

Bushfire Management Plan

PROPOSED CHILDCARE CENTRE

Lot 57 Briggs Road, Byford

May 2023



LIMITATIONS STATEMENT

This Bushfire Management Plan ('BMP') has been for a childcare to be established at Lot 57 Briggs Road Byford. The site is located within the Shire of Serpentine Jarrahdale.

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Version Control

Lot 57 Briggs Road Byford			
Version	Date	Author	
V1	28 February 2023	Anthony Rowe	submission
V2	9 May 2023	Anthony Rowe	Revised Figure 3

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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.

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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 assessment of a proposed childcare centre.

Envision Bushfire Protection has not been engaged to assess the compliance of the site and the construction standard of the building in accordance with its planning and building approvals.

The scope of the advice has been to assess the proposal for compliance with the policy measures described in State Planning Policy 3.7.

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 V.1.4.

EXECUTIVE SUMMARY

Preface

This report investigates the suitability of a childcare centre to be established at Lot 57 Briggs Road Byford with the Western Australian Bushfire Protection Guidelines.

The site is located in the Shire of Serpentine Jarrahdale, the decision maker. It is within a declared bushfire prone area and State Planning Policy 3.7 Planning in Bushfire Prone Areas applies.

In accordance with SPP 3.7 the planning authority in determining an application in a declared bushfire prone area must be satisfied the proposal is consistent with the Policy intent, **to preserve life and reduce the impact of bushfire on property and infrastructure.**

State Planning Policy 3.7 and Guidelines for Planning in Bushfire Prone Areas (WAPC, v.1.4 December 2021) identifies a childcare facility to be classed as a 'vulnerable' development. A 'vulnerable' development in addition to the usual assessment information, is required is also to have a Bushfire Emergency Evacuation Plan (BEEP). The Bushfire Emergency Evacuation Plan in turn follows the options identified in the Bushfire Management Plan.

This BMP has been prepared in accordance with SPP 3.7 and Appendix Five in the Guidelines v.1.4 and the Department of Planning Lands and Heritage (DPLH) *BMP Template for a complex development application*; the following summary has followed the structure (heading topics) illustrated in the DPLH template.

1. Proposal details (addressed in Section 1)

The development site is a 2400 m² and part of a larger 2 ha lot (Lot 57 Briggs Road Byford) **(the site)**.

The larger lot (site) is 2 ha, flat and occupied by a single dwelling with gardens, and outbuildings as part of a rural residential land use. The development site is at the western end of the lot and is flat and clear of trees except along the western fence line.

The site is within an area identified as residential (Local Structure Plan) **(Plate 3)**. Under the plan, a public open space is also proposed north of the site, including a drainage channel. It is to be separated from the north boundary of the childcare site by a proposed public road. It is assumed the POS will be vegetated as forest.

The site will also join a public through road at the east boundary which will be followed by residential development. Land south of the boundary will be developed as residential and across Briggs Road (west) will be residential development. Also across Briggs Road and south west of the site is a public purpose reserve. It has been assumed to be developed as forest.

The site has access to a reticulated water supply and a fire hydrant is located in Briggs Road.

2. Environmental considerations (addressed in Section 2)

A review of Landgate ecological data base in accordance with the DPLH template has been undertaken to identify any potential restriction (regulated vegetation) upon the implementation of bushfire protection measures, that may require the modification or removal of vegetation and any planned ecological rehabilitation.

The site does not contain any specifically identified regulated vegetation. It is within a general area identified as habitat for the Carnaby Black Cockatoo.

The proposal and a 122 m Asset Protection Zone will only displace grassland. The existing stand of trees at the south boundary and north west to the carpark can be retained within the Asset Protection Zone standard.

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 assessment is illustrated at Figure 5a. It has assumed an Asset Protection Zone can be created around the childcare building within the site to achieve a BAL not exceeding BAL-19. This is required in the interim until the grassland is replaced by residential development.

When the surrounding land is developed the building will be within a BAL-19 area. The future development is illustrated in figure 5b.

Identification of bushfire hazard issues (addressed in Section 4)

The site is within a Mediterranean climate, with cool, wet winters (June to August) followed by a mild spring (September-November), and hot, dry summers (December to February) leading into autumn (March-May).

The bushfire season is typically from the beginning of December through to the end of March each year.

The site is within an area identified as bushfire prone due to vegetation within large residential lots. This may overestimate the risk in this instance because the presence of buildings and gardens fragments the continuity of bushfire fuels.

The site is also within an area that will be developed for medium density residential purposes. In the interim the BAL affecting the building from the immediate land is predominantly from grassland. It requires the shortest separation (12 m) to achieve BAL-19 at the building.

The proposed subdivision layout has the Childcare adjoining residential development surrounded by residential development. It is separated by 40 m from the public open space (public purpose and park - recreation and conservation) to the north of the site and separated by a road. The PoS is assumed to be developed as forest and a retained bushfire threat in the long term.

The road at the east of the site will provide an opportunity to evacuate into a BAL Low area.

A childcare building under NCC 2019 has no bushfire construction requirement and it is at the applicant's discretion to apply a bushfire construction standard. Notwithstanding the childcare will be located within BAL-19 it is recommended the Childcare Building adopt the construction standards for BAL-29, to provide resistance to a bushfire occurring in the reserve north of the site.

During a bushfire the peak radiant heat, upon which the BAL is determined lasts only a short time, typically 2 minutes, with the heat rapidly decaying after the firefront (peak) has passed.

Notwithstanding BAL-29 is the acceptable construction standard it is a fatal exposure level for humans; 10 kWm² is the maximum short term exposure to evacuate by a vehicle.

In the event of a bushfire the childcare centre should be evacuated, but evacuation will not be able to continue during the peak. Shelter in the building will be required at this time and this is a reason to construct the building to a standard commensurate to the level of bushfire attack.

The BAL-29 construction standard does not account for a direct flame contact. It is important that the grounds are maintained to prevent secondary fires at the site, by the location of flammable objects, that may subject the building to direct flame contact.

Seasonal preparations are described in the Bushfire Emergency Evacuation Plan as a risk treatment, as well as pre-emptive evacuation if there is a fire within 5 km.

4. 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 - requires development avoid areas of extreme Bushfire Hazard level and can achieve BAL-29 at completion.

The site is within an establishing residential built out area, transitioning from rural living and pasture grass. The site is within a predominantly a Moderate Bushfire Hazard Level.

The Childcare will achieve BAL-19 at completion.

The proposal is compliant with Element 1.

Element 2 Siting and Design – requires that a planning application should demonstrate the habitable buildings will not be exposed to a BAL greater than BAL-29.

The development site is within a larger ownership responsible for the management of the land, enabling the APZ separation to be created from classified grassland to achieve BAL-19 at the building. This will be required until the adjoining land is subsequently developed for residential purposes, and roadways, both excluded as a threat by AS3959, s.2.2.3.2(e).

The proposal achieves BAL-19 and is compliant with the acceptable solution A2.1.

It is however recommended the building is constructed to BAL-29 standard.

Element 3 Vehicle Access – requires the site has access to a through road to provide alternate routes of escape and access for fire fighters.

The site is initially accessed from Briggs Road which is a through road.

When the adjoining land is developed the carpark will be accessed from a new through road (unnamed) that will be established at the east boundary to the carpark.

The site has access to a public through road, initially and into the future.

The proposal is compliant with Element 3.

Element 4 Water – requires the availability of water for firefighting purposes.

The proposal will be connected to the reticulated water supply. Public hydrants are located on along Briggs Road within 100 m of the site.

Additional Bushfire Management Strategies (addressed in section 5.2)

Additional Bushfire Management Strategies are provided through the Bushfire Emergency Evacuation Plan following planning preparation, response and recovery.

Existing risk controls, external to control by the applicant, are expected to be maintained. This includes public notification of bushfire, the provision of emergency services for the community, the maintenance of public roads, and the capacity of the reticulated water supply.

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

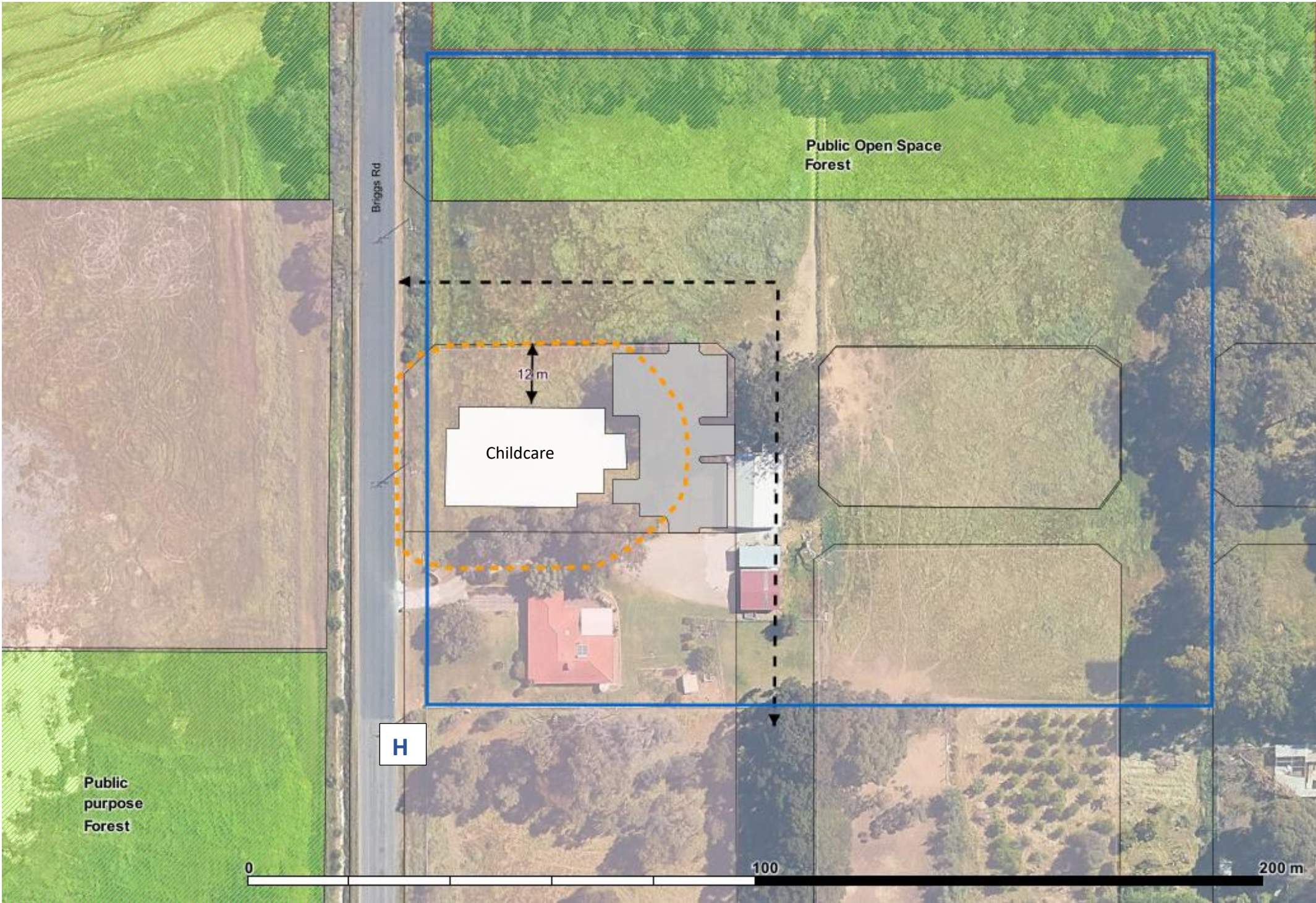
The key features demonstrating compliance with the bushfire protection measures are identified on the *Spatial representation of the bushfire management strategies*.

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

5. Responsibilities for implementation and management of the bushfire measures

The *Responsibilities for Implementation and Management of the Bushfire Measures*, addressed in section 6 of the BMP and summarised in Figure EX1 supersede or are additional to the details included within the development application.






Figure Ex 1 - Spatial representation of the proposed risk management strategies - Lot 57 Briggs Road Byford



Responsibilities for implementation and management of the bushfire measures

1. The childcare building Asset Protection Zone (12 m) is to be maintained in accordance with the Asset Protection Zone standard described in the *Guidelines for Planning in Bushfire Prone Areas v1.4*.
2. The childcare building is to be constructed in accordance with the BAL 29 building construction requirements prescribed in sections 3 and 7 in AS3959:2018
3. In furtherance of any *Building Act 2011* requirement, the Childcare is to be connected to the towns reticulated water, and fire hoses are to be provided at capable of applying water to all external surfaces of the building and up to 10 m around the building.

LEGEND

-  Site Boundary
-  Asset Protection Zone 12 m
-  Future roads
-  Future residential area
-  Hydrant

Site assessment Date: 17 November 2022
 Prepared: Anthony Rowe
 Accreditation Level: BPAD L3
 Accreditation Number: 36690

EMERGENCY EVACUATION DIAGRAM

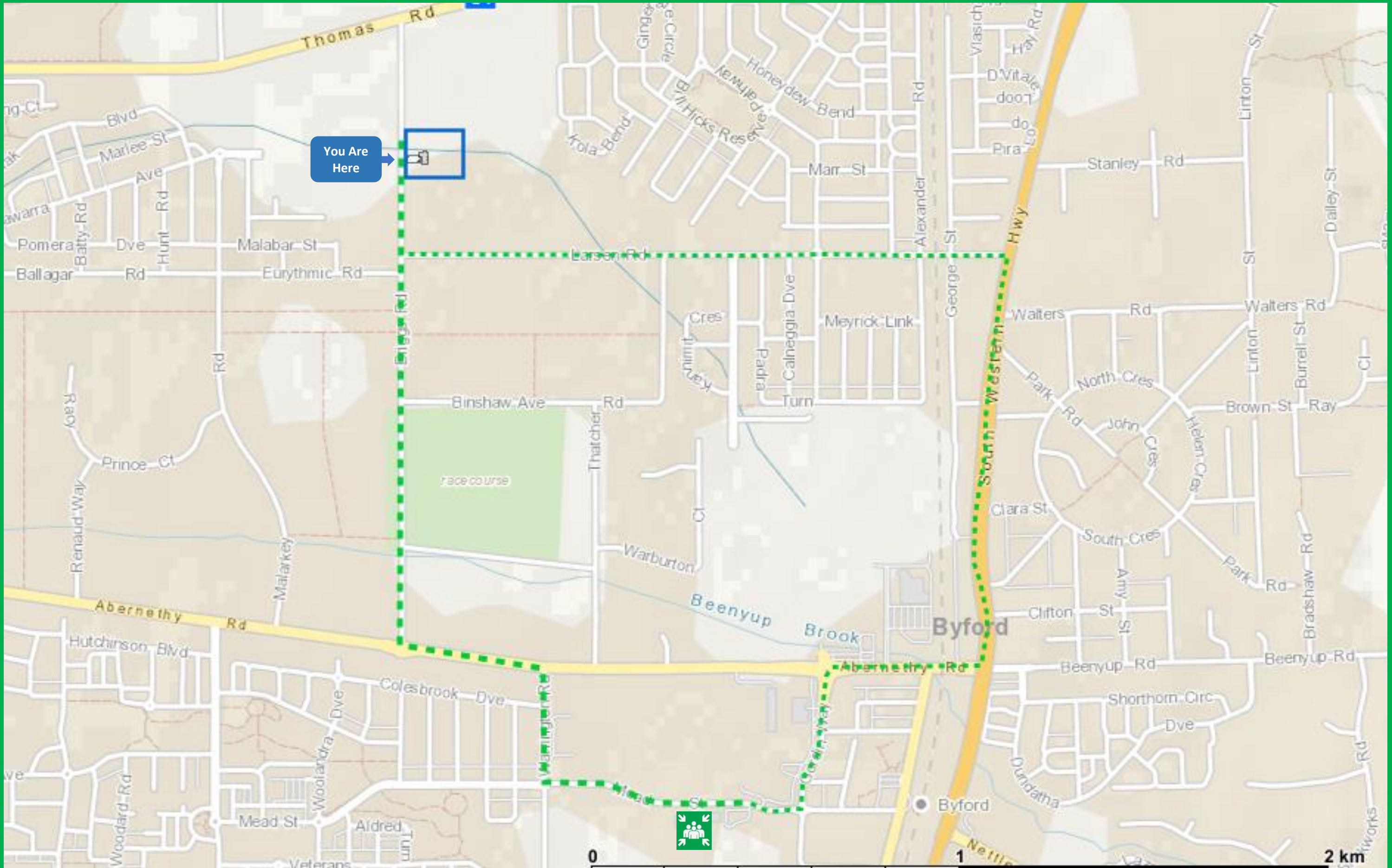


Table of Contents

PROPOSAL DETAILS.....	1
1.1 <i>Introduction.....</i>	<i>1</i>
1.2 <i>Regulatory Compliance Requirements.....</i>	<i>6</i>
2. ENVIRONMENTAL CONSIDERATIONS.....	8
2.1 <i>Native Vegetation – Modification and Clearing.....</i>	<i>8</i>
2.2 <i>Re-vegetation/Landscape Plans.....</i>	<i>10</i>
3. BUSHFIRE ASSESSMENT	11
3.1 <i>Bushfire Attack Level Assessment (Inputs).....</i>	<i>11</i>
4. IDENTIFICATION OF BUSHFIRE HAZARD ISSUES	25
5. BUSHFIRE PROTECTION MEASURES.....	30
5.1 <i>State Planning Policy 3.7 - Planning In Bushfire Prone Areas (SPP 3.7)</i>	<i>30</i>
5.2 <i>Guidelines for Planning in Bushfire Prone Areas Version 1.4 (the Guidelines)</i>	<i>31</i>
5.3 <i>Bushfire Management Strategies.....</i>	<i>37</i>
5.4 <i>Spatial representation of the bushfire management strategies</i>	<i>39</i>
6. RESPONSIBILITIES FOR IMPLEMENTATION AND MANAGEMENT OF THE BUSHFIRE MEASURES	39

ATTACHMENT 1 - Emergency Evacuation Plan

ATTACHMENT 2 - References

PROPOSAL DETAILS

1.1 Introduction

Envision Bushfire Protection has been commissioned to provide bushfire consultancy services, in the preparation of a development proposal compliant with the State Planning Policy 3.7, *Planning in Bushfire Prone Areas*, for a proposal to construct a childcare centre at Lot 57 Briggs Road Byford (Plate 1).

