description/justification of classification: Scattered Acacia and Cassia shrubs with areas of mineral earth and grasses.</p>	
<p>Photo ID: 24</p> <p>Plot Number: 4</p> <p>Vegetation classification or exclusion clause: Class D Scrub</p> <p>Description/justification of classification: Scattered Acacia and Cassia shrubs with areas of mineral earth and grasses.</p>	
<p>Photo ID: 25</p> <p>Plot Number: 5</p> <p>Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2 (f)</p> <p>Description/justification of classification: Low fuel managed areas within the site. Managed in perpetuity with scattered trees and large open spaces with minimal fuels.</p>	

<p>Photo ID: 26</p> <p>Plot Number: 5</p> <p>Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2 (f)</p> <p>Description/justification of classification: Low fuel managed areas within the site. Managed in perpetuity with scattered trees and large open spaces with minimal fuels.</p>	
<p>Photo ID: 27</p> <p>Plot Number: 5</p> <p>Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2 (f)</p> <p>Description/justification of classification: Low fuel managed areas within the site. Managed in perpetuity with scattered trees and large open spaces with minimal fuels.</p>	
<p>Photo ID: 28</p> <p>Plot Number: 5</p> <p>Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2 (f)</p> <p>Description/justification of classification: Low fuel managed areas within the site. Managed in perpetuity with scattered trees and large open spaces with minimal fuels.</p>	
<p>Photo ID: 29</p> <p>Plot Number: 5</p> <p>Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2 (f)</p> <p>Description/justification of classification: Low fuel managed areas within the site. Managed in perpetuity with scattered trees and large open spaces with minimal fuels.</p>	
<p>Photo ID: 30</p> <p>Plot Number: 5</p> <p>Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2 (f)</p> <p>Description/justification of classification: Low fuel managed areas within the site. Managed in perpetuity with scattered trees and large open spaces with minimal fuels.</p>	

<p>Photo ID: 31</p> <p>Plot Number: 5</p> <p>Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2 (f)</p> <p>Description/justification of classification: Currently vegetated but future low fuel managed APZ areas within the site. Managed in perpetuity with scattered trees and large open spaces with minimal fuels.</p>	
<p>Photo ID: 32</p> <p>Plot Number: 5</p> <p>Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2 (f)</p> <p>Description/justification of classification: Currently vegetated but future low fuel managed APZ areas within the site. Managed in perpetuity with scattered trees and large open spaces with minimal fuels.</p>	
<p>Photo ID: 33</p> <p>Plot Number: 6</p> <p>Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2 (e)</p> <p>Description/justification of classification: Driveways, gravel and mineral earth areas fire hydrant infrastructure and minimal fine fuels.</p>	
<p>Photo ID: 34</p> <p>Plot Number: 6</p> <p>Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2 (e)</p> <p>Description/justification of classification: Driveways, gravel and mineral earth areas with minimal fine fuels.</p>	

<p>Photo ID: 35</p> <p>Plot Number: 6</p> <p>Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2 (e)</p> <p>Description/justification of classification: Driveways, gravel and mineral earth areas with minimal fine fuels.</p>	
<p>Photo ID: 36</p> <p>Plot Number: 6</p> <p>Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2 (e)</p> <p>Description/justification of classification: Driveways, gravel and mineral earth areas with minimal fine fuels.</p>	
<p>Photo ID: 37</p> <p>Plot Number: 6</p> <p>Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2 (e)</p> <p>Description/justification of classification: Driveways, gravel and mineral earth areas with minimal fine fuels.</p>	
<p>Photo ID: 38</p> <p>Plot Number: 6</p> <p>Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2 (e)</p> <p>Description/justification of classification: Driveways, gravel and mineral earth areas with minimal fine fuels.</p>	
<p>Photo ID: 39</p> <p>Plot Number: 6</p> <p>Vegetation classification or exclusion clause: Exclusion Clause 2.2.3.2 (e)</p> <p>Description/justification of classification: Driveways, gravel and mineral earth areas with minimal fine fuels.</p>	

3.1.2 Effective Slope

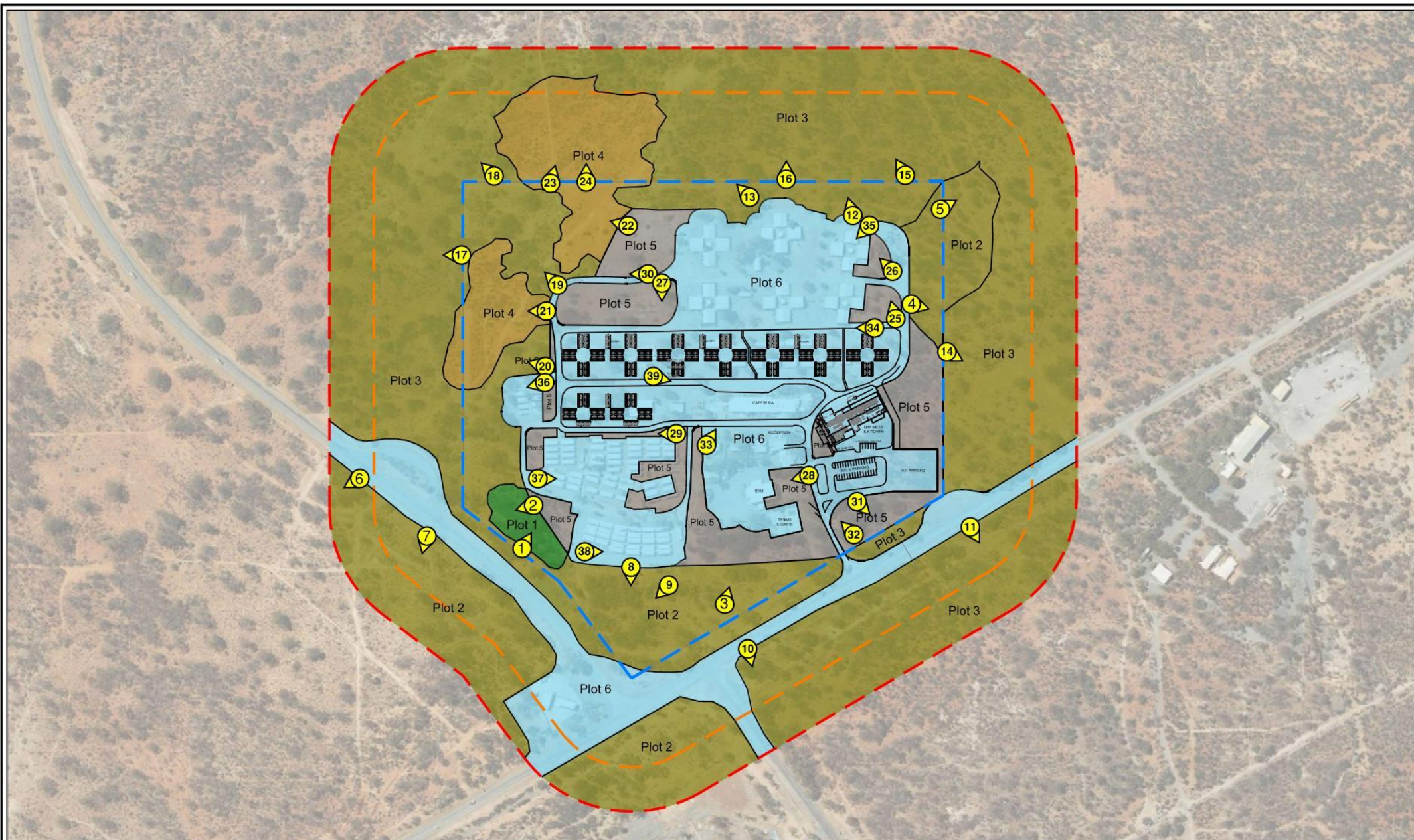
There is a gentle slope averaging 1 degree across the site sloping down towards the south west of the landscape.

Classified vegetation west, north and east of the site is predominantly upslope.

This is outlined in Table 2 and the vegetation plots are mapped in Figure 4.

Table 2. Summary of vegetation type and effective slope

Vegetation Area/ Plot	Applied Vegetation Classification	Effective Slope under the Classified Vegetation (degrees)
1	Class A Forest	Downslope 0 - 5°
2	Class B Woodland	Downslope 0 - 5°
3	Class B Woodland	Flat / upslope
4	Exclusion Clause 2.2.3.2 (e)	N/A
5	Exclusion Clause 2.2.3.2 (f)	N/A



Location details: Durkin Road
Kambalda

Assessment date: February, 2022

Prepared by: Bushfire Safety Consulting

Accreditation level: Level 3 BPAD Practitioner

Accreditation number: BPAD 23160

Accreditation expiry date: 31st January, 2023

Date aerial photo: February 2021

**FIGURE 4 - VEGETATION
CLASSIFICATION MAP
(BAL CONTOUR MAP)**

0 20 40 60 80 100 120 140 160 180m

SCALE 1:4000 @ A3

DATE: MAY 2022

NORTH

LEGEND:

SUBJECT LAND

ASSESSMENT AREA (150m) FROM THE
EXTERNAL BOUNDARY OF THE SUBJECT SITE

ASSESSMENT AREA (100m) FROM THE
EXTERNAL BOUNDARY OF THE SUBJECT SITE

SOURCE OF PHOTOGRAPHY: NEARMAP

PLOT 1 CLASS A FOREST - DOWNSLOPE 0-5

PLOT 2 CLASS B WOODLAND - DOWNSLOPE 0-5

PLOT 3 - CLASS B WOODLAND - FLAT / UPSLOPE

PLOT 4 - CLASS D SCRUB - FLAT / UPSLOPE

PLOT 5 - EXCLUSION CLAUSE 2.2.3.2(f)

PLOT 6 - EXCLUSION CLAUSE 2.2.3.2(e)

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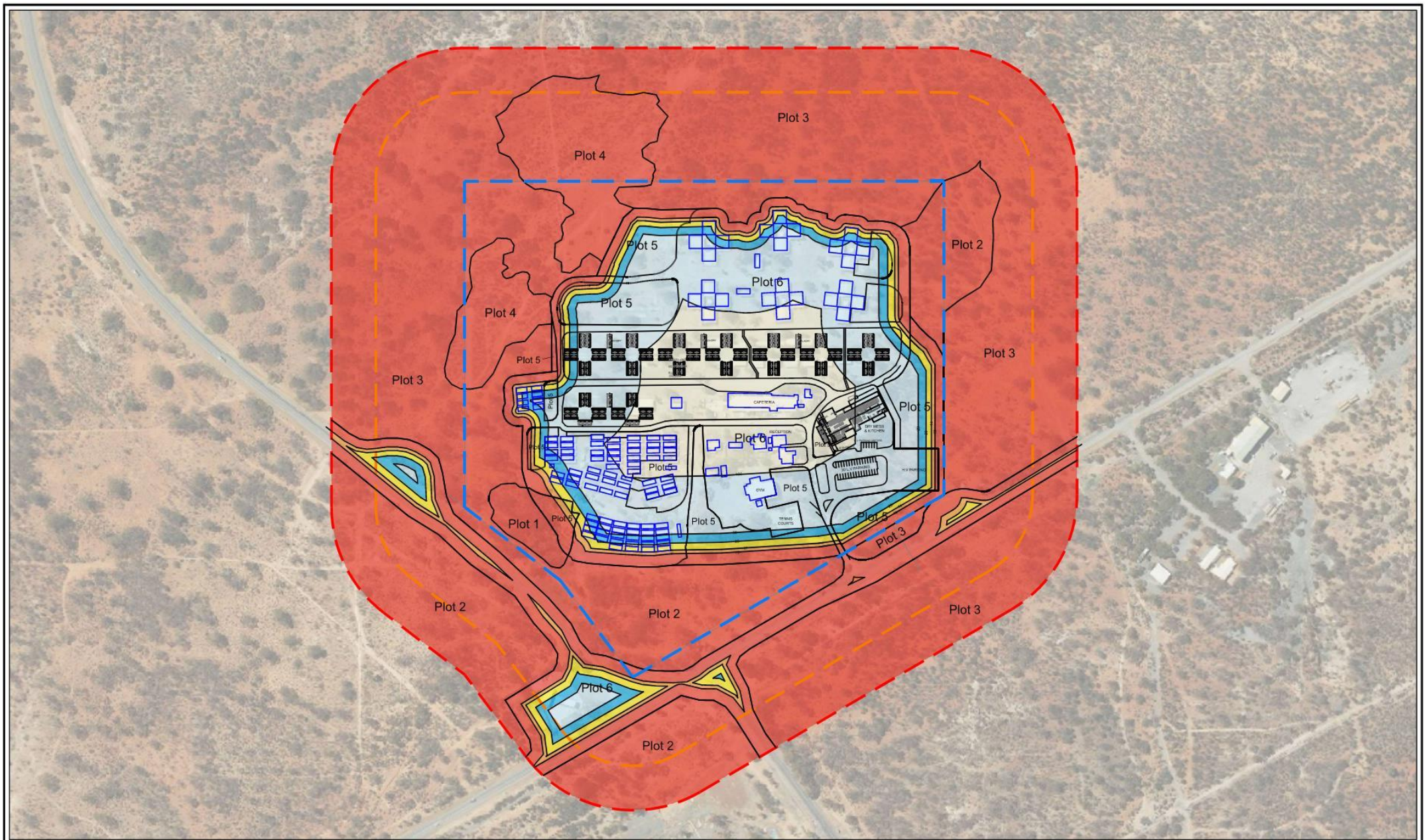
3.2 Assessment Outputs

A BAL contour assessment was undertaken according to Appendix 3 of the Guidelines and the results are found in Figure 5 and Table 3. The method 1 BAL Assessment was undertaken to determine the BAL contours impacting the proposed and existing buildings. The majority of buildings (proposed and existing) are exposed to BAL-12.5 and BAL-LOW. Perimeter buildings on the north, west and south are exposed to BAL-29 and the Dry Mess and Kitchen are exposed to BAL-12.5.

Table 3. Summary of assessment outputs

Perimeter Building	Plot No. & Applied Vegetation Classification	Effective slope	Separation distance to Classified Vegetation	Highest BAL Contour
Dry Mess and Kitchen	Plot 3 Class B Woodland	Flat/Upslope	53.5 metres	BAL-12.5
New Accommodation units – East interface	Plot 2 Class B Woodland	Downslope 0-5	41.5 metres	BAL-12.5
Existing Accommodation units – East interface	Plot 5 Class G Grassland	Downslope 0-5	41.5 metres	BAL-12.5
Existing Accommodation units – North interface	Plot 3 Class B Woodland	Flat/Upslope	14 metres	BAL-29
New Accommodation units – West interface	Plot 3 Class B Woodland	Flat/Upslope	14 metres	BAL-29
Existing Accommodation units – West interface	Plot 3 Class B Woodland	Flat/Upslope	14metres	BAL-29
Existing Accommodation units – South interface	Plot 2 Class B Woodland	Downslope 0-5	17 metres	BAL-29
Gymnasium	Plot 2 Class B Woodland	Downslope 0-5	69.5 metres	BAL-12.5
Reception / Site Office	Plot 2 Class B Woodland	Flat/Upslope	127 metres	BAL-LOW
Existing Cafeteria	Plot 2 Class B Woodland	Downslope 0-5	155 metres	BAL-LOW

Figure 6 outlines the final developed scenario with the new buildings constructed and the landscaped areas around the buildings managed to standards.



Location details: Durkin Road
Kambalda
Assessment date: February, 2022
Prepared by: Bushfire Safety Consulting
Accreditation level: Level 3 BPAD Practitioner
Accreditation number: BPAD 23160
Accreditation expiry date: 31st January, 2023
Date aerial photo: February 2021

**FIGURE 5
BAL CONTOUR MAP**

0 20 40 60 80 100 120 140 160 180m
SCALE 1:4000 @ A3
DATE: MAY 2022



LEGEND:
SUBJECT LAND
ASSESSMENT AREA (150m) FROM THE
EXTERNAL BOUNDARY OF THE SUBJECT SITE
ASSESSMENT AREA (100m) FROM THE
EXTERNAL BOUNDARY OF THE SUBJECT SITE
EXISTING BUILDINGS

SOURCE OF PHOTOGRAPHY: NEARMAP

INDICATIVE BUSHFIRE ATTACK LEVELS

BAL LOW
BAL 12.5
BAL 19
BAL 29
BAL 40
BAL FLAME ZONE

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4 IDENTIFICATION OF BUSHFIRE HAZARD ISSUES

An extreme hazard exists with Class A Forest, Class B Woodland and Class D Scrub vegetation found around the site and in the broader area.

With the management of the Asset Protection Zone, the BAL contour plan highlights the areas of the Village impacted by a potential bushfire. Impact from a fire can come from any direction due to the distribution of classified vegetation around the site.

Understanding this, assists with evacuation planning and the realisation that moving away from bushfire threat involves moving people early in a direction away from the approaching fire front. If this cannot be achieved an internal safer sheltering area is designated as a contingency.

The site could be impacted as outlined in the BAL contour plan. With the area immediately surrounding the proposed buildings managed to low threat standards, the proposed building is exposed to BAL-12.5, while the majority of existing buildings are also exposed to BAL-12.5. A large internal area is exposed to BAL-LOW.

Public Road borders the Village on the south-east and south-west interface and provide ready access for fire-fighting appliances. The existing reticulated water supply and fire hydrant system has been designed to standards for the existing site and future requirements are being assessed.

The Bushfire Emergency Evacuation Plan (BEEP) provides Village management with triggers and actions to implement if the site is ever threatened by a bushfire. Fire threat can come from any direction and sheltering in the identified central area and evacuating in the direction away from a fire threat if safe to do so is a solid strategy outlined in the BEEP in Attachment 1.

5 ASSESSMENT AGAINST THE BUSHFIRE PROTECTION CRITERIA

This report adopts an acceptable solution and performance-based system of control for each bushfire protection criteria. This methodology is consistent with Appendix 4 of the *Guidelines for Planning in Bushfire Prone Areas, Version 1.4 (2021)*. The management issues are:

- Location of the development
- Siting and Design of Development
- Vehicular access.
- Water

Acceptable solutions are proposed for all bushfire protection criteria.

5.1 Compliance Table

Land use planning bushfire risk mitigation strategies are comprehensively detailed in the following sections by providing responses to the performance criteria that fulfil the intent of the bushfire hazard management issues outlined in the *Guidelines for Planning in Bushfire Prone Areas V1.4(2021)*. The compliance checklist is shown in Table 5 and the final scenario is outlined in Figure 6 as a spatial representation of the bushfire management strategies.

5.2 Additional Management Strategies

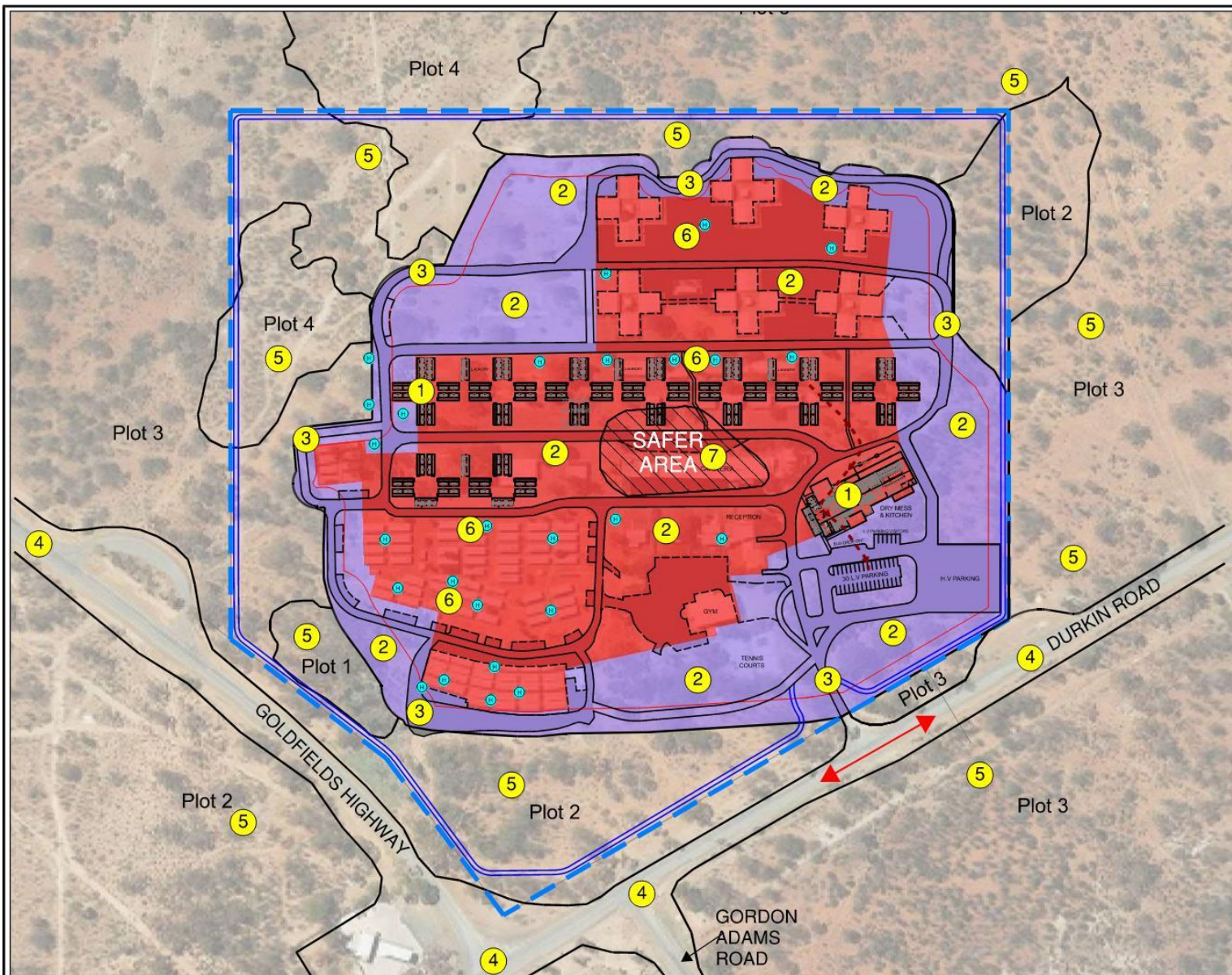
The safest place to be during a bushfire is away from it. Where to go is a crucial element when people are relocating during a time of emergency. The internal relocation of staff, guests and visitors away from areas of bushfire threat during an event is required to ensure the safety of people.

Specific details are provided in the Bushfire Emergency Evacuation Plan (Attachment 1). Safer sheltering options exist centrally on-site if evacuation off site is not achievable. If required external evacuation can be undertaken to the designated evacuation destination which is the shopping precincts at either Kambalda East or Kambalda West.

Table 4: Compliance Table

Bushfire Protection Criteria	Method of compliance	Proposed bushfire management strategies
	Acceptable Solutions	
Element 1: Location	A1.1 Development Location	The Method 1 BAL Assessment outlined in this report demonstrates that the proposed development at the Village achieve BAL-29 and lower, therefore full compliance is achieved. All existing buildings are similarly exposed to a maximum of BAL-29, many buildings are exposed to BAL-12.5 and BAL-LOW.
Element 2: siting and Design	A2.1 Asset Protection Zone (APZ)	A large well established Asset Protection Zone (APZ) in the form of maintained perimeter roads, driveways, mineral earth areas occur around existing Village buildings. An additional APZ is achieved between the new development, perimeter buildings and areas of bushfire threat. The APZ standards (Appendix 1) are achieved.
Element 3: Vehicular Access	A3.1 Public Roads	All surrounding public roads provide access to heavy machinery and mining equipment. They all comply with minimal public road standards (Appendix 2).
	A3.2a Multiple access routes	Access to and from the site is via Durkin Road which is a dual carriage access road providing two access ways. Other public roads nearby include Goldfields Highway and Gordon Adams Road. Multiple access routes are available on these public roads to multiple destinations. Figure 6 shows the immediate access roads.
	A3.2b Emergency access way	The site has a comprehensive internal driveway system and there are no Emergency Access Ways nor is there a requirement for any.

Element 3: Vehicular Access (cont)	A3.3 Through roads	Not applicable
	A3.4a Perimeter roads	The site has an internal driveway system that provides access between all buildings and all bushland areas. This driveway system provides adequate perimeter access. No internal public roads are proposed or required.
	A3.4b Fire services access route	The site has an internal driveway system that provides access between all buildings and all bushland areas. This driveway system provides adequate perimeter access. The site also has a compliant trafficable perimeter firebreak system and there are no Fire Service Access Routes proposed or required.
	A3.5 Battle-axe access legs	Not applicable
	A3.6 Private driveways	There is one main driveway entrance into the Village from Durkin Road, the Dry Mess and kitchen is located 140 metres from Durkin Road. The site has an extensive loop driveway system and perimeter driveway. The driveway system complies with minimum standards (Appendix 2).
Element 4: Water	A4.1 Identification of future water supply	Not applicable
	A4.2 Provision of water for firefighting purposes	<p>Fire services require ready access to an adequate water supply during fire emergencies. The Village has a reticulated water supply and the existing buildings are serviced with multiple hydrants and fire hoses.</p> <p>As required by Regulation 18B (1) of the amended (19 Dec 2012) Building Regulations 2012, the application for the building permit for a Class 2-9 building is required to have plans and specifications of sufficient detail for assessment purposes deposited with DFES. This documentation for the proposed buildings will be provided to DFES for assessment at the building application stage.</p>
Element 5: Vulnerable Tourism Land Uses	A5.1 Siting and Design	Not applicable



REQUIREMENTS

1. The proposed dry mess and kitchen are exposed to BAL-12.5 and the accommodation units are exposed to a maximum BAL-29 due to the existing and proposed Asset Protection Zone (APZ).
2. The Asset Protection Zone (APZ) occupies the entire site and importantly the perimeter to ensure compliant BAL ratings are achieved.
3. The internal driveway complies with minimum standards and provides access around the perimeter of the site and throughout the facilities. Compliant turnarounds and loop access for fire fighting appliances are provided in multiple locations.
4. Surrounding public roads all provide good egress in all directions.
5. The Class A Forest, Class B Woodland and Class D Scrub vegetation around the site poses the greatest threat from bushfire.
6. The area is provided with a reticulated water supply. Fire hydrants and Fire hoses are located throughout the Village and the proposed buildings will comply with the standards.
7. Design fire modelling and a 1 in 200 return period Fire Danger Index has determined the central area is exposed to less than 2kW/m2 in the event of a fire with FFDI 160. This area is 0.55 ha in size and can accommodate all guests and staff if required to shelter from life threatening radiant heat.

LEGEND:

SUBJECT LAND

BAL-29 / BAL 40 INTERSECTION

PERIMETER ASSET PROTECTION ZONE - TO ACHIEVE BAL-29 AND LOWER

INTERNAL ASSET PROTECTION ZONE - TO ENSURE LOCALISED FLAME CONTACT DOES NOT OCCUR ON STRUCTURES

INTERNAL DRIVEWAY SYSTEM

CARPARKING AREAS

PERIMETER FIREBREAK

FIRE HYDRANT & HOSE REELS

SAFER AREA

0.5ha SAFER AREA - EXPOSED TO <2kW/M2 WITH 1 IN 200 RETURN PERIOD FIRE EVENT

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0 20 40 60 80 100 120 140m

SCALE 1:3000 @ A3
DATE: MAY 2022



Location details: Durkin Road
Kambalda
Assessment date: February, 2022
Prepared by: Bushfire Safety Consulting
Accreditation level: Level 3 BPAD Practitioner
Accreditation number: BPAD 23160
Accreditation expiry date: 31st January, 2023
Date aerial photo: February 2021

FIGURE 6 - SPATIAL REPRESENTATION OF BUSHFIRE MANAGEMENT STRATEGIES

6 RESPONSIBILITIES FOR IMPLEMENTATION AND MANAGEMENT OF THE BUSHFIRE MEASURES

Table 6 outlines the initial and ongoing responsibilities, actions and associated works that need to be undertaken by site management. The check boxes for implementation actions will be used by Village managers. A Bushfire Planning Practitioner will certify that the necessary implementation action has been completed.

Table 5. Responsibility for bushfire measures

VILLAGE SITE – PRIOR TO OCCUPATION OF THE BUILDINGS		
No.	Implementation Action	DA Clearance
1	Establish and maintain the APZ to standards outlined in Appendix 1 and certify the BAL Rating at building licence stage	<input type="checkbox"/>
2	Make a copy of this BMEEP available to the facility management and staff.	
3	It is recommended the new buildings are constructed to AS 3959:2018 standards.	
4	As required by Regulation 18B (1) of the amended (19 Dec 2012) Building Regulations 2012, the application for the building permit for a Class 2-9 building is required to have plans and specifications of sufficient detail for assessment purposes deposited with DFES. This documentation will be provided to DFES for assessment at this stage.	
VILLAGE SITE MANAGEMENT – ONGOING MANAGEMENT		
5	Annually review the Bushfire Emergency Evacuation Plan	
6	Maintain the Asset Protection Zone (APZ) to standards stated in this BMEEP (Appendix 1).	
7	Ensure the site complies with the Shire of Coolgardie's Fire Control Notice as published (Appendix 3).	
8	If buildings are subject to additional construction in the future, AS 3959:2018 compliance is recommended.	
SHIRE OF COOLGARDIE – ONGOING MANAGEMENT		
9	Maintain public roads to appropriate standards and ensure compliance with the Shire of Coolgardie's Fire Control Notice.	
10	Provide fire prevention and preparedness advice to the landowners upon request, including the Shire of Coolgardie's Fire Control Notice.	

Certification by Bushfire Consultant

I _____ certify that at the time of inspection, the BAL rating contained within this BMEEP is correct; and implementation Action 1 has been undertaken in accordance with the BMEEP.

Signature: _____

Date: _____

7 CONCLUSION

This Plan provides acceptable solutions and responses to the performance criteria that fulfil the intent of the bushfire hazard management issues outlined in the Guidelines for Planning in Bushfire Prone Areas (WAPC 2021 V1.4). However, community bushfire safety is a shared responsibility between governments, fire agencies, communities and individuals.

The proposed buildings are located in a bushfire prone area (i.e. within 100m of classified vegetation) and risk is reduced via compliance with *AS3959:2018* standards which is recommended. BAL-29 is not exceeded, an APZ will surround the new and existing buildings and be maintained in perpetuity.

Multiple access options and fire hydrant requirements for fire-fighting are met. The proposed development will fall within the acceptable level of risk.

8 REFERENCES

Department of Environment and Conservation (2010) A Biodiversity and Cultural Conservation Strategy for the Great Western Woodlands. Internal Report.

Standards Australia. 2018. Construction of buildings in bushfire-prone areas (Amendments 1-3), AS 3959-2018, Standards Australia International Ltd, Sydney.

Western Australian Planning Commission (WAPC). 2015b. State Planning Policy No. 3.7: planning in Bushfire Prone Areas (SPP3.7). December 2015. Western Australian Planning Commission and Department of Planning WA, Government of Western Australia.

Western Australian Planning Commission (WAPC). 2021. Guidelines for Planning in Bushfire Prone Areas. December 2021 V1.4. Western Australian Planning Commission and Department of Planning WA, Government of Western Australia.



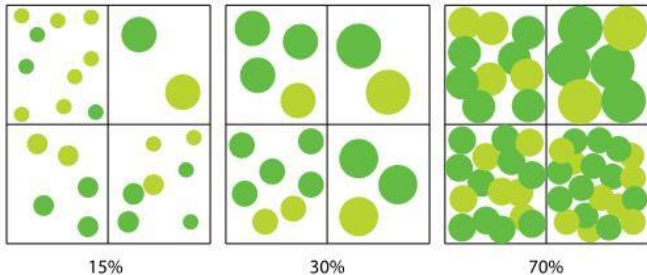
APPENDICES

Appendix 1: Asset Protection Zone Standards

Appendix 2: Vehicular Access Technical Requirements

Appendix 3: Shire of Coolgardie – Firebreak Notice 2021/22

Appendix 1: Asset Protection Zone Standards

SCHEDULE 1: STANDARDS FOR ASSET PROTECTION ZONES	
OBJECT	REQUIREMENT
Fences within the APZ	<ul style="list-style-type: none"> Should be constructed from non-combustible materials (for example, iron, brick, limestone, metal post and wire, or bushfire-resisting timber referenced in Appendix F of AS 3959).
Fine fuel load (Combustible, dead vegetation matter <6 millimetres in thickness)	<ul style="list-style-type: none"> Should be managed and removed on a regular basis to maintain a low threat state. Should be maintained at <2 tonnes per hectare (on average). Mulches should be non-combustible such as stone, gravel or crushed mineral earth or wood mulch >6 millimetres in thickness.
Trees* (>6 metres in height)	<ul style="list-style-type: none"> Trunks at maturity should be a minimum distance of six metres from all elevations of the building. Branches at maturity should not touch or overhang a building or powerline. Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation. Canopy cover within the APZ should be <15 per cent of the total APZ area. Tree canopies at maturity should be at least five metres apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided that the total canopy cover within the APZ will not exceed 15 per cent and are not connected to the tree canopy outside the APZ. <p>Figure 19: Tree canopy cover – ranging from 15 to 70 per cent at maturity</p>  <p>15% 30% 70%</p>
Shrub* and scrub* (0.5 metres to six metres in height). Shrub and scrub >6 metres in height are to be treated as trees.	<ul style="list-style-type: none"> Should not be located under trees or within three metres of buildings. Should not be planted in clumps >5 square metres in area. Clumps should be separated from each other and any exposed window or door by at least 10 metres.
Ground covers* (<0.5 metres in height. Ground covers >0.5 metres in height are to be treated as shrubs)	<ul style="list-style-type: none"> Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above. Can be located within two metres of a structure, but three metres from windows or doors if >100 millimetres in height.

Appendix 2: Vehicular Access Technical Requirements

Table 6: Vehicular access technical requirements

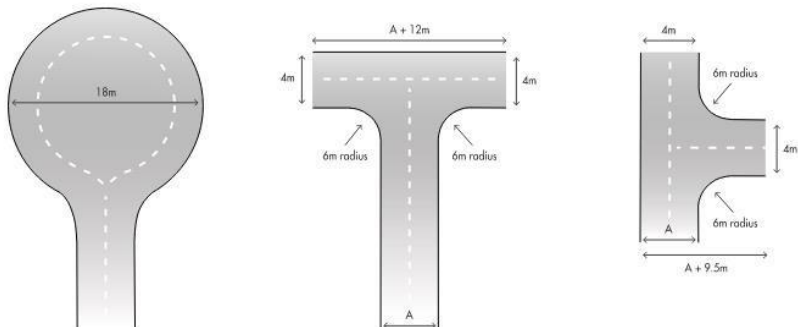
TECHNICAL REQUIREMENTS	1 Public roads	2 Emergency access way ¹	3 Fire service access route ¹	4 Battle-axe and private driveways ²
Minimum trafficable surface (metres)	In accordance with A3.1	6	6	4
Minimum horizontal clearance (metres)	N/A	6	6	6
Minimum vertical clearance (metres)	4.5			
Minimum weight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

Notes:

¹ To have crossfalls between 3 and 6%.

