Bushfire Assessment Report

Proposed:Caravan Park

At: 313 Magpie Lane, Galambine NSW

Reference Number: 230959

15th January 2024



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Version Control					
Version	Date	Author	Reviewed by	Details	
1	15/01/2024	Andrew Muirhead	Stuart McMonnies	Final Report	

List of Abbreviations:

APZ Asset Protection Zone

AS3959 Australian Standard 3959 'Construction of buildings in bushfire-prone areas

- 2018

BAL Bushfire Attack Level

BPMs Bushfire Protection Measures

BPLM Bushfire Prone Land Map

Council Mid-Western Regional Council

DA Development Application

ELVIS Elevation and Depth Foundation Spatial Data

EP&A Act Environmental Planning and Assessment Act - 1979

FRNSW Fire and Rescue NSW

IPA Inner Protection Area

NASH National Association of Steel-framed Housing

NCC National Construction Code

NP National Park

NSP Neighbourhood Safer Place

OPA Outer Protection Area

PBP Planning for Bush Fire Protection – 2019 as amended

ROW Right of Way

RF Act Rural Fires Act - 1997

RFS NSW Rural Fire Service

SEPP State Environmental Planning Policy

SFPP Special Fire Protection Purpose

SWS Static Water Supply

Executive Summary:

Building Code and Bushfire Hazard Solution P/L has been engaged to prepare an independent Bushfire Assessment Report for the proposed caravan park at 313 Magpie Lane, Galambine.

The proposal is development for the purposes of a caravan park, comprising of one-hundred and forty-seven (147) short-term sites and two-hundred and forty (240) long-term sites. The short-term area and sites are intended to be utilised predominantly for tourism purposes, whilst the long-term sites will be predominantly utilised for accommodation for workers in the mining and agricultural sector who are undertaking work in the local area, or as an alternate form of affordable housing.

The subject site is not depicted on Council's Bushfire Prone Land Map as being 'bushfire prone' and therefore the application of Planning for Bush Fire Protection is not formally triggered.

As part of the Pre-DA consultation with Council, the following advice was provided to the applicant:

Despite the site not being mapped as BFPL, bushfire is clearly a high risk for the subject site and this will need to be properly assessed – it is strongly recommended that Bushfire Threat Assessment Report is prepared for assessment and is to include onsite measures as well as an evacuation plan.

Tourist development (including caravan parks) is captured as Special Fire Protection Purpose under Chapter 6 of *Planning for Bush Fire Protection* (PBP). The Bushfire Assessment Report has assessed the proposal against the relevant specification and requirements of PBP.

The vegetation identified a posing a hazard to the development site is within neighbouring properties and the subject property in all directions.

Dwelling sites within a caravan park are permitted to accommodate camping, moveable dwellings (caravans/ motor homes) or cabins. In the context of the application of PBP these types of uses have different risk profiles and subsequently are assessed differently.

Asset Protection Zones for Special Fire Protection Purpose development are determined from Table A1.12.1 of PBP or bushfire design modelling achieving a radiant heat impact of no more than 10kW/m² at the closest point of the proposed dwelling sites.

All proposed short-term sites provide APZs achieving a Bushfire Attack Level (BAL) of Low in accordance with A1.12.6 of PBP and therefore exceed the minimum required APZ in accordance with A1.12.1 of PBP.

As the Community Centres have floor areas of >500m2 we have applied the requirements for Places of Public Assembly (s8.3.11). Therefore, the minimum APZ was subsequently determined from Table A1.12.1 of PBP. The proposed Community Centres have APZs achieving BAL Low in accordance with A1.12.6 of PBP and therefore exceed the minimum required APZs in accordance with A1.12.1 of PBP.

Manufactured homes and moveable dwellings have the capacity to comply with AS3959 and provided there is a mechanism to ensure future compliance with the corresponding Bushfire Attack Level (BAL) Asset Protection Zones (APZs) which meet ≤29kW/m² can be applied.

All proposed long-term sites provide APZs achieving ≤29kW/m² and will have a restriction requiring the application of the relevant BAL.

The proposal, in our opinion, satisfies all relevant specifications and requirements of PBP.

In accordance with the bushfire safety measures contained in this report, and consideration of the site specific bushfire risk assessment it is our opinion that when combined, they will provide a reasonable and satisfactory level of bushfire protection to the subject development.