The site is located in the Shire of Serpentine Jarrahdale, which is the decision maker.

The subject land is within a declared bushfire prone area (Plate 2).

In accordance with SPP 3.7 the planning authority in determining an application in a declared bushfire prone area must be satisfied the proposal is consistent with the SPP 3.7 Policy Intent, **to preserve life and reduce the impact of bushfire on property and infrastructure.**

Purpose of this Plan

The purpose of this BMP is to assess the suitability of the proposal and its location for the intended use, to assess the bushfire risk and identify the risk treatments that satisfy the objectives 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.

Site and Proposal Description

Address	Lot 57 Briggs Road Byford			
Local Government Area	Shire of Serpentine Jarrahdale			
Local Planning Scheme Zone	(Draft) Local Planning Scheme 3 – Urban Development Local Structure Plan (see Plate 3)			
Bushfire Season	Shire of Serpentine Jarrahdale 1 December – 12 May (precise dates may vary annually)			
Development proposal	Commercial Building (Plate 4)			
Building class	Class 9b – the construction standard is at the discretion of the applicant NCC 2019, but provisions apply when NCC 2022 becomes operational.			
Site area	Development site 2236 m ²			
Adjoining Land uses	North	East	South	West
Within 150 m	Urban	Woodland	Urban	Urban
Within 2.5 km	Pasture (grassland)	Forest (isolated<5%)	Pasture (grassland) Forest	Urban
Road Access	Briggs Road (Local distributor road)			
Water supply	The site has access to a reticulated water supply. The nearest hydrant is immediate to the site on Briggs Road.			

Tele communications	The site is within the Telstra 4G - 5G network
Emergency services	The nearest fire brigades are Byford Volunteer Bush Fire Brigade, Clara Street Byford (2.6 km) Oakford Volunteer Fire Brigade, 1099 Nicholson Rd, Oakford (8 km)
Minor Development	N/A
Unavoidable development	N/A
Vulnerable Development	Yes – Bushfire Emergency Evacuation Plan provided
High risk land use	N/A

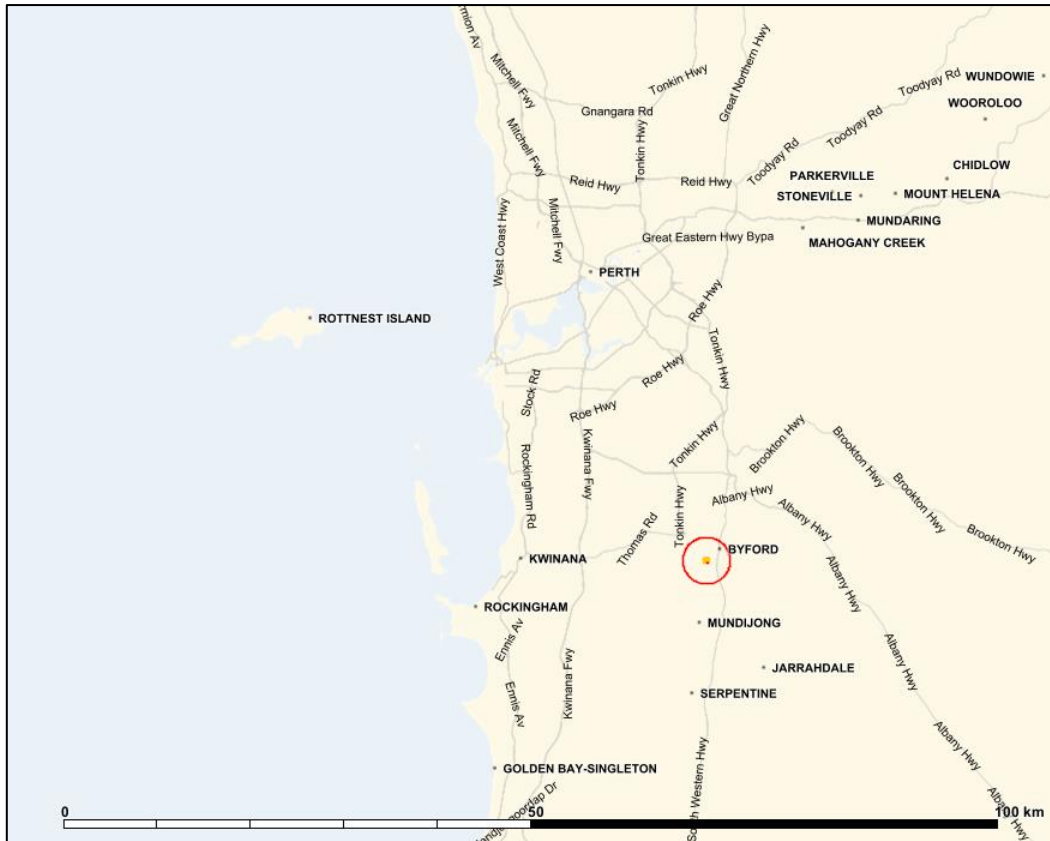


Plate 1: Site in Locality (National Map)



Plate 2: OBRM Bushfire Prone Area (Pink area)

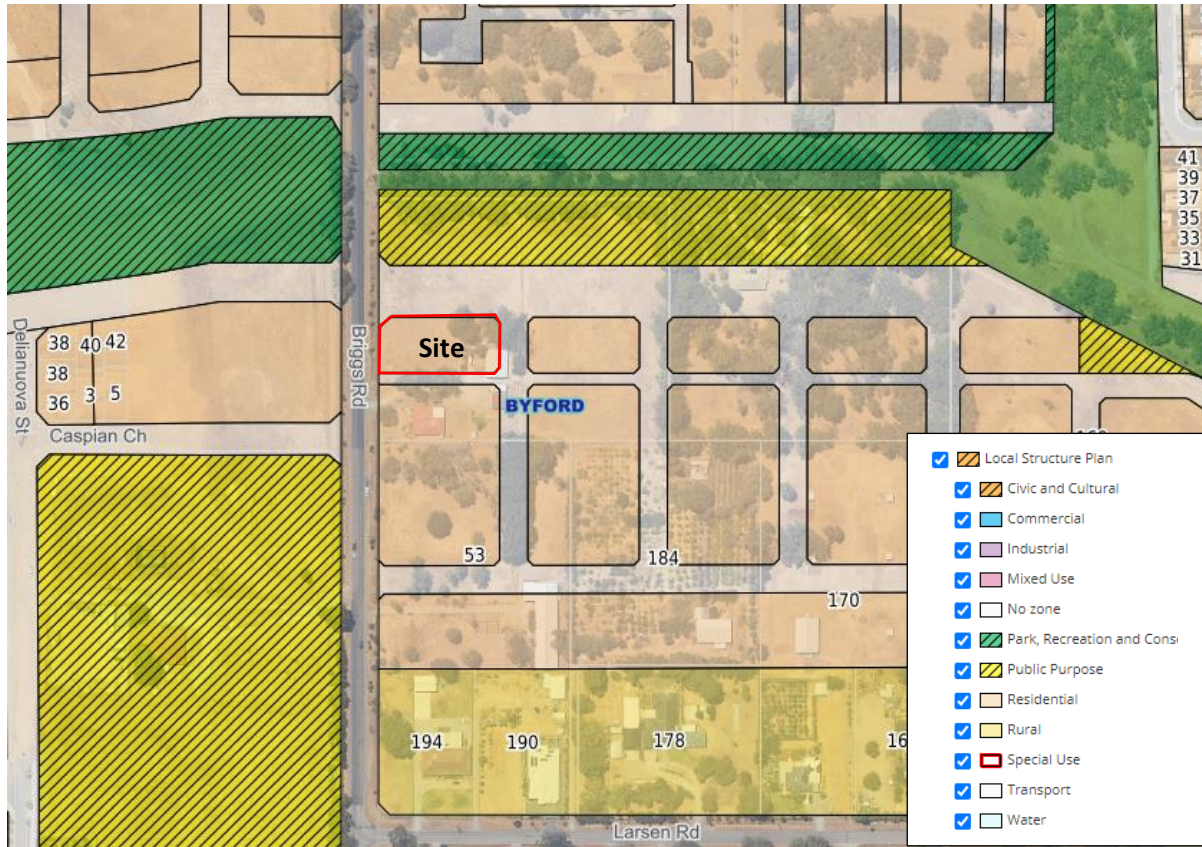


Plate 3: Local Structure Plan

1.2 Regulatory Compliance Requirements

Planning and Development Act 2005 - SPP 3.7

On 7 December 2015, the State Government introduced by Gazette, a state map of Bushfire Prone Areas by order under the *Fire and Emergency Services Act 1998* and introduced development controls in Bushfire Prone Areas through the *Planning and Development Act 2005*. These controls were 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 relevant Policy Objectives of SPP 3.7 are to:

5.1 Avoid any increase in the threat of bushfire to people, property, and infrastructure. The preservation of life and the management of bushfire impact are paramount. (Matters that may increase the threat of a bushfire include increasing available fuels or increasing the likelihood of ignition).

5.2 Reduce vulnerability to bushfire through the identification and consideration of bushfire risks in decision-making at all stages of the planning and development process. (Risk is the combination of likelihood and consequence, and reducing vulnerability is the identification of mitigation measures: see Bushfire Protection Criteria and Additional Bushfire Management Strategies).

Applicable clause from SPP 3.7, include:

SPP 6.2: A development application within a bushfire prone area has or will, on completion, have a moderate BHL and/or where BAL-12.5 to BAL-29 applies, may be considered for approval. *In this instance the proposal will not exceed BAL 29 refer to Figure 5a.*

SPP 6.5: A development application in a bushfire protection area is to be accompanied by an assessment against the bushfire protection criteria contained within the Guidelines, demonstrating compliance within the boundary of the development. *The proposed development requires no imposition beyond its site.*

SPP 6.7: A development that will result in the introduction or intensification of development or land use in an area that has or will, on completion, have an extreme BHL and/or BAL-40 or BAL-FZ will not be supported. *The proposal will not exceed BAL 29 refer to Figure 5a.*

SPP 6.10: The decision-maker may impose a 'notice on title' advising that the site is located in a bushfire prone area and is subject to a Bushfire Management Plan. *Routinely imposed as a condition of planning approval.*

SPP 6.11: Precautionary Principle if a landowner/proponent cannot satisfy the performance principles of the relevant policy measures (intent) through either the acceptable solutions outlined in the Guidelines, or through the alternative solutions (Performance Principle) the application may not be approved. *The proposal achieves compliance with the Acceptable solutions.*

Vulnerable Land Uses (Guidelines for Planning in Bushfire Prone Areas cl.5.5.1)

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

An additional requirement provided by SPP 3.7 and its Guidelines, is that a proposal classified as a 'vulnerable development' is to be accompanied by a (Bushfire) Emergency Evacuation Plan,

comprising the details described at cl.5.5.4 of the Guidelines V1.4 and in accordance with the DPLH A Guide to developing a Bushfire Emergency Evacuation Plan 2019.

Building Act 2011

The proposal is a Class 9b building for the purpose of the *Building Act 2011*. The Building Act 2011, utilising the National Construction Code 2019 applies AS 3959:2018 construction requirements only upon class 1, 2, 3, and 10a buildings. *The construction requirements in AS 3959:2018 are often exceeded by the construction requirement for other classes of buildings. In instances where it does not, then a higher standard can be volunteered.*

National Construction Code 2022, to become operational in May 2023 has construction requirements 'to the degree necessary' applicable to Class 9 buildings, including Childcare buildings, in a bushfire prone area the degree necessary is attributable to the requirement for the building to provide shelter in a bushfire.

In this instance the proposal does not advocate shelter, as the primary response, other than to wait the passing of the peak flaming period.

Bush Fires Act 1954

Section 33 of the *Bush Fires Act 1954* recognises the responsibility of all landowners to prevent the spread of bushfire. The Local Government issues a Firebreak Notice annually. It can also issue a notice upon the landowner, at any time, to act as and when specified in the notice with respect to anything (stored materials) which in the opinion of the local government's authorised officer, is or is likely to be, conducive to the outbreak of a bushfire, or the spread or extension of a bushfire.

An owner who fails to comply with a notice is guilty of an offence (Penalty: \$5,000). The local government may in addition carry out the required works of the notice and recover the costs incurred by application to a Court.

2. ENVIRONMENTAL CONSIDERATIONS

2.1 Native Vegetation – Modification and Clearing

The protection or conservation of certain vegetation may restrict the ability to establish the Asset Protection Zone as required to achieve compliance with the Acceptable Solutions. Approval to modify or remove vegetation may be required under separate legislation (identified below).

The modification of regulated vegetation may be restricted to the extent required to achieve BAL-29. Where removal of regulated vegetation is not authorised an alternate position on site may be required, or a high a construction standard commensurate to the distance available may be required.

In addition to the regulation of native vegetation, Local government may have additional policies, including within their Planning Scheme that would restrict the removal of native vegetation.

This BMP does not affect the independent considerations made under other legislation, or parts of the local Planning Scheme, regulating the modification and removal of native vegetation.

Regulated Vegetation

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

It is an offense 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 *Bush Fires 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.

(WA) Biodiversity Conservation Act 2016 and Bio-diversity Conservation Regulations 2018

The *Biodiversity Conservation Act, 2016*, replaces the *Wildlife Conservation Act, 1950*, and the *Sandalwood Act, 1929*, it became operational with the *Bio-diversity Conservation Regulations 2018*, on 1 January 2019.

The Act provides for listing species, threatened ecological communities (TECs), key threatening processes, and critical habitats. It introduces criteria for listing species 'endangered', 'critically endangered' or 'vulnerable,' to align with the Environment Conservation and Biodiversity Conservation Act 1999 (Cth).

The *Biodiversity Conservation Act 2016* recognises that activities approved under the *Environment Protection Act 1986* do not require further approval include clearing of native vegetation that is either exempt or done under the authority of a clearing permit or done in accordance with an implementation decision under Part IV of the *Environment Protection Act 1986*.

The proposal will not affect any vegetation regulated by the above Acts.

Commonwealth Environment Protection Biodiversity Conservation Act 1999 (EPBC)

The Commonwealth Environment Protection Biodiversity Conservation Act 1999 provides for the protection of matters of national environmental significance. National environment law does not generally regulate fire prevention measures taken by state and territory governments, but no specific exemptions are provided.

