

Bushfire Hazard Assessment

Residential Subdivision

2 Bullecourt Ave Milperra NSW 2214

Prepared for:

Mirvac Residential (NSW) Developments Pty Ltd

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15 October 2025



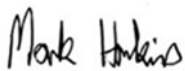
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Client Details:	Mirvac Residential (NSW) Developments Pty Limited 200 George Street, Sydney NSW 2000
Project Address	2 Bullecourt Ave Milperra NSW 2214
Project Number:	J3738 - 2 Bullecourt Ave Milperra

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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	Various including Class 1a residential.
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)	Yes
Is referral to the NSW RFS required?	Yes
Is a Bush Fire Safety Authority (BFSA) required?	Yes
Assessment Framework	☒ <i>Planning for Bushfire Protection 2019</i> : ☒ Meets the deemed to satisfy provisions ☐ Alternate solution/ performance-based assessment

2. Introduction

This Bushfire Hazard Assessment report is submitted to the Department of Planning, Housing and Infrastructure (the Department) on behalf of Mirvac Residential (NSW) Pty Ltd (the Applicant) in support of a State Significant Development Application (SSDA) for a staged residential development at 2 and 2A Bullecourt Avenue (the site).

The site is currently owned by Western Sydney University and is located within the Canterbury Bankstown LGA at 2 and 2A Bullecourt Avenue, Milperra, being legally described as Lot 2 in DP1291984 and Lot 1 in DP101147 (refer Figure 1).

The total site has an area of approximately 19.64ha and is the subject of numerous easements affecting the site, including two easements to drain water, easements for electricity and other purposes, and a right of carriageway.

Since the demolition of the previous buildings on the site, the site currently comprises:

- Existing at-grade car park (within Zone 4) repurposed as parking and hardstand area for the temporary sales office.
- Existing at-grade car park for the Childcare Centre (generally within the location of the future Road 2B).
- At-grade roads off Bullecourt Avenue.
- A large oval to the south.
- The Western Sydney University Early Learning Centre (Child-care centre).
- Vegetation of varying significance, including Cumberland Plain Woodland.

The site is bound by the M5 Motorway to the south, Ashford Avenue / existing residential dwellings to the west, Bullecourt Avenue / existing industrial development to the north, and Horsley Road / existing industrial development to the east. Adjoining the site along the southeastern boundary is Mount St Joseph Catholic College.

A substantial number of bus stops are located along Bullecourt Avenue and Horsley Road, servicing routes that connect passengers both within and beyond the LGA, including direct links to Bankstown Central (approximately 8.5km drive from the site), Westfield Burwood, and Westfield Miranda. While the nearest train line is the T8, accessible via East Hills, Panania, and Revesby stations, the T6 line at Bankstown Station can also be reached via bus services operating near the site.

A 3 metre high non-combustible, sound attenuation wall is situated between the site and the South-Western Motorway.

A small portion of the site is on designated Bushfire Prone Land as per Canterbury Bankstown Councils Bushfire Prone Land (BFPL) map (Figure 2) and therefore requires referral to the NSW Rural Fire Service (RFS). The proposed development includes several stages of residential subdivision and associated infrastructure. The RFS's assessment should be confined to the parts of the development that are identified as bushfire prone land.

Applying bushfire requirements to areas outside this designation is not consistent with a proportionate, risk-based assessment. The remainder of the site should not be unnecessarily burdened where no identifiable bushfire risk exists. The RFS Guidance Document "*Application of section 100B of the Rural Fires Act 1997 (Bush Fire Safety Authority)*" provides detail regarding the application of bush fire protection measures only on the bush fire prone land portion of the land.

The NSW Planning Portal indicates that the nearest Bush Fire Prone Land (BFPL) is a small remnant parcel of vegetation approximately 60 metres from the existing Child Care Centre.

The remainder of the residential subdivision has two-way roads positioned between the remnant of vegetation and the proposed allotments. Acceptable solution Asset Protection Zones (APZ) and other Bushfire Protection Measures have been provided to the remnant Classified vegetation. The proposal meets the requirements of Planning for Bushfire Protection 2019 (PBP).

Residential subdivision on designated BFPL triggers the integrated development referral requirements of Section 4.46 of the *Environmental Planning and Assessment Act, 1979* (EPA Act) and requires assessment by the NSW RFS under Section 100B of the *Rural Fires Act 1997* (RF 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

A small portion of the site is 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 applicable. However, the existing childcare centre is not affected by the designated Bushfire Prone Land.