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

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



Appendix 3: City of Armadale – Firebreak Notice

Fire Hazard Reduction Notice

In accordance with Section 33 of the Bush Fire Act 1954
Land OVER 2000sqm



Firebreak of at least 3m in width to be installed and cleared of all flammable material immediately inside and along the land boundaries by 1st November and be maintained up to, and including, the 31st day of March.

Additional Firebreaks to be installed and cleared immediately around buildings that are on that land.

Flammable Material includes:

- Dead/Dry/Overgrown Grass & Weeds
- Leaf Litter build-up
- Dead/Dry Timber or Trees
- Stockpiles of Boxes/Cartons/Paper
- Any other material likely to catch fire & burn
- Any other thing deemed by an Authorised Officer to be capable of combustion

"Flammable material"

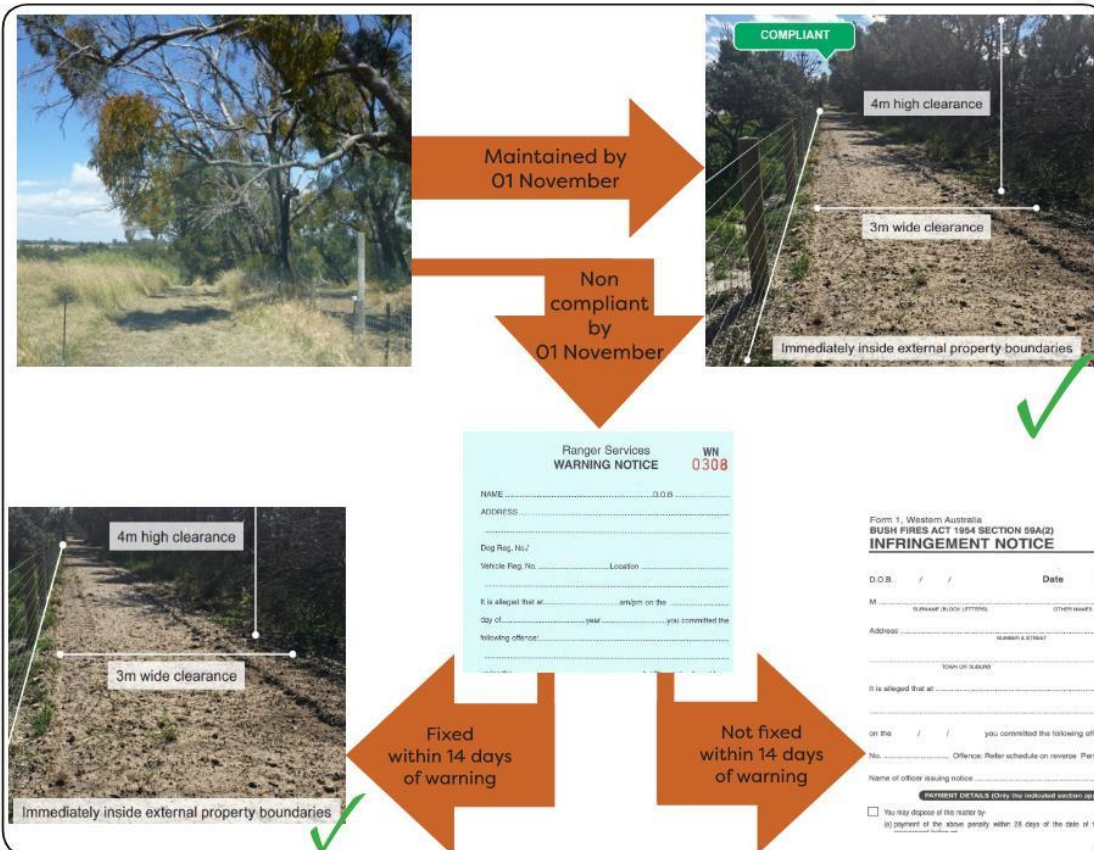
Does not include green growing trees or green growing plants in gardens. It also does not include plants native to the region that are fire resistant e.g. Saltbush shrubs.

Failure to comply with the Shire's Fire Hazard Reduction Notice is an offence under the Bush Fires Act 1954 and may result in a penalty of up to \$5000, plus additional contractor and administration costs to carry out fire prevention works on your property.

Fire Restrictions

Date	Permitted / Not Permitted
1 May - 30 September	No permit required (Restrictions still apply)
1 October - 31 October	Permit Required
1 November - 31 March	All burning Prohibited
1 April - 30 April	Permit Required

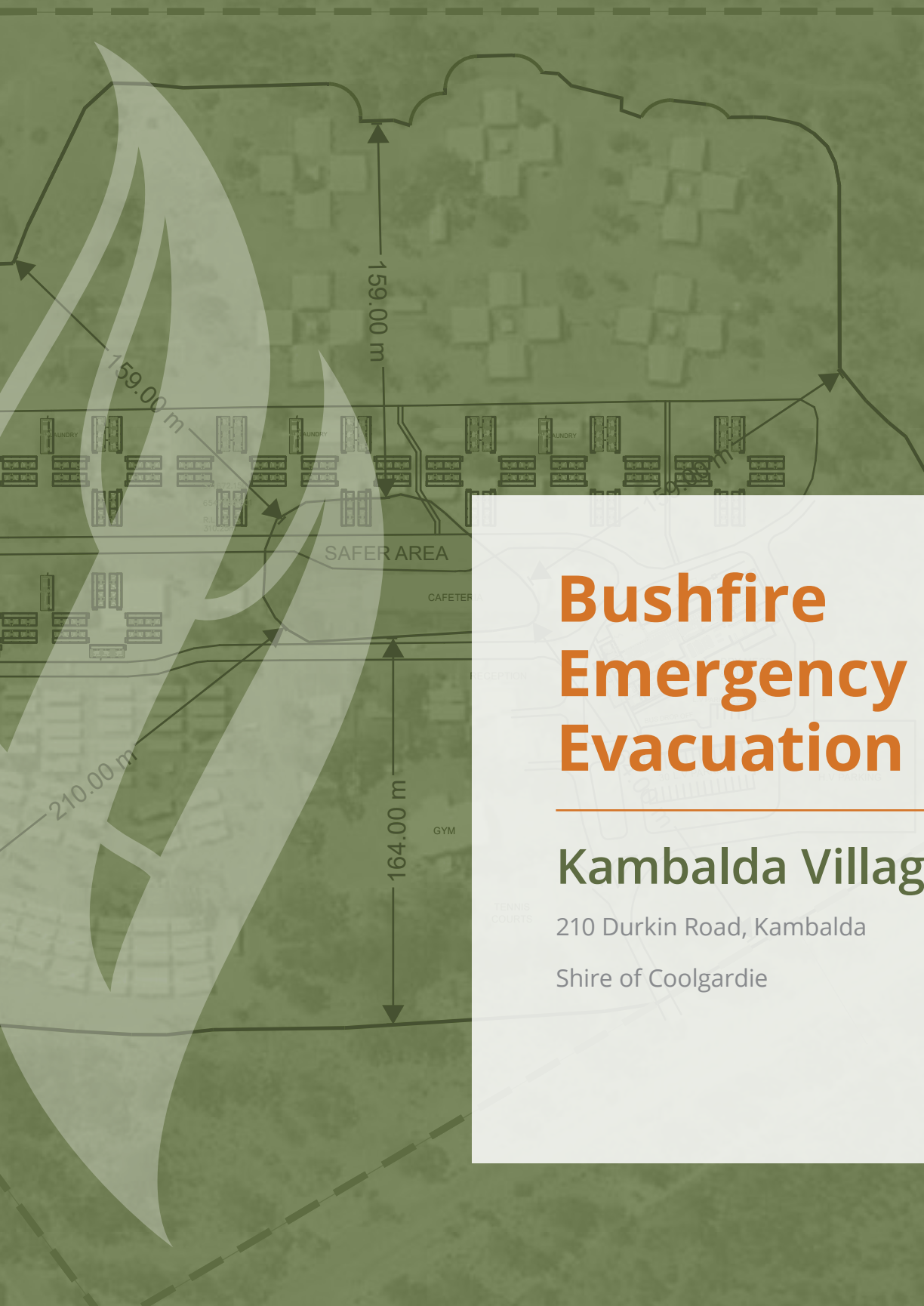
Images Sourced from google





ATTACHMENTS

Attachment 1: Bushfire Emergency Evacuation Plan



Bushfire Emergency Evacuation Plan

Kambalda Village

210 Durkin Road, Kambalda

Shire of Coolgardie

Site Details

Name of Facility	Kambalda Village		
Address	210 Durkin Road, Kambalda WA 6442		
Prepared by (Practitioner)	Rohan Carboon BPAD Level 3 – 23160		
Owner/operator	Compass Group		
Date	10/06/2022	Plan Version	2.0

Document Control

VERSION	DATE	DETAILS	UNDERTAKEN BY
V1	7/05/2022	Draft for review	Rohan Carboon BPAD Level 3 – 23160
V2	10/06/2022	Final for submission	Rohan Carboon BPAD Level 3 – 23160

Emergency Management Team

TITLE	POSITION/ NAME	CONTACT DETAILS
Chief Warden	Site Manager Peter Rodgers	9027 1696 0421 337 690
Deputy Chief Warden	Emergency Response Coordinator name	TBA
Communications Officer	Name	TBA
Additional Wardens	Emergency Response Team Members Names ? First Aid Officer Name	TBA

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Appendix 6: Bushfire Emergency Evacuation Plan Assessment

1. Facility Details

This plan has been designed to assist Kambalda Village management to protect life in the event of a bushfire. It outlines procedures for both **shelter-in-place** and **evacuation** to enhance the protection of guests and staff from the threat of a bushfire.

The primary action to follow in a bushfire emergency is to Evacuate to a safe location if it is assessed as being safe to do so.

In the event that the risk associated with evacuation is assessed as being greater than the risk of sheltering, the alternative action to follow in a bushfire emergency will be to shelter in place in the on-site Safer Location.

Name of on-site contact person	Peter Rodgers
Position/ role of contact person	Current Chief Fire Warden
Phone number of contact person	9027 1696 0421 337 690
Type of facility	Workplace accommodation facility
Number of buildings	222 buildings.
Number of staff:	The number of staff and contractors is fluid. It is estimated total of 10
Total number of Guests:	The number of guests fluctuates depending on the time of day, whether people are at work sites or not and the work rosters of adjacent mining operations. Up to 700 people can be accommodated.
Number of Staff/ guests with support needs:	Some guests may require some assistance to respond to an emergency. Some guest will be self-driving, others may be transported to and from worksites in buses. The number of guests with medical conditions is likely to fluctuate and we still currently have covid impacting the movement of people.
Description of support needs	<p>Guests will need direction and advice from the park managers in order to respond to a bushfire emergency. A coordinated response by park management will result in a better outcome, with decisions being centrally made with advice from DFES (if available) and decision made about evacuation or sheltering on-site. Triggers to evacuate or stay on-site and shelter in the Safer Area is the most important risk mitigation strategy in this plan.</p> <p>Organising transport is also best coordinated by the park managers so the movement of people off -site to the evacuation areas can be undertaken in a safe manner and avoided if the fire threat on the roads exceeds the safer response by sheltering on-site.</p>

2. Responsibilities

Table 1 - Responsibility for implementing the emergency procedures in the event of a bushfire.

Area of Responsibility	Name of Staff Member/s	Staff Position/ Identification Item	Responsibilities	Mobile Phone Number
Chief Warden	Peter Rodgers	White Helmet	<ul style="list-style-type: none"> • Monitor the Fire Danger Rating daily and if there is a fire danger rating of Very High or greater, ensure appropriate bushfire monitoring procedures are in place (see Table 4); • Should a bushfire be identified, shelter in place and then evaluate the need to evacuate or using Bushfire Response Decision Making Process Flowchart and Poster (Appendix 1). See Table 2 for Emergency Contact numbers; • Initiate evacuation or sheltering in place procedures as required; • Advise authorities that an evacuation or shelter in place is underway, including DFES, Police, and Shire of Coolgardie Ranger Services (see Table 2 for Emergency Contact numbers). Maintain communication with emergency services; • Consider requirements of guests with high needs, such as those that are less mobile or are asthmatic; • Ensure shelter in place actions are implemented by Zone Wardens and available staff members if required (see Table 7.2); • Document the circumstances of the emergency, processes and outcome. 	TBA

Deputy Wardens	?	White Helmet White Helmet Red Helmet Red Helmet Red Helmet	<ul style="list-style-type: none"> • Assist Chief Warden. Liaise between Chief Warden, Zone Wardens and other staff members; • Ensure all buildings are cleared and locked down in event of bushfire close to the Village; • Ensure all guests are accounted for and follow up on missing guests; • Enact shelter in place actions if required (see Table 7.2); 	TBA
Administration Officer	?	Administration Officers	<ul style="list-style-type: none"> • Monitor the Fire Danger Rating daily and if there is a fire danger rating of Very High or greater, advise the Chief Warden; • Manage emergency communications as directed by the Chief Warden i.e. sirens, phone calls, etc., • Print Guest Roll, give with emergency pack to Administration Officer; • Record all phones calls to emergency services (Fire, Police, Ambulance); • Direct all enquiries from emergency services to Chief Warden. 	TBA

Zone Wardens	?	Grounds Staff	<ul style="list-style-type: none"> • Take and use handheld UHF radio – Channel 1; • Take direction from and carry out tasks allocated by the Chief Warden or Deputy Wardens; • Ensure all guests, visitors and staff are evacuated from all rooms, toilets, storage areas, etc., and ensure everyone makes it to the assembly area; • Maintain communication with, and update Deputy Warden/s or Chief Warden with situation reports; • Provide situational information to staff, guests and visitors; • Actively defend immediate surrounds if required when sheltering in place (see Table 6 for shelter in place required actions); • Once emergency threat or event has passed and all clear from DFES given, unlock all buildings and facilitate return of guests back to rooms; • Contributing to debriefing. • Coordinating traffic flows on the Village grounds during a bushfire event. • Ensuring an orderly evacuation away from the site if the decision is made by emergency services to evacuate the Village. • Managing the access and placement of Zone Wardens and staff to co-ordinate vehicles to safely leave the Village during an evacuation if required. 	TBA
First Aid Officers	TBC	Health Centre Nurse	<ul style="list-style-type: none"> • Obtain first aid kit from office; • Evaluate any injuries or conditions requiring first aid assistance; • Administer first aid if safe to do so; • Assess if those requiring further medical assistance can be evacuated safely and coordinate if so. 	TBA

3. Emergency Contacts

Table 2 – Emergency Contacts in the event of a bushfire.

Name or Organisation	Office/ Contact	Contact Details
Fire, Police, Ambulance	Fire or Emergency	000
DFES Kalgoorlie	Fire	(08) 9026 4100
Kambalda Police	Emergency	(08) 9028 3200
Coolgardie Police	Emergency	(08) 9093 8400
Department of Fire & Emergency Services (DFES)	Emergency Information	13 DFES (13 33 37) and 9395 9300
EmergencyWA	Warnings and Incidents	www.emergency.wa.gov.au
City of Coolgardie	Incl. After Hours	(08) 9080 2111
Local Hospitals / health centres	Kalgoorlie Health Campus	(08) 9080 5888
	Coolgardie Health Centre	(08) 9025 0200
	St John General Practice	(08) 9027 0029
	- Kambalda	
SES	State Emergency Service	132 500
Water	Water Corporation	13 13 75
Gas	ATCO Gas Australia	13 13 52
Electricity – Western Power	Western Power	13 13 51
Main Roads WA	Road Conditions	138 138

4. Preparation

The bushfire season in the Shire of Coolgardie is usually between **October 1 through to 31st March**; each year, but it can extend beyond this in dry years. Table 3 lists the bushfire preparedness actions that must be undertaken throughout the year, including ongoing, just prior and during the bushfire season.

Table 3 – Bushfire preparedness actions to be undertaken

Actions	Frequency	Responsible Person
Ongoing		
<ol style="list-style-type: none"> 1. All Wardens, Staff and other responsible contractors working at the Village should be informed of and trained in relation to all information contained in this document; individual roles and responsibilities; access and egress routes; assembly point location; and written shelter in place and evacuation procedures. 2. Fire-fighting equipment and water supply infrastructure, including smoke detectors and hand held fire hydrants, to be checked and maintained regularly according to servicing schedules. 3. Ensure no modifications or alterations that may affect BAL ratings are made to the buildings, or structures without prior development approval and Bushfire Management Plan revision. 	As required	Chief Warden - Peter Rodgers
To be completed just prior to the bushfire season each year (October 1)		
<ol style="list-style-type: none"> 1. Practice shelter in place and initial evacuation procedures, including use of communication devices and procedures and EMT Identification Items. Staff briefing should occur prior to each such drill and a debriefing should follow any drill to discuss any issues regarding the implementation of the plan. 2. Review and revise (if required) plan annually prior to bushfire season, including Emergency Management Team members and contact details, as well as emergency contact numbers. In addition, revision of procedures should occur 	Annually	Chief Warden - Peter Rodgers

<p>following any bushfire in the area and/ or after an evacuation. Ensure Evacuation Diagram is clearly displayed at reception.</p> <p>3. Ensure Asset Protection Zone (APZ) is established and maintained according to the standards outlined in the Bushfire Management Plan, and that compliance with the Shire of Coolgardie Fire Hazard Reduction Notice is achieved.</p>		
To be completed during the bushfire season between 30th November through to 31st March		
<p>1. Ensure that APZ is maintained to the standards outlined in the Bushfire Management Plan. Regularly remove leaf and twig materials that collect in gutters or against buildings.</p> <p>2. Ensure buildings are maintained by repairing or sealing any gaps greater than 2mm that form.</p> <p>3. Ensure monitoring for bushfires is carried out on days with Fire Danger Rating of Very High, Severe, Extreme OR Catastrophic in accordance with Section 5 (see Table 4).</p>	Ongoing	Chief Warden – Peter Rodgers

5. Awareness and Pre-emptive Procedures

Table 4 outlines actions to be undertaken to ensure the Village maintains situational awareness of a possible bushfire approaching and pre-emptive procedures. This will assist with the assessment of the bushfire situation and whether the triggers identified in the evacuation/ sheltering-in-place procedures have occurred. Appendix 2 provides more information on the Fire Danger Rating system.

Table 4 – Bushfire awareness and pre-emptive procedures to be undertaken

Actions	Predicted Fire Behaviour	Responsible Person
Days forecast Low, Moderate or High		
No specific monitoring required, but staff alert for any signs of smoke.	Fire likely to be controlled, but possibly unpredictable and hard to control if windy.	Administration Officer Chief Warden Safety Systems Officer
Days forecast Very High		
No specific monitoring required, but all staff and particularly grounds staff are alert for any signs of smoke in the environment.	Hot, dry and possibly windy conditions, fire may be hard to control.	Administration Officer Chief Warden Safety Systems Officer
Days forecast Severe, Extreme or Catastrophic		
<ol style="list-style-type: none"> 1. Monitor Websites every 30 minutes; 2. Monitor ABC Radio during broadcasts at 15 minutes before and after the hour; 3. Assess for smoke by walking around the Village observing the surroundings every hour. 	Very hot, dry and windy conditions, fire will be unpredictable, move very fast and be difficult for firefighters to bring under control. Spot fires will start and move quickly. Embers may come from many directions. Buildings are generally not designed or built to withstand a fire in these conditions. Usually a Total Fire Ban is declared	Administration Officer Chief Warden Safety Systems Officer

6. Emergency Response

The primary action to follow with an imminent bushfire threat is to Evacuate to a Safer Area if it is safe to do so and sufficient vehicles are on-site to achieve this action. The Village grounds are extensive and there is a suitable areas for sheltering on site in the designated “Safer Place”. Late evacuation is very dangerous, the threat to lives while travelling on roads is extreme during a bushfire and should never be attempted.

6.1 Shelter in Place

The designated Bushfire Sheltering Area is the central zone in the middle of the village area and includes the area show in Figure 1. The Shelter in place procedures are outlined in Table 5.

The trigger to shelter in place is an assessment by the Chief Warden and may involve consultation with Emergency Services, that a bushfire is likely to impact the school buildings and immediate action is required. A Sheltering Area has been identified as suitable after a detailed fire weather analysis and is based on a 1 in 200 return fire weather event.

Design bushfire modelling has been undertaken to assess life safety potential within the Village from a surrounding bushfire event. The fire model used a flame temperature of 1200°K to ensure life safety for people sheltering on-site and demonstrates that the designated central area is exposed to radiant heat of less than 2kw/m² (see Appendix 6). Table 5 shows the procedures that should be implemented once the decision to shelter in place has been activated.

Table 5 – Shelter in Place Procedure

Action	Responsible Person/s
1. If not already consulted, advise emergency authorities of the decision to shelter in place using contact numbers in Table 2 (see Appendix 4 for details to be provided);	Chief Warden
2. Calmly notify staff and guests of the decision to shelter in place. All guests and staff to assemble at Safer Place in the middle of the Village site (see Figure 1);	Deputy Chief Warden/ Area Wardens
3. Ensure that all guests and staff have moved to the safer area and are accounted for;	Deputy Chief Warden/ Area Wardens
4. Be prepared when sheltering to experience smoke, heat and embers.	All Staff Members
5. Keep alert for any embers that could start fires in buildings or immediate garden areas surrounding the Safer Place. Extinguish embers using fire extinguishers under the direction of the Chief Fire Warden. Alert authorities if any local ember fire cannot be extinguished;	All Staff Members
6. Monitor guests wellbeing and respond as appropriate. Ensure everyone is well hydrated and as cool as possible.	All Staff Members
7. Stay in the Bushfire Safer Area until advised by DFES or Police that the fire is no longer a threat or until evacuated off-site with assistance from Emergency Services.	Chief Warden

6.2 Evacuation

The key to a safe relocation and evacuation is to ensure it is undertaken well before the fire front is adjacent to the site and while evacuation routes are not threatened. Evacuation away from the site on buses and private or work vehicles can be undertaken safely if the fire front is clearly a safe distance from the Village. Relocating to the central safer place during a fire event is easily achieved as people will be moving away from the vegetation and bushfire hazard. There may be smoke experienced by people in the safer place, but the radiant heat flux levels are lowest in this area. Evacuating off site will be in buses and other vehicles to either sports oval areas on the public roads still has hazards because the route taken could be impacted by a large landscape scale bushfire. If in doubt about the whereabouts of the fire front(s) and the safety of travelling on the roads, the internal relocation to the safer place of guests and staff should be the initial response to ensure the safety and well-being of people before any evacuation off site.

Table 6 shows the procedures that should be implemented in the unlikely event that a decision to evacuate has been made.

The following are triggers for evacuation:

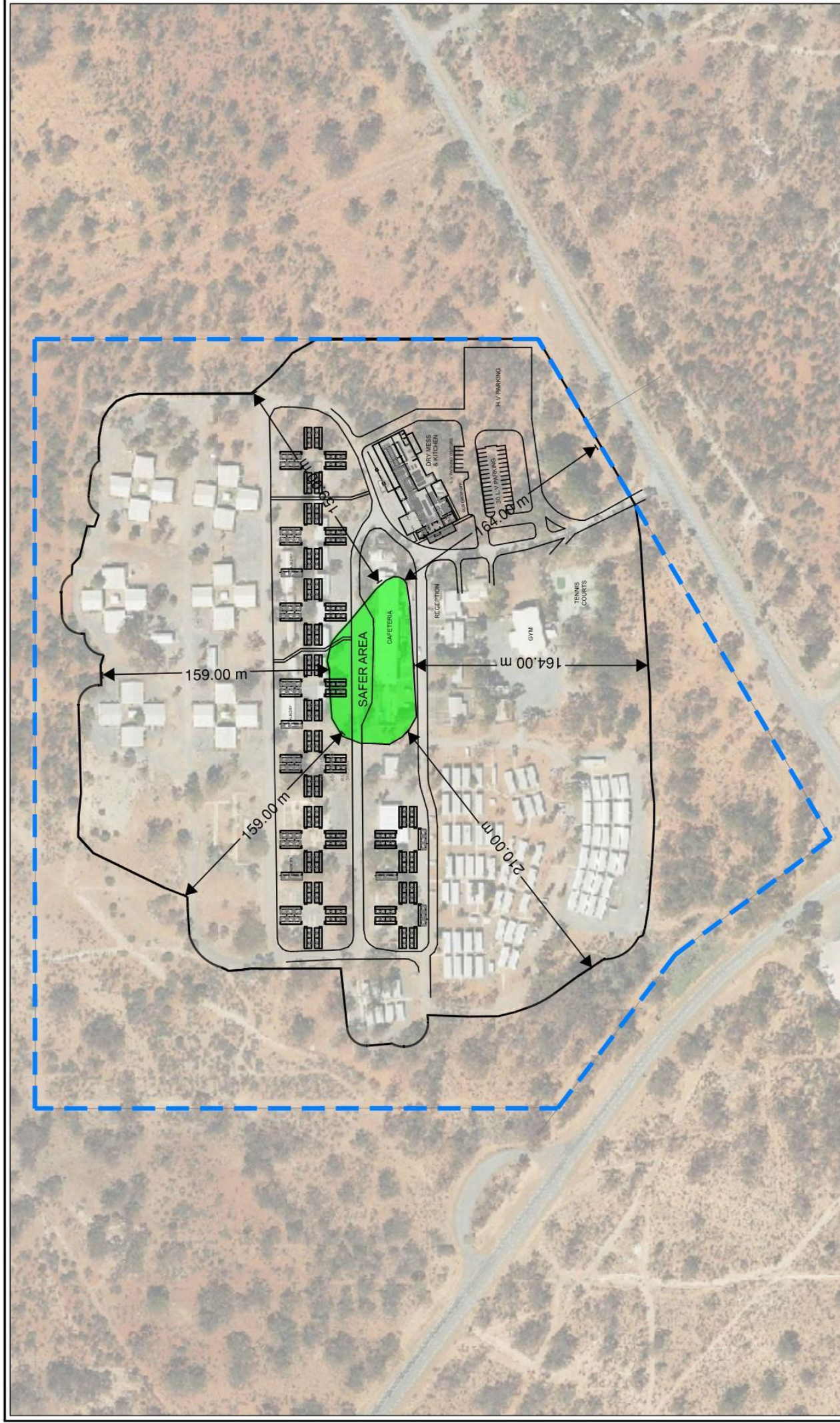
- Receipt of an official warning to evacuate from the emergency authorities. Details of official warning levels are provided in Appendix 3. These official warnings, however, must be assessed against the local conditions and needs of guests and staff before evacuation is undertaken and therefore advice should also be sought directly from emergency services.
- When it is judged by the Chief Warden, using the tools provided in this document, that a bushfire could impact the site and evacuation is safer than to shelter in place (see Bushfire Assessment Flowchart and Poster).

Table 6 – Evacuation Procedure

Action	Responsible Person/s
1. In consultation with emergency services, decide whether evacuation off site is required,, a safe route and organise buses and vehicles for all guests and staff;	Chief Warden/ Principal
2. Calmly notify all guests and staff that a bushfire evacuation is underway.	Deputy Chief Warden/ Area Wardens
3. Collect any required documentation including guest details, emergency contact details, and visitor's registrations;	Administration Officer/ Deputy Chief Warden
4. Ensure the site is completely evacuated before the site is secured;	Deputy Chief Warden/ Area Wardens
5. Evacuate away from the threat to either sports oval in East or west Kambalda or other designated Evacuation Centre.	Chief Warden

7.3 Recovery

When notified of all clear by Emergency Services, assess if there is any damage to the Village buildings and facilities. Do not resume use of the site buildings and grounds until DFES has determined that it is safe to do so. Continue to monitor the buildings and grounds for any sign of fire for up to 48 hours after the bushfire incident. A review of this Bushfire Emergency Evacuation Plan, including the response of the staff and guests, should be undertaken following any bushfire in the area and/or after an evacuation.



Location details:

Durkin Road
Kambalda

Assessment date:
February, 2022

Prepared by:
Bushfire Safety Consulting

Accreditation level:
Level 3 BPAD Practitioner

Accreditation number:
BPAD 23160

Accreditation expiry date:
31st January, 2023

Date aerial photo:
February 2021

FIGURE 1
BUSHFIRE SAFER AREA

LEGEND:
SUBJECT LAND



SCALE 1:2500 @ A3
DATE: MAY 2022



SOURCE OF PHOTOGRAPHY: NEARMAP



bushfire safety
CONSULTING

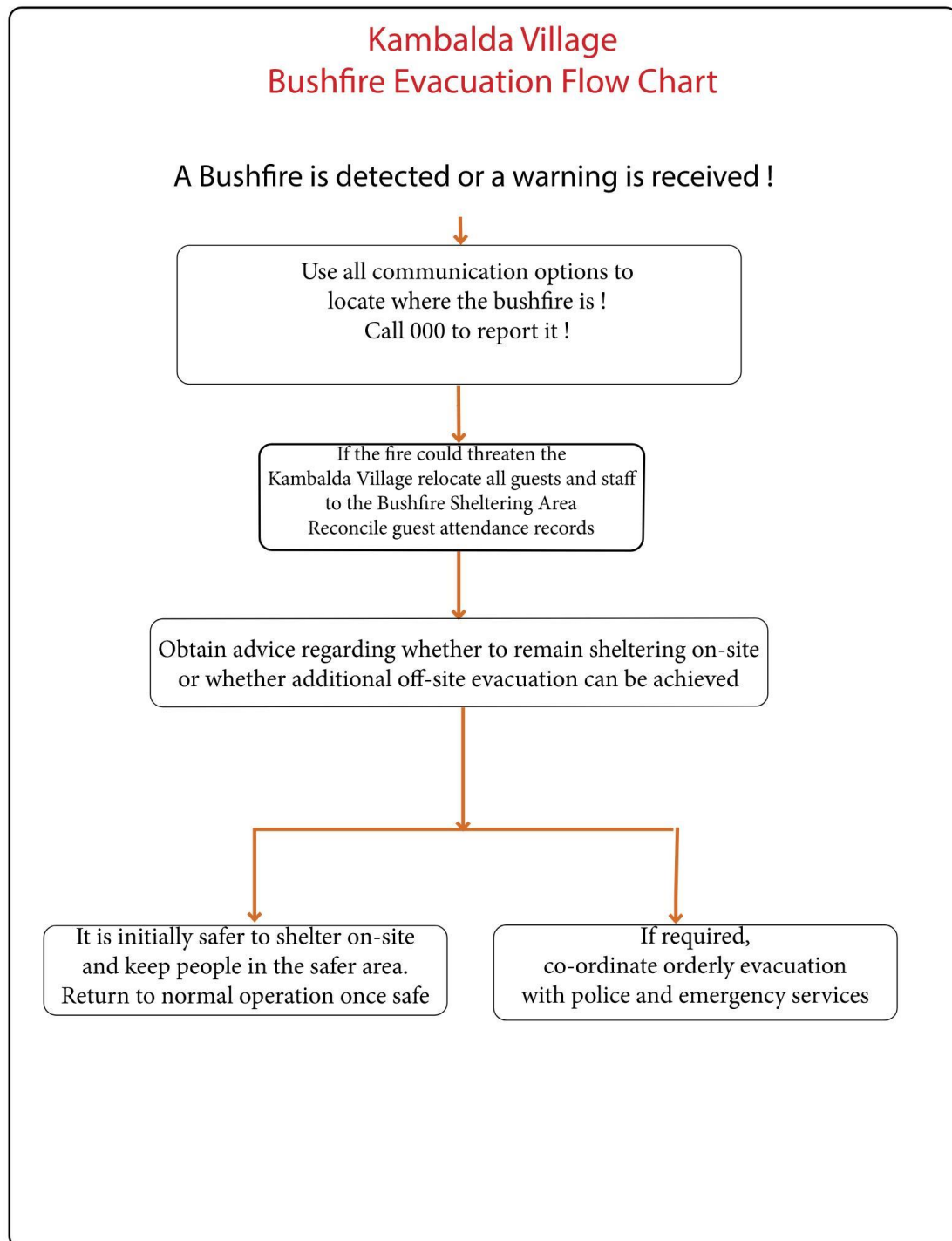
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APPENDICES

- Appendix 1: Bushfire Response Decision Making Flowchart
- Appendix 2: Fire Danger Ratings and their Meanings
- Appendix 3: Details of Fire Warning Levels
- Appendix 4: Shelter in Place - Details to be provided to Emergency Authorities
- Appendix 5: Warden Contact List - 2022
- Appendix 6: Bushfire Emergency Evacuation Plan Assessment
- Appendix 7: Assessment Criteria and Design Fire Modelling – Sheltering Area

Appendix 1 – Bushfire Response Decision Making Flowchart



Appendix 2 – Fire Danger Ratings and their Meanings

FIRE DANGER RATING			WHAT DOES IT MEAN?	WHAT SHOULD I DO?
 <p>Fires can threaten suddenly and without warning.</p> <p>Watch for signs of fire, especially smoke and flames.</p> <p>Know your Fire Danger Rating and be aware of local conditions.</p> <p>Have your bushfire survival plan and kit ready.</p> <p>To seek information listen to local radio, go to www.dfes.wa.gov.au or call the DFES information line on 13 DFES (13 3337).</p> <p>Call 000 to report a fire.</p> 	CATASTROPHIC 100+		<ul style="list-style-type: none"> Spot fires will start well ahead of the main fire and cause rapid spread of the fire. Embers will come from many directions Homes are not designed or constructed to withstand fires in these conditions The only safe place to be is away from bushfire risk areas. 	<p>YOU NEED TO ACT NOW</p> <ul style="list-style-type: none"> Put your survival first and leave bushfire risk areas the night before or early in the day – this is your best option Act immediately – do not wait and see: <ul style="list-style-type: none"> leave now avoid forested areas, thick bush or long, dry grass take shelter if you cannot leave
	EXTREME 75-99		<ul style="list-style-type: none"> These are very hot, dry and windy conditions for a bush or grass fire If a fire starts and takes hold, it will be extremely difficult to control and will take significant firefighting resources and cooler conditions to bring it under control 	<p>YOU NEED TO GET READY TO ACT</p> <ul style="list-style-type: none"> Only stay with your property if you are prepared to the highest level. This means your home needs to have been constructed to bushfire protection levels eg. enclosed eaves, covers over external air conditioners, metal flyscreens etc You must be well prepared and able to actively defend your home if a fire starts. This means you have the right equipment and resources to put out fires around your home eg. enough water supply, petrol/diesel portable pump, generator, protective clothing etc If you are not prepared to the highest level, leaving bushfire risk areas early in the day is your safest option.
	SEVERE 50-74		<ul style="list-style-type: none"> Homes that are prepared to the highest level, have been constructed to bushfire protection levels and are actively defended may provide safety You must be physically and mentally prepared to defend in these conditions The only safe place to be is away from bushfire risk areas. 	<p>YOU NEED TO BE AWARE</p> <ul style="list-style-type: none"> Well prepared homes that are actively defended can provide safety. This means you have the right equipment and resources to put out fires around your home eg. enough water supply, petrol/diesel portable pump, generator, protective clothing etc.
	VERY HIGH 32-49		<ul style="list-style-type: none"> Well prepared homes that are actively defended can provide safety You must be physically and mentally prepared to defend in these conditions. 	
	HIGH 12-31		<ul style="list-style-type: none"> Controlled burning may occur in these conditions if it is safe – check to see if permits apply. 	
	LOW-MODERATE 0-11		<ul style="list-style-type: none"> Check your bushfire survival plan Monitor conditions Action may be needed Leave if necessary 	
			PREPARE. ACT. SURVIVE.	