1.0 Introduction

The proposal is development for the purposes of a caravan park, comprising of one-hundred and forty-seven (147) short-term sites and two-hundred and forty (240) long-term sites at 313 Magpie Lane, Galambine. The short-term area and sites are intended to be utilised predominantly for tourism purposes, whilst the long-term sites will be predominantly utilised for accommodation for workers in the mining and agricultural sector who are undertaking work in the local area, or as an alternate form of affordable housing.

In terms of built form, the proposal will include three (3) amenities buildings, two (2) community centres, 2 office and activities buildings, and a separate workshop building, as well as a storage building. Landscaping is included throughout the site.

The proposal includes the construction of three formal access roads to the site, the main access to the site via Magpie Lane, in addition to a one-way emergency exit road further east along Magpie Lane, and another emergency exit road onto Guntawang Road, as well as intersection upgrades to the Guntawang Road/Magpie Lane interface. Internal access roads also form a component of the proposal, in addition to internal cul-de-sacs, and boom gate entry and exit points.

The subject site comprises of two (2) existing allotments zoned RU4: Primary Production Small Lots pursuant to Mid-Western Regional Local Environment Plan 2012.

The subject property has street frontage to Magpie Lane to the north, Guntawang Road to the southwest and abuts private rural allotments to the east.

The subject site is not depicted on Council's Bushfire Prone Land Map as being 'bushfire prone' and therefore the application of Planning for Bush Fire Protection is not formally triggered.

As part of Pre-DA consultation with Council they advised:

Despite the site not being mapped as BFPL, bushfire is clearly a high risk for the subject site and this will need to be properly assessed – it is strongly recommended that Bushfire Threat Assessment Report is prepared for assessment and is to include onsite measures as well as an evacuation plan.

This report has been prepared to address the relevant specifications and requirements of Planning for Bush Fire Protection - 2019 (PBP) for Special Fire Protection Purpose (SFPP) development.

2.0 Legislative Requirements

While the subject site is not mapped as 'bushfire prone', Mid-Western Regional Council issued the following advice as part of Pre DA consultation:

Despite the site not being mapped as BFPL, bushfire is clearly a high risk for the subject site and this will need to be properly assessed – it is strongly recommended that Bushfire Threat Assessment Report is prepared for assessment and is to include onsite measures as well as an evacuation plan.

While the subject is not identified as being 'bushfire prone' at Council request a Bushfire Assessment Report has been prepared outlining the relevant specifications and requirements of PBP.

As the proposed development involves a SFPP the following are the relevant specifications and requirements of PBP:

- Chapter 1 Aim and Objectives
- Chapter 6 Special Fire Protection Purpose Developments

3.0 Purpose of Report

The purpose of this Bushfire Assessment Report is to provide Mid-Western Regional Council with an independent bushfire assessment together with appropriate recommended bushfire mitigation measures.

The recommendations contained within this report may assist in forming the basis of any specific construction conditions and/or bushfire mitigation measures that Council may elect to place within any consent conditions issued for the subject Development Application.

4.0 Scope of this Report

The scope of this report is limited to providing a bushfire assessment and recommendations for the subject property. Where reference has been made to the surrounding lands, this report does not purport to directly assess those lands; rather it may discuss bushfire impact and/or progression through those lands and possible bushfire impact to the subject property.

5.0 Compliance Tables & Notes

The following table sets out the project's compliance with *Planning for Bush Fire Protection – 2019*.

Short Term Dwelling Sites (1 – 146)

	North	East	South	West
Vegetation Structure	Grassland	Grassland	Grassland	Grassland
Effective Slope	0 - 5° down	0 degrees and up	0 degrees and up	0 - 5° down
Required Asset Protection Zone	11 metres	10 metres	10 metres	11 metres
Available Asset Protection Zone	>50 metres	>50 metres	>50 metres	>50 metres
Significant Landscape Features	Magpie Lane	Electrical easement / Neighbouring allotments	Proposed long- term sites	Guntawang Road
Bushfire Attack Level	BAL Low	BAL Low	BAL Low	BAL Low

Long Term Dwelling Sites (1001 – 1240):

	North	East	South	West
Vegetation Structure	Managed Land	Grassland	Riparian (Grassy Woodland)	Grassland
Effective Slope	N/A	0 degrees and up	0 - 5 degrees down	0 - 5° down
Required Asset Protection Zone	N/A	10 metres	13 metres	11 metres
Available Asset Protection Zone	>140 metres	>50 metres	>13 metres	>50 metres
Significant Landscape Features	Proposed short- term sites	Electrical easement / Neighbouring allotments	Proposed riparian zone	Stormwater basin / Guntawang Road
Bushfire Attack Level	BAL Low	BAL Low	BAL 29	BAL Low

