

Bushfire Hazard Assessment

Residential Subdivision

2 Bullecourt Ave Milperra NSW 2214

Prepared for:

Mirvac Residential (NSW) Developments Pty Ltd

Version V1

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Client Details:	Mirvac Residential (NSW) Developments Pty Limited 200 George Street, Sydney NSW 2000
Project Address	2 Bullecourt Ave Milperra NSW 2214
Project Number:	J3738 - 2 Bullecourt Ave Milperra

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1. Summary

Table 1 is a summary of compliance with relevant documents and approaches to limit bushfire attack and meet the requirements of the NSW planning framework for new development in Bushfire Prone Areas.

Table 1: Summary

Planning for Bushfire Protection 2019 Classification	Residential Subdivision
NCC Classification	Not Applicable
Location	2 Bullecourt Ave Milperra NSW 2214
Local Government Area	Canterbury Bankstown Council
Can this proposal comply with AS3959:2018	Yes, the proposed lots can comply with the required 29kW/m ² radiant heat levels
Does this development comply with the requirements of <i>Planning for Bushfire Protection 2019</i>?	Yes
Does this development comply with the Aims and objectives of <i>Planning for Bushfire Protection 2019</i>?	Yes
Is the proposal for a State Significant Development (SSD)	No
Is referral to the NSW RFS required?	No
Is a Bush Fire Safety Authority (BFSA) required?	No

Assessment Framework	<input checked="" type="checkbox"/> <i>Planning for Bushfire Protection 2019</i> :
	<input checked="" type="checkbox"/> Meets the deemed to satisfy provisions
	<input type="checkbox"/> Alternate solution/ performance-based assessment

2. Introduction

Blackash Bushfire Consulting has been engaged by Beveridge Williams on behalf of Mirvac Residential (NSW) Developments Pty Limited, to assess the proposed residential subdivision of land at 2 Bullecourt Ave Milperra (the site), legally known as Lot 2 DP1291984 (refer Figure 1).

The site is zoned as R1 - General Residential with areas of RE1 (Public Recreation), C2 - Environmental Conservation and B1 – Neighbourhood Centre under the Canterbury Bankstown Local Environmental Plan 2014 (LEP), which permits the application of dwelling houses with consent.

The site is located on the interface between the residential suburbs and Central Business District of Milperra (see Figure 1), within the Canterbury Bankstown Council Local Government Area. The site is approximately 20 ha in size and houses the Bankstown Campus of Western Sydney University.

The site has a range of existing uses including the Western Sydney University Bankstown Campus, Tennis First Academy, sports fields and has areas of remnant vegetation onsite. The site adjoins existing residential development, commercial and industrial properties and the South-Western Motorway to the south.

The site is NOT on designated Bushfire Prone Land as per Canterbury Bankstown Councils Bushfire Prone Land (BFPL) map (Figure 2) and therefore does not require referral to the NSW Rural Fire Service (RFS).

The NSW Planning Portal indicates that the nearest Bush Fire Prone Land (BFPL) is approximately 600 metres to the south-west. Therefore, the configuration of the proposed subdivision should have adequate provision for Asset Protection Zones (APZ) and other requirements of *Planning for Bushfire Protection 2019* (PBP).

Residential subdivision on designated BFPL would trigger the integrated development referral requirements of Section 4.46 of the *Environmental Planning and Assessment Act, 1979* (EPA Act) and require assessment by the NSW RFS under Section 100B of the *Rural Fires Act 1997* (RF Act), if it were mapped as BFPL. However, as the site is not affected by designated BFPL, the assessment has been completed against Section 4.14 of the EPA Act.

This assessment has been prepared by Mark Hawkins, Senior Bushfire Specialist and reviewed by Mr. Lew Short, Principal at Blackash Bushfire Consulting (Level 3 FPAA BPAD-A Certified Practitioner No. BPD-PA-16373) who is recognised by the NSW RFS as qualified in bushfire risk assessment and has been accredited by the Fire Protection Association of Australia as a suitably qualified consultant to undertake alternative solution proposals.

