



AUSTRALIAN BUSHFIRE CONSULTING SERVICES



0438 668 203



wayne@australianbushfire.com.au



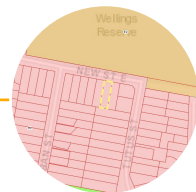
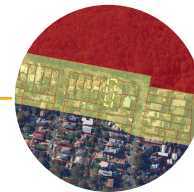
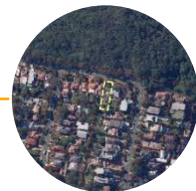
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**BRONZE
MEMBER**
Fire Protection
Association Australia

ABN 23 622 676 493
PO Box 212 Berowra Heights 2082

Bush Fire Assessment Report



Proposed new dwelling:

**7 New Street East,
Balgowlah Heights, NSW 2093.**

31st March 2023
Reference 22-602-3

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Abbreviations:

ABCS	Australian Bushfire Consulting Services Pty Ltd
APZ	Asset Protection Zone
AS2419.1 2021	Fire hydrant installations System design, installation and commissioning
AS3959 - 2018	Australian Standard 3959 – 2018 Construction of buildings in bushfire prone areas
BAL	Bushfire Attack Level
BCA	Building Code of Australia
BPMs	Bushfire Protection Measures
BPLM	Bushfire Prone Land Map
Council	Northern Beaches Council
DA	Development Application
EP&A Act	Environmental Planning and Assessment Act - 1979
ESD	Ecologically Sustainable Development
FR NSW	Fire & Rescue NSW
IPA	Inner Protection Area
LGA	Local Government Area
NASH Standard	National Association of Steel-Framed Housing Standard - Steel Framed Construction in Bushfire Areas 2014 (1.7.14 updated)
NCC	National Construction Codes
NP	National Park
NSP	Neighbourhood Safer Place
OPA	Outer Protection Area
PBP 2019	Planning for Bush Fire Protection – 2019
ROW	Right of Way
RF Act	Rural Fires Act - 1997
RFS	NSW Rural Fire Service
SEARs	Planning Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SFPP	Special Fire Protection Purpose
SWS	Static Water Supply
URA	Urban Release Area

1.0 Introduction.

The development seeks approval for the construction of a new sole occupancy dwelling within an existing residential allotment at 7 New Street East, Balgowlah Heights, NSW. The existing dwelling within the subject site will be demolished as part of this development. The subject site is mapped as bushfire prone land and therefore the application of *Planning for Bush Fire Protection 2019* (PBP 2019) is relevant to the development proposal.

The aims of PBP 2019 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*. This is achieved by determining and where applicable applying the required asset protection zones, applying the relevant construction requirements, ensuring satisfactory access and egress has been incorporated into the design and providing safe service supply and adequate water provisions for occupants and attending emergency services.

2.0 Property details.

Address: 7 New Street East, Balgowlah Heights, NSW, 2093
Lot/Sec/DP: Lot 10 DP 9561
Zoned: R2 Low Density Residential
LGA: Northern Beaches Council

The subject site has street frontage to New Street East to the north and abuts developed private R2 zoned allotments to the remaining three aspects. The potential bushfire hazardous vegetation was found to be within Wellings Reserve located to the north of the subject site beyond New Street East.

3.0 Legislative context.

The development is classified as infill development and assessed under section 4.14 of the Environmental Planning and Assessment Act 1979 (EP&A Act). Under Section 4.14 of the EP&A Act, Council can determine a development application on bushfire prone land providing;

Council is satisfied that the development conforms to the specifications and requirements of Planning for Bush Fire Protection that are relevant to the development or

Council has been provided with a certificate by a person who is recognised by the NSW Rural Fire Service as a qualified consultant in bush fire risk assessment stating that the development conforms to the relevant specifications and requirements Planning for Bush Fire Protection.

If the Council is satisfied that the development does not conform to the relevant specifications and requirements of Planning for Bush Fire Protection Council may grant consent but only if it has consulted with the Commissioner of the NSW Rural Fire Service concerning measures to be taken with respect to the development to protect persons, property and the environment from danger that may arise from a bush fire.

The bushfire attack level (BAL) to the proposed dwelling has been determined to be BAL 29 and section 3.2.1 of AS3959 – 2018 has been applied to the attached garage. Suitable recommendations have been made herein to enable Council to issue development consent inclusive of conditions required to ensure compliance with both AS3959 – 2018 or the NASH Standard and PBP 2019.

The proposal meets the aims and objectives of PBP 2019 by means of compliance with the deemed to satisfy provisions of that document. I am a person who is recognised by the NSW Rural Fire Service as a qualified consultant in bush fire risk assessment and I have attached a certificate to this report satisfying the requirements of s4.14. As such Council can approve the application without referral to the NSW Rural Fire Service.

4.0 Referenced documents and people.

The following documents have been referenced in the preparation of this report;

- AS3959 – 2018 Construction of buildings in bushfire prone areas,
- NASH Standard (1.7.14 updated) *National Standard Steel Framed Construction in Bushfire Areas 2014*
- Planning for Bush Fire Protection 2019,
- Northern Beaches Council's Bushfire Prone Land Map,
- Rural Fires Act 1997,
- Rural Fires Regulation 2022,
- 10/50 Vegetation Clearing Code of Practice,
- NSW RFS Guide for bush fire prone land mapping V5b Nov 2015,
- Ocean Shores to Desert Dunes – David Andrew Keith 2004.
- Site plan, floor plans, and elevations by Atria Designs Ref J1797 Sheets 1-7 inclusive
- Landscape plan by Anthea Dunlop "Landscape Plan" Dwg 1 complies with the APZ requirements.
- A company representative undertook an inspection of the property and the surrounding area on 10/11/2021.

5.0 Copyright, scope and disclaimer.

This assessment of possible bushfire impact (including smoke, ember, radiant heat and flame contact) and compliance with other matters such as access and service supply is pertinent to the subject site only. Where reference has been made to the surrounding lands, this report does not assess impact to those lands rather it is an assessment of possible bushfire progression and impact on or from those lands towards the subject site.