PREPARE. ACT. SURVIVE.

PREPARE. ACT. SURVIVE.

Appendix 3: Details of Fire Warning Levels

An **ADVICE** provides information that a fire has started but there is no immediate danger, this is general information to keep people informed and up to date with developments. **An Advice warning is a trigger to assess where the fire is and its potential threat level.**

A **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.

An **EMERGENCY WARNING:** An out of control fire is approaching fast and you need to take immediate action to survive. If you aren't, it is too late. You must seek shelter or leave now if it is safe to do so. The message may start with a siren called a Standard Emergency Warning Signal.

Appendix 4: Shelter in Place - Details to be provided to emergency authorities

The following information should be provided to the emergency authorities if a decision is made to shelter in place:

1. Nature of the emergency
 - a. Immediacy – Can the bushfire be seen/distance from site
 - b. Evidence of ember attack
 - c. Evidence of spot fires
2. Details of individuals sheltering:
 - a. Number
 - b. Condition/ state
 - c. Special needs
3. Location
 - a. Address
 - b. Nearest cross-roads
 - c. Exact location of shelter
 - d. Entry point to shelter

Appendix 5: Warden Contact List 2022

WARDEN CONTACT LIST – 2022				
EVAC AREA	LOCATIONS	BUILDINGS	WARDENS	MOBILE NUMBERS
ZONE-1	TBA	TBA	Peter Rodgers	9027 1696 0421 337 690
ZONE-2	TBA	TBA	TBA	
ZONE-3	TBA	TBA	TBA	
ZONE-4	TBA	TBA	TBA	
ZONE-5	TBA	TBA	TBA	
ZONE-6	TBA	TBA	TBA	
ZONE-7	TBA	TBA	TBA	
ZONE-8	TBA	TBA	TBA	

EVACUATION MANAGEMENT TEAM	NAME	MOBILE
Communications Officer		
Deputy Communications Officer –		
Chief Warden	Peter Rodgers	0421 337 690
Deputy Chief Warden		
Additional Wardens – to assume the role as required.		

Appendix 6: Bushfire Emergency Evacuation Plan Assessment

STEP 1 – EMERGENCY MANAGEMENT TEAM

The Emergency Management Team (EMT) consists of responsible senior staff members at Kambalda Village. The Chief Warden is responsible for;

- Ensuring all staff are educated and trained on emergency procedures;
- Consulting with local emergency services in relation to this Bushfire Emergency Evacuation Plan (BEEP), and;
- Annually reviewing the BEEP to ensure it remains practical and current.

STEP 2 – FACILITY DETAILS, SITE ANALYSIS AND LOCATION CHARACTERISTICS

The BEEP will apply to the Kambalda Village, which is a private run accommodation facility for workers primarily involved in the mining industry and related services. At the completion of the development, the Village will contain 782 ensuite rooms, a dining room, guest take away, tavern, swimming pool and gymnasium. The Village accommodates workers that are employed at surrounding mines and contractors. Up to 700 people can be accommodated and usually on any given day, 450 of those workers are not at the site as they are at their work places.

The existing facility contains an established driveway network, fire hydrant and hose system and all facilities that are centrally located on the property. The perimeter of the property contains scrub and woodland vegetation including scattered eucalypt trees and shrubs. The property has an established trafficable perimeter firebreak

Access to the Village is via Durkin Road and the property is also located on the intersection of the Goldfields Highway. There are multiple access ways on surrounding public roads and sealed roads through mining leased areas.

Kambalda Village is located at 210 Durkin Road, Kambalda, it is within an area identified as bushfire prone. The facility has Class A Forest, Class B Woodland and Class D Scrub on site and surrounding it. A bushfire is likely to impact the site from any direction.

With the establishment and maintenance of a compliant APZ, all buildings are assessed as being exposed to BAL-29 or less.

The site is reticulated and water for fire-fighting can be sourced from hydrants installed at the facility. Access to and from the site is to the south-east via Durkin Road.

STEP 3 – PRIMARY AND EMERGENCY ACTIONS

Evacuation is the process of moving people from the site to another safer location off-site. If successfully done, evacuation occurs in a calm, safe manner, away from the place of threat, to a location that will not be affected by bushfire.

Shelter in place is a process of sheltering in an identified safer building or open area on-site, away from the life threatening radiant heat caused by a bushfire. Shelter in place during a bushfire is generally not recommended and should only be taken as a last resort if it is not safe to evacuate. However, the separation distances between the bushland areas around the site is significant and a fast moving, high intensity fire with little warning could impact the site making evacuation difficult. Given the large open areas within the site in the

middle of the property, with heat flux at 1200°K of less than 2kw/m, sheltering in place at the area identified in the event of a nearby bushfire is the most appropriate response. The identified shelter in place location, surrounding facilities and APZ should be well prepared and maintained in the event this is necessary.

STEP 4 – REQUIREMENTS FOR EVACUATION AND SHELTER IN PLACE

a) Identification of off-site location for evacuation

The following questions are taken from the Western Australia Planning Commission's guide to developing a bushfire emergency evacuation plan (2019) to assess the suitability of the primary off-site evacuation location.

If there are occupants with support needs that require a similar facility to support them, is the off-site location suitable?	In the unlikely event that evacuation is required, a location suitable to accommodate the number of staff and guests in the short term has been identified as the sports ovals in Kambalda east and Kambalda West. Longer term there would be a need to evacuate or relocate to Kalgoorlie or Esperance depending on the threat.
Is the off-site location in an area away from the effects of bushfire?	This depends on the location of the bushfire and the direction of travel, Due to the extensive areas of classified vegetation surrounding the site, there are no alternatives to travelling through areas that can't be affected. Evacuation will only occur if the staff and guests can move away from the direction of bushfire threat.
Are there amenities (toilets, food, water, etc.,) available at the off-site locations ?	Yes
Can the off-site location accommodate the number of occupants?	Yes
Does the route to the off-site location require transport through bushfire affected areas, or areas that may be affected by an approaching bushfire?	Yes, this is unavoidable due to extent of surrounding vegetation.
Has the owner of the off-site location advised that they are happy to accommodate occupants if evacuation from a bushfire emergency occurs?	The Local Government authorities are being contacted for review.

b) Determining transport to an off-site location (evacuation)

The following questions are taken from the Western Australia Planning Commission's guide to developing a bushfire emergency evacuation plan (2019) to assess the suitability of available transport to off-site evacuation locations.

Do you have your own transport for all occupants?	In the event evacuation is required, the facility has an arrangement with some local bus charter companies. They can be engaged and organized by the site manager to provide transport to the evacuation destination. There may be insufficient buses available and some guest can move with their own vehicles and relocate others at the facility.
Are you going to use private vehicles?	This is possible because some guests staying at the site do bring their own vehicles and if there is plenty of time and evacuation is required then private vehicles can be used to evacuate guests.
If using private vehicles, will they be available when you need them and will there be drivers available?	Guests staying at the facility will have their own vehicles, if they are at work they will not be on-site and therefore no vehicle will be available.
Will there be sufficient vehicles to transport all the occupants?	This is not always guaranteed however additional buses are potentially available on surrounding mine sites to assist.

Have occupants with support needs been considered when determining transport types and necessary timing to evacuate?	Yes, the facility management will take extra time to organise evacuation and shelter in place in safe location within site with any guests that have special needs.
Is disabled transport required, and is this sufficient to move the number of occupants from the facility?	Not applicable
Do you require ambulances?	No
Is a community bus available when needed?	No, not required.
Are other means of transport available?	Potentially buses from surrounding mine sites.
Do you need any other type of special transport?	No

STEP 5 – PRIMARY EMERGENCY PROCEDURES

Primary and secondary emergency procedures were developed with the following considerations;

- Requirement to organise and co-ordinate evacuation of site users present safely. If this is not possible, then the requirement to provide shelter in place procedures for the number of guests present.

Emergency Procedures include those for preparation prior to potential bushfire event, monitoring to detect bushfire or required conditions for pre-emptive actions, identification of triggers to enact BEEP, emergency response both prior, during and after the fire front has passed, and finally recovery responses to be undertaken when the all clear has been given following a bushfire event

STEP 6 – TRAINING AND EDUCATION ON EMERGENCY PROCEDURES

The Chief Warden will ensure that all staff are aware of their responsibilities within the BEEP, and are sufficiently trained to carry out their duties in the event of a bushfire. This includes preparedness, monitoring, pre-emptive and recovery tasks in addition to tasks undertaken in response to a bushfire emergency.

Appendix 7: Assessment Criteria and Design Fire Modelling - Sheltering Area

1 Introduction

Facilities such as accommodation camps with day use can provide a building that could function as an on-site shelter if sufficient separation distance from the predominant bushfire prone vegetation to avoid exposure to a radiant heat flux exceeding 10kW/m^2 is achieved. Where an open space area is to function as an on-site shelter there must be sufficient separation distance from the predominant bushfire prone vegetation to avoid exposure to a radiant heat flux exceeding 2kW/m^2 . The flame temperature of 1200K is to be used in all calculations. A building used as suitable on-site shelter would need to be designed and constructed (or retrofitted) in accordance with the National Construction Code and the ACBC Community Shelter Handbook.

The entire facility area is sited on 24.6 hectares in size and bushfire hazard surrounds the site. The sheltering area is 0.56 ha in size. The site has a suitable Asset Protection Zone which is being expanded and includes driveways, parking areas, hard surfaces and some retained vegetation with managed fuel loads. This results in a large area to shelter from life threatening radiant heat from a bushfire in the central area.

Staff, guests and visitors on the site can relocate within the property and shelter in a large central area exposed to less than 2kW/m^2 . See Design fire modelling below.

2 LIMITATIONS

Bushfire sheltering locations do not guarantee people's safety, but they offer improved protection if people are caught by a fire and cannot evacuate early, away from the threat, to an area that cannot be threatened.

It is important for people to understand that there are risks associated with sheltering in open spaces even when assessed to the accepted standards. The Country Fire Authority (CFA 2020) and NSW Rural Fire Service (RFS 2017) have identified the following risks that are associated with sheltering in open spaces that are applicable to this site:

- Travelling to the Bushfire Shelter Area through a fire affected landscape either on foot or in a vehicle could be inherently dangerous due to poor visibility, fire activity and potential traffic accidents on internal roads.
- Sheltering at a site may result in physical and / or psychological trauma.
- Extreme conditions can be experienced such as embers, heat, strong winds, fire noise, radiant heat, smoke and ash while sheltering.
- The presence of emergency services cannot be guaranteed and there may be no communications, power, water or first aid facilities, however these can be planned for at this controlled site.

3 Assessment Criteria and Methodology

The methodology used to determine the predicted radiant heat flux levels at the Bushfire Shelter Location utilises the methodology developed by Douglas and Tan (2005) *Integrating Site Assessment and Performance Planning Outcomes for Bushfire Prone Areas*.

The assessment criteria used in this assessment (Table 1) was developed by the NSW Rural Fire Service and is outlined in their document "Neighbourhood Safer Places – Guidelines for the identification and inspection of Neighbourhood Safer Places in NSW".

Table 1: Relevant assessment criteria

	Performance Criteria	Acceptable Solution
Radiant Heat	Open Space is located to enhance the chance of survival for humans in attendance from the radiant heat of a bushfire.	Open Space is situated and maintained to prevent direct flame contact, material ignition and radiant heat flux levels of 2kW/m ² , or Provide 310 metres separation distance from a bushfire hazard.
Maintenance of the site and surrounding area	Area between bushfire hazard and the sheltering site is maintained to a level that ensures the radiant heat flux levels at the open space meet the Performance Criteria for radiant heat	The site and grounds between the sheltering area and the bushfire hazard is managed land or maintained in accordance with Asset Protection Zone Standards. There is driveways, parking areas and hard surfaces between the shelter area and bushland.

Table 2: Principles for site identification

Site Selection	The site should provide a safer place for the Village community.
	The community should be moving away from the bushfire hazard to access the site over short distances where possible.
	The location should reflect the community need and bushfire risk
Moving to the site	The site should not be isolated from the facility management.
	The staff and guests should not be impeded from reaching the site in a bushfire situation
Capacity	Additional bushfire shelter areas should be sought where it is likely the site cannot accommodate those likely to use it. The area is 0.56 ha in size.
	Demand for use of a site reflects the sites level of bushfire preparedness

The detailed site-specific design fire calculations are outlined below.

4 KAMBALDA VILLAGE - SITE ASSESSMENT

4.1 Assessment Inputs

A detailed site visit has been undertaken and a minimum assessment area of 150 metres around the property and sheltering area was undertaken.

The bushfire sheltering location was identified in the middle of the site and the open space area has been modelled to be suitable. The site- specific detailed design fire modelling inputs and analysis is outlined below.

The vegetation was classified in accordance with Clause 2.2.3 of AS 3959-2018. Each distinguishable vegetation plot with the potential to determine the predicted radiant heat flux levels towards the sheltering area were identified.

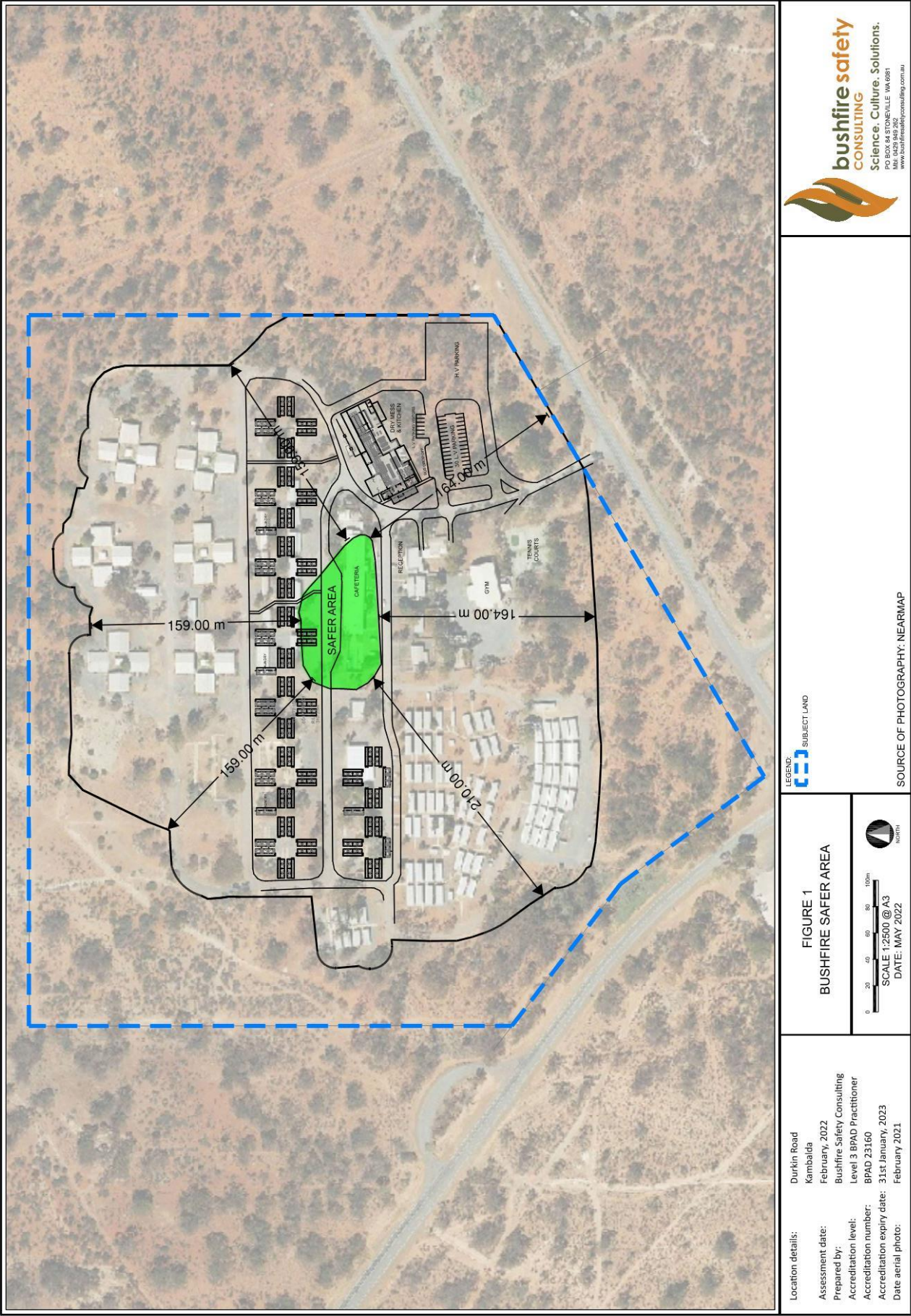
4.2 KAMBALDA VILLAGE - BUSHFIRE SHELTERING AREA

The open space bushfire sheltering area has been identified to provide staff and guests and visitors with an area that will provide improved protection of human life during the onset and passage of a bushfire. It is a location where people facing an immediate threat to their personal safety can gather and seek shelter from the impact of bushfire in the nearby bushland areas.

Detailed design fire modelling has been undertaken surrounding the facility with site specific variables analysed to identify an area that is situated (and can be maintained) to achieve radiant heat flux levels of 2kW/m² and less. This sheltering area has been assessed against the criteria (Table 3) and provides a backup plan to be utilised if the safe and early evacuation off site, away from bushfire threat, cannot be implemented. Evacuation off site is not easy to achieve quickly, it may be necessary, but it is important to have a good sheltering location on-site until that is achieved.

Table 3: Sheltering Area assessment outcomes against the criteria

Location	Kambalda Village	
Size	0.56ha	
Access	Centrally located, easily accessible to staff, guests and visitors by walking.	
Assessment Criteria – (from NSW RFS 2017)		
	Performance Criteria	Acceptable Solution
Radiant Heat	Open Space is located to enhance the chance of survival for humans in attendance from the radiant heat of a bushfire.	The open space is situated and maintained to prevent direct flame contact, material ignition and radiant heat flux levels of 2kW/m ² . The site contains sports ovals, carparks, irrigated gardens and buildings.
Maintenance of the site and surrounding area	Area between bushfire hazard and the sheltering site is maintained to a level that ensures the radiant heat flux levels at the open space meet the Performance Criteria for radiant heat	This zone was assessed in existing condition and is managed in a low threat condition consistent with vegetation classifications exclusion clause 2.2.3.2(f) (manage parkland) and Exclusion Clause 2.2.3.2(e) - unvegetated in AS3959-2018.
Principles for Site Identification		
Site Selection	The site should provide a safer place for the community.	The area is the open space in the middle of the site, so is the safest area within the site. Radiant heat flux modelling confirms this.
	The community should be moving away from the bushfire hazard to access the site over short distances where possible.	Site users, staff, students and visitors can move towards this area away from surrounding bushfire threat.
	The location should reflect the community need and bushfire risk	The site reflects the immediately needs for the school occupants comprehensively, it is nearby and easily accessible.
Moving to the site	The site should not be isolated from the community	The site is located in the middle of the site.
	The community should not be impeded from reaching the site in a bushfire situation	It is within walking distance (200 metres) or a short vehicle journey for all users.
Capacity	Additional bushfire shelter areas should be sought where it is likely the site cannot accommodate those likely to use it	There is no requirement for another site to be identified for users of this facility. It is accessible and permanent
	Demand for use of a site reflects the community's level of bushfire preparedness	A Bushfire Management Plan has been developed for the facility and the safer area reflects the needs of the facility and staff and guests. Staff consultation has occurred.



5 Design Fire Modelling

5.1 AIM

Provide a bushfire protection outcome that meets the performance requirements of the proposed safer area at the site and;

- Approval under State Planning Policy No. 3.7 Planning in Bushfire Areas V1.4 (2021);
- Compliance with the Performance Principles in the Guidelines for Planning in Bushfire Prone Areas V1.4 (December 2021) and Australian Standard AS 3959-2018 Construction of buildings in bushfire-prone areas (Standards Australia 2018);

5.2 Objectives

Demonstrate the Radiant Heat Flux (RHF) exposure profile is $< 2\text{kW/m}^2$ contour

Demonstrate that the exposure profile under specific design fire evaluation that includes:

- Classified vegetation uses default fuels loads specified in AS3959-2018;
- Flame temperature is set at 1200K as a conservative level to assess life safety priorities;
- FDI set at 107 due to detailed fire weather analysis of the Perth Area to determine a 1:200 FDI return period.

Site specific values for effective slope under classified vegetation and site slope

5.3 Design Fire Assessment to determine $<2\text{kW/m}^2$

The methodology used to assess the Bushfire Shelter Area utilises the methodology developed by Douglas and Tan (2005) Integrating Site Assessment and Performance Planning Outcomes for Bushfire Prone Areas. The extent of exposure to people sheltering from bushfire attack is primarily related to the proximity to the fire front, fire severity/ fuel characteristics, fire weather, topography and shielding (by natural features or man-made barriers).

The design fire assessments determine the level to which predicted radiant heat flux exposure from surrounding areas impacts the proposed sheltering area.

The predicted bushfire attack is assessed by considering specific site factors that are different to those used in a method 1 BAL assessment in AS3959-2018. The predicted radiant heat flux received on the identified sites from surrounding areas is determined by accurate assessment of site and effective slope characteristics, vegetation heights, fire weather and fuel load analysis.

5.4 Specific Design Fire Inputs

Specific design fire inputs used to evaluate all design fires surrounding each sheltering location is listed below.

- Site slope and effective slope analysis using a Forestry Pro digital field instrument to determine the slope under the classified vegetation and between the sheltering areas and the vegetation;
- Flame temperature set at 1200K to reflect life safety priorities;
- Fire Danger Indice of 160 determined by Generalised Extreme Value (GEV) and regression analyses to determine the FFDI return period of 1:200 years for Kalgoorlie;
- Elevation of Receiver used is default to ensure maximum predicted radiant heat flux results;

5.5 Methodology

The Method 2 Approach to determine the radiant heat flux exposure is described in Appendix B Detailed method for determining the Bushfire Attack Level (BAL) – Method 2 in AS3959-2018. Site specific inputs and bushfire modelling calculations were undertaken using the software tool Bushfire Attack Level calculator (BALc) version 4.8 developed for FPAA by Flamesol.

The Bushfire Attack Level calculator (BALc) version 4.8 is a software tool approved for use by the FPAA that implements the Method 2 bushfire behaviour and view factor calculations and heat transfer models to determine the exposure of a site to a radiant heat flux

6 Fire Weather Analysis for Developing Alternative Design Bushfire Conditions

The Kalgoorlie weather station data was used in the design fire calculations. The site is 50 kms from the Kalgoorlie weather station and the data for the weather station is expected to be quite accurate for the site. It is the best data available.

Table 1 – Long term climate data from weather stations at Kalgoorlie (Source – BOM 2020)

Climate Data	Weather Station Location
	Kalgoorlie Station Id 012038
Mean Maximum Temperature (°C)	25.3
Maximum Recorded Temperature (°C)	46.5
Mean Annual Rainfall (mm)	265.6
Mean Rainfall in January (mm)	28.9
Mean Rainfall in July (mm)	24.2
Mean Humidity at 3pm in January (%)	24
Mean Humidity at 3pm in July (%)	46
Mean Wind Speed at 3pm in January (km/h)	15.1
Mean Wind Speed at 3pm in July (km/h)	16.6

The data from the Kalgoorlie weather station provided the most accurate data to determine alternative design fire conditions at Kambalda Village. Daily Forest Fire Danger Index (FFDI) data for the weather station was extracted from Lucas (2010) Historical Fire Weather Data-set obtained from the Bureau of Meteorology (BOM). The dataset covers 47 years from 1975 to 2020. The data for 1995 had FFDI data missing for January and March.

This data was analysed to determine the 1:200 year FFDI annual return interval using methodology set out in Douglas et.al. The NSW RFS Neighbourhood Safer Places methodology uses a Fire Danger Index of 120 (Catastrophic) AS3959-2018 policy FFDI value for this location is 80, the results of this assessment conclude the 1:200 year FFDI is 160.

6.1 Methodology

The extreme value analysis was undertaken using 47 years data of the highest FFDI values for the Kalgoorlie weather station (Table 2).

Table 2: Maximum yearly FFDI at 3pm records for Kalgoorlie Weather Station.

Year	No.	Return Period Calc	Return Period	Max FFDI
1991	1	46	46	119
1978	2	23	23	117
2015	3	15.3333333333333	15.33	112
1985	4	11.5	11.5	106
2005	5	9.2	9.2	106
1980	6	7.6666666666667	7.67	105
2014	7	6.57142857142857	6.57	104
2004	8	5.75	5.75	102
1988	9	5.11111111111111	5.11	99
1994	10	4.6	4.6	98
2019	11	4.18181818181818	4.18	98
2009	12	3.83333333333333	3.83	94
2010	13	3.53846153846154	3.54	94
1983	14	3.28571428571429	3.29	92
1986	15	3.06666666666667	3.07	92
1996	16	2.875	2.88	90
2007	17	2.70588235294118	2.71	90
1981	18	2.55555555555556	2.56	88
1993	19	2.42105263157895	2.42	87
2017	20	2.3	2.3	86
2001	21	2.19047619047619	2.19	85
2016	22	2.09090909090909	2.09	85
1976	23	2	2	83
1998	24	1.91666666666667	1.92	83
1973	25	1.84	1.84	82
1977	26	1.76923076923077	1.77	82
1997	27	1.7037037037037	1.7	82
2002	28	1.64285714285714	1.64	82
2013	29	1.58620689655172	1.59	81
1990	30	1.53333333333333	1.53	80
1987	31	1.48387096774194	1.48	79
1989	32	1.4375	1.44	79
2012	33	1.39393939393939	1.39	76
1979	34	1.35294117647059	1.35	75
2000	35	1.31428571428571	1.31	71
1992	36	1.27777777777778	1.28	70
2011	37	1.24324324324324	1.24	69
2003	38	1.21052631578947	1.21	67
2006	39	1.17948717948718	1.18	65
1984	40	1.15	1.15	64
1974	41	1.1219512195122	1.12	63
1995	42	1.0952380952381	1.1	63
2008	43	1.06976744186047	1.07	63
1982	44	1.04545454545455	1.05	57
1999	45	1.02222222222222	1.02	56
1975	46	1	1	52

6.2 Results for 47 years of data

The data (Table 2) was used to generate a GEV analysis of a return period of 1:200 years which has been advocated as an input into determining fire weather inputs for an alternative method for the identification of places for community bushfire shelters.

Figure 1 outlines the linear-log plots of FFDI vs return period R for the Perth Airport weather station. The plots were then subject to a formatted trend line using the log-linear function as expressed in Douglas et.al as : $y = a \ln R + b$

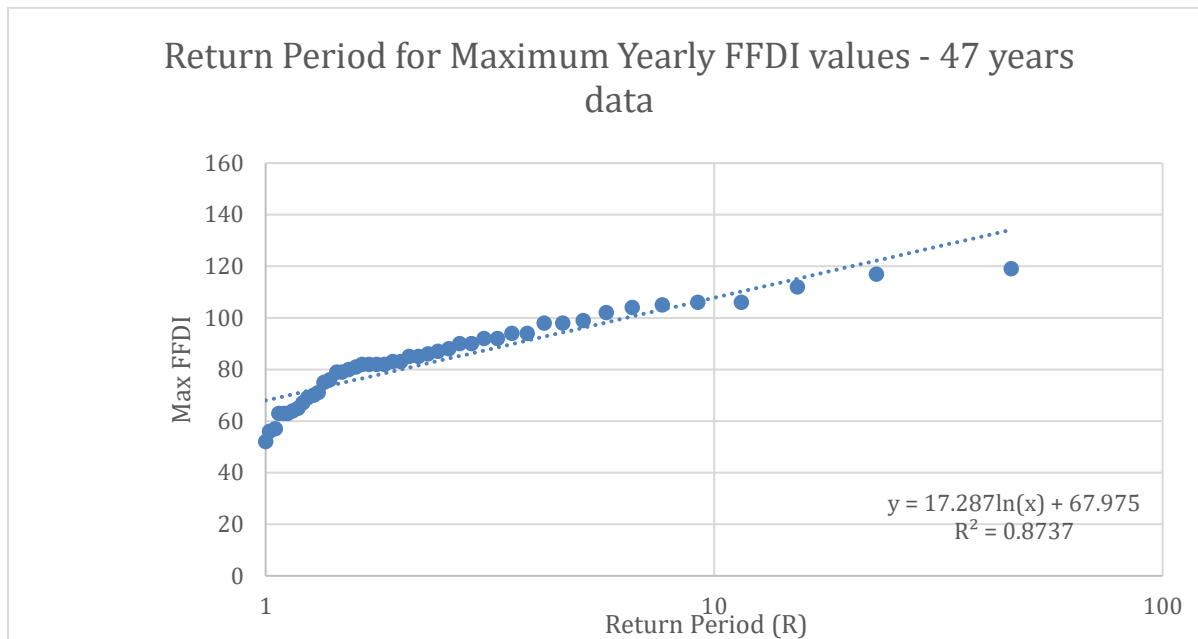


Figure 2 – Linear-log plot of FFDI and Return Period (R) – 47 years of data

The GEV and regression analyses were applied to the data from the weather station and the results are presented in Table 2. Also included in Table 3 are the FFDI values corresponding to 1:200 return period. The correlation co-efficient R^2 of 0.8737 refers to the quality of the statistical analysis.

Using the equation $y = a \ln R + b$ in Douglas et.al.(2015) for the log linear graph (Figure 1) to determine the 1:200 year return period, the extrapolated results are:

$$Y = 17.287 \ln(200) + 67.975$$

FFDI = 159.6

Highest maximum FFDI on record is 119 which occurred in the 1991. Generalised Extreme Value (GEV) analysis of data determined that a return value of 1:200 years gives a maximum FFDI of 159.6 (Figure 1 and Tables 2 & 3).

Table 3: Results of GEV and regression analysis and FFDI value based on a 1:200 return period.

a	b	r^2	FFDI R=1:200
17.287	67.975	0.8737	159.6

7 Vegetation and Fuel load analysis for Developing Alternative Design Bushfire Conditions

Dominant vegetation types in the bushland on and around the site has been assessed to create a BAL Contour Plan in the Bushfire Management Plan. The bushland area around the facilities contain vegetation classes of Class A Forest, Class B Woodland and Class D Scrub. The dominant vegetation class on the site is Class B Woodland although it is not likely to produce the highest radiant heat flux levels on the sheltering area. The small area of forest vegetation has higher accumulated and elevated fuel layers and fuel loads.

The three vegetation types are differentiated by differences in overall canopy foliage cover and canopy height. Forest vegetation contains over > 30% foliage canopy cover and is over 12 metres high, and Woodland contains less than 30% and is patchy with isolated shrubs and areas of mineral earth. Scrub is 2-3 metres in height and fine fuels are found from ground level to the top of the canopy. The structure of the vegetation also significantly influences fire rate of spread and intensity, forest vegetation tends to have more middle-storey vegetation which can act as a ladder fuel between the forest floor and the overstorey canopy.

The vegetation plots on and surrounding the site and within 150 metres of the site boundary are found in Figure 4 of the Bushfire Management Plan.

The deemed to satisfy tables and default fuel loads in AS3959-2018 provide a simple method to determine predicted radiant heat flux levels on sheltering areas or structures. The default fuel loads for corresponding vegetation classifications in AS3959-2018 have been used in this assessment.

8 Design Fire Modelling

This assessment determined the site specific FFDI based on the Generalised Extreme Value (GEV) modelling found in Douglas et.al. The 1:200 year return period for 47 years of data from the Kalgoorlie weather station was determined as FDI 159.6

To ensure conservative values were modelled for life safety reason the FFDI of 160 was adopted in this assessment.


The view factor and radiant heat flux level calculations are contained in Appendix 3.


A performance based solution including design fire modelling and AS3959 Method B fire modelling has been undertaken to predict these outcomes.