Office & Activities Building (Short Term Area):

	North	East	South	West
Vegetation Structure	Grassland	Grassland	Managed Land	Grassland
Effective Slope 0 - 5° down 0 degrees a		0 degrees and up	N/A	0 - 5° down
Required Asset Protection Zone	40 metres	36 metres	N/A	40 metres
Available Asset Protection Zone	>50 metres	>50 metres	>140 metres	>50 metres
Significant Landscape Features	Access Road	Proposed dwelling sites	Access Road	Access Road / Carpark / Guntawang Road
Bushfire Attack Level	BAL Low	BAL Low	BAL Low	BAL Low

Community Centres (1 & 2) & Office & Activities (Long Term Area):

	North	East	South	West
Vegetation Structure Managed Land Grassland		Grassland	Managed Land	Grassland
Effective Slope	N/A	0 degrees and up	N/A	0 - 5° down
Required Asset Protection Zone	N/A	36 metres	N/A	40 metres
Available Asset Protection Zone	>140 metres	>50 metres	>100 metres	>50 metres
Significant Landscape Features	Access Road / Proposed dwelling sites	Proposed dwelling sites	Access Road / Proposed dwelling sites	Access Road / Proposed dwelling sites / Carpark / Guntawang Road
Bushfire Attack Level	BAL Low	BAL Low	BAL Low	BAL Low

Compliance Summary of Bushfire Protection Measures Assessed					
Bushfire Protection Measure	Acceptable Solution	Performance Solution	Report Section		
Asset Protection Zones & Landscaping	×		7.03		
Construction Standard	\boxtimes		7.03		
Access	\boxtimes		7.03		
Services			7.03		
Emergency Management Planning	⊠		7.03		

Asset Protection Zones Compliance

Typically, Asset Protection Zones for Special Fire Protection Purpose development are determined from Table A1.12.1 of PBP or bushfire design modelling achieving a radiant heat impact of no more than 10kW/m² at the closest point of the proposed dwelling sites.

Dwelling sites within a caravan park are permitted to accommodate camping, moveable dwellings (caravans/ motor homes) or cabins. In the context of the application of Planning for Bush Fire Protection 2019 (PBP) these types of uses have different risk profiles and subsequently are assessed differently.

Manufactured homes and moveable dwellings have the capacity to comply with AS3959 and provided there is a mechanism to ensure future compliance with the corresponding Bushfire Attack Level (BAL) Asset Protection Zones (APZs) which meet ≤29kW/m² can be applied.

All proposed long-term sites will have a restriction requiring the application of the relevant BAL.

The minimum required APZs for the long-term sites were subsequently determined from Table A1.12.3 of PBP.

As the Community Centres have a floor area of >500m² we have applied the requirements for Places of Public Assembly (s8.3.11). Therefore, the minimum APZ was subsequently determined from Table A1.12.1 of PBP.

The proposed building footprints and dwelling sites were found to exceed the corresponding minimum required APZs.

The APZs consist of maintained grounds within the subject property and existing public road roads.

Construction Level Compliance

The highest Bushfire Attack Level to the proposed dwelling sites was determined from Table A1.12.6 of PBP.

The buildings on the proposed dwelling sites are required to comply with the relevant Bushfire Attack Level as shown on the attached Bushfire Attack Level Overlay. The highest Bushfire Attack Level applies to the entire building.

6.0 Aerial view of the subject allotment



Figure 02: Aerial view of the overall subject site and surrounding area 140m assessment area (blue dotted line)