3. Bushfire Prone Land

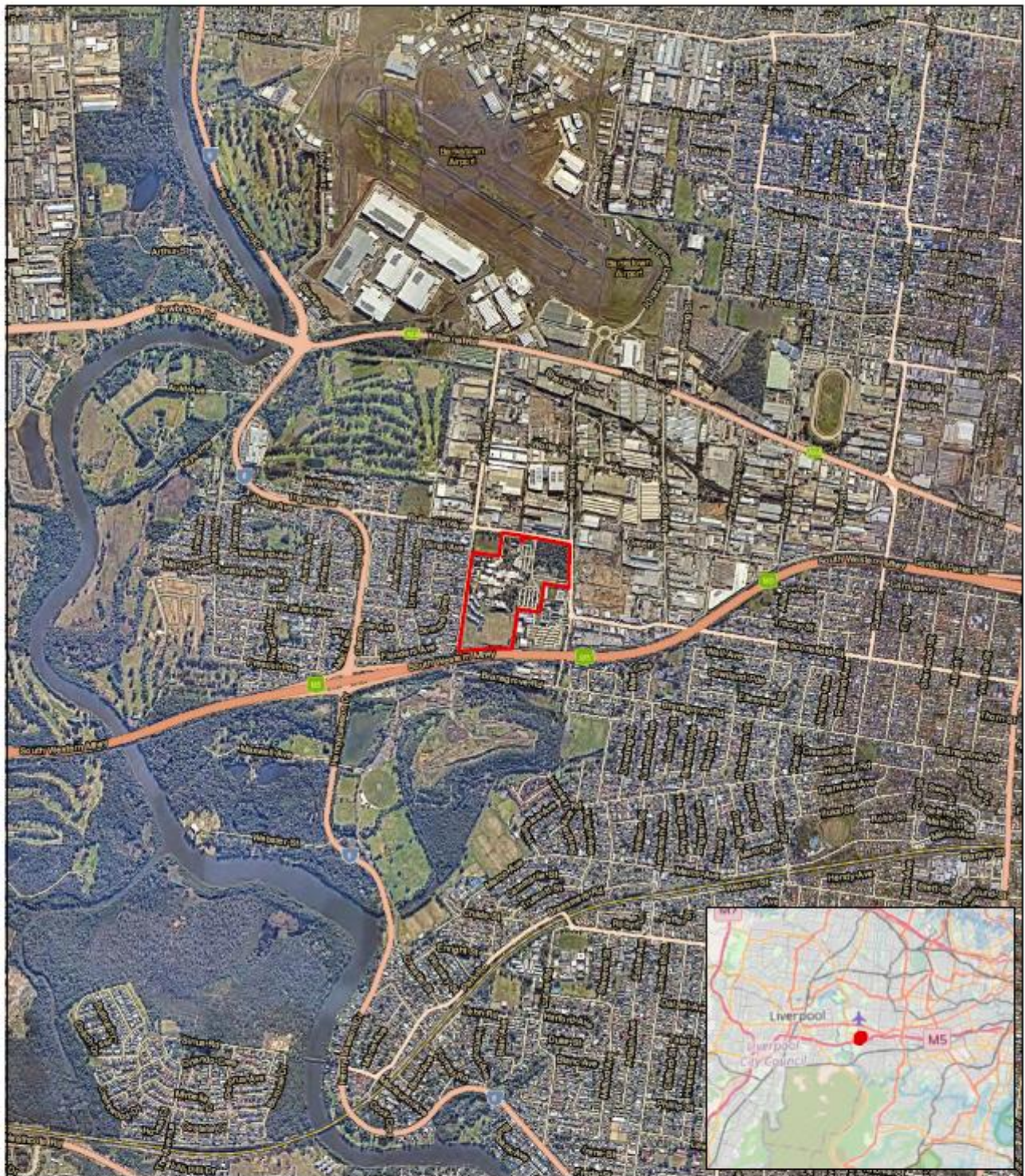
The site is NOT identified as 'bush fire prone land' (see Figure 2) for the purposes of Section 10.3 of the EPA Act and the legislative requirements for development on bush fire prone lands are not applicable.