Apart from any use permitted under the Copyright Act 1968 no part of this document, including any wording, images, or graphics, can be modified, changed or altered in any way without written permission from Australian Bushfire Consulting Services Pty Ltd. This report may only be referenced, distributed or forwarded to other parties in its original format.

This report has been prepared as a submission document in support of a development application to Council and cannot be relied upon for commencement of works or construction until it has been included within the consent conditions issued by Council as part of the DA determination. **The onus is on the applicant to cross reference this document with any conditions of consent issued by Council or any requirements supplied by the NSW Rural Fire Service following development approval.** I can review and cross reference these documents however the onus is on the applicant / client to provide them to me and request this review.

Where any difference between this document and the development consent (or the NSW Rural Fire Service requirements) is found, the conditions of consent always take precedence until an application to review, amend or vary those conditions is approved.

The statements and opinions contained in this report are given in good faith and in the belief that such statements and opinions are correct and not misleading. AS3959 – 2018 states that “...*there can be no guarantee that a building will survive a bushfire event of every occasion. This is substantially due to the degree of vegetation management, the unpredictable nature and behaviour of fire, and extreme weather conditions*”. The NSW RFS state “*Homes are not designed to withstand fires in catastrophic conditions*”. Correspondingly any representation, statement of opinion, or advice expressed or implied in this document is made on the basis that Australian Bushfire Consulting Services Pty Ltd is not liable to any person for any damage or loss whatsoever which has occurred or may occur in relation to that person taking or not taking (as the case may be) action in respect of any representation, statement or advice made by Australian Bushfire Consulting Services Pty Ltd.

6.0 Assessment summary table.

Aspect	North	South	West	East
Vegetation Structure	Forest	n/a	n/a	n/a
Hazard slope	0-5° downslope	n/a	n/a	n/a
Proposed asset protection zone	> 29.5 metres * See Note 1	n/a	n/a	n/a
Features that may mitigate the impact of bush fire on the proposed development.	<p>The separation from the hazard interface includes maintained land wholly within the subject site and land considered to be equivalent to an asset protection zone being maintained land within New Street East road reserve to the north.</p> <p>The asset protection zones is existing and no tree removal is required to construct it. As such, there is no impact on the environment of the proposed bushfire protection measures. The proposed landscape plan by Anthea Dunlop "Landscape Plan" Dwg 1 has been reviewed and was found to comply with all APZ requirements.</p>			
Noteworthy landform & environmental features.	New Street East and Wellings Reserve	Maintained curtilages	Maintained curtilages	Maintained curtilages
Bushfire Attack Level Table A1.12.5 PBP 2019	BAL 29	n/a	n/a	n/a
Required Construction Level	<p>The highest Bushfire Attack Level to the proposed new dwelling was determined from Table A1.12.5 PBP 2019 to be 'BAL 29' from the northern aspect.</p> <p>The proposed new dwelling roof and the northern, western and eastern facades are required to comply with section 3 and 7 BAL 29 of AS 3959 – 2018 <i>Construction of buildings in bushfire prone areas</i> or NASH Standard (1.7.14 updated) <i>National Standard Steel Framed Construction in Bushfire Areas 2014</i> as appropriate for BAL 29 construction.</p> <p>The southern facade can be downgraded one BAL level due to shielding provided by the build of the dwelling itself and is required to comply with section 3 and 6 BAL 19 of AS 3959 – 2018 <i>Construction of buildings in bushfire prone areas</i> or NASH Standard (1.7.14 updated) <i>National Standard Steel Framed Construction in Bushfire Areas 2014</i> as appropriate for BAL 12.5 construction.</p> <p>The additional construction requirements detailed within section 7.5.2 of PBP 2019 are also applicable to the proposed development.</p> <p>The garage is attached to the building and is within an area rated as BAL 40 (APZ is 22.1 metres to the garage) The proposed garage is an attached structure and be isolated from the dwelling in accordance with section 3.2.1 of AS3959 – 2018</p> <p><u>See section 8.7 this report for additional details.</u></p> <p>Any new fencing within the subject site should be made from non-combustible material only.</p>			

* Note 01: The APZ is measured to the dwelling and the attached garage is treated under section 3.2.1 of AS3959 – 2018 See section 8.7 this report for additional details.

Guideline Ref.	Proposed Development Determinations
Property Access	<p>The subject site has street frontage to New Street East to the north. The most disadvantaged point of the proposed dwelling will be within 70 metres of a road that supports the operational use of fire appliances (hydrants) and the access requirements of Table 7.4a within PBP 2019 are not applicable.</p> <p>Free pedestrian access will be available around the building footprint. Access to the hazard interface for fire suppression or hazard reduction activities is available without the need to enter the subject site.</p>
Water Supply	<p>The subject site is connected to reticulated water mains for domestic needs. Hydrants are located along New Street East and are available for the replenishment of fire fighting appliances. The closest hydrant is available within the roadside verge immediately to the east of the property.</p> <p>The most disadvantaged point of the proposed new dwelling will be less than 70 metres from a public road that supports the operational use of fire appliances (hydrants) and a static water supply is not required.</p>
Electrical & Gas Supply	<p>Existing above ground electrical supply is available to the subject site and reticulated gas mains is available in this area. Recommendations will be included to ensure that that any new electrical services or gas connections are provided in accordance with Table 7.4a of PBP 2019.</p>
Evacuation	<p>Occupants are encouraged to complete a Bush Fire Safety Plan addressing “Prepare, Act, Survive” as advocated by the NSW RFS http://www.rfs.nsw.gov.au/ under publications / bushfire safety.</p>