Bush fire prone land maps provide a trigger for the development assessment provisions and consideration of sites that are bushfire prone. BFPL 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.

The vegetation within the site to the north of the existing Child Care has been mapped as Category 2 vegetation in recognition of its lower bush fire risk. The APZ widths for the existing Child Care have been in place for several years and were approved on the basis of the small size and shape of vegetation presenting a lower bushfire risk profile.

Category 1 BFPL is located to the south of the site, with only a small portion of the site falling within the 100-metre buffer.

The limited extent of BFPL within the site should inform a proportionate assessment by the RFS, with bushfire planning requirements applied only to those areas affected by the mapping, rather than the entire site.

4. Legislative Framework

The proposed subdivision of land is classified as Integrated Development under Section 4.46 of the Environmental Planning and Assessment Act 1979, as it triggers the need for a Bush Fire Safety Authority (BFSa) from the NSW Rural Fire Service under Section 100B of the Rural Fires Act 1997. A Bushfire Assessment Report has been prepared in support of this application, demonstrating compliance with *Planning for Bush Fire Protection* (PBP) 2019. The report identifies relevant bushfire hazards, establishes appropriate Asset Protection Zones, and confirms that access, water supply, and construction standards can be met in accordance with the requirements of the RFS. Accordingly, the application seeks the issue of a BFSa as part of the integrated development process.

The limited extent of BFPL within the site should inform a proportionate assessment by the RFS, with bushfire planning requirements applied only to those areas affected by the mapping, rather than the entire site.

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.



Figure 1: Location

5. Site Context and Proposed Development

The project will be delivered in stages and across two separate SSDA Projects, and comprises the construction of up to 430 dwelling houses, dual occupancies and attached dwellings, three (3) public parks, new roads and shared paths, civil infrastructure, a car park, and the management of conservation land.

Specifically, across the two SSDAs, consent is sought for:

- Tree removal
- Site remediation (excluding works carried out as category 2 remediation works)
- Construction of bulk earthworks, public roads and landscaping, and services
- Augmentation of existing services and road infrastructure
- Construction of three (3) public parks
- Construction of up to 430 dwelling houses
- Construction of a carpark to service the existing childcare centre and E1 Local Centre zoned land
- Subdivision resulting in up to 430 residential lots, infrastructure lots, and the creation of a community title lot for land zoned C2 Environmental Conservation and E1 Local Centre
- Conservation works including the management of >2Ha Cumberland Plain Woodland Species.

This SSDA comprises of all Civil works across the entirety of the site as well as the construction of all 62 dwellings in Stages 1 and 2 only, which are as follows:

- Stage 1 – Commencement of site-wide tree removal and land remediation, creation of two (2) super lots and total of 22 residential lots, and construction of 22 dwelling houses fronting Ashford Avenue. This will be the first stage to be delivered and will connect into the existing infrastructure that located within Ashford Avenue.
- Stage 2 – Creation of four (4) super lots, a new lot (Lot 25) across the RE1 Public Recreation zoned land, and 40 residential lots. This stage also involves the construction of 40 dwellings within Stage 2, and the construction of new roads and the new public park referred to in the Civil Plans as the 'Central Park'.
- Stage 3a – Creation of a new super lot, and the construction of perimeter roads surrounding the existing childcare centre, construction of a new car park to service the childcare centre and C2 Environmental Conservation zoned land. It is proposed all associated civil works required to enable the operation of the existing childcare centre will be delivered under this stage. The new traffic intersections at both Bullecourt Avenue and Horsley Road will be constructed.
- Stage 3b – Creation of three (3) lots to be delivered under a Community Title Scheme for the E1 Local Centre zoned land.
- Stage 4 – Creation of eight (8) super lots, a new lot (Lot 50) across the RE1 Public Recreation zoned land, and a new lot (Lot 49) across the SP2 Infrastructure zoned land. This stage also involves the

construction of new roads, the stormwater infrastructure Basin 1 and Basin 2, and the new public park referred to in the Civil Plans as the 'Southern Park', all to be dedicated to Council.

- Stage 5 – Creation of six (6) super lots and construction of new roads and civil works.
- Stage 6 – Creation of nine (9) super lots and a new lot (70) across the RE1 Public Recreation zoned land. This stage also involves the construction of new roads and civil works, and the new public park referred to in the Civil Plans as the 'Northern Park', all to be dedicated to Council.
- Stage 7 – Creation of six (6) super lots and construction of road and civil works.

