

LOCATION SKETCH
NOT TO SCALE

20244-F01-2.0.dwg

VER.	DATE	BY	AMENDMENTS	FILE SOURCE
1.0	10.12.2020	MDB	Issued for Information	20244-1.0-25112020-PCG94-F
2.0	15.12.2020	MDB	Design Data Altered	20244-1.0-25112020-PCG94-F


- Notes:**
1. Boundary plotted from Landgate SCDB digital data only.
 2. True position of Boundary is subject to a re-establishment survey.
 3. Heights established via VRS connection.
 4. Dimensions, Areas and Offsets subject to re-establishment survey.
 5. Sewer & water data plotted from Dial Before You Dig and Survey.

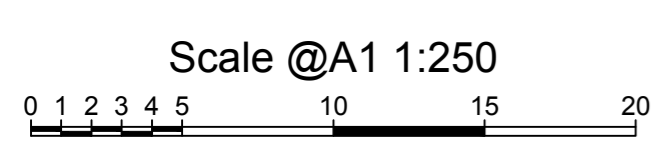


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web: www.jbasurveys.com.au

CLIENT:



JOB NO: 20244	TITLE: FEATURE SURVEY	DATUM		
PROJECT:	LOT 51 ON DP33952 Nº 48 LEWIS ROAD SERPENTINE, WA, 6152 C/T 2552-979	VERT: AHD HORIZ: PCG94 SCALE: NTS		
SURVEYOR: BDF		DATE OF SURVEY: 25.11.2020	DRAWN BY: MDB	APPROVED BY: NRW
SHEET NO: 1 OF 4			VER: 2.0 A1	



LYNESTYLE LEGEND

- Contour Major 1.0m Intervals
- Contour Minor 0.2m Intervals
- Cadastral Boundary
- Kerb Line
- Road Centreline
- Pedestrian Ramp
- Driveway Edge
- Proposed Design
- Track
- Top of Bank
- Bottom of Bank
- Building
- Verandah
- Roof Ridge
- Eave Line
- Wall
- Concrete Edge
- Fence Line
- Gate
- Brick Paving
- DBVD Water
- Rocky Outcrop

SYMBOL LEGEND

- Light Pole
- Steel Wire Anchor
- Electrical Cable Pit
- Power Pole
- Unknown Service
- Water Bore
- Columns
- Floor Level
- Natural Surface
- Sign (One Pole)
- Top of Wall

CONTROL POINT SCHEDULE

Point	Eastings	Northing	Elevation	Description
9003	67275.824	218141.148	70.45	R/Set in Wall
9004	67270.283	218112.651	70.78	R/Set in Wall
9006	67263.169	218093.877	69.85	SHN in Paving

20244-F01-2.0.dwg

VER.	DATE	BY	AMENDMENTS	FILE SOURCE
1.0	10.12.2020	MDR	Issued for Information	20244-1.0-25112020-PCG94-F
2.0	15.12.2020	MDR	Design Data Altered	20244-1.0-25112020-PCG94-F

Notes:

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- Heights established via VRS connection.
- Dimensions, Areas and Offsets subject to re-establishment survey.
- Sewer & water data plotted from Dial Before You Dig and Survey.

2
DP415695

Timber Post & Wire Fence (poor condition)

JBA SURVEYS
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Actionsheds AUSTRALIA

CLIENT:

JOB NO: 20244 TITLE: FEATURE SURVEY

PROJECT: LOT 51 ON DP33952 NO 48 LEWIS ROAD SERPENTINE, WA, 6125 C/T 2552-979

DATUM: VERT: AHD HORIZ: PCG94

SCALE: 1:250

DWG NO: 20244-F01 VER: 2.0

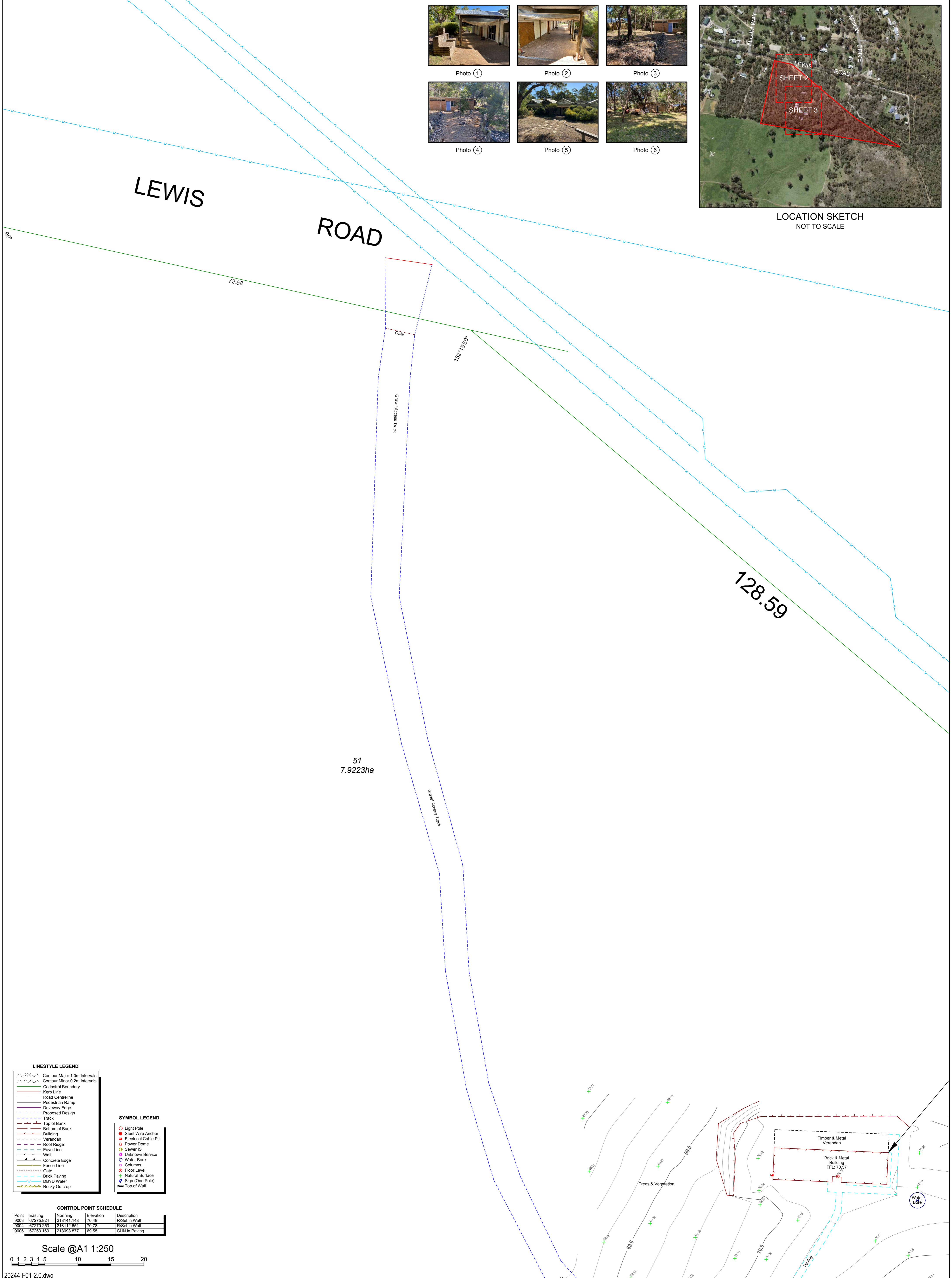
SHEET NO: 2 OF 4 A1

SURVEYOR: BDF DATE OF SURVEY: 25.11.2020 DRAWN BY: MDR APPROVED BY: NRW

Ordinary Council Meeting - 17 October 2022



LOCATION SKETCH
NOT TO SCALE



LINestyle LEGEND

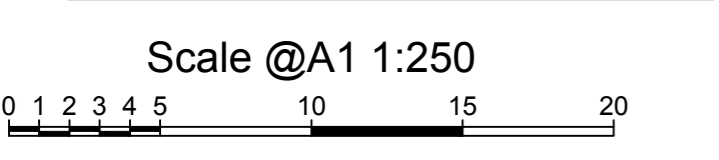
- Contour Major 1.0m Intervals
- Contour Minor 0.2m Intervals
- Cadastral Boundary
- Metre Line
- Road Centreline
- Pedestrian Ramp
- Driveway Edge
- Proposed Design
- Track
- Top of Bank
- Bottom of Bank
- Building
- Verandah
- Roof Ridge
- Eave Line
- Wall
- Concrete Edge
- Fence Line
- Gate
- Brick Paving
- DBVD Water
- Rocky Outcrop

SYMBOL LEGEND

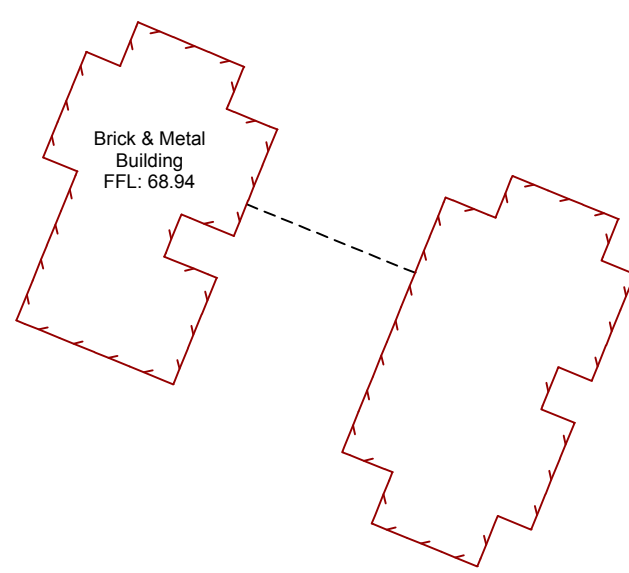
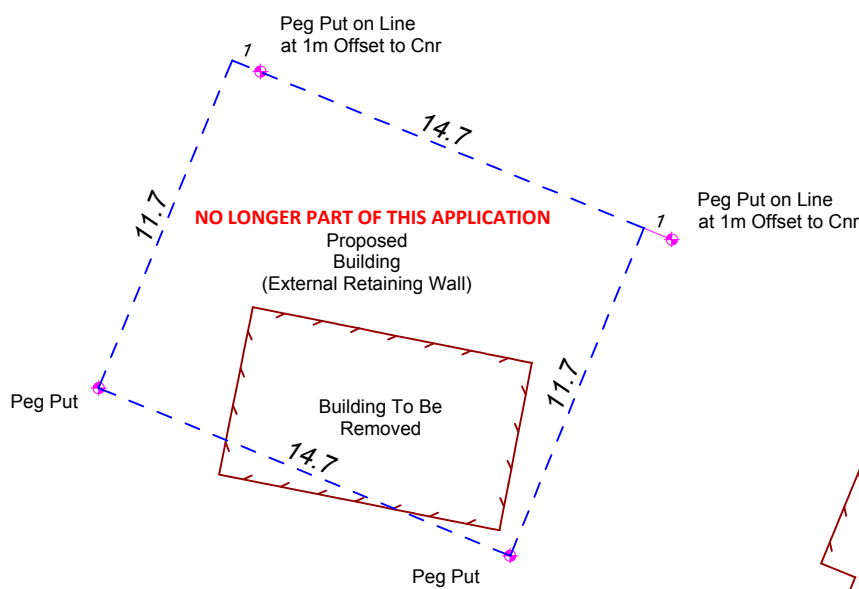
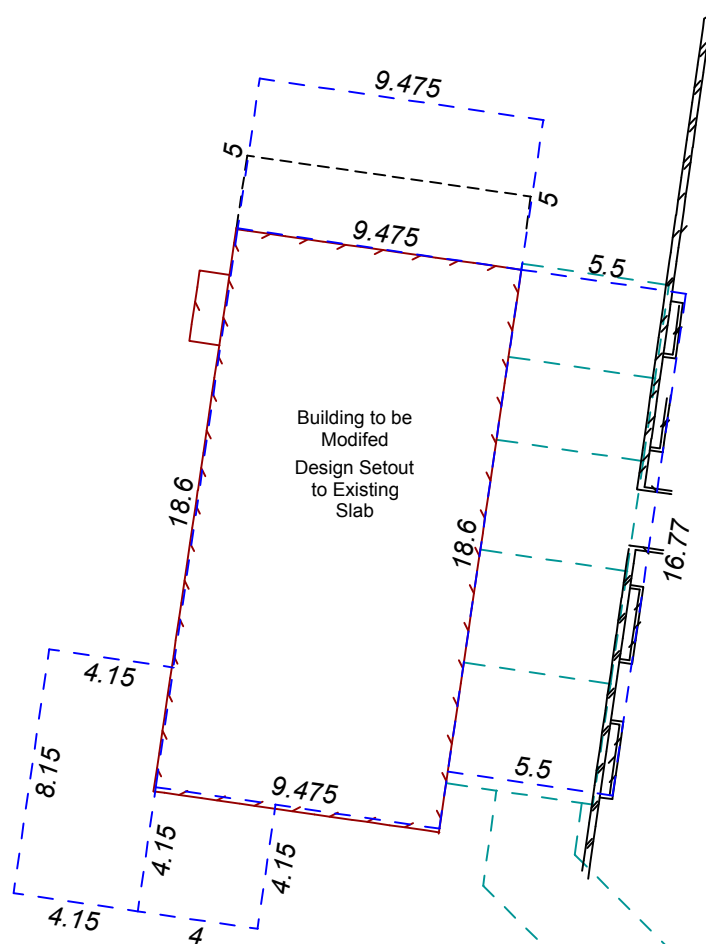
- Light Pole
- Steel Wire Anchor
- Electrical Cable Pit
- Power Dome
- Sewer IS
- Unknown Service
- Water Bore
- Columns
- Floor Level
- Natural Surface
- Sign (One Pole)
- Top of Wall

CONTROL POINT SCHEDULE

Point	Easting	Northing	Elevation	Description
9003	67275.824	218141.148	70.48	R/Set in Wall
9004	67270.253	218112.651	70.78	R/Set in Wall
9008	67283.189	218093.377	69.55	SHN in Paving



20244-F01-2.0.dwg		<p>JBA SURVEYS</p> <p>120 Pepler Ave, Satter Point WA 6152 Ph: 9450 7188 email: admin@jbasurveys.com.au web: www.jbasurveys.com.au</p>		<p>Actionsheds AUSTRALIA</p>		<p>CLIENT:</p>		<p>JOB NO: 20244 TITLE: FEATURE SURVEY</p>		<p>DATUM</p> <p>VERT: AHD HORIZ: PCG94 SCALE: 1:250 DWG NO: 20244-F01 SHEET NO: 3 OF 4</p>		<p>VER: 2.0</p>																
<table border="1"> <thead> <tr> <th>VER</th> <th>DATE</th> <th>BY</th> <th>AMENDMENTS</th> <th>FILE SOURCE</th> </tr> </thead> <tbody> <tr> <td>1.0</td> <td>10.12.2020</td> <td>MDR</td> <td>Issued for Information</td> <td>20244-1.0-25112020-PCG94-F</td> </tr> <tr> <td>2.0</td> <td>15.12.2020</td> <td>MDR</td> <td>Design Data Altered</td> <td>20244-1.0-25112020-PCG94-F</td> </tr> </tbody> </table>	VER	DATE	BY	AMENDMENTS	FILE SOURCE	1.0	10.12.2020	MDR	Issued for Information	20244-1.0-25112020-PCG94-F	2.0	15.12.2020	MDR	Design Data Altered	20244-1.0-25112020-PCG94-F	<p>Notes:</p> <ol style="list-style-type: none"> Boundary plotted from Landgate SCDB digital data only. True position of Boundary is subject to a re-establishment survey. Heights established via VRS connection. Dimensions, Areas and Offsets subject to re-establishment survey. Sewer & water data plotted from Dial Before You Dig and Survey. 			<p>DATE OF SURVEY: 25.11.2020</p>		<p>DRAWN BY: MDR</p>		<p>APPROVED BY: NRW</p>		<p>DATE OF SURVEY: 25.11.2020</p>		<p>DATE OF SURVEY: 25.11.2020</p>	
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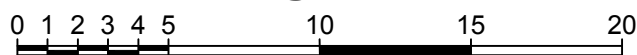
LINestyle LEGEND

	Proposed Design
	Existing Building
	Existing Retaining Wall
	Existing Eave Line
	Existing Verandah



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Scale @A3 1:250



20244-F01-2.0.dwg

VER.	DATE	BY	AMENDMENTS	FILE SOURCE	CLIENT: 	JOB NO: 20244	TITLE: SETOUT SURVEY	DATUM	N
1.0	10.12.2020	MDB	Issued for Information	20244-1.0-25112020-PCG94-F		PROJECT:	LOT 51 ON DP33952 Nº 48 LEWIS ROAD SERPENTINE, WA, 6125 C/T 2552-979	VERT: AHD HORIZ: PCG94	
2.0	15.12.2020	MDB	Design Data Altered	20244-1.0-25112020-PCG94-F				DWG NO: 20244-F01	VER: 2.0
								SHEET NO: 4 OF 4	A3
						SURVEYOR: BDF	DATE OF SURVEY: 25.11.2020	DRAWN BY: MDB	APPROVED BY: NRW

Bushfire Management Plan

Serpentine Retreat Centre
48 Lewis Road Serpentine

Client – The Centre for Attitudinal Healing

January 2022



LIMITATIONS STATEMENT

This Bushfire Management Plan ('BMP') has been solely prepared for The Centre for Attitudinal Healing facility at 48 Lewis Road Serpentine (**the Site**) within the Shire of Serpentine Jarrahdale.

Envision Bushfire Protection

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Version Control

The Centre for Attitudinal Healing - 48 Lewis Road Serpentine			
Version	Date	Author	
V1	15 February 2021	Anthony Rowe	Submission
V2	11 March 2021	Anthony Rowe	Add: to volunteer the supply of a 10, 000 L water tank to reduce dependence upon the reticulated water supply.
V3	25 January 2022	Anthony Rowe	Clarification of road access and operating period. Clarification in the narrative for the BEEP

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Disclaimer

In undertaking this work, the authors have made every effort to accurately apply the available information at the time of writing following the instructions of the regulatory authorities and applying best practice as described by the Fire Protection Association Australia. Any conclusions drawn or recommendations made in the report are made in good faith, and the consultants take no responsibility for how this information and the report are subsequently used.

Envision Bushfire Protection accepts no liability for a third party's use of, or reliance upon, this specific report.

Envision Bushfire Protection accepts no liability for the inaction of the owner to provide or maintain the bushfire protection measures identified in this report. Vegetation is dynamic, building materials may distort, and the accumulation and the location of flammable materials near the building may affect the potential for damage or loss of a building to occur.

Failure to maintain the property and/or building to these standards may compromise an insurance policy if currently covering any of your assets or those of any third party that may be consequentially affected due such failure. If not insured, and if you are seeking insurance, this report may not influence the decision of any insurer not to offer cover.

Importantly the measures contained in this report cannot guarantee human safety or an absence of harm or that the building will not be damaged or would survive a bushfire event on every occasion. This is due to the unpredictable nature of fire behaviour (knowledge in this field continues to develop) and the unpredictable nature of extreme weather conditions.

Scope of this report

Envision Bushfire Protection has been engaged to provide expert bushfire safety and planning advice.

The scope of the advice has been to assess the proposal for compliance with the policy measures described in State Planning Policy 3.7 and identify appropriate mitigation measures to be considered by the determining authority. This is described in a Bushfire Management Plan and prepared with regard to the Department of Planning Lands and Heritage templates.

The investigations and mitigation measures identified in the BMP, has, in turn, formed the basis for the preparation of a Bushfire Emergency Evacuation Plan.

Client relationship

I was engaged to provide expert bushfire safety and planning advice. My relationship with the client is a standard commercial contract, and no private, personal, or other matter has influenced the content of the BMP or my findings.

STATEMENT OF CONFORMITY – PLANNING AND DEVELOPMENT ACT 2005



Anthony Rowe Level 3 - BPAD36690

Principal



The signatory declares that this Bushfire Management Plan meets the requirements of State Planning Policy 3.7 and the Guidelines for Planning in Bushfire Prone Areas V1.3.

EXECUTIVE SUMMARY

Preface

The Centre for Attitudinal Healing is proposing a building extension and a building replacement (the proposal) at the Serpentine Retreat Centre (the facility) at 48 Lewis Road Serpentine (the site).

The Centre for Attitudinal Healing in Perth is a not-for-profit registered charity that is committed to psychological well-being.

“...Attitudinal Healing is the process of changing our way of seeing our lives from fear....”

Programs offered include day courses and live-in retreats.

Examples include:

- Outreach for Ronald McDonald House;
- Caring for Carers;
- Retreat for people with life threatening or terminal illnesses and their families; and
- Retreat for people suffering anxiety and depression.

A key feature is the restorative benefit of the natural setting of the centre being within a forest.

The facility does not operate in January and February each year.

The site is 16 ha of predominantly Marri/Jarrah forest, with the facility set centrally within the site. The facility is of longstanding and predates SPP 3.7 and contemporary bushfire construction requirements.

The site is now within a declared bushfire prone area and the proposal is development that is required to be assessed against State Planning Policy 3.7 *Planning in Bushfire Prone Areas* (**SPP 3.7**) and the Bushfire Protection Criteria, described in the Guidelines V1.3.

The intent of the policy is: **“to preserve life and reduce the impact of bushfire on property and infrastructure”**. The proposed land-use because it will invite visitation by people unfamiliar with the locality is classified as a ‘Vulnerable’ development.

It is understood that the facility, because it predates SPP 3.7, does not have an existing Bushfire Emergency Evacuation Plan (BEEP). The proposal presents an opportunity to extend the requirement for the BEEP (cl 6.7 in SPP 3.7.) to a bushfire emergency evacuation plan (BEEP) that covers the overall facility.

