

Bushfire Emergency Plan

Operational Document

Prepare | Respond | Recover | Review

Lot 29 (#38) Paterson Street, Mundijong

Shire of Serpentine-Jarrahdale

Vulnerable Land Use Category:
(Guidelines WAPC v1.3)

Category 1: A facility designed to accommodate occupants with reduced physical or mental ability such as the elderly, children (under 18 years of age) and the sick or injured.

Facility/Premises Use Type:

Childcare centre

Date Created:

9 April 2021

Associated Bushfire Management Plan Reference No:

210158

To Be Reviewed Annually

BPP Group Pty Ltd t/a Bushfire Prone Planning
ACN: 39 166 551 784 | ABN: 39 166 551 784

Level 1, 159-161 James Street
Guildford WA 6055

PO Box 388
Guildford WA 6935

08 6477 1144 | admin@bushfireprone.com.au



DOCUMENT CONTROL

PREPARATION				
Author:	Ian Macleod (BPAD Level 2 - No. 39131)	<i>Ian Macleod</i>		
Co-Author:				
Review/Authorise:	Kathy Nastov (BPAD Level 3 - No. 27794)	<i>K. Nastov</i>		
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		<input type="checkbox"/>	<input type="checkbox"/>	
BEP (Standard) Template v8.4				
<p>Limitation of Liability: The procedures and their associated actions contained in this Bushfire Emergency Plan do not guarantee that a building will not be damaged in a bushfire, persons injured, or fatalities occur either on the subject site or off the site while evacuating. This is substantially due to the unpredictable nature and behaviour of fire and fire weather conditions. Additionally, the correct implementation of the required bushfire protection measures will depend upon, among other things, the ongoing actions of the landowners and/or operators over which Bushfire Prone Planning has no control.</p> <p>Any representation, statement, opinion, or advice expressed or implied in this document is made in good faith based on information available to Bushfire Prone Planning at the time. Bushfire Prone Planning will not, except as the law may require, be liable for any loss or other consequences whether or not due to the negligence, lack of care or otherwise of their consultants, their servants or agents, arising out of the services provided by their consultants.</p> <p>Copyright ©2020 BPP Group Pty Ltd: All intellectual property rights, including copyright, in format and proprietary content contained in documents created by Bushfire Prone Planning, remain the property of BPP Group Pty Ltd. Any use made of such format or content without the prior written approval of Bushfire Prone Planning, will constitute an infringement on the rights of the Company which reserves all legal rights and remedies in respect of any such infringement.</p>				

EMERGENCY PLANNING TEAM

Name	Business/Organisation and Position	Contact Details
TBA	To be determined prior to facility/premises commencing	
Mike Scott	Bushfire Prone Planning / Consultant	64771144

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USING THE BUSHFIRE EMERGENCY PLAN

1. Know the designated PRIMARY PROCEDURE to apply in a bushfire emergency.
2. For any day, identify the relevant TRIGGER and its designated PROCEDURE that establishes the ACTIONS to be implemented.
3. Be familiar with the MAPS showing SITE INFORMATION and EVACUATION ROUTES AND DESTINATIONS.
4. Be familiar with the FIRE BEHAVIOUR INFORMATION and EMERGENCY CONTACTS / INFORMATION SOURCES.

THE DESIGNATED PRIMARY EMERGENCY PROCEDURE

In the event of a bushfire emergency, there is **ONE** designated Primary Procedure for the childcare centre at 38 Paterson Street, Mundijong and it applies to all persons within the facility and on the Site.

THE DESIGNATED PRIMARY PROCEDURE IS

SAFE (EARLY) EVACUATION

(refer page 10)

Safe early evacuation is the preferred option. However, given the ages of the occupants and the location and availability of suitable offsite transport options, evacuation may require an extended period of time. Allowances should be made for this when deciding to evacuate or shelter in place.

Where possible, parents should be contacted to pick up their children from either the childcare centre or the chosen evacuation location.

The nearest classifiable vegetation is a narrow strip of forest (approximately 25 metres wide) running along the railway reserve and parallel to the subject lot. Due to the narrow width and orientation of the vegetation, exposure to extreme radiant heat, smoke and ember attack is expected to be limited. The proposed childcare centre is to be constructed to bushfire standards and will provide a viable option to shelter in place.

EMERGENCY CONTACTS

FACILITY/PREMISES CONTACTS			
POSITION	NAME	BUSHFIRE RESPONSIBILITY	MOBILE NUMBER
Property Manager	To be determined and entered here prior to operation.	Primary Contact.	
Property Owner	To be entered here prior to operation.	Secondary Contact.	
STATE EMERGENCY CONTACTS			
ORGANISATION	SERVICES	NUMBER	
Department of Fire and Emergency Services (DFES) / Police / Ambulance	Response to life threatening emergencies. Use to report a fire.	Call triple zero (000) or use the EMERGENCY+ Phone App.	
State Emergency Service (SES)	Assistance with structural damage, flooding, rescuing persons.	13 2500	
Western Power	Response to electricity supply outages and damage.	13 1351	
OTHER CONTACTS			
ORGANISATION	SERVICES	PHONE NUMBER	
Rockingham General Hospital	Medical services	08 9599 4000	
Sir Charles Gairdner Hospital	Medical services	08 6457 3333	
Perth Children's Hospital	Medical services	08 6456 2222	
Department of Communities Child Protection and Family Support	Crisis care	1800 032 965	
Red Cross	Emergency humanitarian assistance	1800 733 276	
Salvation Army	Social services care line	13 72 58	

INFORMATION TO MONITOR AND INFORM DECISION MAKING

ORGANISATION	SERVICES	NUMBER/WEBSITE
Your Surroundings	This can be your best information source. Stay alert to what is happening all around you for as far as you can see. Be aware of the current and forecast wind direction as this is the primary direction the fire will move.	
Emergency WA website	Warnings, incidents, fire danger ratings, total fire bans, preparation, and recovery information	www.emergency.wa.gov.au
Radio	Bushfire alerts, warnings, and information.	Local ABC stations (AM/digital).
Your Mobile Phone	Emergency alert (warnings).	An automated government telephone warning system for numbers in an affected area.
Department of Fire & Emergency Services (DFES)	Public emergency information. Note: Call triple zero (000) to report a fire.	13 3337 (13 DFES) www.dfes.wa.gov.au www.twitter.com/dfes_wa www.facebook.com/dfeswa
Parks and Wildlife Service	Bushfire alerts and warnings, prescribed burns in national parks.	www.dpaw.wa.gov.au
Bureau of Meteorology	Fire weather information and weather forecasts.	www.bom.gov.au/wa/forecasts
Main Roads WA	Road conditions/closures.	13 8138 www.mainroads.wa.gov.au

Understanding Certain Fire Behaviours: The information below will assist decision making by making persons aware of potential limitations to the time available to conduct the designated Primary Procedure. This is important information to be aware of - particularly in the absence of any Emergency Warnings. If evacuating, it must be conducted early to be safe. Leaving late is a high risk action as the likelihood of the facility/premises or the evacuation route being impacted by fire increases significantly. Being on roads when a bushfire is close is a high risk action.

DAILY FORECAST FIRE DANGER RATING	BUSHFIRE		GRASSFIRE
	Potential Forward Rate of Spread (km/hr)	Potential Spotting Ahead Distance (km)	Potential Forward Rate of Spread (km/hr)
Catastrophic	10+	8-20	15-25
Extreme	3-6	>6	10-15
Severe	2-3	>4	8-12
Very High	1-2	>2	5-10
High	0.5-1	>1	3-6
Low-Moderate	0.1-0.5	<1	0.1-0.5

Slope: Fire in vegetation will travel quicker up a slope. For every 10 degrees, the forward rate of spread will double.
Vegetation Spotting Potential: Bark fuels are the greatest contributor. Fine fibrous bark = massive ember quantity and short distance spotting; ribbon/candle bark = substantial quantities of spotting at distances greater than 2km and shorter distances; smooth/platy/papery/course fibre barks = limited quantities of short distance spotting.