Department of Lands and Heritage (DPLH) BMP template complex

The Department of Lands and Heritage BMP template complex list the publicly available datasets available from the Landgate SLIP platform. It is provided as a guide. The publicly available datasets are not comprehensive and for some data sets are available only at a general scale. The BMP is not intended as a 'one stop shop' and it does not obviate the need for the owner to apply for authorisation under other legislation.

Table 1: Ecological database assessment.

Is the land affected by:	Yes/No/NA	If yes - describe
Conservation Wetland or buffer (DBCA-019 DBCA-017)	No	
RAMSAR Wetland (DBCA-010)	No	
Threatened and Priority Flora (DBCA-036)	No	
Threatened and Priority Fauna (DBCA-037)	Nearby	Potential Carnaby Cockatoo Habitat
Threatened Ecological Communities (DBCA-038)	No	
Bush Forever (COP-071)	No	
Environmentally Sensitive Area (DWER-046)	No	
Regionally Significant Natural Areas (DWER-070)	No	
Conservation Covenant (DPIRD-023)	N/A	
Does the proposal require the removal of restricted vegetation?		NO

No clearing of regulated vegetation is required, the proposal will not displace habitat for the Carnaby Black Cockatoo.

The proposal imposes no impact upon classified vegetation, either in the establishment of an Asset Protection Zone or by an increased expectation of fuel management on neighbouring land.

2.2 Re-vegetation/Landscape Plans

The Asset Protection Zone will be established 8 m from the childcare building, to provide a separation from adjoining grassland until the grassland is displaced by roads and residential development (Low threat AS3959:2018, s.2.2.3.2 (e)).

It is anticipated the Public Open Space and Public Purpose areas, within 100 m of the site may be revegetated as forest. The BAL has been assessed on the revegetation assumption and it demonstrates the future BAL at the childcare will be BAL - 19.

3. BUSHFIRE ASSESSMENT

3.1 Bushfire Attack Level Assessment (Inputs)

The following assessment has applied the methodologies described in AS 3959:2018, the Guidelines, and has used the Fire Protection Association Australia accredited practitioner methodology for the preparation of Bushfire Attack Level (BAL) assessments.

All vegetation within 150 m (context) of the subject building has been classified following Clause 2.2.3 (AS 3959 -2018) to determine the predominant vegetation affecting the behaviour at the locality. The Bushfire Attack Level is determined by the **predominant** vegetation within 100 m of the external face from a habitable building.

The classifications of vegetation used in AS 3959:2018 are based on foliage cover, measured as a percentage of a hectare and by the fuel (vegetation) height.

Foliage cover: *The portion of the ground that would be shaded by foliage when the sun is shining directly overhead, expressed as a percentage for each stratum or identifiable layer of vegetation.*

AS 3959:2018

Layer/ Stratum	Description	Hazard
Bark	Tight/fine – course/ribbon	Spotting and ember attack potential associated with forest
Canopy	Trees taller than 6 m (forest)	Influences the flame height
Elevated fuel	Trees and Shrubs up to 6 m	Influences the flame height
Near surface	Grasses and shrubs taller than 100 mm and up to 2 m	Influences the rate of spread and canopy ignition
Surface	On ground material, leaves, twigs, bark	Influences the rate of spread

From CFA (Vic) Overall fuel assessment guide 2010

AS 3959:2018 describes six categories of Bushfire Attack Level (BAL): BAL-LOW, BAL-12.5, BAL-19, BAL-29, BAL-40, and BAL-FZ. In addition, BAL-FZ describes only performance solutions where the separation from classified vegetation (on completion) is less than 10 m. The BAL level is used for determining the siting of development (to be less than BAL-40) and in turn the construction standard that is equivalent to the BAL at the proposed building location.

This assessment has followed the guidance of AS 3959:2018. This includes:

- A recognition of excluded vegetation types described at cl.2.2.3.2 (e) and (f), but the underlying vegetation should still be classed e.g., an orchard may be excluded but not the grassland within it.
- A separate plot is applied if there is a variation in the slope greater than 5.0°
- For various vegetation classes a representation that is less than 10%, does not constitute the predominant class. Foliage cover referred to in AS 3959:2018 for various classes is based on the foliage cover for that class as a percentage of a ha. (shadow cast is not representative of foliage cover).
- The measurement point and the most influential vegetation class (presenting the highest BAL at the building) is used for the determination of the BAL at the building (Figure 2.2 AS 3959:2018).
- Consideration of the predominant vegetation is to consider the likelihood of regeneration.
- Orchards, and single tree rows (planted in a row less than 10 m wide) is determined by the underlying near surface fuel.

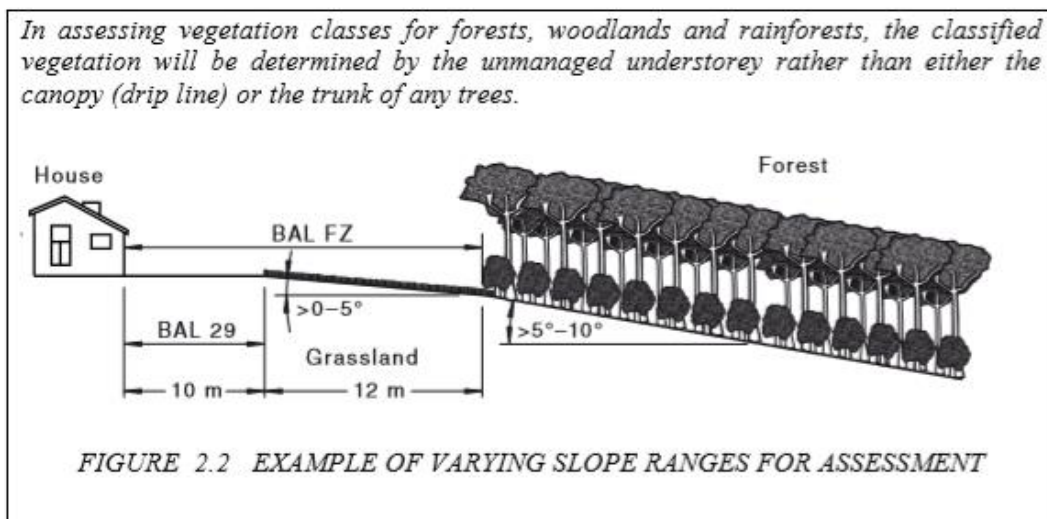


Plate 5: Effective Slope and measurement taken from AS 3959:2018

Effective slope under each vegetation plot was assessed in accordance with the methodology detailed in AS 3959:2018 Construction of buildings in bushfire prone areas (AS 3959) (Standards Australia, 2018 Bushfire Fuels). Slope data was measured on site and cross referenced with Landgate elevation data.

Photo evidence Site Assessment & Site Plans

The assessment of this site / development was undertaken on 17 November 2022 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 (future roads shown)

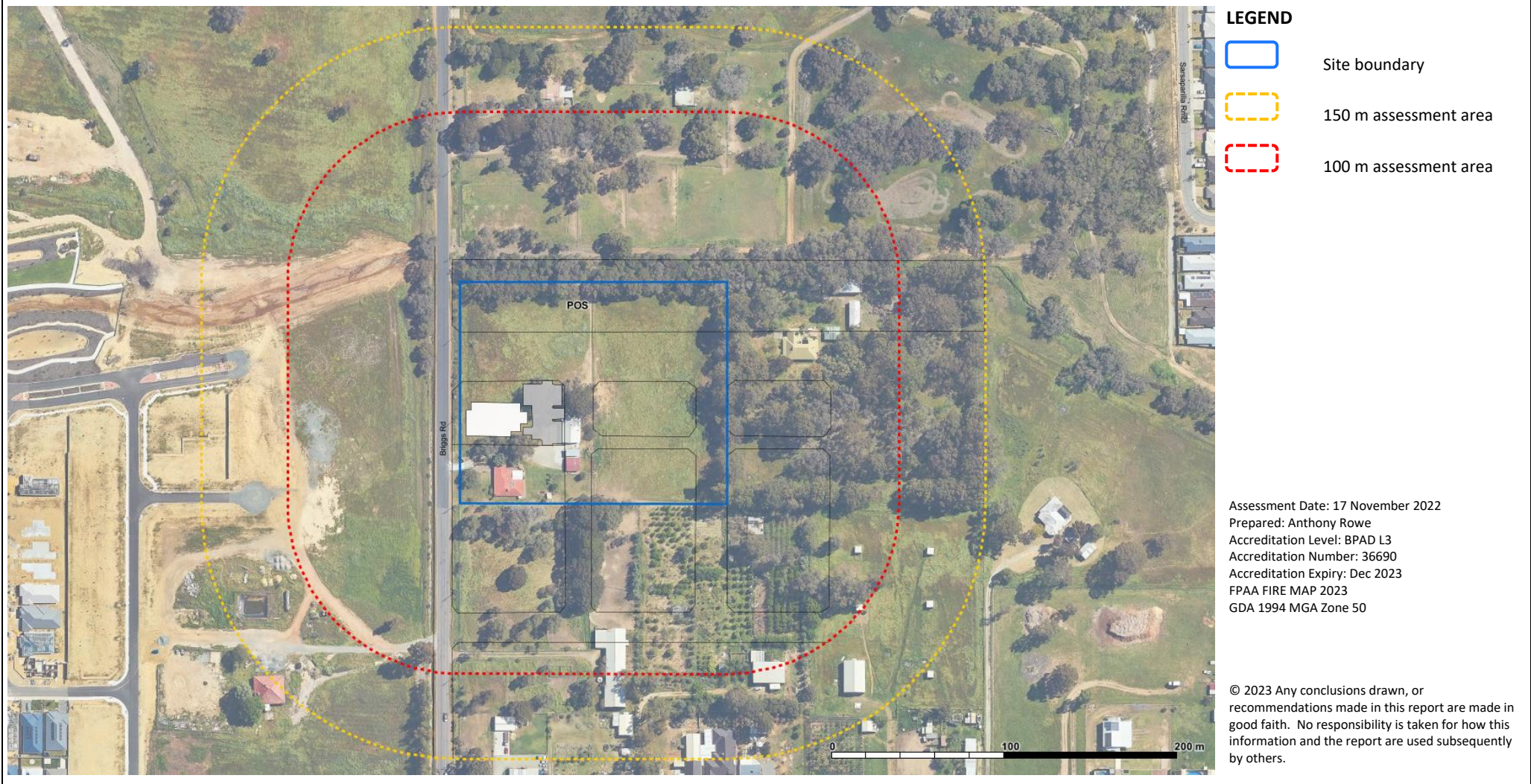


Figure 2: Topography (future road shown)

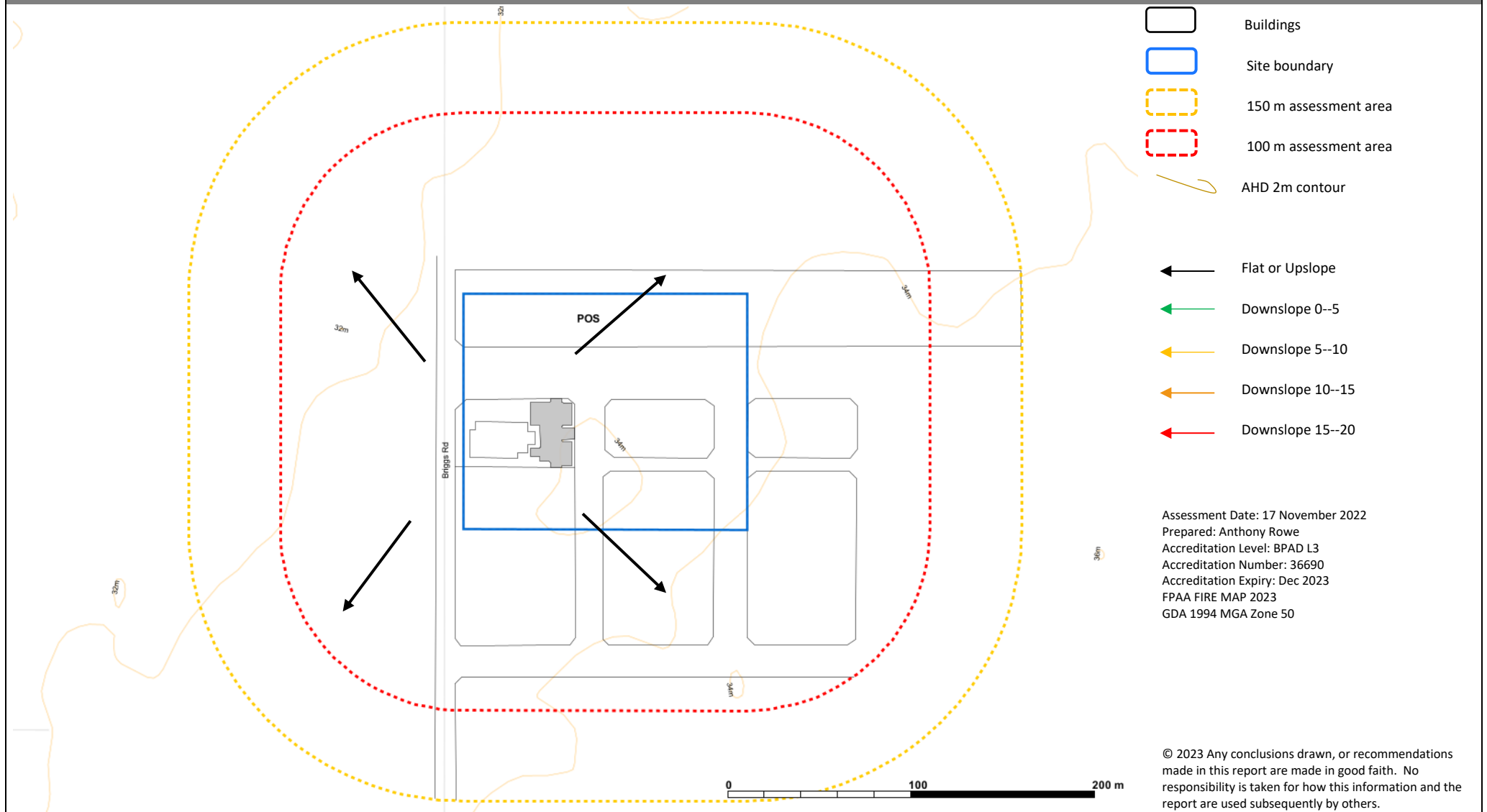
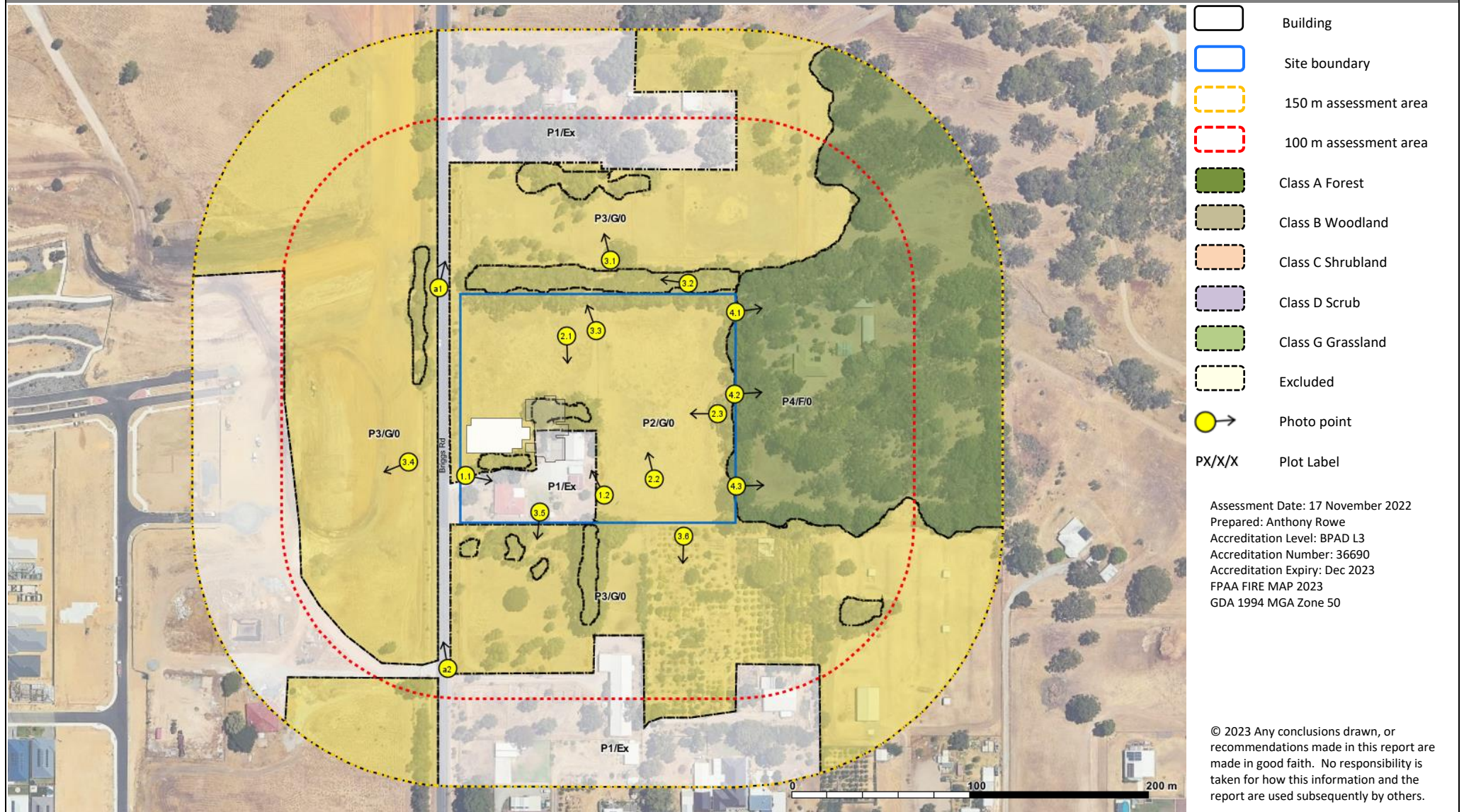