This BMP has been prepared in accordance with SPP 3.7 and Appendix Five in the Guidelines V1.3 and the Department of Planning Lands and Heritage (DPLH) *BMP Template for a complex development application*.

The following describes the outcome of the investigations. The arrangement follows the DPLH template.

1. Proposal details (addressed in Section 1)

The site is 16 ha of predominantly Marri/Jarrah forest, with the facility set centrally within site. The site slopes downwards 3^o-10^o from the area of the proposed Meditation building with the slope being steepest at the southern boundary.

The site comprises seven habitable buildings: a communal building (1), accommodation buildings (3), toilet block (1), a supervisor’s residence (1), and various outbuildings. The primary buildings on-site, excluding the outbuildings (sheds) are a mix of construction types that predate the bushfire construction standards. The accommodation units are timber frame cement sheet but bricked to ground. The communal building is a mix of construction methods representing a series of additions over time; it is considered vulnerable to significant damage or loss from a bushfire attack. The supervisor residence is a masonry construction.

The site can be characterised as having a camp setting with buildings set intimately within vegetation (Marri/Jarrah forest). The buildings are arranged around a central area with access to the carpark. Garden spaces are minimal and mainly frame the communal area on its west, south, and east, with the north open to the carpark and the supervisor’s residence. It is a dry site with no irrigated areas.

Regulatory implications

The requirements to the SPP3.7 through the *Planning and Development Act 2005*, are not retrospective but apply siting requirements for new buildings and changes of land use for existing buildings. It is the *Building Act 2011* that applies the construction standards.

The facility is longstanding, and the contemporary bushfire construction standards only apply to class 1-3 and 10a buildings, but they can be volunteered for other classes and existing developments, through the Planning and Development Act 2005.

The proposal is to extend and modify the Communal building and construct a new Meditation building, in place of a small outbuilding.

The Communal building (class 9 b) is an extension to an existing building therefore is exempt from SPP 3.7, and it is not a class of building to which bushfire construction standards apply through the *Building Act 2011*.

The Meditation building (class 9 b) is a new construction, and compliance with SPP 3.7 is required. It is a vulnerable land use, but it is not a class 1-3, or 10a building. Bushfire construction standards are not applicable but may be applied under 78E(1). *Building Act 2011* construction standards for fire, but not specifically bushfire, apply.

2. Environmental considerations (addressed in Section 2)

The site is identified as Marri and Jarrah forest, the tree canopy is contiguous across the site, excepting where buildings and roadways have displaced it.

The ecological databases capture the site as moderate to high value across a range of parameters.

Clearing of regulated vegetation will be required for the purpose of bushfire protection but will be minimised. In this instance, it is an existing facility, and the advice of the Department of Water and Environmental Regulation will be required before commencing any clearance of vegetation.

There is evidence of ground cover maintenance within 50 m of the site, particularly to the south and south-east. (See BAL photos in Appendix 1)

3. Bushfire assessment results (addressed in Section 3)

A Bushfire Attack Level assessment following Method 1 AS 3959:2018, and the DPLH *Visual guide for bushfire risk assessment in Western Australia*, and using an FFDI of 80, has been undertaken. The site due to the proximity of classified vegetation is BAL - FZ. Figure 3 in Appendix 1, for indicative purposes, illustrates the APZ extent required to achieve BAL-29 at all buildings.

4. Identification of bushfire hazard issues (addressed in Section 4)

The site is vulnerable to bushfire attack. The site is contextually vulnerable to extended fire runs to its south and east. Areas west of the site are rural residential but expected to fill over time with residential development following the MRS. The area north of the site is contiguous rural living development, and whilst containing vegetation, the fire behaviour would be moderated by the displacement of the fuels by buildings, roads and gardens.

The site is at the foot of the Darling Escarpment with is contiguous forest extending east. The most damaging bushfires recorded Perth Hills fires have arrived from the east, and the Darling Escarpment is difficult terrain to undertake fire control. An urban penetration from the east, is a foreseeable risk of affecting the site.

To the south of the site is open agricultural land adjoining the Serpentine River Valley. The valley is a large area of dense forest as it extends eastwards.

Access to the site is limited to the north and west side. Fortunately, this is in a direction away from a likely advancing firefront and into the safety of the Peth Urban area.

5. Assessment against the bushfire protection criteria (addressed in Section 5)

The proposal was compared with the four Bushfire Protection Criteria Elements: Location, Siting and Design, Access, and Water.

Acceptable Solution

Element 1 - Location

The Acceptable Solution for Element 1 requires that areas of 'extreme' bushfire hazard level is to be avoided. This element applies primarily to strategic considerations and can be extended to consider a broader context of safe access. The proposal is for an extension of an existing facility and not necessarily an extension of its capacity; no further accommodation is being added. The emphasis is instead upon Element 2 and addressing ameliorating the bushfire risk to an acceptable level at the development site.

Element 2 --Siting and Design

The Acceptable Solution for Element 2 requires that the development site should, on completion have a BAL level not exceeding BAL 29.

In its strictest sense, the considerations of SPP 3.7 do not apply to the extensions of the Communal building, and the building is not a class that requires bushfire construction standards to apply however the Communal building in its present condition cannot be relied upon to provide any safety in a bushfire event. It would however be desirable to use the Communal building as an assembly place from which to oversee an orderly and safe evacuation, as opposed to an open-air assembly which risks sunburn and falling particles. The Communal building is also integral to the function of the facility and from both aspects it is recommended measures are volunteered to reduce its risk of ignition.

It is recommended the Communal building be provided with an APZ (west elevation) equivalent to BAL 29 (there is sufficient space within the site) and a construction standard commensurate with BAL-29, as described in AS 3959:2018 sections 3 and 7, applied to the western and southern face. The APZ will only be required to address the west aspect as the Communal building is separated, from classified vegetation to the north by the accessway and carpark, to the east by the communal area and accommodation units, and to the south by the proposed Meditation building.

The Meditation building is required to comply with SPP 3.7, and by the acceptable solution, it will require an Asset Protection Zone, based on slope, that extends 33 m south, 27 m east and 21 m, north and east. Sufficient distance is available within the site to provide the required Asset Protection Zone for the Meditation building. The removal of some trees will be required to achieve the Asset Protection Zone, tree canopy separation and maximum 15% cover.

Element 3 - Vehicle Access

The acceptable solution requires access to a through-road that provides alternative destinations for evacuation (human safety), and from which assistance from emergency services (protection of assets) can be received.

Access to the site is by Lewis Road from the west (South Western Highway) which connects to MacKay Drive that loops back onto Lewis Road. Lewis Road is a dead-end road because it is a single access to the South Western Highway.

The proposal is an addition to an existing use and does not represent an intensification of use at the site. SPP 3.7 is not retrospective; today's technical requirements cannot be used to invalidate the existing land use, an exemption is provided at A3.3 where the layout already exists and there is no alternative within the applicants control.

The BMP has identified that Lewis Road provides a single access for 49 residential properties but at the northern extent of Mackay Drive is a short Shire Emergency Access Way. The Emergency Access Way connects onto Butter Gum Close/Selkirk Road and the Great Southern Highway. It is sign posted for 'emergency access' but is gated with substantial locked gates. The arrangement of the EAW, if unlocked, would satisfy the Acceptable Solution of a through road access. This would not only benefit this proposal but the entire rural residential estate that is accessed from Lewis Road.

The internal road access is mineral earth, open, and complies with the technical requirement Table 6 Column 3.

Firebreaks in accordance with the Shire Serpentine Jarrahdale firebreak notice were not observed to have been maintained on the site, but the removal of understorey was evident and maintained within 30 m of the buildings.

Element 4 - Water

The site is connected to a reticulated water supply. Hydrants are located along Lewis Road, 50 m on either side of the entry. A 10,000 L water tank is recommended to be volunteered to assist access to a water supply without reliance upon the reticulated water supply in an emergency event.

Additional Bushfire Management Strategies (addressed in section 5.2)

Additional management strategies, further to the Bushfire Protection Criteria, include the measures to minimise the exposure of guests to bushfire impacts. This is addressed in the Bushfire Emergency Evacuation Plan.

Spatial representation of the bushfire management strategies (Figure EX 1)

The key features demonstrating compliance with the bushfire protection measures are identified on the *Spatial representation of the bushfire management strategies*.

These actions are reflected in the following *Responsibilities for implementation and management of the bushfire measures*.

Conclusion

The facility is of longstanding, and it is acknowledged that an intrinsic attraction is the intimate setting with nature. It is noted that there has been understorey management and it is assumed it will be maintained. The site is not suitable for shelter in a bushfire, and evacuation is emphasised. The communal building will be improved by the proposal, and whilst not a shelter, it would assist assembly for evacuation.

The gated EAW at the northern end of Mackay Drive, should be unlocked to provide a secondary evacuation route for the benefit of the local community. Given the forested condition of the site and the intrinsic value it provides, avoiding exposure to bushfire, rather than ameliorating its effect is recommended. In this regard it is recommended the facility not operate when conditions do not support the ability to control a bushfire. The facility should not operate on days declared as Severe or higher (day before by Bureau of Meteorology). These days primarily occur in late January and throughout February and the facility is closed during these months.

The facility does not provide ready vehicle access around the buildings. It is therefore recommended facilities are provided at the buildings to assist preparation before a fire and suppression after the fire has passed. The provision of shielded fire hoses capable of applying water to all parts of a building and 10 m around the perimeter are recommended.

6. Responsibilities for implementation and management of the bushfire measures

The Owner responsibilities (Guidelines 4.6.3) identify the bushfire management measures necessary to achieve compliance with the bushfire protection criteria.

Owner

- | | | |
|----|--|---------------------------------|
| 1. | The adoption of the Bushfire Emergency Evacuation Plan (as provided in Appendix 2). | Prior to occupation and ongoing |
| 2. | The facility will not operate to accommodate guests in period, including the whole of the month of January and February each year. | Ongoing |

Should this arrangement change, it will require a variation to this approval and a review of the BMP.

- | | |
|--|--|
| <p>3. The establishment of an Asset Protection Zone (APZ) as demonstrated in the <i>Spatial Representation of Bushfire Management Strategies</i> and in accordance with the Standards for Asset Protection Zones (Schedule 1 Guidelines for Planning in Bushfire Prone Areas V1.3).</p> <p>This includes:</p> <ul style="list-style-type: none"> • An APZ extending 27 m west of the Communal building (Volunteered). • The removal of vegetation greater than 100 mm within 10 m of the Communal building (Volunteered). • An Asset Protection Zone extending 33 m south of the Meditation Building and 21 m to all other elevations (Required). | <p>Prior to occupation and ongoing</p> |
| <p>4. Firebreaks to be installed and maintained in accordance with the Shire of Serpentine Jarrahdale annual Firebreak and Fuels Hazard Reduction Notice (<i>Bushfire Act 1954</i>).</p> | <p>Ongoing</p> |
| <p>5. The driveway is to be maintained in accordance with the technical requirements for private driveways specified in Element 3 Table 6 column 3</p> | <p>Ongoing</p> |
| <p>6. A 10 000 L water tank is to be provided (Volunteered) and reserved for emergency services. The tank is to be provided with a coupling to the standards required by Shire of Serpentine Jarrahdale. The tank is to be signposted.</p> | <p>Prior to occupation and ongoing</p> |
| <p>7. Shielded fire hoses, AS 1221, capable of applying water to all parts of a building and 10 m around its perimeter are to be provided and signposted.</p> <p><i>Around the Meditation building – prior to occupation. Volunteered to all other buildings.</i></p> | <p>Prior to occupation and ongoing</p> |

Advisory notes

1. The landowner acknowledges their *duty of care*, to protect any visitors to the site from harm, including safe direction and evacuation from the site, when there is a risk of bushfire affecting the site.
2. The landowner is responsible for availing themselves of any promotions and information to assist in preparing for and responding to a bushfire event as may be made by the Shire or the Department Fire and Emergency Services
3. Where there is conflict between this Bushfire Management Plan and the Shire Firebreak Notice the higher level of bushfire protection will prevail

Shire of Serpentine Jarrahdale

- | | |
|---|----------------|
| <p>1. It is recommended the Shire investigate the availability of the Emergency Access Way, at the northern end of MacKay Drive that connects Butter Gum Close/Selkirk Road to is to be sign posted each end for 'emergency access' and unlocked, as a alternate access for the benefit of the local community.</p> | <p>Ongoing</p> |
| <p>2. Developing and maintaining district bushfire fighting services and facilities.</p> | <p>Ongoing</p> |
| <p>3. Administer the <i>Bushfire Act 1954</i> and monitor landowner compliance to maintain land in a state not conducive to the ignition or spread of bushfire.</p> | <p>Ongoing</p> |
| <p>4. Promoting education and awareness of bushfire prevention and preparation measures though the community.</p> | <p>Ongoing</p> |



- | | |
|--|---------|
| 5. Administering the requirements of the <i>Planning and Development Act 2005</i> by ensuring the facility closure in accordance with the terms of the Development approval. | Ongoing |
| 6. Administering the requirements of the <i>Planning and Development Act 2005</i> and the <i>Building Act 2011</i> . | Ongoing |

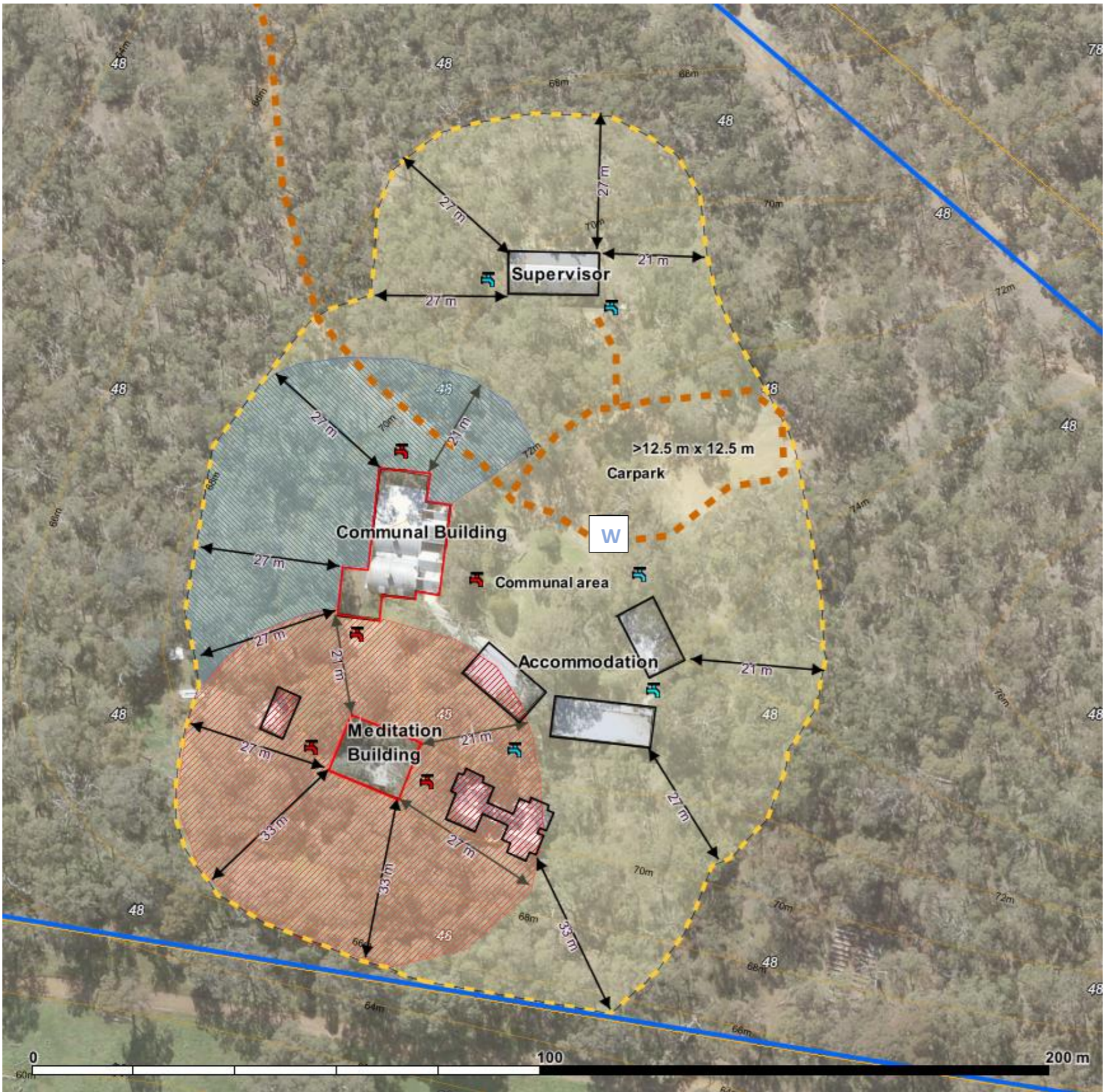
State Government

- | | |
|--|---------|
| • Notification of Emergency Alerts - Website and Telecommunication Media | Ongoing |
| • Policing operations to minimise the deliberate ignition of bushfires. | Ongoing |
| • Maintain fuel reduction on public lands | Ongoing |

Acknowledgment - Proponent

The proponent acknowledges the responsibilities as listed above and the requirement to ensure that should the land transfer to a new owner, that the new owner is aware of the BMP and their ongoing responsibility.

Figure EX 1 - Spatial representation of the proposed risk management strategies



Notes

1. Establishment of an Asset Protect Zone in accordance with the Standards for Asset Protection Zones (Schedule 1 Guidelines for Planning in Bushfire Prone Areas V1.3):
 - An APZ extending 27 m west of the communal building (volunteered).
 - The removal of vegetation greater than 100 mm within 10 m of the communal building.
 - An APZ extending 33 m south of the meditation building.
2. The driveway is to be maintained in accordance with the technical requirements for private driveways specified in Element 3 Table 6 column 3
3. Firebreaks to be installed and maintained in accordance with the Shire of Serpentine Jarrahdale annual Firebreak and Fuels Hazard Reduction Notice (*Bushfire Act 1954*).
4. A 10 000 L water tank is to be provided and reserved for emergency services. The tank is to be provided with a coupling to the standards required by Shire of Serpentine Jarrahdale. The tank is to be signposted.
5. Shielded fire hoses, AS 1221, capable of applying water to all parts of a building and 10 m around its perimeter are to be provided and signposted.

	Required Asset Protection Zone
	Volunteered Asset Protection Zone
	Maintained removed understorey area (present actions)
W	10000 L water tank (volunteered)
	Required fire hoses
	Voluntary fire hoses

Property Assessment Details
 48 Lewis Road Serpentine
 Prepared by: Anthony Rowe
 Accreditation Level: Level 3
 Accreditation Number: 36690
 Date: 11 March 2021

EMERGENCY EVACUATION DIAGRAM

**YOUR LOCATION IS
The Centre for
Attitudinal Healing**

**48 Lewis Road
Serpentine**

- **IF YOU SEE SMOKE**
- **IF YOU SEE FIRE**

PHONE 000

Describe your location and where the smoke or fire is.

- **IF YOU ARE TOLD TO LEAVE**

Verify it is safe to leave and Evacuate by vehicle to **Clem Kentish Hall** 24 Wellard St, Serpentine **OR AS OTHERWISE ADVISED BY EMERGENCY SERVICES** (directly or via publicly broadcast information and warnings)

1. Assemble at the communal building
2. Evacuate by vehicle from Lewis Street to South Western Highway then Karnup Road or as otherwise advised

DO NOT TRAVEL THROUGH FIRE.

3. Monitor emergency information
 - ABC Local radio 720 am
 - DFES on 13 33 37
 - Emergency WA - www.emergency.wa.gov.au

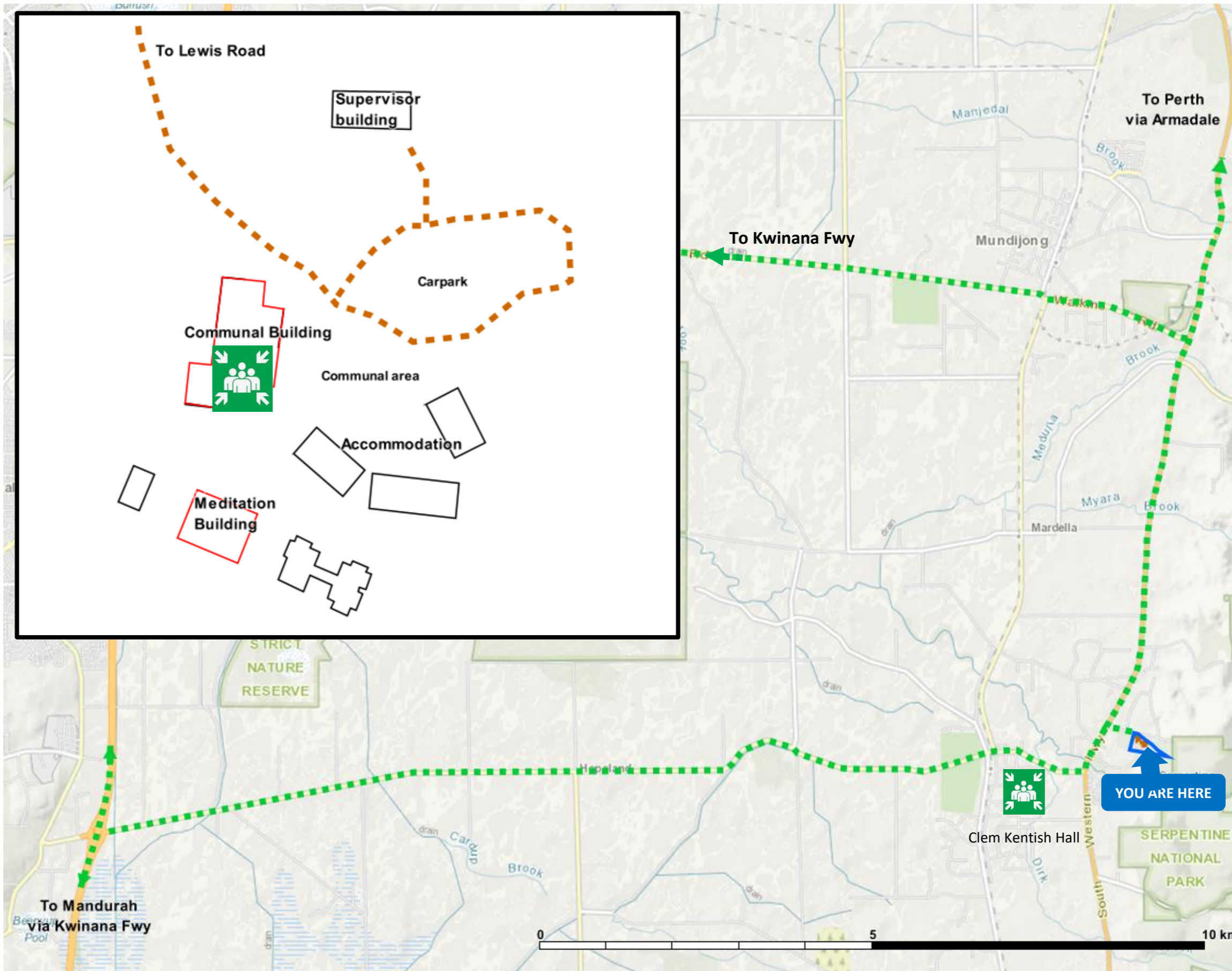


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1. PROPOSAL DETAILS

1.1 Introduction

The purpose of this BMP is to assess the suitability of a building extension and a building replacement at the attitudinal healing facility (day visit and short stay accommodation) at 48 Lewis Road Serpentine ('the site').