7.0 Images and maps.

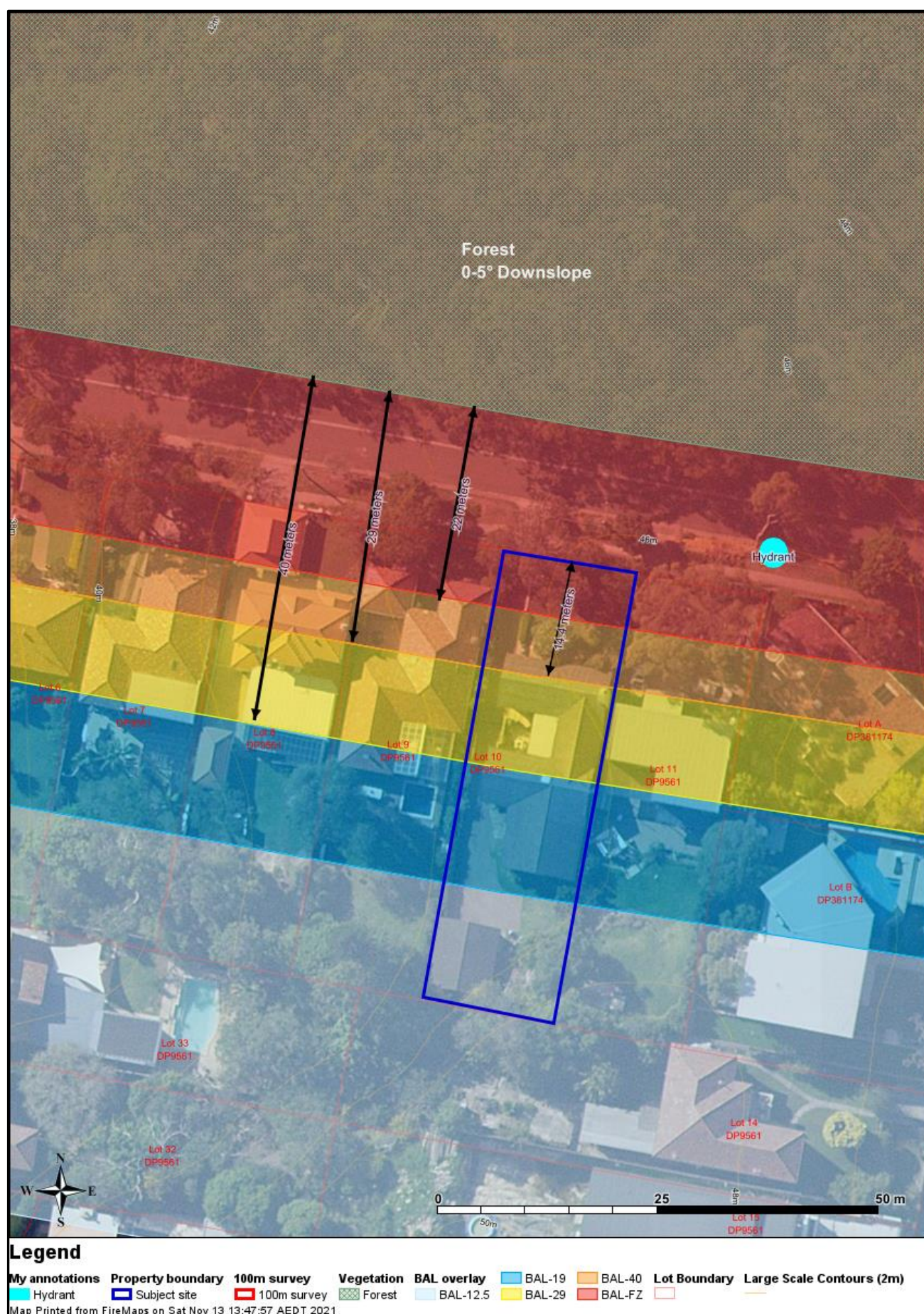


Image 01: BAL Contour overlay and site assessment summary

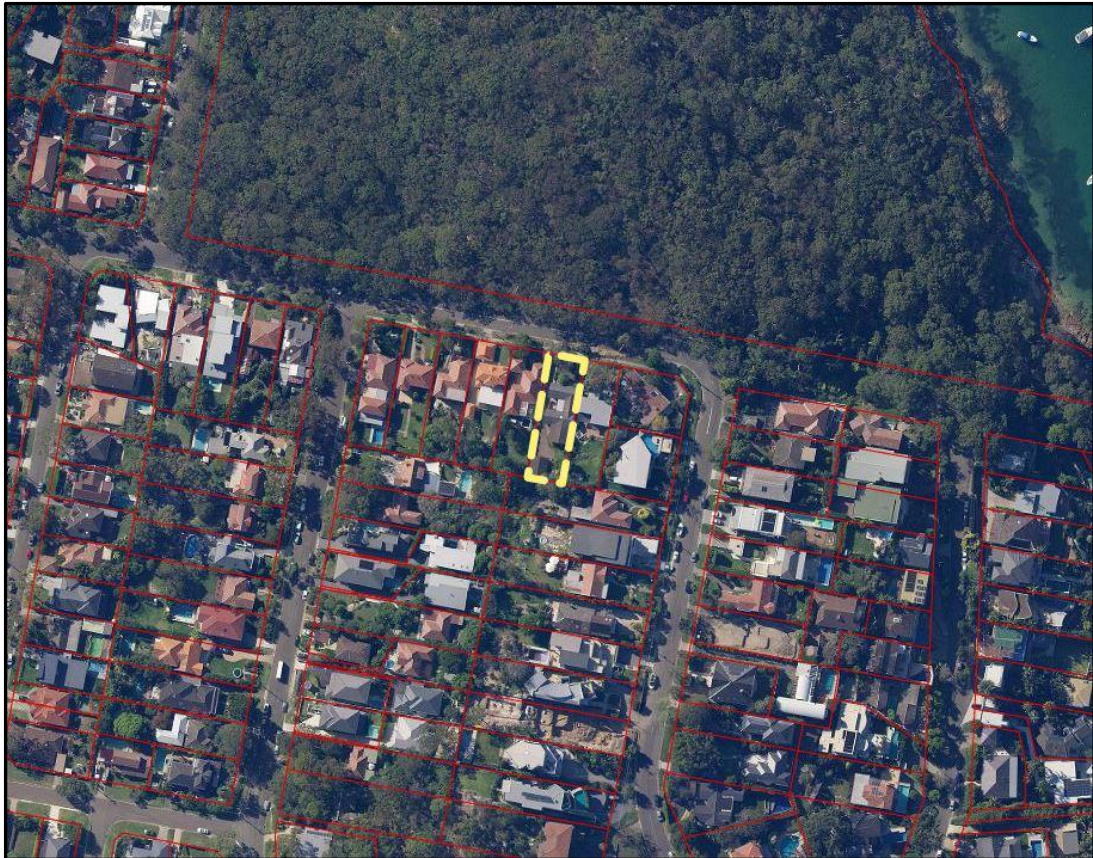


Image 02: Aerial image from NSW Government Planning Portal Property Information



Image 03: Bushfire Prone Land Map from NSW Government Planning Portal Property Information