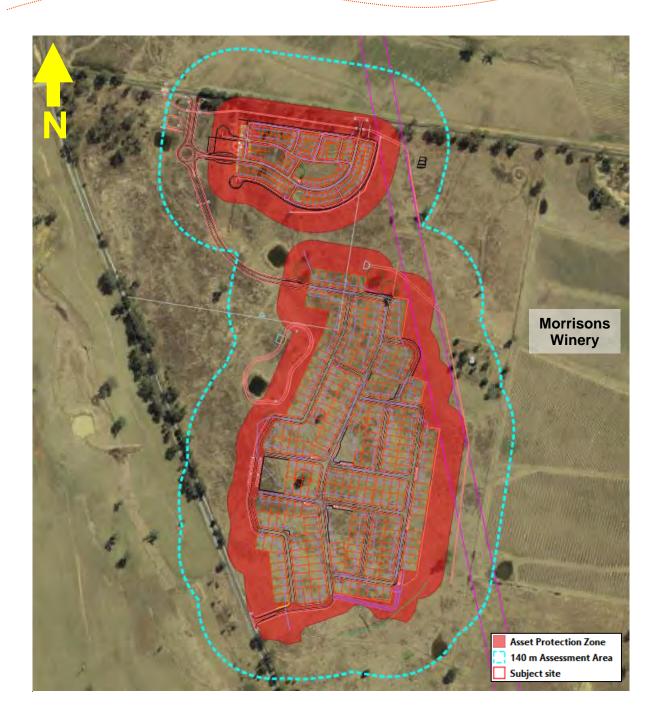


Figure 03: Aerial view of the overall subject site and surrounding area

7.0 Site Assessment

A representative of Building Code & Bushfire Hazard Solutions completed an inspection of the subject site and surrounding area on 24th May 2023.

In addition, the following external data sources have been relied upon for the site assessment:

- Aerial imagery of the subject area (NSW Spatial Services);
- 1 metre contour mapping of the subject area (Elevation and Depth Foundation Spatial Data

 Geoscience Australia)
- NSW Planning Portal Spatial Viewer
- Vegetation mapping (NSW Vegetation)
- NSW Bush Fire Prone Land (NSW Rural Fire Service)

7.01 Location

The subject site comprises of two (2) existing allotments known as 313 Magpie Lane, Galambine and legally identified as Lot 1 DP 174385 and Lot 1 DP 1003242. The site is currently used for agricultural and grazing purposes.

The proposed long term dwelling sites and associated infrastructure are located centrally within the site. The proposed short term sites are located in the northern portion of the site, adjacent Magpie Lane.

The subject site is located within Mid-Western Regional Council and zoned 'RU4: Primary Production Small Lots'.

The subject property has street frontage to Magpie Lane to the north, Guntawang Road to the southwest and abuts private rural allotments to the east.

7.02 Vegetation

The vegetation identified a posing a hazard to the development site is within neighbouring properties and the subject property in all directions.

In accordance with Appendix 1 'Site Assessment Methodology' of PBP we have undertaken an assessment of all vegetation formations within 140 metres of the development site for each aspect as per Keith (2004).

The vegetation posing a hazard was found to be grazed land or vineyards. Due to an infrequency of management of these areas a conservative assessment has been applied.

For the purpose of assessment under PBP we have determined the vegetation posing a hazard to be Grassland.

To the south of the long term sites there is a mapped 2nd order watercourse. The native vegetation in this area is mapped as Boxgum Woodland. While it acknowledged that the vegetation is not currently present, for the purpose of the assessment under PBP we have allowed for riparian planting and conservatively determined the vegetation to this aspect to be Woodland.

Figure 04 shows the vegetation assessment within 140 metres of the habitable building sites (development footprint).



Figure 04: Vegetation Assessment



Photograph 01: View south into the northern portion of the site



Photograph 02: View west into the neighboring allotment



Photograph 03: View across the southern portion of the site



Photograph 04: View west into the neighboring allotment

7.03 Slope and Topography

The slope of the land under the classified vegetation has a direct influence on the forward rate of spread, fire intensity and radiant heat exposure. The effective slope is considered to be the slope under the classified vegetation which will most significantly influence bushfire behaviour toward the development site.

In accordance with A1.4 'Determine slope' of PBP the slope assessment is to be derived from the most detailed contour data available.

The slope that would **most significantly** influence bushfire behaviour was determined from topographic imagery (1 metre contours sourced from ELVIS - Geoscience Australia) to be:

- \triangleright 0 5 degrees down slope within the hazard to the north, south and west
- O degrees and up slope within the hazard to the east