Figure 3: Vegetation Classification

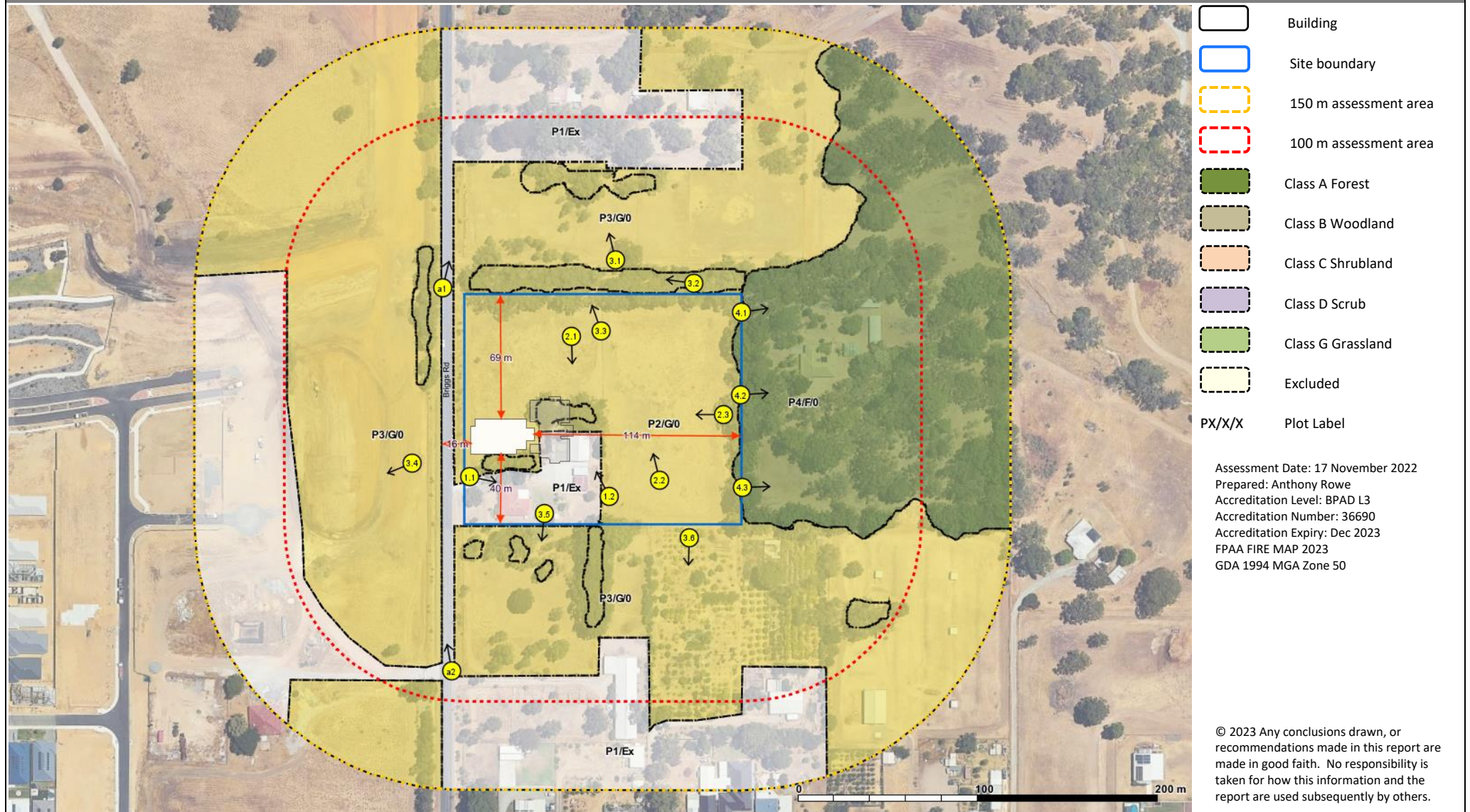


- Building
- Site boundary
- 150 m assessment area
- 100 m assessment area
- Class A Forest
- Class B Woodland
- Class C Shrubland
- Class D Scrub
- Class G Grassland
- Excluded
- Photo point
- Plot Label

Assessment Date: 17 November 2022
 Prepared: Anthony Rowe
 Accreditation Level: BPAD L3
 Accreditation Number: 36690
 Accreditation Expiry: Dec 2023
 FPAAs FIRE MAP 2023
 GDA 1994 MGA Zone 50





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Figure 4: Vegetation Classification – distance to classified vegetation



PLOT:1				
Vegetation Classification		Slope		
Excludable - 2.2.3.2(f) Low Threat Vegetation		Flat		
Observation/Justification for classification				
Fuel Hazard	Surface	Near surface	Elevated	Bark
Low	✓	✓	✓	✓
Moderate				
High				
Very High				
Extreme				
Vegetation Description (AS 3959)				
Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops.				
Post development				
Photo 1.1 – existing dwelling		Photo 1.2 – existing buildings		

PLOT: 2				
Vegetation Classification		Slope		
Class G Grassland – Tussock grassland G-22		Flat		
Observation/Justification for classification				
Fuel Hazard	Surface	Near surface	Elevated	Bark
Low		✓	✓	✓
Moderate				
High	✓			
Very High				
Extreme				
Vegetation Description (AS 3959)				
All forms (except tussock moorlands) including situations with shrubs and trees if the overstorey foliage cover is less than 10%. Includes pasture and cropland. NOTE: Grassland managed in a minimal fuel condition and non-curing cropland is regarded as low threat vegetation for the purposes of Clause 2.2.3.2.				
Post development				
Grassland at the development site to be displaced by the childcare centre and residential lots				
Photo 2.1 Grassland in foreground - childcare location view from north		Photo 2.2 Grassland in foreground – future residential east of childcare - view from south		
Photo 2.3 Grassland in foreground - childcare location view from east				

PLOT:3				
Vegetation Classification		Slope		
Class G Grassland – Tussock grassland G-22		Flat		
Observation/Justification for classification				
Fuel Hazard	Surface	Near surface	Elevated	Bark
Low		✓	✓	✓
Moderate				
High	✓			
Very High				
Extreme				
Vegetation Description (AS 3959)				
All forms (except tussock moorlands) including situations with shrubs and trees if the overstorey foliage cover is less than 10%. Includes pasture and cropland. NOTE: Grassland managed in a minimal fuel condition and non-curing cropland is regarded as low threat vegetation for the purposes of Clause 2.2.3.2.				
Post development				
Grassland outside of the development site; land zoned for urban development				
				
Photo 3.1 Grassland future residential north of PoS		Photo 3.2 future PoS area (public purpose) including the drain, to be in forest POS.		
				
Photo 3.3 view north to PoS, including the drain (photo 3.2) to be in forest POS. .		Photo 3.4 grassland west of Childcare across Briggs Road, future residential		

PLOT:3				
Vegetation Classification		Slope		
Class G Grassland – Closed tussock grassland G-21		Flat		
Observation/Justification for classification				
Fuel Hazard	Surface	Near surface	Elevated	Bark
Low		✓	✓	✓
Moderate				
High	✓			
Very High				
Extreme				
Vegetation Description (AS 3959)				
All forms (except tussock moorlands) including situations with shrubs and trees if the overstorey foliage cover is less than 10%. Includes pasture and cropland. NOTE: Grassland managed in a minimal fuel condition and non-curing cropland is regarded as low threat vegetation for the purposes of Clause 2.2.3.2.				
Post development				
Grassland on lot zoned for rural living outside of the development site.				
<p>Photo 3.5 grassland south of the site (windrow (excluded) shown within grassland)</p>		<p>Photo 3.6 grassland under orchard south of the site. Orchard trees are excluded</p>		

PLOT:4				
Vegetation Classification		Slope		
Class A Forest - Open forest A-03		Flat		
Observation/Justification for classification				
Fuel Hazard	Surface	Near surface	Elevated	Bark
Low				
Moderate	✓			✓
High		✓		
Very High			✓	
Extreme				
Vegetation Description (AS 3959)				
Trees up to 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				
Forest on land zoned urban development east of the development site				
Photo 4.1 retained within PoS		Photo 4.2 future residential		
Photo 4.3 future residential				

POTENTIAL BUSHFIRE IMPACT - Outputs

In accordance with SPP 3.7, a BAL Contour Map 5a has been prepared to illustrate the potential radiant heat impacts and associated BAL ratings for the facility.

Table: 2.1

Plot no.	Vegetation Classification	Effective slope	Separation	Present BAL	Separation at completion	BAL at completion
1	Excluded	Flat/Upslope	0 m	BAL - Low	0	BAL Low
2	Grassland	Flat/Upslope*	0 m	BAL - FZ	12 m	BAL 29
3	Grassland	Flat/Upslope	16 m	BAL - 19	16 m	BAL 19
4	Forest	Flat/Upslope	114 m	BAL – Low	114 m	BAL Low

An APZ of 12 m is proposed around the childcare building, consistent with the future subdivision boundary.

The APZ can be established within the existing lot, requiring grass maintained at less than 100 mm around the childcare building (illustrated in figure 5a).

The future BAL when the adjoining land is developed in accordance with the approved structure plan is BAL – 19 (illustrated in figure 5b).

Figure 5a: BAL Contour

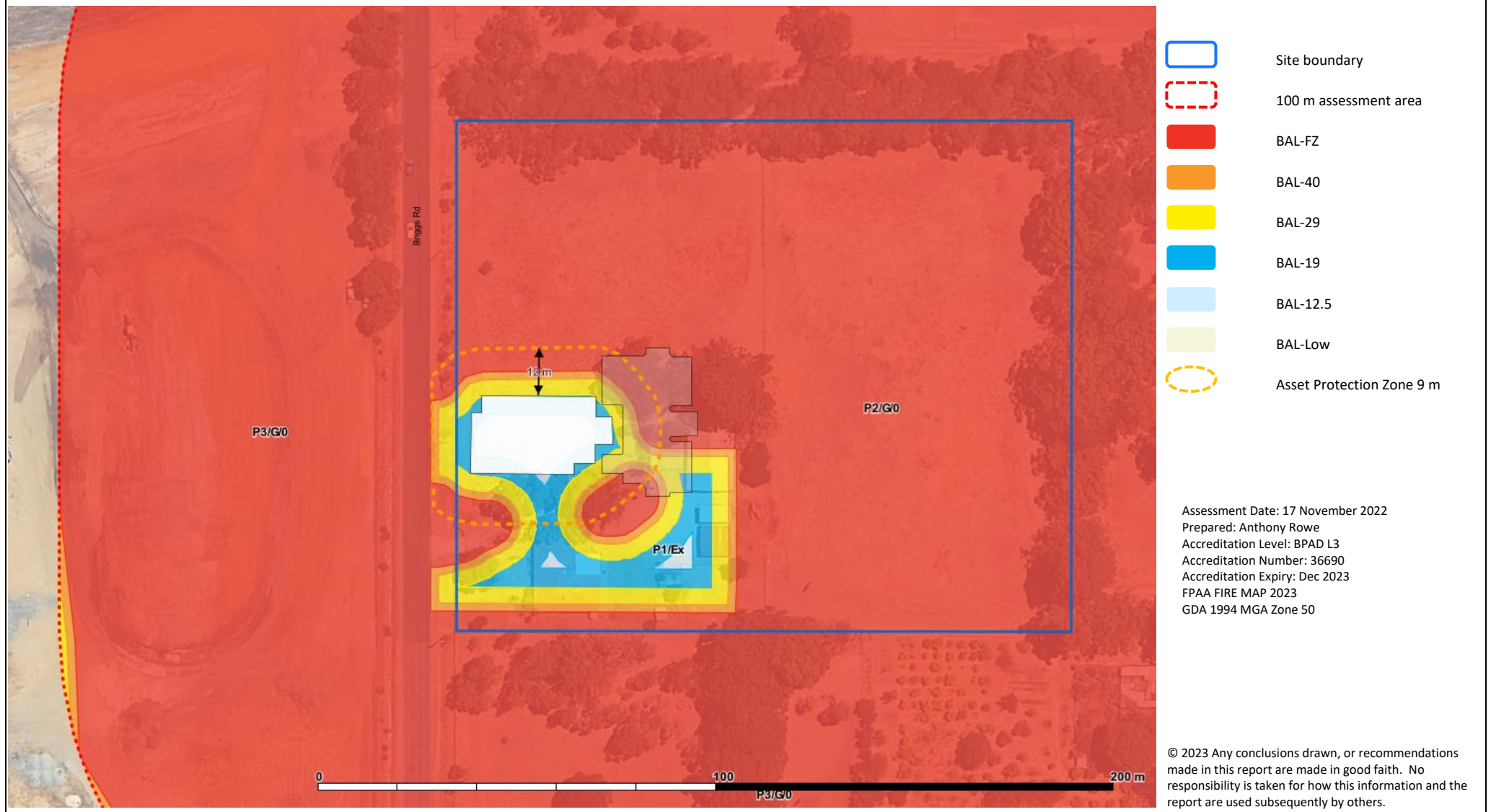
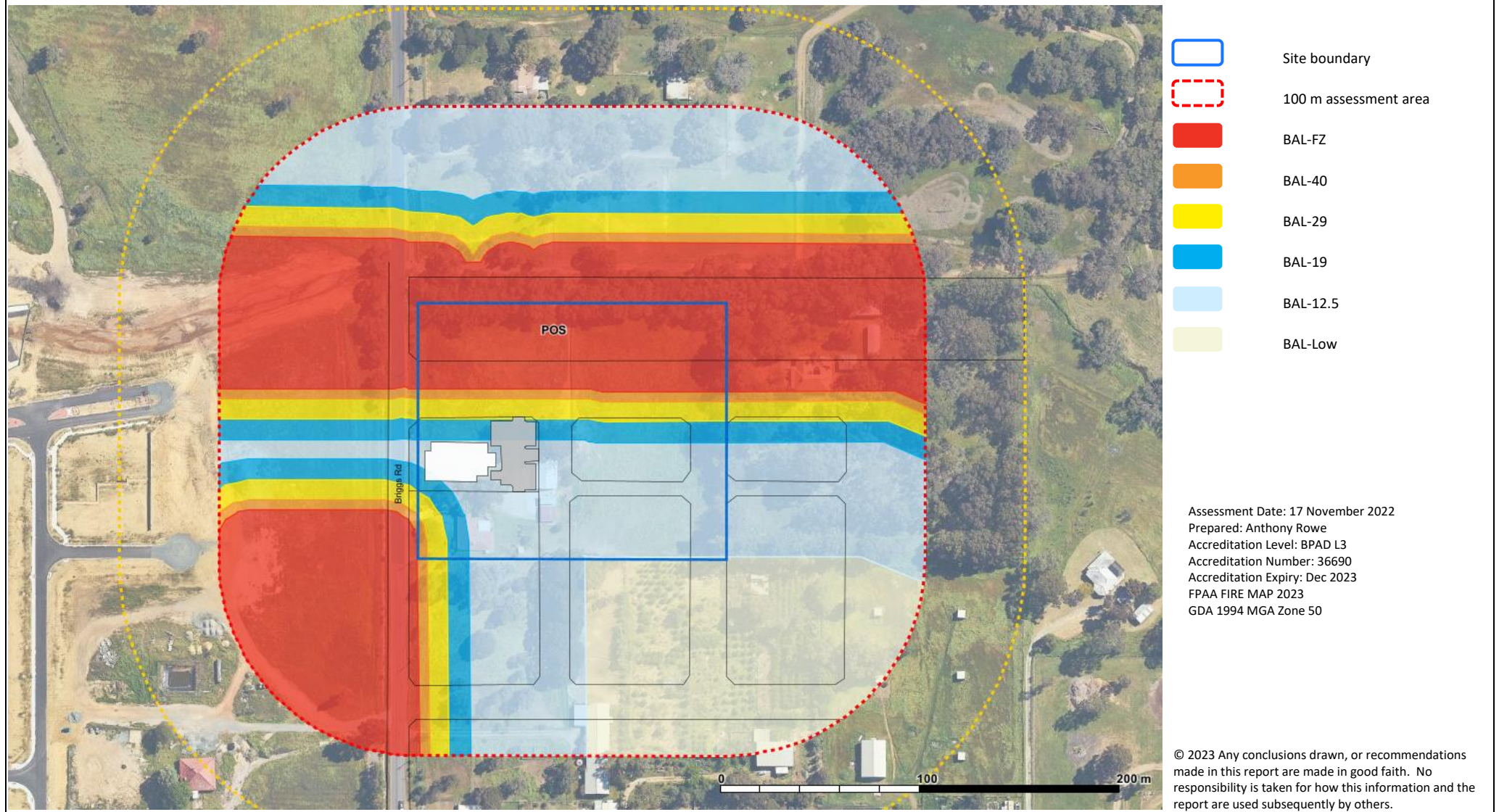


Figure 5b: BAL Contour - future development



4. IDENTIFICATION OF BUSHFIRE HAZARD ISSUES

Bushfire Behaviour

Sustainable fire combustion depends upon the availability of fuel, oxygen, and heat. Removal of any one of the three aspects will extinguish or not sustain a fire. Fuel management, the management of vegetation, is the most practical means of control.