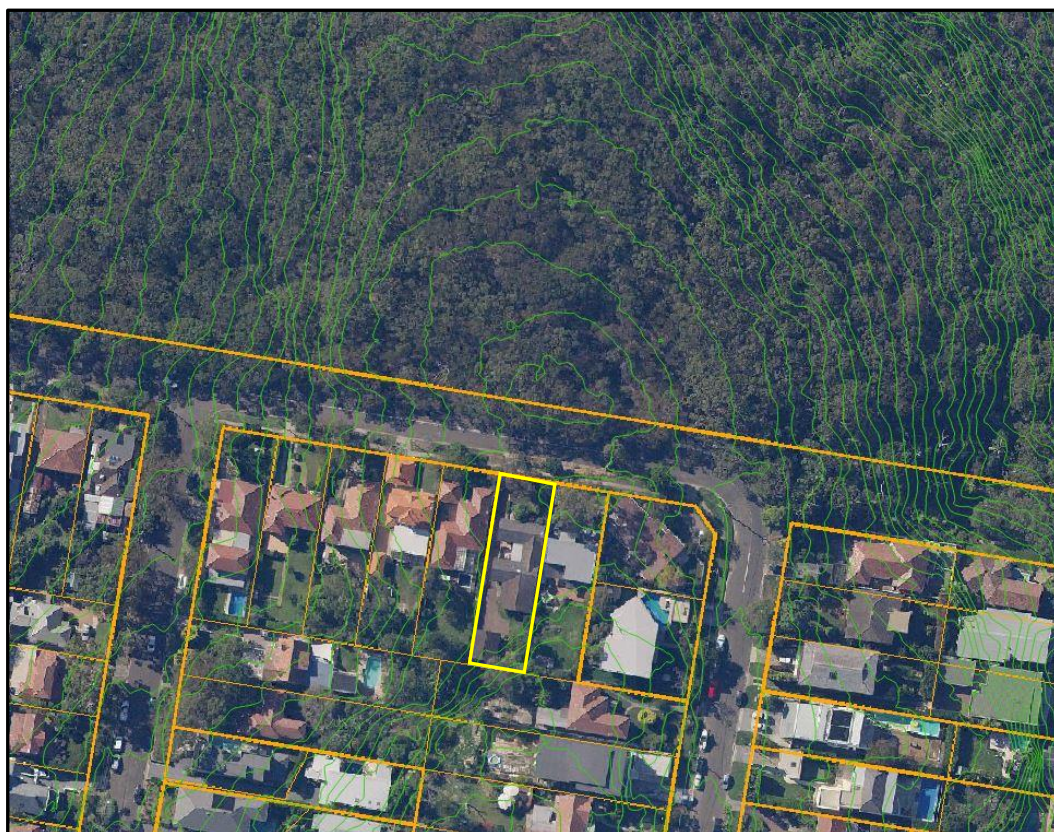


Image 04: 1 m contour topographic image from NSW Government Elevation Foundation Data