The second SSDA will seek consent for all outstanding works in stages 3 to 7, which are as follows:

- Stage 3 – Construction of the Childcare Alterations and Additions and Construction of a permanent structure for Commercial use.
- Stage 4, 5, 6 & 7 – Creation of the subsequent subdivision into residential lots and construction of dwellings.

Appendix 2 details the plans for the proposed residential subdivision respectively. No increase to the building footprint of the existing Child Care development or change to the approved 40 metre wide APZs is proposed.



Figure 2: Bushfire prone land map

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. For residential subdivision, the APZ requirements 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 BFPL 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.

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 3, the nearest vegetation is a small stand of remnant Cumberland Dry Sclerophyll Forest vegetation to the north of the Child Care centre. This small area of isolated and remnant vegetation will be retained. However, the broader landscape has been developed and is not mapped as bushfire prone, resulting in a minimal and highly localised bushfire risk. To the south, the nearest vegetation to the site is Estuarine Swamp Oak Twig-rush Forest (Forested Wetland) vegetation beyond the South Western Motorway.

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 within the remnant vegetation comprise 1.1 degree downslopes and also to the south 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.

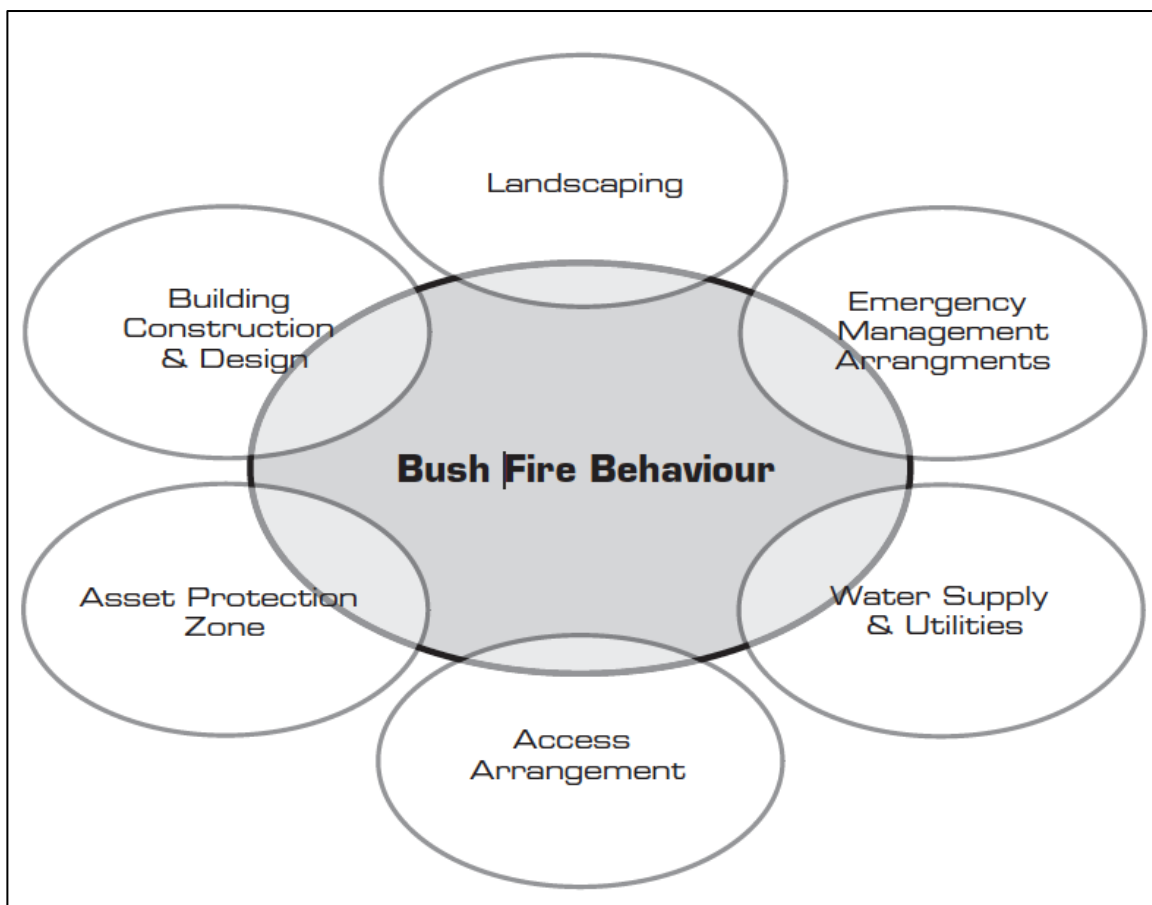


Figure 4: Bushfire Protection Measures in Combination (source PBP p. 26).