THE TRIGGERS FOR ACTIVATION OF EACH BUSHFIRE EMERGENCY PROCEDURE							
TRIGGER	EMERGENCY MANAGEMENT PROCEDURES ¹						
	PRIMARY		SECONDARY				
	Safe (early) Evacuation	Shelter-in-Place	Elevated Threat	Recovery	Pre-Emptive	In-Season Prepare	Pre-Season Prepare
	Page 10	Page 13	Page 15	Page 16	Page 17	Page 18	Page 19
A	A BUSHFIRE IS IDENTIFIED. Emergency services personnel (authority) are on site and have issued specific instructions.		Inform the emergency service person of the existence of this Bushfire Emergency Plan and the designated Primary Procedure. Commence the relevant procedure as instructed by the authority.				
B	A BUSHFIRE IS IDENTIFIED. A bushfire EMERGENCY or WATCH AND ACT warning is in place; or If no warning has been issued, consider the broader landscape (vegetation and ruggedness/slope of the ground) and incorporate the 'Understanding Certain Fire Behaviours' information into your decision making.		<input checked="" type="checkbox"/>				
D	A BUSHFIRE IS IDENTIFIED. A bushfire 'ADVICE' warning is in place; or If no warning has been issued, consider the broader landscape (vegetation and ruggedness/slope of the ground) and incorporate the 'Understanding Certain Fire Behaviours' information into your decision making.			<input checked="" type="checkbox"/>			
E	A BUSHFIRE IS IDENTIFIED. The bushfire is controlled, or the fire front has moved past the facility/premises. Prior evacuation or sheltering in place may have been implemented.				<input checked="" type="checkbox"/>		
F	NO BUSHFIRE IS IDENTIFIED. A Total Fire Ban is declared or the forecast fire danger rating (FDR) is Catastrophic or Extreme.			<input checked="" type="checkbox"/>			
G	NO BUSHFIRE IS IDENTIFIED. The forecast fire danger rating (FDR) is Severe, Very High, High, or Low-Moderate.					<input checked="" type="checkbox"/>	
H	PRIOR TO THE START OF THE BUSHFIRE SEASON.						<input checked="" type="checkbox"/>

Note ¹: Each trigger will only activate a single initial emergency management procedure. If subsequently an additional or different procedure is to apply, this will be directed by the required actions established by the initial procedure.

Addendum to the Bushfire Emergency Plan

Information Supporting the Development of the Bushfire Emergency Plan

Location and Use Specific Assessments for the Vulnerable Land Use

Lot 29 (#38) Paterson Street, Mundijong

Shire of Serpentine-Jarrahdale

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(Guidelines WAPC v1.3)

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Level 1, 159-161 James Street

Guildford WA 6055

PO Box 388

Guildford WA 6935

08 6477 1144 | admin@bushfireprone.com.au



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PREPARATION		
Author:	Ian Macleod (BPAD Level 2 - No. 39131)	<i>Ian Macleod</i>
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1.0	Original Document Issue	9 April 2021
1.1	Amended site layout and occupant capacity	2 March 2022
BEP (Standard) Supporting Information Template v2.4		
<p>Limitations: Any representation, statement, opinion, or advice expressed or implied in this document is made in good faith based on information available to Bushfire Prone Planning at the time.</p> <p>The bushfire protection measures established by the Bushfire Management Plan, of which this vulnerability assessment is a part, are considered to be minimum requirements and they do not guarantee that a building will not be damaged in a bushfire, persons injured, or fatalities occur either on the subject site or off the site while evacuating. This is substantially due to the unpredictable nature and behaviour of fire and fire weather conditions. Additionally, the correct implementation of the required bushfire protection measures will depend upon, among other things, the ongoing actions of the landowners and/or operators over which Bushfire Prone Planning has no control.</p> <p>Bushfire Prone Planning and its employees are not liable, whether by reason of negligence, lack of care or otherwise, to any person for damage or loss whatsoever which has occurred or may occur in relation to that person taking or not taking (as the case may be) action in respect of any representation, statement, opinion or advice referred to herein, except as the law may require.</p> <p>Copyright ©2020 BPP Group Pty Ltd: All intellectual property rights, including copyright, in format and proprietary content contained in documents created by Bushfire Prone Planning, remain the property of BPP Group Pty Ltd. Any use made of such format or content without the prior written approval of Bushfire Prone Planning, will constitute an infringement on the rights of the Company which reserves all legal rights and remedies in respect of any such infringement.</p>		

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1. PLANNING FOR THE EMERGENCY MANAGEMENT OF A BUSHFIRE EVENT

STATE PLANNING POLICY 3.7 PLANNING IN BUSHFIRE PRONE AREAS (SPP 3.7)

State Planning Policy 3.7 *Planning in Bushfire Prone Areas* (SPP 3.7) establishes:

- The policy intent which includes the preservation of life by implementing effective, risk-based land use planning and development;
- The policy objectives that include the provision that preservation of human life is paramount; and
- The policy measure which establishes the concept of a 'Vulnerable Land Use', define it as a land use where persons may be less able to respond in a bushfire emergency; and
- The policy measure that requires a development application for a vulnerable land use to include a Bushfire Emergency Plan (or a more concise form of the required information within the bushfire management plan when relevant, such as for residential based small scale vulnerable land uses). This is to establish the procedures and associated actions for management of a bushfire emergency to ensure the safety of proposed occupants, visitors, customers and staff associated with the use of the site.

Consequently, the development of the required Bushfire Emergency Plan is conducted within the context of the protection of life being the primary focus of the bushfire planning framework in WA. It is focused on:

- The occupants of or visitors to a site, and associated staff, that are considered 'vulnerable' persons because their ability to respond appropriately to a bushfire emergency is constrained in some way; and
- Ensuring the safe re-location of those vulnerable persons, either offsite or onsite, in the event of a bushfire impacting that site.

DOCUMENTS TO MEET PLANNING AND OPERATIONAL REQUIREMENTS

Bushfire Prone Planning will prepare two documents, each with a specific purpose, to fulfil the requirements of SPP 3.7.

THE BUSHFIRE EMERGENCY PLAN (BEP)

The Bushfire Emergency Plan (BEP) is required as an operational document for use in the bushfire season. It will establish the required operational procedures and associated actions to be conducted for different scenarios before and during the bushfire season, including a bushfire event. Its purpose is to ensure the safety of occupants, visitors and staff of the facility/premises leading up to, during and following a bushfire emergency event.

Because the BEP will be used in the pressured environment of an emergency, it must be as concise and informative as possible and provide clear triggers for the initiation of well-defined procedures. It will not contain information that does not assist with making immediate operational decisions.

Consequently, within this operational document, it is not appropriate to assess risks associated with the proposed location and its use, or to justify why certain procedures/actions are prescribed in the BEP. Hence the requirement for information supporting the development of the BEP to be a separate document.

THE BEP SUPPORTING INFORMATION

Developing a BEP for a proposed vulnerable land use must account for:

1. The complex and variable characteristics of bushfire threats (flame contact, radiant heat, embers, wind, smoke) that might exist for any given bushfire event and that are specific to a given site; and
2. Any constraints, specific to the use of the facility that will dictate the most appropriate responses to a bushfire emergency event to ensure that the level of residual risk to 'vulnerable' persons can be considered acceptable based on each unique circumstance.

Consequently, this will require an assessment of the vulnerabilities of the proposed site, its location, buildings and persons and the subsequent development of site and use specific bushfire protection measures.