8.1 Kambalda Village Design Fire modelling

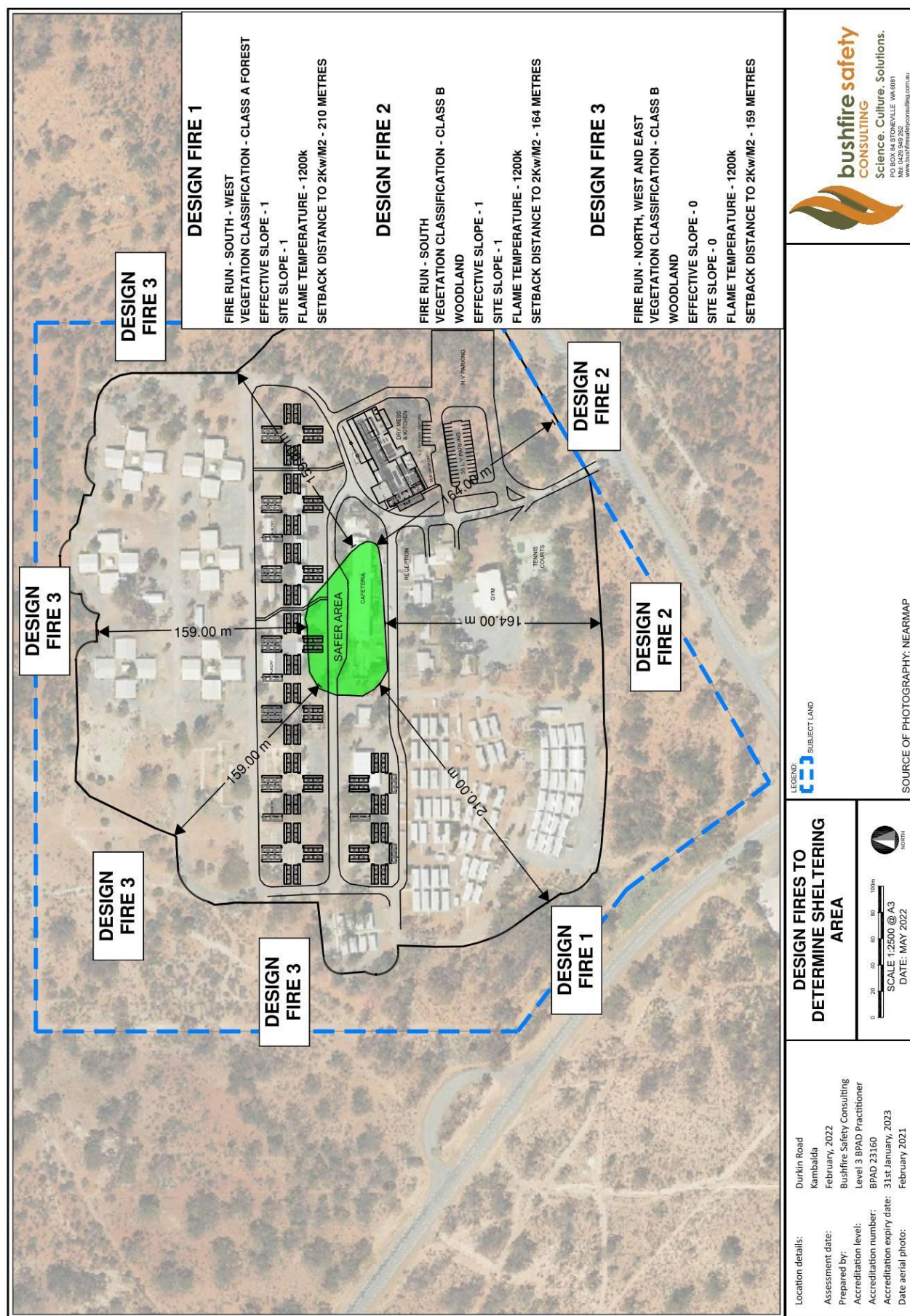
Design Fire	Direction of fire run	Vegetation type	Default AS3959 Fuel Load (t/ha)		Slope (°)		Separation (m)	Flame Temp.	FDI	Elevation of receiver	Flame Width (m)	Flame length (m)	Radiant Heat Flux
			surface	overall	Effective	Site							
1	South west	Class A Forest	25	35	1	1	210 m	1200K	160	default	100m	37.62 m	1.99 kW/m ²
2	South,	Class B Woodland	15	25	1	1	164 m	1200K	160	default	100m	23.05 m	1.99 kW/m ²
3	North West and east	Class B Woodland	15	25	0	0	159 m	1200K	160	default	100m	21.71 m	2 kW/m ²

8.2 Kambalda Village Model Calculations – Design Fires 1, 2 and 3

 FLAMESOL <small>Calculated May 11, 2022, 6:21 pm (BALC v4.9)</small> design fire forest kambalda			
Bushfire Attack Level calculator - AS3959-2018 (Method 2)			
Inputs		Outputs	
Fire Danger Index	160	Rate of spread	5.14 km/h
Vegetation classification	Forest	Flame length	37.62 m
Understorey fuel load	25 t/ha	Flame angle	81 °
Total fuel load	35 t/ha	Panel height	37.16 m
Vegetation height	n/a	Elevation of receiver	3 m (user defined value)
Effective slope	1 °	Fire intensity	93,000 kW/m
Site slope	1 °	Transmissivity	0.681
Distance to vegetation	210 m	Viewfactor	0.0261
Flame width	100 m	Radiant heat flux	1.99 kW/m ²
Windspeed	n/a	Bushfire Attack Level	BAL-12.5
Heat of combustion	18,600 kJ/kg		
Flame temperature	1,200 K		
<small>Rate of Spread - Mearthur, 1973 & Noble et al., 1980 Flame length - NSW Rural Fire Service, 2001 & Noble et al., 1980 Flame angle - Douglas & Tan, 2005 Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005</small>			

 FLAMESOL <small>Calculated April 28, 2022, 5:50 pm (BALC v4.9)</small> kambalda sheltering			
Bushfire Attack Level calculator - AS3959-2018 (Method 2)			
Inputs		Outputs	
Fire Danger Index	160	Rate of spread	3.08 km/h
Vegetation classification	Woodland	Flame length	23.05 m
Understorey fuel load	15 t/ha	Flame angle	83 °
Total fuel load	25 t/ha	Panel height	22.88 m
Vegetation height	n/a	Elevation of receiver	3 m (user defined value)
Effective slope	1 °	Fire intensity	39,857 kW/m
Site slope	1 °	Transmissivity	0.694
Distance to vegetation	164 m	Viewfactor	0.0257
Flame width	100 m	Radiant heat flux	1.99 kW/m ²
Windspeed	n/a	Bushfire Attack Level	BAL-12.5
Heat of combustion	18,600 kJ/kg		
Flame temperature	1,200 K		
<small>Rate of Spread - Mearthur, 1973 & Noble et al., 1980 Flame length - NSW Rural Fire Service, 2001 & Noble et al., 1980 Flame angle - Douglas & Tan, 2005 Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005</small>			

 FLAMESOL <small>Calculated April 29, 2022, 12:33 pm (BALC v4.9)</small> kambalda sheltering woodland flat			
Bushfire Attack Level calculator - AS3959-2018 (Method 2)			
Inputs		Outputs	
Fire Danger Index	160	Rate of spread	2.87 km/h
Vegetation classification	Woodland	Flame length	21.71 m
Understorey fuel load	15 t/ha	Flame angle	83 °
Total fuel load	25 t/ha	Panel height	21.55 m
Vegetation height	n/a	Elevation of receiver	3 m (user defined value)
Effective slope	0 °	Fire intensity	37,199 kW/m
Site slope	0 °	Transmissivity	0.697
Distance to vegetation	159 m	Viewfactor	0.0257
Flame width	100 m	Radiant heat flux	2 kW/m ²
Windspeed	n/a	Bushfire Attack Level	BAL-12.5
Heat of combustion	18,600 kJ/kg		
Flame temperature	1,200 K		
<small>Rate of Spread - Mearthur, 1973 & Noble et al., 1980 Flame length - NSW Rural Fire Service, 2001 & Noble et al., 1980 Flame angle - Douglas & Tan, 2005 Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005</small>			



9 References

Bureau of Meteorology (BOM), 2021, *Climate Data Online*, viewed 4th May 2021, <<http://www.bom.gov.au/climate/data>>.

Lucas, C., 2010, On developing a historical fire weather data-set for Australia, in *Australian Meteorological and Oceanographic Journal*, vol.60, pp.1-14.

Attachment 6

Traffic Impact Assessment (Urbii)



urbii

Sustainable Transport. Safe Solutions

Kambalda Accommodation Village Proposed Development

Traffic Impact Assessment



Prepared for:
Compass Group

June 2022

Kambalda Accommodation Village

Prepared for: Compass Group
Prepared by: Paul Ghanous
Date: 11 June 2022
Project number: U22.045

Version control

Version No.	Date	Prepared by	Revision description	Issued to
U22.045.r01	04/06/22	Paul Ghanous	DRAFT	CLE Town Planning
U22.045.r01a	11/06/22	Paul Ghanous	FINAL	CLE Town Planning



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1 Introduction

This Transport Impact Statement has been prepared by **Urbii** on behalf of **Compass Group** with regards to the proposed development at **Kambalda Accommodation Village**, in Kambalda.

The subject site is situated on the northern corner of Goldfields Highway and Durkin Road, as shown in Figure 1. The site presently accommodates Kambalda Accommodation Village. The proposal will involve an approximate net increase of 208 rooms (264 rooms added and 56 rooms to be demolished). The existing dining hall will also be replaced by a new facility closer to the entrance.

The key issues that will be addressed in this report include the traffic generation and distribution of the proposed development, access and egress movement patterns, car parking and traffic analysis of the site access on Durkin Road.

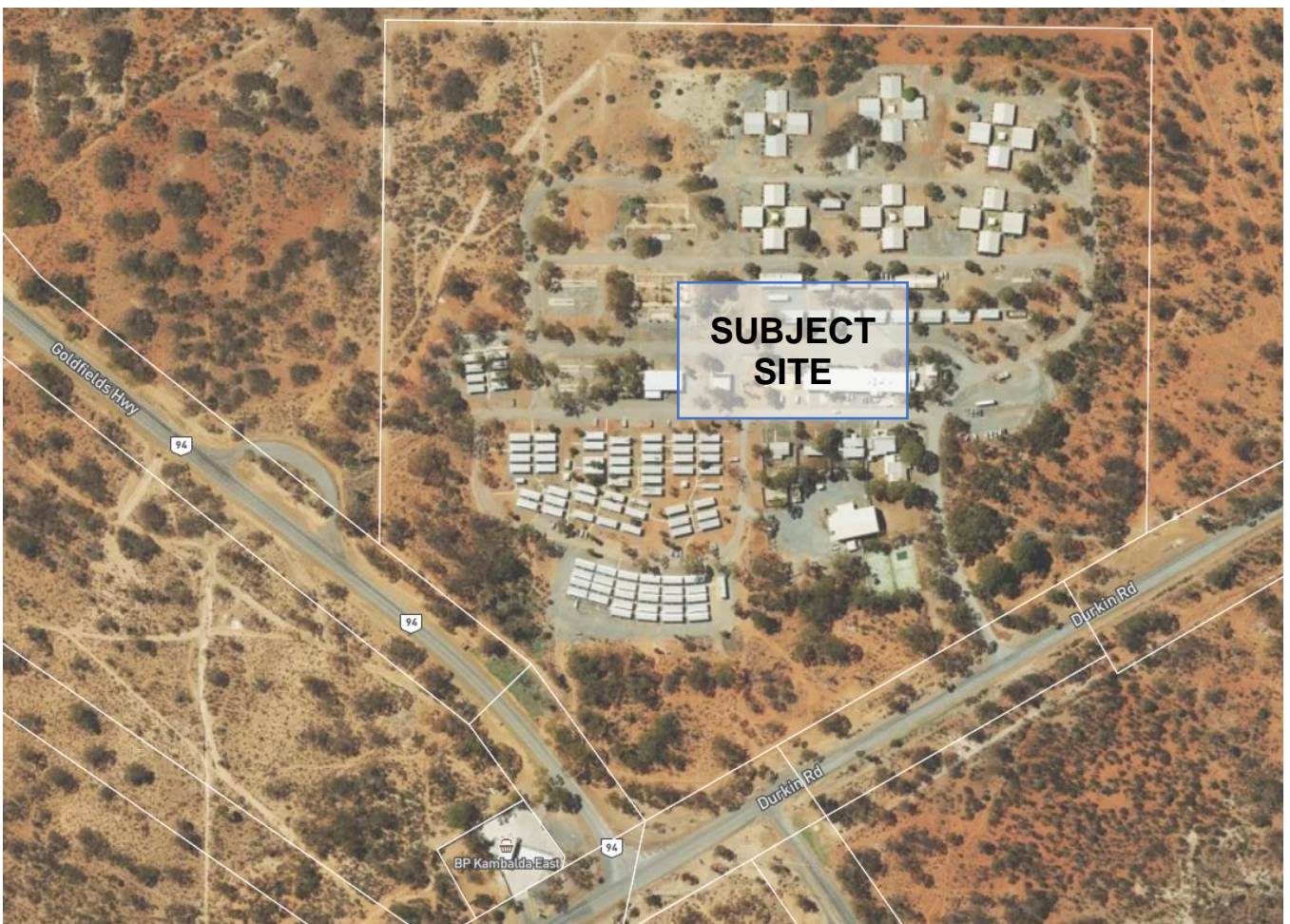


Figure 1: Subject site



2 Proposed development

The proposal for the subject site is for expansion of the existing workforce accommodation comprising:

- Retention of existing amenities including the cafeteria, swimming pool, tennis court and gym;
- Net increase of 208 rooms (264 rooms added and 56 rooms to be demolished);
- Total increase in rooms from 574 to 782;
- Demolition of the existing dining hall and relocation to be closer to the main entrance;
- Construction of car parking for the relocated dining hall (approximately 36 bays); and,
- Approximately 120 additional car parking bays for residents distributed between individual residential buildings.

Vehicle access to the site is via the existing intersection on Durkin Road.

Waste collection, delivery and other service vehicle activity for the site will be accommodated within the site as per existing arrangements.

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

3 Vehicle access and parking

3.1 Vehicle access

Vehicle access to the subject site is presently accommodated via an intersection with Durkin Road (Figure 2).

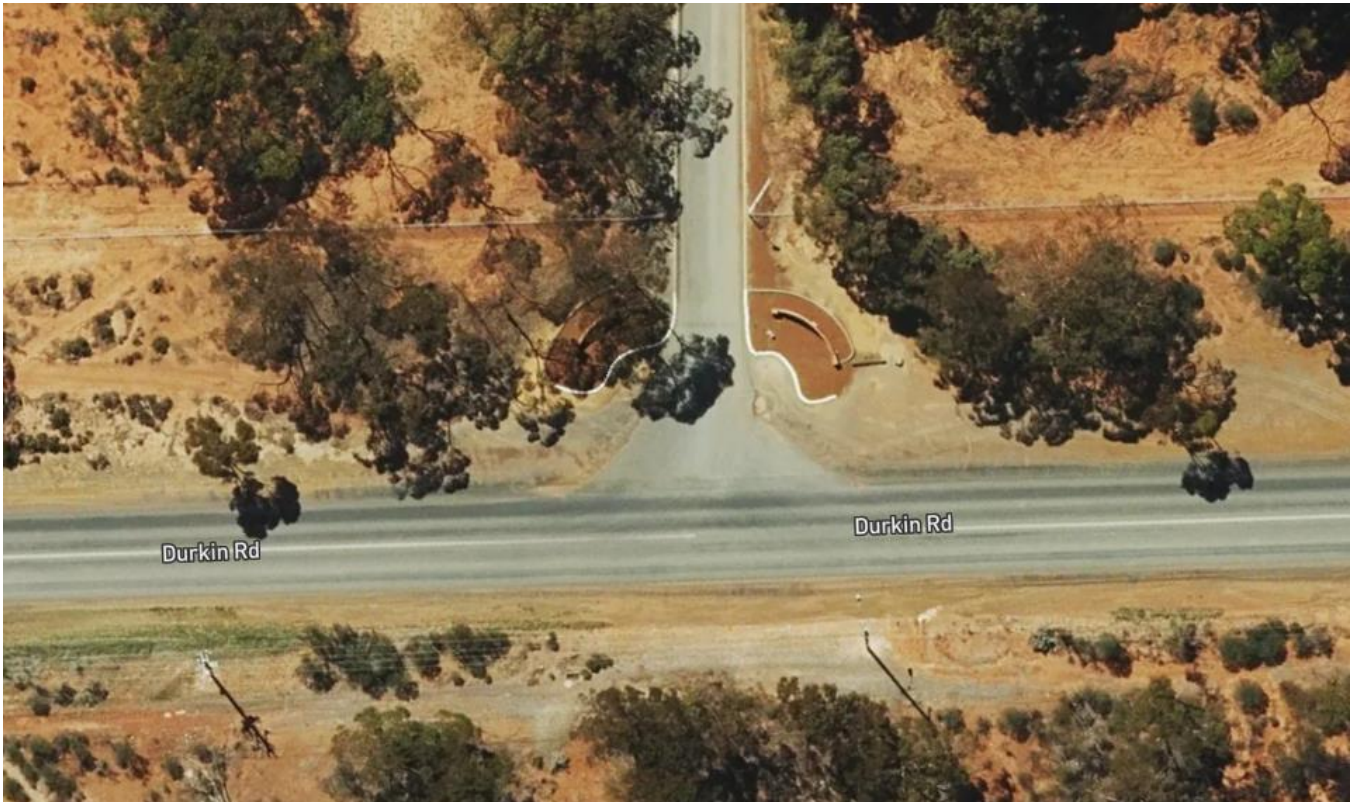


Figure 2: Existing vehicle access

A sealed road network is constructed within the site, to facilitate vehicle circulation to and from the residential buildings and other site amenities (Figure 3). Car parking is distributed throughout the site, so that people can park close to their destination.

The vehicle access to the external road network is proposed to be retained as per the existing situation with no changes. Only minor changes to the internal circulation roads are proposed, with additional roads and car parking to be constructed around the relocated dining hall.



Figure 3: Existing vehicle circulation and parking

3.2 Parking supply and demand

Approximately 120 car bays will be provided between the new residential buildings. Approximately 36 car bays will be provided for the dining hall. The proposed car parking provision is influenced by the operational requirements of the facility.

Car parking will be monitored and managed by the site operator. It is understood there is surplus land area to accommodate additional parking should it be required in the future.

It is recommended that two ACROD bays be provided for the dining hall.

4 Provision for service vehicles

For this nature of land uses, service vehicles which may need to access the site may include:

- Waste collection trucks;
- Delivery trucks; and,
- Other service vehicles (such as laundry).

Based on advice provided to Urbii, the existing accommodation village has been operating successfully and service vehicle arrangements and scheduling will be retained as per the existing situation.

Suitable provisions for loading and waste collection should be allowed for the dining hall as part of subsequent detailed design stages.



5 Hours of operation

A 24-hour video survey was undertaken of the site access intersection with Durkin Road. The survey was undertaken on a standard weekday in May 2022. Analysis of the survey data showed that traffic was active for every hour of the 24-hour period (Figure 4). However, the core activity was recorded between 4:00am and 8:00pm.

6 Daily traffic volumes and vehicle types

6.1 Traffic generation

To establish the existing traffic generation of the site, a 24-hour video survey was undertaken of the site access intersection with Durkin Road. The survey was undertaken on a standard weekday on Monday 23 May 2022. The site traffic generation by hour is shown by direction in Figure 4. The combined inbound and outbound flows are presented in Figure 5.

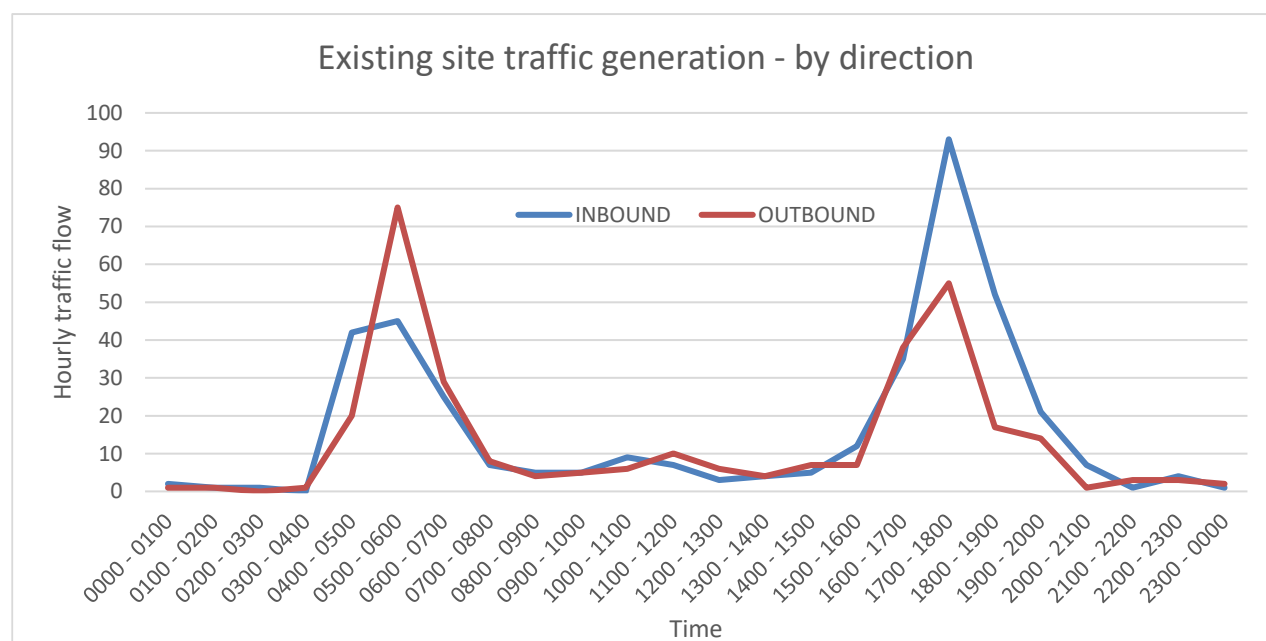


Figure 4: Hourly site traffic generation (by direction) – Monday 23 May 2022

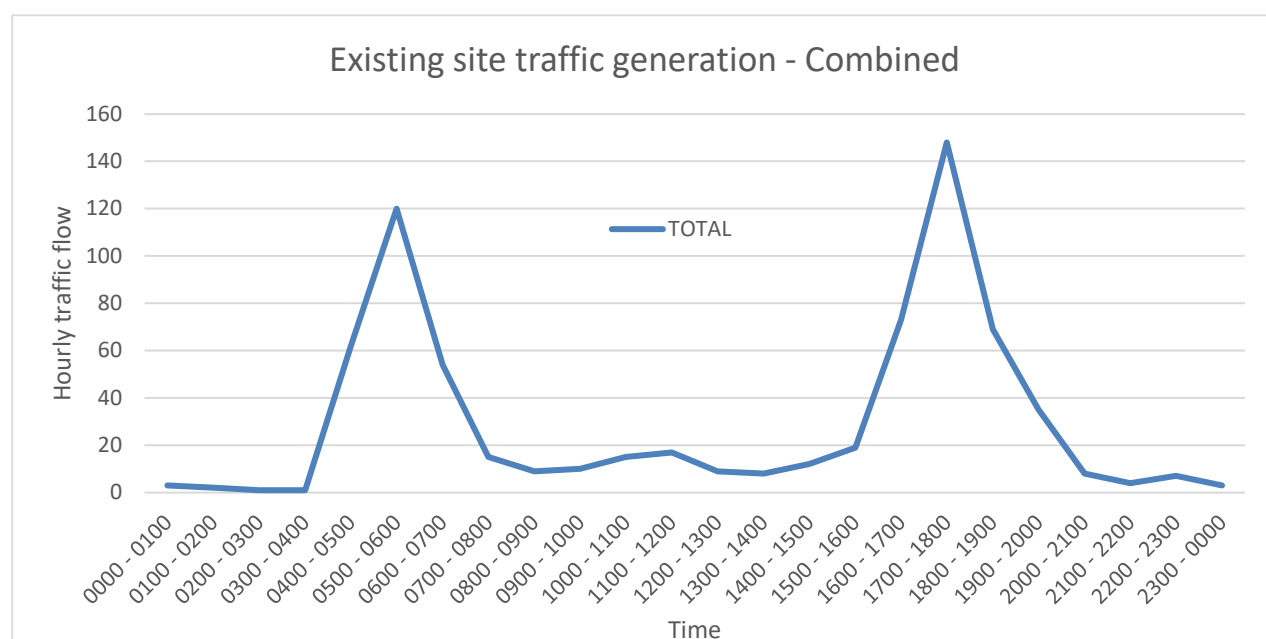


Figure 5: Hourly site traffic generation (combined) – Monday 23 May 2022



The AM peak hour for the site was recorded between 4:45am and 5:45am. The PM peak hour was recorded between 5:00pm and 6:00pm. The site generates around 140 to 150 vehicles per hour (vph) during the peak hours and around 700 vehicles per day (vpd). Over the 24-hour period, approximately 15% of traffic was categorised as “heavy vehicles”. These would include service trucks and buses for group transport of workers. Surveyed traffic generation also includes visitors to the site. Visitors may be seeing residents or eating at the dining hall from an external origin. Surveyed existing turning flow diagrams are included in Appendix B.

Table 1: Existing site traffic generation

TIME	INBOUND	OUTBOUND	TOTAL
0000 - 0100	2	1	3
0100 - 0200	1	1	2
0200 - 0300	1	0	1
0300 - 0400	0	1	1
0400 - 0500	42	20	62
0500 - 0600	45	75	120
0600 - 0700	25	29	54
0700 - 0800	7	8	15
0800 - 0900	5	4	9
0900 - 1000	5	5	10
1000 - 1100	9	6	15
1100 - 1200	7	10	17
1200 - 1300	3	6	9
1300 - 1400	4	4	8
1400 - 1500	5	7	12
1500 - 1600	12	7	19
1600 - 1700	35	38	73
1700 - 1800	93	55	148
1800 - 1900	52	17	69
1900 - 2000	21	14	35
2000 - 2100	7	1	8
2100 - 2200	1	3	4
2200 - 2300	4	3	7
2300 - 0000	1	2	3
24 HOUR	387	317	704

Source: Video survey Monday 23 May 2022

Information from the site operator indicated that there was 95% room occupancy on the day of the survey. Therefore, no seasonal adjustment was required to the traffic generation. A comparison of the existing traffic generation and post development traffic generation is presented in Table 2. It is assumed that site traffic will grow in proportion to the percentage increase in rooms, which is a 36% increase.

Table 2: Existing and proposed traffic generation

Factor	Existing	Proposed	Net change
Rooms	574	782	+208 (+36%)
AM Peak traffic (vph)			
Inbound	60	82	+22
Outbound	81	110	+29
AM Total	141	192	+51
PM Peak traffic (vph)			
Inbound	93	127	+34
Outbound	55	75	+20
PM Total	148	202	+54
Daily traffic (vpd)	704	959	+255

The proposed development is estimated to generate a total of 959 vehicles per day (vpd) and 202 vehicles per hour (vph) during the PM peak hour. The net increase in site traffic is estimated to be **+255vpd** and **+54vph** when traffic generation of the existing and proposed building facilities is compared.

These trips include both inbound and outbound vehicle movements. It is anticipated that most of the vehicle types would be utility vehicles, SUVs and buses.



6.2 Impact on surrounding roads

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

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

The proposed development will not increase traffic flows on any roads adjacent to the site by the quoted WAPC threshold of +100vph to warrant further analysis. Therefore, the impact on the surrounding road network is minor.

6.3 Trip distribution and assignment

The existing traffic turning flows are detailed in Figure 6.

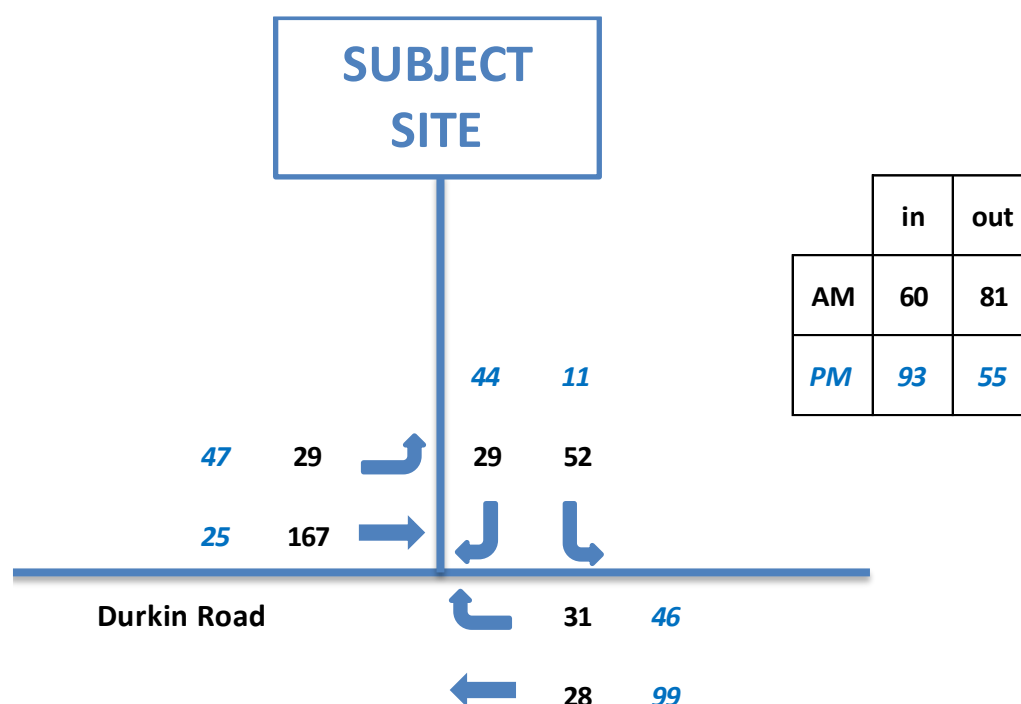


Figure 6: Existing traffic flows – peak hours

Source: Video survey Monday 23 May 2022

The post development traffic flows are detailed in Figure 7.

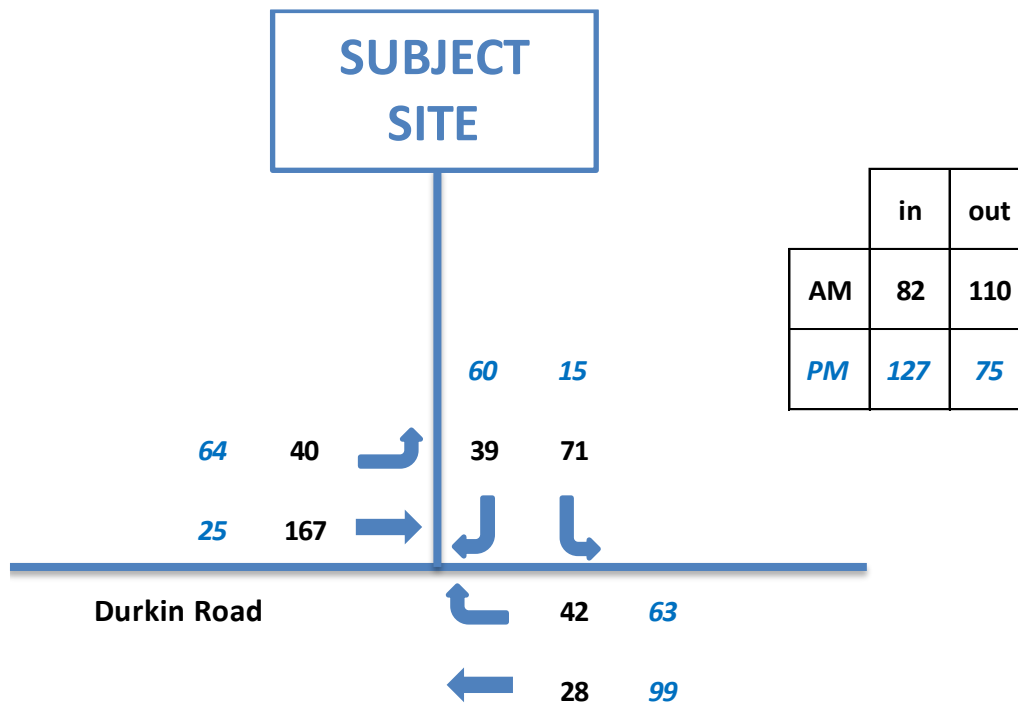


Figure 7: Post-development traffic flows – peak hours

6.3.1 10-year post development analysis

The 10-year post development assessment year adopted in this assessment is 2033. A traffic forecasting exercise was undertaken to estimate the background traffic volumes for the 10-year post development analysis in this TIA. For robust assessment it was assumed that through traffic volumes on Durkin Road would double in that time.

The resulting 10-year post development traffic flows (including background and development traffic) are detailed in Figure 8.

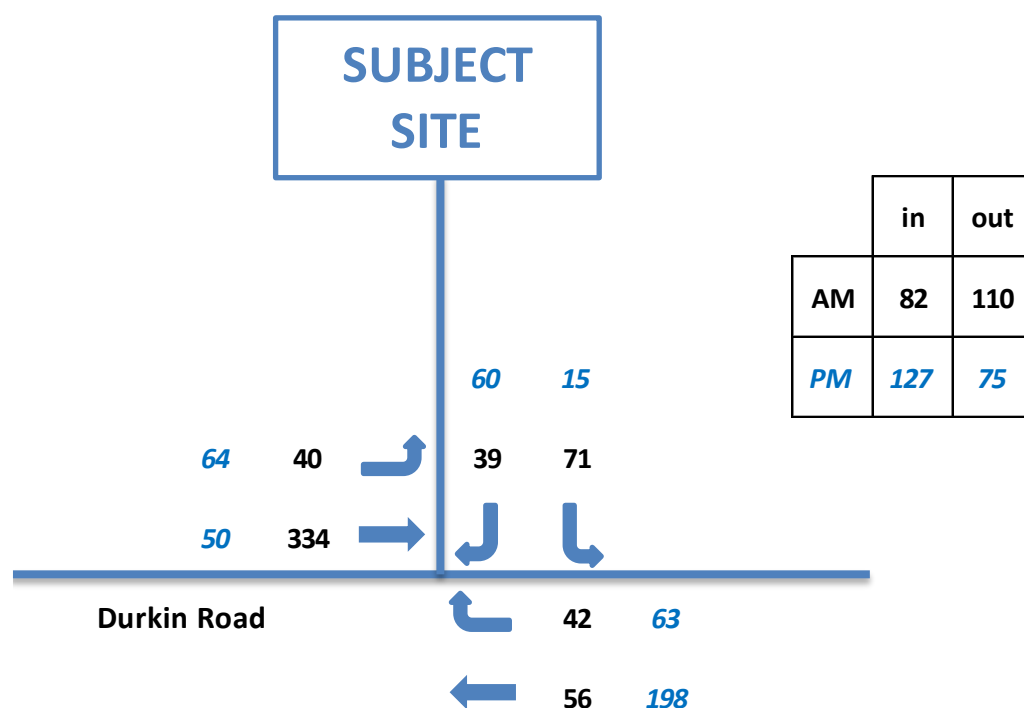


Figure 8: 10-year post development traffic flows – peak hours

6.4 Analysis of intersections and development access

Capacity analysis of intersections was undertaken using the SIDRA 9 computer software package. SIDRA 9 is an intersection modelling tool commonly used by traffic engineers for all types of intersections.

The Durkin Road site crossover was modelled as a give-way T-intersection, as shown in Figure 9.