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 – see Figure 5.

The existing and approved APZ for the existing Child Care centre will continue to be provided – see Figure 6.

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 however perimeter roads are provided by the existing surrounding road network.

The access arrangements for the existing Child Care have been in place for several years and have already been assessed and approved to comply with PBP. Some changes to carparking will be proposed but will result in a benefit to the existing access. 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 affected residential lots as identified see Figure 7, should be constructed to a minimum of BAL 12.5, in accordance with the identified bushfire exposure. No specific bushfire construction requirements apply to the remainder of the site, which is not subject to bushfire risk.

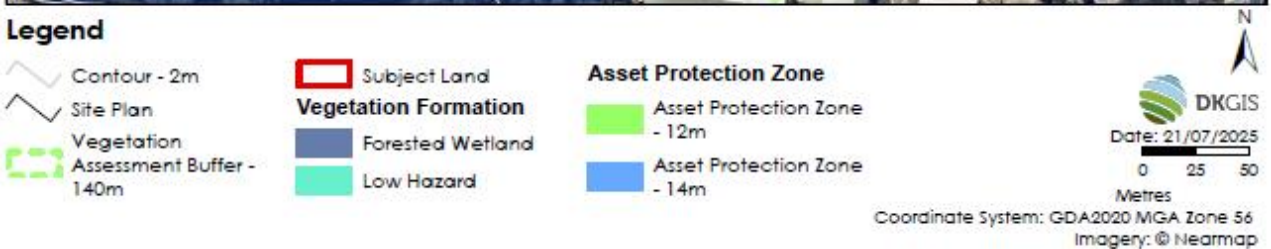
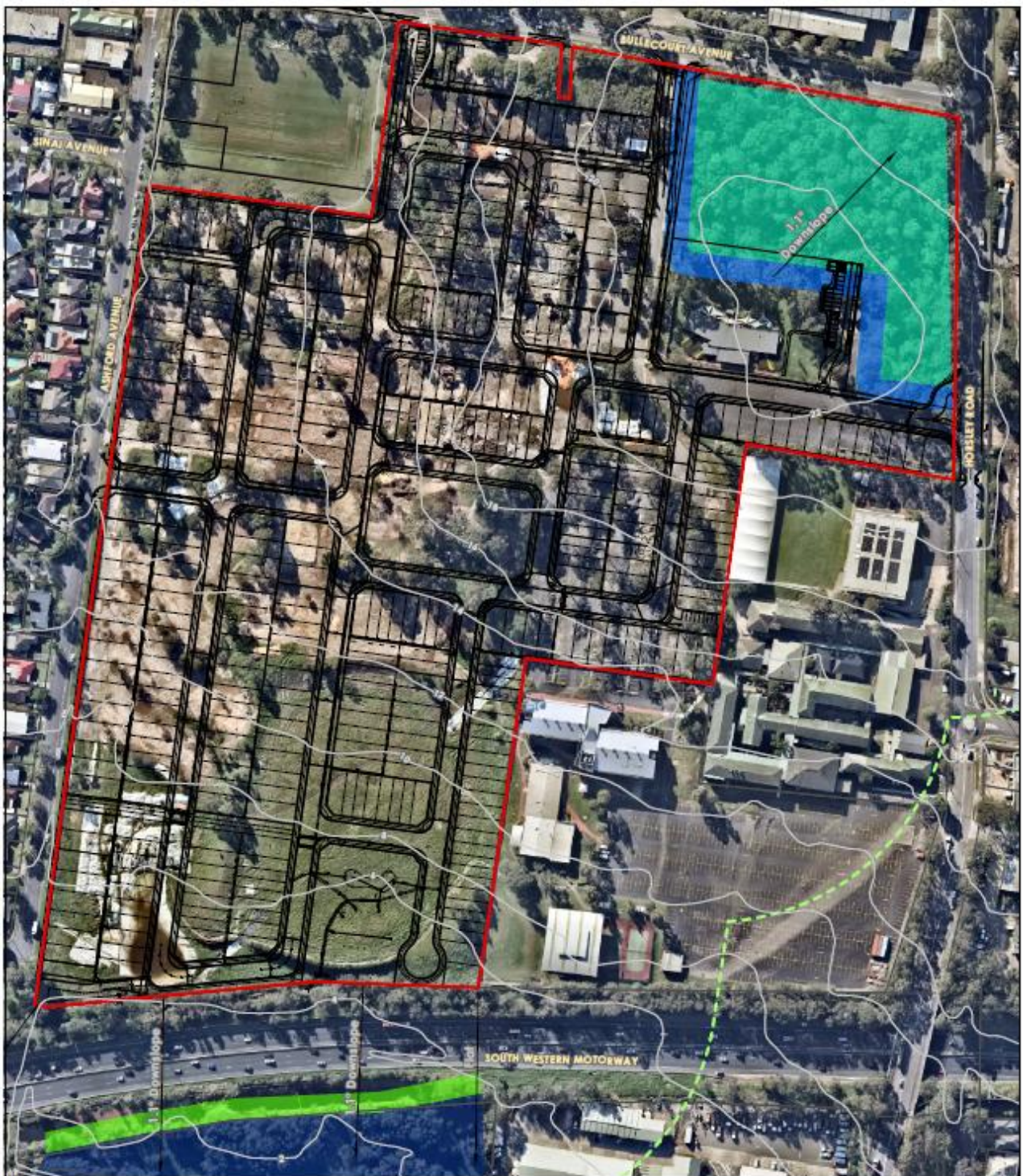