To achieve this outcome, Bushfire Prone Planning, prepares an appropriate level of supporting information that informs the development of the BEP and justifies the approach taken in establishing the appropriate procedures and their associated actions.

Information Supporting Development of the Site/Use Specific BEP

Additionally, the supporting information will:

1. Assist planning decision makers and their advisors to assess the suitability of the BEP for the specific site and its use; and
2. Assist persons associated with the facility, who are given bushfire emergency management responsibilities, by improving their understanding and use of the BEP.

Typically, this supporting information will be included as an addendum to the Bushfire Emergency Plan. However, it does not form part of the operational document and can therefore be removed from a printed version of the operational document.

2. ESTABLISH AN EMERGENCY PLANNING TEAM AND IDENTIFY RESPONSIBLE PERSONS

GUIDANCE

The Emergency Planning Team (EPT) is to be responsible for the development and documentation of the Bushfire Emergency Plan (BEP), its implementation and its subsequent annual reviews.

The type of facility will dictate the makeup of the EPT. It is to be a consultative group representing those who may work at the facility and have representation of a competent person for advice (and in practice, the preparation of the Bushfire Emergency Plan).

The EPT will typically consist of senior management, staff, nominated fire wardens and a bushfire consultant. As a minimum it will consist of the bushfire consultant and the owner or operator of the facility.

The Emergency Planning Team – Minimum Requirements and Role

The bushfire consultant:

- Prepare the Bushfire Emergency Plan (BEP) – formulate the facility specific emergency procedures and actions;
- Assist with the training of staff and the annual review of the BEP; and
- Consult with the local government and local emergency services as required.

The facility owner or operator:

- Contribute operational information to inform the preparation of the BEP as required;
- Identify and assign duties and responsibilities to employees regarding the management of a bushfire emergency and ensure they are trained;
- Ensure the BEP is implemented, that the procedures related to preparation of property and people are conducted each year and assist with the annual review; and
- Consult with the local government and local emergency services as required.

Responsible Onsite Persons – Bushfire Emergency Management

The EPT will need to identify persons for specific roles when the proposed use will accommodate this. When persons are available to be given the role of fire warden/s, the following indicates their responsibilities.

Role of the Fire Warden:

- Coordinating the implementation of the relevant emergency procedures and their management during an emergency event (or exercise);
- Arranging the training of employees in the emergency procedures;
- Reviewing the effectiveness of emergency procedures (after exercises or an emergency event); and
- Accounting for persons during an emergency event.

Role of the Assistant Fire Warden:

- Implement directions of the Fire Warden;
- Communicate with the occupants, visitors and other staff and maintain calm; and
- May be required to act as Fire Warden

More information can be sourced from AS 3745 *Planning for emergencies in facilities* and AS 4083 *Planning for emergencies – Health care facilities*.

THE EMERGENCY PLANNING TEAM

Where the persons who will comprise the EPT have not yet been identified, they will be required to be confirmed prior to operation of the facility/premise and their details included in the Bushfire Emergency Plan (the operational document).

Name	Business/Organisation and Position	Contact Details	Currently Unknown
TBA			<input checked="" type="checkbox"/>
TBA			<input checked="" type="checkbox"/>
Mike Scott	Bushfire Prone Planning / Consultant	64771144	<input type="checkbox"/>

AVAILABILITY OF PERSONS TO BE RESPONSIBLE FOR BUSHFIRE EMERGENCY MANAGEMENT

Availability	Details
There will be responsible persons (e.g. owner, manager, caretaker) onsite. <input checked="" type="checkbox"/>	The childcare centre manager and staff will be onsite at all times when facility is open.
There will be responsible persons (e.g. owner, manager, caretaker) resident offsite but within proximity of the facility/premises. <input type="checkbox"/>	
The use of the facility/premises will not be supervised by any persons within proximity. <input type="checkbox"/>	

Identified Onsite Responsible Persons

Certain person/s will be nominated and trained as the primary contact for occupants/visitors in the event of a bushfire and have an emergency management role for the facility/premises. If persons have not been identified at this stage of planning, they will be required to be confirmed prior to operation of the Facility and their details included in the Bushfire Emergency Plan (the operational document).

Position in the Facility	Name	Bushfire Responsibility		Mobile Number	Currently Unknown
		Title	Role		
TBA		Fire Warden	Primary Contact. Responsibility for decision making and managing carrying out of emergency procedures.		<input type="checkbox"/>
TBA			Secondary Contact.		<input type="checkbox"/>
					<input type="checkbox"/>

3. ASSESSMENT OF ONSITE PERSONS FACTORS CONTRIBUTING TO VULNERABILITY

CHARACTERISTICS OF PERSONS ONSITE

VULNERABLE LAND USE CATEGORY (as per Guidelines WAPC v1.3)			
Category 1: A facility designed to accommodate occupants with reduced physical or mental ability such as the elderly, children (under 18 years of age) and the sick or injured.			
FACILITY/PREMISES USE TYPE			
Childcare centre			
TOTAL PERSONS ONSITE (MAXIMUM NUMBERS/AGE PROFILE)			
Occupants	55	Children <input checked="" type="checkbox"/>	Juveniles <input type="checkbox"/> Adults <input type="checkbox"/> Seniors <input type="checkbox"/>
Staff / Employees	8	Children <input type="checkbox"/>	Juveniles <input type="checkbox"/> Adults <input checked="" type="checkbox"/> Seniors <input type="checkbox"/>
Visitor		Children <input type="checkbox"/>	Juveniles <input type="checkbox"/> Adults <input type="checkbox"/> Seniors <input type="checkbox"/>
Potential Variation of Numbers Daily and/or Annually			
To be advised.			
'VULNERABLE' PERSONS ONSITE (MAY BE LESS ABLE TO RESPOND IN A BUSHFIRE EMERGENCY)			
Level of Dependency on Facility Management for Support, Assistance and/or Direction			
High <input checked="" type="checkbox"/>	Moderate <input type="checkbox"/>	Low <input type="checkbox"/>	Self-Supporting <input type="checkbox"/>
Applicable Constraints Creating the Dependency	Max No.	Description of Support, Assistance and/or Direction to be Provided	
Medical Constraints: A level of medical and healthcare support is required. <input type="checkbox"/>		It is expected that children from the ages of 0 to 4 years old will be cared for at this centre. Suitably qualified staff will be onsite at all times.	
Mobility Constraints: Age (young /old), physical health/disability, mental health/disability, intoxication. <input checked="" type="checkbox"/>			
Communication Constraints: Non-English speaking, children, mental health/disability. <input checked="" type="checkbox"/>			
Awareness Constraints: Visitors to location, children, mental health/disability, intoxication. <input checked="" type="checkbox"/>			
Confinement Constraints: Issues with numbers and building design and not able to move/respond without authority and assistance. <input checked="" type="checkbox"/>			
Relative Vulnerability Level Associated with the Characteristics of Persons Onsite			
Low <input type="checkbox"/>	Moderate <input type="checkbox"/>	High <input checked="" type="checkbox"/>	Extreme <input type="checkbox"/>