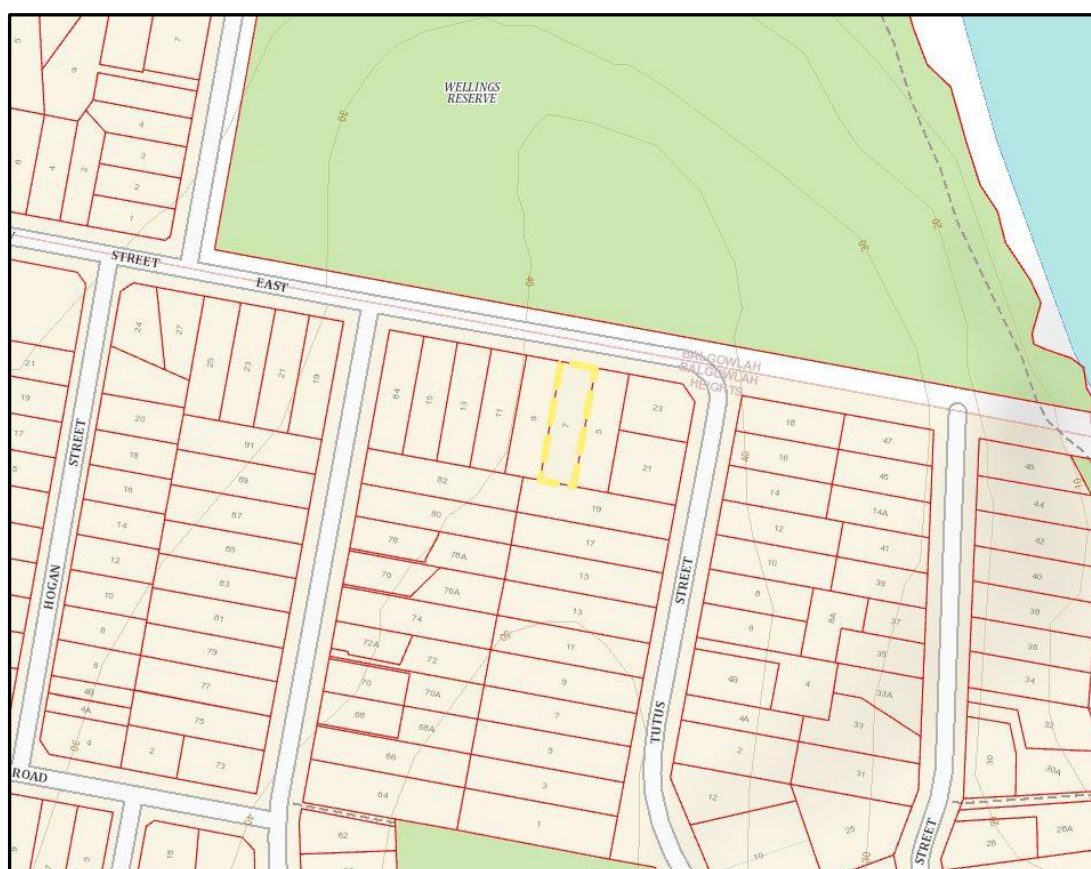


Image 05: 10 m contour topographic image from NSW Government Planning Portal Property Information



Image 06: Biodiversity Values Map from NSW Government Planning Portal Property Information

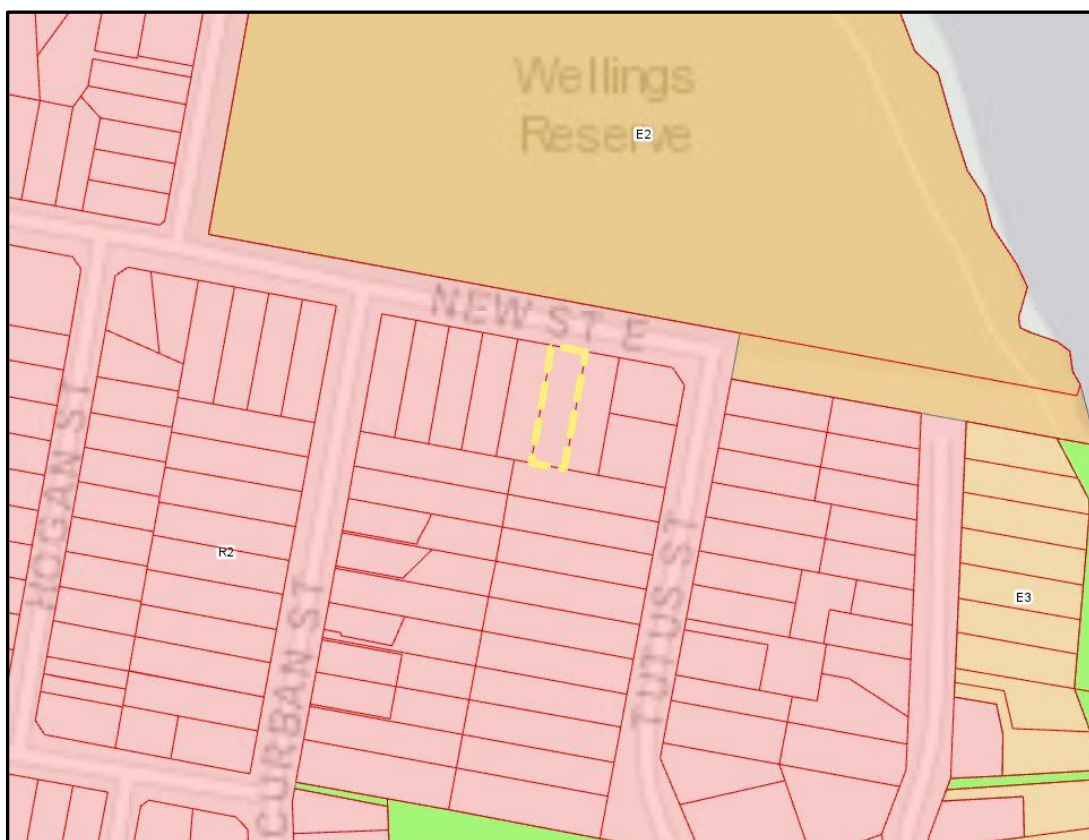


Image 07: Council LEP Zones from NSW Government Planning Portal Property Information

8.0 Bushfire hazard assessment

Properties considered to be bushfire prone land are identified on Councils Bushfire Prone Land Map as being:

- *within or within 100 m of Category 1 (high) hazards or,*
- *within or within 30 m of Category 2 (low) hazards or,*
- *within or within 30 m of Category 3 (medium) hazards.*

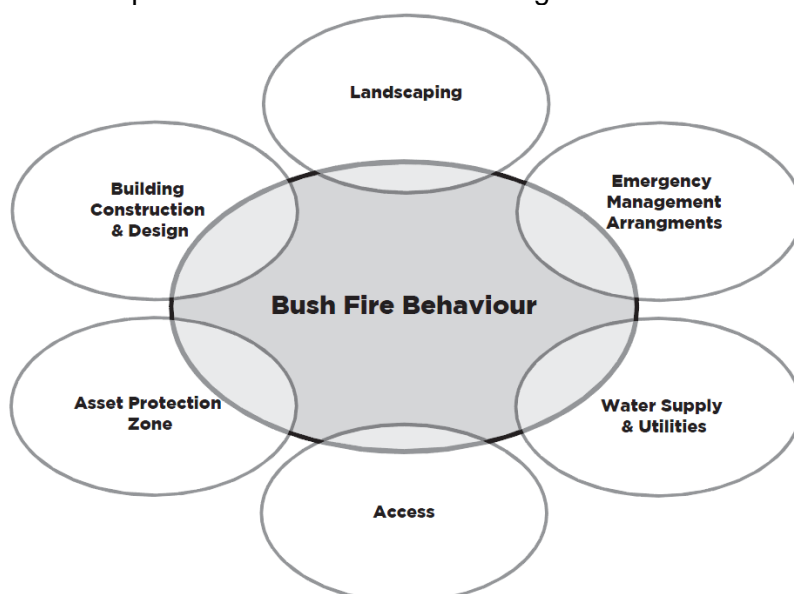
The NSW RFS document PBP – 2019 is applicable to all development on bushfire prone land, this includes an assessment of the proposals adequacy in providing an appropriate combination of bushfire protection measures in terms of asset protections zones, landscaping, access and service supply. This document also provides a means of determining the necessary level of building construction under AS3959 - 2018. Infill development proposals on BFPL must be accompanied by bush fire assessments and reports demonstrating compliance with PBP 2019.