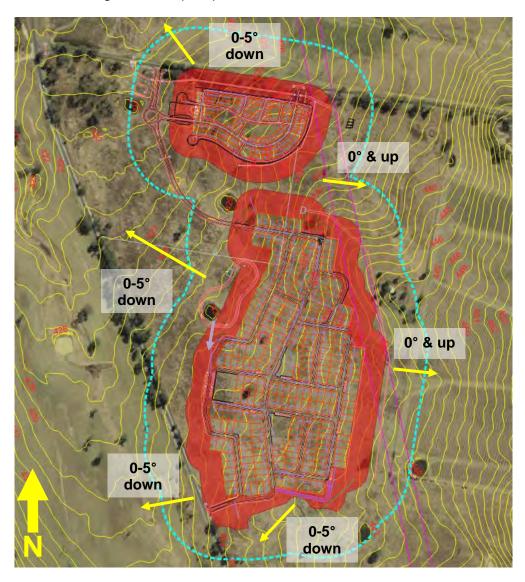


Figure 05: Extract from ELVIS showing 1 metre contours

7.04 Fire Weather

All development which attracts an Asset Protection Zone under PBP requires the identification of the relevant Forest Fire Danger Index (FFDI). The FFDI required to be used for development assessment purposes is based on the local government boundaries, being Mid-Western Regional Council's in this instance.

In accordance with the NSW Rural Fire Service publication 'NSW Local Government Areas FDI' (2017) Mid-Western Regional Council's form part of the Southern Riverina Fire Weather District and attracts an FFDI of 80.

As there are identified grassland hazards, Table 5.1.4a of PBP was used to determine a Grassland Fire Danger Index (GFDI) of 110.

7.05 Fire History

There are areas within NSW that have significant fire history and are recognised as known fire paths. While the fire history is more commonly considered as part of strategic planning (to ensure future development is not exposed to an unacceptable risk), it is useful to consider at a Development Application phase to ensure the land is suitable for development in the context of bushfire risk.

In this instance there have been no wildfires recorded within the immediate area (source NPWS Fire History dataset). The closest recorded wildfire was found to have a small burn area and located >4.7 kilometres to the west of the subject site (2006-07).

The subject site is therefore <u>not</u> considered to be within a known fire path. Furthermore, in consideration of the previous bushfire history the likelihood of a bushfire occurring within the immediate area is considered unlikely.



Figure 06: Aerial view of the subject area with previous wildfire history layer (source NPWS Fire History)

8.0 Bushfire Assessment

8.01 Planning for Bush Fire Protection - 2019

Properties considered to be affected by possible bushfire impact are determined from the local Bushfire Prone Land Map as prepared by Council and or the Rural Fire Service.

The subject site is not depicted on Council's Bushfire Prone Land Map as being 'bushfire prone' and therefore the application of Planning for Bush Fire Protection is not formally triggered.

As part of Pre-DA consultation with Council they advised:

Despite the site not being mapped as BFPL, bushfire is clearly a high risk for the subject site and this will need to be properly assessed – it is strongly recommended that Bushfire Threat Assessment Report is prepared for assessment and is to include onsite measures as well as an evacuation plan.

The proposal must therefore conform to the aim and objectives detailed in Chapter 1 'Introduction' and the specific objectives and bushfire protection measures detailed in Chapter 6 'Special Fire Protection Purpose Developments' of PBP.

7.02 Specific Objectives

The following table lists the specific objectives for Special Fire Protection Purpose development in accordance with section 6.2 of PBP applicable to the proposal and our comments on compliance or otherwise.

Specific Objective	Comment
minimise levels of radiant heat, localised smoke and ember attack through increased APZ, building design and siting;	The proposal exceeds the relevant minimum required Asset Protection Zones.
provide an appropriate operational environment for emergency service personnel	Large managed areas, including proposed roads, are located between the hazards and the proposed dwelling sites.
during firefighting and emergency management;	These features between the identified hazards and proposed dwelling sites provide an appropriate operational environment for emergency service personnel.

Specific Objective Comment ensure the capacity of existing Guntawang Road has a carriageway of 7.5 metres exceeding the requirements for non-perimeter roads as described in infrastructure (such as roads and utilities) can accommodate Table 6.8b of PBP. the increase in demand during Guntawang Road also provides egress to the north to the emergencies as a result of the township of Gulgong and the township of Mudgee to the south. development; and Magpie Lane also provides access to Castlereagh Highway to the east which provides an alternative route to the townships of Gulgong and Mudgee. This access route does not travel through areas of Forest, Woodland or Scrub. Furthermore, in consideration of the low risk posed to the proposed dwelling sites a late large scale evacuation due to bushfire is considered unlikely. The proposal will provide adequate water supply by a hydrant system. This assessment includes a recommendation that a Bushfire ensure emergency evacuation Emergency Management Plan be prepared. procedures and management which provides for the special characteristics and needs of occupants.