ONSITE AVAILABILITY OF BUSHFIRE EMERGENCY MANAGEMENT KNOWLEDGE

Assessment Factors and Comments	Response
Will there be persons onsite who will have bushfire behaviour knowledge and/or have received training in bushfire awareness and the use of the Bushfire Emergency Plan developed for the proposed use i.e. persons able to be responsible for onsite emergency management?	Yes
Responsible staff are to be trained in bushfire awareness and use of the Bushfire Emergency Plan.	
When onsite responsible persons are available (e.g. aged care, schools, function centres) the required Bushfire Emergency Plan can provide detailed procedures which can be scaled to respond to different scenarios including preparation and pre-emptive procedures. Does this apply?	Yes
BEP will provide detailed procedures for different scenarios.	
When onsite responsible persons are not available (e.g. short stay holiday rental) the occupants of such premises will have to act independently and therefore emergency procedures must be sufficiently clear and simple (Bushfire Emergency Information). Does this apply?	No
N/A	
Will persons onsite have ready and timely access to the official bushfire warnings that are produced by DFES in the event of an emergency?	Yes
Yes, owners have access to EmergencyWA website, DFES Emergency Information Line (13DFES or 13 3337)	
Likely attendance of emergency services personnel in the initial stages of a bushfire event to provide guidance/instruction.	Likely
Mundijong Bush Fire Brigade is located approximately 600 metres south of the subject site.	
Existence, location and likely response times of emergency services:	
Emergency services are located at: Mundijong 0.6km (approximately 1 minute travel time at 60km/hr) Serpentine 8km (approximately 8 minutes travel time at 60km/hr) Jarrahdale 10km (Approximately 10 minutes travel time at 60km/hr) For these volunteer services additional time is to be allowed for getting to station.	
Relative Vulnerability Level Associated with the Onsite Availability of Bushfire Emergency Management Knowledge	
Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input type="checkbox"/> Extreme <input type="checkbox"/>	
Comments: Due to the close proximity of the Shire of Serpentine-Jarrahdale offices and the Mundijong Bush Fire Brigade it is expected that emergency services personnel can be in attendance within a short period of time.	

4. ASSESSMENT OF SITE FACTORS CONTRIBUTING TO VULNERABILITY

BUSHFIRE PRONE VEGETATION, TOPOGRAPHY AND LOCATION OF DEVELOPMENT

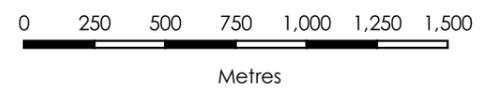
Assessment Factors and Comments
Offsite vegetation types, extent and proximity to subject lot: Significant extents of bushfire prone vegetation exist across the broader landscape in the form of cleared pasture and remnant areas of forest. Most of the vegetation is on private land and subject to various levels of fuel load management. Closer to the proposed development there is a narrow strip of forest vegetation along the South West railway line which terminates close to the subject lot. An 8ha area of forest is located 140 metres to the east of the lot.
Onsite vegetation types, extent and proximity to existing/proposed buildings (including landscaping): There will be no onsite bushfire prone vegetation.
Topography: Offsite: Relatively flat Onsite: Relatively flat
Fuel fragmentation/discontinuity: Offsite: To the north, west and south available fuel is fragmented by developed residential or commercial lots. Areas to the east allow for a continuous fire run through pasture and discontinuous areas of forest. Onsite: There will be no bushfire fuel available onsite.
Considered fire weather conditions: Adverse fire weather conditions have been applied, including high temperature, low relative humidity and high wind speed.
Likely fire runs: The surrounding land in the broader landscape will hold running fire. However, the childcare centre is located within the Mundijong townsite and the greatest impact to the development will be from a bushfire approaching from the east.
Potential bushfire forward rates of spread (relative). Likelihood of fast moving unpredictable fire in the vicinity: The surrounding areas of land will support fast moving grassfire with potential rate of spread exceeding 25km/hr depending on wind speeds. The relative potential for flame contact, high and persistent radiant heat, production of embers, generation of high winds:
Potential flame contact is unlikely due the separation of the development from bushfire prone vegetation. Radiant heat and ember attack is possible from areas of forest to the east of the development site. Grassland areas will have short fire residence time and generally produce less embers. Due to the relatively flat open landscape high winds are possible in this area.
Relative likelihood of bushfire events: It is likely the development will be impacted by a bushfire event at some time, due to the combination of available fuels and rural environment.
Availability of routes suitable for emergency vehicle access to the site from surrounding areas and availability of offsite firefighting water supply: Access is available to the site from 2 different directions along Paterson Street, and at a larger scale from arterial roads in 4 different directions. A fire hydrant is located 2 metres from the front of the subject lot boundary.
Relative Vulnerability Level Associated with Bushfire Prone Vegetation and Topography
Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input type="checkbox"/> Extreme <input type="checkbox"/>

BEP Supporting Information Spatial Context Map

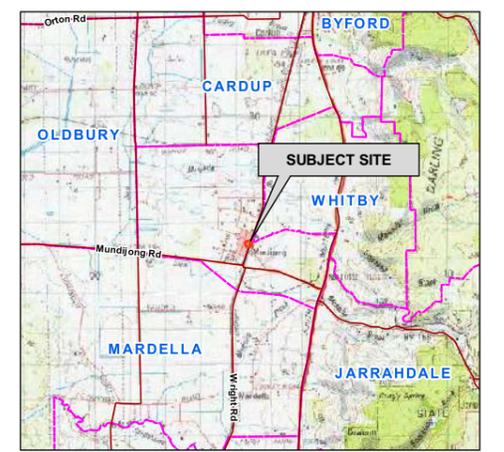
Lot 29 on Diagram 13165
38 Paterson Street
MUNDIJONG
SHIRE OF SERPENTINE-JARRAHDALE