The site is in the Shire of Serpentine Jarrahdale (**Plate 1**) and is located within a bushfire prone area (OBRM 2019) **Plate 2**.

Development, buildings, and land use, located within a bushfire prone area, are required to demonstrate compliance with the requirements of State Planning Policy 3.7.

The policy intent is *to preserve life and reduce the impact of bushfire on property and infrastructure*, and compliance is achieved where a proposal incorporates the Acceptable Solutions as described under each Element in the Bushfire Protection Criteria or can satisfy the intent of each Element by performance principle and the Precautionary Principle.

This document presents an assessment of a proposed vulnerable class of development "visitation uses that may involve people who are unaware of their surroundings" with the requirements State Planning Policy 3.7 and *Guidelines for Planning in Bushfire Prone Areas* (WAPC, V1.3 December 2017) including assessment against each of the Bushfire Protection Criteria and the requirement for an Emergency Evacuation Plan.

Purpose of this Plan

The purpose of this BMP is to assess the suitability of the proposal and its location for the intended use and identify measures to avoid an increase in the threat of bushfire and reduce the vulnerability of people and property (to the degree necessary) from potentially significant adverse bushfire impacts.

Proposal Description

The proposal is an extension to the Communal building and the construction of a Meditation building. A site plan illustrates the location of the existing buildings and the proposed building work (blue) at Plate 3. The proposed building elevations are provided at Plate 4 and 5

The use of the facility is classed as education and short stay and the proposed buildings are consistent with the existing land use.

The site presently provides accommodation for up to 40 people plus supervisors; the proposal is not intended to increase the capacity of the facility.

The facility does not operate in January and February each year.

Site Description

Address	48 Lewis Road Serpentine
Local Government Area	Shire of Serpentine Jarrahdale
Local Planning Scheme Zone	Rural Zone, Adjacent Rural Residential zone (north and west of the site)
Bushfire Season	1 December – 12 May (precise dates may vary annually)
Development proposal	Education and short-stay accommodation
Building class	Class 9
Lot size	16 ha
Land description site	The site is 16 ha and has a consistent upward slope of 3 ⁰ and a cross slope 3 ⁰ - 10 ⁰ , downwards to the south with the 10 ⁰ slope occurring immediately to the proposed Meditation building. The facility is located centrally within the site (development site). The features at the development site include:

	<ul style="list-style-type: none"> • A communal barbecue area; • A communal building with kitchen; • A 'supervisors' cottage' with two bedrooms for group leaders & facilitators; • Three accommodation buildings providing twelve bedrooms of bunk-style accommodation (for up to 40 people) boarding in the communal space and linked to the communal building by a covered walkway. • An Ablution block & laundry facility <p>The buildings at the site predate contemporary bushfire construction requirements.</p> <p>The site is notable as having a contiguous cover of Marri and Jarrah trees, but immediate to the facility extending 30 m from the buildings the understorey has been removed (managed). It is an area characterised as mainly trees above low depth leaf litter, it is easily walked through without brushing vegetation, but the tree canopy exceeds 30% (forest).</p>			
Adjoining Land uses	North	East	South	West
	Rural Living, houses within large lots with trees over managed land, i.e., Woodland. The area is predominantly level with the site.	Darling Escarpment, rising 15 ^o with an undulating landscape of contiguous forest.	Pasture and the Serpentine River, initial 10 ^o downward slope (230 m), comprised of pasture, to the flood plain	Rural Living, predominantly pasture with small pockets of forest Serpentine town centre 2 km. Downslope from 3 ^o -5 ^o site to the Swan Plain.
Road Access	<p>From South Western Highway by Lewis Road. Lewis Road is a sealed public road complainant with the technical requirements (DPLH) but is a single access from South Western Highway.</p> <p>The site driveway meets the technical requirement table 6 column 3 (DPLH), but it does not provide vision of the facility from Lewis Road.</p>			
Nearest town centre	Serpentine 2 km west.			
Water supply	No water tanks are currently provided on the site. The site has access to the reticulated water supply. A hydrant is located 50 m either side of the site entry.			
Tele communications	The site is within the Telstra 4G network			
Emergency services	<p>The nearest rural fire brigade is Serpentine Fire Brigade at 1514 Karnup Road, Serpentine (2.5 km)</p> <p>The nearest Evacuation Centre is located at Clem Kentish Hall, 24 Wellard Street, Serpentine</p>			
Minor Development	N/A			
Unavoidable development	N/A			
Vulnerable Development	Yes			
High risk land use	N/A			

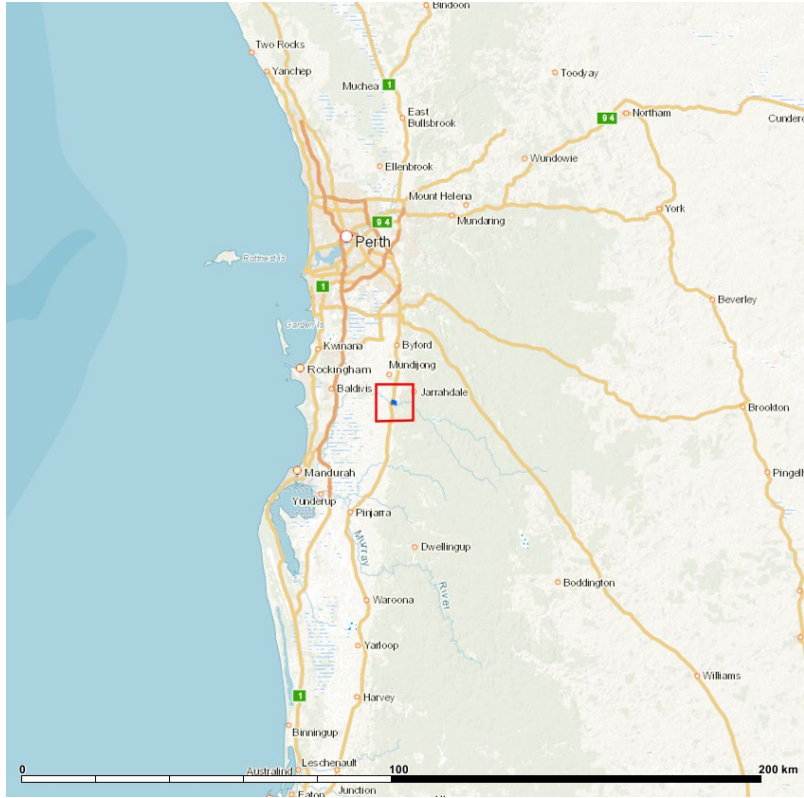


Plate 1: Site in Locality

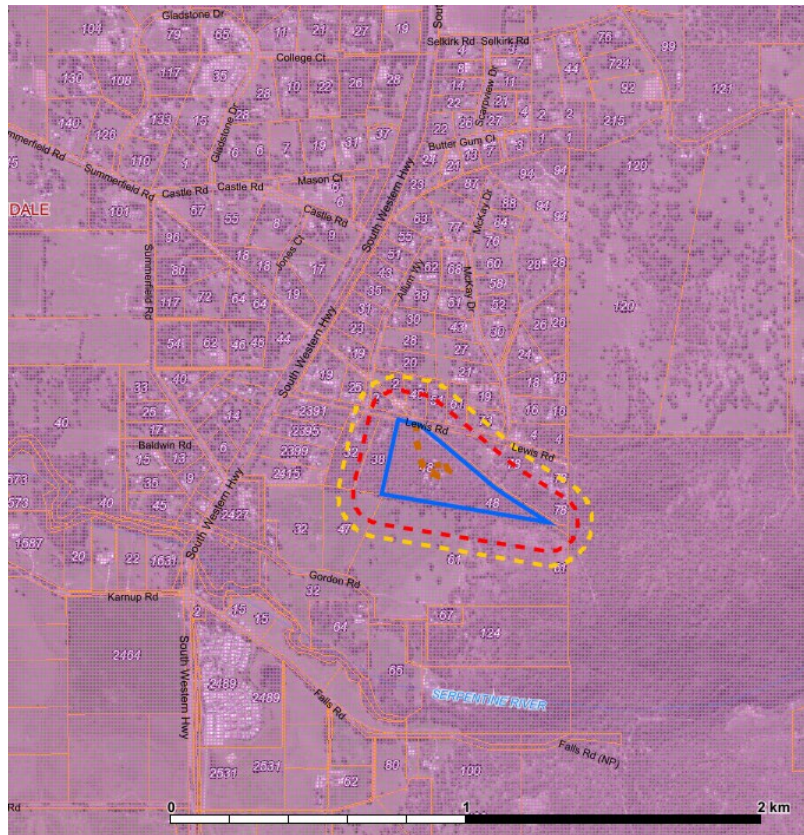


Plate 2: OBRM Bushfire Prone Area (Pink area)

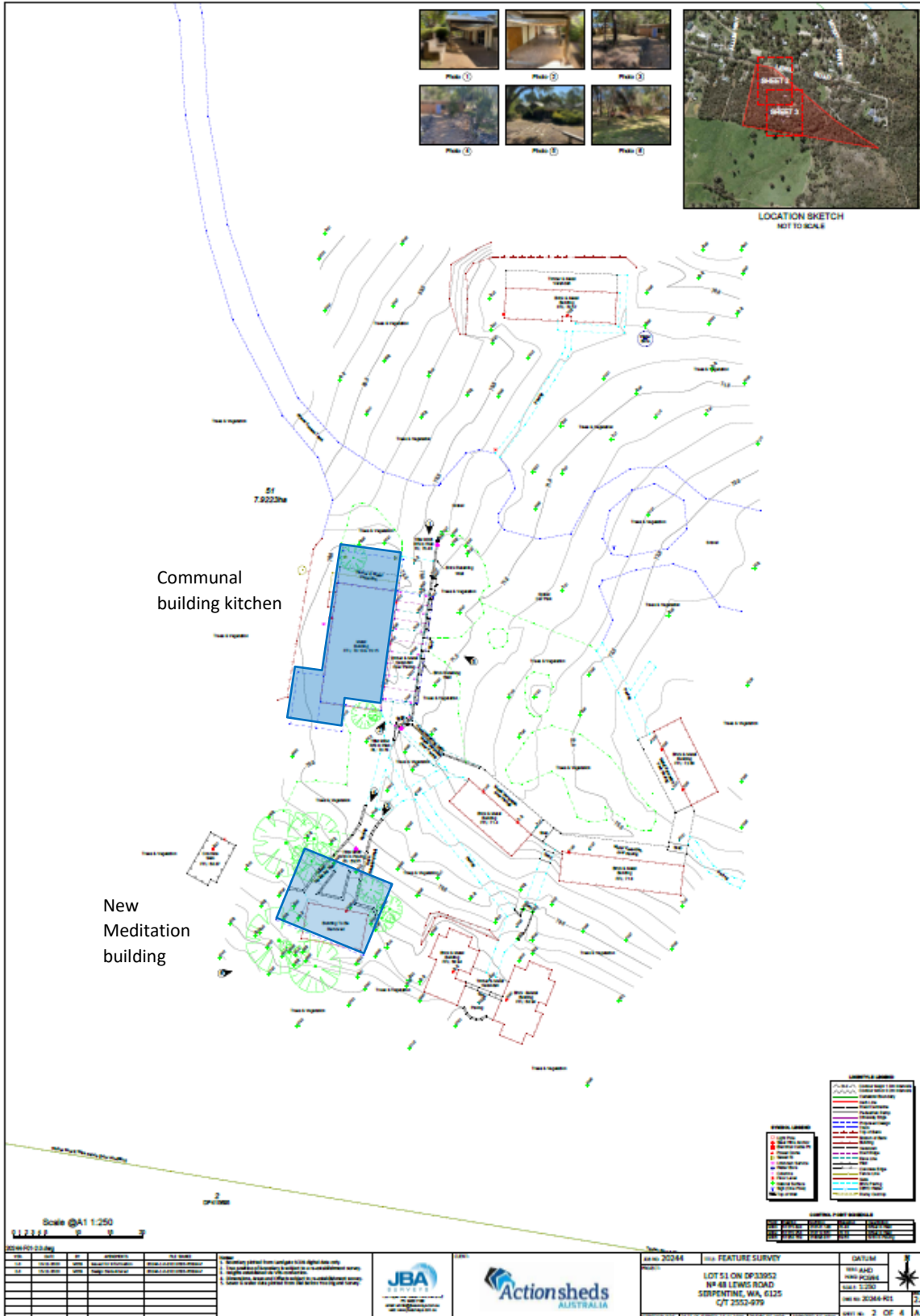


Plate 3: Site Plan

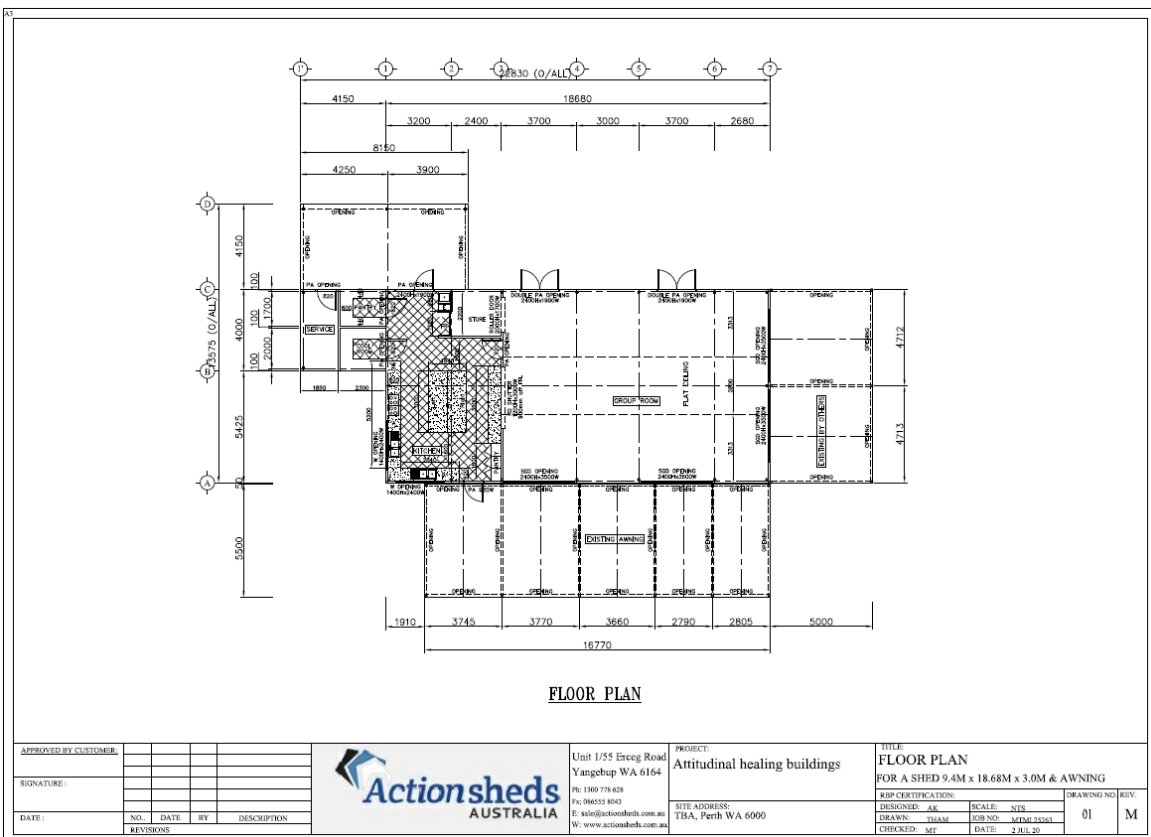
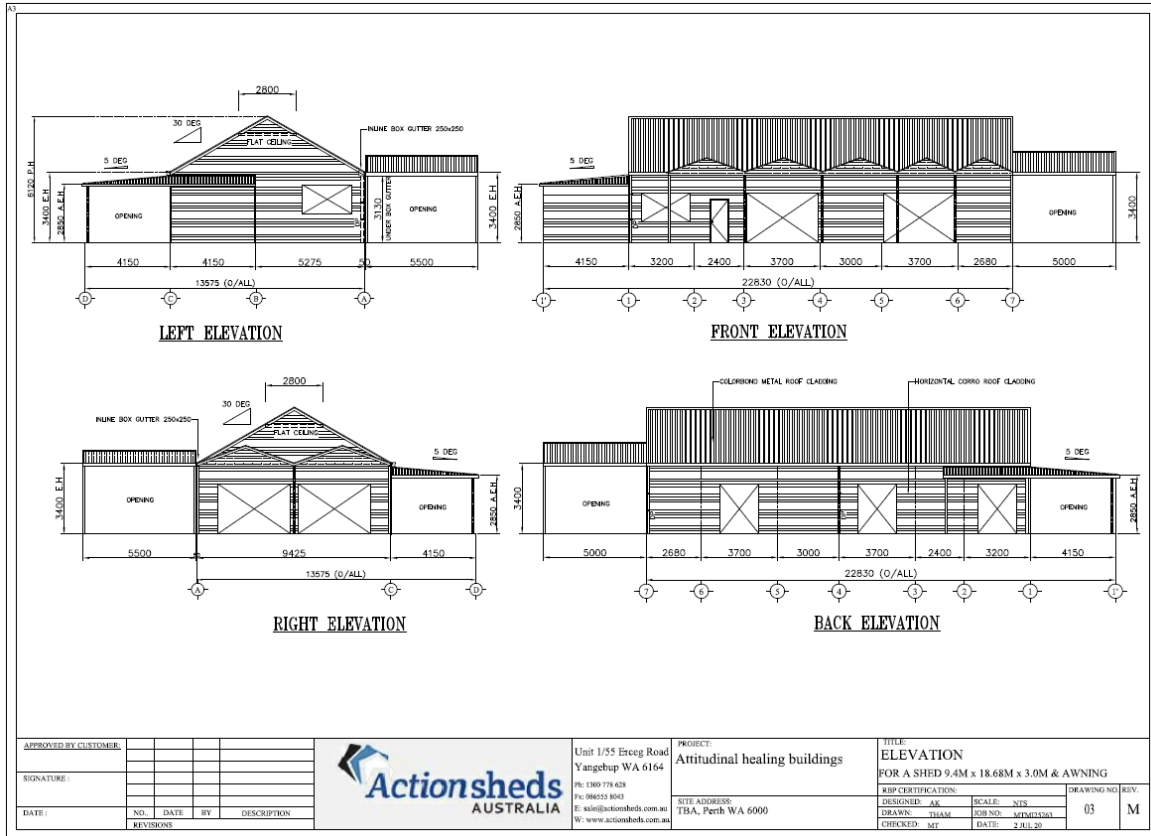