Bush fire prone land maps provide a trigger for the development assessment provisions and consideration of sites that are bushfire prone. Bushfire prone land (BPL) is land that has been identified by council, which can support a bushfire or is subject to bushfire attack. Bushfire prone land maps are prepared by local council and certified by the Commissioner of the NSW RFS. However, as the site is **not** affected by designated BFPL, the assessment has been completed against Section 4.14 of the EPA Act.


4. Legislative Framework

As the site is **not** affected by designated BFPL, the assessment has been completed against Section 4.14 of the EPA Act. The application has been completed having regard to the requirements of PBP as though the application was an Integrated Development, under s.4.46 of the EPA Act. However, as the site is not Integrated development, Canterbury Bankstown Council do not require General Terms of Approval or a Bushfire Safety Authority from the NSW RFS.

As a new residential subdivision, the application is able to demonstrate that the proposal can achieve a Bushfire Attack Level (BAL) of a maximum of BAL-29 on all new lots. This can be achieved on all proposed lots and is demonstrated in this report.



Legend

 Subject Land



Date: 20/09/2024

0 250 500

Metres

Coordinate System: GDA2020 MGA Zone 56

Imagery: © Nemap

Figure 1: Location

5. Site Context and Proposed Development

This application seeks approval for the residential subdivision into stages with suitable building envelopes, a commercial lot housing an existing child care centre and public drainage reserves. Under the Canterbury Bankstown LEP the development area of the site supports the proposed subdivision and residential development.

The total land allocated to the proposed residential subdivision is approximately 20 ha.

- Stage 1 subdivision;
- Stages 2A & 2B will be a staged DA; Stage 2A creates 9 residential lots and Stage 2B creates 2 residential lots;
- Stage 3 will be a standalone DA;
- Stage 4 will be a standalone DA;
- Stage 5 will be a standalone DA;
- Stage 6 will be a standalone DA; and
- A Commercial lot will be created as a separate lot as part of the stage 1 subdivision to house the Western Sydney University Early Learning Bankstown.

The development consent includes the following scope of works:

- Staged delivery of Torrens Title Subdivision
- Site clearing
- Demolition of existing structures
- New road layout
- New services
- Stormwater and drainage infrastructure
- Landscaping works

The site has a range of existing uses including the Western Sydney University Bankstown Campus, Tennis First Academy, sports fields and has areas of remnant vegetation onsite. The site adjoins existing residential development, commercial and industrial properties and the South-Western Motorway to the south.

The surrounding landscape further to the south has large cleared and disturbed areas associated with the Kelso Waste facility and riparian vegetation associated with a tributary of the Georges River.



Legend

- Watercourse
- Cadastre
- Subject Land

- Bushfire Prone Land**
- Vegetation Category 1
 - Vegetation Buffer

Date: 20/09/2024
 0 125 250
 Metres
 Coordinate System: GDA2020 MGA Zone 56
 Imagery: © Nearmap

Figure 2: Bushfire prone land ma

6. Bushfire Threat Assessment

6.1. Methodology

PBP provides a methodology to determine the bushfire threat and commensurate size of any asset protection zone (APZ) that may be required to offset possible bushfire attack. These elements include the potential hazardous landscape that may affect the site and the effective slope within that hazardous vegetation. Although not formally required, the APZ requirements in this assessment are in accordance with PBP and are based on keeping radiant heat levels at new buildings below 29kW/m² (BAL-29).

The following assessment is prepared in accordance with Section 100B of the RF Act, Clause 44 of the RF Reg and PBP. This assessment is based on the following resources:

- Planning for Bush Fire Protection (NSW RFS, 2019);
- Canterbury Bankstown Council Bushfire Prone Land Map;
- Aerial mapping; and
- Detailed GIS and Site analysis.

The methodology used in this assessment is in accordance with PBP and is outlined in the following sections.

6.2. Bushfire Hazard

An assessment of the Bushfire Prone Land is necessary to determine the application of bushfire protection measures such as APZ locations and future building construction levels. The vegetation formations (bushfire fuels) and the topography (effective slope) combine to create the bushfire threat that may affect bushfire behavior at the site, and which determine the planning and building response of PBP 2019.

The site is not exposed to a bushfire hazard.