----- LEGEND -----

- ◆ DFES Stations
- Subject Site
- Locality
- Cadastre

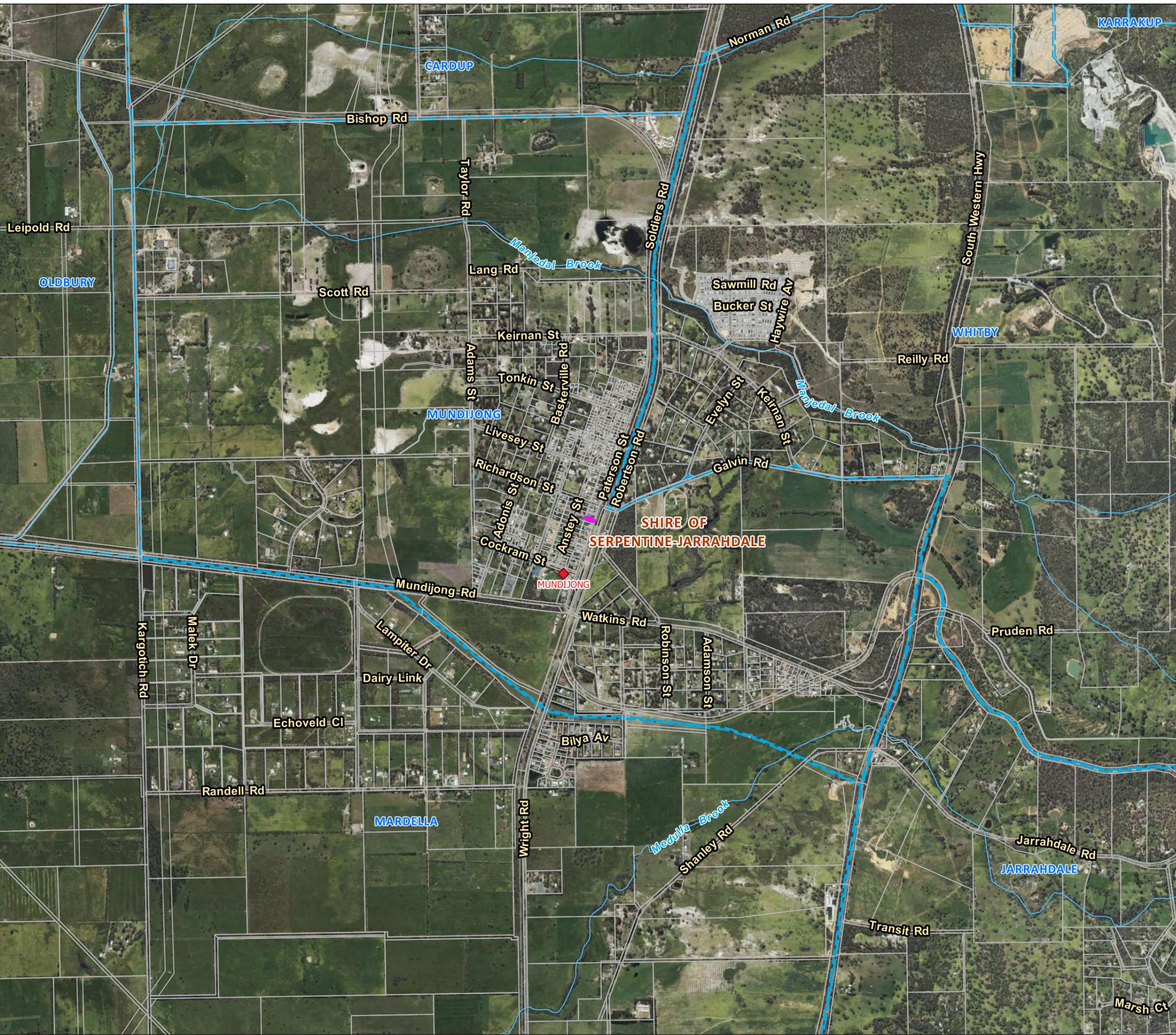


----- LOCALITY -----



AERIAL IMAGERY: Landgate/SLIP

Coordinate System: GDA 1994 MGA Zone 50
 Projection: Universal Transverse Mercator Units: Metre
 Map by: Ian Macleod 24-03-2021
 SCALE (A3): 1 : 25000



STRUCTURE/S VULNERABILITY TO BUSHFIRE AND CONSEQUENTIAL LOCAL FIRE

List of Separate Structures Onsite	Status	BAL Rated Construction	Potential Bushfire Threat Exposure
1. Childcare Centre	Proposed	BAL-12.5	Flame Contact <input type="checkbox"/> High Radiant Heat <input type="checkbox"/> Low Radiant Heat <input checked="" type="checkbox"/> Ember Attack <input checked="" type="checkbox"/> Smoke <input checked="" type="checkbox"/> High Winds <input checked="" type="checkbox"/>
2. Covered Outdoor Play Area	Proposed	BAL-12.5	Flame Contact <input type="checkbox"/> High Radiant Heat <input type="checkbox"/> Low Radiant Heat <input checked="" type="checkbox"/> Ember Attack <input checked="" type="checkbox"/> Smoke <input checked="" type="checkbox"/> High Winds <input checked="" type="checkbox"/>
Design features (existing or proposed) that determine reliability, resilience and robustness against the threats of bushfire:			
Building 1: Non-combustible exterior materials, relatively simple design with few areas to trap embers. Building 2: Possible combustible exterior materials, rectangular building design.			
Potential for structure to structure fire (building separation): and other consequential (secondary) local fire:			
Building 1: Possible due to proximity of buildings. Building 2: Possible due to proximity of buildings.			
Availability of suitable onsite emergency vehicle access and firefighting water supply:			
This is a fire hydrants located within 2m of the development. Site access will be compliant as detailed in the BMP.			
Conditions of the grounds in terms of landscaping, types of plantings and proximity of planting to susceptible building elements with regard to separation and maintenance.			
Site will be maintained to a low bushfire threat state.			
Capacity to establish required or greater sized Asset Protection Zones within the subject lot when required to be applied as an additional bushfire protection measure:			
Whole of lot will be managed to APZ requirements.			
The likelihood of buildings impacted by bushfire remaining habitable until the passage of the fire front:			High
It is expected that buildings will be constructed to their assessed BAL ratings.			
Relative Vulnerability Level Associated with Structure/s Construction and Location			
Low <input checked="" type="checkbox"/>	Moderate <input checked="" type="checkbox"/>	High <input type="checkbox"/>	Extreme <input type="checkbox"/>

AVAILABILITY OF FIRE FIGHTING RESOURCES

Assessment Factors and Comments	Response		
Existence, location and likely response times of emergency services:			
Emergency services are located at: Mundijong 0.6km (approximately 1 minute travel time at 60km/hr) Serpentine 8km (approximately 8 minutes travel time at 60km/hr) Jarrahdale 10km (Approximately 10 minutes travel time at 60km/hr) For these volunteer services additional time is to be allowed for getting to station.			
Suitable emergency vehicle access will be available:	Yes		
To the site from surrounding areas: There are multiple access routes available from surrounding areas. Within the site and around buildings: Site access is available via the driveway from Paterson Street and a right of way along the rear of the lot.			
An adequate supply and appropriately plumbed firefighting water supplies will be available:	Yes		
Static: N/A Reticulated: A fire hydrant is located 2 metres from the front boundary.			
Sprinkler suppression systems internal or external to buildings, are/will be installed:	Possible		
To be advised.			
Relative Vulnerability Level Associated with Availability of Fire Fighting Resources			
Low <input type="checkbox"/>	Moderate <input checked="" type="checkbox"/>	High <input type="checkbox"/>	Extreme <input type="checkbox"/>

5. ASSESSMENT OF EVACUATION DESTINATIONS, ROUTES, TRANSPORT & TIME

SAFER OFFSITE LOCATIONS REQUIREMENTS

Requirements	Required
Suitable offsite evacuation destination or destinations are required either as the priority or as a backup. For the proposed development.	<input checked="" type="checkbox"/>
More than one offsite evacuation destination is required due to the extent of bushfire prone vegetation and the potential for evacuation routes to be compromised.	<input checked="" type="checkbox"/>
A building with amenities, drinking water and enough space to accommodate all persons being evacuated.	<input checked="" type="checkbox"/>
A facility/premises with the capacity to provide all required support services for the number of dependent persons that will be evacuated for the period required (this may be for a short or extended time).	<input checked="" type="checkbox"/>
An identified location/area that is available en-route to the evacuation destination (i.e. not used for sheltering), that will not be impacted by the potential impacts of bushfire. The required evacuation times will be calculated for reaching this location.	<input type="checkbox"/>
An area or building that does not need to provide amenities and will function as a pick-up location for a short time (e.g. pick up by relatives, friends, or taxi). Typically, within the vicinity of a built out urban area (e.g. commercial district).	<input type="checkbox"/>
A destination, well away from the facility/premises, that is the evacuees home residence or rented accommodation. Typically, this is a self-evacuate scenario.	<input type="checkbox"/>
An area of enough size to contain all evacuated occupants/visitors and that will not be subject to radiant heat flux greater than 2 kW/m ² (@ 1200° K flame temp.)	<input type="checkbox"/>

IDENTIFIED SAFER OFFSITE LOCATIONS AND THEIR SUITABILITY

Identified Locations	
Briggs Park Sports Pavilion, Mead Street Byford Clem Kentish Hall, 24 Wellard St, Serpentine	
Assessment Factors and Comments	Response
Are the off-site locations away from the potential threats of bushfire and/or resilient to bushfire impact?	Yes
In residential built up areas.	
If the off-site location is an open area, is it subject to 2 kW/m ² (@ 1200° K flame temp.) or less of radiant heat flux?	N/A
N/A	
Do the off-site locations have the required support services and amenities?	Yes
Location have adequate water supply and ablutions.	
Can the off-site location accommodate the number of persons who will be evacuating?	Yes
Briggs Park Sports Pavilion: 200+ persons Clem Kentish Hall: 200+ persons	
Has the local government, local emergency management committee and/or the Department of Communities been consulted in the identification of an off-site location?	Yes
Shire of Serpentine-Jarrahdale Coordinator of Emergency Services contacted.	