8.03 Bushfire Protection Measures

Section 6.8 'Bush fire protection measures' of PBP outlines the specific Bushfire Protection Measures (BPMs) applicable to Special Fire Protection Purpose development, including APZs, Landscaping, Construction, Access, Services & Emergency Management Plan.

The following section addresses each BMP and the proposals compliance or otherwise.

Asset Protection Zones & Landscaping

Asset Protection Zones for new Special Fire Protection Purpose (SFPP) development are determined from Table A1.12.1 of PBP or bushfire design modelling achieving a radiant heat impact of no more than 10kW/m² at the closest point of the proposed dwelling sites and community facilities.

Dwelling sites within a caravan park are permitted to accommodate camping, moveable dwellings (caravans/ motor homes) or cabins. In the context of the application of Planning for Bush Fire Protection 2019 (PBP) these types of uses have different risk profiles and subsequently are assessed differently.

Manufactured homes and moveable dwellings have the capacity to comply with AS3959 and provided there is a mechanism to ensure future compliance with the corresponding Bushfire Attack Level (BAL) Asset Protection Zones (APZs) which meet ≤29kW/m² can be applied.

All proposed long-term sites will have a restriction requiring the application of the relevant BAL.

The minimum required APZs for the long-term sites were subsequently determined from Table A1.12.3 of PBP.

The minimum required APZs for the short-term sites were determined from Table A1.12.1 of PBP.

As the Community Centres have a floor area of >500m² we have applied the requirements for Places of Public Assembly (s8.3.11). Therefore, the minimum APZ was subsequently determined from Table A1.12.1 of PBP.

The proposed building footprints and dwelling sites were found to exceed the corresponding minimum required APZs.

The APZs consist of maintained grounds within the subject property and existing public road roads.

All Asset Protection Zones within the subject site will be maintained in accordance with an Inner Protection Area as detailed in Appendix 4 of *Planning for Bush Fire Protection* 2019 and the NSW Rural Fire Service publication 'Standards for Asset Protection Zones'.

Construction

It is proposed to establish a positive covenant / easement to ensure that the future buildings will be constructed to the appropriate construction standard under AS3959 or the NASH Standard.

The highest Bushfire Attack Level was determined from Table A1.12.6 of PBP.

The buildings are required to comply with the relevant Bushfire Attack Level as shown on the attached Bushfire Attack Level Overlay. The highest Bushfire Attack Level applies to the entire building.

Access

The subject site has street frontage to Magpie Land to the north and Guntawang Road to the southwest.

The proposal includes new internal roads inclusive of access to both Magpie Land to the north and Guntawang Road to the southwest.

The proposed new internal loop road will provide a minimum 6 metre carriageway exceeding the requirements for Non-Perimeter Roads as described in Table 6.8b of PBP.

Guntawang Road has a carriageway of 7.5 metres exceeding the requirements for non-perimeter roads as described in Table 6.8b of PBP.

Guntawang Road also provides egress to the north to the township of Gulgong and the township of Mudgee to the south. Magpie Lane also provides access to Castlereagh Highway to the east which provides an alternative route to townships of Gulgong and Mudgee. This access route does <u>not</u> travel through areas of Forest, Woodland or Scrub.

Persons seeking to egress the proposed dwelling sites will be able to do so via the proposed and existing road infrastructure.

It is proposed in lieu of a full perimeter road around proposed long term sites 1173 - 1179, perimeter access will be provided by a perimeter fire trail. The separate access / egress provides through access for emergency services whilst residents have separate access / egress to the site. This will allow attending services to access the riparian hazard from both the proposed road network and the proposed fire trail allowing for greater coverage.

Access for fire services and opportunities for occupant evacuation are considered adequate for this development.

Services - Water, electricity & gas

The subject site contains various static water supplies.

The subject property will have a hydrant system, supplied by three 200kL water tanks, to service the proposed new sites in accordance with Table 6.8c PBP. The spacing, design, sizing, flows and pressures of the hydrant system must comply with AS2419.1-2021. Hydrants are not permitted within the carriageway of any road.

The proposed water supply is considered adequate for the replenishment of attending fire services.

Recommendations will be included to ensure compliance with any new electricity and gas services.

Bushfire Emergency Management Plan

The intent of the Bushfire Emergency Management Plan measure is to provide suitable emergency and evacuation arrangements for occupants of SFPP developments.