Plate 4: Communal building and kitchen

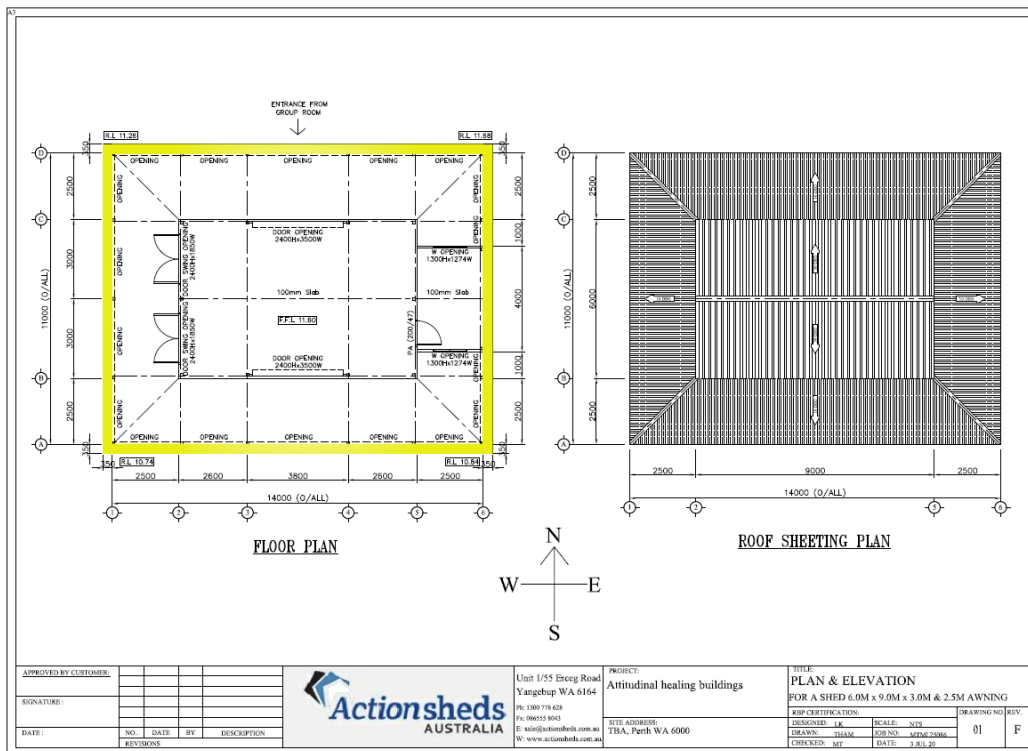
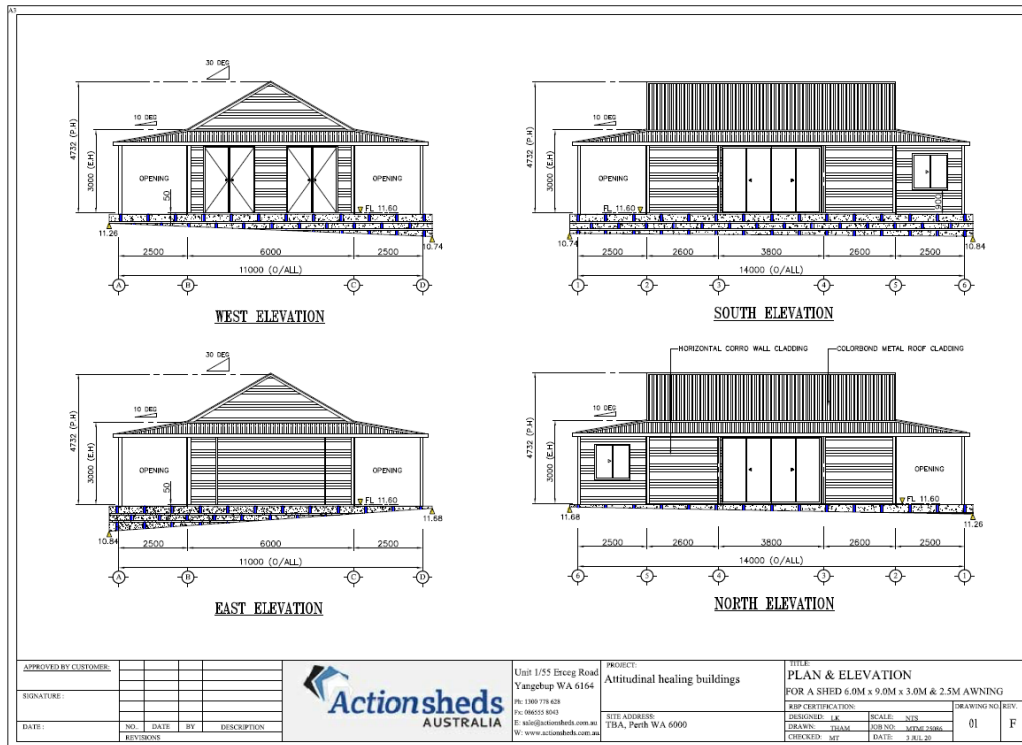
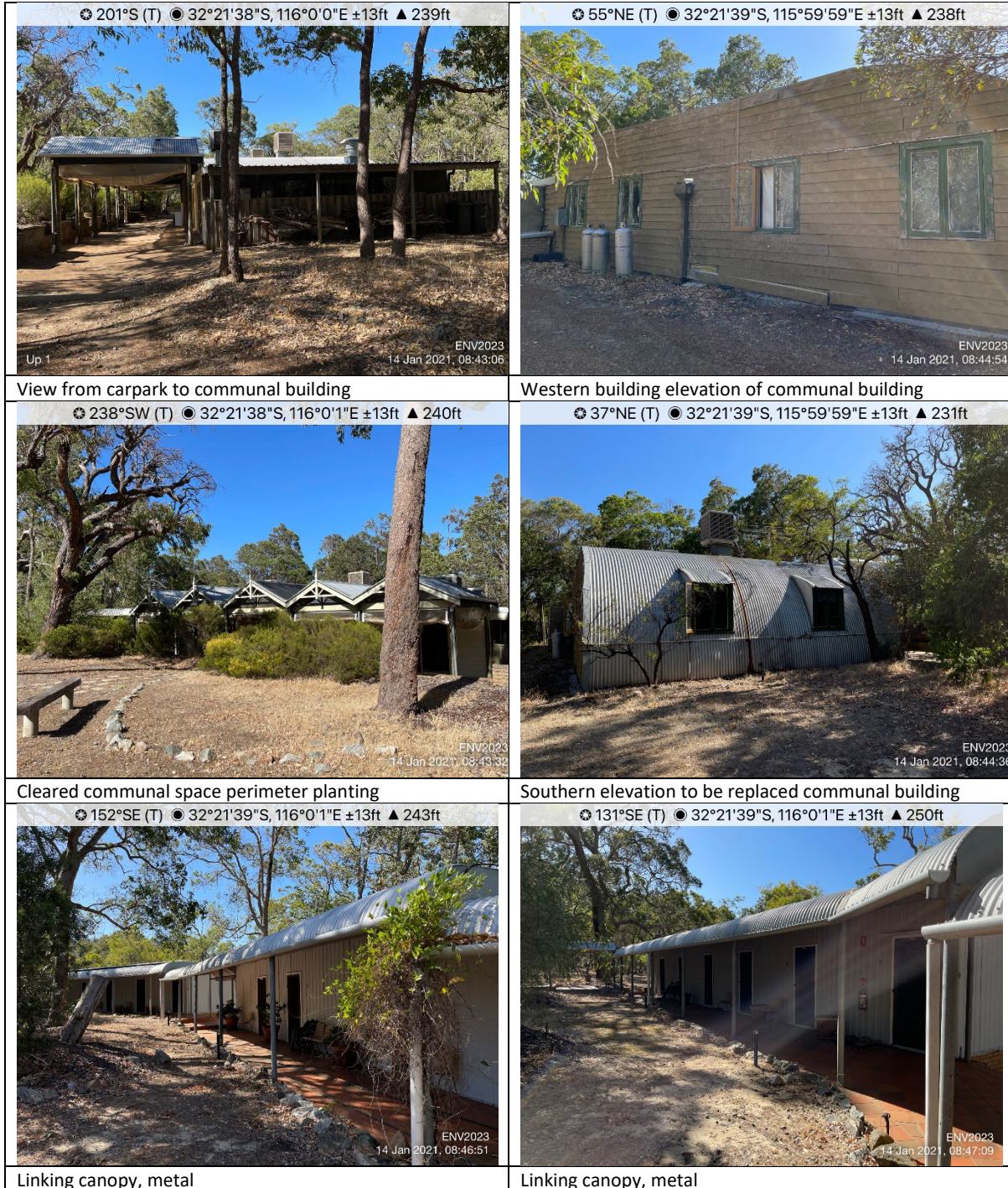


Plate 5: New Meditation building





1.2 Regulatory Compliance Requirements

Planning and Development Act 2005 –

SPP 3.7

On 7 December 2015, the State Government introduced a state map of Bushfire Prone Areas by order under the *Fire and Emergency Services Act 1998* and introduced development controls in Bushfire Prone Areas through the *Planning and Development Act 2005*. These controls were authorised by State Planning Policy 3.7 (Planning in Bushfire Prone Areas) regulations introduced under Part 10A Schedule 2 of the *Planning and Development (Local Planning Scheme) Regulations 2015* and guided by the *Guidelines for Planning in Bushfire Prone Areas*.

The State Planning Policy, Regulations, and Guidelines now form the foundation for fire risk management planning in WA at a community and land development level. The Policy Intent of SPP 3.7 is **to preserve life and reduce the impact of bushfire on property and infrastructure**.

The proposal is to provide education and short stay accommodation. It is, therefore, a ‘vulnerable’ development and pursuant to cl. 6.2 (SPP 3.7). The proposal must demonstrate, **on its completion**, it will achieve a moderate BAL rating not exceeding BAL – 29.

Cl. 6.6 Vulnerable Land Uses (and Guidelines for Planning in Bushfire Prone Areas cl.5.5.)

Typically, *Vulnerable* land uses are those where persons may be less able to respond in a bushfire emergency.

This includes:

- *“short stay accommodation or visitation uses that involve people who are unaware of their surroundings and who may require assistance or direction in the event of a bushfire, such as bed and breakfast, caravan park and camping ground, holiday house, holiday accommodation, home business, serviced (short stay) apartment, **tourist development** and workers’ accommodation.”*

In recent court determinations, it has been acknowledged that whilst people may choose to live in a dangerous location, that is different to inviting people who may or may not be aware of the danger of a bushfire. (JURAN and CITY OF ARMADALE [2018] WASAT 49 (21 June 2018). Consequently, the requirement for the precautionary principle to be applied by cl.6.11 in SPP 3.7, necessitates a higher consideration of safety, than may normally be expected of an owner, where it involves a ‘vulnerable’ development.

An additional requirement provided by SPP 3.7 and its Guidelines, is that a proposal that is classified as a vulnerable development is to be accompanied by a BEEP, comprising the details described at cl.5.5.2 of the Guidelines.

Cl.6.7.

Cl. 6.7 provides that the intensification of development or land use in an area that has or will, on completion, have a BAL-40 or BAL-FZ will not be supported unless it is a type listed as a “minor development” or an “unavoidable development”.

Clause 6.7 enable existing land uses to be addressed pragmatically and follows the consideration of increasing the risk. Hence additions to buildings and building that do not increase the level of people exposed to bushfire is not an intensification. In this instance, the proposed extension of the communal building and the new meditation building are to provide for the existing patronage levels at the site.

Planning and Development (Local Planning Scheme) Regulations 2015, Schedule 2, Part 10A

The *Planning and Development (Local Planning Scheme) Regulations 2015*, Schedule 2, Part 10A provides how SPP 3.7 is to apply to development.

SPP 3.7 applies to habitable buildings, and habitable buildings are defined as fully or partially enclosed and used by people for living; working; studying; or being entertained.

Part 10A establishes the exemptions from the application of SPP 3.7 for certain development types. In addition, the definition of 'construction' in its meaning provides an exemption from the application of SPP 3.7

“construction of a building includes the erection, assembly or placement of a building but does not include the renovation, alteration, extension, improvement or repair of a building;”

In this instance the proposed communal building is a habitable building (applicable to SPP 3.7), but as an extension of a building it is not subject to the SPP 3.7, and the Bushfire Protection Criteria. It is, however, still subject to assessment under the *Building Act 2011*.

The meditation building is a new building and is subject to the considerations of SPP 3.7.

The Building Act 2011

The *Building Act 2011*, and *Building Regulations 2012*, applies the construction standards of the Building Code of Australia (National Construction Code) where it relates to an 'applicable' building.

The Bushfire construction requirement in the National Construction Code is only applicable to class 1-4, and class 10a buildings.

The proposal is a class 9 building and is located within a declared bushfire prone area. Therefore, the construction provisions of the NCC Vol 2, s.3.10.5 do not apply.

Construction standards can, however, be volunteered.

Building Regulations 2012 r.31BA

The applicable building standards for buildings and incidental structures in bushfire prone areas exempt certain development from the effect of NCC Vol 2 s.3.10.5.

Regulation 31BA provides that minor works < \$20 000 and where an extension does not increase the risk to the building;

“Excluded building work means building work that is the renovation, alteration, extension, improvement or repair of a relevant building if —

- (a) the estimated value of the building work is less than \$20 000; or*
- (b) the renovation, alteration, extension, improvement or repair does not increase the risk of ignition from bushfire attack for the relevant building”*

The communal building is not captured by NCC Vol 2 s.3.10.5, nor need to rely upon the Regulations exception. However, it is recommended that siting and construction considerations apply to improve the expected low resistance of ignition of the building.

Bushfires Act 1954

Section 33 of the *Bushfires Act 1954* recognises the responsibility of all landowners to prevent the spread of bushfire. Local government, at any time, may give notice in writing to an owner or occupier of land within the district of the local government. The notice may specify works to be undertaken, including the management of grasses on the property usually to be maintained at less than 10cm during the fire season. It also provides that the identified works can be undertaken as a separate operation or in coordination with the neighbouring land.

Environment Protection Act 1986 and Environmental Protection (clearing native vegetation) Regulation 2004

It is an offence to clear native vegetation without the authority of a permit or an exemption. The act of clearing native vegetation, requires a permit from either the Department of Water and Environmental

Regulation (DWER) or the Department of Mines, Industry Regulation and Safety (DMIRS), unless an exemption applies.

Exemptions include:

Environment Protection Act 1986

- Clearing required by local Government Section 33 *Bushfire Act 1954*.
- Clearing in accordance with the terms of a subdivision approval.
- Clearing in accordance with a permit under the *Bushfires Act 1954* (prescribed burning) and clearing by a bushfire control officer.

Environmental Protection (clearing native vegetation) Regulation 2004 (exemptions do not apply in Environmentally Sensitive Areas, and clearing > than 5ha)

<https://www.der.wa.gov.au/your-environment/environmentally-sensitive-areas>

- Clearing to the extent necessary to construct an approved building.
- Clearing that is for fire hazard reduction burning.
- Clearing to maintain an area cleared in the last ten years.

2. ENVIRONMENTAL CONSIDERATIONS

2.1 Native Vegetation – Modification and Clearing

A fundamental consideration in the assessment of development under SPP 3.7 is to avoid instances where bushfire risk management measures would conflict with or be limited by other biodiversity management measures.

In accordance with the Department of Planning Lands and Heritage template (BMP template to support a BAL Contour Assessment) a review of the listed databases has been undertaken as part of this assessment to identify whether restrictions or other specific considerations may apply that would affect the implementation of any bushfire protection initiatives that may otherwise be identified.

Table 1: Ecological database assessment.

Is the land affected by:	Yes/No/NA	If yes - describe
Conservation Wetland or buffer (DBCA-019 DBCA-017)	NA	
RAMSAR Wetland (DBCA-010)	NA	
Threatened and Priority Flora (DBCA-036)	NA	
Threatened and Priority Fauna (DBCA-037)	Yes	Quenda and Black cockatoo habitat
Threatened Ecological Communities (DBCA-038)	Yes	Supporting the Quenda and Black cockatoo habitat
Bush Forever (COP-071)	Nearby	Serpentine River
Environmentally Sensitive Area (DWER-046)	Nearby	Serpentine River
Regionally Significant Natural Areas (DWER-070)	Yes	The site is within an area identified as locally significant
Conservation Covenant (DPIRD-023)	NA	
Does the proposal require the removal of restricted vegetation?	Yes	No

The clearing of ecologically recognised vegetation will be required to establish the Asset Protection Zones. It is noted that the understorey around the site for up to 30 m-50 m has been removed (of longstanding) but tree canopy exceeds the 15% foliage cover limitation of an Asset Protection Zone (APZ). Where the APZ is required as part of establishing the proposed development, some removal of trees will be required to achieve the required canopy separation and reduce the canopy cover to 15%. Trees with the highest ecological value should be prioritised for retention.

It is noted that there has been a historic removal of understorey, within 30 m of the buildings. Quendas rely on the understorey for habitat. Further understorey removal is not expected as part of the establishment of the Asset Protection Zone.

The Department of Water and Environmental Regulation (DWER) is to be consulted with regard to clearing permit requirements. It may require a detail flora study of the vegetation identified including an assessment to roosting trees.

2.2 Re-vegetation/Landscape Plans

Re-vegetation/landscape plans are not included, nor are they required as part of this proposal.

The Asset Protection Zone areas are not barren land but a vertical and horizontal separation of fuels. The arrangement to be followed (Standards for Asset Protection Zones Schedule 1 Element 2 Guidelines V1.3) is attached. More precise detail will be required from DWER about the evaluation of the vegetation to be removed.

3. BUSHFIRE ASSESSMENT

3.1 Bushfire Attack Level Assessment (Inputs)

Bushfire Behaviour

Bushfire behaviour is the primary determinant of the bushfire consequence. Bushfire behaviour is affected by three factors;

- Climate (drought and season) & weather (temperature, humidity, wind, atmospheric instability) determines the intensity of a fire, the speed and direction and the potential for advanced spotting. Measured as an FDI in AS3959. A bushfire becomes uncontrollable in conditions FDI 50+ (Severe), which leads to building loss, and there is a sharp increase in building loss and fatalities when the FDI exceeds FDI 80 + (Extreme and catastrophic).
- Topography (slope under vegetation, and wind influences). Fire travels faster up a hill, the intensity and the flame length are increased, and the fire speed can double with each 10-degree increase in slope. Landforms such as gully's can channel and increase local wind speed and create turbulence.
- Vegetation (horizontal and vertical structure, flammability, mass and availability). Measured as a vegetation classification, or an exclusion, in AS3959 (Method 1).

It is assumed that a bushfire will achieve a steady-state and be fully developed to maximum intensity over a 100 m (minimum fire run). Grass fires travel faster than a forest canopy fire, but a forest canopy fire can eject a higher level of embers and eject them over a greater distance.

The arrangement of fuel and its exposure to oxygen, has a significant effect upon the intensity of the fire. Crown fires occur when the ground fire is intense, and conversely when ground fuels are managed the resultant fire intensity may not be sufficient to sustain a crown fire.

Separating the vertical structure to avoid no direct connection between the ground and the crown, reduces the likelihood of a crown fire.

The following assessment has been undertaken in accordance with the methodologies described in AS3959:2018 and in accordance with the Guidelines and the Fire Protection Association accredited practitioner methodology.

All vegetation within 150 m (**context**) of the subject building has been classified (AS 3959:2018 Clause 2.2.3) to determine the Bushfire Hazard Level at the site;

The BAL rating has been determined through site inspection and assessment of the following parameters:

- Fire Danger Index (FDI) rating; assumed to be FDI - 80 for Western Australia;
- Separation distance between the building and the classified vegetation source(s) within 100 m (for BAL impact) the separation distance is measured from the wall face (receiver) to the unmanaged understory rather than the canopy edge (dripline) *see plate 6*; and
- Slope of the land under the classified vegetation.

In assessing vegetation classes for forests, woodlands and rainforests, the classified vegetation will be determined by the unmanaged understorey rather than either the canopy (drip line) or the trunk of any trees.

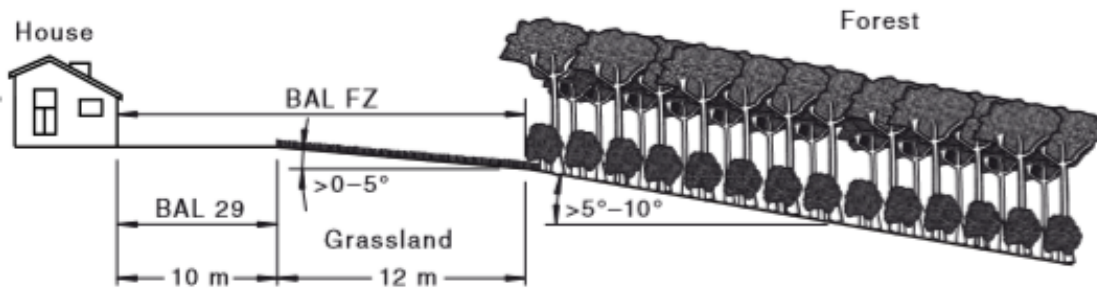


FIGURE 2.2 EXAMPLE OF VARYING SLOPE RANGES FOR ASSESSMENT

Plate 6: Arrangement of inputs for the determination of a BAL.

A site inspection was undertaken on 14 January 2021, in accordance with the FPAA Guidelines.

All vegetation within 150m of the site / proposed development was classified in accordance with Clause 2.2.2.3 and Table 2.5 in AS 3959:2018.

A BAL Assessment has been prepared in accordance with the FPAA Guidelines and is attached (Appendix 1).

3.2 Determined Bushfire Attack Level (Outputs) Method 1

The Determined Bushfire Attack Level (highest BAL) for the site / proposed development is based upon the conditions and classified vegetation present at the time of inspection; it does not represent the state upon completion, but only the requirement for bushfire protection measures.

Determined Bushfire Attack Level has been derived in accordance with clause 2.2.6 (Method 1) of AS 3959:2018. Table 2.5 and the DPLH *Visual Guide for Bushfire Risk Assessment In Western Australia*.

As the starting point, in this instance there is no separation of the proposed building works and the classified vegetation.

Determined Bushfire Attack Level	
Meditation Building	BAL - FZ
Communal Building	BAL - FZ

3.3 Indicative Bushfire Attack Level (BAL)

The Indicative Bushfire Attack Level for the proposed development is determined by the availability to establish an APZ (subject to clearing approval) within the site (or with perpetual external arrangements).

Indicative Bushfire Attack Level	
Meditation Building	BAL – 29
Communal Building	BAL -29 Volunteered

4. IDENTIFICATION OF BUSHFIRE HAZARD ISSUES

The Bushfire Danger Season has traditionally been between November and April each year, but recent climatic conditions have caused fire danger conditions to be present on either side of this period.

Severe bushfire conditions FDI 50+, occur mostly between January and March. Extreme and Catastrophic conditions occur mostly in the afternoon and typically with south-south easterly winds (BoM Karnet 6 km from the site). A bushfire can, however, come from any direction.

Rose of Wind direction versus Wind speed in km/h (01 Jan 1965 to 12 Aug 2020)

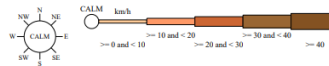
Custom times selected, refer to attached note for details

KARNET

Site No: 009111 • Opened Dec 1963 • Still Open • Latitude: -32.4389° • Longitude: 116.0789° • Elevation 286m

An asterisk (*) indicates that calm is less than 0.5%.

Other important info about this analysis is available in the accompanying notes.