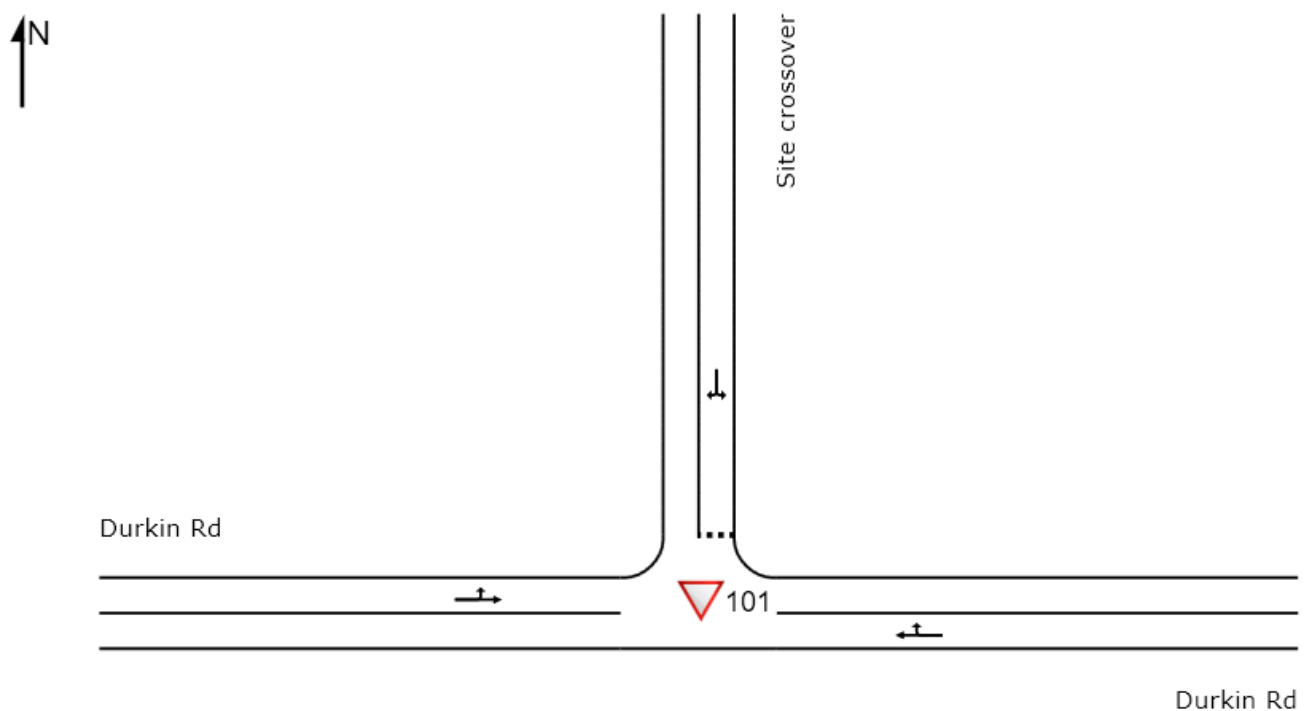


Figure 9: SIDRA model developed for analysis

LOS is the qualitative measure describing operational conditions within a traffic stream and the perception by motorists and/or passengers. In general, there are 6 levels of service, designated from A to F, with Level of Service A representing the best operating condition (i.e. free flow) and Level of Service F the worst (i.e. forced or breakdown flow).

The worst-case scenario is the 10 years post development analysis. The SIDRA analysis results indicate that the site crossover will operate at a satisfactory level of service 'A' with no queuing or delays.

Detailed SIDRA outputs are provided in Appendix C.

7 Traffic management on the frontage roads

Information from online mapping services, Main Roads WA, Local Government, and/or site visits was collected to assess the existing traffic management on frontage roads.

7.1.1 Durkin Road

Durkin Road near the subject site is an approximately 8m wide, two-way single carriageway sealed road. It is classified as a *Local Distributor* road in the Main Roads WA road hierarchy (Figure 10) and currently operates under a default speed limit (Figure 11). *Local Distributor* roads are normally the responsibility of Local Government. They are predominantly for the movement of traffic within local areas (Figure 12).

Traffic data collected during the video survey indicates that Durkin Road carries around 1,700 vehicles per day (vpd), in 2022.

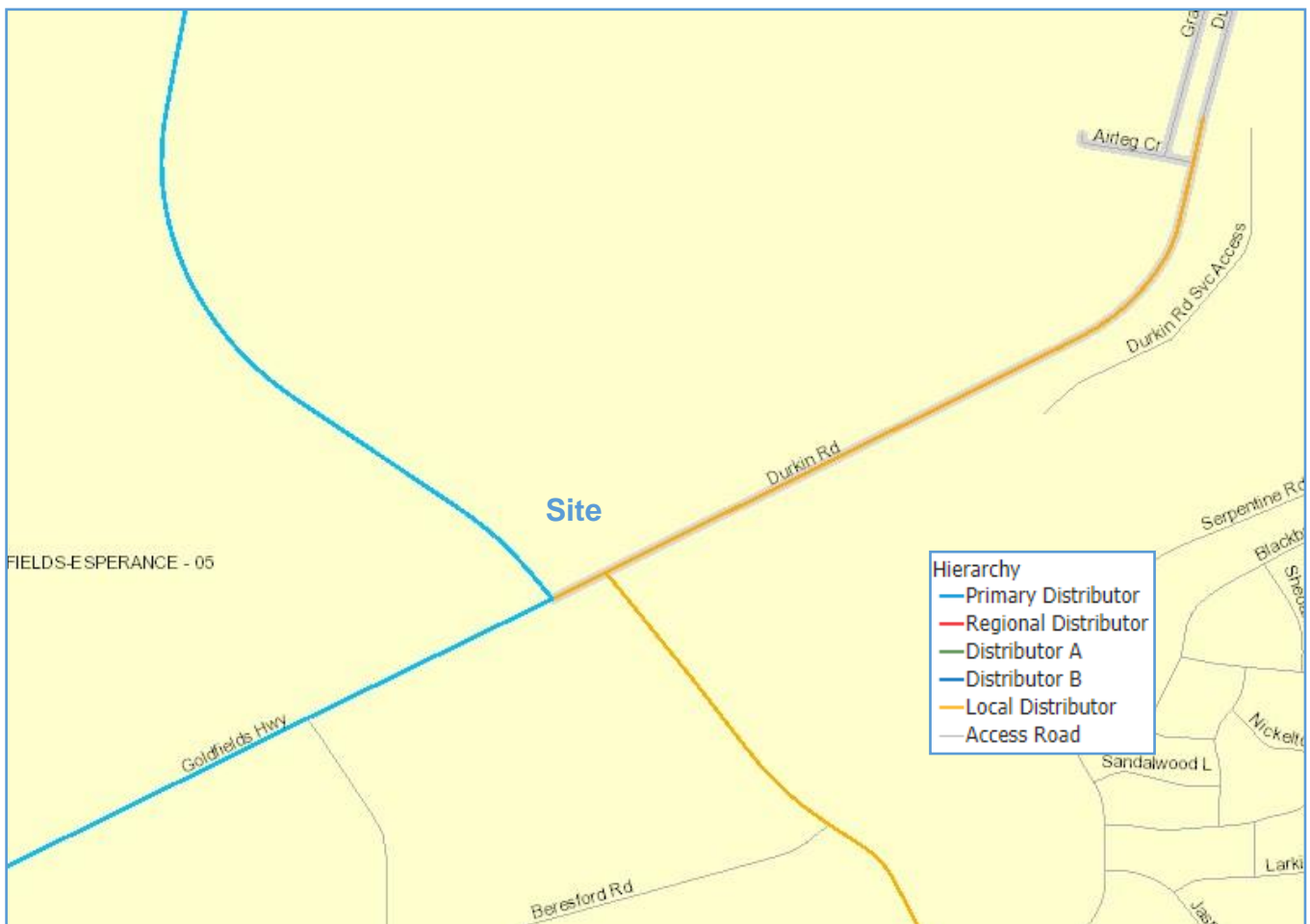


Figure 10: Main Roads WA road hierarchy plan

Source: Main Roads WA Road Information Mapping System (RIM)

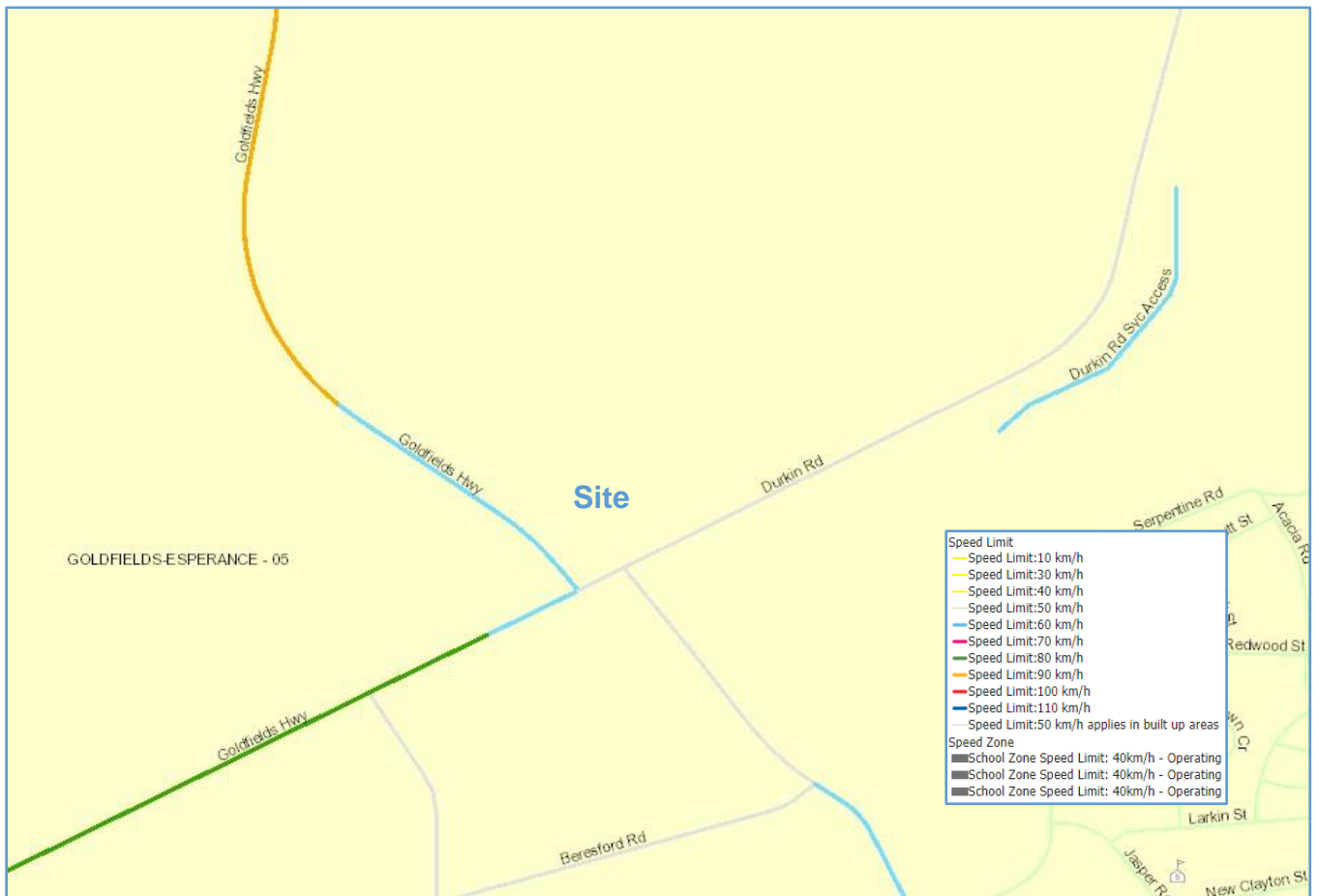


Figure 11: Main Roads WA road speed zoning plan

Source: Main Roads WA Road Information Mapping System (RIM)



ROAD HIERARCHY FOR WESTERN AUSTRALIA
ROAD TYPES AND CRITERIA (see Note 1)

CRITERIA	PRIMARY DISTRIBUTOR (PD) (see Note 2)	DISTRICT DISTRIBUTOR A (DA)	DISTRICT DISTRIBUTOR B (DB)	REGIONAL DISTRIBUTOR (RD)	LOCAL DISTRIBUTOR (LD)	ACCESS ROAD (A)
<i>Primary Criteria</i>						
1. Location (see Note 3)	All of WA incl. BUA	Only Built Up Area.	Only Built Up Area.	Only Non Built Up Area. (see Note 4)	All of WA incl. BUA	All of WA incl. BUA
2. Responsibility	Main Roads Western Australia.	Local Government.	Local Government.	Local Government.	Local Government.	Local Government.
3. Degree of Connectivity	High. Connects to other Primary and Distributor roads.	High. Connects to Primary and/or other Distributor roads.	High. Connects to Primary and/or other Distributor roads.	High. Connects to Primary and/or other Distributor roads.	Medium. Minor Network Role Connects to Distributors and Access Roads.	Low. Provides mainly for property access.
4. Predominant Purpose	Movement of inter regional and/or cross town/city traffic, e.g. freeways, highways and main roads.	High capacity traffic movements between industrial, commercial and residential areas.	Reduced capacity but high traffic volumes travelling between industrial, commercial and residential areas.	Roads linking significant destinations and designed for efficient movement of people and goods between and within regions.	Movement of traffic within local areas and connect access roads to higher order Distributors.	Provision of vehicle access to abutting properties
<i>Secondary Criteria</i>						
5. Indicative Traffic Volume (AADT)	In accordance with Classification Assessment Guidelines.	Above 8 000 vpd	Above 6 000 vpd.	Greater than 100 vpd	Built Up Area - Maximum desirable volume 6 000 vpd. Non Built Up Area – up to 100 vpd.	Built Up Area - Maximum desirable volume 3 000 vpd. Non Built Up Area – up to 75 vpd.
6. Recommended Operating Speed	60 – 110 km/h (depending on design characteristics).	60 – 80 km/h.	60 – 70 km/h.	50 – 110 km/h (depending on design characteristics).	Built Up Area 50 - 60 km/h (desired speed) Non Built Up Area 60 – 110 km/h (depending on design characteristics).	Built Up Area 50 km/h (desired speed). Non Built Up Area 50 – 110 km/h (depending on design characteristics).
7. Heavy Vehicles permitted	Yes.	Yes.	Yes.	Yes.	Yes, but preferably only to service properties.	Only to service properties.
8. Intersection treatments	Controlled with appropriate measures e.g. high speed traffic management, signing, line marking, grade separation.	Controlled with appropriate measures e.g. traffic signals.	Controlled with appropriate Local Area Traffic Management.	Controlled with measures such as signing and line marking of intersections.	Controlled with minor Local Area Traffic Management or measures such as signing.	Self controlling with minor measures.
9. Frontage Access	None on Controlled Access Roads. On other routes, preferably none, but limited access is acceptable to service individual properties.	Prefer not to have residential access. Limited commercial access, generally via service roads.	Residential and commercial access due to its historic status. Prefer to limit when and where possible.	Prefer not to have property access. Limited commercial access, generally via lesser roads.	Yes, for property and commercial access due to its historic status. Prefer to limit whenever possible. Side entry is preferred.	Yes.
10. Pedestrians	Preferably none. Crossing should be controlled where possible.	With positive measures for control and safety e.g. pedestrian signals.	With appropriate measures for control and safety e.g. median/islands refuges.	Measures for control and safety such as careful siting of school bus stops and rest areas.	Yes, with minor safety measures where necessary.	Yes.
11. Buses	Yes.	Yes.	Yes.	Yes.	Yes.	If necessary (see Note 5)
12. On-Road Parking	No (emergency parking on shoulders only).	Generally no. Clearways where necessary.	Not preferred. Clearways where necessary.	No – emergency parking on shoulders – encourage parking in off road rest areas where possible.	Built Up Area – yes, where sufficient width and sight distance allow safe passing. Non Built Up Area – no. Emergency parking on shoulders.	Yes, where sufficient width and sight distance allow safe passing.
13. Signs & Linemarking	Centrelines, speed signs, guide and service signs to highway standard.	Centrelines, speed signs, guide and service signs.	Centrelines, speed signs, guide and service signs.	Centrelines, speed signs and guide signs.	Speed and guide signs.	Urban areas – generally not applicable. Rural areas - Guide signs.
14. Rest Areas/Parking Bays	In accordance with Main Roads' <i>Roadside Stopping Places Policy</i> .	Not Applicable.	Not Applicable.	Parking Bays/Rest Areas. Desired at 60km spacing.	Not Applicable.	Not Applicable.

Figure 12: Road types and criteria for Western Australia

Source: Main Roads Western Australia D10#10992

8 Public transport access

Due to the nature of the land uses and the location, public transport is not a critical consideration for this development. The site uses private buses to transport workers.



9 Site specific issues

No additional site-specific issues were identified within the scope of this assessment.

10 Safety issues

The five-year crash history in the vicinity of the site was obtained from Main Roads WA. As detailed in Figure 13, 5 crashes were recorded in the locality in the last five years. No crashes were recorded at the site crossover.

The detailed crash history is presented in Table 3. The net change in development traffic is unlikely to impact on road safety.

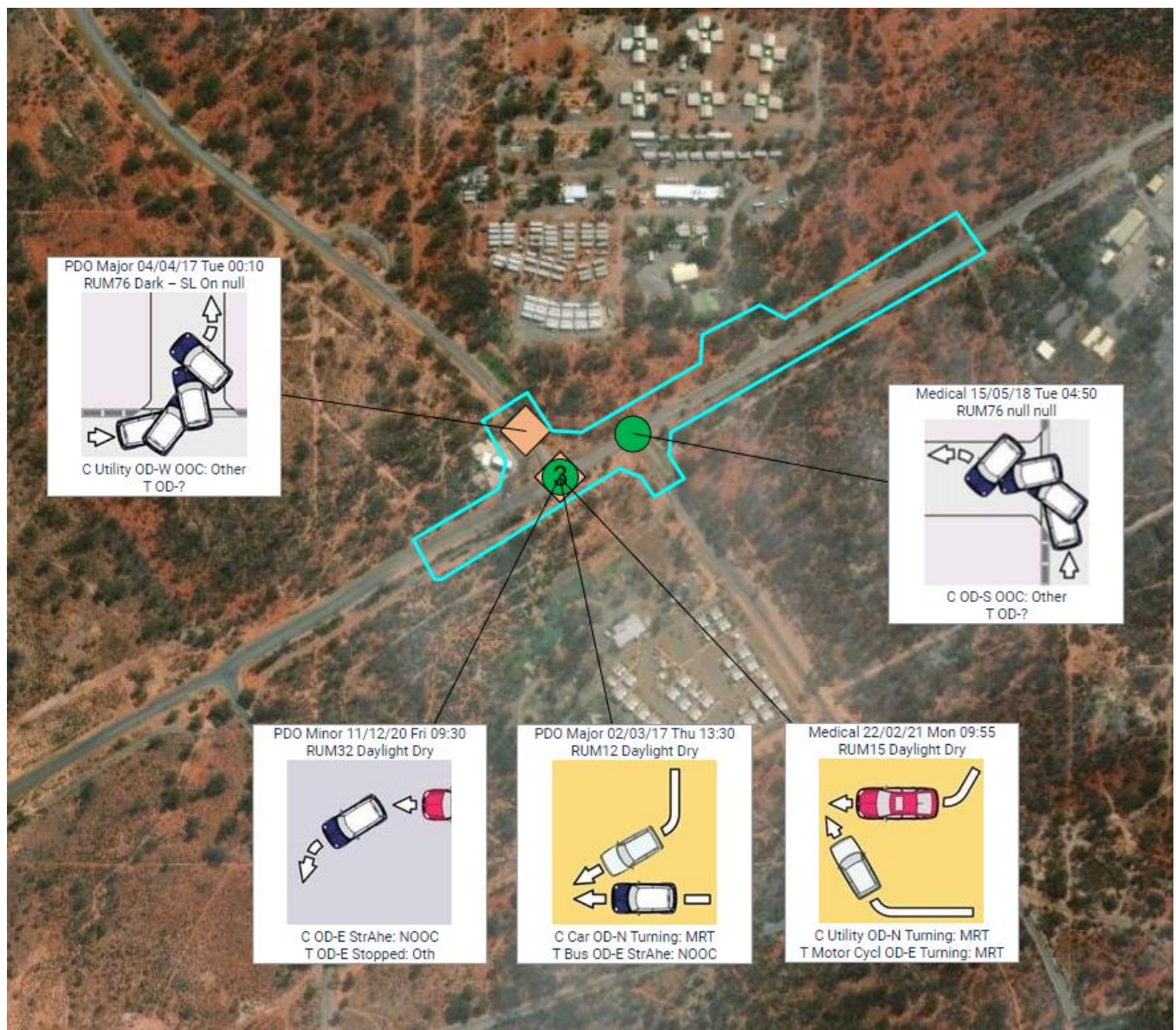


Figure 13: 5-year crash map in the locality (2017-2021)

Source: MRWA crash mapping tool



Table 3: 5-year crash history in the locality (2017-2021)

Severity	No.	%
Fatal	0	0
Hospital	0	0
Medical	2	40.00
PDO Major	2	40.00
PDO Minor	1	20.00
Year	No.	%
2017	2	40.00
2018	1	20.00
2020	1	20.00
2021	1	20.00
Nature	No.	%
Head On	0	0
Hit Animal	0	0
Hit Object	1	20.00
Hit Pedestrian	0	0
Non Collision	1	20.00
Not Known	0	0
Rear End	1	20.00
Right Angle	2	40.00
Right Turn Thru	0	0
Sideswipe Opposite Dirn	0	0
Sideswipe Same Dirn	0	0
Light	No.	%
Dark - Street Lights Not Provided	0	0
Dark - Street Lights Off	0	0
Dark - Street Lights On	1	20.00
Dawn Or Dusk	0	0
Daylight	3	60.00
Not Known	0	0
Other / Unknown	1	20.00
Conditions	No.	%
Dry	3	60.00
Not Known	0	0
Other / Unknown	2	40.00
Wet	0	0
Alignment	No.	%
Curve	1	20.00
Not Known	0	0
Other / Unknown	2	40.00
Straight	2	40.00
Total	5	

11 Conclusion

This Transport Impact Statement has been prepared by Urbii on behalf of Compass Group with regards to the proposed expansion of Kambalda Accommodation Village, in Kambalda.

The subject site is situated on the northern corner of Goldfields Highway and Durkin Road. The subject site presently accommodates Kambalda Accommodation Village. The proposal will involve an approximate net increase of 208 rooms (264 rooms added and 56 rooms to be demolished). The existing dining hall will also be replaced by a new facility closer to the entrance.

The traffic analysis undertaken in this report shows that the traffic generation of the proposed development is minimal (less than 100vph on any lane) and as such would have insignificant impact on the surrounding road network.

The car parking supply is satisfactory and can accommodate the car parking demand of the proposed development.

It is concluded that the findings of this Transport Impact Statement are supportive of the proposed development.



Appendices

Appendix A: Proposed development plans

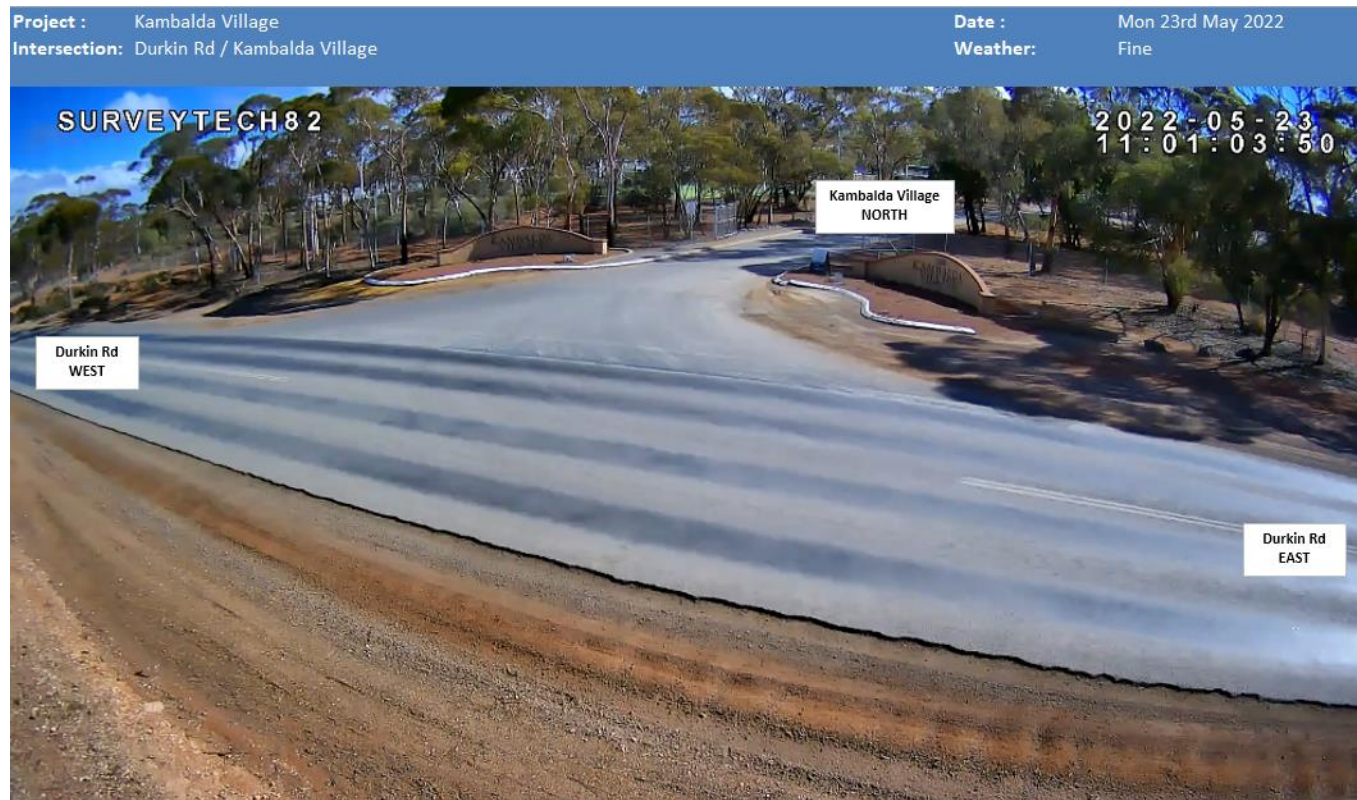
[illegible]

groundslipgroup.com.au
Registered Builders BC 102229
Perth 2/885 Wellington Street, West Perth, WA 6005
38 Hedland 4 Ayrton Street, Wangarfield, WA 6721

KAMBALDA

SCALE	JOB NO.	DWG NO.	REV
OVERALL SITE PLAN			
DATE	BY	AD	
DESIGNED	CHECKED	BY	
REVIEWED	APPROVED		
PROJECT			
LOCATION			

Appendix B: Surveyed intersection turning movements



Project: Kambalda Village
Intersection: Durkin Rd / Kambalda Village

Date: Mon 23rd May 2022
Weather: Fine

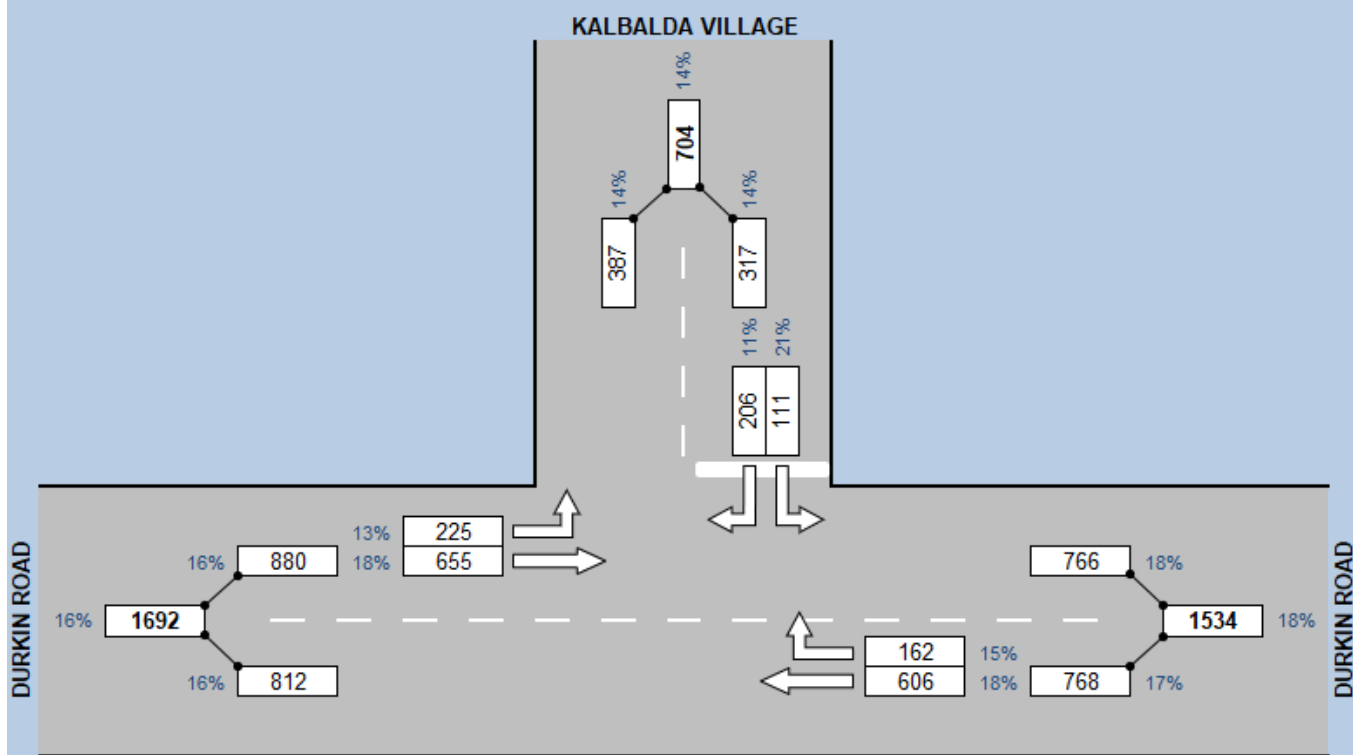


Survey Time: 24 Hour Totals

All Vehicles
(% Heavy Vehicles)

24 Hour Totals

- ☒ ALL Vehicles ☒ Heavy %
☐ Light Vehicles
☐ Heavy Vehicles



Project: Kambalda Village
Intersection: Durkin Rd / Kambalda Village

Date: Mon 23rd May 2022
Weather: Fine

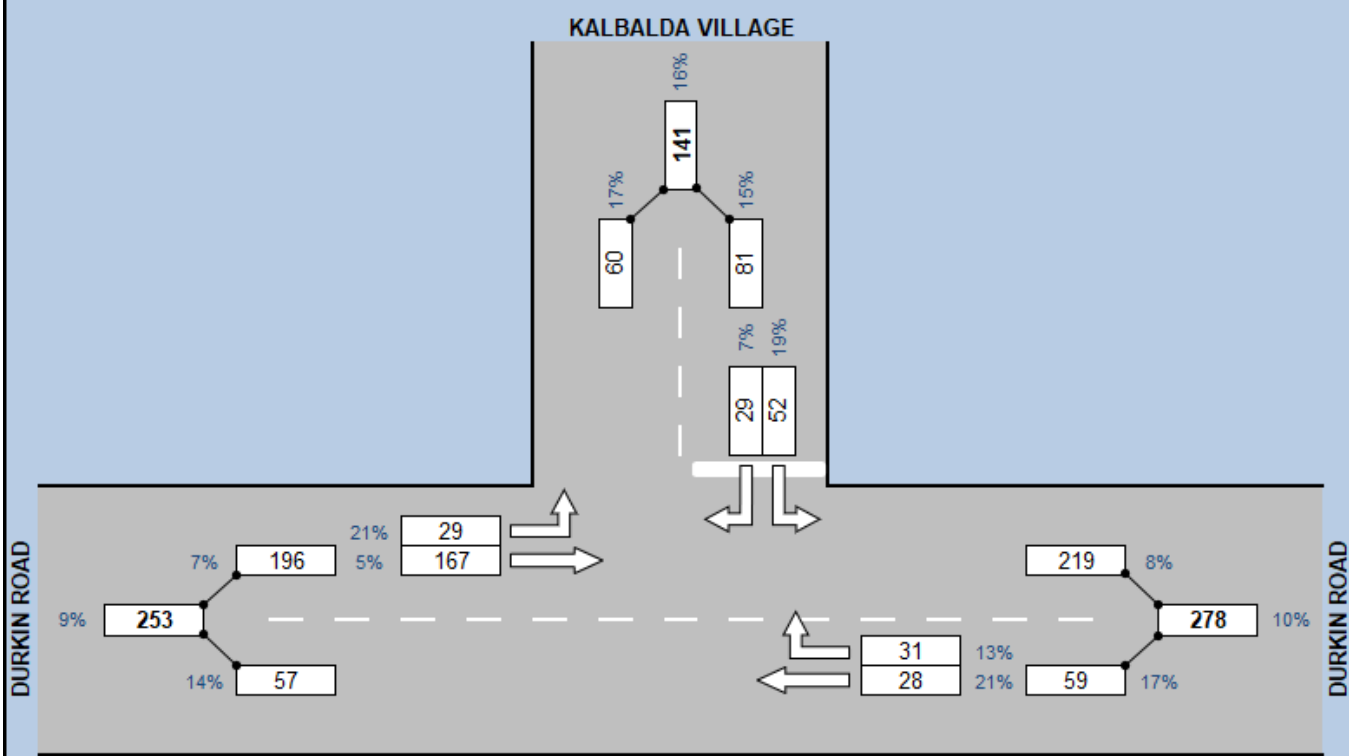


Survey Time: AM Peak Hour - 0445 - 0545

All Vehicles
(% Heavy Vehicles)

AM Peak Hour - 0445 - 0545

- ☒ ALL Vehicles ☒ Heavy %
☐ Light Vehicles
☐ Heavy Vehicles



Project: Kambalda Village
Intersection: Durkin Rd / Kambalda Village

Date: Mon 23rd May 2022
Weather: Fine

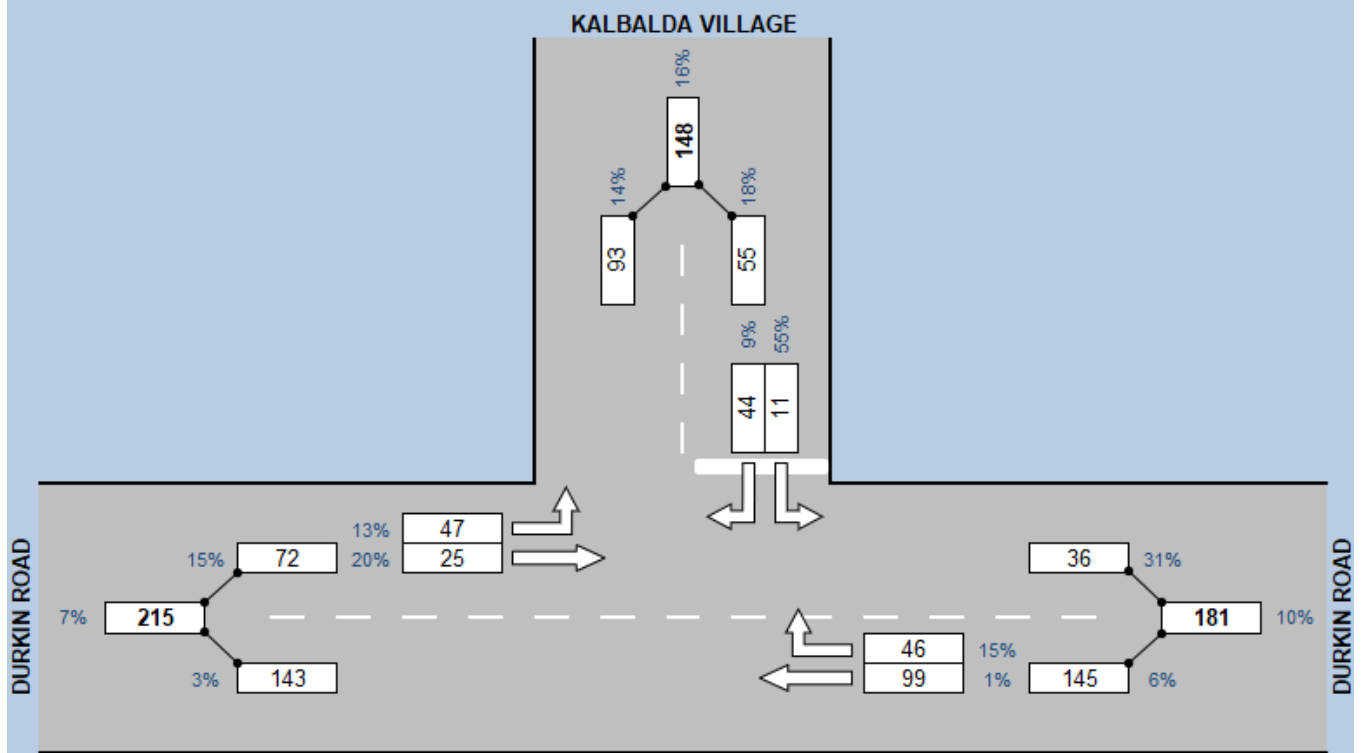


Survey Time: PM Peak Hour - 1700 - 1800

All Vehicles
(% Heavy Vehicles)