Information Supporting Development of the Site/Use Specific BEP

Has the owner/operator of the off-site location been contacted and confirmed that the location can be used as a safe shelter if an evacuation is required?	Yes
Shire of Serpentine-Jarrahdale Coordinator of Emergency Services contacted.	
Has the owner/operator of the off-site locations provided contact persons and phone numbers any instructions regarding notifying and opening the location (if necessary)?	Yes
Contact 1 – Shire Welfare Liaison Officer – 0436 011 613 (During office hours) Contact 2 – Emergency Operations After Hours - 9526 1111	
Relative Vulnerability Level Associated with the Availability of Suitable Safer Offsite Locations	
Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Extreme <input type="checkbox"/>	
Comments:	

IDENTIFIED EVACUATION ROUTES AND THEIR SUITABILITY

Assessment Factors Comments	Response
Is more than one evacuation route required - to an off-site safer location or to more than one off-site location - due to the high risk nature of the route due to potential bushfire threats?	Yes
Both escape routes travel through bushfire prone vegetation. There is potential for one or both escape routes to be compromised during a bushfire event.	
Are the necessary evacuation route/s available?	Yes
1. Left onto Paterson Street, travel approximately 8 kms north and then turn left onto Mead Street, travel 300 metres and the Briggs Park Sports Pavilion will be on your left. 2. Right onto Paterson Street and travel 600 metres south to Mundijong Road, turn left onto Mundijong Road, cross the railway line and turn right onto Wright Road, travel for 7 kms and turn left onto Karnup Road, then travel 300 metres and turn right onto Lefroy Street, then travel 250 metres and turn left onto Lefroy Street, travel 50 metres and Clem Kentish Hall will be on your left.	
Will the roads be constructed to public road standards?	Yes
All roads are existing and constructed to public road standards.	
Will the routes require travelling through or towards bushfire prone vegetation?	Yes
Both routes travel through areas of generally open pasture. However, the roads do have trees along their verges and there is a possibility of falling trees blocking an escape route.	
Is there a location en-route along the available evacuation routes that can be considered to present a low bushfire threat to evacuees before reaching the designated safer offsite location – such that the time taken to reach this location can be considered as the time it will take evacuees to reach a safer location?	No
N/A	
Relative Vulnerability Level Associated with Availability of Suitable Evacuation Routes	
Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input checked="" type="checkbox"/> Extreme <input type="checkbox"/>	

EVACUATION TRANSPORT REQUIREMENTS AVAILABILITY AND SUITABILITY

Assessment Factors and Comments			Response	
Have occupants with support needs been considered when determining vehicle types required?			Select.	
To be advised.				
Are ambulances or other vehicles supplying specialised support for dependent persons required?			Select.	
To be advised.				
Will the facility provide its own transport for all occupants, visitors, and staff - and will there be sufficient vehicles (capacity)?			Select.	
To be advised.				
Will occupants, visitors and staff use their own vehicles - and will there be sufficient vehicles (capacity)?			Select.	
To be advised.				
Is it possible that occupants, visitors, or staff will be dropped at the facility without own transport?			Yes	
Children will be dropped off at childcare centre.				
Is a community bus and driver expected to be available when required?			Select.	
To be advised.				
Will third party (commercial) transport providers be required to supply vehicles?			Select.	
To be advised.				
Have third party (commercial) transport providers been contacted and agreed to an arrangement to supply the required vehicles and capacity in the event of a bushfire emergency?			Select.	
To be advised.				
Has consideration been given to the capacity of the commercial transport provider to provide the agreed vehicles when there may be demand from other facilities affected by the same bushfire?			Select.	
To be advised.				
EXPECTED MAXIMUM PERSON NUMBERS				
Person Type	Using Own Vehicles or Onsite Transport	Using Alternative Transport	Details (as necessary)	
Occupants		55	Transport options to be advised.	
Visitors			Any visitors will use own vehicles.	
Staff/Employees	8			
VEHICLE SOURCE				
Occupants	Own Vehicles <input type="checkbox"/> Onsite Facility Vehicles <input type="checkbox"/> Offsite Facility or Third Party Vehicles <input checked="" type="checkbox"/>			
Visitors	Own Vehicles <input checked="" type="checkbox"/> Onsite Facility Vehicles <input type="checkbox"/> Offsite Facility or Third Party Vehicles <input type="checkbox"/>			
Staff/Employees	Own Vehicles <input checked="" type="checkbox"/> Onsite Facility Vehicles <input type="checkbox"/> Offsite Facility or Third Party Vehicles <input type="checkbox"/>			
VEHICLE AND DRIVER ARRANGEMENTS				
Location / Organisation	Vehicle Type / Capacity	Number of Vehicles	Contact Details (name & phone)	Date Arranged



Information Supporting Development of the Site/Use Specific BEP

Facility Vehicles				
To be advised.				
Third Party (Commercial) Vehicles				
To be advised.				
Relative Vulnerability Level Associated with Availability of Suitable Evacuation Transport				
Low <input type="checkbox"/>	Moderate <input type="checkbox"/>	High <input type="checkbox"/>	Extreme <input type="checkbox"/>	

TIME REQUIRED TO INITIATE AND COMPLETE THE EVACUATION PROCEDURE

The time it takes to coordinate and move occupants from the facility/premises to another location is the minimum time required to evacuate safely. This time needs to be considered within the context of the likely time available given the type of bushfire scenario that the site may be subject to and to ensure that any evacuation is instigated early. Relevant considerations for the bushfire scenario include the possibility of rapid onset fire (i.e. fire starting in close to the site and evacuation routes), proximity of vegetation, potential rates of spread and residence times. If the time required is highly likely to be too long, then identifying/providing shelter in place options become a priority.

Actions	Estimated Time (hrs:min)			
	Less Dependent / Lower Care Persons		High Dependency / High Care Persons	
	Own Transport	Provided Transport	Own Transport	Provided Transport
Assess the situation and make decision to evacuate.	TBA	TBA	TBA	TBA
Inform drivers (and bring onsite vehicles to the assembly area (can be staff, residents, or visitors/customers).	TBA	TBA	TBA	TBA
Contact outside transport provider and complete delivery of required vehicles to the facility/premises (a prior organised arrangement).	TBA	TBA	TBA	TBA
Inform and prepare persons to evacuate.	TBA	TBA	TBA	TBA
Move persons to the assembly area.	TBA	TBA	TBA	TBA
Board all persons into the vehicles. Re-evaluate availability of evacuation route.	TBA	TBA	TBA	TBA
Total Prepare Time¹	0:0	0:0	0:0	0:0
Travel Time – to furthest designated safe destination	0:0	0:0	0:0	0:0
Travel Time - to first safe location en-route ²	0:0	0:0	0:0	0:0
Total Required Time	0:0	0:0	0:0	0:0
<p>Note¹: In calculating the total time required, consideration is given to the ability to simultaneously carry out relevant stated actions.</p> <p>Note²: Applied as the required travel time if relevant (i.e. considerable time to safe destination but safety en-route is reached much sooner).</p>				
<p>The Practicality of Designating Safe (early) Evacuation as Primary Procedure After Consideration of Time Required</p>				
<p>Early evacuation and removal of occupants from the source of the bushfire threat is the preferred option where time permits. Due to the demographic of the occupants, and probable requirement for offsite transport options, it is expected that a prolonged period of time may be required to complete the evacuation process.</p> <p>Bushfires in the vicinity are likely to be fast moving, wind driven grass fires which may preclude the possibility of early evacuation. It is important that the proposed childcare centre be constructed to its assessed BAL: rating, as this will be used as the shelter in place building.</p>				
Relative Vulnerability Level Associated with the Time Required to Evacuate				
<p style="text-align: center;"> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input checked="" type="checkbox"/> Extreme <input type="checkbox"/> </p>				
Comments:				