9 am Feb
1525 Total Observations

Calm 4%

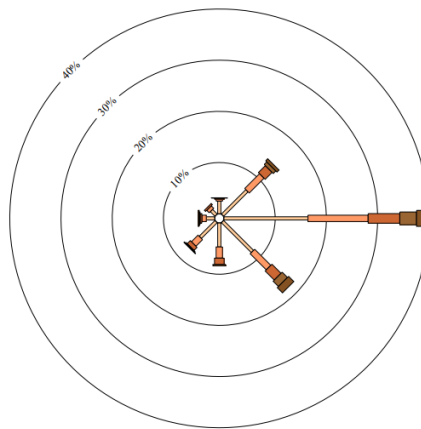


Plate 7: BoM weather data, prevailing wind directions as of 9 am

Rose of Wind direction versus Wind speed in km/h (01 Jan 1965 to 12 Aug 2020)

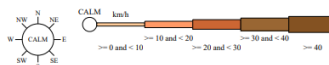
Custom times selected, refer to attached note for details

KARNET

Site No: 009111 • Opened Dec 1963 • Still Open • Latitude: -32.4389° • Longitude: 116.0789° • Elevation 286m

An asterisk (*) indicates that calm is less than 0.5%.

Other important info about this analysis is available in the accompanying notes.



3 pm Feb
1234 Total Observations

Calm 4%

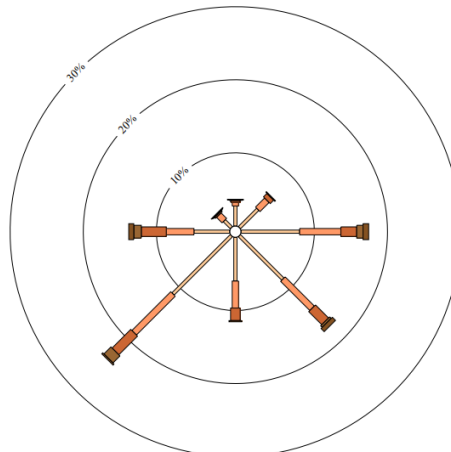


Plate 8: BoM weather data, prevailing wind directions as of 3 pm

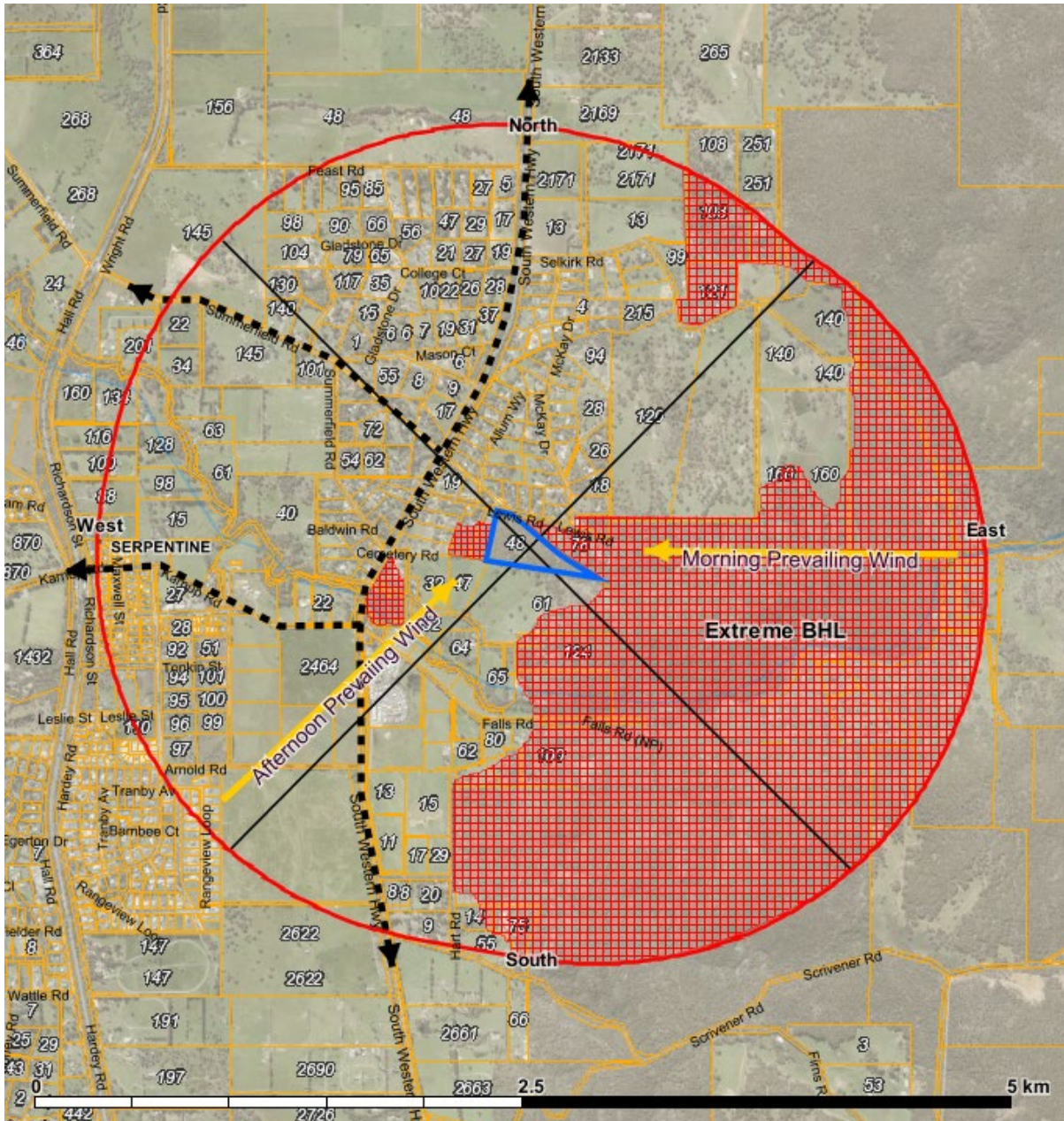


Plate 9: Locality 2 km

Table Hazard Identification by quadrant.

	North	East	South	West
Adjacent vegetation and continuity	Rural living. Non-contiguous forest	Forest. Contiguous	Forest, Partial	Pasture
Slope	Level	Upslope	Level	Downslope
% Forest	<10%	60%	60%	<10%
Topography	Undulating 0-5 ⁰	Undulating 10-15 ⁰ Upslope	Undulating 0-5 ⁰ Downslope	Flat 0-1 ⁰
Rate of spread km/h	2.4	2.4	3.4/20(GDFI)	20 (GDFI)
Bushfire Hazard Level	Moderate	Extreme	Extreme	Moderate
Morning wind %		80%		
Afternoon wind %	5	45	40	10
Vegetation retained off-site	Non-contiguous forest	Forest	Pasture, Forest	Pasture
Access BHL	Moderate	Not available	Moderate	Moderate
Evacuation direction	McKay Drive	Not available	South Western Highway	South Western Highway
Nearest Emergency Services	Mundijong Fire Station	Jarrahdale Fire Brigade	Keysbrook Volunteer Bushfire Brigade	Serpentine Fire Brigade

The site is considered an extension of the forest in the Darling Escarpment to the east.

The Darling Escarpment (east of the site) comprises contiguous forest and is an 'Extreme' bush fire hazard level.

The site is downwind to easterly winds, which are a high proportion of morning winds and a significant percentage of all wind directions in the afternoon. Landscape fires in the Perth Hills east of the site, often travel from east to west driven by low humidity easterly winds.

Active, fuel reduction measures taken east of the site have prevented landscape fires from penetrating the Perth Urban area, including through ember attack.

These measures also assist in reducing the risk to the site but are beyond the applicant's control. The site is considered vulnerable to a fire occurring east of the site, and from a grass fire approaching from the south.

Lewis Road provides for evacuation west, and McKay Drive provides for evacuation north (although it is unlikely to be preferred to Lewis Road in any event). Both routes provide evacuation in the opposite direction to an advancing fire.

McKay Drive is joined to Butter Gum Close (north) by a gated Emergency Access Way. The EAW is short (140 m) and should be made available to the rural living community located north of the site, but also to the south of the EAW, to also have an alternative access to that provided by Lewis Road from the South Western Highway.

Evacuation is the preferred response when the routes are safer than the site. This is determined by ensuring the Available Safe Evacuation (Egress) time ASET is greater than the Required Safe evacuation time RSET. In this instance the lead time for RSET is short because visitors, as short term accommodation guests, will not take time to gather possessions.

The minimum RSET time to evacuate to South Western Highway 600 m (Safer place boundary), and then further west, is 30 minutes to organise and alight vehicles assuming vehicles are available on site. The travel distance and time is short, and it is unlikely that the route via Lewis Road to South Western Highway would not be available.

A fire takes time to develop from initial ignition and it spreads elliptically, it therefore becomes wider and more intense with distance, and the ability to avoid it is therefore dependent upon the distance from the site to the initial ignition.

The buildings predate bushfire construction standards and have a higher reliance upon fire suppression, applying water to a fire, than do contemporary bush fire construction standards. Emergency services are located within a responsive distance from the site to attend to building fires after the passing of the firefront. Their attendance however cannot be relied upon due to other priorities.

The facility would therefore be assisted by construction and site management that reduces the risk of ignition to the buildings.

The proposal is a catalyst for improving site management, access, and onsite suppression facilities together with a BEEP to minimise human exposure to the effects of bushfire.

5. BUSHFIRE PROTECTION MEASURES

5.1 Bushfire Protection Criteria (Appendix 4 of the Guidelines V1.4)

For each of the elements listed within Appendix 4 of the Guidelines for Planning in bushfire-prone areas, the 'intent' must be achieved either by the proposal meeting the acceptable solutions; or where these acceptable solutions cannot be fully met, then by a performance-based solution that can achieve the 'intent.'


Table 2: Bushfire Protection Criteria assessment.


✓	Acceptable solution provided	C	An Acceptable Solution to be conditioned
N/A	Not Applicable	P	Performance Principle solution see 5.2

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
Element 1: location 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	A1.1 Development location The strategic planning proposal, subdivision, and development application is located in an area that is or will, on completion, be subject to either a moderate or low bushfire hazard level, or BAL-29 or below.	✓		In accordance with the WAPC Position Statement: <i>Planning in bushfire prone areas – Demonstrating Element 1: Location and Element 2: Siting and design</i> , the consideration of the bushfire hazard level is not relevant to a development site, as it is used as a basis for determining the suitability of an area of land for rezoning. The proposal is development at an existing facility. Element 1 is not applicable in this instance; Element 2 addresses a site-specific proposal.

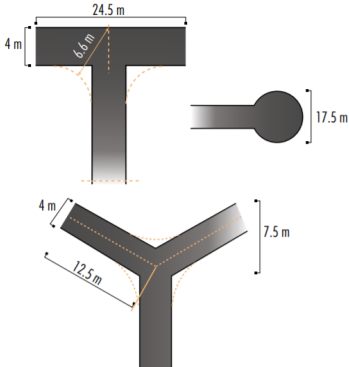

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
<p>Element 2: Siting and Design</p> <p>To ensure that the siting and design of development minimises the level of bushfire impact</p>	<p>A2.1 Asset Protection Zone</p> <p>Every habitable building is surrounded by, and every proposed lot can achieve, an APZ depicted on submitted plans, which meets the following requirements:</p> <ul style="list-style-type: none"> • Width: Measured from any external wall or supporting post or column of the proposed building, and of sufficient size to ensure the potential radiant heat impact of a bushfire does not exceed 29kW/m² (BAL-29) in all circumstances. • Location: the APZ should be contained solely within the boundaries of the lot on which the building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity (see explanatory notes). • Management: the APZ is managed in accordance with the requirements of 'Standards for Asset Protection Zones.' (see Schedule 1). 	✓		<p>The Acceptable solution A2.1 requires that the development site can achieve on completion a BAL not exceeding BAL-29, by an Asset Protection Zone (APZ) within the boundaries of the lot.</p> <p>In this instance, there is no requirement upon the proposed communal building; building extensions are exempt from SPP 3.7 and the <i>Building Act 2011</i> does not provide a bushfire construction standard for this class of building. However, a siting (BAL -29) and construction standard can be volunteered (r.78(E)).</p> <p>The communal building will face classified vegetation only at its west elevation (from the west quadrant). It is recommended (to be volunteered) that an APZ be provided at the west quadrant, extending from the west face a sufficient distance to achieve BAL-29 at the building and practical measures undertaken to the exterior; comparable to a BAL-29 construction standard.</p> <p>The proposed meditation building, whilst it will replace an outbuilding is a new building. It is considered a new habitable building, requiring siting in accordance with A2.1. The location of the building is sufficiently set back from the nearest boundary to accommodate the required APZ (BAL 29) for slope and vegetation type.</p> <p>Whilst it is evident that fuel reduction works have been undertaken within the area to be covered by the APZ, some tree removal will be required to achieve a canopy cover not exceeding 15%.</p>

<p>Element 3: Vehicular Access</p> <p>To ensure that the vehicular access serving a subdivision/development is available and safe during a bushfire event</p>	<p>A3.1 Two access routes</p> <p>Two different vehicular access routes are provided, both of which connect to the public road network, provide safe access and egress to two different destinations, and are available to all residents/the public at all times and under all weather conditions.</p>	<p>N/A</p>	<p>The proposal is exempt from the application of Element 3</p> <p>The proposal is an addition to an existing use and does not represent an intensification of use at the site.</p> <p>SPP 3.7 is not retrospective, today's technical requirements cannot be used to invalidate the existing land use.</p> <p>An exemption is provided at A3.3 where the layout already exists and there is no alternative within the applicants control.</p> <p>Performance Principle consideration of community EAW</p> <p>Lewis Road is a dead end road that extends east from the South Western Highway, it connects to McKay Drive which is a loop road that reconnects to Lewis Road. Lewis Road is a single connection that combined with MacKay Drive supports 49 residents.</p> <p>A secondary access would be of benefit to the existing community.</p> <p>MacKay Drive at its northern end is connected of Butter Gum Close by a Shire EAW 140 m. Butter Gum Close in turn connects to the South Western Highway.</p> <p>The Shire Emergency Access Way that compliant with the technical requirements Element 3 Table 6 and is over public land.</p>
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			<p style="text-align: center;">📍 164°S (T) 📍 32°21'0"S, 116°0'10"E ±13ft ▲ 297ft</p>  <p><i>Plate 10: EAW at Butter Gum Close – signage is to the Shire of Serpentine Jarrahdale</i></p> <p>The EAW is gated with padlocks and not available to the public. A light padlocked gate is provided at Gum Tree close but the gate/barrier at McKay Drive is substantial and is not a push pass gate.</p>
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Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
				<p data-bbox="1332 292 1944 320"> 📍 229°SW (T) 📍 32°21'6"S, 116°0'8"E ±16ft ▲ 256ft </p>  <p data-bbox="1240 901 1668 927"><i>Plate 11: Locked heavy gate at McKay Drive</i></p> <p data-bbox="1240 948 2033 1029">This EAW has potential to serve all residents (49 houses McKay Drive and Lewis Road). It is therefore recommended for the Shire’s consideration that the gate not be locked.</p> <p data-bbox="1240 1050 2033 1107">If the gate is not locked the proposal is then serviced by an arrangement compliant with a through road.</p>

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies																																																
	<p>A3.2 Public road</p> <p>A public road is to meet the requirements in Table 6, Column 1.</p> <p>Table 6: Vehicular access technical requirements</p> <table border="1"> <thead> <tr> <th>TECHNICAL REQUIREMENTS</th> <th>1 Public road</th> <th>2 Cul-de-sac</th> <th>3 Private driveway</th> <th>4 Emergency access way</th> <th>5 Fire se acce rout</th> </tr> </thead> <tbody> <tr> <td>Minimum trafficable surface (m)</td> <td>6*</td> <td>6</td> <td>4</td> <td>6*</td> <td>6*</td> </tr> <tr> <td>Horizontal clearance (m)</td> <td>6</td> <td>6</td> <td>6</td> <td>6</td> <td>6</td> </tr> <tr> <td>Vertical clearance (m)</td> <td>4.5</td> <td>N/A</td> <td>4.5</td> <td>4.5</td> <td>4.5</td> </tr> <tr> <td>Maximum grade <50 metres</td> <td>1 in 10</td> <td>1 in 10</td> <td>1 in 10</td> <td>1 in 10</td> <td>1 in 10</td> </tr> <tr> <td>Minimum weight capacity (t)</td> <td>15</td> <td>15</td> <td>15</td> <td>15</td> <td>15</td> </tr> <tr> <td>Maximum crossfall</td> <td>1 in 33</td> <td>1 in 33</td> <td>1 in 33</td> <td>1 in 33</td> <td>1 in 33</td> </tr> <tr> <td>Curves minimum inner radius (m)</td> <td>8.5</td> <td>8.5</td> <td>8.5</td> <td>8.5</td> <td>8.5</td> </tr> </tbody> </table> <p>*Refer to E3.2 Public roads: Trafficable surface</p>	TECHNICAL REQUIREMENTS	1 Public road	2 Cul-de-sac	3 Private driveway	4 Emergency access way	5 Fire se acce rout	Minimum trafficable surface (m)	6*	6	4	6*	6*	Horizontal clearance (m)	6	6	6	6	6	Vertical clearance (m)	4.5	N/A	4.5	4.5	4.5	Maximum grade <50 metres	1 in 10	1 in 10	1 in 10	1 in 10	1 in 10	Minimum weight capacity (t)	15	15	15	15	15	Maximum crossfall	1 in 33	1 in 33	1 in 33	1 in 33	1 in 33	Curves minimum inner radius (m)	8.5	8.5	8.5	8.5	8.5	✓		<p>Lewis Road is a 20 m road reserve with a 6 m sealed carriage way and 1 m shoulders. Trees in the road reserve are tall and their canopies were observed to provide a vertical clearance greater than 4.5 m.</p> <p>Lewis Road complies with the Technical Requirements (DPLH) listed in Element 3 Table 6.</p> <p>The South Western Highway is a dual carriage way sealed road that exceeds the technical requirements listed in Element 3 Table 6.</p>
TECHNICAL REQUIREMENTS	1 Public road	2 Cul-de-sac	3 Private driveway	4 Emergency access way	5 Fire se acce rout																																															
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Curves minimum inner radius (m)	8.5	8.5	8.5	8.5	8.5																																															
	<p>A3.3 Cul-de-sac (including a dead-end road)</p> <p>A cul-de-sac and/or a dead end road should be avoided in bushfire prone areas. Where no alternative exists (i.e. the lot layout already exists and/or will need to be demonstrated by the proponent), the following requirements are to be achieved:</p> <p>Requirements in Table 6, Column 2;</p> <ul style="list-style-type: none"> Maximum length: 200 metres (if public emergency access is provided between cul-de-sac heads maximum length can be increased to 600 metres provided no more than eight lots are serviced and the emergency access way is no more than 600 metres); and Turn-around area requirements, including a minimum 17.5 metre diameter head. 		✓	<p>Refer to 3.1</p> <p>The proposal is accessed from the west (Great Southern Highway) along Lewis Road.</p> <p>The proposal is an addition to an existing land use that predate SPP 3.7 and is not an intensification of development.</p> <p>The proposal is part of a loop Road (McKay Drive) with a single access to the Great Southern Highway.</p> <p>No alternative exists to create a secondary access from the site, but a Shire EAW is potentially available at the northern extent of McKay Road, that will provide the existing community (49 residents) dependent on Lewis Road, and the proposal, with a secondary access to the north.</p>																																																
	<p>A3.4 Battle-axe</p> <p>Requirements in Table 6, Column 3;</p> <ul style="list-style-type: none"> Maximum length: 600 metres; and Minimum width: six metres. 	N/A																																																		

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
	<p>A3.5 Private driveway longer than 50 m</p> <p>Requirements in Table 6, Column 3;</p> <ul style="list-style-type: none"> • Required where a house site is more than 50 metres from a public road; • Passing bays: every 200 metres with a minimum length of 20 metres and a minimum width of two metres (i.e. the combined width of the passing bay and constructed private driveway to be a minimum six metres); • Turn-around areas designed to accommodate type 3.4 fire appliances and to enable them to turn around safely every 500 metres (i.e. kerb to kerb 17.5 metres) and within 50 metres of a house; and • Any bridges or culverts are able to support a minimum weight capacity of 15 tonnes. • All-weather surface (i.e. compacted gravel, limestone or sealed)  <p>Figure 22: Design requirements for a private driveway longer than 50 metres Turning areas should allow type 3.4 fire appliances to turn safely</p>	C		<p>The facility is located greater than 50 m from a public road, and the private driveway is longer than 50 m (207 m).</p> <p>The driveway is an all-weather surface and provides a horizontal clearance of 6 m. The driveway meanders which restrict long view and would deter the attendance of emergency services.</p>  <p>Trees, with a sparse understory, are located close to the road; constant management is required to ensure a vertical clearance of 4.5 m is maintained.</p> <p>The terminus of the driveway at the communal space is wide and can accommodate a turning area of 12.5 m x 12.5 m.</p> <p>The private driveway should be conditioned to maintain the specifications in Table 6, Column 3.</p>

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
	<p>A3.6 Emergency access way</p> <p>Requirements in Table 6, Column 4;</p> <ul style="list-style-type: none"> No further than 600 metres from a public road; Provided as right of way or public access easement in gross to ensure accessibility to the public and fire services during an emergency; and Must be signposted. 		✓	Refer to 3.1
	<p>A3.7 Fire service access routes (perimeter roads)</p> <p>Requirements Table 6, Column 5;</p> <ul style="list-style-type: none"> Provided as right of ways or public access easements in gross to ensure accessibility to the public and fire services during an emergency; Surface: all-weather (i.e. compacted gravel, limestone or sealed) Dead end roads are not permitted; Turn-around areas designed to accommodate type 3.4 appliances and to enable them to turn around safely every 500 metres (i.e. kerb to kerb 17.5 metres); No further than 600 metres from a public road; Allow for two-way traffic and; Must be signposted 	N/A		
	<p>A3.8 Firebreak width,</p>	C		<p>Perimeter firebreaks were not identified to be present at the time of inspection, but fuel reduction at the facility near the buildings was evident.</p> <p>Firebreaks are to be provided and maintained in accordance with the Shire of Serpentine Jarrahdale annual Firebreak and Fuel Hazard Reduction Notice (Bushfire Act 1954).</p>

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
<p>Element 4: Water To ensure that water is available to the subdivision, development or land use to enable people, property and infrastructure to be defended from bushfire</p>	<p>A4.1 Reticulated areas</p> <p>The subdivision, development or land use is provided with a reticulated water supply in accordance with the specifications of the relevant water supply authority and Department of Fire and Emergency Services.</p> <p>E4.1: The Water Corporation's 'No. 63 Water Reticulation Standard' is deemed to be the baseline criterion for developments and should be applied unless local water supply authorities' conditions apply.</p>	✓		<p>The site has access to a reticulated water supply.</p> <p>It is recommended a 10,000 L water tank be provided, for use by Emergency Services, at the terminus to the private driveway and clearly signposted, to avoid reliance on the reticulated system during an emergency event.</p> <p>To assist site preparation before evacuating or to assist people who may attend the site after the fire's passing, it is recommended that fire hoses be provided that are capable of applying water to all parts of the buildings and for an area 10 m around the buildings. The fire hoses are to be clearly marked and shielded from radiant heat.</p> <p>In addition to the requirements for the meditation building, fire hoses are to be volunteered for the remainder of the facility.</p>
	<p>A4.2 Non-reticulated areas</p> <ul style="list-style-type: none"> • Volume: minimum 50,000 litres per tank; Ratio of tanks to lots: minimum one tank per 25 lots (or part thereof); • Tank location: no more than two kilometres to the furthest house site within the residential development to allow a 2.4 fire appliance to achieve a 20 minute turnaround time at legal road speeds; • Hardstand and turn-around areas suitable for a type 3.4 fire appliance (i.e. kerb to kerb 17.5 metres) are provided within three metres of each water tank; and • Water tanks and associated facilities are vested in the relevant local government 	N/A		
	<p>A4.3 Individual lots within non-reticulated areas (Only for use if creating 1 additional lot and cannot be applied cumulatively)</p> <p>Single lots above 500 square metres need a dedicated static water supply on the lot that has the effective capacity of 10,000 litres.</p>	N/A		

5.2 Bushfire Management Strategies

The principles of Emergency Management (listed below) that may apply to the proposal can be divided across the BMP and BEEP working in unison – the BMP determines the suitability of the location and the BEEP describes the management actions. The two align with emergency management principles as follows:

- Prevention – avoidance and mitigation works undertaken in advance i.e. (Planned Asset Protection Zone, communal area, and restricted operation – the centre is closed in January and February and should not operate on days where the FDR is declared to be Severe or higher (day prior by the Bureau of Meteorology)).
- Preparation – education, procedures, training i.e., Seasonal maintenance APZ, regular review of (BEEP) requirements, contacts, responsibilities, and warning systems
- Response – actions taken in an event for saving lives (primary) - early evacuation if safe or shelter as a last resort with survival procedures described (BEEP).
- Recovery – return and restoration procedures described (BEEP).