In particular, the following must be addressed:

- a statement that the site is BFPL;
- the location, extent and vegetation formation of any bushland on or within 140 metres of the site;
- the slope and aspect of the site and of any BFPL within 100 metres of the site;
- any features on or adjoining the site that may mitigate the impact of a bush fire on the proposed development;
- a statement assessing the likely environmental impact of any proposed BPMs;
- a site plan showing access, water supplies, APZs, BAL requirements and building footprint in relation to the bush fire hazards; and
- calculated BAL construction levels.

By incorporating bush fire protection measures into a development, the six objectives of PBP 2019 are addressed:

1. afford buildings and their occupants protection from exposure to a bush fire;
2. provide for a defendable space to be located around buildings;
3. provide appropriate separation between a hazard and buildings which, in combination with other measures,
4. prevent the likely fire spread to buildings;
5. ensure that appropriate operational access and egress for emergency service personnel and occupants is available;
6. provide for ongoing management and maintenance of BPMs; and ensure that utility services are adequate to meet the needs of firefighters.



8.1 Site

The subject site has street frontage to New Street East to the north and abuts developed private R2 zoned allotments to the remaining three aspects.

Councils Bushfire Prone Land Map identifies this property as being within the 100 metre buffer zone from a Category 1 Vegetation. Therefore, it is appropriate to apply PBP 2019 to the development proposal.

8.2 Vegetation

PBP 2019 requires a classification of the vegetation on and surrounding the property out to a distance of 140 metres from the property boundary (or building footprint). The surrounding neighbouring private allotments are managed as an asset protection zone around the built assets.

The potential bushfire hazardous vegetation was found to be located within Wellings Reserve to the north beyond New Street East. The vegetation is mapped as a mix of:

Coastal Sands Littoral Scrub-Forest
Vegetation Formation: Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation Class: Coastal Dune Dry Sclerophyll Forests
PCT Name: Coastal Sands Littoral Scrub-Forest
PCTID: 3546

Sydney Coastal Sandstone Foreshores Forest
Vegetation Formation: Dry Sclerophyll Forests (Shrubby sub-formation)
Vegetation Class: Sydney Coastal Dry Sclerophyll Forests
PCT Name: Sydney Coastal Sandstone Foreshores Forest
PCTID: 3594

For the purpose of assessment under PBP 2019 a Forest classification has been applied to the vegetation to the north.

8.3 Topography

The slope must be assessed over a distance of 100m from the existing property boundary (or building footprint) towards the various vegetation communities constituting the hazard. In assessing the slope, it may be found that there are a variety of slopes covering different distances. The gradient within the hazard (vegetation) which will most significantly influence the fire behaviour must be determined.

The slope was assessed onsite with an inclinometer and verified by using 1 metre contour mapping to be:

0-5° downslope within the hazard to the north.

8.4 Asset Protection Zones

An Asset Protection Zone (APZ) is a buffer zone between a bush fire hazard and buildings, which is managed progressively to minimise fuel loads and reduce potential radiant heat levels, flame, ember and smoke attack. A fuel-reduced, physical separation between buildings and bush fire hazards is the key element in the suite of bushfire protection measures. The existing available asset protection zones were measured onsite and verified from plans and aerial imagery to be:

- 29.5 metres to the north

The APZ is measured to the dwelling and the attached garage is treated under section 3.2.1 of AS3959 – 2018 [See section 8.7 this report for additional details.](#)

The separation from the hazard interface includes maintained land wholly within the subject site and land considered to be equivalent to an asset protection zone being maintained land within New Street East road reserve to the north.

Recommendations will be included within this report to ensure that at the commencement of construction and in perpetuity all land not built upon within the subject site is maintained as an Asset Protection Zone / Inner Protection Area in accordance with the requirements detailed within Appendix 4 of *Planning for Bush Fire Protection 2019* and the NSW RFS document *Standards for an Asset Protection Zone*.

The asset protection zones is existing and no tree removal is required to construct it. As such, there is no impact on the environment of the proposed bushfire protection measures. The proposed landscape plan by Anthea Dunlop "Landscape Plan" Dwg 1 has been reviewed and was found to comply with all APZ requirements.

8.5 Access & egress

The subject site has street frontage to New Street East to the north. Persons seeking to egress the subject site will be able to do so via the property access drive and the existing road infrastructure. It is encouraged that the occupants complete a Bush Fire Safety Plan addressing "Prepare, Act, Survive" as advocated by the NSW RFS <http://www.rfs.nsw.gov.au/> under publications / bushfire safety.

The most disadvantaged point of the proposed dwelling will be within 70 metres of a road that supports the operational use of fire appliances (hydrants) and the access requirements of Table 7.4a within PBP 2019 are not applicable.

Free pedestrian access will be available around the building footprint. Access to the hazard interface for fire suppression or hazard reduction activities are available without the need to enter the subject site.

8.6 Services

The subject site is connected to reticulated water mains for domestic needs. Hydrants are located along New Street east and are available for the replenishment of fire fighting appliances. The nearest hydrant is located to the east of the property available within the road reserve. The most disadvantaged point of the proposed new dwelling will be less than 70 metres from a public road that supports the operational use of fire appliances (hydrants) and a static water supply is not required.

Existing above ground electrical supply is available to the subject site and reticulated gas mains is available in this area. Recommendations will be included to ensure that that any new electrical services or gas connections are provided in accordance with Table 7.4a of PBP 2019.



Photograph 01: View west from New Street East towards the subject site showing existing hydrant.