Figure 5: Acceptable Solution Residential Protection Zones



Figure 6: SFPP Asset Protection Zones (as originally approved for Child Care Centre)

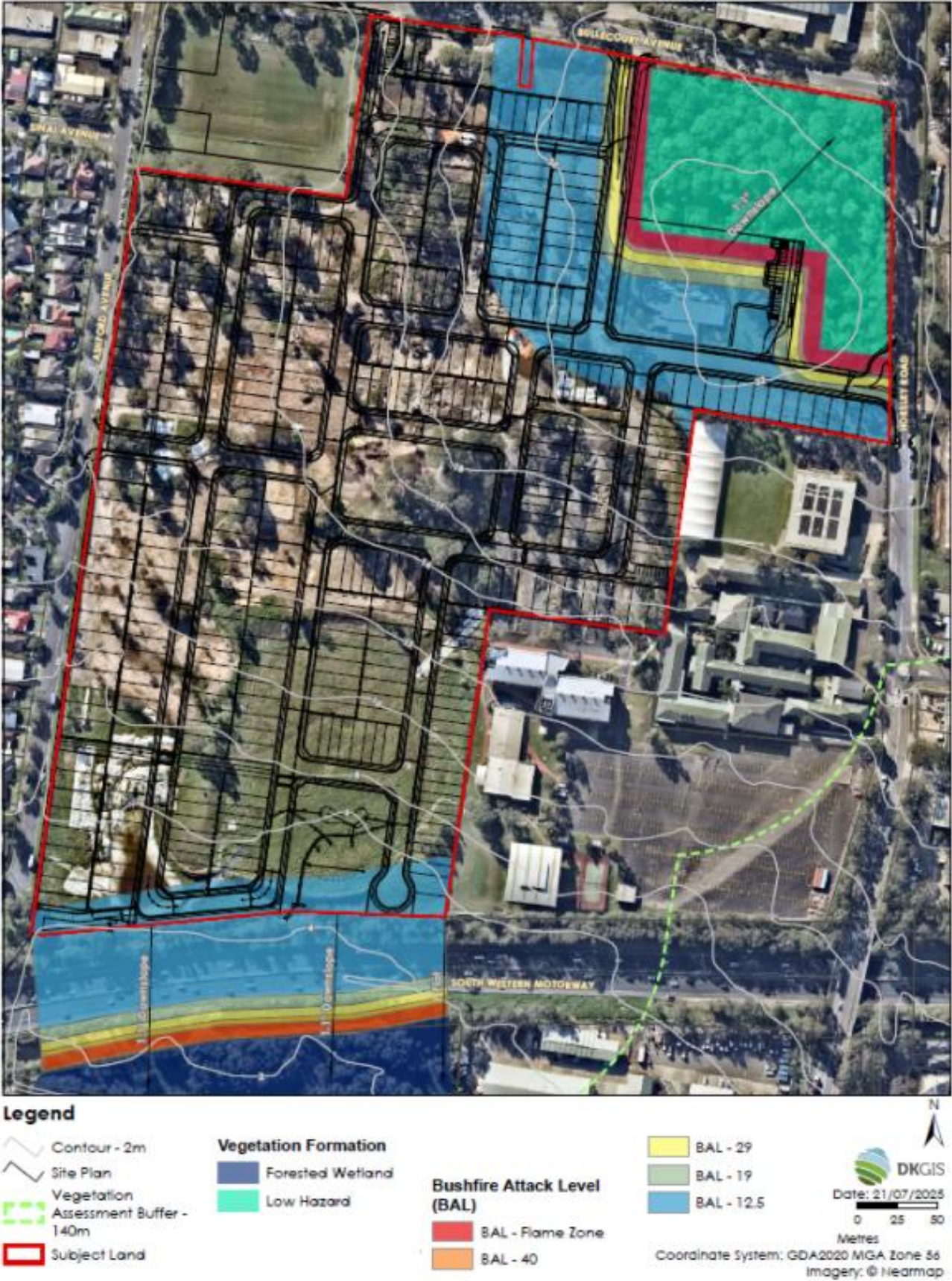


Figure 7: Residential Bushfire Attack Levels

8. Recommendations

The following recommendations have been made within this report to ensure the proposed development is compliant with Section 100B of the *Rural Fires Act 1997* and *Planning for Bush Fire Protection 2019*:

Recommendation 1: All lots within the residential stages that fall within the area designated on the Figure 7 BAL map are to be maintained as an Inner Protection Area (IPA) in accordance with Appendix 4 of *Planning for Bush Fire Protection 2019* and the NSW RFS *Asset Protection Zone Standards*.

Recommendation 2: Installation of new water, electricity and gas supplies (where installed) through the proposed development must comply with section 5.3.3 of PBP 2019.

Recommendation 3: All new roads on bushfire prone land that fall within the area designated on the Figure 7 BAL map must comply with section 5.3.2 of PBP 2019 as appropriate.

9. Conclusion

This assessment has demonstrated that the proposed development can comply with *Planning for Bushfire Protection 2019* and relevant sections of the *Environmental Planning and Assessment Act 1979* (NSW) and the *Rural Fires Act 1997* (NSW).