5.2.1 Vulnerable Development Emergency Evacuation (Cl 6.6)

In regard to this proposal because no structures are proposed, it is instead a land use. The additional bushfire management strategies to the Bushfire Protection Criteria, relates to the management of an event to preserve life, and for a Vulnerable class of development this is to be addressed in the BEEP.

The proposed BEEP is attached in Appendix 2 and follows the State Government's *A Guide to developing a Bushfire Emergency Evacuation Plan* October 2019 and the *Emergency Evacuation Plan template* V1.1. The BEEP has been developed consistent with the Australian Standard AS 3745-2010, Planning for Emergencies in facilities.

The attached BEEP incorporates the requirements listed under section 5.5.2 V1.3 Guidelines for Planning in Bushfire Prone areas and acknowledged in **Table 4**.

Table 4: Compliance with Cl. 5.5.2 *Guidelines for Planning in Bushfire Prone Areas*

The emergency evacuation plan should be concise and consider:	Addressed in Emergency Evacuation Plan
The number of guests at the facility	40 maximum, six staff
Whether the occupants are permanent or transient	Transient
Whether there is a caretaker on site	Hosted events
Whether there are people with a disability, medically dependant, young children, or the elderly	Visitors are able-bodied or expected to be in the care of a patron.
Identification of a safe alternative location if there was a need for evacuation/relocation	Clem Kentish Hall at 24 Wellard Street, Serpentine Shire nominated evacuation centre
A proposed method of movement of occupants to a safe location(s)	Private vehicles
Details of suitable access/egress routes for the expected type/volume of traffic, including alternatives when suitable roads are inaccessible, insufficient or inappropriate	Lewis Road to Great Western Highway, and multiple distribution options.

	McKay Drive (secondary subject to availability of the EAW)
Transport options for those without access to private vehicles	Guests are expected to arrive by private vehicle with their vehicle remaining onsite for the duration of their stay.
Options to shelter in place as a last resort	Evacuation only as per public instruction Emergency WA
Roles and responsibilities of facility personnel and emergency services.	<p>The retreat will have a Chief Warden and two Area Wardens (nominated staff members) in attendance at all times when visitors are present during the bushfire season.</p> <p>Emergency procedures and responsibilities are to be clearly displayed within all habitable buildings.</p> <p>The communal building is the control centre and is immediate to the carpark, driveway turn around, and communal space.</p>

The emergency evacuation plan should consider if actions will change based on a series of triggers, such as:	Addressed in Emergency Evacuation Plan
Effective warning methods appropriate for the occupants (including consideration of at-risk persons and the demographics of the occupants)	The Chief Warden will monitor the media for Fire Danger Rating information and be trained in the triggers and procedure for evacuation.
Closure of facility and early relocation of occupants appropriate to the fire danger rating (FDR) and bushfire warnings	
Any local government bushfire requirements (for example, harvest and vehicle movement bans)	N/A
A suitably qualified emergency management professional should prepare the emergency evacuation plan in collaboration with relevant stakeholders including the landowner/developer and the local government (refer to section 6.14 of the Guidelines)	Anthony Rowe Accreditation Level 3 Accreditation Number: 36690

5.3 Spatial representation of the bushfire management strategies

Further to the assessment against the bushfire protection criteria, the key features demonstrating compliance should be represented spatially in the *Spatial representation of the bushfire management strategies*. It represents the required bushfire risk management measures that must be implemented and maintained.

The Spatial representation of the bushfire management strategies is provided in Figure EX1.

6. RESPONSIBILITIES FOR IMPLEMENTATION AND MANAGEMENT OF THE BUSHFIRE MEASURES

The responsibilities for implementation and management of the bushfire measures, summarises the measures identified to achieve compliance with the bushfire protection measures following SPP 3.7. This has been provided in the Executive Summary. The details contained within the planning application authorised by the responsible decision-maker are enforceable under section 214 of the *Planning and Development Act 2005*. The items addressed in the table responsibilities for implementation and management of the bushfire measures form part of the planning authorisation and where there is conflict supersede the detail of the planning application.

The responsibilities assigned to the Shire of Serpentine Jarrahdale reflect the current activities of the Shire and are not to be relied upon nor are they binding upon the Shire as a consequence of this Bushfire Management Plan. This BMP does however seek the Shires consideration with regard to the gating of the Emergency Accessway between McKay Drive and Butter Gum close.

For the benefit of the facility and the 49 residents that rely on Lewis Road it is recommended the EAW not be locked or be conspicuously and easily opened. If the intent is to discourage through traffic a locking mechanism can be used that draws attention to the user.

APPENDIX 1 - 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 (Incorporating Amendment Nos 1, 2 and 3). 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	
			43	Lewis Road	
	Suburb			State	Postcode
	Serpentine			WA	6125
Local government area	Shire of Serpentine Jarrahdale				
Main BCA class of the building	Class 9b		Use(s) of the building		Education
Description of the building or works	Construction of Meditation Building (isolated building) and extensions to the communal building (isolated building)				

Report Details

Report / Job Number	Report Version	Assessment Date	Report Date
	1	14 January 2021	15 February 2021

BPAD Accredited Practitioner Details

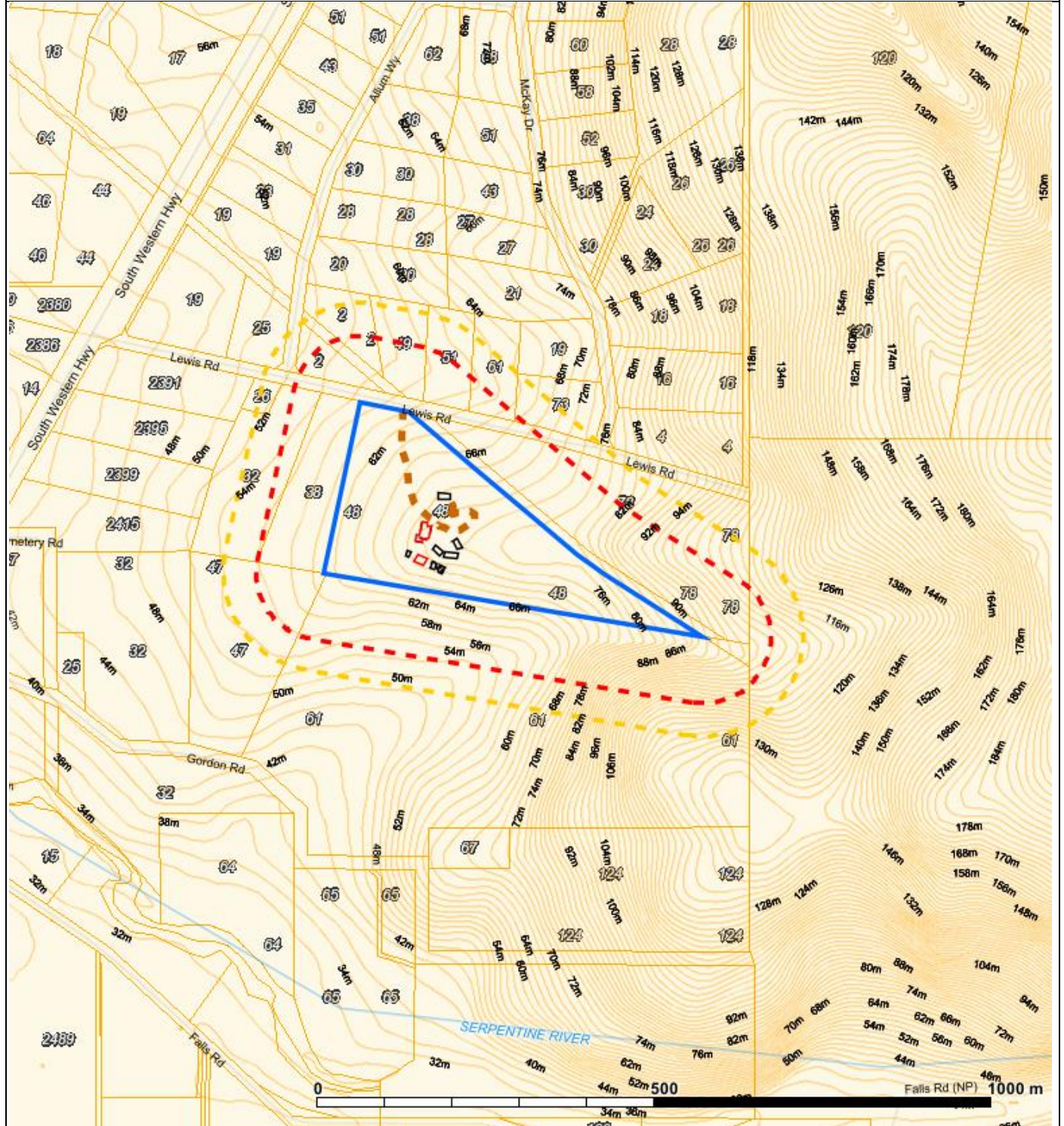
<p>Name JACQUI ROWE ANTHONY ROWE – BPAD 36690</p> <p>Company Details Envision Bushfire Protection Ph - 0439 112 179 Email - admin@envisionbp.com.au</p> <p>ABN 90958370365</p>	<p>Authorised Practitioner Stamp</p>
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Reliance on the assessment and determination 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 & Site Plans

The assessment of this site / development was undertaken on 14 January 2021 by a BPAD Accredited Practitioner for the purpose of determining the Bushfire Attack Level in accordance with AS 3959 - 2018 Simplified Procedure (Method 1).

Figure 1: Location and Topography: 48 Lewis Road Serpentine



Assessment Date:
14 January 2021
Prepared: Anthony Rowe
Accreditation Level: BPAD L3
Accreditation Number: 36690
Accreditation Expiry: Dec 2021
FPA FIRE MAP 2020
GADA 1994 MGA Zone 50

- Building
- Site boundary
- 100m area assessment
- 150m area assessment
- 2m contour
- Access

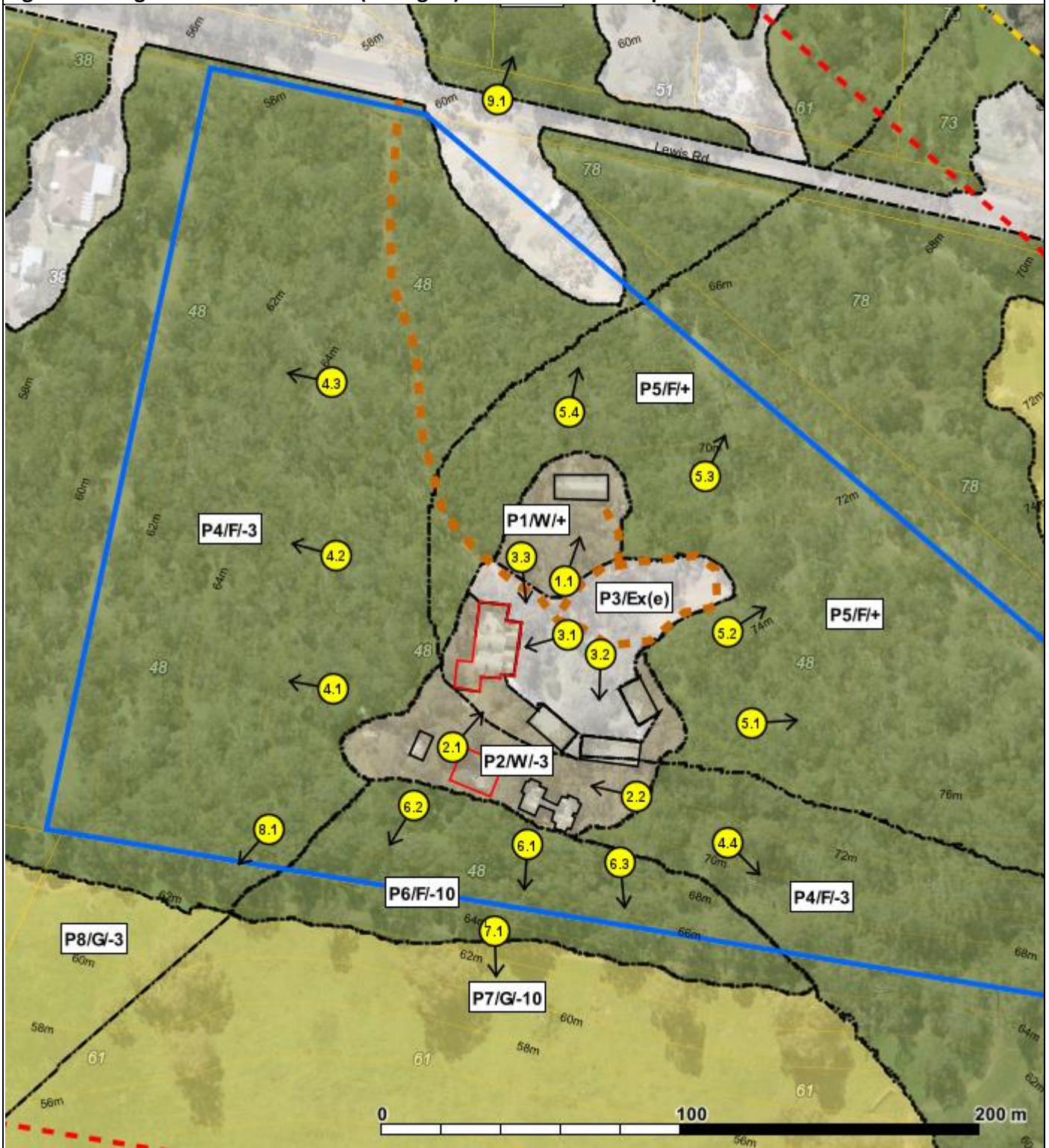
© 2021 Any conclusions drawn, or recommendations made in this report are made in good faith. No responsibility is taken for how this information and the report are used subsequently by others.

Figure 2: Vegetation Classification: 48 Lewis Road Serpentine



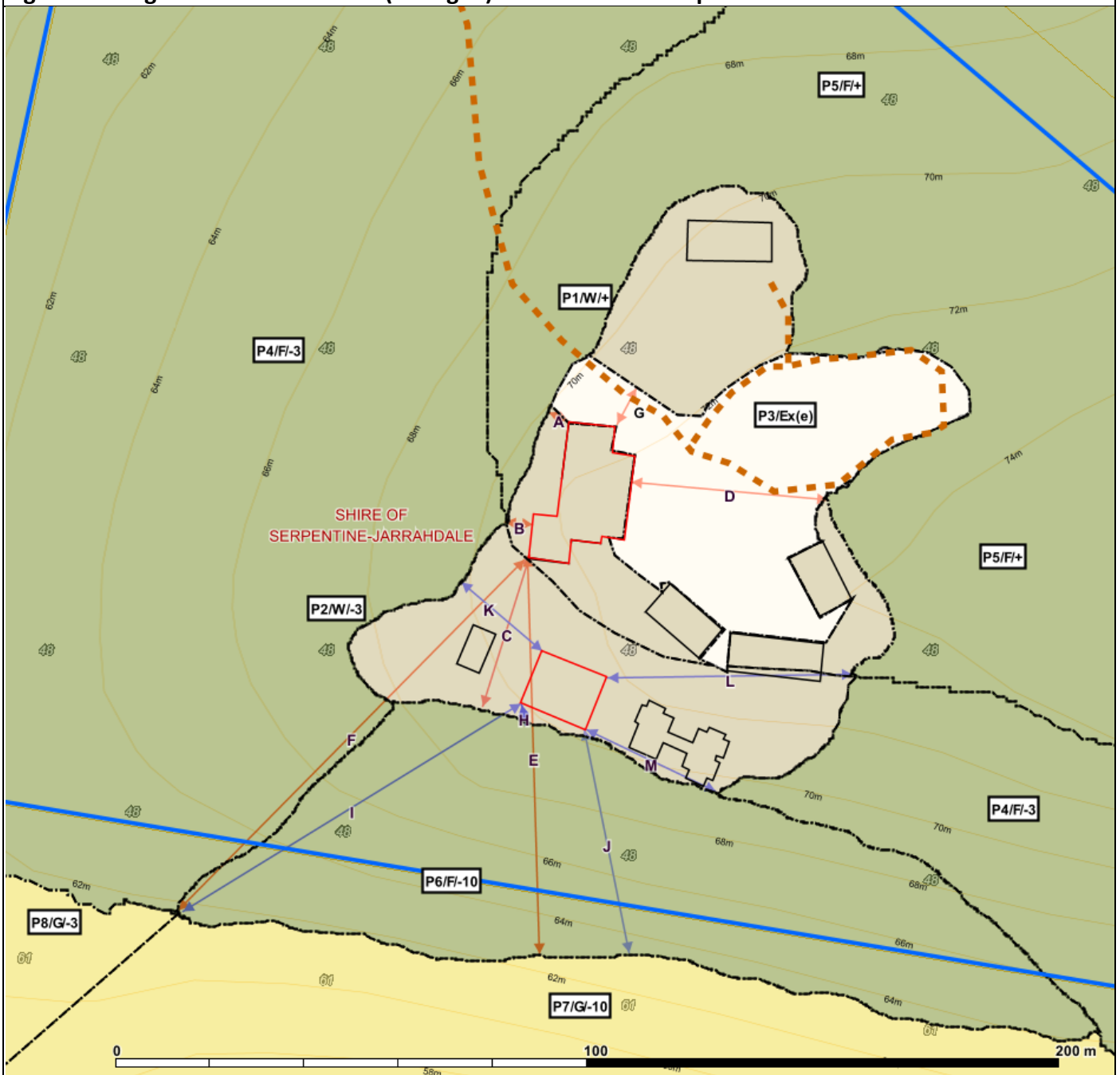
Assessment Date: 14 January 2021 Prepared: Anthony Rowe Accreditation Level: BPAD L3 Accreditation Number: 36690 Accreditation Expiry: Dec 2021 FPAA FIRE MAP 2020 GADA 1994 MGA Zone 50	Building	150m area assessment	Class A Forest	Class D Scrub	© 2021 Any conclusions drawn, or recommendations made in this report are made in good faith. No responsibility is taken for how this information and the report are used subsequently by others.
	Site boundary	Photo point	Class B Woodland	Class G Grassland	
	100m area assessment	Plot Label	Class C Shrubland	Excluded	

Figure 2a: Vegetation Classification (Enlarged): 48 Lewis Road Serpentine



Assessment Date: 14 January 2021 Prepared: Anthony Rowe Accreditation Level: BPAD L3 Accreditation Number: 36690 Accreditation Expiry: Dec 2021 FPAA FIRE MAP 2020 GADA 1994 MGA Zone 50	Building	150m area assessment	Class A Forest	Class D Scrub	© 2021 Any conclusions drawn, or recommendations made in this report are made in good faith. No responsibility is taken for how this information and the report are used subsequently by others.
	Site boundary	Photo point	Class B Woodland	Class G Grassland	
	100m area assessment	Plot / Veg Class/Slope	Class C Shrubland	Excluded	