Bushfire behaviour, as it increases in intensity and speed of travel, can exceed human control measures and when this occurs the risk increases to humans and property. Bushfire behaviour is a result of climate, topography, and the availability of bushfire fuel (vegetation).

- Climate (drought and season) & weather (temperature, humidity, wind, atmospheric instability).

Wind

Bushfires are influenced by the wind direction and the speed. The wind direction generally determines the direction of the fire and wind speed, along with ground slope, generally determines the speed a fire will travel over ground. As wind strength increases it increases the availability of oxygen allowing the fire intensity to increase.

Atmospheric conditions determine the potential for the uplift of embers and particles that can be distributed by the prevailing wind direction well ahead of the fire, up to 9 km, to create spot fires that can advance the location of the fire front.

Fire Danger Index FDI

FDI is an indicator of potential fire intensity and behaviour based upon weather conditions; temperature, humidity, and wind speed, together with climate measures, drought factor representing the dryness of the ground fuels.

The FDI is an indicator of the potential for house loss and fatalities.

The FDI is used as a basis for determining the required design performance of a building.

- Topography (slope of the ground, aspect) – fire travels faster uphill, and in some conditions may determine the direction of the fire. The landform can also channel and increase the windspeed at a locality and create turbulence. It is measured as 0.0° or in downslope increments of 5.0°.
- Vegetation (horizontal and vertical structure, flammability, mass, and availability). Measured as a vegetation classification, or an exclusion, in AS 3959 (Method 1). The arrangement of fuel has a greater effect upon the intensity of a fire than just its mass; its exposure to oxygen is referred to as its availability in a bushfire.

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 (GFDI) than a forest canopy fire, but a forest canopy fire can eject a higher level of embers and also eject them over a greater distance, up to 5 km.

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 involve the crown or sustain a fire.

Fuel reduction initiatives such as slashing and controlled burns are intended to reduce the fuel availability to a level where the intensity of the fire remains controllable.

Climate

The nearest weather station to the site is at Jandakot Aerodrome (23 km north west of the site). The site is within an area described as having a Mediterranean climate of dry summers and mild, wet winters. The majority of rainfall is between May and September. The prohibited burning period is from mid-December to mid-March.

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 either side of this period.

Severe bushfire conditions FDI 50+, occur mostly between January and March. Extreme (FDI 50) and Catastrophic (FDI 75+) conditions occur mostly in the afternoon and typically with south-south easterly winds (BoM Cape Naturaliste). A bushfire can however come from any direction.

Bushfires generally travel in the direction of the prevailing wind. The direction of the prevailing wind conditions can affect the options for evacuation and anticipated fire intensity depending upon the slope and fuel.

The wind roses below (Plates 6) for February (averaged) recorded at 9 am and 3 pm, illustrate the winds are strongest and most frequent from the south-east and east in the morning. Morning wind directions are predominantly from the southeast with a higher easterly component. Afternoon winds are generally stronger and of higher frequency from the south, with a higher westerly component.

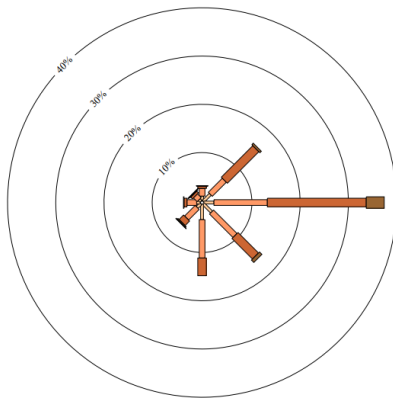
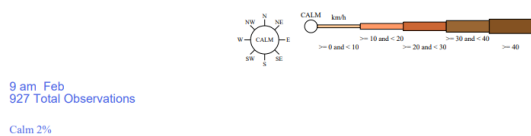


Plate 6a: BoM weather data, prevailing wind directions as at 9 am

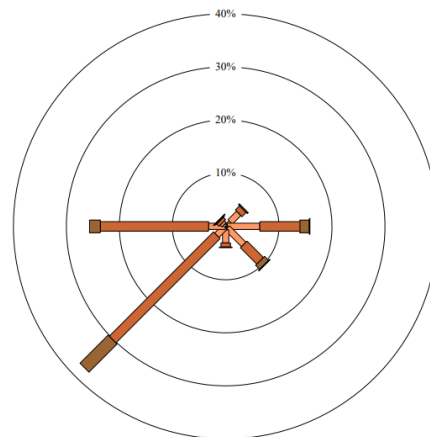
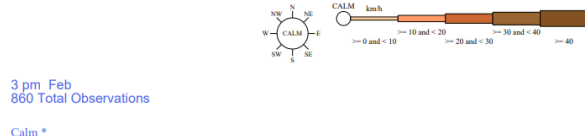


Plate 6b: BoM weather data, prevailing wind directions as at 3 pm

Site Context

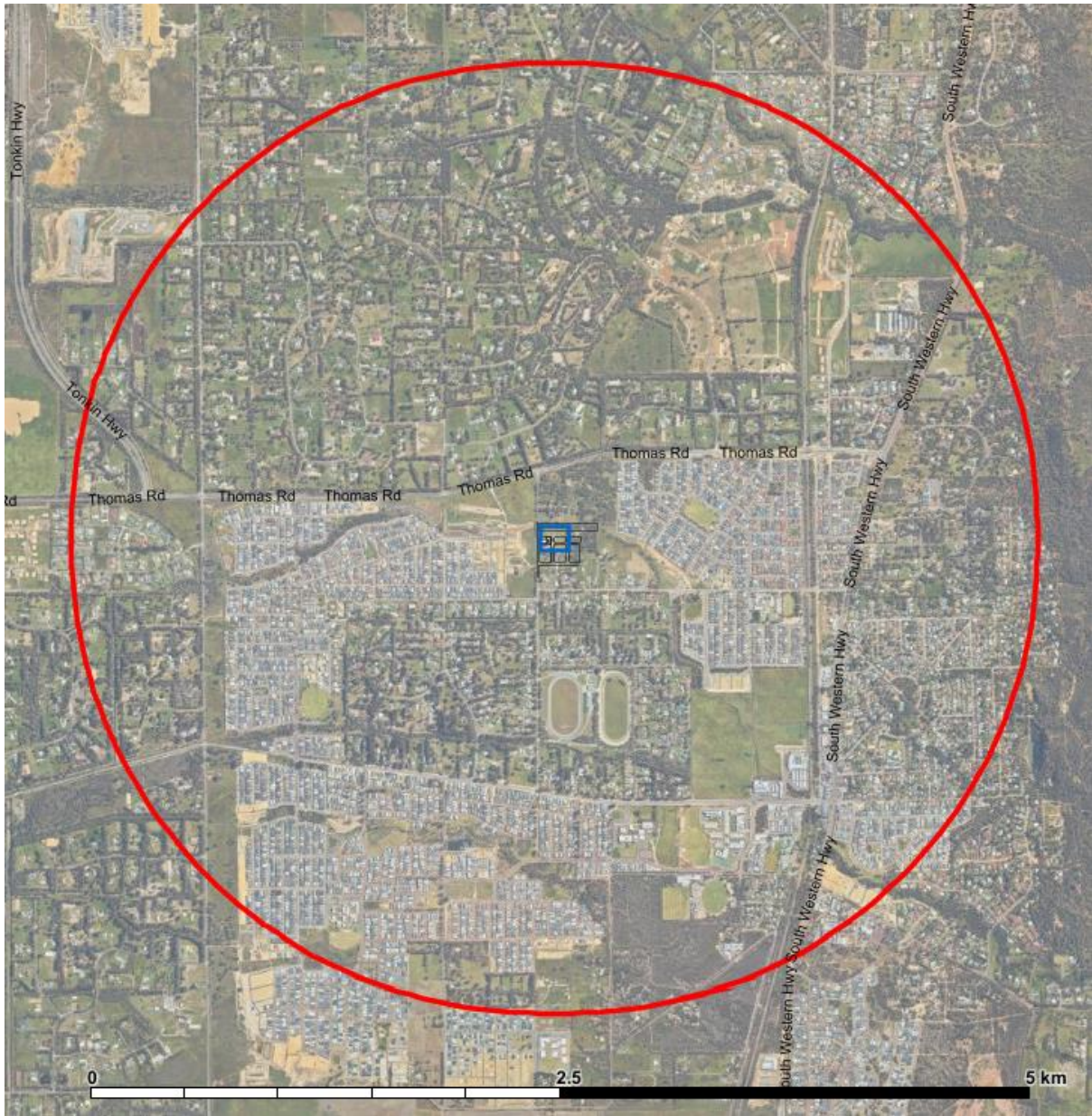


Plate 7: Illustrates the surrounding area within 2.5 km is predominantly urban

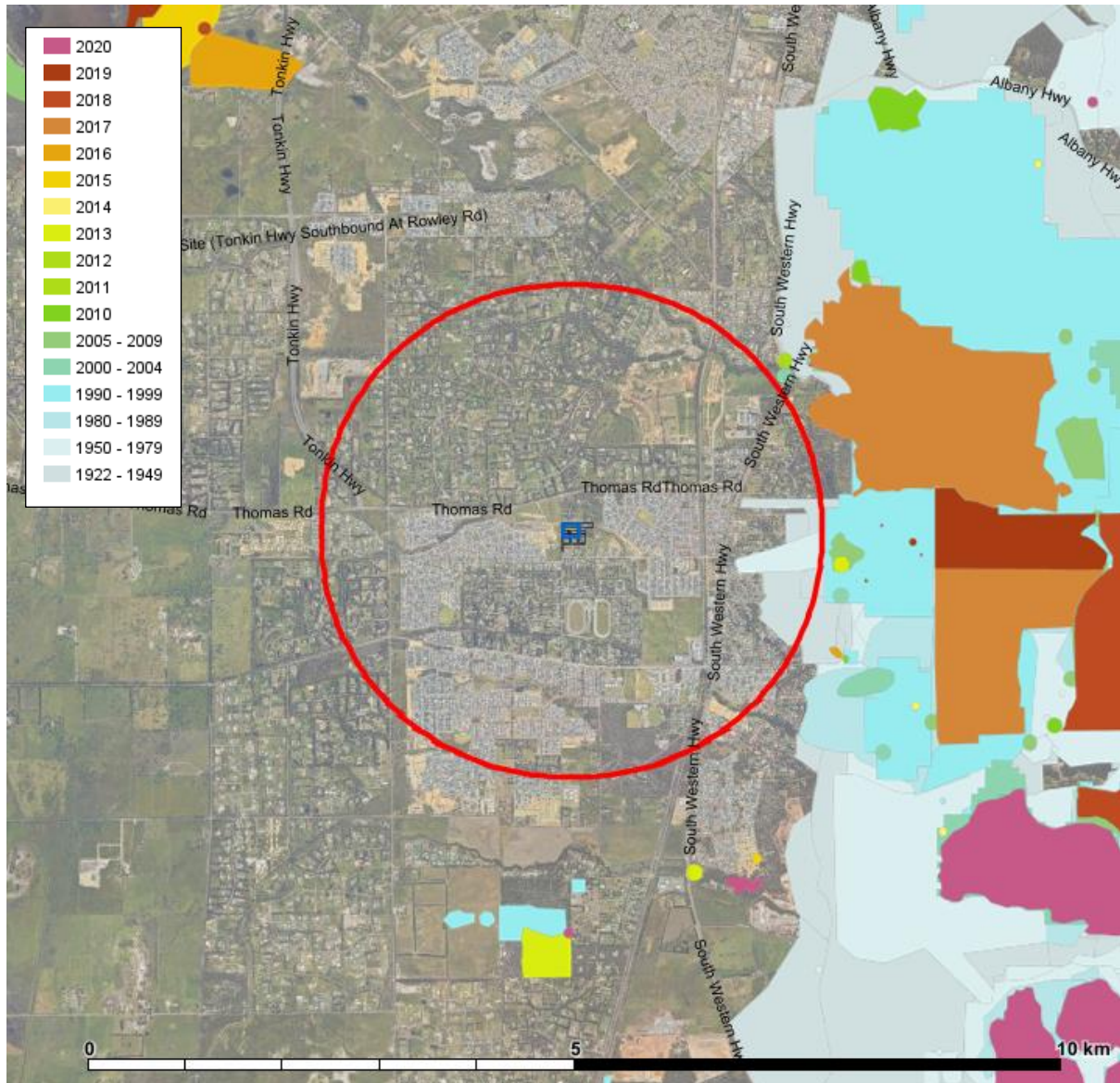


Plate 8: DBCA (indicative) landscape fire history

Plate 7; when combined with Plates 6, suggests a fire that is most likely to affect the childcare from grassland, east and southeast (morning) and (from the southwest) in the afternoon. The site is primarily within a grassland area that is intended for medium density residential development.

The fire history suggests the site is unlikely to be directly affected by a bushfire but there has been activity, both managed fuel reduction and bushfire east of the site in the Darling Scarp and Darling Ranges.

Until the development occurs the site is within a contiguous extent of grassland requiring an Asset Protection Zone to be established around the building to avoid direct flame contact. The Childcare is within a single holding until the adjoining residential development, site works and roads are made. Until then an Asset Protection Zone 12 m from the childcare can be established (BAL-19).