This assessment includes a recommendation that a Bushfire Emergency Management Plan be prepared. This recommendation satisfies the acceptable solutions detailed in Table 6.8d of PBP.

8.04 Aim & Objectives

The following table details the aim and objectives of *Planning for Bush Fire Protection* 2019 and the proposals ability to comply.

Aim / Objective Comment

The aim of PBP is to provide for the protection of human life and minimise impacts on property from the threat of bush fire, while having due regard to development potential, site characteristics and protection of the environment. With the inclusion of the recommendations made herein it is of our opinion that the aim of PBP has been satisfied.

(i) afford buildings and their occupants protection from exposure to a bush fire;

The proposed dwelling sites exceed the minimum required APZ.

It is proposed to establish a positive covenant / easement to ensure that the future buildings will be constructed to the relevant construction standard under AS3959 or the NASH Standard.

The proposed APZs in conjunction with the application of the corresponding BAL will afford buildings and their occupant's protection from a bushfire / grassfire.

Objective	Comment
(ii) provide for a defendable space to be located around buildings;	The proposed dwelling sites exceed the minimum required APZs. A suitable defendable space is provided.
(iii) provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings;	The proposed APZs in conjunction with the application of the corresponding BAL will prevent the likely fire spread to future buildings.
(iv) ensure that appropriate operational access and egress for emergency service personnel and occupants is available;	The proposed roads provide direct vehicle access to the proposed dwelling sites.
(v) provide for ongoing management and maintenance of bush fire protection measures, (BPMs); and	The Asset Protection Zones within the subject site are to be maintained in accordance with the NSW Rural Fire Service's document 'Standards for Asset Protection Zones' and Appendix 4 of <i>Planning for Bush Fire Protection</i> 2019. Any new landscaping is to comply with the
	provisions of Appendix 4 of PBP.
(vi) ensure that utility services are adequate to meet the needs of firefighters.	The proposed water supply is adequate for the replenishment of attending fire services.

It is of our opinion that the proposal can satisfactorily comply with the aim and objectives of *Planning for Bush Fire Protection* 2019.

9.0 Recommendations

The following recommendations are provided as the minimum necessary for compliance with *Planning for Bush Fire Protection* – 2019. Additional recommendations are provided to supplement these minimum requirements where considered necessary.

General

 That the proposed development is to comply with the Master Plan prepared by Adw Johnson, dwg ref: 240401-PSK-002-M, version M, dated 10.01.2024 (attached).

Asset Protection Zones

- 2. That all grounds within the subject site identified as 'Asset Protection Zone' on Figure 03 of this report shall be maintained as an Inner Protection Area as detailed in the NSW Rural Fire Service's document 'Standards for Asset Protection Zones' and Appendix 4 of Planning for Bush Fire Protection 2019.
- 3. That a Fuel Management Plan be established to ensure the ongoing management of the APZs.

Emergency Management

4. That a bushfire emergency / evacuation plan be prepared consistent with the NSW Rural Fire Service Guidelines for the *Preparation of Emergency / Evacuation Plan*.

Landscaping

5. That any new landscaping within the proposed new dwelling sites or Asset Protection Zones is to comply with Appendix 4 of *Planning for Bush Fire Protection* 2019

Construction

6. That a positive covenant / easement be established to ensure that the future buildings be constructed to the relevant construction standard under AS3959 or the NASH Standard as shown on the attached Bushfire Attack Level Overlay.

Services

Water:

- 7. That the new internal hydrant system is to comply with the requirements detailed in Table 6.8c of Planning fir Bush Fire Protection 2019, specifically:
 - fire hydrant spacing, design and sizing comply with the relevant clauses of AS 2419.1:2021;
 - hydrants are not located within any road carriageway;
 - fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2021.
 - all above-ground water service pipes external to the building are metal, including and up to any taps.
 - fire hose reels are constructed in accordance with AS/NZS 1221:1997 Fire hose reels, and installed in accordance with the relevant clauses of AS 2441:2005 Installation of fire hose reels.

Electricity:

- 8. Any new electrical services must comply with Table 6.8c of *Planning for Bush Fire Protection* 2019, specifically:
 - where practicable, electrical transmission lines are underground.
 - where overhead electrical transmission lines are proposed:
 - lines are installed with short pole spacing (30 metres), unless crossing gullies, gorges or riparian areas; and
 - no part of a tree is closer to a power line than the distance set out in ISSC3 *Guideline for Management Vegetation Near Power Lines*.