PM Peak Hour - 1700 - 1800

- ☒ ALL Vehicles ☒ Heavy %
☐ Light Vehicles
☐ Heavy Vehicles



Appendix C: SIDRA analysis outputs

SIDRA outputs are presented in the form of Degree of Saturation, Level of Service, Average Delay and 95% Queue. These characteristics are defined as follows:

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

MOVEMENT SUMMARY

▼ Site: 101 [Durkin Rd Crossover 10 yr Post Dev AM (Site Folder: General)]

U22.045 - Kambalda Workforce Accommodation
 Durkin Crossover
 10 yr Post Development - AM Peak Hour
 Site Category: (None)
 Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
						v/c	sec							km/h
East: Durkin Rd														
11	T1	56	21.0	59	21.0	0.074	1.2	LOS A	0.3	2.7	0.39	0.31	0.39	94.5
12	R2	42	13.0	44	13.0	0.074	10.0	LOS A	0.3	2.7	0.39	0.31	0.39	66.1
Approach		98	17.6	103	17.6	0.074	5.0	NA	0.3	2.7	0.39	0.31	0.39	79.8
North: Site crossover														
1	L2	71	19.0	75	19.0	0.126	7.4	LOS A	0.5	3.7	0.44	0.69	0.44	54.2
3	R2	39	7.0	41	7.0	0.126	8.1	LOS A	0.5	3.7	0.44	0.69	0.44	55.4
Approach		110	14.7	116	14.7	0.126	7.6	LOS A	0.5	3.7	0.44	0.69	0.44	54.6
West: Durkin Rd														
4	L2	40	21.0	42	21.0	0.207	8.8	LOS A	0.0	0.0	0.00	0.07	0.00	57.6
5	T1	334	5.0	352	5.0	0.207	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	107.5
Approach		374	6.7	394	6.7	0.207	1.0	NA	0.0	0.0	0.00	0.07	0.00	98.4
All Vehicles		582	10.1	613	10.1	0.207	2.9	NA	0.5	3.7	0.15	0.23	0.15	82.6

MOVEMENT SUMMARY

▼ Site: 101 [Durkin Rd Crossover 10 yr Post Dev PM (Site Folder: General)]

U22.045 - Kambalda Workforce Accommodation
 Durkin Crossover
 10 yr Post Development - PM Peak Hour
 Site Category: (None)
 Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Durkin Rd														
11	T1	198	1.0	208	1.0	0.154	0.2	LOS A	0.5	3.6	0.14	0.16	0.14	102.5
12	R2	63	15.0	66	15.0	0.154	8.8	LOS A	0.5	3.6	0.14	0.16	0.14	69.7
Approach		261	4.4	275	4.4	0.154	2.3	NA	0.5	3.6	0.14	0.16	0.14	92.0
North: Site crossover														
1	L2	15	55.0	16	55.0	0.087	6.4	LOS A	0.3	2.4	0.24	0.63	0.24	50.6
3	R2	60	9.0	63	9.0	0.087	7.3	LOS A	0.3	2.4	0.24	0.63	0.24	55.6
Approach		75	18.2	79	18.2	0.087	7.1	LOS A	0.3	2.4	0.24	0.63	0.24	54.6
West: Durkin Rd														
4	L2	64	13.0	67	13.0	0.069	8.6	LOS A	0.0	0.0	0.00	0.39	0.00	55.2
5	T1	50	20.0	53	20.0	0.069	0.0	LOS A	0.0	0.0	0.00	0.39	0.00	96.2
Approach		114	16.1	120	16.1	0.069	4.8	NA	0.0	0.0	0.00	0.39	0.00	67.9
All Vehicles		450	9.6	474	9.6	0.154	3.7	NA	0.5	3.6	0.12	0.29	0.12	76.4





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ADMIN@CLEPLAN.COM.AU

+61 8 9382 1233



Shire of Coolgardie

Our Community, Our People, Our Future

(Schedule 111(A), File 13.3.13)

APPLICATION FOR PLANNING CONSENT

FORM 1

Compass (Australia) Catering & Services Pty Ltd, formally known as Eures (Australia) Catering & Services Pty Ltd by its authorised representative and company secretary:

Name of Owner of Land) Surname Murray
on which development) Christian Names Bart
proposed) Address in Full Level 2, 35-51 Mitchell Street, McMahons Point, NSW, 2060

Submitted by CLE Town Planning + Design

Contact telephone numbers: H) W) 9382 1233 M)

Address for Correspondence 2 Abbotsford Street
West Leederville WA 6007
PO Box 796 Subiaco WA 6904

Locality of Development Kambalda

Title Office Description of Land

Lot No 201 Street Durkin Road Loc No

Plan of Diagram 28380 Certificate of Title Vol 2218 Folio 617

The type of development and the nature of the proposed buildings are as follows:

Additions to Existing Workforce Accommodation

The approximate cost of proposed development is \$30 Million
05/2023

The estimated time of completion is

The approximate number of person to be employed when the development is completed 47

Three copies of the Site Plan and other necessary plans of the proposals are submitted with this application.


Signed by the Owner of the Land



Shire of Coolgardie

Our Community, Our People, Our Future

(Schedule 111(A), File 13.3.13)

APPLICATION FOR PLANNING CONSENT

FORM 1

Director of landowner

Name of Owner of Land) Surname McArdle
on which development) Christian Names Rosie
proposed) Address in Full Ground Floor, 35-51 Mitchell St
McMahons Point, NSW 2060

Submitted by CLE Town Planning + Design

Contact telephone numbers: H) W) 9382 1233 M)

Address for Correspondence 2 Abbotsford Street
West Leederville WA 6007
PO Box 796 Subiaco WA 6904

Locality of Development Kambalda

Title Office Description of Land

Lot No 201 Street Durkin Road Loc No

Plan of Diagram 28380 Certificate of Title Vol 2218 Folio 617

The type of development and the nature of the proposed buildings are as follows:

Additions to Existing Workforce Accommodation

The approximate cost of proposed development is 30M

The estimated time of completion is 05/2023

The approximate number of person to be employed when the development is completed 47

Three copies of the Site Plan and other necessary plans of the proposals are submitted with this application.


Signed by the Owner of the Land

NOTE: A separate application is required to be submitted to the Council for a building licence (where applicable).

APPLICATION FOR PLANNING CONSENT

Every application for Planning Consent shall be made in the form prescribed on the reverse side of this sheet.

GENERAL:

Unless Council waives any particular requirement every Application for Planning Consent shall be accompanied by:

- (a) A plan or plans to scale of not less than 1:500 showing
 1. Street names, lot numbers, north point, dimensions of site.
 2. Location and proposed use of any existing buildings to be retained and the location and use of buildings proposed to be erected on the site.
 3. The existing and proposed means of access for pedestrians and vehicles to and from the site.
 4. The location, number, dimensions, layout of all car parking spaces intended to be provided.
 5. The location and dimensions of any area proposed to be provided for the loading and unloading of vehicles carrying goods or commodities to and from the site and the means of access to and from these areas.
 6. The locations, dimensions and design of any open storage or trade display area and particulars of the manner in which it is proposed to develop the same.

- (b) Plans elevations and sections of any building proposed to be erected or altered and of any building it is intended to retain;

- (c) Industrial Development
A landscaping plan detailing the layout, planting schedule and proposed method of maintaining the landscaped area in a condition acceptable to Council. The plan should demonstrate compliance with District Town Planning Scheme No. 4, Table II Development Table and Clauses 5.10.2, 5.10.3, 5.10.4.
 - 5.10.2 The front setback area may be used only for the purposes of landscaping, visitors car parking or access. The Council may approve the use of the front setback area for display or for loading and unloading of vehicles. No material or product may be stored within the front setback area.
 - 5.10.3 Where an open storage area is visible from a public place or street, and is not of a display nature, it shall be screened to the satisfaction of the Council.
 - 5.10.4 Street setback areas shall be landscaped, including an area of not less than one metre wide adjacent to each side boundary, except where an access is shared between adjacent lots. Areas other than the front setback that are visible from a public street or place shall be developed with landscaped open space or screened to the approval of Council.

From: Harry Norman <harry@cleplan.com.au>
Sent: Wednesday, 20 July 2022 3:44 PM
To: Francesca Lefante <Planning@coolgardie.wa.gov.au>
Subject: Lot 201 Durkin Road, Kambalda

Hi Francesca

Further to our chat yesterday, I just thought I'd follow up to clarify the proposed parking strategy for the Kambalda expansion.

Whilst the site plan does show parking bays outside the proposed accommodation blocks, I just wanted to clarify that these bays will be unsealed, informal parking areas and will not be constructed as hard stand parking bays. As the majority of those staying at the Kambalda Village travel to site by bus, these areas are not formally required to satisfy the relatively low demand for private parking on site. These areas are in addition to the proposed 36 car bays just south of the proposed dining hall facility.

To avoid any confusion as to whether these bays will be constructed, as had been mentioned in our earlier discussion, is it worth updating the site plan to remove reference to these bays and if so will this have any impact on your assessment timeframe?

Thanks Francesca and happy to discuss.

Harry Norman
Planner



2 Abbotsford Street West Leederville WA 6007
PO Box 796 Subiaco WA 6904
Whadjuk Country of the Noongar Nation
harry@cleplan.com.au
08 9382 1233 0414 792 424



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From: Harry Norman <harry@cleplan.com.au>
Sent: Wednesday, 17 August 2022 3:25 PM
To: Francesca Lefante <Planning@coolgardie.wa.gov.au>
Cc: Daniel Martinovich <daniel@cleplan.com.au>
Subject: RE: LOT 201 Durkin Road, Kambalda East - queries

Hi Francesca |

As discussed, please see responses below.

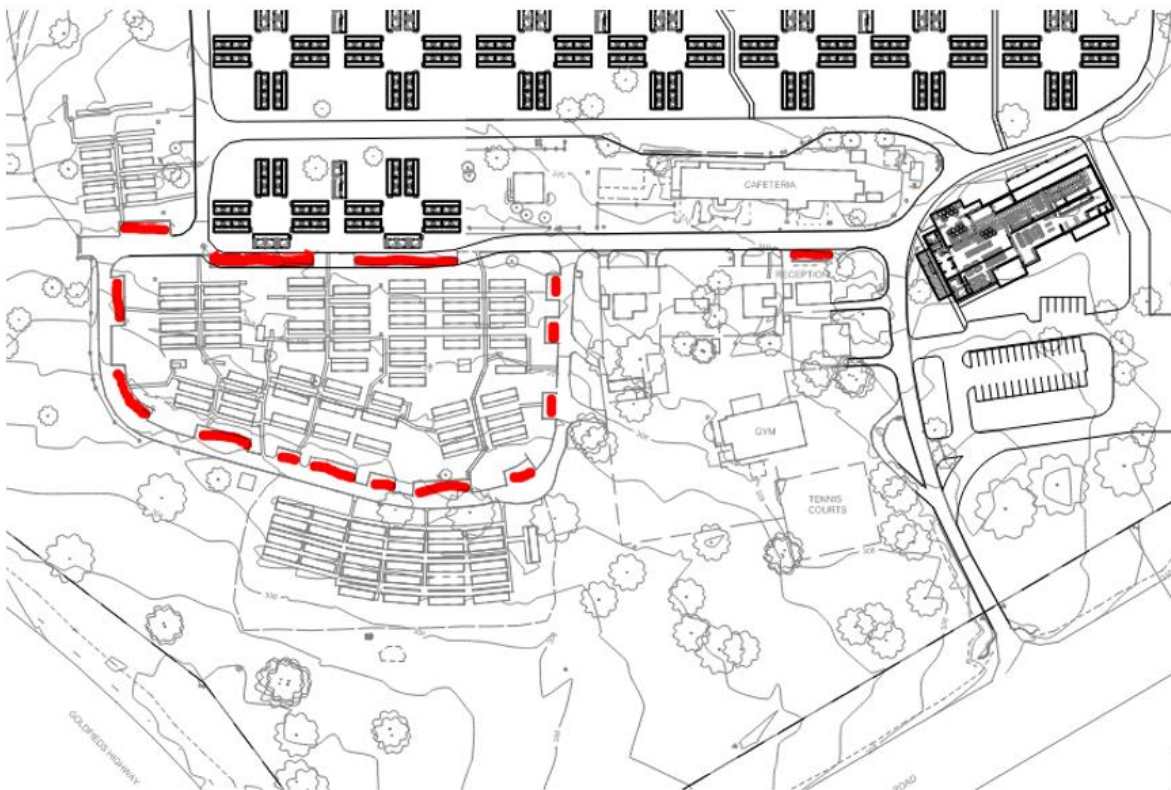
1. On-site Parking

The proposed development includes an additional 36 bays, located just south of the proposed dining hall facility – these are indicated on the site plan.

The informal, unsealed areas located adjacent the proposed accommodation blocks will not be constructed to accommodate formal parking bays. Despite this, there remains opportunity to accommodate informal parking in these areas if required, however, as noted previously it is unlikely this will be required given the relatively low demand for private parking with the majority of those staying at the site travelling by bus.

In terms of existing parking, there are several dedicated parking areas which provide a total of 70 hardstand bays (see highlighted below). Note that these areas are not definitively line marked.

Ultimately, the parking arrangements on site are consistent with the operational requirements of the facility which currently function effectively.



2. SPP5.4 Road and Rail Noise

As required by SPP5.4 an initial screening assessment mentioned in Section 4.1.2 of SPP5.4 has been undertaken, and it was deemed there were no road noise impacts from Goldfields Highway on the proposed development as demonstrated below.

Goldfields Highway is identified in the SPP 5.4 map database as a trigger for SPP 5.4, being an 'strategic freight or major traffic route'. The associated 300m policy trigger distance only covers the western portion of the subject site. SPP 5.4 (Section 4.1.2) states that: *"Where any part of the lot is within the specified trigger distance, an assessment against the policy is required to determine the likely level of transport noise and management / mitigation required. An initial screening assessment (guidelines: Table 2: noise exposure forecast) will determine if the lot is affected and to what extent"*.

The "initial screening assessment" is the first step in a potentially 3-step process described from Sections 6.2 to 6.4 of SPP 5.4, inclusive. The first step uses *Table 2 – Noise exposure forecast* in the Guidelines to clarify whether, for a specific site within the generic trigger distance, there is any noise issue requiring further investigation. With reference to Table 2 in the SPP5.4 Guidelines (Guidelines), we note that Goldfields Highway would be a 2-4 lane strategic freight or major traffic route. The distance between the western boundary of the proposed building envelope and the nearest Goldfields Highway carriageway is approximately 180 metres. Using these inputs, Table 2 suggests that noise exposure for those lots would be 54 decibels, which equates to 'no further measures'.

It is also noted that noise mitigation measures were not deemed necessary for existing buildings on site which are currently located closer to the Goldfields Highway carriageway. These existing buildings as well as the vegetation fronting Goldfields Highway will also provide for further noise reductions from Goldfields Highway as provided for in section 3.3.1 of the Guidelines.

As such, the preparation of a noise level contour map and noise management plan was not deemed necessary given the considerable separation between the proposed development and Goldfields Highway which is unlikely to result in any noise related impacts for the site.

Thanks and happy to discuss.



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Sustainable Transport. Safe Solutions

Kambalda Accommodation Village Proposed Development

Traffic Impact Assessment



Prepared for:
Compass Group

August 2022

Kambalda Accommodation Village

Prepared for: Compass Group
Prepared by: Paul Ghanous
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1 Introduction

This Transport Impact Statement has been prepared by **Urbii** on behalf of **Compass Group** with regards to the proposed development at **Kambalda Accommodation Village**, in Kambalda.

The subject site is situated on the northern corner of Goldfields Highway and Durkin Road, as shown in Figure 1. The site presently accommodates Kambalda Accommodation Village. The proposal will involve an approximate net increase of 208 rooms (264 rooms added and 56 rooms to be demolished). The existing dining hall will also be replaced by a new facility closer to the entrance.

The key issues that will be addressed in this report include the traffic generation and distribution of the proposed development, access and egress movement patterns, car parking and traffic analysis of the site access on Durkin Road.

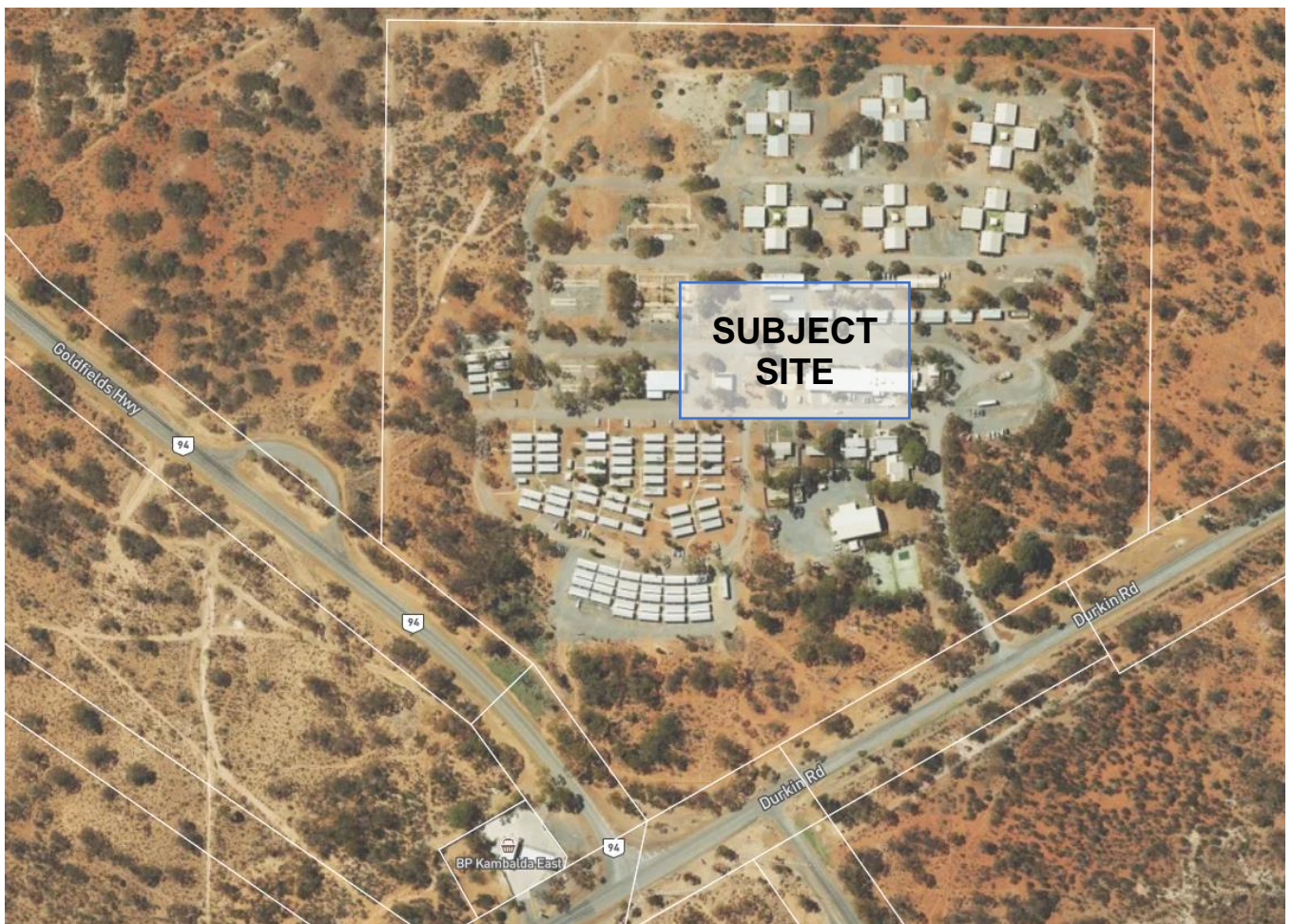


Figure 1: Subject site



2 Proposed development

The proposal for the subject site is for expansion of the existing workforce accommodation comprising:

- Retention of existing amenities including the cafeteria, swimming pool, tennis court and gym;
- Net increase of 208 rooms (264 rooms added and 56 rooms to be demolished);
- Total increase in rooms from 574 to 782;
- Demolition of the existing dining hall and relocation to be closer to the main entrance; and,
- Construction of car parking for the relocated dining hall (approximately 36 bays).

Vehicle access to the site is via the existing intersection on Durkin Road.

Waste collection, delivery and other service vehicle activity for the site will be accommodated within the site as per existing arrangements.

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

3 Vehicle access and parking

3.1 Vehicle access

Vehicle access to the subject site is presently accommodated via an intersection with Durkin Road (Figure 2).

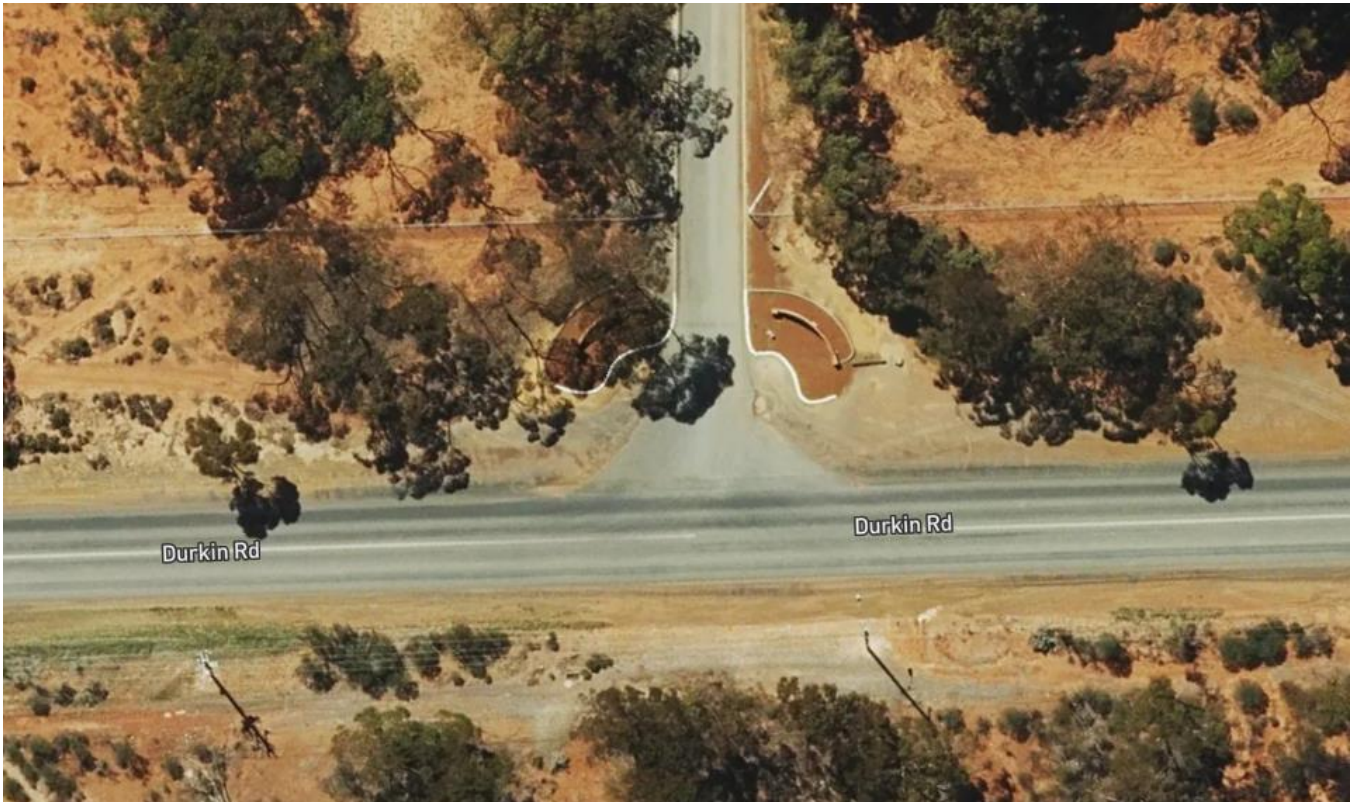


Figure 2: Existing vehicle access

A sealed road network is constructed within the site, to facilitate vehicle circulation to and from the residential buildings and other site amenities (Figure 3). Car parking is distributed throughout the site, so that people can park close to their destination.

The vehicle access to the external road network is proposed to be retained as per the existing situation with no changes. Only minor changes to the internal circulation roads are proposed, with additional roads and car parking to be constructed around the relocated dining hall.



Figure 3: Existing vehicle circulation and parking

3.2 Parking supply and demand

Approximately 36 car bays will be provided for the dining hall. The proposed car parking provision is influenced by the operational requirements of the facility. Some residents with access to a vehicle presently park informally within the site near their allocated room.

Car parking will be monitored and managed by the site operator. It is understood there is surplus land area to accommodate additional parking should it be required in the future.

It is recommended that two ACROD bays be provided for the dining hall.

4 Provision for service vehicles

For this nature of land uses, service vehicles which may need to access the site may include:

- Waste collection trucks;
- Delivery trucks; and,
- Other service vehicles (such as laundry).

Based on advice provided to Urbii, the existing accommodation village has been operating successfully and service vehicle arrangements and scheduling will be retained as per the existing situation.

Suitable provisions for loading and waste collection should be allowed for the dining hall as part of subsequent detailed design stages.



5 Hours of operation

A 24-hour video survey was undertaken of the site access intersection with Durkin Road. The survey was undertaken on a standard weekday in May 2022. Analysis of the survey data showed that traffic was active for every hour of the 24-hour period (Figure 4). However, the core activity was recorded between 4:00am and 8:00pm.

6 Daily traffic volumes and vehicle types

6.1 Traffic generation

To establish the existing traffic generation of the site, a 24-hour video survey was undertaken of the site access intersection with Durkin Road. The survey was undertaken on a standard weekday on Monday 23 May 2022. The site traffic generation by hour is shown by direction in Figure 4. The combined inbound and outbound flows are presented in Figure 5.

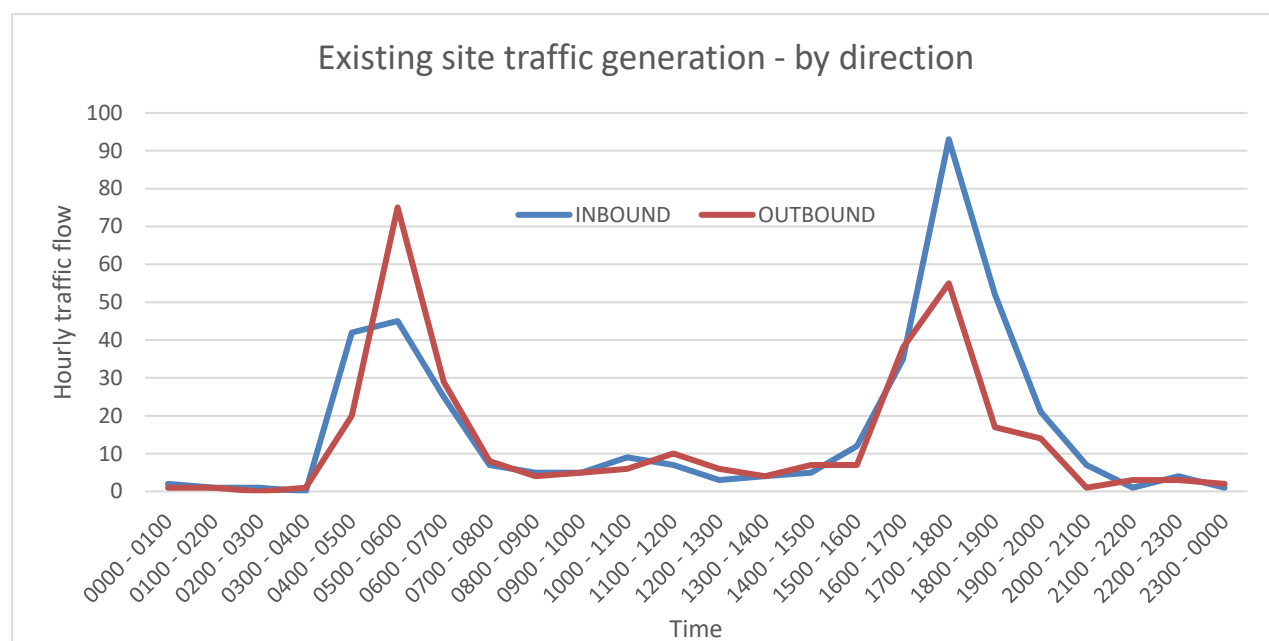


Figure 4: Hourly site traffic generation (by direction) – Monday 23 May 2022

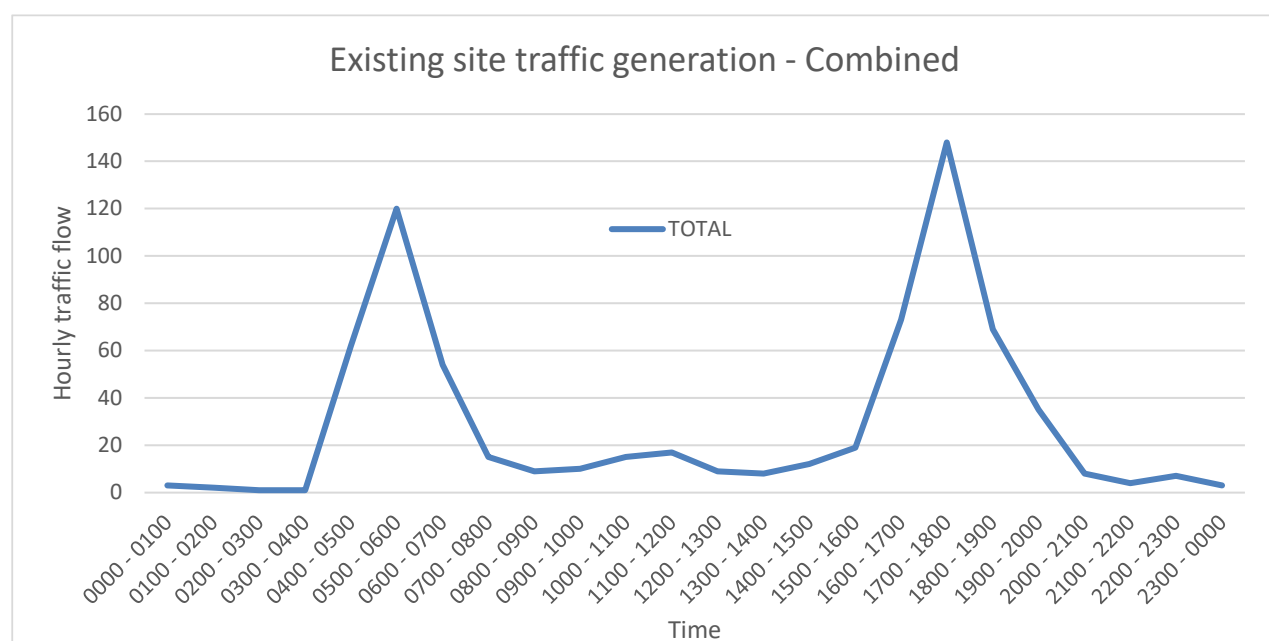


Figure 5: Hourly site traffic generation (combined) – Monday 23 May 2022



The AM peak hour for the site was recorded between 4:45am and 5:45am. The PM peak hour was recorded between 5:00pm and 6:00pm. The site generates around 140 to 150 vehicles per hour (vph) during the peak hours and around 700 vehicles per day (vpd). Over the 24-hour period, approximately 15% of traffic was categorised as “heavy vehicles”. These would include service trucks and buses for group transport of workers. Surveyed traffic generation also includes visitors to the site. Visitors may be seeing residents or eating at the dining hall from an external origin. Surveyed existing turning flow diagrams are included in Appendix B.

Table 1: Existing site traffic generation

TIME	INBOUND	OUTBOUND	TOTAL
0000 - 0100	2	1	3
0100 - 0200	1	1	2
0200 - 0300	1	0	1
0300 - 0400	0	1	1
0400 - 0500	42	20	62
0500 - 0600	45	75	120
0600 - 0700	25	29	54
0700 - 0800	7	8	15
0800 - 0900	5	4	9
0900 - 1000	5	5	10
1000 - 1100	9	6	15
1100 - 1200	7	10	17
1200 - 1300	3	6	9
1300 - 1400	4	4	8
1400 - 1500	5	7	12
1500 - 1600	12	7	19
1600 - 1700	35	38	73
1700 - 1800	93	55	148
1800 - 1900	52	17	69
1900 - 2000	21	14	35
2000 - 2100	7	1	8
2100 - 2200	1	3	4
2200 - 2300	4	3	7
2300 - 0000	1	2	3
24 HOUR	387	317	704

Source: Video survey Monday 23 May 2022

Information from the site operator indicated that there was 95% room occupancy on the day of the survey. Therefore, no seasonal adjustment was required to the traffic generation. A comparison of the existing traffic generation and post development traffic generation is presented in Table 2. It is assumed that site traffic will grow in proportion to the percentage increase in rooms, which is a 36% increase.