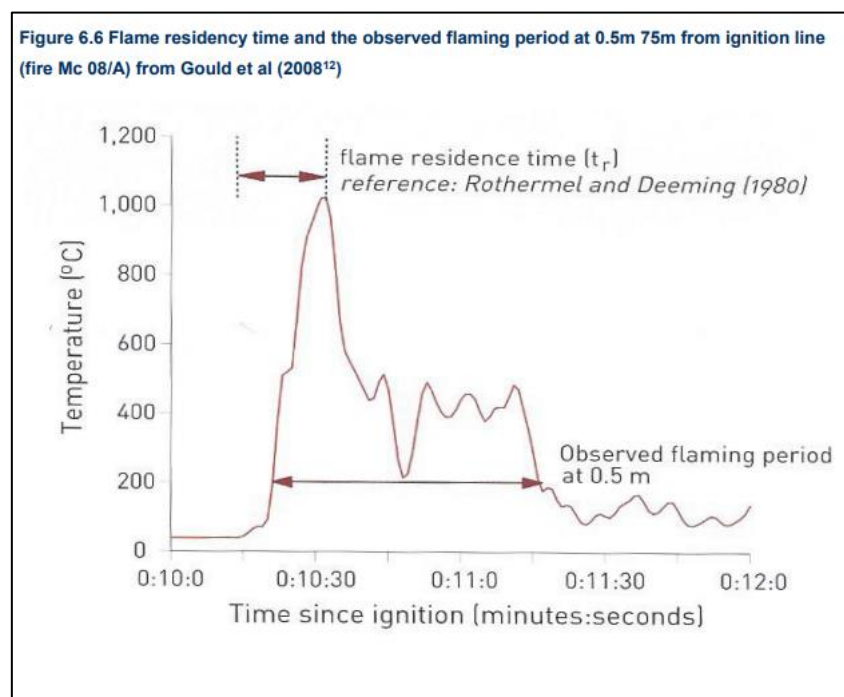
The site is within 5 km to the Darling Scarp and contiguous forest. Forest fire can generate embers that can be dispersed up to 5 km from the fire front, and fires in the Darling Ranges typically travel under winds from the east. The development site is unlikely to be affected by a concentrated ember attack, due to its separation from the Darling Scarp but ember attack could ignite the adjacent grassland.

Ember attack is responsible for the destruction of most buildings, either igniting adjacent flammable materials or penetrating gaps > 2mm to reach flammable materials within a building. Site management and building and maintenance can reduce this risk. Seasonal preparations are described in the Bushfire Emergency Evacuation Plan as a risk treatment.

A childcare building under NCC 2019 has no bushfire construction requirement and it is at the applicant's discretion to apply a bushfire construction standard. Notwithstanding the childcare will be located within BAL-19 it is recommended the Childcare Building adopt the construction standards for BAL-29, to provide resistant to a bushfire occurring in the reserve north of the site.

During a bushfire the peak radiant heat, upon which the BAL is determined lasts only a short time, typically 2 minutes, with the heat rapidly decaying after the firefront (peak) has passed.

Notwithstanding BAL - 29 is the acceptable constructions standard it is a fatal exposure level for humans, 10 kWm² is the maximum short-term exposure to evacuate by a vehicle.



From Bushfire Verification Method Handbook: NCC/ACBC 2014

In the event of a bushfire the Childcare should be evacuated, but evacuation will not be able to continue during the peak. Shelter in the building will be required at this time and this is a reason to construct the building to a standard commensurate to the level of bushfire attack.

The site has access to a reticulated water supply. The local brigade is also located within 2.6 Km of the site to provide a quick response, although in a bushfire there may be a number of competing priorities. Brigade attendance should therefore not be relied upon for the defence of a building.

The Bushfire construction standard and site maintenance are passive measures that minimise the dependence upon the local brigade for a building's survival.

5. BUSHFIRE PROTECTION MEASURES

5.1 State Planning Policy 3.7 - Planning In Bushfire Prone Areas (SPP 3.7)

SPP 3.7 applies to all development applications in designated bushfire prone areas.

SPP 3.7 Objectives

Policy Measure 5 contains the objectives of SPP 3.7. The following demonstrates how the proposed development meets each of the objectives.

Objective 1: Avoid any increase in the threat of bushfire to people, property, and infrastructure. The preservation of life and management of bushfire impact is paramount.

Development Response

The nature of the proposed activity does not increase the occurrence or intensity of bushfire within its locality.

Objective 2: Reduce vulnerability to bushfire through the identification and consideration of bushfire risks in decision-making at all stages of the planning and development process.

Development Response

The site provides opportunity to satisfy the acceptable solutions in the Bushfire Protection Criteria addressed in Section 5.2 below, which are acceptable treatments to the risk identified by the BAL level.

Objective 3: Ensure that higher order strategic planning documents, strategic planning proposals, subdivision and development applications take into account bushfire protection requirements and include specified bushfire protection measures.

Development Response

Objective 3 is satisfied through the compliance of the proposed development with the Bushfire Protection Criteria addressed in Section 5.2 below.

Objective 4: Achieve an appropriate balance between bushfire risk management measures and, biodiversity conservation values, environmental protection and biodiversity management and landscape amenity, with consideration of the potential impacts of climate change.

Development Response

The proposal does not require any modification to regulated vegetation.

5.2 Guidelines for Planning in Bushfire Prone Areas Version 1.4 (the Guidelines)

The Guidelines apply to development applications located within designated bushfire prone areas. The Guidelines provide supporting information for implementation of SPP 3.7. Specifically, they provide the Bushfire Protection Criteria to be addressed for all applications.

5.2.1 Bushfire Protection Criteria

The bushfire risk mitigation strategies detailed in (Table 2 below) are designed to comply with the Bushfire Protection Criteria detailed in Guidelines for Planning in Bushfire Prone Areas Version 1.4 (the Guidelines) Appendix 4 (WAPC, 2021).

Where discrepancy occurs between State and Local bushfire planning provisions, the higher standard of mitigation has been selected.

Table 2: Bushfire Protection Criteria assessment.

For each of the elements listed within Appendix 4 of the Guidelines for Planning in bushfire-prone areas (V.1.4), 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.'

The following table also follows Guidelines for Planning in bushfire-prone areas (V.1.4) which now list certain items to be considered in a development application, as distinct to a Strategic document or subdivision proposal.

✓	Acceptable solution provided	C	An Acceptable Solution to be conditioned
N/A	Not Applicable	P	Performance Principal 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.	✓		The development site is within an area that is predominantly grassland. It is a moderate Bushfire Hazard Level area. The childcare building will be located on land not exceeding BAL-29.

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 APZ within the boundaries of the lot.</p> <p>The development site is adjoined by grassland. An APZ separation to achieve BAL-29 from grassland is 8m.</p> <p>It is proposed to provide an APZ of 12 m, which is a distance that would achieve BAL-19 at the childcare building, which is consistent with the BAL at the childcare building when the immediate area is developed for residential purposes.</p> <p>Figure 5a illustrates an APZ of 12m established within the site.</p> <p>Figure 5b illustrates the BAL when the immediate area is developed for residential purposes.</p> <p>A class 9b building is not a mandatory requirement to be constructed to BAL-29.</p> <p>In this instance the building need not be constructed to a shelter standard because evacuation is possible.</p> <p>The construction standard is at the applicant discretion and in this instance is recommended for construction comparable to BAL-29 construction level prescribed in AS3959:2018.</p>

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
<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 Public roads</p> <p>The minimum requirements under this acceptable solution are applicable to all proposed and existing public roads. Public roads are to meet the minimum technical requirements in Table 6, Column 1. The trafficable (carriageway/pavement) width is to be in accordance with the relevant class of road in the Local Government Guidelines for Subdivisional Development (IPWEA Subdivision Guidelines), Liveable Neighbourhoods, Aust Road standards and/or any applicable standards for the local government area.</p>	✓		<p>The site is adjoins Briggs Road which is a sealed public road compliant with Table 6 column 1</p> <p>The development of the adjoining land will include public roads compliant with the IPWEA standard for a public road.</p>
	<p>A3.2a Multiple access routes</p> <p>Public road access is to be provided in two different directions to at least two different suitable destinations with an all-weather surface (two-way access). If the public road access to the subject site is via a no-through road which cannot be avoided due to demonstrated site constraints, the road access is to be a maximum of 200 metres from the subject lot(s) boundary to an intersection where two-way access is provided. The no-through road may exceed 200 metres if it is demonstrated that an alternative access, including an emergency access way, cannot be provided due to site constraints and the following requirements are met: the no-through road travels towards a suitable destination; and the balance of the no-through road, that is greater than 200 metres from the subject site, is wholly within BAL-LOW, or is within a residential built-out area – Figure 23</p>	✓		<p>The site has access in two different directions to at least two different suitable destinations.</p> <p>Briggs Road is a north south through road.</p> <p>The car park will be accessed from a new road at the east boundary when the adjoining land is developed. The new road (unnamed) is a through road.</p>

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
	<p>A3.2b Emergency access way</p> <p>Where it is demonstrated that A3.2a cannot be achieved due to site constraints, or where an alternative design option does not exist, an emergency access way can be considered as an acceptable solution. An emergency access way is to meet all the following requirements: requirements in Table 6, Column 2; provides a through connection to a public road; be no more than 500 metres in length; and must be signposted</p>	N/A		The site has direct access to a through road.
	<p>A3.6 Private driveways</p> <p>There are no private driveway technical requirements where the private driveway is: within a lot serviced by reticulated water; no greater than 70 metres in length between the most distant external part of the development site and the public road measured as a hose lay; and accessed by a public road where the road speed limit is not greater than 70 km/h. In circumstances where all of the above conditions are not met, or the private driveway is in a non-reticulated water area, the private driveway is to meet all the following requirements: requirements in Table 6, Column 4; passing bays every 200 metres with a minimum length of 20 metres and a minimum additional trafficable width of two metres (i.e. the combined trafficable width of the passing bay and constructed private driveway to be a minimum six metres); and turn-around area as shown in Figure 28 and within 30 metres of the habitable building.</p>	✓		The childcare building and carpark is within 70 m of a public road. The technical requirements for private driveways in Table 6 column 4 does not apply.

Bushfire Protection Criteria	Method of Compliance	AS	PP	Proposed Bushfire Management Strategies
Element 4: Water To ensure that water is available to enable people, property and infrastructure to be defended from bushfire	A4.2 Provision of water for firefighting purposes Where a reticulated water supply is existing or proposed, hydrant connection(s) should be provided in accordance with the specifications of the relevant water supply authority	NA		For the assessment of strategic proposals.
	A4.2 Provision of water for firefighting purposes Where a reticulated water supply is existing or proposed, hydrant connection(s) should be provided in accordance with the specifications of the relevant water supply authority. Where these specifications cannot be met, then the following applies: The provision of a water tank(s), in accordance with the requirements of Schedule 2; and Where the provision of a strategic water tank(s) is applicable, then the following requirements apply: – land to be ceded free of cost to the local government for the placement of the tank(s); – the lot or road reserve where the tank is to be located is identified on the plan of subdivision; – tank capacity, construction, and fittings, provided in accordance with the requirements of Schedule 2; and – a strategic water tank is to be located no more than 10 minutes from the subject site (at legal road speeds). Where a subdivision includes an existing habitable building(s) that is to be retained, a water supply should be provided to this existing habitable building(s), in accordance with the requirements listed above.	✓		The site has access to a reticulated water supply. and firefighting hydrants (public)

5.3 Bushfire Management Strategies

Additional management strategies not directly addressed by the bushfire protection criteria above include the additional measures required to address the risk to a vulnerable class of development. This includes the provision of an Emergency Evacuation Plan (BEEP), prepared in accordance with clause 6.6 of SPP 3.7.

The following describes the compliance requirement for preparation of the BEEP that has been followed. In addition to these requirements the presentation has been undertaken to compliment an overall emergency in facilities plan (AS 3745:2010) for consideration on an ongoing basis.

Vulnerable Development Emergency Evacuation (Cl 6.6)

Attachment 1 includes the BEEP. This plan has followed the WA Department of Planning Lands and Heritage *A Guide to Developing a Bushfire Emergency Evacuation Plan 2019*.

The attached Emergency Evacuation Plan has also incorporated the requirements listed under section 5.5.2 V1.4 *Guidelines for Planning in Bushfire Prone areas*.

Assumptions

- The childcare centre will be staffed, and children supervised.
- The occupants are able bodied, but require guidance, appropriate support and availability of transport if evacuation is required.
- The supervisors can see and smell smoke and can see a fire.

Key features to achieve occupant life safety include:

- Establishing monitoring of emergency public notifications;
- Establishing alert triggers;
- Establishing evacuation procedure;
- Evacuation transport and alternative destination; and
- Communication with parents and carers.

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 <i>The plan has followed AS3745-2010</i>
the number of people at the facility	104 Children aged 0-5 years 18 Staff
whether the occupants are permanent or transient	Visiting
whether there is a caretaker onsite	Hosted
whether there are people with a disability, medically dependent, young children or the elderly	Special transport needs are required for children.
identification of a safe alternative location if there was a need for evacuation/relocation	Serpentine Jarrahdale Community Recreation Centre
a proposed method of movement of occupants to safe location(s)	Children will arrive by private vehicle. A priority emergency transport agreement should be

	entered into with a transport company if in an emergency it could be necessary to supplement existing centre buses.
details of suitable access/egress routes for the expected type/volume of traffic, including alternatives when suitable roads are inaccessible, insufficient or inappropriate	
transport options for those without access to private vehicles	Transport arrangements will be in place.
options to shelter in place as a last resort	Evacuation only. Evacuation is available in opposite directions (east and west), and it is therefore expected to be available in the opposite direction to an approaching fire.
roles and responsibilities of facility personnel and emergency services.	The landowner and/or childcare centre manager will have responsibility for seasonal preparations and daily preparations.
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)	Centre managers and personnel are expected to recognise smoke, smell of fire and the site of fire. Warning is through monitoring of public resources DFES Emergency WA website ABC Local radio 720 and by observation.
closure of facility and early relocation of occupants appropriate to the fire danger rating (FDR) and bushfire warnings	It would be prudent to consider advising parents and guardians of children with respiratory conditions to avoid attendance on Extreme FDR days. If in attendance such children should be placed as a priority for evacuation.
any local government bushfire requirements (for example, harvest and vehicle movement bans).	Nil
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

5.4 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, includes additional measure to achieve compliance with the bushfire protection measures following SPP 3.7. and become part of the development proposal. 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 Advisory Notes **do not** form part of the Development Proposal and are not enforceable.

Owner

1. The adoption of the Bushfire Emergency Evacuation Plan dated 28 February 2023.	Prior to occupation
2. The inside face of all external doors shall display the Evacuation Diagram.	Prior to occupation and ongoing
3. The childcare building Asset Protection Zone (12 m) is to be maintained in accordance with the Asset Protection Zone standard described in the <i>Guidelines for Planning in Bushfire Prone Areas v1.4</i> .	Prior to occupation and ongoing
4. The childcare building is to be constructed in accordance with the BAL 29 building construction requirements prescribed in sections 3 and 7 in AS3959:2018	Prior to occupation and ongoing
5. In furtherance of any <i>Building Act 2011</i> requirement, the Childcare is to be connected to the towns reticulated water, and fire hoses are to be provided at capable of applying water to all external surfaces of the building and up to 10 m around the building.	Prior to occupation and ongoing
6. A notification, pursuant to Section 70A Transfer of Land Act 1893 is to be placed on the certificate(s) of title of the proposed lot(s) with a Bushfire Attack Level (BAL) rating of 12.5 or above, advising of the existence of a hazard or other factor. The notification is to state as follows: <i>"This land is within a bushfire prone area as designated by an Order made by the Fire and Emergency Services Commissioner and is subject to a Bushfire Management Plan and a Bushfire Emergency Evacuation Plan."</i>	Prior to occupation and ongoing

Advisory notes

1. The landowner acknowledges any materials located against or near adjacent to the buildings, should they ignite, will expose the buildings to flame contact and will increase the risk of building ignition.

Note: The Bushfire Emergency Evacuation Plan includes seasonal preparations to remove the 'open' storage of flammable materials around the building and the elimination of gaps in roof greater than 2 mm (to prevent the entry of embers on to combustible materials in the roof cavity).

2. The landowner is responsible for availing themselves of any promotions and information to assist owners in preparing for and responding to a bushfire event as may be made by the Shire or the Department Fire and Emergency Services

The Shire of Serpentine Jarrahdale

- Developing and maintaining district bushfire fighting services and facilities. Ongoing
- Administer the *Bush Fires Act 1954* and monitor landowner compliance to maintain land in a state not conducive to the ignition or spread of bushfire. Ongoing
- Promoting education and awareness of bushfire prevention and preparation measures through the community. Ongoing
- Administering the requirements of the *Planning and Development Act 2005* and the *Building Act 2011*. Ongoing

State Government

- Notification of Emergency Alerts - Website and Telecommunication Media 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.

ATTACHMENT 1 - Emergency Evacuation Plan

SCOPE OF PROJECT

The following Emergency Evacuation Plan Assessment and Emergency Evacuation Plan have been prepared pursuant to clause 6.6 in the State Planning Policy 3.7, Planning in Bushfire Prone Areas.