Gas:

- 9. Any new gas services must comply with Table 6.8c of *Planning for Bush Fire Protection* 2019, specifically:
 - reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 - The storage and handling of LP Gas, the requirements of relevant authorities, and metal piping is used;
 - all fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side;
 - connections to and from gas cylinders are metal;
 - if gas cylinders need to be kept close to the building, safety valves are directed away from the building and at least 2m away from any combustible material, so they do not act as a catalyst to combustion;
 - polymer-sheathed flexible gas supply lines to gas meters adjacent to buildings are not to be used; and
 - above-ground gas service pipes external to the building are metal, including and up to any outlets.

Access

- 10. That the new roads shall comply with the requirements for Non-Perimeter Roads as detailed in Table 5.3b of *Planning for Bush Fire Protection*, specifically:
 - property access roads are two-wheel drive, all-weather roads;
 - traffic management devices are constructed to not prohibit access by emergency services vehicles;
 - maximum grades for sealed roads do not exceed 15 degrees and an average grade of not more than 10 degrees or other gradient specified by road design standards, whichever is the lesser gradient;
 - the capacity of perimeter and non-perimeter road surfaces and any bridges/causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes); bridges/ causeways are to clearly indicate load rating.
 - hydrants are located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression;
 - hydrants are provided in accordance with the relevant clauses of AS 2419.1:2005 - Fire hydrant installations System design, installation and commissioning;
 - minimum 5.5m carriageway width kerb to kerb;
 - parking is provided outside of the carriageway width;
 - curves of roads have a minimum inner radius of 6m;
 - the road crossfall does not exceed 3 degrees; and
 - a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.
- 11. The perimeter fire trail shall comply with the requirements detailed in *NSW Fire Trail Standards* (Version 2.0 November 2023).

10.0 Conclusion

The proposal is development for the purposes of a caravan park, comprising of one-hundred and forty-seven (147) short-term sites and two-hundred and forty (240) long-term sites at 313 Magpie Lane. Galambine. The short-term area and sites are intended to be utilised predominantly for tourism purposes, whilst the long-term sites will be predominantly utilised for accommodation for workers in the mining and agricultural sector who are undertaking work in the local area, or as an alternate form of affordable housing.

The subject site is not depicted on Council's Bushfire Prone Land Map as being 'bushfire prone' and therefore the application of Planning for Bush Fire Protection is not formally triggered.

As part of Pre-DA consultation with Council they advised:

Despite the site not being mapped as BFPL, bushfire is clearly a high risk for the subject site and this will need to be properly assessed – it is strongly recommended that Bushfire Threat Assessment Report is prepared for assessment and is to include onsite measures as well as an evacuation plan.

This report has been prepared to address the relevant specifications and requirements of Planning for Bush Fire Protection - 2019 (PBP) for Special Fire Protection Purpose (SFPP) development.

The proposal satisfies all relevant specifications and requirements of PBP.

In accordance with the bushfire safety measures contained in this report, and consideration of the site specific bushfire risk assessment it is our opinion that when combined, they will provide a reasonable and satisfactory level of bushfire protection to the subject development.

We are therefore in support of the development.

Should you have any enquiries regarding this project please contact our office.

Prepared by Building Code & Bushfire Hazard Solutions



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11.0 Annexure 01

List of Referenced Documents

Australian Building Codes Board (2022). *National Construction Code Volume One - Building Code of Australia*. ABCB

Australian Building Codes Board (2022). National Construction Code Volume Two - Building Code of Australia. ABCB

ELVIS -Elevation -*Foundation Spatial Data*. Elevation.fsdf.org.au. Available at: http://elevation.fsdf.org.au/

Keith, D. (2004). "Ocean Shores to Desert Dunes" Department of Environment and Conservation, Sydney

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NSW Rural Fire Service (2019). *Planning for Bush Fire Protection. A Guide for Councils, Planners, Fire Authorities and Developers*.

Rural Fire Service NSW (2005). Standards for Asset Protection Zones

Standards Australia (2018). AS3959:2018 Construction of buildings in bushfire-prone areas.

Standards Australia (2014). AS/NZS 1596 The storage and handling of LP Gas

Acknowledgements to:

Geoscience Australia

Nearmap

NSW ePlanning Portal

NSW State Vegetation Type Map

Attachments

Attachment 01: Proposed Masterplan

Attachment 02: Bushfire Attack Level Overlay