Table 2: Existing and proposed traffic generation

Factor	Existing	Proposed	Net change
Rooms	574	782	+208 (+36%)
AM Peak traffic (vph)			
Inbound	60	82	+22
Outbound	81	110	+29
AM Total	141	192	+51
PM Peak traffic (vph)			
Inbound	93	127	+34
Outbound	55	75	+20
PM Total	148	202	+54
Daily traffic (vpd)	704	959	+255

The proposed development is estimated to generate a total of 959 vehicles per day (vpd) and 202 vehicles per hour (vph) during the PM peak hour. The net increase in site traffic is estimated to be **+255vpd** and **+54vph** when traffic generation of the existing and proposed building facilities is compared.

These trips include both inbound and outbound vehicle movements. It is anticipated that most of the vehicle types would be utility vehicles, SUVs and buses.



6.2 Impact on surrounding roads

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

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

The proposed development will not increase traffic flows on any roads adjacent to the site by the quoted WAPC threshold of +100vph to warrant further analysis. Therefore, the impact on the surrounding road network is minor.

6.3 Trip distribution and assignment

The existing traffic turning flows are detailed in Figure 6.

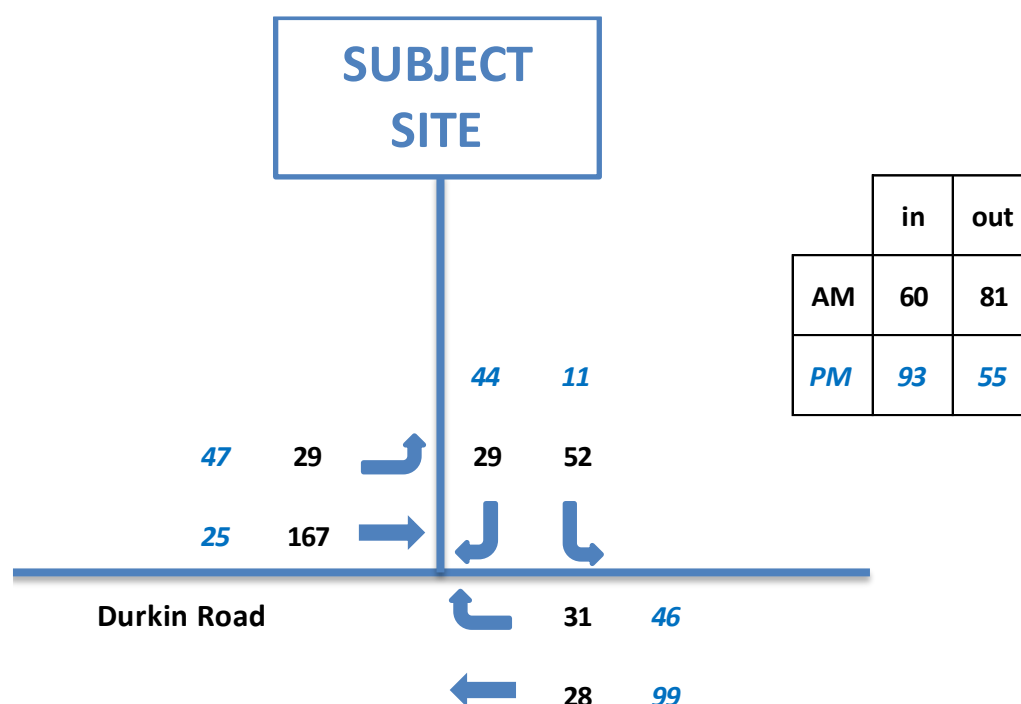


Figure 6: Existing traffic flows – peak hours

Source: Video survey Monday 23 May 2022

The post development traffic flows are detailed in Figure 7.

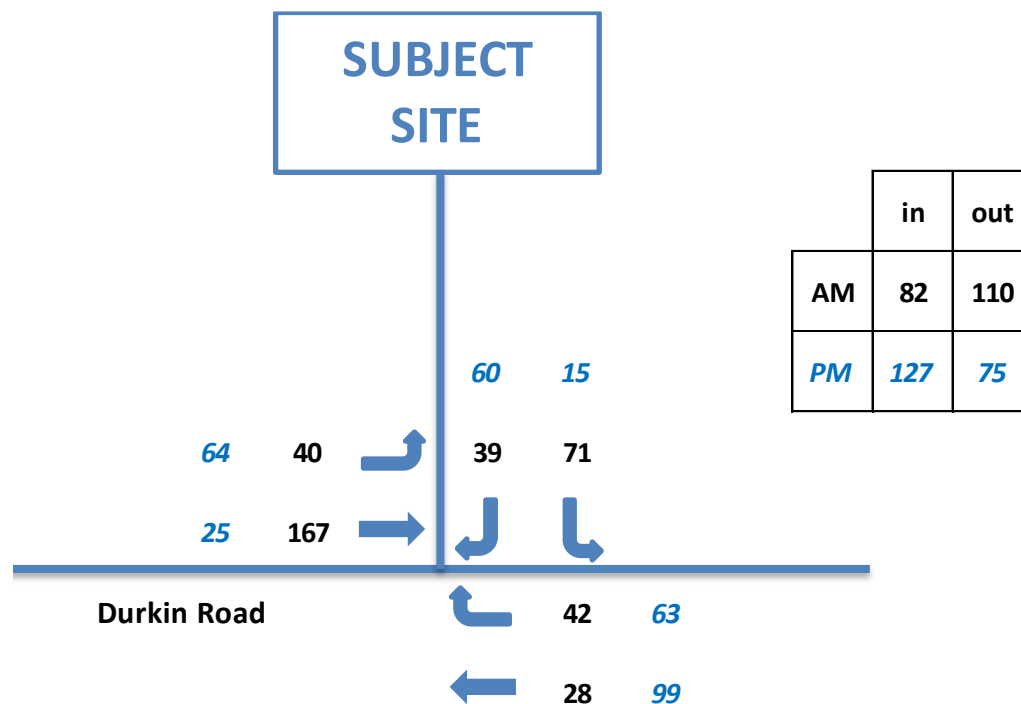


Figure 7: Post-development traffic flows – peak hours

6.3.1 10-year post development analysis

The 10-year post development assessment year adopted in this assessment is 2033. A traffic forecasting exercise was undertaken to estimate the background traffic volumes for the 10-year post development analysis in this TIA. For robust assessment it was assumed that through traffic volumes on Durkin Road would double in that time.

The resulting 10-year post development traffic flows (including background and development traffic) are detailed in Figure 8.

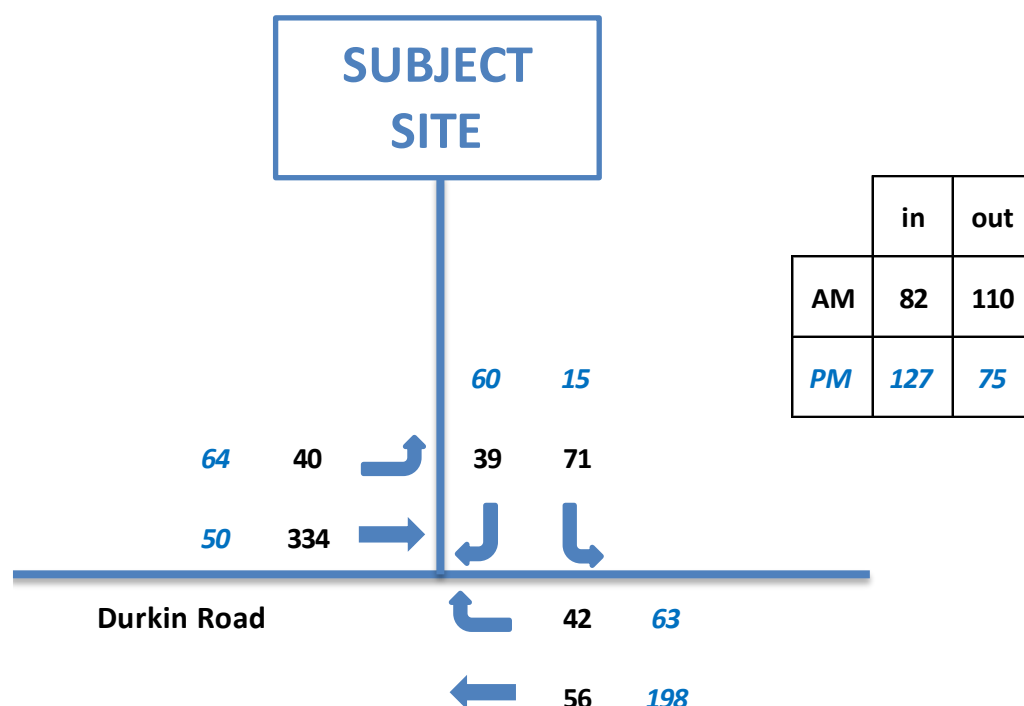


Figure 8: 10-year post development traffic flows – peak hours

6.3.2 Heavy vehicle profile

The Shire provided Urbii with classified count data for Durkin Road west of the camp entrance. The vehicle proportions highlighted in Figure 9 were adopted in the analysis. It was assumed that the peak hour proportions were the same as the daily to simplify the analysis.

Daily Classes

DailyClass-280

Site: 6020039.0.1EW
Description: Durkin Rd - approx 200mtrs from Gfds Hwy. West of camp entrance
Filter time: 16:00 Thursday, 7 July 2022 => 12:30 Thursday, 21 July 2022
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

Monday, 11 July 2022

	1	2	3	4	5	6	7	8	9	10	11	12	Total
Mon	1202	16	269	5	12	0	1	2	5	5	56	72	1645
(%)	73.1	1.0	16.4	0.3	0.7	0.0	0.1	0.1	0.3	0.3	3.4	4.4	
Tue	1294	18	303	20	10	2	2	0	4	4	74	100	1831
(%)	70.7	1.0	16.5	1.1	0.5	0.1	0.1	0.0	0.2	0.2	4.0	5.5	
Wed	1357	9	345	9	7	1	6	0	9	5	70	95	1913
(%)	70.9	0.5	18.0	0.5	0.4	0.1	0.3	0.0	0.5	0.3	3.7	5.0	
Thu	1272	22	320	23	10	1	6	0	2	5	70	85	1816
(%)	70.0	1.2	17.6	1.3	0.6	0.1	0.3	0.0	0.1	0.3	3.9	4.7	
Fri	1106	11	276	17	6	0	4	0	11	6	49	91	1577
(%)	70.1	0.7	17.5	1.1	0.4	0.0	0.3	0.0	0.7	0.4	3.1	5.8	
Sat	851	12	216	1	2	0	0	0	3	1	48	78	1212
(%)	70.2	1.0	17.8	0.1	0.2	0.0	0.0	0.0	0.2	0.1	4.0	6.4	
Sun	776	18	203	2	0	0	0	0	5	4	35	57	1100
(%)	70.5	1.6	18.5	0.2	0.0	0.0	0.0	0.0	0.5	0.4	3.2	5.2	

Average daily volume

Entire week

	1123	15	276	11	7	1	3	0	6	4	57	83	1585
(%)	70.8	1.0	17.4	0.7	0.4	0.0	0.2	0.0	0.4	0.3	3.6	5.2	

Weekdays

	1246	15	303	15	9	1	4	0	6	5	64	89	1756
(%)	71.0	0.9	17.2	0.8	0.5	0.0	0.2	0.0	0.4	0.3	3.6	5.0	

Weekend

	814	15	210	2	1	0	0	0	4	3	42	68	1156
(%)	70.4	1.3	18.1	0.1	0.1	0.0	0.0	0.0	0.3	0.2	3.6	5.8	

* - Incomplete

Figure 9: Heavy vehicle profile

Source: Shire of Coolgardie



Five different heavy vehicle classes were coded in SIDRA, as per the Main Roads WA *Operational Modelling Guidelines* (Figure 10).

MOVEMENT DEFINITIONS - Durkin Rd Crossover 10 yr Post Dev AM (Site Folder: General)

Movement Classes **Origin - Destination Movements**

Standard Classes Quick Input View Display ▼

Always Included (Standard)

	Name	ID	Model Designation
<input checked="" type="checkbox"/>	Light Vehicles	LV	Light Vehicle
<input checked="" type="checkbox"/>	Heavy Vehicles	HV	Heavy Vehicle

Select to Include (Standard)

	Name	ID	Model Designation
<input type="checkbox"/>	Buses	B	Heavy Vehicle
<input type="checkbox"/>	Bicycles	C	Light Vehicle
<input type="checkbox"/>	Large Trucks	TR	Heavy Vehicle
<input type="checkbox"/>	Light Rail / Trams	LR	Heavy Vehicle

User Classes

Select to Include (User)

	Name	ID	Base Class
<input checked="" type="checkbox"/>	Class 6-9	U1	Heavy Vehicles ▼
<input checked="" type="checkbox"/>	Class 10	U2	Heavy Vehicles ▼
<input checked="" type="checkbox"/>	Class 11	U3	Heavy Vehicles ▼
<input checked="" type="checkbox"/>	Class 12	U4	Heavy Vehicles ▼
<input type="checkbox"/>	User Class 5	U5	Large Trucks ▼
<input type="checkbox"/>	User Class 6	U6	Light Rail / Tram ▼

Figure 10: SIDRA vehicle classes

6.4 Analysis of intersections and development access

Capacity analysis of intersections was undertaken using the SIDRA 9 computer software package. SIDRA 9 is an intersection modelling tool commonly used by traffic engineers for all types of intersections.

The Durkin Road site crossover was modelled as a give-way T-intersection, as shown in Figure 11.

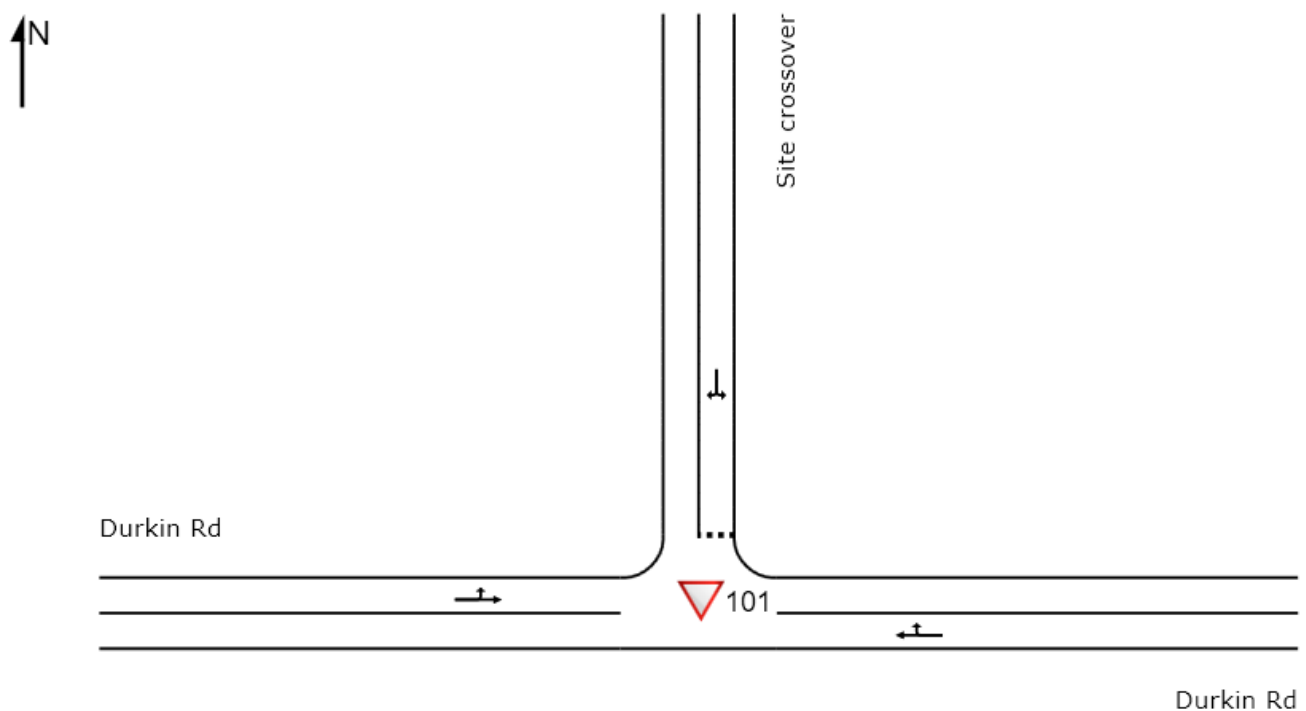


Figure 11: SIDRA model developed for analysis

LOS is the qualitative measure describing operational conditions within a traffic stream and the perception by motorists and/or passengers. In general, there are 6 levels of service, designated from A to F, with Level of Service A representing the best operating condition (i.e. free flow) and Level of Service F the worst (i.e. forced or breakdown flow).

The worst-case scenario is the 10 years post development analysis. The SIDRA analysis results indicate that the site crossover will operate at a satisfactory level of service 'A' with no queuing or delays.

Detailed SIDRA outputs are provided in Appendix C.

7 Traffic management on the frontage roads

Information from online mapping services, Main Roads WA, Local Government, and/or site visits was collected to assess the existing traffic management on frontage roads.

7.1.1 Durkin Road

Durkin Road near the subject site is an approximately 8m wide, two-way single carriageway sealed road. It is classified as a *Local Distributor* road in the Main Roads WA road hierarchy (Figure 12) and currently operates under a default speed limit (Figure 13). *Local Distributor* roads are normally the responsibility of Local Government. They are predominantly for the movement of traffic within local areas (Figure 14).

Traffic data collected during the video survey indicates that Durkin Road carries around 1,700 vehicles per day (vpd), in 2022.

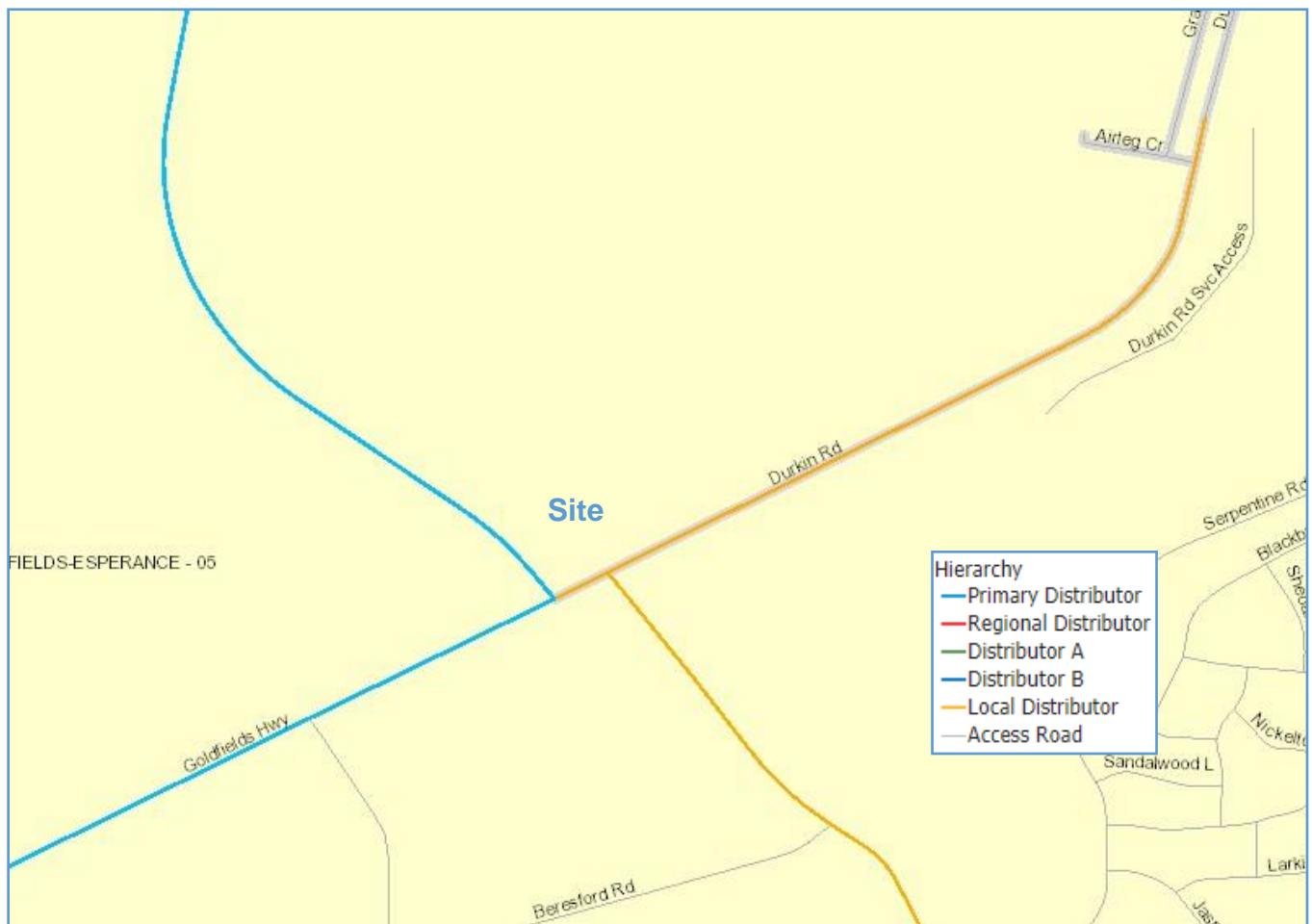


Figure 12: Main Roads WA road hierarchy plan

Source: Main Roads WA Road Information Mapping System (RIM)

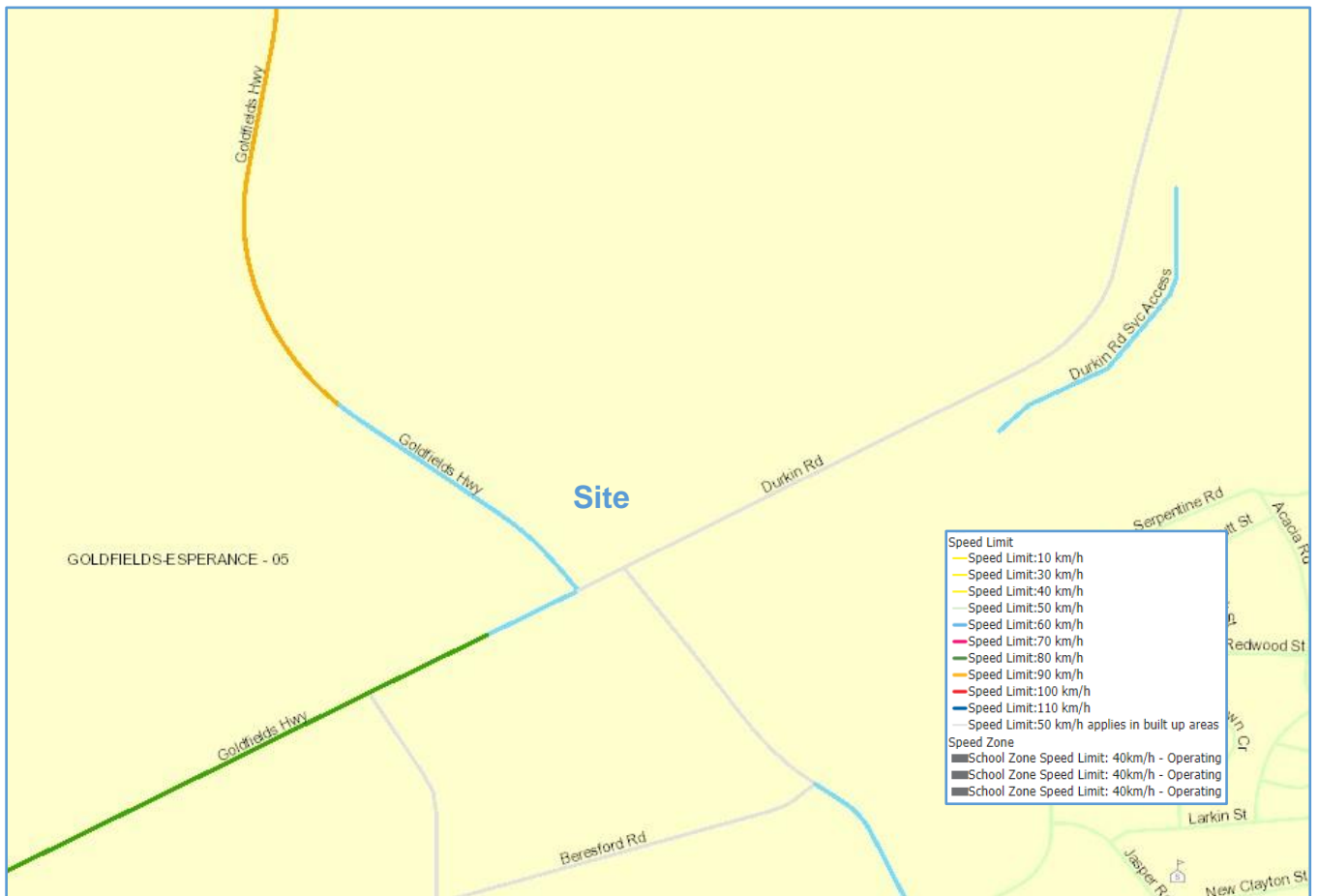


Figure 13: Main Roads WA road speed zoning plan

Source: Main Roads WA Road Information Mapping System (RIM)

ROAD HIERARCHY FOR WESTERN AUSTRALIA
ROAD TYPES AND CRITERIA (see Note 1)

CRITERIA	PRIMARY DISTRIBUTOR (PD) (see Note 2)	DISTRICT DISTRIBUTOR A (DA)	DISTRICT DISTRIBUTOR B (DB)	REGIONAL DISTRIBUTOR (RD)	LOCAL DISTRIBUTOR (LD)	ACCESS ROAD (A)
<i>Primary Criteria</i>						
1. Location (see Note 3)	All of WA incl. BUA	Only Built Up Area.	Only Built Up Area.	Only Non Built Up Area. (see Note 4)	All of WA incl. BUA	All of WA incl. BUA
2. Responsibility	Main Roads Western Australia.	Local Government.	Local Government.	Local Government.	Local Government.	Local Government.
3. Degree of Connectivity	High. Connects to other Primary and Distributor roads.	High. Connects to Primary and/or other Distributor roads.	High. Connects to Primary and/or other Distributor roads.	High. Connects to Primary and/or other Distributor roads.	Medium. Minor Network Role Connects to Distributors and Access Roads.	Low. Provides mainly for property access.
4. Predominant Purpose	Movement of inter regional and/or cross town/city traffic, e.g. freeways, highways and main roads.	High capacity traffic movements between industrial, commercial and residential areas.	Reduced capacity but high traffic volumes travelling between industrial, commercial and residential areas.	Roads linking significant destinations and designed for efficient movement of people and goods between and within regions.	Movement of traffic within local areas and connect access roads to higher order Distributors.	Provision of vehicle access to abutting properties
<i>Secondary Criteria</i>						
5. Indicative Traffic Volume (AADT)	In accordance with Classification Assessment Guidelines.	Above 8 000 vpd	Above 6 000 vpd.	Greater than 100 vpd	Built Up Area - Maximum desirable volume 6 000 vpd. Non Built Up Area – up to 100 vpd.	Built Up Area - Maximum desirable volume 3 000 vpd. Non Built Up Area – up to 75 vpd.
6. Recommended Operating Speed	60 – 110 km/h (depending on design characteristics).	60 – 80 km/h.	60 – 70 km/h.	50 – 110 km/h (depending on design characteristics).	Built Up Area 50 - 60 km/h (desired speed) Non Built Up Area 60 – 110 km/h (depending on design characteristics).	Built Up Area 50 km/h (desired speed). Non Built Up Area 50 – 110 km/h (depending on design characteristics).
7. Heavy Vehicles permitted	Yes.	Yes.	Yes.	Yes.	Yes, but preferably only to service properties.	Only to service properties.
8. Intersection treatments	Controlled with appropriate measures e.g. high speed traffic management, signing, line marking, grade separation.	Controlled with appropriate measures e.g. traffic signals.	Controlled with appropriate Local Area Traffic Management.	Controlled with measures such as signing and line marking of intersections.	Controlled with minor Local Area Traffic Management or measures such as signing.	Self controlling with minor measures.
9. Frontage Access	None on Controlled Access Roads. On other routes, preferably none, but limited access is acceptable to service individual properties.	Prefer not to have residential access. Limited commercial access, generally via service roads.	Residential and commercial access due to its historic status. Prefer to limit when and where possible.	Prefer not to have property access. Limited commercial access, generally via lesser roads.	Yes, for property and commercial access due to its historic status. Prefer to limit whenever possible. Side entry is preferred.	Yes.
10. Pedestrians	Preferably none. Crossing should be controlled where possible.	With positive measures for control and safety e.g. pedestrian signals.	With appropriate measures for control and safety e.g. median/islands refuges.	Measures for control and safety such as careful siting of school bus stops and rest areas.	Yes, with minor safety measures where necessary.	Yes.
11. Buses	Yes.	Yes.	Yes.	Yes.	Yes.	If necessary (see Note 5)
12. On-Road Parking	No (emergency parking on shoulders only).	Generally no. Clearways where necessary.	Not preferred. Clearways where necessary.	No – emergency parking on shoulders – encourage parking in off road rest areas where possible.	Built Up Area – yes, where sufficient width and sight distance allow safe passing. Non Built Up Area – no. Emergency parking on shoulders.	Yes, where sufficient width and sight distance allow safe passing.
13. Signs & Linemarking	Centrelines, speed signs, guide and service signs to highway standard.	Centrelines, speed signs, guide and service signs.	Centrelines, speed signs, guide and service signs.	Centrelines, speed signs and guide signs.	Speed and guide signs.	Urban areas – generally not applicable. Rural areas - Guide signs.
14. Rest Areas/Parking Bays	In accordance with Main Roads' <i>Roadside Stopping Places Policy</i> .	Not Applicable.	Not Applicable.	Parking Bays/Rest Areas. Desired at 60km spacing.	Not Applicable.	Not Applicable.

Figure 14: Road types and criteria for Western Australia

Source: Main Roads Western Australia D10#10992

8 Public transport access

Due to the nature of the land uses and the location, public transport is not a critical consideration for this development. The site uses private buses to transport workers.



9 Site specific issues

No additional site-specific issues were identified within the scope of this assessment.

10 Safety issues

The five-year crash history in the vicinity of the site was obtained from Main Roads WA. As detailed in Figure 15, 5 crashes were recorded in the locality in the last five years. No crashes were recorded at the site crossover.

The detailed crash history is presented in Table 3. The net change in development traffic is unlikely to impact on road safety.



Figure 15: 5-year crash map in the locality (2017-2021)

Source: MRWA crash mapping tool



Table 3: 5-year crash history in the locality (2017-2021)

Severity	No.	%
Fatal	0	0
Hospital	0	0
Medical	2	40.00
PDO Major	2	40.00
PDO Minor	1	20.00
Year	No.	%
2017	2	40.00
2018	1	20.00
2020	1	20.00
2021	1	20.00
Nature	No.	%
Head On	0	0
Hit Animal	0	0
Hit Object	1	20.00
Hit Pedestrian	0	0
Non Collision	1	20.00
Not Known	0	0
Rear End	1	20.00
Right Angle	2	40.00
Right Turn Thru	0	0
Sideswipe Opposite Dirn	0	0
Sideswipe Same Dirn	0	0
Light	No.	%
Dark - Street Lights Not Provided	0	0
Dark - Street Lights Off	0	0
Dark - Street Lights On	1	20.00
Dawn Or Dusk	0	0
Daylight	3	60.00
Not Known	0	0
Other / Unknown	1	20.00
Conditions	No.	%
Dry	3	60.00
Not Known	0	0
Other / Unknown	2	40.00
Wet	0	0
Alignment	No.	%
Curve	1	20.00
Not Known	0	0
Other / Unknown	2	40.00
Straight	2	40.00
Total	5	

11 Conclusion

This Transport Impact Statement has been prepared by Urbii on behalf of Compass Group with regards to the proposed expansion of Kambalda Accommodation Village, in Kambalda.

The subject site is situated on the northern corner of Goldfields Highway and Durkin Road. The subject site presently accommodates Kambalda Accommodation Village. The proposal will involve an approximate net increase of 208 rooms (264 rooms added and 56 rooms to be demolished). The existing dining hall will also be replaced by a new facility closer to the entrance.

The traffic analysis undertaken in this report shows that the traffic generation of the proposed development is minimal (less than 100vph on any lane) and as such would have insignificant impact on the surrounding road network.

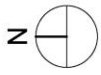
The car parking supply is satisfactory and can accommodate the car parking demand of the proposed development.

It is concluded that the findings of this Transport Impact Statement are supportive of the proposed development.