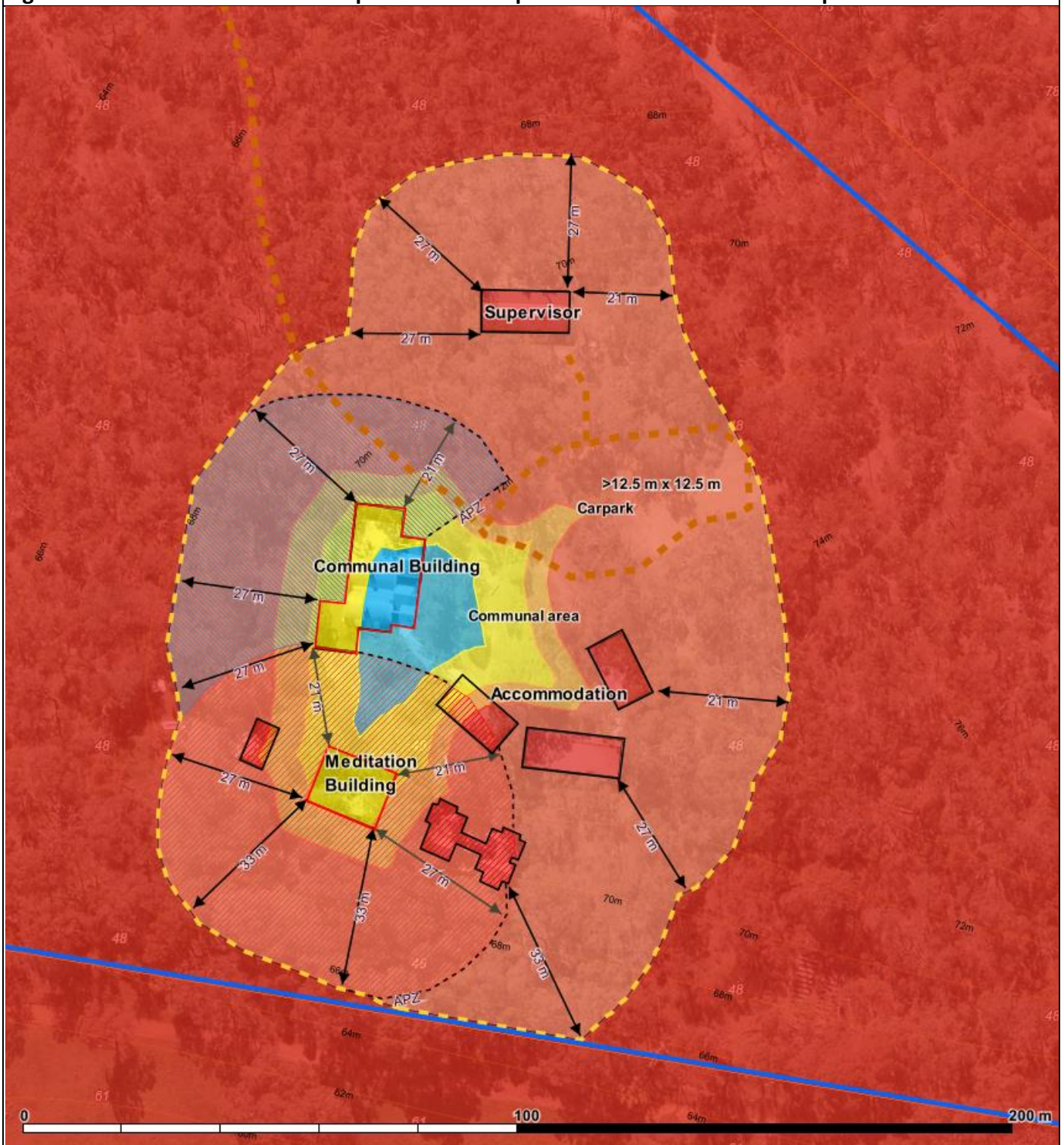
Figure 2b: Vegetation Classification (Enlarged): 48 Lewis Road Serpentine



Assessment Date: 14 January 2021 Prepared: Anthony Rowe Accreditation Level: BPAD L3 Accreditation Number: 36690 Accreditation Expiry: Dec 2021 FPA FIRE MAP 2020 GADA 1994 MGA Zone 50	Building	150m area assessment	Class A Forest	Class D Scrub
	Site boundary	Photo point	Class B Woodland	Class G Grassland
	100m area assessment	Plot Label	Class C Shrubland	Excluded
		Plot / Veg Class/Slope		

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Figure 3: BAL Contour: Post Development – Development site: 48 Lewis Road Serpentine



Assessment Date: 14 January 2021 Prepared: Anthony Rowe Accreditation Level: BPAD L3 Accreditation Number: 36690 Accreditation Expiry: Dec 2021 FPA Fire MAP 2020 GADA 1994 MGA Zone 50	Building		BAL FZ	BAL 19	© 2021 Any conclusions drawn, or recommendations made in this report are made in good faith. No responsibility is taken for how this information and the report are used subsequently by others.
	Site boundary	100m area assessment	BAL 40	BAL 12.5	
	150m area assessment	BAL 29	BAL Low		

PLOT: 1		
Vegetation Classification	PHOTO ID: 1.1	PHOTO ID: 2.1
Class B Woodland - Woodland B-05		
Slope		
Flat		
Description (AS3959)		
Trees 10 m - 30 m high; 10% - 30% foliage cover dominated by eucalypts and/or callistris with a prominent grassy understorey. May contain isolated shrubs.		
Observation/Justification for classification	Comment: Woodland between the communal building and the supervisors cottage; modification is required near the communal building	Comment: View from meditation building to communal building.
Managed understory and tree canopies less than 30%.	PHOTO ID: 2.2	
Post-development		
Modification to facilitate APZ.	Comment: Woodland adjacent existing accommodation unit	

PLOT: 3				
<p>Vegetation Classification</p> <p>Excludable - 2.2.3.2(f) Low Threat Vegetation</p> <p>Slope</p> <p>Flat</p> <p>Description (AS3959)</p> <p>Exclusions – Low threat vegetation and non-vegetated areas:</p> <p>(f) Vegetation regarded as low threat due to factors such as flammability, moisture content or fuel load. This includes grassland managed in a minimal fuel condition, mangroves and other saline wetlands, maintained lawns, golf courses (such as playing areas and fairways), maintained public reserves and parklands, vineyards, orchards, banana plantations, market gardens (and other non-curing crops) cultivated gardens, commercial nurseries, nature strips and windbreaks.</p> <p>Observation/Justification for classification</p> <p>Managed open space with trees comprising less than 10%. Perimeter garden shrubs fronting the communal building.</p> <p>Post development</p> <p>No change</p>	<p>PHOTO ID: 3.1</p>		<p>PHOTO ID: 3.2</p>	
	<p>Comment: Communal area (right of accommodation unit)</p>		<p>Comment: Communal area facing the communal building</p>	
	<p>PHOTO ID: 3.3</p>		<p>PHOTO ID: 2.4</p>	
	<p>Comment: Looking from the supervisors cottage, through Woodland (plot 1) to the communal open space area.</p>			

PLOT: 4		
Vegetation Classification	PHOTO ID: 4.1	PHOTO ID: 4.2
Class A Forest - Low open forest A-04		
Slope	Comment: Trees 10-20 m in height. Understorey increasing with distance from the facility.	
Downslope 0-5		
Description (AS3959)		
Trees over 30 m high; 30%-70% foliage cover (may include understorey of sclerophyllous low trees or shrubs). Typically dominated by eucalypts, melaleuca or callistemon (may include riverine and wetland environments) and callitris. Includes eucalypt plantations.	PHOTO ID: 4.3	PHOTO ID: 4.4
Understorey vegetation increasing in density as the distance west increases beyond 30 m from the facility. No evidence of recent scorch mark on trees. Tree canopies exceeding 30% cover.		
Post-development	Comment: Trees 10-20 m in height. Understorey increasing with distance from the facility.	
Modification for APZ is required; it will require the removal of some trees, but will occur within the area of removed understorey.		

LOT: 5		
Vegetation Classification	PHOTO ID: 5.1	PHOTO ID: 5.2
Class A Forest - Low open forest A-04		
Slope		
Upslope		
Description (AS3959)		
Trees over 30 m high; 30%-70% foliage cover (may include understorey of sclerophyllous low trees or shrubs). Typically dominated by eucalypts, melaleuca or callistemon (may include riverine and wetland environments) and callitris. Includes eucalypt plantations.	Comment: Tree canopy greater than 30%, modified understorey.	
Observation/Justification for classification	PHOTO ID: 5.3	PHOTO ID: 5.4
Unmanaged forest extending north, between the facility and Lewis Road. Evidence of a removed understorey and burn marks on tree trunks up to 3 m from the ground.		
Post-development		
Retained	Comment: Tree canopy greater than 30%, modified understorey.	

PLOT: 6		
Vegetation Classification	PHOTO ID: 6.1	PHOTO ID: 6.2
Class A Forest - Low open forest A-04		
Slope	Comment: Removed understorey, grassland plain beyond	
Downslope 10-15		
Description (AS3959)	PHOTO ID: 6.3	
Trees over 30 m high; 30%-70% foliage cover (may include understorey of sclerophyllous low trees or shrubs). Typically dominated by eucalypts, melaleuca or callistemon (may include riverine and wetland environments) and callitris. Includes eucalypt plantations.		
Observation/Justification for classification	Comment: Removed understorey, grassland plain beyond	
The understorey has been removed up to the southern boundary. The tree canopy cover exceeds 30% (forest). Some removal of trees will be required to establish the APZ for the meditation building.		
Post-development		
Modification for APZ is required; it will require the removal of some trees, but will occur within the area of removed understorey.	Comment: Removed understorey, grassland plain beyond	

PLOT: 7, 8 and 10		
Vegetation Classification	PHOTO ID: 7.1	PHOTO ID: 8.1
Class G Grassland – Sown pasture G-26 Class A Forest - Low open forest A-04		
Slope		
Downslope 5-10 Downslope 0-5		
Description (AS3959)		
Grassland: All forms (except tussock moorlands) including situations with shrubs and trees if the overstorey foliage cover is less than 10%. Includes pasture and cropland. Forest:	Comment: Grassland plain south of the meditation building, immediate slope is 10° downslope to a trough in the landscape	Comment: Through trees to the grassland plain beyond, slope under grass plain 0-5°
Observation/Justification for classification	PHOTO ID: 9.1	PHOTO ID: 5.4
Trees over 30 m high; 30%-70% foliage cover (may include understorey of sclerophyllous low trees or shrubs). Typically dominated by eucalypts, melaleuca or callistemon (may include riverine and wetland environments) and callitris. Includes eucalypt plantations.		
Post-development		
Retained	Comment: Adjoining forest north of site entrance.	

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

Table 2.7

FDI 50

Table 2.6

FDI 80

Table 2.5

FDI 100

Table 2.4

Potential Bushfire Impacts

The potential bushfire impact to the site / proposed development from each of the identified vegetation plots, excluding grass are identified below. The distance is measured from the nearest building.

Pasture grass is not included because it is not restricted and is within the owner's control. The buildings are set back from the site boundaries at a distance that regardless of the adjoining vegetation classification will not exceed BAL-29.

	Plot	Vegetation Classification	Effective Slope	Separation (m)	BAL	Modified by APZ
A	5	Class A - Forest	Flat	6	BAL – FZ	Yes
B	4	Class A - Forest	0-5	5	BAL – FZ	Yes
C	6	Class A - Forest	5-10	33	BAL – 29	Yes
D	5	Class A - Forest	Flat	41	BAL – 19	Yes
E	7	Class G Grassland	5-10	87	BAL – LOW	No
F	8	Class G Grassland	0-5	106	BAL – LOW	No
G	1	Class B Woodland	Flat	9	BAL – FZ	Yes
	2	Class B Woodland	0	0	BAL – FZ	Yes
H	6	Class A - Forest	5-10	5	BAL – FZ	Yes
I	8	Class G Grassland	0-5	83	BAL – LOW	No
J	7	Class G Grassland	5-10	47	BAL – 12.5	No
K	4	Class A - Forest	0-5	21	BAL – 40	Yes
L	5	Class A - Forest	Flat	52	BAL – 12.5	No
M	4	Class A - Forest	0-5	31	BAL – 29	No
	2	Class B Woodland	Flat	0	BAL - FZ	Yes

Table 1: BAL Analysis

Determined Bushfire Attack Level (BAL)

The Determined Bushfire Attack Level (highest BAL) for the site / proposed development has been determined in accordance with clause 2.2.6 of AS 3959-2018 using the above analysis.

Determined Bushfire Attack Level (communal building)	BAL – FZ
Determined Bushfire Attack Level (meditation building)	BAL – FZ
Indicative Bushfire Attack Level (communal building)	BAL - 29
Indicative Bushfire Attack Level (meditation building)	BAL - 29

Appendix 1: Additional Information / Advisory Notes

CONSTRUCTION REQUIREMENTS

AS 3959 – 2018 has six (6) levels of BAL based on the radiant heat flux exposure to the building, and identifies the relevant sections for building construction, as detailed below;

Bushfire Attack Level (BAL)	Classified vegetation within 100m of the site and heat flux exposure thresholds	Description of predicted bushfire attack levels of exposure	Construction Section (within AS 3959)
BAL-LOW	See clause 2.2.3.2	There is insufficient risk to warrant specific construction requirements	Nil (s.4)
BAL-12.5	$\leq 12.5 \text{ kW/m}^2$	Ember Attack	3 & 5
BAL-19	$> 12.5 \text{ kW/m}^2$ to $\leq 19 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux	3 & 6
BAL-29	$> 19 \text{ kW/m}^2$ to $\leq 29 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux	3 & 7
BAL-40	$> 29 \text{ kW/m}^2$ to $\leq 40 \text{ kW/m}^2$	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux with the increased likelihood of exposure to flames	3 & 8
BAL-FZ	$> 40 \text{ kW/m}^2$	Direct exposure to flames from the fire front in addition to heat flux and ember attack	3 & 9

BAL CONSTRUCTION LEVELS IN CONTEXT



Direct exposure to flames, radiant heat and embers from the fire front.

Increasing ember attack and windborne debris, radiant heat between 29 kW/m^2 and 40 kW/m^2 . Exposure to flames from fire front likely.

Increasing ember attack and windborne debris, radiant heat between 19 kW/m^2 and 29 kW/m^2 .

Increasing ember attack and windborne debris, radiant heat between 12.5 kW/m^2 and 19 kW/m^2 .

Ember attack radiant heat below 12.5 kW/m^2

There is insufficient risk to warrant any specific construction requirements but there is still some risk.

APPENDIX 2 - Emergency Evacuation Plan

BUSHFIRE EMERGENCY EVACUATION DOCUMENTS

The Centre For Attitudinal Healing
48 Lewis Road Serpentine

JANUARY 2022

This document contains two parts:

1. The preparation compliance with the WAPC *A Guide to developing a BUSHFIRE EMERGENCY EVACUATION PLAN October 2019*: and
2. The Emergency Evacuation Plan contained in Appendix 1. The Emergency Evacuation Plan incorporates the requirement of AS3745-2010 where relevant in the WAPC Emergency Evacuation Plan Template.

1. ESTABLISHING THE EMERGENCY MANAGEMENT TEAM

In accordance with the Guidelines for preparing a bushfire emergency evacuation plan, an accredited bushfire practitioner was engaged (Anthony Rowe BPAD L3 36690).

The bushfire planning practitioner has been responsible for assisting the emergency management team with

- The establishment and implementation of emergency plans and procedures
- Formulation of emergency procedures
- Reviewing the local emergency services

The Emergency Planning Committee, with feedback from the Emergency Management Team, should regularly review the emergency evacuation plan to ensure it remains practical and current.

Emergency Planning Committee (EPC)

The **Emergency Planning Committee** is responsible for overseeing the preparation of the site buildings and grounds and any supporting facilities required for protection in a bushfire, prior to the approaching bushfire season. This includes attendance to any maintenance required to minimise the risk of damage from bushfire attack.

The Emergency Planning Committee should regularly review the emergency evacuation plan to ensure it remains practical and current.

The Committee is responsible for reviewing the BEEP and overseeing the undertaking of education and training. It evaluates the outcomes of any drills and ensure appropriate resources are provided to prepare for the bushfire season.

The Committee is responsible for establishing the Emergency Management Team and assigning roles and responsibilities to staff.

The difference between the **Emergency Planning Committee** and the **Emergency Management Team** is the Emergency Planning Committee is responsible for all things in planning for the occurrence of a bushfire and preparing the facility to minimise any adverse effects. The priority is human safety. The Emergency Management Team responds to the bushfire event, it comprises the people expected to be in attendance at the time of a bushfire event. Its priority is human safety, and secondary may also include firefighting if trained. There should be no expectation upon any visitor to the facility to participate in firefighting.

Emergency Management Team (EMT)

The Emergency Management Team shall comprise management and staff of The Centre for Attitudinal Healing assigned to the following positions:

- Chief Warden
- Area Warden Communication
- Area Warden Traffic

The Chief Warden will be responsible for responding to a bushfire event and ensuring the safety of guests.

2. PREPARING THE EMERGENCY PLAN

The emergency plan applies to the Facility at **The Centre for Attitudinal Healing at 48 Lewis Road Serpentine**.

The facility is closed for, January and February during the peak of the bushfire season.

The Bushfire Management Plan dated **25 January 2022** articulates bushfire safety measures that include:

- Identification of the Asset Protection Zone and maintenance
- Provision of firefighting equipment

This Emergency Plan has been prepared in response to bushfire threats identified in the BMP 25 January 2022.

3. DETERMINE EMERGENCY ACTION

The **primary action** in response to bushfire threat is early **evacuation**

The Centre for Attitudinal Healing facility is set within 16 ha of forest, predominantly Marri and Jarrah, 25 km south of the City of Armadale.

- Monitor the DFES Alerts and Warnings web page <https://www.emergency.wa.gov.au>
The Chief Warden is responsible for monitoring this site at regular intervals.

Evacuate

- Upon a public announcement to evacuate and the fire is greater than 5 km from the site.

Evacuate before the fire's arrival when it has been verified (on advice of Emergency Services) that it is safe to do so.

- If a fire is within 5 km of the site (Chief Warden)
- If smoke or a fire is seen nearby (Chief Warden)
- If directly advised to leave by DFES or the police (Chief Warden)

Time Required to Evacuate – 30 minutes to exit the site, up to 50 vehicles.

Suitable Access Routes – Perth via South Western Highway

Transportation Arrangements – Private Vehicle.

4. EVACUATION / SHELTER REQUIREMENTS

The Shire of Serpentine Jarrahdale has several facilities that may be activated as evacuation centres in a bushfire emergency, the closest of these being the Clem Kentish Hall at 24 Wellard Street, Serpentine. In a bushfire event, announcements will be made via electronic media and online confirming locations of evacuation centres and safe routes.

Shelter on site is not recommended; however, the owner should ensure the Asset Protection Zone is maintained and the communal building kept comparable to BAL 29 incase it is not safe to leave and refuge is to be taken at the site.

5. TRAINING REQUIREMENTS

The Emergency Planning Committee is responsible for:

- The written procedures applicable to the site.
- Individual roles and responsibilities.
- Identifying Response Actions
 - Access and egress routes and managing evacuation.
 - Assembly point location and shelter procedures.
- Ensuring the facility is prepared prior to the bushfire season including:
 - The establishment of the asset protection zones
 - The maintenance of all building, ensuring they are clear of flammable materials and all external surfaces are intact, gaps greater than 2mm have been eliminated
 - Firefighting facilities and PPE is in operating order
 - First Aid kit is complete and up to date.

The Emergency Management Team is responsible for:

- Acknowledging the emergency response plan and the evacuation procedures.
- Acknowledging the location of facilities
- The allocation of responsibilities.
 - Nominating the chief warden
 - Nominating the traffic management responsibility
 - First aid responsibility
- Overseeing the safe evacuation of the facility or safe refuge taken at the site.