8.7 Construction

AS3959 – 2018	
BAL Low	It is predicated on low threat vegetation and non-vegetated areas. This Standard does not provide construction requirements for buildings assessed in bushfire-prone areas as being BAL-LOW.
BAL-12.5	BAL-12.5 is primarily concerned with protection from ember attack and radiant heat up to and including 12.5 kW/m ² where the site is less than 100 m from the source of bushfire attack.
BAL-19	BAL-19 is primarily concerned with protection from ember attack and radiant heat greater than 12.5 kW/m ² up to and including 19 kW/m ² .
BAL-29	BAL-29 is primarily concerned with protection from ember attack and radiant heat greater than 19 kW/m ² up to and including 29 kW/m ² .
BAL-40	BAL-40 is primarily concerned with protection from ember attack, increased likelihood of flame contact and radiant heat greater than 29 kW/m ² and up to and including 40 kW/m ² .
BAL-FZ	BAL-FZ is primarily concerned with protection from flame contact together with ember attack and radiant heat of more than 40 kW/m ² . Construction in the Flame Zone BAL-FZ may require reliance on measures other than construction. The requirements for construction of a building in the Flame Zone are regulated by the building authorities having jurisdiction in the States and Territories of Australia.



Planning for Bush Fire Protection 2019 provides for six (6) levels of building construction these being BAL - Low, BAL - 12.5, BAL - 19, BAL - 29, BAL - 40 and BAL - FZ. A Bushfire Attack Level (BAL) is a means of measuring 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 metre squared, and is the basis for establishing the requirements for construction to improve protection of building elements from attack by bushfire.

The highest Bushfire Attack Level to the proposed new dwelling was determined from Table A1.12.5 PBP 2019 to be 'BAL 29' from the northern aspect.

The proposed new dwelling roof and the northern, western and eastern facades are required to comply with section 3 and 7 BAL 29 of AS 3959 – 2018 *Construction of buildings in bushfire prone areas* or NASH Standard (1.7.14 updated) *National Standard Steel Framed Construction in Bushfire Areas 2014* as appropriate for BAL 29 construction.

The southern facade can be downgraded one BAL level due to shielding provided by the build of the dwelling itself and is required to comply with section 3 and 6 BAL 19 of AS 3959 – 2018 *Construction of buildings in bushfire prone areas* or NASH Standard (1.7.14 updated) *National Standard Steel Framed Construction in Bushfire Areas 2014* as appropriate for BAL 12.5 construction.

The additional construction requirements detailed within section 7.5.2 of PBP 2019 are also applicable to the proposed development.

The proposed garage is attached to the building and is within an area rated as BAL 40 (APZ is 22.1 metres). The proposed garage is an attached structure and must be separated from the dwelling in accordance with section 3.2.1 of AS3959 – 2018 as follows:

3.2.1 Attached structures and structures sharing a common roof space

Where any part of a garage, carport, veranda, cabana, studio, storage area or similar roofed structure is attached to, or shares a common roof space with, a building required to conform with this Standard, the entire garage, carport, veranda or similar roofed structure shall conform with the construction requirements of this Standard, as applicable to the subject building.

Alternatively, the structure shall be separated from the subject building by a wall that extends to the underside of a non-combustible roof covering, and that conforms with one of the following:

(a) The wall shall have an FRL of not less than 60/60/60 for loadbearing walls and –/60/60 for non-loadbearing walls when tested from the attached structure side and shall have openings protected as follows:

(i) Doorways—by self-closing fire doors with an FRL of –/60/30, conforming with AS 1905.1 and tested in accordance with AS 1530.4.

(ii) Windows—by fire windows with an FRL of –/60/– when tested in accordance with AS 1530.4 and permanently fixed in the closed position.

(iii) Other openings—by construction with an FRL of not less than –/60/– when tested in accordance with AS 1530.4.

NOTE: Control and construction joints, subfloor vents, weepholes and penetrations for pipes and conduits need not conform with Item (iii).

or

(b) The wall shall be of masonry, earth or masonry-veneer construction with the masonry leaf of not less than 90 mm in thickness and shall have openings protected as follows:

(i) Doorways—by self-closing fire doors with an FRL of –/60/30, conforming with AS 1905.1 and tested in accordance with AS 1530.4.

(ii) Windows—by fire windows with an FRL of –/60/– when tested in accordance with AS 1530.4 and permanently fixed in the closed position.

(iii) Other openings—by construction with an FRL of not less than –/60/– when tested in accordance with AS 1530.4.

NOTE: Control and construction joints, subfloor vents, weepholes and penetrations for pipes and conduits need not conform with Item (iii).

PBP 2019;

Fences and gates in bush fire prone areas may play a significant role in the vulnerability of structures during bush fires. In this regard, all fences in bush fire prone areas should be made of either hardwood or non-combustible material.

However, in circumstances where the fence is within 6m of a building or in areas of BAL-29 or greater, they should be made of non-combustible material only.

Any new fencing within the subject site should be made from non-combustible materials only.

9.0 Recommendations

9.1 Asset Protection Zones / landscaping

1. That at the commencement of construction and in perpetuity all land not built upon within the subject site is maintained as an Asset Protection Zone / Inner Protection Area in accordance with the requirements detailed within Appendix 4 of Planning for Bush Fire Protection 2019 and the NSW RFS document Standards for an Asset Protection Zone.

Note: The proposed landscape plan by Anthea Dunlop "Landscape Plan" Dwg 1 has been reviewed and was found to comply with all APZ requirements.

9.2 Construction

2. That the proposed new dwelling roof and the northern, western and eastern facades are to be constructed in accordance with section 3 and 7 BAL 29 of AS 3959 – 2018 *Construction of buildings in bushfire prone areas* or NASH Standard (1.7.14 updated) *National Association of Steel-Framed Housing Standard - Steel Framed Construction in Bushfire Areas 2014* as appropriate for BAL 29 construction.
3. That the proposed new dwelling southern facade is constructed in accordance with section 3 and 6 BAL 19 of AS 3959 – 2018 *Construction of buildings in bushfire prone areas* or NASH Standard (1.7.14 updated) *National Association of Steel-Framed Housing Standard - Steel Framed Construction in Bushfire Areas 2014* as appropriate for BAL 12.5 construction.
4. That the proposed new dwelling is also to be constructed to that of the 'Additional Construction Requirements' detailed within section 7.5.2 of *Planning for Bush Fire Protection 2019*.