In accordance with the Department of Planning Lands and Heritage *A Guide to developing a BUSHFIRE EMERGENCY EVACUATION PLAN*, and the Emergency Evacuation Plan Template, compliance with clause 6.6, has been provided in the following documents comprising the

- Emergency Evacuation Plan Assessment; and
- Emergency Evacuation Plan

These documents follow the Bushfire Management Plan prepared **9 May 2023** by Anthony Rowe L3 BPAD 36690 in accordance with the FPA Guidelines.

PLANNING FOR EMERGENCIES IN FACILITIES

The Department of Planning Lands and Heritage *A Guide to developing a BUSHFIRE EMERGENCY EVACUATION PLAN*, and the Australian Standards (AS): AS 3745:2010 – *Planning for emergencies in facilities* are generally consistent and require a documentation of emergency arrangements consisting of preparedness, prevention, response and recovery arrangements.

Typically, the AS 3745:2010 is a response to a range of hazards **within** a building, where as a *Bushfire Emergency Evacuation Plan* is a response to a hazard initially **outside** of the building and includes the ability to move safely within the locality, or alternatively, to use the building for protection - Shelter.

The triggers for evacuation or shelter may be preventative, based upon direction from emergency services or by observation of an external danger.

Whilst *Planning for emergencies in facilities*, will incorporate many similarities, the triggers and subsequent response may be different, including the management arrangements.

A notable difference between the *Guide* and AS 3745:2010, is the description of the management structure. AS 3745:2010, and its Emergency Plan, separates the management duties into the Emergency Planning Committee, responsible for preparation of the facility, and the Emergency Control Organisation, responsible for supervising and undertaking the actions during a bushfire. Whilst the functions are separated in AS 3745:2010, they are instead to be undertaken by the Emergency Management Team, as a single management entity, in a Bushfire Emergency Evacuation Plan.

Also, at the time of seeking Development Approval, the final building design and its internal arrangements will not be determined. At development approval the Bushfire Emergency Evacuation Plan serves to demonstrate the conditions for evacuation or shelter, and it precedes the preparation of the *Planning for emergencies in facilities*.

This Bushfire Emergency Evacuation Plan should therefore be incorporated within or as an addendum to the overall Emergency Plan (AS 3745:2010) *Planning for emergencies in facilities* when it is prepared.

Both the emergency evacuation diagram for the facility, and the emergency evacuation plan (bushfire), are required to be displayed, and the distinction between an internal threat and response and an external threat and response should be clearly illustrated.

LIMITATIONS STATEMENT.

Envision Bushfire Protection

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Version Control

Proposed childcare – Lot 57 Briggs Road Byford			
Version	Date	Author	
V1	28 February 2023	Anthony Rowe	Submission
V2	9 May 2023	Anthony Rowe	Submission

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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.

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:

- Emergency Evacuation Plan Assessment; and
- Emergency Evacuation Plan

STATEMENT OF CONFORMITY – PLANNING AND DEVELOPMENT ACT 2005



Anthony Rowe Level 3 - BPAD36690
Principal

BUSHFIRE EMERGENCY EVACUATION ASSESSMENT

This assessment has been prepared having regard to:

The Department of Planning Lands and Heritage: A Guide to developing a BUSHFIRE EMERGENCY EVACUATION PLAN

AS 3745-2010: Planning for emergencies in facilities

This assessment has been prepared in accordance with the Guidelines for preparing a bushfire emergency evacuation plan an accredited bushfire practitioner was engaged (Anthony Rowe BPAD L3 36690).

This assessment does not form part of the BUSHFIRE EMERGENCY EVACUATION PLAN.

STEP 1. THE EMERGENCY MANAGEMENT TEAM

For the purpose of a Childcare Centre the Emergency Management Team shall comprise of the owner/s of the facility.

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

- Formulation of emergency procedures
- Consultation with local government and local emergency services as part of the Development Approval

Following the development of the emergency plan, the owner / operator is responsible to

- Maintain the emergency plan and ensure resources are provided for its implementation. The childcare centre should be provided with;
 - Alarm control for signalling of assembly
 - Emergency kit
 - Communication equipment
 - Hi vis vests for staff
 - First aid equipment
 - Water for hydration
 - Pre-arranged transport
 - Parent communication procedures and set messages
- Ensure the childcare centre is compliant with the building's bushfire safety measures, in liaison with the property owner.
- Nominate staff to key positions who will be on site whenever the centre is operating
 - Identify and assign duties and responsibilities
 - Chief Warden
 - Deputy Chief Warden
 - Evacuation Wardens
 - Ensure the training of staff and a demonstrated understanding of respective roles prior to the commencement of the bushfire season
- Ensure priority is given to the safety of children in care during a bushfire event.
- Ensure parents are informed of preparations, possibility for precautionary closure, response actions (evacuation) and recovery during the bushfire season.
- Maintain awareness of local government and emergency services initiatives in planning for emergencies, bushfire alerts, and evacuation places and safe routes which may change with the circumstance of the bushfire event.

The emergency management team (owner) should regularly review the emergency evacuation plan to ensure it remains practical and current.

STEP 2. FACILITY DETAILS, SITE ANALYSIS AND LOCAL CHARACTERISTICS

The emergency plan applies to the childcare centre at Lot 57 Briggs Road Byford (the site). The facility is located in a developing residential area but is within an area identified as bushfire prone.

The childcare centre provides care for up to 104 children from 0-5 years.

The proposed Childcare Centre site has frontage to Byford Road, a through road. Access to the site will be from the north boundary off the proposed extension of Indigo Parkway.

The site is within a reticulated area and a hydrant is located within 100 m on Briggs Road.

The area has full mobile phone coverage in addition to land lines, a resilient communication infrastructure.

The BMP dated **9 May 2023** describes the sites vulnerability to bushfire.

Key positions and responsibility

Chief Warden

- At regular intervals during the bushfire season the Chief Warden will monitor the DFES Alerts and Warnings web page <https://www.emergency.wa.gov.au>
- Responsible for determining the need to evacuate through communication with DFES or Police and overseeing the evacuation.
- initiate the evacuation – predetermined transport arrangement.
- Ensure parents are informed of the emergency response, and the arrangements for safe collection of children.
- Responsible to prepare post emergency reports documenting the actions taken and any difficulties with following the emergency plan before, during and after the evacuation.
- It is recommended the Chief Warden delegates the parent communication function to a nominated Warden.

Deputy Chief Warden

- Fulfills the responsibilities of the Chief Warden in the absence of the Chief Warden.

Evacuation Wardens

- Follows directions from the Chief Warden (or deputy) to ensure all children, staff and other visitors are accounted for.

An arrangement is to be entered into for priority attendance by a transport company to provide transport suitable for the evacuation of children 0-5 years in an emergency.

Transport WA requirements for transport of children are as follows –

Drivers are legally responsible for ensuring that children are suitably restrained in a vehicle:

- Aged 0 to 6 months are restrained in a rear-facing child restraint (e.g. infant capsule).*
- Aged 6 months to under 4 years are restrained in either a rear or forward-facing child restraint with in-built harness.*
- Aged 4 years to under 7 years seated in either a forward-facing child seat or booster seat restrained by a fastened seat belt or child safety harness.*
- Aged 7 years to 16 years are either in a suitable child seat or a seatbelt.*
- Aged under 7 years must not be in the front row of seats, if the vehicle has two or more rows of seats.*
- Aged between 4 years and 7 years can travel in the front seat if all other rear seats are filled with passengers aged under 7.*

When riding in a bus or taxi, if there is no suitable approved child seat available, children under the age of seven years must not be in the front row of seats where the bus or taxi has two or more rows of seats.

Children seven years and over can be restrained in an adult seat belt or booster seats.

Whilst child restraints are not mandatory on buses or in taxis, staff should be trained in the use of childcare restraints for those children in the baby rooms (maximum 24), and sufficient restraints must either be on hand at the centre or have been negotiated to be provided by the pre-arranged transport company.

STEP 3. PRIMARY AND SECONDARY EMERGENCY ACTIONS

The **primary action** in response to bushfire threat is **early** evacuation to an off-site location at a distance away from the effects of a bushfire.

Evacuate when:

- 'Advice', 'Watch and Act' or 'Emergency Warning' alert is issued from the Department of Fire and Emergency Services.
- There is awareness of fire in the locality with a likelihood of reaching the site
- Smoke or fire has been identified nearby.

Evacuation destination

In a bushfire event, announcements will be made via electronic media and online, regarding bushfire incidents and potential threats to the site.

In a bushfire event follow DFES/Emergency Services advice (public announcements) to determine the safe evacuation route and destination.

Smoke and particles, including embers can fall a distance greater than the heat experienced from the fire and can cause harm; evacuation from the area, by vehicle is therefore recommended.

The facility should be closed on catastrophic fire danger rating days, until the surrounding area is developed for residential purposes.

STEP 4. REQUIREMENTS FOR EVACUATION AND SHELTER-IN-PLACE

This assessment of requirements for evacuation and shelter has been guided by the questions provided in The Department of Planning Lands and Heritage: *A Guide to developing a BUSHFIRE EMERGENCY EVACUATION PLAN*. These have been addressed in Appendix 1

The Shire of Serpentine Jarrahdale has a number of nominated evacuation centres which may be activated in a bushfire emergency.

The Serpentine Jarrahdale Community Recreation Centre 38 Mead St, Byford WA is the closest.

The route is via Briggs Road (travel south) to Abernethy Road, then Warrington Road to Mead Street and east along Mead Street to the Serpentine Jarrahdale Community Recreation Centre. An alternative longer route is available via Southwest Highway, Abernethy Road and Gordin Way to Mead Street and the Serpentine Jarrahdale Community Recreation Centre.

Upon being alerted to a fire approaching the Chief Warden (Manager) will

1. Alert staff (calmly) and initiate their undertaking of assigned responsibilities
2. Confirm evacuation destination and route with DFES
3. Contact the transport company
4. Assemble children within the common area close to the exit
5. Close windows and doors
6. Account for all children (verify against daily registration log)
7. Keep children hydrated and calm
8. Locate fire extinguishers
9. Observe external conditions
10. Monitor condition of the building
11. Upon arrival of arranged transport, evacuate the building taking the emergency kit and daily attendance log (inclusive of parent/guardian contact information).
12. Advise parents/guardians the childcare centre has been evacuated. Instruct them not to attend the child care centre and confirm the evacuation destination and arrangements for collection of children

Notes:

The location may be subject to smoke and ember attack. It is best to remain in the building until transport arrives in order to reduce the likelihood of minor injury and distress to children.

STEP 5. DEVELOP PRIMARY AND SECONDARY EMERGENCY PROCEDURES

PREPAREDNESS

Prior to the commencement of the bushfire season the Emergency Evacuation Plan must be reviewed ensuring all information, procedures, contact details and any attached publications are current.

The A3 size evacuation diagram must include current information and be displayed at all exit doors within the childcare centre.

The facility should be closed on catastrophic fire danger rating days.

Fire extinguishers must be checked to ensure they are charged and in working order.

Fire hoses should be checked to ensure all are in good condition and capable of reaching all surfaces of the building.

Flammable materials should be removed from within 3 m of the building.

Externally located rubbish bins, storage areas, should have closing lids.

No flammable materials should be attached to the building, i.e. shade sails should not be of a flammable material.

Ensure employees and other occupants are informed and familiar with the procedures laid out in the Emergency Evacuation Plan.

Contact off-site location(s) for potential use during a bushfire emergency.

Contact transport suppliers for potential use during a bushfire emergency.

Ensure property access is kept clear and easily trafficable.

Ensure an emergency evacuation kit including first aid kits and adequate levels of drinking water has been prepared and is easily accessible by staff.

AWARENESS

Maintain situational awareness through a range of information sources including local ABC radio 720, the Emergency WA website (emergency.wa.gov.au), DFES Facebook or Twitter, information line 13 DFES (13 33 37) and local emergency services.

Maintain observation of external condition for signs, and smell of smoke.

Alert parents and guardians to expected Catastrophic conditions and notify them of the precautionary closure of the centre.

If an Advice warning is issued, precautionary evacuation must occur; contact parents and carers to arrange urgent collection of children.

Parents and carers contact details are to be confirmed on attendance at sign in.

EMERGENCY RESPONSE

Evacuate when:

- 'Advice', 'Watch and Act' or 'Emergency Warning' alert is issued from the Department of Fire and Emergency Services.
- There is awareness of fire in the locality with a likelihood of reaching the site
- Smoke or fire has been identified nearby.

If sufficient time permits, following advice from DFES or emergency services, contact parents/carers and arrange for immediate collection of children. If there is not sufficient time available to arrange full evacuation by parents/carers, contact the transport company and evacuate to the Shire's nominated evacuation centre.

Check and communicate:

- Confirm building is clear and all children, staff visitors are accounted for.
- Inform DFES and parents and carers of evacuation and destination.

Shelter in place is not recommended and there should be no necessity for shelter in place to occur however if DFES or emergency services have advised it is too late to leave, or it is unsafe to exit the building due to the conditions outside, then staff should ensure all doors and windows are sealed as best as possible.

Staff should move children to the room furthest from the fire front and with ready access to an exit. The centres Emergency in Facilities Plan must identify the location for shelter in the building¹. The fire front should continue to be observed by a nominated staff member; if the building has ignited the building must be evacuated. As soon as it is safe outside (the fire has passed) a member of the emergency management team should check the building and grounds for any small fires; any small fires should be extinguished.

When safe to do so arrange for the children to be collected.

Recovery

- Maintain communication (appointed responsibility) with parents and carers and arrange collection of children.
- On all clear, the Chief Warden is to check building is suitable for occupation.
- Advise parents/carers when the centre will re-open
- Review incident for improvement and incorporate into the Emergency Plan and training.

¹ Emergency in Facilities Plan AS3745-2010 which addresses a range of emergencies

STEP 6. TRAINING AND EDUCATION ON EMERGENCY PROCEDURES

Staff and volunteers will be provided with information outlining emergency management procedures and bushfire protection measures. The childcare centre manager will practice procedures and ensure that delivery of education and training for staff and any volunteers occurs. The manager will be trained in where to find official emergency information. For example, Emergency WA website, 13 DFES information line, and local ABC Radio 720 for the purpose of monitoring conditions.

As part of the registration process notice must be provided to the responsible parent or carer that the childcare centre is located within a bushfire prone area and precautionary or emergency evacuation may be required during the fire season.

Staff and volunteers must acknowledge that they have sighted and understood the emergency evacuation procedures and understand their role and responsibilities.

- Individual roles and responsibilities.
- Access and egress routes.
- Assembly point location.
- Firefighting equipment locations
- The written procedures applicable to the site.
- Use of child (vehicle) restraints

The following exercise drills should be practiced

- assembly and evacuation procedures
- site preparation procedures and post fire inspections
- firefighting techniques to create a familiarity with the firefighting equipment (which might be used by staff to address small fires)
- the debrief process (which would follow any bushfire event) to identify and discuss any issues that could occur with the emergency plan

Appendix 1

Step 4 Evacuation or Shelter Analysis

The following questions will assist developing or reviewing the Emergency Evacuation Plan to identify an off-site location - EVACUATION.	
If there are occupants with support needs that require a similar facility to support them, is the off-site location suitable?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<ul style="list-style-type: none"> Occupants with support needs are people with physical, intellectual, visual, or auditory disability or impairment, either temporary or permanent. It also includes aged persons and juveniles who are dependent on others for their care and wellbeing. 	
Comment: The facility provides the care of children who will require supervision and 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"/>
<ul style="list-style-type: none"> Have you considered locations such as community centres, clubs etc. as possible places to go? 	
Comment: Shire nominated emergency shelter - Serpentine Jarrahdale Community Recreation Centre 38 Mead St, Byford WA	
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"/>
<ul style="list-style-type: none"> Remember that other persons may wish to utilise the same facility as their shelter for evacuation. Accommodation for more than one day may be required. 	
Comment: Shire provided emergency shelter Serpentine Jarrahdale Community Recreation Centre 38 Mead St, Byford WA	
Does an available route to the off-site location avoid transporting through bushfire affected areas or areas that may be affected by an approaching bushfire?	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Depending on the extent of the bushfire hazard around the site, the location of a bushfire and the safest route from the site, there may be a need for alternative routes and locations.	
Comment: The most direct access (2.9 km) to the Serpentine Jarrahdale Community Recreation Centre is South along Briggs Road. An alternative route (4.3 km) is available east of the site via Larsen Road to Southwest Highway	
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: The Shire promotes the availability of community recreation centres operating at times that the childcare centre is in operation.	
Consider the following questions to assist planning transport arrangements.	
Do you have your own transport for all occupants? If no, what transport provider will you use?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Comment: Sufficient transport suitable for all children and staff is required to be arranged at the commencement of each season. Verification of transport availability must be confirmed on days of Extreme conditions when the centre is operating. Whilst child restraints are not mandatory on buses or in taxis, staff should be trained in the use of childcare restraints for those children in the baby rooms (maximum 24), and sufficient restraints must either be on hand at the centre or have been negotiated to be provided by the pre-arranged transport company.	
Are you going to use private vehicles?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Comment: Private transport will be arranged.	
If using private vehicles, 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"/>
Comment: The availability of pre-arranged transport will be verified on days of Extreme conditions when the centre is operating. In addition, taxis and other forms of hire transport may be used.	
Will there be sufficient vehicles to transport all the occupants?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Comment: An arrangement with a transport provider will be confirmed prior to each bushfire season.	
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"/>
Comment: Staff will accompany the children to the evacuation destination.	
Is disabled transport required, and is this sufficient to move the number of occupants from the facility?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Comment: An individual plan should be determined for children with reduced physical ability, which may include ambulance support.	
Do you require ambulances? If yes, St John Ambulance Australia needs to be consulted.	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Comment: This will be subject to the individual needs of the child, but a bushfire is only one circumstance where emergency support by ambulance may be required and will be part of an individual plan.	