Visitors

- Should be advised of the evacuation procedure when the introduction formalities are given

Emergency Evacuation Plan Preparation Checklist

The following questions will assist the individual in developing or reviewing the Emergency Evacuation Plan to identify an off-site location. For an appropriate off-site location	
If there are occupants with support needs that require a similar facility to support them, is the off-site location suitable?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Comment: Guests with support needs may visit the facility but would have a carer or family member in attendance with them to provide the required support.	
Is the off-site location in an area away from the effects of a bushfire?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Comment: Shire nominated emergency evacuation facility	
Are there amenities (toilets, food, water etc.) available at the off-site location? (if applicable)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Can the off-site location accommodate the number of occupants?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Comment: Shire nominated emergency evacuation facility	
Does the route to the off-site location require transporting through bushfire affected areas or areas that may be affected by an approaching bushfire?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Short distance < 200m (185 m) to moderate BHL west of the driveway along Lewis Road	
Has the owner of the off-site location advised that they are happy to accommodate occupants if evacuation from a bushfire emergency occurs?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Comment: Shire nominated emergency evacuation facility	

Consider the following questions to assist in planning transport arrangements.	
Do you have your own transport for all occupants? If no what transport provider will you use? Guests will have their own transport	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Are private vehicles to be used?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If using private vehicles will there be sufficient vehicles to transport all the occupants, will they be available when you need them, and will there be drivers available? If no, consider another mode of transport	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Will there be sufficient vehicles to transport all occupants? All guests will arrive by private transport	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Have occupants with support needs been considered when determining transport types and necessary timing to evacuate?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Do you require ambulances? If yes, St John Ambulance Australia needs to be consulted.	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Is a community bus available?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Will community buses be available when you need them and will drivers be available?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Are other means of transport available?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Do you need any other type of special transport?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

The following questions will assist the individual in developing or reviewing the Emergency Evacuation Plan to identify an on-site building. For an appropriate building, the answers to the below questions should receive a 'yes'.	
Is the property well maintained and kept free from a build-up of fuel and leaf litter in gutters and around buildings?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
The facility predates bushfire construction standard and is position intimately within the environment. The understorey vegetation around the buildings has been removed, but contiguous canopies remain. The facility does not operate through January and February. The standards for Asset Protection Zones in The Guidelines for Planning in Bushfire Prone Areas should be used as a reference to maintain land around the buildings	
Is there a building on-site that is away from bushland and is unlikely to be impacted by bushfire?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Shelter on site is not the preferred response	
Is the building constructed in a manner that minimises bushfire attack with appropriate Asset Protection Zones?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
The communal Building is to be upgraded to a standard comparable to BAL 29, and BAL 29 APZ to provide a refuge of last resort. Access to Modertae BHL is within 200 m the necessity for shelter on site is unlikely, particularly given the Extreme conditions is east of the site and the evacuation rout is to the west.	
Can the building accommodate the number of occupants and visitors?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
NA	
Is there ease of accessibility to the building, and is it easily identifiable?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
NA	
Is there access to amenities (toilets, food, water, etc.) away from the effects of a bushfire?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
NA	

EvBUSHFIRE EMERGENCY PLAN

NAME OF FACILITY	The Centre For Attitudinal Healing
ADDRESS	48 Lewis Road Serpentine
PREPARED BY	Anthony Rowe, L3 BPAD 36690
OWNER/OPERATOR	The Centre for Attitudinal Healing
DATE	25 January 2022
VERSION NUMBER	3

Document Control

Version	Date	Details	Undertaken by
1	15/02/2021	DRAFT	Anthony Rowe
2	11/03/2021	SUBMISSION	Anthony Rowe
3	25/01/2022	SUBMISSION	Anthony Rowe

Emergency Management Team

Name	Role	Identification Colour	Contact Details
Centre Manager	Chief Warden		
Staff	Area Warden (Communication)		
Staff	Area Warden (Traffic)		

FACILITY DETAILS

This Plan is for a retreat offering both day and live in courses and has been designed to assist management in protecting life and property in the event of a bushfire.

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

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

Evacuate



Shelter in place



NAME OF CONTACT PERSON			
POSITION / ROLE OF CONTACT PERSON		Manager	
PHONE NUMBER		TBC	
FACILITY TYPE	Retreat	NUMBER OF BUILDINGS	7
NUMBER OF STAFF	6	NUMBER OF OCCUPANTS	40
NUMBER OF OCCUPANTS WITH SUPPORT NEEDS		0	
DESCRIPTION OF SUPPORT NEEDS		Not applicable	

RESPONSIBILITIES

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

Position	Role	Responsibility
Centre Manager Emergency Planning Committee (EPC)		<ul style="list-style-type: none"> The facility is not to operate in January and February each year. Daily - check www.emergency.wa.gov.au for any warnings or alerts Monitor Fire Danger Ratings at all times when visitors are at the site and ensure precautionary evacuation (cancellation) occurs on days of Severe Extreme or Catastrophic Fire Danger Rating (FDR) Ensure the site is prepared for the bushfire season Maintain the Asset Protection Zone Establish a first aid store. The first aid store is to include amongst other items eye wash.
Emergency Management Team	Chief Warden	<ul style="list-style-type: none"> Monitor conditions on Severe plus FDR days <ul style="list-style-type: none"> Local ABC Radio 720 am emergency.wa.gov.au Determine with DFES/emergency services that safe evacuation is available Determine to Evacuate- advise visitors to evacuate due to an emergency warning and if DFES advise the evacuation route is safe Remain contactable (mobile phone) at all times Evacuate if advised the evacuation route is safe If a fire is within 5 km of the site or if an Emergency or Watch and Act warning has been issued confirm the safe evacuation (route) and destination and oversee evacuation <ul style="list-style-type: none"> Advise guests of the safe route and destination Ensure all guests have been accounted for and have evacuated Oversee the evacuation of staff

EMERGENCY CONTACTS

Name of Organisation	Office / Contact	Contact details
Fire / Police / Ambulance	Fire or Emergency	000 (112 from a mobile)
Department of Fire & Emergency Services	Emergency Information	13 33 37 (13 DFES)
Emergency WA	Warnings and incidents	www.emergency.wa.gov.au
Bureau of Meteorology	Weather information	1300 659 213

Secondary Contacts

Name of Organisation	Office / Contact	Contact details

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PREPAREDNESS

CHECKLIST – ongoing, prior to and during the bushfire season

BUSHFIRE SEASON: DECEMBER TO MAY OF EVERY YEAR (refer to the Shires Annual Fire Break Notice for precise start and finish dates as they vary each season)

Action	Frequency	Responsibility
<p>To be completed during the bushfire season from December to May each year by the Emergency Planning Committee (owner and/or manager).</p> <p>Please refer to the Shire's Annual Fire Break Notice for precise start and finish dates as they vary each season.</p>		
<p>1. Ensuring the facility is prepared prior to the bushfire season including:</p> <ul style="list-style-type: none"> The establishment of the asset protection zones as per the Standards for Asset Protection Zones The maintenance of all building, ensuring they are clear of flammable materials and all external surfaces are intact, gaps greater than 2 mm have been eliminated Firefighting facilities and PPE is in operating order. First Aid kit is complete and up to date. 	Ongoing	EPC
2. The evacuation diagram is clearly displayed within all habitable buildings		
3. Emergency Contacts details are current and identified on the Evacuation Diagram		
4. First aid kits are complete and up to date.		

AWARENESS AND PRE-EMPTIVE PROCEDURES

The following outlines the actions that must be taken to ensure occupants maintain an awareness of the bushfire threat and the appropriate procedures to follow.

Actions	Frequency	Responsible Person
Days forecast Extreme or Catastrophic		
Check the Emergency WA website daily for alerts and warnings www.emergency.wa.gov.au	Previous 24 hours	EPC
Close the centre for the duration of an announced fire danger rating of Severe, Extreme or Catastrophic.		
During the fire Season		
Check the Emergency WA website daily for alerts and warnings www.emergency.wa.gov.au	Check at 9am, 1pm and 4pm	EPC Chief Warden

The centre does not operate for guests through the months of January and February.		
Days forecast Very High or Severe Fire Danger rating		
Check the Emergency WA website daily for alerts and warnings www.emergency.wa.gov.au	Check hourly throughout the day and actively monitor any incidents within 10 Km	Chief Warden

Emergency Services provide community and emergency advice about predicted and current conditions that advise about the level of bushfire threat.

The Fire Danger Rating (**FDR**) is based on the forecast weather conditions, the higher the rating, the higher the threat.

Fire Danger Ratings *Extreme or Catastrophic ratings are the highest level and represent unsafe conditions.*

Fire Danger Rating

CATASTROPHIC

EXTREME

The worst conditions for a fire. Homes are not designed or built to withstand a fire in these conditions. The only safe place is away from bushfire risk areas.

SEVERE

VERY HIGH

Seek out information and be ready to leave or stay and actively defend your property if a fire starts. Only stay if you are 100% prepared.

HIGH

LOW - MODERATE

Be vigilant. Check your fire plan and continue to monitor conditions as they can change quickly.

Public advice warning

Note: there is no alignment between the colours used to denote a fire danger rating and the colours used for emergency warnings.

An 'Emergency Warning' could be issued to you regardless of the daily rating if you are in the path of an approaching fire.

Emergency Warnings and Actions

EMERGENCY WARNING

An out of control fire is approaching very fast. You must leave now if it is safe to do so or act immediately to survive.

WATCH AND ACT

A fire is approaching and is out of control. You must leave now check it is safe to do so.

ADVICE

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

EMERGENCY PROCEDURE, LOCATION, AND TRANSPORT DETAILS

Evacuation

Designated evacuation assembly point/s

1. The communal area adjacent to the driveway

Primary off-site location

Name of venue	Clem Kentish Hall		
Address of venue	24 Wellard St, Serpentine		
Nearest cross street	Lefroy Street	Map reference	JXPJ+JC Serpentine, WA
Venue phone number	95261111		
Primary route to location	Turn left onto Lewis Street and then turn left onto South Western Highway. Turn right after 800 m onto Karnup Road. Turn left after 750 m onto Wellard Street. Clem Kentish Hall and oval is on the right.		

Secondary route to location

Primary transportation arrangements

Visitors will have transport adequate for all members of their party.

Estimated travelling time to destination 5 minutes

Secondary off-site location

Name of venue	Serpentine Jarrahdale Community Recreation Centre		
Address of venue	Mead St, Byford		
Nearest cross street	Gordin Way	Map reference	
Primary route to location	Turn left onto Lewis Street and then turn right onto South Western Highway. Turn left after 13.4 km onto Cardup Siding Road. At the roundabout take the third exit onto Soldiers Road then after 1.9 km turn left onto Mead Street. The recreation centre is on your left.		

Secondary route to location

Secondary transportation arrangements

Guests will have their own transport adequate for all members of the party.

Estimated travelling time to destination 15 minutes

EVACUATE OR SURVIVAL

The **primary action** to follow if there is an imminent bushfire threat is to **EVACUATE** following confirmation (DFES or emergency services) that a safe evacuation route is available.

Shelter in place is not recommended. Early evacuation by vehicle to the urban area of Perth will be available; however, if DFES or emergency services have advised it is too late to leave then Survival procedures are to be undertaken. Guests and staff should assemble at the communal building adjacent to the driveway.

Designated on-site building: Communal Building. Refer to DFES publication (attachment 2) for survival instructions.

Procedures for evacuation and shelter-in-place in the event of a bushfire.

Trigger	Action	Responsible Person
EVACUATE		
<p>WATCH and ACT – EVACUATE</p> <ul style="list-style-type: none"> A fire is within 10 km, and DFES have publicly advised to evacuate and the route is safe. A fire is within 5 km, and DFES have confirmed a safe route. 	<ul style="list-style-type: none"> Assemble at the communal area adjacent to the driveway. Advise guests of the safe route and destination. Ensure all guests have been accounted for. Oversee evacuation. 	Chief Warden
SURVIVAL – only if advised by DFES it is not possible to leave and shelter in place as a last resort is to be taken		
<p>EMERGENCY – SURVIVAL</p> <ul style="list-style-type: none"> A fire can be seen to be approaching the site and will arrive within 30 minutes, or DFES have advised it is not safe to evacuate 	<ul style="list-style-type: none"> Alert staff to implement the Emergency Plan - immediately Turn off air conditioning, close all doors, and windows. Assemble immediately in the communal building Account for all staff and visitors Alert DFES that shelter has been taken Block smoke ingress (wet towels) Keep hydrated Monitor external conditions Leave the building for the communal area when safe to do so. Do not stay in a burning building. Use fire hoses to extinguish small fires and cool areas. Follow evacuation procedures when safe to do so. 	Chief Warden

RECOVERY

Action	Responsible Person
<p>Following an evacuation when the area has been deemed safe by emergency services the owner and/or manager will:</p> <ul style="list-style-type: none"> • return to the site • check grounds for any smouldering objects • determine when it will be safe to recommence operating 	Chief Warden (Manager)
<p>Debrief</p> <ul style="list-style-type: none"> - assess the severity of the event; - would the actions taken be sufficient to ensure the safety of staff and visitors in an extreme event; - were there any unexpected problems not accounted for in the existing emergency plan; - update the emergency plan to include any learnings from the event. 	Emergency Planning Committee (owner) with the Emergency Management Team (Chief Warden)

Attachment 1 – Emergency Plan and Evacuation Map

BUSHFIRE EMERGENCY RESPONSE PLAN

FACILITY DETAILS

Location -	48 Lewis Road Serpentine
Facility –	The Centre For Attitudinal Healing
Visitors –	Maximum 40 visitors; 6 staff

The facility does not operate during the peak of the bushfire season: closed throughout January and February or when a Severe Extreme or Catastrophic fire danger rating has been declared.

CONTACT PERSONS	NAME	CONTACT NO.
Centre Manager		
Nominated Staff		
Nominated Staff		

Chief Wardens Role:

Remain informed of Emergency Warnings by monitoring public information sources (listed below)

INFORMATION SOURCES

Local ABC radio	720 am
DFES information line	13 33 37
Emergency WA	www.emergency.wa.gov.au
Bureau of Meteorology	1300 659 213
Police	112 or 000

EMERGENCY WARNINGS (DFES)

ADVICE prepare to evacuate

PREPARE TO EVACUATE

An ADVICE warning has been issued across telecommunications media.

The Chief Warden will take the following issues into consideration when determining if and when to evacuate:

- The severity of a bushfire incident
- The location of, and distance to, the fire incident relative to the site
- The approximate time for the bushfire to impact the site
- Emergency Service advice

WATCH AND ACT- Evacuate

EVACUATE:

A Severe Extreme or Catastrophic fire danger rating has been declared.

Emergency Service have advised EVACUATION IS REQUIRED (Public Notice) and the Fire is greater than 5 km from the site

Fire is within 5 km of the site or Smoke or Fire is observed in the locality. Confirm with Emergency Services that safe evacuation is available.

- Alert staff to implement the Emergency Plan
- Turn off air conditioning
- Close all doors, windows, and window blinds
- Assemble at the communal building
- Evacuate by vehicle to safe destination via route confirmed as safe by Emergency Services.

EMERGENCY – survival procedure

SURVIVAL:

A fire can be seen to be approaching the site and will arrive within 30 minutes, or

Emergency Services have advised it is not safe to evacuate

- Alert staff to implement the Emergency Plan - immediately
- Turn off air conditioning, close all doors, and windows.
- Assemble immediately in the communal building
- Account for all staff and visitors
- Inform Emergency Service that shelter has been taken
- Block smoke ingress (wet towels)
- Keep hydrated
- Monitor external conditions
- Leave the building for the communal area when safe to do so. Do not stay in a burning building.
- Use fire hoses to extinguish small fires and cool areas

ALL CLEAR

Following an evacuation and when the area has been deemed safe by emergency services the manager will:

- attend the site
- check grounds for any smouldering objects
- Inspect buildings and declare if safe to return
- debrief

EMERGENCY CONTACTS

FIRE, POLICE OR AMBULANCE

112 or 000

Vehicle Management: The Chief Warden must ensure sufficient vehicles remain onsite and available for evacuation of guests at all times during the bushfire season.

EMERGENCY EVACUATION DIAGRAM

**YOUR LOCATION IS
The Centre for
Attitudinal Healing**

**48 Lewis Road
Serpentine**

- **IF YOU SEE SMOKE**
- **IF YOU SEE FIRE**

PHONE 000

Describe your location and where the smoke or fire is.

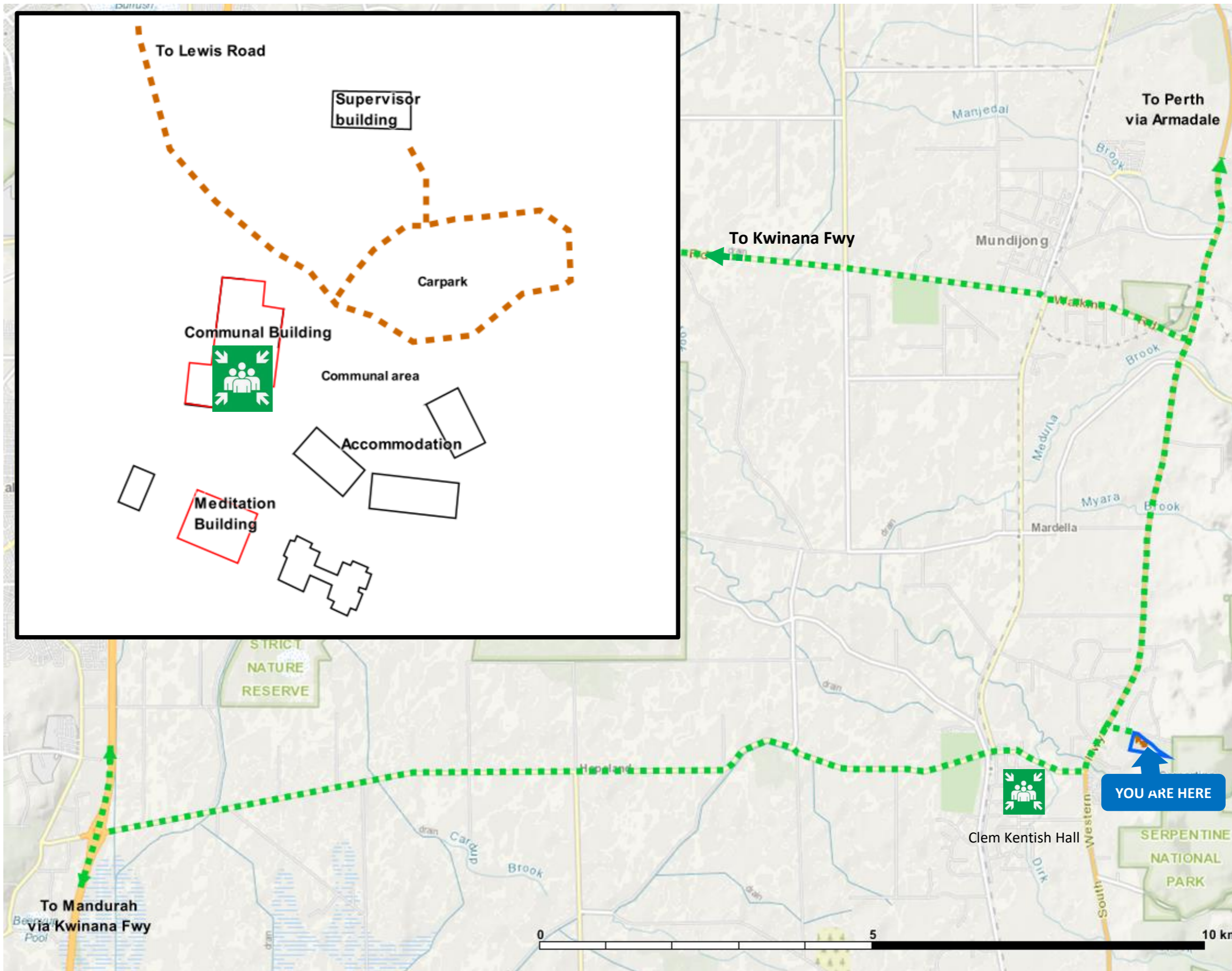
- **IF YOU ARE TOLD TO LEAVE**

Verify it is safe to leave and Evacuate by vehicle to **Clem Kentish Hall** 24 Wellard St, Serpentine **OR AS OTHERWISE ADVISED BY EMERGENCY SERVICES** (directly or via publicly broadcast information and warnings)

1. Assemble at the communal building
2. Evacuate by vehicle from Lewis Street to South Western Highway then Karnup Road or as otherwise advised

DO NOT TRAVEL THROUGH FIRE.

3. Monitor emergency information
 - ABC Local radio 720 am
 - DFES on 13 33 37
 - Emergency WA - www.emergency.wa.gov.au



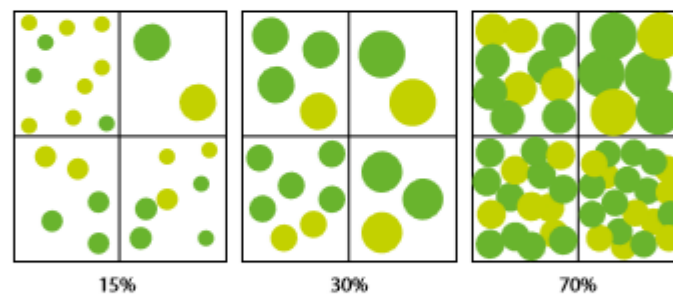
APPENDIX 3 - APZ Guidelines

ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT

SCHEDULE 1: STANDARDS FOR ASSET PROTECTION ZONES

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

Figure 18: Tree canopy cover – ranging from 15 to 70 per cent at maturity



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

APPENDIX 4 – Access Standard

Table 6: Vehicular access technical requirements

TECHNICAL REQUIREMENTS	1 Public road	2 Cul-de-sac	3 Private driveway	4 Emergency access way	5 Fire service access routes
Minimum trafficable surface (m)	6*	6	4	6*	6*
Horizontal clearance (m)	6	6	6	6	6
Vertical clearance (m)	4.5	N/A	4.5	4.5	4.5
Maximum grade <50 metres	1 in 10	1 in 10	1 in 10	1 in 10	1 in 10
Minimum weight capacity (t)	15	15	15	15	15
Maximum crossfall	1 in 33	1 in 33	1 in 33	1 in 33	1 in 33
Curves minimum inner radius (m)	8.5	8.5	8.5	8.5	8.5

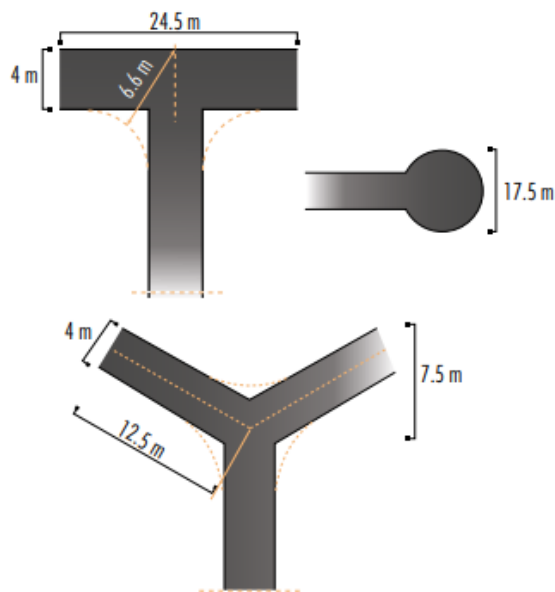


Figure 22: Design requirements for a private driveway longer than 50 metres
Turning areas should allow type 3.4 fire appliances to turn safely

APPENDIX 5 – References

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