6.3. Fire Danger District

The fire weather is dictated by PBP and assumes a credible worst-case scenario and an absence of any other mitigating factors relating to aspect or prevailing winds. The Canterbury Bankstown Council LGA has a Forest Fire Danger Index (FFDI) of 100, which has been applied as per PBP.

6.4. Vegetation Assessment

The RF Regulation requires a classification of the vegetation on and surrounding the property (out to a distance of 140 metres from the boundaries of the property) in accordance with the system for classification of vegetation contained in PBP 2019.

Predominant vegetation is classified by structure or formation using the system adopted by Keith (2004) and by the general description provided in PBP.

As per Figure 4, the nearest vegetation to the site is Estuarine Swamp Oak Twig-rush Forest (Forested Wetland) vegetation to the south (that has NOT been mapped as BFPL).

6.5. Slopes Influencing Bushfire Behavior

The RF Reg requires an assessment of the slope of the land on and surrounding the property out to a distance of 100 metres from the boundaries of the property or from the proposed development footprint.

The 'effective slope' influencing fire behaviour approaching the sites has been assessed in accordance with the methodology specified within PBP 2019. The effective slope is the slope of the ground under the hazard (vegetation). It is not the slope between the vegetation and the building (slope located between the asset and vegetation is the site slope).

The effective slopes adjoining the proposed residential subdivision comprise a range of downslopes and are demonstrated in Figure 3.