Appendices

Appendix A: Proposed development plans



NOT IN SCOPE

BOUNDARY

NOT FOR CONSTRUCTION

REV.	DATE	BY	TO	DESCRIPTION

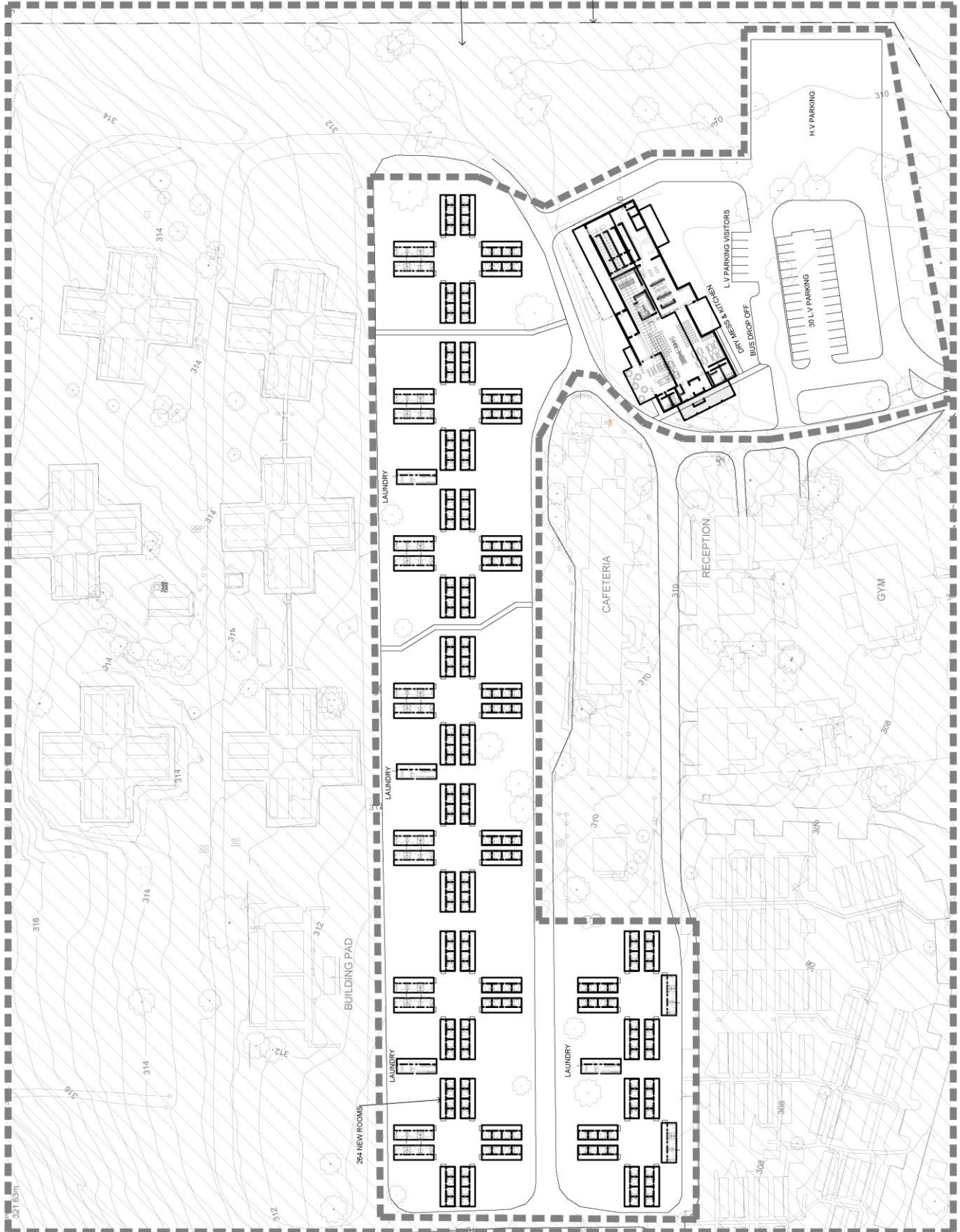
grounded.
BUILDING CONSTRUCTION, INTERIOR

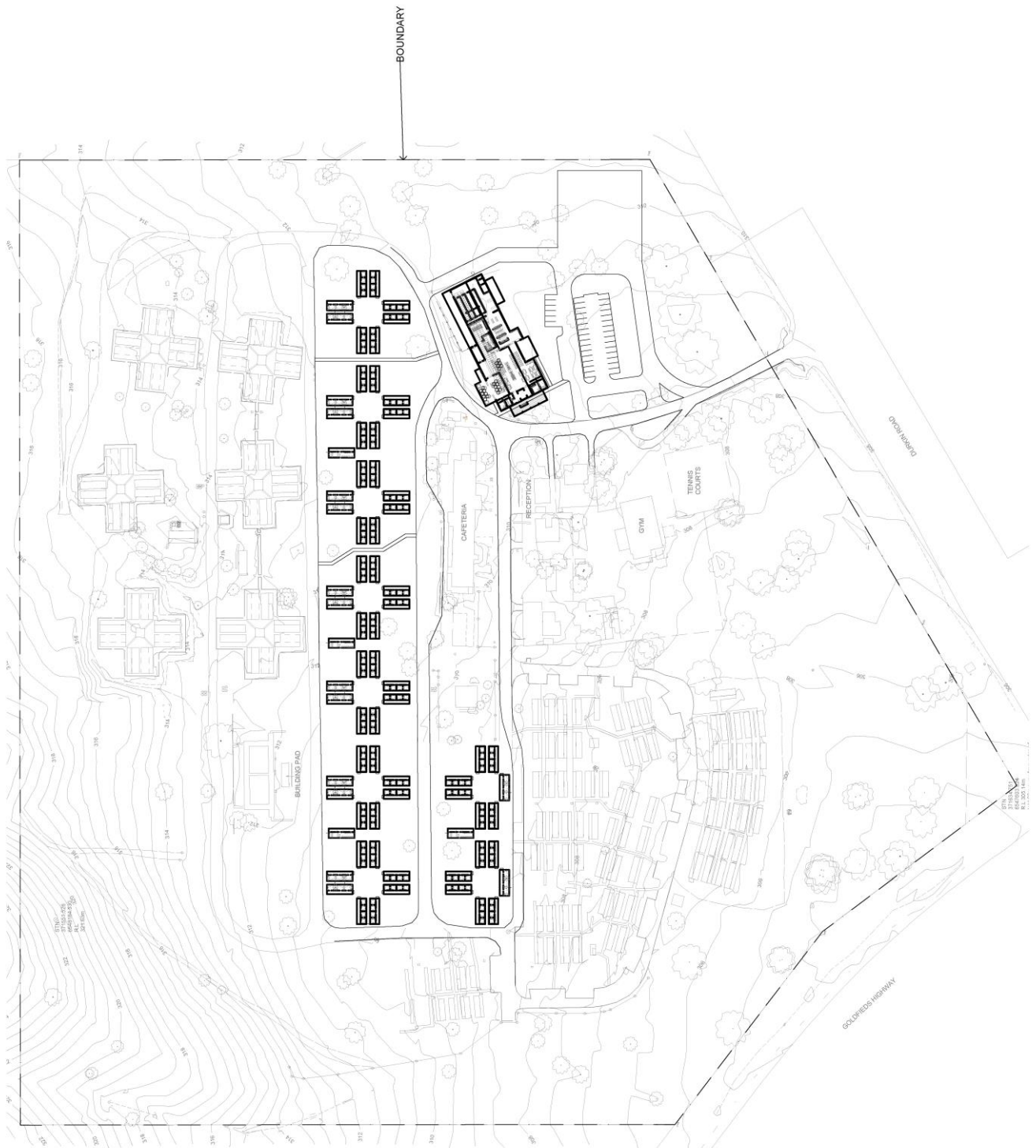
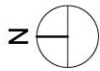
27 Archibald Road, Suite 101
Melbourne VIC 3003
Phone: 03 9480 1000
Email: info@grounded.com.au
Website: www.grounded.com.au

KAMBALDA

SITE PLAN
IN SCOPE

REV.	DATE	BY	TO	DESCRIPTION





NOT FOR CONSTRUCTION

DATE	BY	REVISION

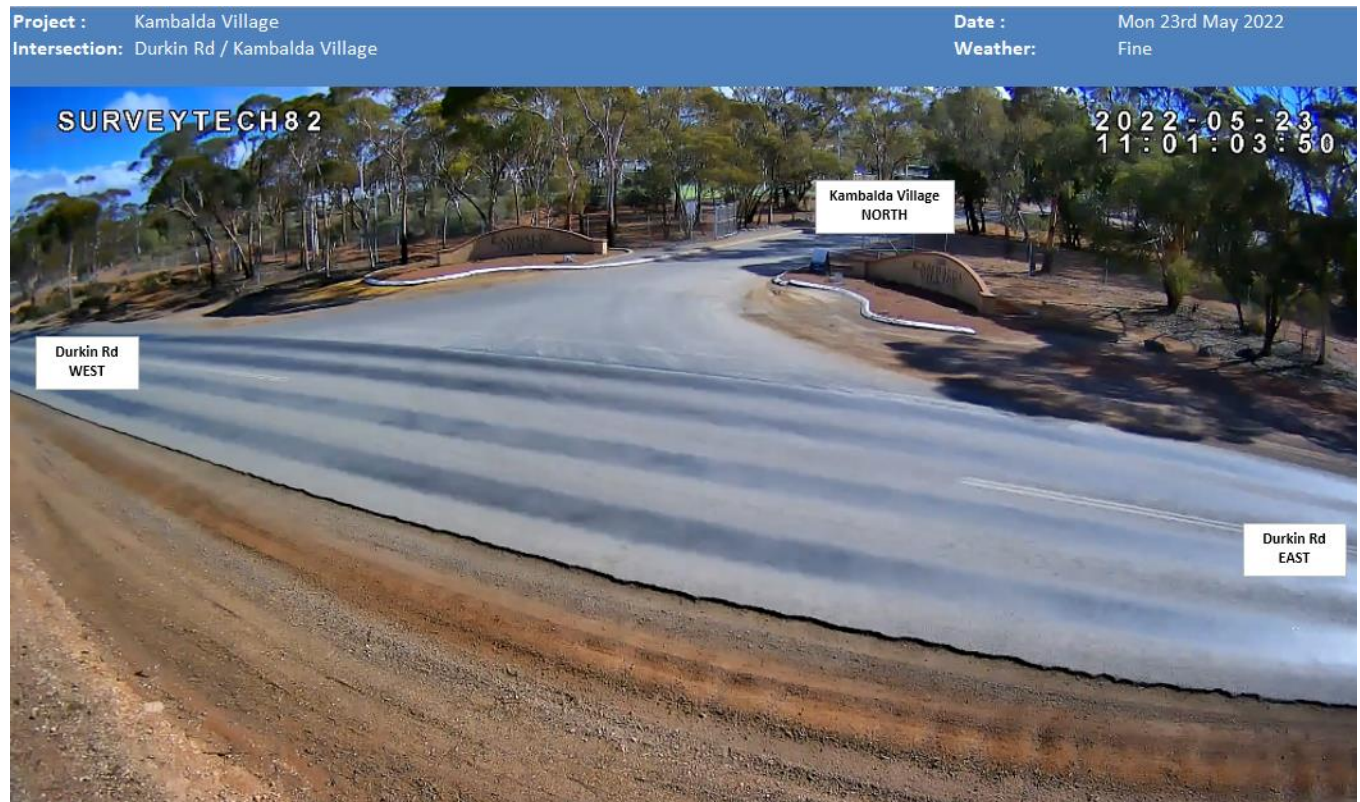
grounded.
SUSTAINABLE INFRASTRUCTURE, TOGETHER

Grounded Pty Ltd
100/101 Stirling Street, Perth, WA 6000
Phone: 08 9438 1000
Email: info@grounded.com.au

KAMBALDA

OVERALL SITE PLAN	
DATE	
BY	
REVISION	

Appendix B: Surveyed intersection turning movements



Project: Kambalda Village
Intersection: Durkin Rd / Kambalda Village

Date: Mon 23rd May 2022
Weather: Fine

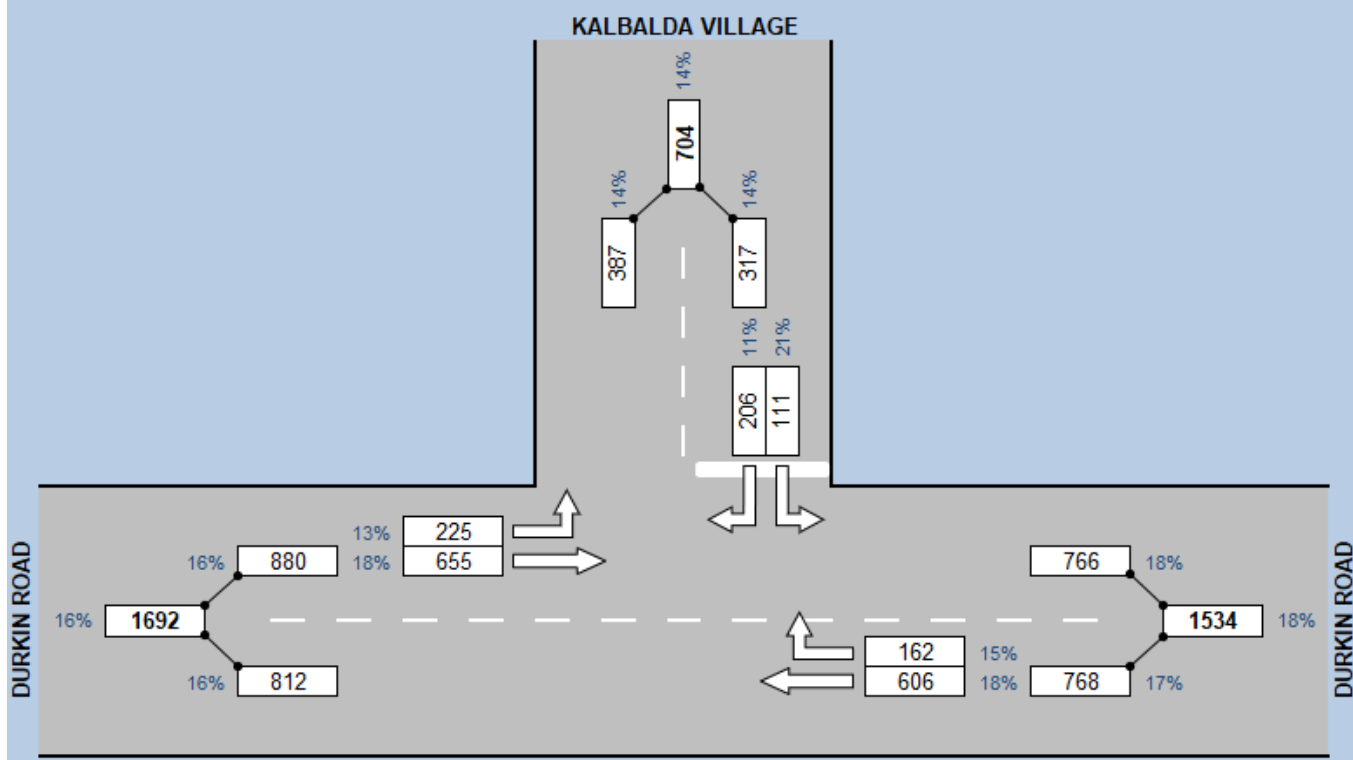


Survey Time: 24 Hour Totals

All Vehicles
 (% Heavy Vehicles)

24 Hour Totals

- ☒ ALL Vehicles
 ☒ Heavy %
☐ Light Vehicles
☐ Heavy Vehicles



Project: Kambalda Village
Intersection: Durkin Rd / Kambalda Village

Date: Mon 23rd May 2022
Weather: Fine

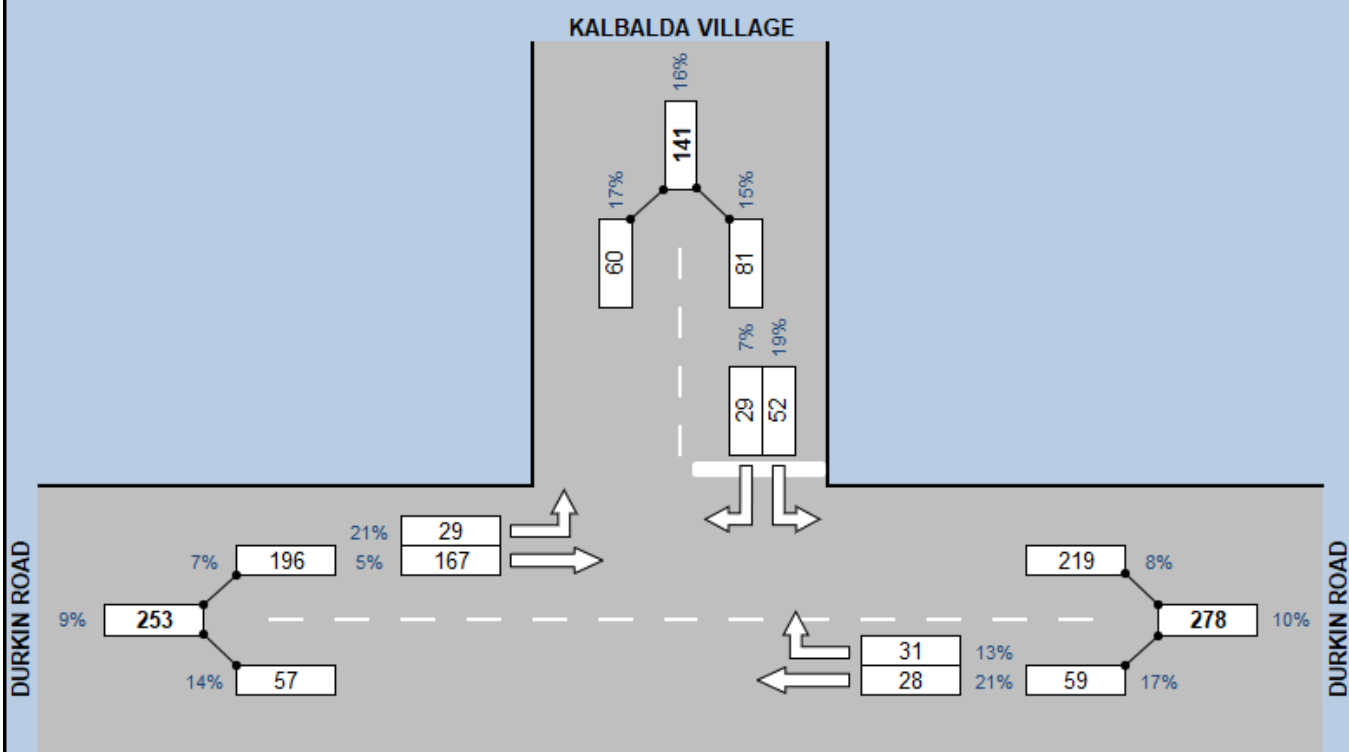


Survey Time: AM Peak Hour - 0445 - 0545

All Vehicles
 (% Heavy Vehicles)

AM Peak Hour - 0445 - 0545

- ☒ ALL Vehicles
 ☒ Heavy %
☐ Light Vehicles
☐ Heavy Vehicles



Project: Kambalda Village
Intersection: Durkin Rd / Kambalda Village

Date: Mon 23rd May 2022
Weather: Fine

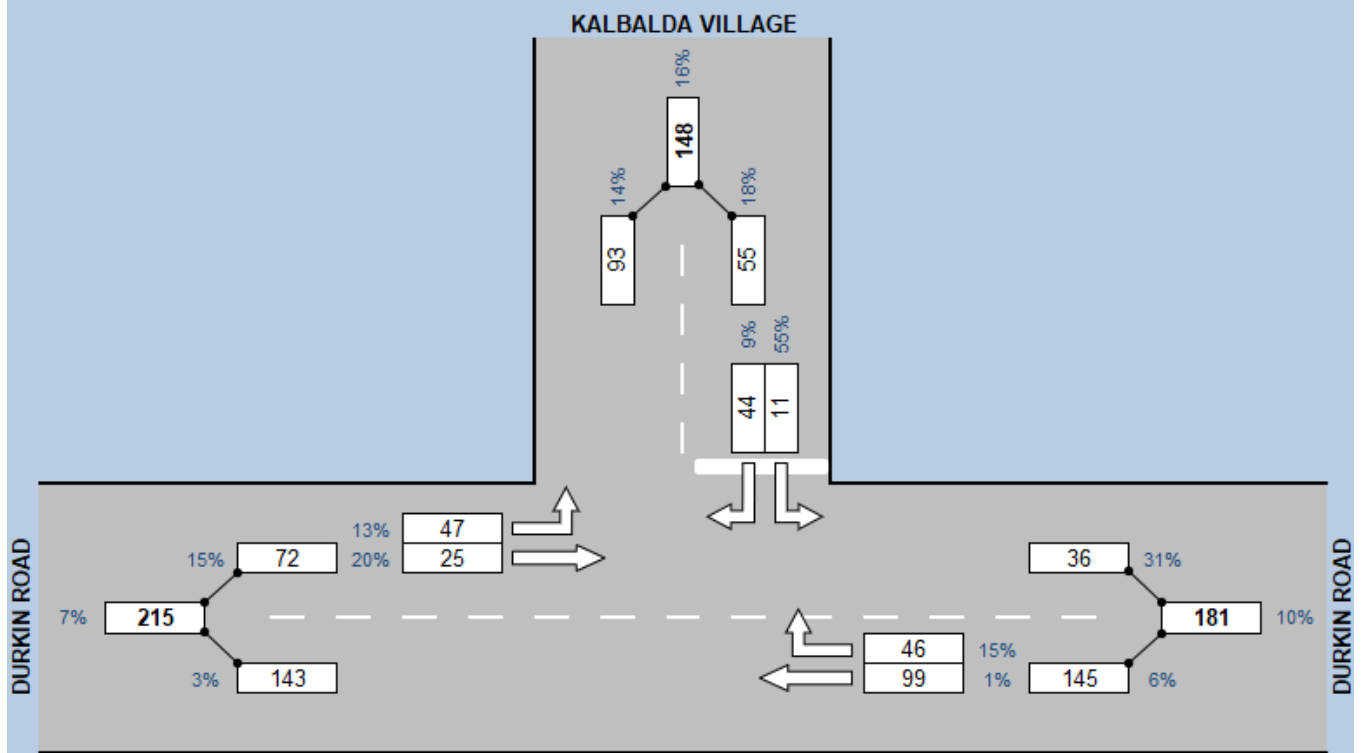


Survey Time: PM Peak Hour - 1700 - 1800

All Vehicles
(% Heavy Vehicles)

PM Peak Hour - 1700 - 1800

- ☒ ALL Vehicles ☒ Heavy %
☐ Light Vehicles
☐ Heavy Vehicles



Appendix C: SIDRA analysis outputs

SIDRA outputs are presented in the form of Degree of Saturation, Level of Service, Average Delay and 95% Queue. These characteristics are defined as follows:

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



MOVEMENT SUMMARY

▽ Site: 101 [Durkin Rd Crossover 10 yr Post Dev AM (Site Folder: General)]

U22.045 - Kambalda Workforce Accommodation
Durkin Crossover
10 yr Post Development - AM Peak Hour
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES [Total veh/h HV] %		DEMAND FLOWS [Total veh/h HV] %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. Dist] veh m		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Durkin Rd														
11	T1	56	28.9	59	28.9	0.081	1.1	LOS A	0.3	3.5	0.38	0.32	0.38	94.2
12	R2	42	13.0	44	13.0	0.081	10.2	LOS B	0.3	3.5	0.38	0.32	0.38	61.0
Approach		98	22.1	103	22.1	0.081	5.0	NA	0.3	3.5	0.38	0.32	0.38	76.4
North: Site crossover														
1	L2	71	19.0	75	19.0	0.127	7.5	LOS A	0.5	3.9	0.44	0.69	0.44	51.8
3	R2	39	7.0	41	7.0	0.127	8.2	LOS A	0.5	3.9	0.44	0.69	0.44	54.4
Approach		110	14.7	116	14.7	0.127	7.7	LOS A	0.5	3.9	0.44	0.69	0.44	52.7
West: Durkin Rd														
4	L2	40	28.9	42	28.9	0.219	9.3	LOS A	0.0	0.0	0.00	0.07	0.00	52.8
5	T1	334	5.0	352	5.0	0.219	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	107.7
Approach		374	7.6	394	7.6	0.219	1.0	NA	0.0	0.0	0.00	0.07	0.00	97.0
All Vehicles		582	11.4	613	11.4	0.219	3.0	NA	0.5	3.9	0.15	0.23	0.15	80.5

MOVEMENT SUMMARY

▽ Site: 101 [Durkin Rd Crossover 10 yr Post Dev PM (Site Folder: General)]

U22.045 - Kambalda Workforce Accommodation
Durkin Crossover
10 yr Post Development - PM Peak Hour
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES [Total veh/h HV] %		DEMAND FLOWS [Total veh/h HV] %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh Dist] m		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Durkin Rd														
11	T1	198	28.9	208	28.9	0.197	0.2	LOS A	0.5	5.5	0.14	0.16	0.14	101.2
12	R2	63	15.0	66	15.0	0.197	9.1	LOS A	0.5	5.5	0.14	0.16	0.14	63.1
Approach		261	25.5	275	25.5	0.197	2.3	NA	0.5	5.5	0.14	0.16	0.14	88.3
North: Site crossover														
1	L2	15	55.0	16	55.0	0.092	6.7	LOS A	0.3	2.6	0.27	0.64	0.27	44.9
3	R2	60	9.0	63	9.0	0.092	7.7	LOS A	0.3	2.6	0.27	0.64	0.27	54.1
Approach		75	18.2	79	18.2	0.092	7.5	LOS A	0.3	2.6	0.27	0.64	0.27	52.0
West: Durkin Rd														
4	L2	64	13.0	67	13.0	0.081	8.7	LOS A	0.0	0.0	0.00	0.39	0.00	53.3
5	T1	50	28.9	53	28.9	0.081	0.0	LOS A	0.0	0.0	0.00	0.39	0.00	95.6
Approach		114	20.0	120	20.0	0.081	4.9	NA	0.0	0.0	0.00	0.39	0.00	66.2
All Vehicles		450	22.9	474	22.9	0.197	3.8	NA	0.5	5.5	0.13	0.30	0.13	73.5



Technical Note

Subject: Kambalda Accommodation Village Proposed Development – Traffic Impact Assessment Review

Date: 16/08/2022

Author: Anthony Anastas

Reviewer: Richard Jois

Client: WML

1. Introduction

WML has commissioned a review of traffic aspects of the Kambalda Accommodation Village Proposed Development – Traffic Impact Assessment on behalf of the Shire of Coolgardie. The review was carried out based on in accordance with the WAPC Transport Impact Assessment Guidelines and Australian Standard applied together with assessment of assumptions made. The purpose of the review is to determine if any part of the assessment is not supported.

2. Supporting Information

The following clarifications were requested from the traffic consultant with regards to the document, with the responses provided:

1. While it was noted that approximately 15% of the site traffic were a mix of service trucks and busses, how will the increase of the rooms affect this percentage?

Traffic consultant's response: Advice from the site operator indicates that the proportions are not expected to change. We have assumed the same percentage HVs for conservative analysis. It should be noted that if the % HVs was to increase then overall traffic volumes would reduce, as this would mean more people are travelling by bus and less people are travelling by car.

The supporting information is supported.

2. What were the assumptions for the trip distribution split for additional traffic to/from the site?

Traffic consultant's response: The proportions of in/out traffic and the distribution left/right was assumed to be the same as the surveyed existing traffic distribution.

The supporting information is supported.

3. While traffic Impact is shown at the access of the site, there has been no consideration on traffic distribution onto the intersections in close proximity that might be affected from the site traffic. As per WAPC: "An intersection would generally be considered to be materially affected if flows on any leg increase by more

than 10 per cent or any individual movement by more than 20 per cent. For already congested intersections, lower thresholds may again trigger the need for assessment.” Please provide further clarification / information as to why the potential traffic impact on nearby intersections has not been considered, noting this WAPC recommendation?

Traffic consultant's response: If we are to reference the WAPC recommendations, the proposed development will result in a net increase of 54 vehicles per hour. This is defined as being “moderate impact” and no analysis of nearby intersections is required. The traffic report we prepared exceeds the requirements of WAPC. We decided to undertake a SIDRA analysis of the access intersection for robust assessment, even though this isn't required for a moderate impact development. We also included some regional traffic growth on Durkin Road (presented as 10 years post development), which is again for a robust assessment. The results show that all movements will work at level of service A with minimal delays and no queues. To answer the question, there is no requirement to analyse external intersections.

Taking into consideration the updated traffic volumes from Shire and the WAPC requirements, the supporting information is supported and no further assessment on nearby intersection is required.

4. Were the heavy vehicle distribution taken into consideration for the SIDRA analysis? As there is a large number of the total heavy vehicles that are Vehicle Class 11, this might affect the SIDRA analysis as the default heavy vehicle length is 10m and the Vehicles class 11 is 26m.

Traffic consultant's response: The Vehicle Classification for the subject site access is appropriate at 10m length. No RAV type vehicles enter or exit the subject site driveway. The Goldfields Highway site located west of Durkin Road is a different road environment than the road fronting the development access. RAV access is not permitted on Durkin Road by default (see below plan). “All operators must carry current written approval from the road asset owner permitting use of the road.” The Goldfields Highway count site mentioned by the Shire's consultant carries around 3,000 vehicles per day. Durkin Road in front of the development site by comparison carries much less traffic, at around 1,700 vehicles per day. Goldfields Hwy is a Primary Distributor and Durkin Road is a Local Distributor. The SIDRA analysis demonstrated that even with double the current traffic volumes on Durkin Road, the development driveway is operating well below peak capacity.

The supporting information is not supported, it was suggested that a new SIDRA analysis was to be updated to include the RAV vehicles as the traffic data from the Shire had shown that RAV vehicles are utilising Durkin Road.

5. Section 6.3.1 (10 Year post development analysis) & Fig 8 have applied a doubling of through traffic only on Durkin Rd and assumed that the turning traffic to and from this accommodation facility remains

unchanged. Has there been any consideration given to possible future site volume change to/from the site and if not, why?

Traffic consultant's response: To answer this question, there is no consideration of future site volume increases to and from the site. Any further development expansions outside of this DA will need a new Development Application and traffic reporting. This new traffic reporting will benefit from newer data at the time it is undertaken.

The supporting information is supported.

3. Review of Updated Document

The revised Traffic Impact Assessment document was reviewed, taking into consideration the supporting information above.

3.1. Proposed Development

The assessment information is supported.

3.2. Vehicle Access and Parking

It was assumed that the motel parking provision from *Shire of Coolgardie Local Planning Scheme No.5 (LPS5)* was to be used (1 space per unit plus 1 space per 10 m² dining room area).

This shows that an additional 208 bays are required for the increase of units. It was estimated that the current dining area is 450m² (from aerial imaging) and the new dining area (from drawings provided) was estimated to be approximately 650m², this results in an additional 20 parking bays.

It was noted that the proposed additional 120 parking bays were removed from the updated document revision, whereas the additional 36 parking bays for the new dining area was still included.

This lead to the observation that more parking bays might be required, with the final decision to be determined by the Shire.

3.3. Provision for Service Vehicles

The assessment information is supported.

3.4. Hours of Operation

The assessment information is supported.

3.5. Daily Traffic Volumes and Vehicle Types

It was noted that there was a minor discrepancy between the data in Table 1 and Table 2, where the AM peak values do not match, but it does not affect the SIDRA results as the PM peak values were used.

The updated SIDRA analysis shows that the traffic impact at the access is minor as the level of service is within good operating conditions, with the assessment information is supported.

3.6. Traffic Management on the Frontage Roads

The assessment information is supported.

3.7. Public Transport Access

The assessment information is supported.

3.8. Site Specific Issues

The assessment information is supported.

3.9. Safety Issues

The assessment information is supported.

4. Conclusion

After undertaking the review of the Traffic Impact Assessment in accordance with the WAPC Transport Impact Assessment Guidelines and Australian Standard applied together with assessment of assumptions made, the traffic impact assessment was supported with the observation that more parking bays might be required for the additional rooms proposed.



mainroads
WESTERN AUSTRALIA

Enquiries: Andrew Azzam
Our Ref: 13/5061
Your Ref: 3702Ltr8

23 June 2022

James Trail
Chief Executive Officer
Shire of Coolgardie
ceo@coolgardie.wa.gov.au

Attn: Francesca Lefante

Dear Mr. Trail,

**DEVELOPMENT APPLICATION
KAMBALDA VILLAGE WORKFORCE ACCOMMODATION EXPANSION
LOT 201 DURKIN ROAD, KAMBALDA**

Thank you for your email received on 22nd June 2022, regarding the above-mentioned Development Application. Main Roads WA has reviewed this application and has no objections.

Should you have any queries in relation to the above, please contact Network Operations on (08) 9080 1418 or gereg@mainroads.wa.gov.au.

Yours sincerely

Andrew Azzam
NETWORK OPERATIONS COORDINATOR/A
GOLDFIELDS ESPERANCE REGION

cc: Francesca Lefante
planning@coolgardie.wa.gov.au

Your Ref: -
Our Ref: 139231762 (SF388109)
Enquiries: Brett Coombes
Direct Tel: 9420 3165
Email: land.planning@watercorporation.com.au

05 August 2022

Chief Executive Officer
Shire of Coolgardie
P.O. Box 138
KAMBALDA WA 6443

Attention: Francesca Lefante

**Development Application - Kambalda Village Workforce Accommodation Expansion
Lot 201 Durkin Road, Kambalda**

Thank you for your correspondence of 20 July 2022 requesting servicing advice regarding the above proposed development.

There is currently sufficient wastewater treatment capacity at the Kambalda WWTP to accept the additional wastewater flows that will result from the proposed development. There is also adequate capacity in the local water mains network that currently services the site and surrounding areas.

However, the bulk water supply to Kambalda comes from the Goldfields main conduit (the GAWS) in Kalgoorlie. The capacity of the entire GAWS system is limited and is currently nearing its maximum capacity. The Water Corporation has become aware of several mining and industry related development proposals in Kalgoorlie, Coolgardie and Kambalda. The GAWS conduit does not have the conveyance capacity to serve all these developments.

The proposed buildings and any service connections will require approval by the Water Corporation's Building Services section prior to the commencement of works. Infrastructure Contributions and fees may be required to be paid prior to approval being issued. For further information about building applications, please follow this link:

<https://www.watercorporation.com.au/Developing-and-building/Building/Lodging-a-building-application>

The information provided above is subject to review and may change. If the proposal has not proceeded within six months, it is recommended that the developer should be advised to contact the Corporation to confirm if the above information is still valid.

Should you have any queries, please do not hesitate to contact the Enquiries Officer.

Brett Coombes
Senior Urban Planner
DEVELOPMENT SERVICES



Our Ref: D25417
Your Ref: PA22-13

Francesca Lefante
Shire of Coolgardie
planning@coolgardie.wa.gov.au

Dear Ms Lefante

RE: VULNERABLE LAND USE - KAMBALDA VILLAGE WORKFORCE ACCOMMODATION EXPANSION LOT 201 DURKIN ROAD, KAMBALDA - DAP

I refer to your email dated 8 August 2022 regarding the submission of a Bushfire Management Plan (BMP) (Version 3), prepared by Bushfire Safety Consulting and dated 10 June 2022, for the above development application.

This advice relates only to *State Planning Policy 3.7: Planning in Bushfire Prone Areas* (SPP 3.7) and the *Guidelines for Planning in Bushfire Prone Areas* (Guidelines). It is the responsibility of the proponent to ensure the proposal complies with relevant planning policies and building regulations where necessary. This advice does not exempt the applicant/proponent from obtaining approvals that apply to the proposal including planning, building, health or any other approvals required by a relevant authority under written laws.

Assessment

- DFES acknowledge the site currently operates as the Kambalda Village and that the development application seeks to construct a proposed Dry Mess and Kitchen, accommodation buildings and parking bays.
- The decision maker has confirmed this to be intensification of development and the application of SPP 3.7 is triggered.
- DFES notes the area designated as a 'safer area' in Figure 6 of the BMP is stated as being subject to 2KW/m². The calculation of 2KW/m² requires a Method 2 however, no Method 2 has been supplied with the BMP. The 'safer area' therefore cannot be validated. This area should either be removed from the BMP, or the Method 2 used to calculate it should be referred to DFES for validation.

Recommendation – supported subject to modifications

The proposal will need to be lodged with DFES Built Environment Branch (BEB) for assessment, as required by Regulation 18B of the Building Regulations 2012 (as amended). DFES BEB will be able to provide more specific and detailed commentary in due course as part of the plan assessment process.

DFES advises the proponent has adequately identified issues arising from the bushfire risk assessment and considered how compliance with the bushfire protection criteria can be achieved within the submitted BMP.

As this planning decision is to be made by a Development Assessment Panel please forward notification of the decision to DFES for our records.

If you require further information, please contact me on telephone number 9395 9713.

Yours sincerely

A handwritten signature in blue ink, appearing to be 'NM', with a long horizontal flourish extending to the right.

Naomi Mynott
DIRECTOR LAND USE PLANNING

26 August 2022