SUMMARY ASSESSMENT OF THE EVACUATION REQUIREMENTS

Assessment Factors and Comments	Response
Are suitable offsite safer locations available?	Yes
Briggs Park Sports Pavilion, Mead Street Byford Clem Kentish Hall, 24 Wellard St, Serpentine	
Are suitable evacuation routes available?	Yes
1. Left onto Paterson Street, travel approximately 8 kms north and then turn left onto Mead Street, travel 300 metres and the Briggs Park Sports Pavilion will be on your left. 2. Right onto Paterson Street and travel 600 metres south to Mundijong Road, turn left onto Mundijong Road, cross the railway line and turn right onto Wright Road, travel for 7 kms and turn left onto Karnup Road, then travel 300 metres and turn right onto Lefroy Street, then travel 250 metres and turn left onto Lefroy Street, travel 50 metres and Clem Kentish Hall will be on your left.	
Is suitable evacuation transport readily available?	Select.
To be advised.	
Can it be most reasonably expected that the time required to initiate and complete the evacuation procedure - before conditions outside were untenable - would fit within the likely window of time available?	Possible
This requires consideration of the location of the bushfire prone vegetation relative to the facility and the most reasonable expectations of fire behaviour in that vegetation.	
This will be dependent upon the location, direction and speed on the bushfire event.	
Safe (early) evacuation is the response to an emergency bushfire event that presents the least risk. Can this be conducted for the proposed facility?	Yes
May require extended period of time due to age group and dependencies of occupants (0-4 years old).	
Relative Vulnerability Level Associated with Evacuation Overall	
Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input checked="" type="checkbox"/> Extreme <input type="checkbox"/>	

6. ASSESSMENT OF THE AVAILABILITY AND SUITABILITY OF SHELTER IN PLACE OPTIONS

Identified Shelter in Place Building or Area	
Name: Childcare Centre Description: Main building	
Assessment Factors and Comments	Response
The shelter-in-place building fully complies with the requirements established by the Australian Building Codes Board Handbook Design and Construction of Community Bushfire Refuges (2014).	No
It does not and is not intending to comply.	
The shelter-in-place building is subject to maximum radiant heat flux of 10 kW/m ² (@ 1200° K flame temp.).	No
The site is affected by a narrow strip of forest and woodland vegetation running parallel to the subject lot. It is likely that the fire effect on the building will be that of a flanking fire and therefore having a reduced radiant heat flux level.	
The proposed shelter-in-place building will be construction to the standard corresponding to its BAL rating as per AS 3959 or NASH.	Will be applied as a protection measure via the BMP.
Implementing the recommendation established by the Bushfire Management Plan for the proposed development will result in the designated shelter-in-place building being constructed to a BAL rating of BAL-12.5.	
The existing shelter-in-place building can be modified to reduce the threat from embers by modifying materials used, closing gaps, screening, enclosing underfloor space, modifying the size/number/type of windows/doors etc to more closely align with AS 3959 or NASH requirements.	N/A
The proposed building is to be constructed to its assessed BAL rating.	
High levels of non-combustible building elements are incorporated into the building.	Yes
The major external building elements will be non-combustible being fibre cement and colorbond.	
Complexity of building design. Complicated roof and wall design (re-entrant corners) can trap debris and embers.	Yes
Relatively simple design with few areas to trap embers. Will have some roof valleys. Regular maintenance will mitigate the risk of consequential local fire in accumulated debris.	
Adequate separation from other buildings (dependent on wall/eave construction rating: 0m for 60/60/60 FRL, 4m for BAL-FZ, 8m for BAL-40, 12m for BAL-29) to prevent building to building ignition). Distances can be reduced by 30% if both buildings are constructed to BAL-29 standard.	Partially Satisfies
The proposed building will be approximately 6 metres from an existing building on the neighbouring lot which is not constructed to bushfire standards.	
The open area shelter is subject to maximum radiant heat flux of 2 kW/m ² (@ 1200° K flame temp.).	N/A
N/A	
The open area surrounding the shelter-in-place building can have an APZ established that will ensure the radiant heat flux impact on the building stays below 10 kW/m ² (@ 1200° K flame temp.). Trees within the APZ can provide barrier and ember shielding benefits. The absence of heavy fuels within the APZ, including fences and retaining walls, is desirable.	No
The APZ consists of design elements and vegetation that is easy to maintain in a minimal fuel, low threat condition. There is evidence of the property being well maintained.	Yes
The lot is currently vacant but managed to a low bushfire threat state. The building design allows for managed and maintained outdoor areas.	

Information Supporting Development of the Site/Use Specific BEP

The existence of an area adjacent /adjoining the shelter-in-place building that is subject to radiant heat flux <math><2\text{kw}/\text{m}^2</math> (@ 1200° K flame temp.) to allow for persons to be able to assemble in the first instance and later move outside should the building be compromised or to allow active ember control for persons suitably dressed (protection).	No
Be able to identify an area containing no heavy fuels that will be available for relocation outside the shelter-in-place building after the passage of the fire front if conditions inside become untenable.	Yes
Car parking area to front of lot. Open outdoor play area to the rear of the lot (available only where building is not compromised by fire).	
The shelter-in-place building has the capacity to accommodate all persons within the facility/premises and on site (floor area=0.75m ² /person, volume = 1.2m ³ per person.	Yes
For 55 children and 8 adults the required space is 48m ² . This space is available within the building.	
The shelter-in-place building can provide adequate amenities for the expected period of sheltering.	Yes
The building will have all required amenities.	
The building design has multiple exit points to different adjacent locations.	Yes
The emergency services have good access in and around the shelter-in-place building.	Partially Satisfies
Access to the rear of the building will need to be from the Right of Way.	
Hydrants/fire hoses/tanks are available within a short distance from the shelter-in-place building.	Yes
Existing fire hydrant is located 2 metres from subject lot.	
There are staff trained and able to monitor for situational awareness and patrol the building to protect against ember attack in the appropriate situation.	Yes
Staff will be trained in bushfire awareness and the operation of the Bushfire Emergency Plan.	
Vehicle parking is designed to be >6m away from the shelter-in-place building (to ensure separation from consequential vehicle fire).	No
Parking is in front of the building of and closer than 6 metres.	
All gas cylinders are to be installed and maintained in accordance with AS 1596. This standard includes requirements for small portable cylinders and larger cylinders used for domestic house supply. To ensure additional heat/flame load is not placed on the structure and reduce the risk of death or injury, from gas flaring or explosion. Requirements include: <ul style="list-style-type: none"> • 6m separation from any combustible material (i.e. heavy fuels including adjacent buildings and combustible retaining walls); • Safety release valve shall be directed away from the building and persons access/egress routes; • Metal piping and fittings shall be used on all piping inside the building's cavities and enclosable occupied spaces and the high pressure side of any gas regulators; and • Tethers securing cylinders are to be non-combustible. 	Yes
Relative Vulnerability Level Associated with the Designated Shelter in Place Building	
Low <input type="checkbox"/>	Moderate <input checked="" type="checkbox"/>
High <input type="checkbox"/>	Extreme <input type="checkbox"/>
Comments: The building will provide a suitable place in which to shelter for the passage of the fire front.	

7. DETERMINATION OF THE PRIMARY EMERGENCY MANAGEMENT PROCEDURE TO BE APPLIED

There are two primary procedure options – evacuation or shelter in place. The intent of both is to change (lessen) the potential consequences of the emergency bushfire event to the degree necessary to ensure the level of residual risk to persons is acceptable.

This is achieved by limiting the exposure of persons (occupants/visitors/customers/staff) to the threats of bushfire by ensuring their re-location to a safer offsite (evacuation) or onsite location (shelter in place). The key considerations are:

Safe evacuation away from the emergency event will always present the least risk. However, the primary requirement is for it to be safe. In practice 'safe' equates to evacuation being conducted early as being on roads when a bushfire is in the vicinity is a high risk action. Otherwise, sheltering-in-place in an identified suitable location, is likely to provide greater protection to persons.