Note: Certain provisions of AS 3959 are varied in NSW based on the findings of the Victorian Bush Fires Royal Commission and bush fire industry research. PBP 2019 section 7.5.2 provides a NSW State Variation that BAL 19 decks are constructed to section 7.7 BAL 29 requirements except that any wall enclosing the subfloor space need only comply with the wall requirements for the respective BAL.

5. That any new fencing or gates within the subject site is made from non-combustible materials only.
6. The proposed garage is an attached structure and must be separated from the dwelling with a wall extending to the underside of the roof and any openings protected in accordance with section 3.2.1 of AS3959 – 2018 (See section 8.7 this report for additional details.

9.3 Services

Electricity

7. That electricity supply is to comply with Table 7.4a of Planning for Bush Fire Protection 2019, in particular the location of electricity services limits the possibility of ignition of surrounding bush land or the fabric of buildings.
 - where practicable, electrical transmission lines are underground; and
 - where overhead, electrical transmission lines are proposed as follows:
 - lines are installed with short pole spacing (30m), 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 accordance with the specifications in ISSC3 *Guideline for Managing Vegetation Near Power Lines*.

Gas

8. That gas supply is to comply with Table 7.4a of Planning for Bush Fire Protection 2019, in particular the location and design of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.
 - Reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 and 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; polymer-sheathed flexible gas supply lines are not used; and
 - above-ground gas service pipes are metal, including and up to any outlets.

10.0 Conclusion

The National Construction Code 2019 (NCC) Volume 2 requires that a Class 1 building or a Class 10a building or deck associated with a Class 1 building that is constructed in a designated bushfire prone area must, to the degree necessary, be designed and constructed to reduce the risk of ignition from a bushfire, appropriate to the potential for ignition caused by burning embers, radiant heat or flame generated by a bushfire; and intensity of the bushfire attack on the building.

The subject property is determined to be bushfire prone land and the proposal must achieve compliance with the NCC by meeting the aims and objectives of PBP 2019. This is achieved by providing construction measures to mitigate against the impacts from bush fire including smoke, embers, radiant heat and flame contact and including suitable access, services supply and means of maintaining the bushfire protection measures for the life of the development.

This bushfire hazard and determination has been made on a site-specific basis which includes an assessment of the local bushland area and its possible impact to the subject property. The highest Bushfire Attack Level to the proposed new works was determined to be 'BAL 29'. Suitable recommendations have been made herein to enable Council to issue development consent inclusive of conditions required to ensure compliance with all requirements of PBP 2019.

The proposal meets the aims and objectives of PBP 2019 by means of compliance with the deemed to satisfy provisions of that document. I am a person who is recognised by the NSW Rural Fire Service as a qualified consultant in bush fire risk assessment and I have attached a certificate to this report satisfying the requirements of s4.14. As such Council can approve the application without referral to the NSW Rural Fire Service.

In consideration of the bushfire risk posed to the proposed development in combination with the recommended bushfire protection measures contained within this report I am satisfied they will provide a reasonable and satisfactory level of bushfire protection to the proposed development.

I am therefore in support of the development application.

Australian Bushfire Consulting Services Pty Ltd




Wayne Tucker

Managing Director
G. D. Design in Bushfire Prone Areas.
Certificate IV Fire Technology
Ass Dip Applied Science
FPA Australia BPAD Level 3 Accredited Practitioner
BPAD Accreditation No. BPAD9399
Graduate Member Institute of Fire Engineers

11.0 List of attachments

Attachment 01: s4.14 Certificate

BUSHFIRE RISK ASSESSMENT CERTIFICATE

THIS FORM IS TO BE COMPLETED BY A RECOGNISED CONSULTANT IN BUSHFIRE RISK ASSESSMENT IN ACCORDANCE WITH SECTION 4.14 1(b) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 NO 203

PROPERTY ADDRESS:	
DESCRIPTION OF PROPOSAL:	
PLAN REFERENCE: (relied upon in report preparation)	
BAL RATING:	(If the BAL rating is FZ the application is to be referred to NSW RFS for assessment.)
DOES THE PROPOSAL RELY ON ALTERNATE SOLUTIONS:	YES NO (Circle the relevant response) (If YES the application is to be referred to NSW RFS for assessment.)

I _____ of _____
(Print Name) (Trading or Company Name)

have carried out a bushfire risk assessment on the above mentioned proposal and property. A detailed Bushfire Assessment Report is attached which includes the submission requirements set out in *Appendix 2 of Planning for Bushfire Protection 2019* together with recommendations as to how the relevant specifications and requirements are to be achieved.

REPORT REFERENCE:	
REPORT DATE:	
CERTIFICATION No/ACCREDITED SCHEME:	

I hereby certify, in accordance with *Section 4.14 of the Environmental Planning and Assessment Act 1979 No 203*:

1. That I am a person recognised by the *NSW Rural Fire Service* as a qualified consultant in bushfire risk assessment; and
2. That subject to the recommendations contained in the attached Bushfire Risk Assessment Report the proposed development conforms to the relevant specifications and requirements

I am aware that the Bushfire Assessment Report, prepared for the above mentioned site is to be submitted in support of a development application for this site and will be relied upon by Northern Beaches Council as the basis for ensuring that the bushfire risk management aspects of the proposed development have been addressed in accordance with *Planning for Bushfire Protection 2019*.

SIGNATURE: _____ DATE: _____

Note: this certificate must be completed and signed by a person recognised by the *NSW Rural Fire Service* as a qualified consultant in bush fire risk assessment in accordance with *Section 4.14 of the EP&A Act 1979 No 203*.

This form has been prepared by Northern Beaches Council for attachment to the Bushfire Assessment Report.