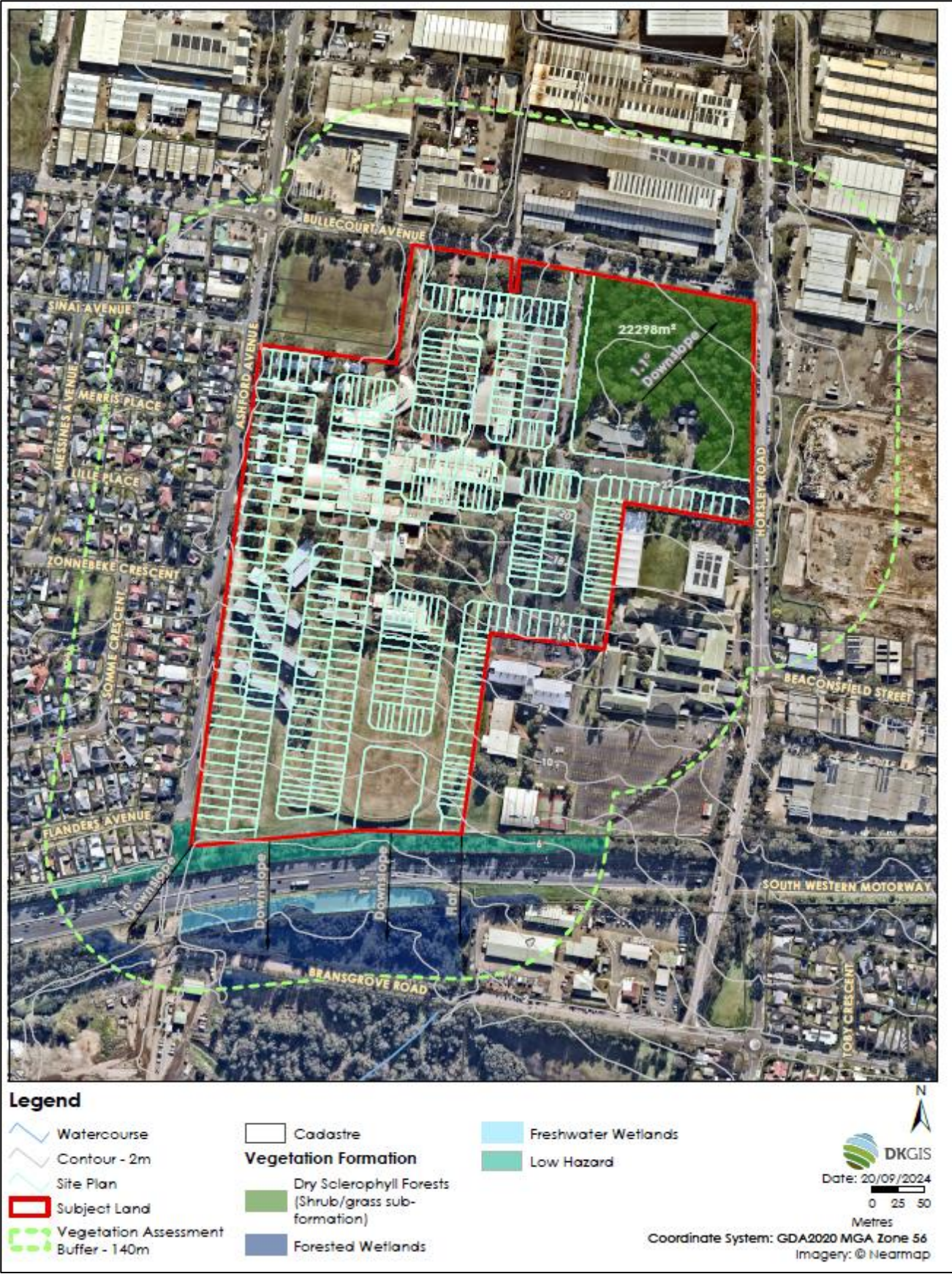


Figure 3: Vegetation & Slope Analysis

7. Bushfire Protection Measures

PBP recognises the unique attributes of an application and promotes detailed site analysis and the application of a combination of bushfire protection measures (BPMs) to achieve an acceptable outcome.

The BPMs work in combination to provide a suite of measures that meet the aim and objective and Chapter 5 of PBP 2019. The BPMs are shown in Figure 4.

Appropriate combinations depend upon geographic location and site circumstances.