There are additional issues to be considered in determining the degree of safety that can be provided by evacuation. Two of these are considered below;

1. The selection of the primary procedure, in the context of bushfire, must apply an understanding of whether there is a greater residual risk associated with evacuation or sheltering in place in a fit for purpose location, for the specific site and its use.

This requires due consideration of the types of occupants and their level of dependency on assistance and medical support. An example is the high risk of injury or mortality in evacuating a group of sick or elderly occupants, highly dependent on medical care.

2. In certain circumstances there may only be a single primary procedure option available. Consequently, other bushfire protection measures (contingency measures) will be required to be applied to compensate for the limitation to the greatest extent possible. For example:
 - Where there is no shelter in place option - very early evacuation or site closure at times of greatest risk will likely be required; and
 - Where there is no evacuation option – a shelter in place option and additional bushfire protection measures will likely be required.

Analysis of the Assessments Conducted - their impact on the determination of the primary procedure to apply)				
Vulnerability Source	Assessed Relative Vulnerability Level of Persons/Buildings	Contribution to Selection of Evacuation as the Primary Procedure	Relative Weight Score (less 1⇒5 greater)	
			Evacuation	Shelter in Place
1. Dependency level of persons onsite	Relatively High	Significant and positive to evacuation	4	2
2. Availability onsite of persons to be responsible for bushfire emergency management.	Relatively Moderate	Neutral to evacuation	3	3
3. Availability of timely bushfire emergency warnings to inform evacuation decisions.	Relatively High	Significant and positive to evacuation	4	2
4. Availability emergency services and/or firefighting equipment and the likelihood of emergency services attendance.	Relatively High	Significant and positive to evacuation	2	4
5. Vulnerability (to bushfire) of location.	Relatively Moderate	Minor and positive to evacuation	4	3

Information Supporting Development of the Site/Use Specific BEP

6. Vulnerability (to bushfire) of buildings onsite.	Relatively Low	Significant and negative to evacuation	2	4
7. Ability to apply complementary bushfire protection measures.	Relatively Moderate	Neutral to evacuation	3	3
8. Availability of suitable offsite evacuation destinations.	Relatively High	Significant and positive to evacuation	4	2
9. Availability of suitable evacuation routes	Relatively Moderate	Neutral to evacuation	3	3
10. Availability of suitable evacuation transport	TBA	Select.	TBA	TBA
11. Expected time required to complete the evacuation procedure is likely less than is expected to be available for likely bushfire scenarios at the site.	TBA	Select.	TBA	TBA
12. Availability of suitable shelter in place location.	Relatively Moderate	Minor and negative to evacuation		
Totals				

The determined Primary Procedure for the proposed development/use is:

SAFE (EARLY) EVACUATION

1. *Early implementation of this procedure is critical. Late evacuation and being on the road with a bushfire in the immediate vicinity is a high risk action.*
2. *A current situation evaluation will be required before leaving the site to confirm that an acceptably safe evacuation route and destination remains available.*

SUMMARY STATEMENT

Safe early evacuation is assessed as being the Primary Procedure for this development. Egress routes are available to different safe locations.

However, the region consists of large areas of pasture and grazing land and may be subject to fast moving grass fires. Sheltering in place is a viable option where it is considered too late to evacuate safely. The shelter in place building is expected to be constructed to bushfire standards and will be a suitable place in which to shelter during the passage of the fire front.

8. ADDITIONAL BUSHFIRE PROTECTION MEASURES (TO BE INCORPORATED INTO THE BUSHFIRE MANAGEMENT PLAN)

For the proposed development, the following additional bushfire protection measures have been identified as being required to be established and maintained. They are additional to those established by the 'Acceptable Solutions' of the *Guidelines for Planning in Bushfire Prone Areas (WAPC 2017 v1.3)* or any relevant 'Position Statement' (WAPC).

These measures will be incorporated into the BMP as recommended measures and will be added to the list of responsibilities of the landowner/operator to implement and maintain.

Additional Bushfire Protection Measures - To Implement at Design Stage or Prior to Operation		
Bushfire Protection Measure	Relevant Site Specific Details	Application
Ensure the Bushfire Emergency Plan is developed.		To be applied
Complete all actions of the Pre-Season Prepare Procedure established in the Bushfire Emergency Plan, prior to initial operation.		To be applied
Any proposed buildings that are not Class 1, 2 3 or 10(a), are to be constructed to the bushfire standard established by either AS 3959-2018 or the NASH Standard and corresponding to their determined BAL rating, or greater.		To be applied
To reduce the risks from gas flaring or explosion, the installation of LP Gas cylinders must be in accordance with AS 1596:2014. This includes 6m separation from any combustible materials, the use of metal piping and fittings, safety valves directed away from the building and persons access/egress routes and tethers securing cylinders upright to be non-combustible.	Compliance with these requirements will increase the robustness of the new building design by ensuring additional heat/flame load is not placed on the structure. It is a suitable and effective treatment.	To be applied

Additional Bushfire Protection Measures - Ongoing Operational		
Bushfire Protection Measure	Relevant Site Specific Details	Application
Each year complete the actions of the Pre-Season Prepare Procedure established in the Bushfire Emergency Plan.		To be applied
A responsible person, with appropriate bushfire emergency training, must always be present on-site (staff / caretaker / landowner) to oversee emergency management procedures.	To achieve the greatest effectiveness from a Bushfire Emergency Plan this an important protection measure.	To be applied

9. EMERGENCY MANAGEMENT PROCEDURES TO BE APPLIED THROUGH THE BUSHFIRE EMERGENCY PLAN

Procedure and Associated Triggers	To Be Applied	Procedure Status	Justification for Application Decision
Safe (Early) Evacuation Procedure A bushfire is identified. An EMERGENCY or WATCH AND ACT warning is in place, or when no bushfire warning has been issued.	Yes	Sole Primary Procedure	All essential evacuation factors are available thereby enabling this procedure as the least risk option if completed early.
Sheltering in Place Procedure A bushfire is identified. An EMERGENCY or WATCH AND ACT warning is in place, or when no bushfire warning has been issued.	Yes	Backup Primary Procedure	
Elevated Threat Procedure A bushfire is identified. A bushfire 'ADVICE' warning is in place, or when no bushfire warning has been issued.	Yes	Secondary Procedure	
Pre-Emptive Procedure Application is relevant when other emergency procedures cannot be implemented to the level of safety required. The intent of the pre-emptive procedure is to change the potential consequences of a bushfire event by avoiding the exposure of persons to the potential threats. The procedure is applied in response to forecasts for fire weather to be more extreme than 'normal bushfire weather conditions' ¹ . It can be applied in two ways.			
	1. Pre-emptive closing of the facility: For certain periods of the year when the likelihood of adverse fire weather conditions is greatest, shut down operations and prevent persons from entering the facility/premises.	No	N/A
	2. Pre-emptive evacuation of the facility: When a Total Fire Ban is declared or the forecast fire danger rating (FDR) is Catastrophic or Extreme, relocate all persons on-site to the designated off-site safer location/s.	No	N/A
Recovery Procedure A bushfire is identified. The bushfire is controlled, or the fire front has moved past the facility/premises. Prior evacuation or sheltering in place may have been implemented.	Yes	Secondary Procedure	An essential procedure
In-Season Prepare Procedure No bushfire is identified. The forecast fire danger rating (FDR) is Severe, Very High, High, or Low-Moderate.	Yes	Secondary Procedure	An essential procedure
Pre-Season Prepare Procedure	Yes	Secondary Procedure	An essential procedure
Note ¹ 'Normal Bushfire Weather Conditions' represent fire weather that is experienced on a more frequent basis, rather than the less frequent extreme fire weather conditions.			