In the authors professional opinion, the bushfire protection measures demonstrated in this report comply with the aim and objectives of *Planning for Bush Fire Protection 2019* and allow for the issue of a Bush Fire Safety Authority under Section 100B of the *Rural Fires Act 1997*.



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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.

LEGEND - FUNCTIONAL LAYOUT PLAN

- ELECTRICITY (UNDERGROUND)
- OPTIC FIBRE
- TELECOMMUNICATION
- DRG
- WATER
- RECYCLED WATER
- STORMWATER DRAIN, PIT & PROPERTY ALLEYS
- MELBOURNE WATER DRAIN & PIT
- SEWER & MAINTENANCE STRUCTURES
- HOUSE DRAIN
- SERVICE CONDUITS
- TRAFFIC PAVING (INDICATIVE ONLY)
- EXISTING ELECTRICITY (UNDERGROUND)
- EXISTING ELECTRICITY (OVERHEAD)
- EXISTING GAS
- EXISTING TELECOMMUNICATION
- EXISTING WATER
- EXISTING RECYCLED WATER
- EXISTING STORMWATER DRAIN
- EXISTING SEWER
- EXISTING HOUSE DRAIN
- EXISTING GRADE DRAIN
- ZERO LOT LINES
- PAYMENT TREATMENT
- DIRECTION OF FILL
- OVERLAP FLOOR
- ALLOTMENT TO BE GRADED EVENLY IN DIRECTION OF FILL TO LEVELS INDICATED
- CONCRETE EDGE STOP WITH SUBSOL DRAIN, NO ROAD SIGN & BARRIERS
- LIMIT OF WORKS
- EXISTING TREES TO BE REMOVED
- EDGE LINE
- RETAINING WALL
- TREE PROTECTION ZONE (TPZ)

SITE PLAN
NOT TO SCALE

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BEWARE OF UNDERGROUND SERVICES
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SHEET NO. 11 OF 22

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