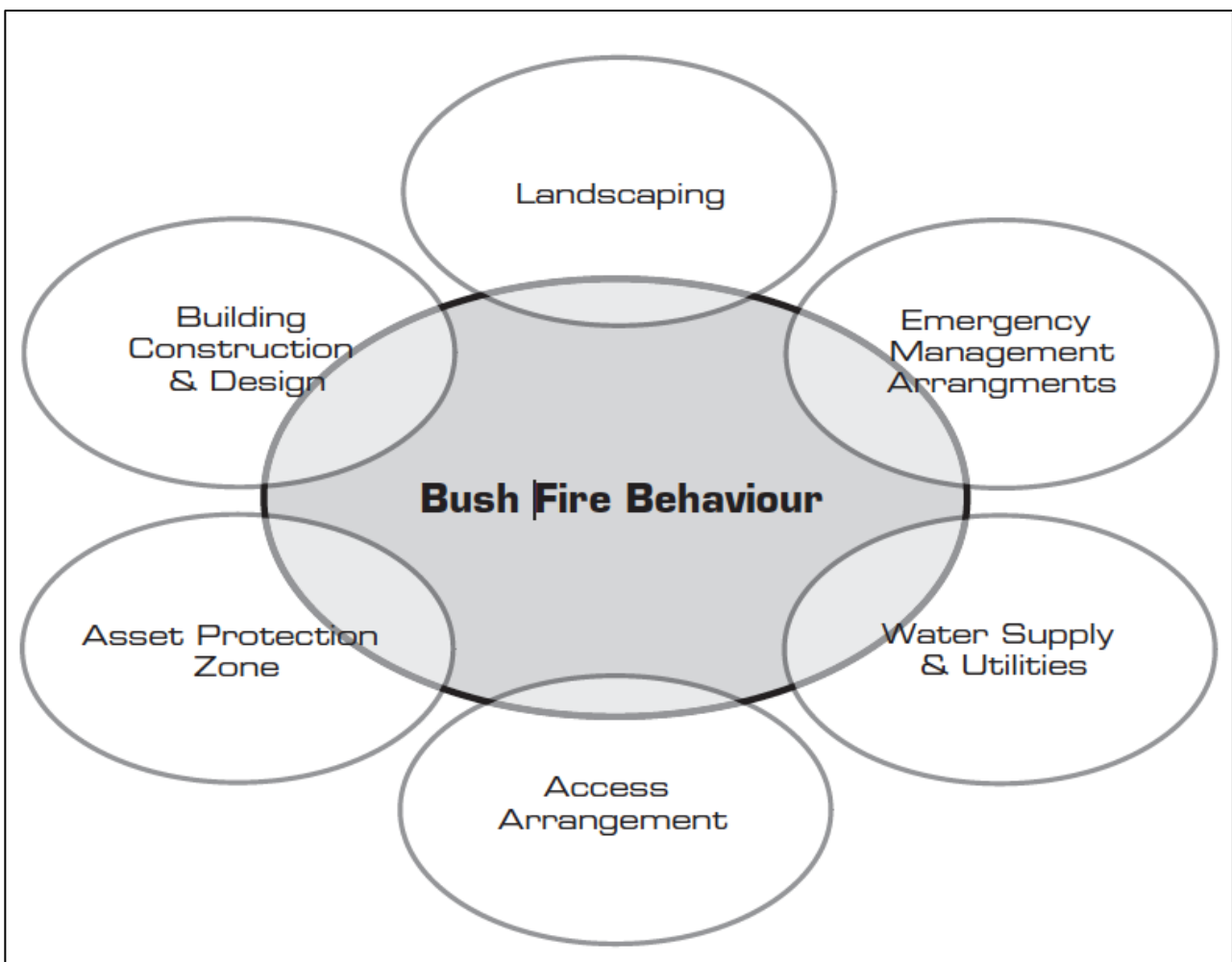


Figure 4: Bushfire Protection Measures in Combination (source PBP p. 26).

7.1. Asset Protection Zones

For proposed new residential subdivisions, PBP requires that a minimum separation is provided in the form of APZ. The APZ is a fuel-reduced, physical separation between buildings and bushfire hazards. For residential developments, APZ requirements are based on keeping radiant heat levels at buildings below 29kW/m² as the maximum exposure on all sides of the building.

The proposed subdivision is not classified as BFPL and as such does not require APZs for the purposes of protection from bushfires.

7.2. Water Supply & Utilities

PBP (p. 47) requires that adequate services of water for the protection of buildings during and after the passage of a bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building.

Blackash have been advised that the proposed site will have access to reticulated water supply.

The provision of water, gas and electricity will be considered at the individual building stage which will be able to comply with PBP.

7.3. Access

The access arrangements have been assessed under the appropriate provisions for Residential Subdivision including the provision of "*perimeter roads are provided for residential subdivisions of three or more allotments*".

All Acceptable Solutions can be designed and implemented for the proposed subdivision development.

7.4. Bushfire Attack Levels

The Bushfire Attack Levels (BAL) is a means of measuring the ability of a building to withstand attack from bushfire. The form of bushfire attack and the severity will vary according to the conditions (FDI, vegetation, slope and setback) on the site.

The BAL assesses the severity of a building's potential exposure to ember attack, radiant heat and direct flame contact, using increments of radiant heat expressed in kilowatts per square metre, which is the basis for establishing the requirements for construction to improve protection of a building from potential

attack by a bushfire, as defined in *Australian Standard AS 3959-2009 Construction of buildings in bushfire-prone areas* (AS 3959-2018).

The proposed subdivision is not classified as BFPL and as such does not require BAL ratings for the purposes of protection from bushfires.

8. Recommendations

The following recommendation is not mandatory but has been made to ensure the proposed development remains compliant for future landscaping with *Planning for Bush Fire Protection 2019*:

NIL

9. Conclusion

This assessment has demonstrated that the site is not affected by BFPL.

In the authors professional opinion, the proposed development does not require the issue of a Bush Fire Safety Authority under Section 100B of the *Rural Fires Act 1997*. However, the bushfire protection measures demonstrated in this report comply with the aim and objectives of *Planning for Bush Fire Protection 2019* and therefore can be approved without referral to the NSW RFS.



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Appendix - 1 References

Councils of Standards Australia AS3959 (2018) – *Australian Standard Construction of buildings in bushfire-prone areas*

Councils of Standards Australia AS2419 (2017) – *Fire Hydrant Installations*

Keith, David (2004) – *Ocean Shores to Desert Dunes – The Native Vegetation of New South Wales and the ACT*. The Department of Environment and Climate Change

NSW Rural Fire Service (2015) *Guide for Bushfire Prone Land Mapping*

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

NSW Government (1979) *Environmental Planning and Assessment Act 1979*. NSW Government Printer.