Is a community bus available?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Comment: Augmented transport arrangements will be negotiated with local private transport suppliers.	
Will community buses be available when you need them and will drivers be available?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Comment: Not required	
Are other means of transport available?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Comment: Pedestrian access to BAL Low south will be available as the area develops (residential development).	
Do you need any other type of special transport?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Comment: Evacuation will be provided across sealed public roads, only 2wd road going vehicles are required.	

The following questions will assist developing the Emergency Evacuation Plan to identify an on-site building. SHELTER		
Is the property well maintained and kept free from a build-up of fuel and leaf litter in gutters and around buildings?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<p>Comment: The building should be inspected prior to the bushfire season, particularly those aspects that are not readily observable or accessible such as elevated ledges and the roof.</p> <p>During the bushfire season rubbish bins should be self-closing, and material accumulating against the building should be removed.</p>		
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"/>
<ul style="list-style-type: none"> Consider the potential for any adjoining structures, vegetation or combustibles to ignite and impact on the building. For facilities where occupants are located in numerous buildings or rooms, it may be appropriate to remain in those rooms under supervision. 		
<p>Comment: On site refuge is not sought but the building is a single building within BAL 29. Evacuation should be taken if safe to leave.</p>		
Is the building constructed in a manner that minimises bushfire attack with appropriate Asset Protection Zones?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
To determine standards of construction, consult Australian Standard AS3959 Construction for buildings in bushfire prone areas.		
Comment: The proposed building will be constructed to the commensurate determined BAL level.		
Can the building accommodate the number of occupants and visitors?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<p>Comment: The building capacity required is 1.2 m³ per person, as a minimum shelter standard ABCB Handbook 2014</p>		
Is there ease of accessibility to the building and is it easily identifiable?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<p>Comment: The main access to the building is from the carpark immediate to Shepparton Boulevard.</p>		
Is there access to amenities (toilets, food, water etc) away from the effects of a bushfire?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Comment: Shire nominated evacuation centres have amenities		

BUSHFIRE EMERGENCY PLAN

NAME OF FACILITY	Child Care Centre
ADDRESS	Lot 57 Briggs Road Byford
PREPARED BY	Anthony Rowe, L3 BPAD 36690
OWNER/OPERATOR	Blokk Property
DATE	9 May 2023
VERSION NUMBER	2

Document Control

Version	Date	Details	Undertaken by
1	28/02/2023	Submission	Anthony Rowe
2	09/05/2023	Submission	Anthony Rowe

Emergency Management Team

Name	Role	Contact Details
	Owner	
	Centre Manager	

FACILITY DETAILS

This Plan is for a Childcare Centre at Lot 57 Briggs Road Byford 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		Centre Manager	
PHONE NUMBER			
FACILITY TYPE	Childcare	NUMBER OF BUILDINGS	1
NUMBER OF STAFF	18	NUMBER OF OCCUPANTS	104 Children (and 18 staff)
NUMBER OF OCCUPANTS WITH SUPPORT NEEDS		104	
DESCRIPTION OF SUPPORT NEEDS		Children will require support and assistance from staff appropriate to their age and development	

RESPONSIBILITIES

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

Position	Role	Responsibility
Owner	Emergency Planning Committee	<ul style="list-style-type: none"> Ensure the facility is prepared for the bushfire season
Facility Manager	Chief Warden (Emergency Management Team)	<ul style="list-style-type: none"> Daily - check www.emergency.wa.gov.au for any warnings or alerts Ensure adequate transport is available for evacuation should it be required Monitor conditions on Severe plus FDR days <ul style="list-style-type: none"> Local ABC Radio 720 am Emergency.wa.gov.au Advise parents/carers of precautionary closure where catastrophic conditions are forecast Determine with DFES/emergency services that safe evacuation is available Consider any special needs of the children that may affect the decision and capability to evacuate Remain contactable (mobile phone) at all times oversee evacuation advise parents or carers of evacuation and arrangements for collection of children
Emergency Management Team (roles allocated to staff)	Deputy Warden	<ul style="list-style-type: none"> Activities delegated by the Chief Warden Supervise any fire suppression activity
	Communications officer	<ul style="list-style-type: none"> Responsible for keeping parents informed
	Transport Warden	<ul style="list-style-type: none"> Responsible for ensuring the evacuation

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
Transport company	TBA	Confirmed annually

PREPAREDNESS

CHECKLIST – ongoing, prior to and during the bushfire season		
BUSHFIRE SEASON: COMMENCES 1 OCTOBER AND CONCLUDES 31 MAY OF EVERY YEAR (UNLESS OTHERWISE ADVISED)		
Action	Frequency	Responsibility
To be completed just prior to the bushfire season (by November 30 each year)		
1. Review Emergency Evacuation Plan to ensure details, procedures and contact phone numbers are correct. <ul style="list-style-type: none"> I. Contact off-site location(s) and confirm potential use during a bushfire emergency. II. Contact transport suppliers and confirm arrangements for potential use during a bushfire emergency. 	Annual	Owner and Centre Manager
2. Ensure all staff are familiar with the procedures in the Emergency Plan		
3. Affirm parents and carers have been informed of the facilities emergency response procedures for the coming bushfire season and the possibility of precautionary closure on extreme, or catastrophic FDR days and on issue of an Advice level warning.		
4. Ensure the site layout diagram and emergency evacuation diagrams are current and in visible location(s).		
5. Ensure the routes to offsite locations are a safe option.		
6. Ensure any firefighting equipment (fire extinguishers hoses etc.) are serviceable and available.		
7. Ensure property access is clear and easily trafficable		
8. Ensure roof and gutters are free from leaf litter and debris		
9. Ensure staff are aware of their responsibilities as assigned by this plan and have received training on procedures and in the use of firefighting equipment		

To be completed during the bushfire season between 1 December and 12 May each year by the Emergency Management Team (centre manager).		
1. Ensure contact details of the emergency management team and employees are updated as required	Ongoing	Centre Manager
2. All objects attached to the buildings are non-combustible or easily removable, and the removing mechanism is in working order		
3. Smoke detectors are in working order		
4. Ensure first aid kits, fire extinguishers, emergency lighting and other emergency resources are current, serviceable and accessible		
5. The evacuation diagram and the site layout diagram are clearly displayed on the inside face of external doors		
6. Ensure defendable spaces around the building and assembly points are maintained (kept clear).		
7. The daily log book (registration of attendance) is kept on hand and includes parent / guardian contact details in case of evacuation		
8. Emergency communication equipment (mobile phone) is charged and on hand		

The Department of Fire and Emergency Services provides 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.

Extreme or Catastrophic ratings are the highest level and represent unsafe conditions. They are rare but represent exceptionally dangerous conditions for travel.

A new national Fire Danger Rating System was launched in September 2022

There are four levels of fire danger in the new system. Fire Danger Ratings are based on predicted conditions such as temperature, humidity, wind and the dryness of the landscape and give an indication of the possible consequences of a fire, if one was to start; the higher the fire danger rating, the more dangerous the conditions.

FIRE DANGER RATINGS

CATASTROPHIC

Catastrophic - For your survival, leave bush fire risk areas

EXTREME

Extreme – Take action now to protect your life and property

HIGH

High – Be ready to act

MODERATE

Moderate – Plan and prepare



EMERGENCY WARNING

An out of control fire is approaching fast and you need to take immediate action to survive. If you haven't prepared your home it is too late.

You must seek shelter or leave now if it is safe to do so.



WATCH AND ACT

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

Only stay and defend if you are mentally and physically prepared.



ADVICE

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

Be aware and keep up to date.

Where can I get information during an emergency?

[emergency.wa.gov.au](https://www.emergency.wa.gov.au) ☎ 13 DFES (13 33 37)

📱 @dfeswa 📺 @dfes_wa 📻 Local ABC Radio



PREPARATION

The following outlines the preparation that must be taken to ensure occupants are aware of the bushfire threat and can respond with appropriate procedures.

Actions	Frequency	Responsible Person
Throughout the bushfire season		
Check the Emergency WA website daily for alerts and warnings www.emergency.wa.gov.au	Daily (in the morning) and again early in the afternoon	Centre Manager
Days forecast with a Catastrophic Fire Danger rating		
Inform parents and staff that due to the fire danger rating the centre will be closed for the duration of the warning.		

If an 'Advice,' 'Watch and Act' or 'Emergency Warning' alert or other communication has been issued by an emergency service authority -

ALERT

An 'Advice' is issued that a fire has started but there is no immediate danger.

Contact DFES for advice on availability of safe evacuation.

Contact parents / carers to arrange urgent collection of children

WATCH AND ACT or EMERGENCY WARNING

In the event of a Watch and Act or Emergency Warning, or if smoke of fire is observed in proximity, confirm with DFES the safe route to the intended destination. Public announcements will include confirmation of safe routes and activated welfare centres.

Method of Alarm

The building is a single building. To avoid distress to the children, the alert condition or condition to evacuate should be verbally communicated to all staff members and procedures followed.

Children should be immediately assembled within the building.

Any staff member who observes smoke or a fire nearby, is to advise the Chief Warden immediately or the acting senior member of staff who should in turn implement the Bushfire Emergency Evacuation Plan.

Parents and Carers are to be contacted and advised of implementation of the Bushfire Emergency Evacuation Plan.

Parent/Guardian Communication

- Advise parent / guardians of precautionary closure of the facility, the day before if there is the potential for the building to be affected by a bushfire (for example a bushfire is distant but may affect the building) or if the forecast FDR for the following day is Catastrophic.
- Advise parent / guardians of pre-emptive evacuation, requirement for urgent collection from the facility if an 'Advice' level warning has been issued.
- Advise parents / guardians of emergency evacuation and ensure they understand they should not attend the childcare centre. As soon as possible following evacuation advise parents / guardians of the location and arrangements for collection of children.

NOTE

The location may be subject to smoke and ember attack. It is best to remain in the building until transport arrives in order to reduce the likelihood of minor injury and minimise distress to children.

Parents and carers are to be informed early and requested to follow an orderly process for the safe collection of children, and importantly enable management to maintain accountability and certainty for the location of each child. The circumstance of a parent acting upon a public notice and collecting their child without appropriate record must be avoided.

Evacuation Destination Details - Preparation

The following destinations and routes may be available in a bushfire event however current public advice from Emergency WA should always be followed to ensure you use the safest evacuation route to the safest destination.			
Designated evacuation assembly point/s			
1. inside the childcare centre			
Primary off-site location			
Name of venue	The Serpentine Jarrahdale Community Recreation Centre		
Address of venue	38 Mead St, Byford WA		
Nearest cross street	Gordin Way (east of the Community Recreation Centre)	Map reference	Q2F2+Q6 Byford
Venue phone number	(08) 92078555		
Primary route to location	Head south on Briggs Road towards Larsen Road, at the roundabout, take the 1st exit onto Abernethy Road and at the next roundabout, take the 2nd exit onto Warrington Rd. From Warrington Road take the first exit at the roundabout onto Mead Street. The Serpentine Jarrahdale Community Recreation Centre is on the right (550 m)		
Secondary route to location	Head south on Briggs Road and turn left onto Larsen Road. Follow Larsen Road to Southwest Highway and turn right. After 1.1 km turn right to the Abernethy Road, then at the roundabout, take the 1st exit at the roundabout onto Gordin Way then the third exit at the roundabout onto Mead Street. The Serpentine Jarrahdale Community Recreation Centre is on the left (170 m)		
Primary transportation arrangements			
An arrangement is to be entered into with a transport company to provide a priority attendance to transport children in an emergency. Two buses each with a 55 person capacity will be required plus the use of private staff vehicles			
Estimated travelling time to destination		50 minutes: 10 minutes travel time plus 40 minutes maximum time required to mobilise transport	

Shelter-In-Place

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. The area is under development and as that development continues areas of BAL-Low will become available south of the site. Until that area is developed evacuation from the facility by vehicle is recommended.

RESPONSE FOR EVACUATION AND SHELTER-IN-PLACE IN THE EVENT OF A BUSHFIRE.

Trigger	Action	Responsible Person
<p>DFES have advised to evacuate and confirmed the route is safe</p> <p>or</p> <p>a bushfire is reported within 3-5 Km of the site</p> <p>or smoke or fire is observed</p> <p>Confirm with DFES it is safe to evacuate and confirm the destination and route</p>	<ul style="list-style-type: none"> • Alert staff to implement the Emergency Plan • Contact transport company to arrange immediate attendance for evacuation • Locate children to the common area of the building close to the exit • Close windows and doors • Account for all children (verify against daily registration log) • Obtain the emergency evacuation kit • Locate fire extinguishers • Monitor external conditions and the condition of the building • Upon arrival of arranged transport evacuate the building taking the emergency kit, the daily attendance log, and water for each child. • Advise DFES the childcare centre has been evacuated. • Check building has been cleared; all children and staff and visitors are accounted for. • Evacuate to determined destination • Contact parents or carers and advise the collection point for children <p>Notes:</p> <p>The location may be subject to smoke and ember attack. It is best to remain in the building until transport arrives in order to reduce the likelihood of minor injury and minimise distress to children.</p>	<p>Centre Manager</p>
<p>SURVIVAL- SHELTER – only if advised by DFES it is not safe to leave and shelter in place is a safer option</p>		
<p>A fire is advised or is observed to be approaching and DFES public or direct advice is it is too late to leave (safe evacuation is not available)</p>	<p>Contact emergency services and advise the number of children and staff sheltering in place.</p> <p>Keep fire extinguishers close by.</p> <p>Monitor the building condition for smoke and heat and stay low.</p> <p>Soak towels to block smoke ingress if required</p> <p>Keep children hydrated.</p>	<p>Centre Manager</p>

	<p>Monitor the fire's passing and leave the building when safe to do so.</p> <p>Note: Survivable conditions establish quickly after the firefront has passed, when the wind and noise has calmed. Don't stay in a burning building. Move to the carpark space.</p> <p>Inspect the building for any small fires and extinguish if safe to do so</p> <p>If the site and land nearby has been impacted by bushfire, evacuate the site when safe to do so until the area has been assessed and is given an 'All clear' is given.</p>	
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RECOVERY

Action	Responsible Person
Inspect building. Advise parents or carers of the date when the centre will re-open	Centre Manager
Debrief <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 (delegate)

Attachment 1 – Emergency Plan and Evacuation Map

ATTACHMENT 2 - References

GENERAL REFERENCES

SA Department of Environment and Natural Resources, Government of South Australia, 2012 *Overall Fuel Hazard Guide for South Australia*

Standards Australia, *AS 3959:2018 Construction of buildings in bushfire-prone areas*, Sydney

Western Australian Planning Commission (WAPC) *Position Statement: Planning in bushfire prone areas – Demonstrating Element 1: Location and Element 2: Siting and design* November 2019

WA Department of Planning Land and Heritage 2016, *Visual Guide for bushfire risk assessment in Western Australia*

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

Western Australian Planning Commission and Department of Fire and Emergency Services (WAPC and DFES) 2017, *Guidelines for Planning in Bushfire Prone Areas Version 1.4*, Western Australia

Online references

Office of Bushfire Risk management (OBRM), Map of Bush Fire Prone Areas, viewed April 2022, <
<https://maps.slip.wa.gov.au/landgate/bushfireprone/>>