



AUSTRALIAN BUSHFIRE CONSULTING SERVICES



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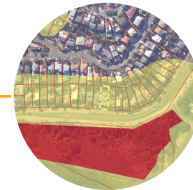
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**BRONZE
MEMBER**
Fire Protection
Association Australia

ABN 23 622 676 493
PO Box 212 Berowra Heights 2082

Bush Fire Assessment Report



Proposed new dwelling & garage:

909 Pittwater Road,
Collaroy, NSW 2097.

13th April 2023
Reference 23-105

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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 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 and attached garage within an existing allotment at 909 Pittwater Road, Collaroy, 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: 909 Pittwater Road, Collaroy, NSW, 2097.
Lot/Sec/DP: Lot 24 Sec 6 DP 10609
Zoned: R2 Low Density Residential
LGA: Northern Beaches Council

The subject site has street frontage to Pittwater Road to the south and abuts private R2 zoned allotments to the north, west and east aspects. Dee Why Lagoon Reserve is located to the south of the property beyond Pittwater Road. The potential bushfire hazardous vegetation was found to be located to the south within Dee Why Lagoon Reserve and is associated with the foreshore of Dee Why Lagoon.

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 highest bushfire attack level (BAL) to the proposed development has been determined to be BAL 12.5 (dwelling) and BAL 19 (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 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,
- 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.

The plans by DUKTIG Design Pty for Mr Vern and Ms Lynne Jackson Ref 23001 Dwgs DA00-DA11 and DA13 inclusive have been reviewed and relied upon in the preparation of this report. A company representative has undertaken a site inspection of the property and the surrounding area in the course of preparing this report.

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 – See Images 01-03 for Transect locations	North	South	East	West
Vegetation Structure	n/a	Tall Heath	n/a	n/a
Hazard slope	n/a	5-10° downslope	n/a	n/a
Proposed asset protection zone Dwelling	n/a	> 42 metres	n/a	n/a
Proposed asset protection zone Garage	n/a	> 36 metres	n/a	n/a
Features that may mitigate the impact of bush fire on the proposed development.	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 existing maintained land within Pittwater Road road reserve. No vegetation modification is required to construct the asset protection zones and as such there is no impact on the environment of the proposed bushfire protection measures.			
Noteworthy landform & environmental features.	Maintained curtilages	Pittwater Road and Dee Why Lagoon	Maintained curtilages	Maintained curtilages
Bushfire Attack Level Table A1.12.5 PBP 2019 Dwelling	n/a	BAL 12.5	n/a	n/a
Bushfire Attack Level Table A1.12.5 PBP 2019 Garage	n/a	BAL 19	n/a	n/a
Required Construction Level	<p>The dwelling and the garage are two separate building elements connected by a common wall and have been assessed in accordance with section 3.2 of AS3959-2018. PBP-2019 and AS3959:2018 do not have provisions preventing multiple BALs when shielding is not needed. The NSW RFS have recently confirmed this in their Policy Advice Note: <i>Multiple Downgrade of Bush Fire Attack Levels (BALs) for Buildings Located in the Flame Zone (FZ)</i>.</p> <p>The highest Bushfire Attack Level to the proposed new dwelling was determined from Table A1.12.5 PBP 2019 to be 'BAL 12.5'. The proposed new dwelling is required to comply with section 3 and 5 BAL 12.5 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 highest Bushfire Attack Level to the proposed new garage was determined from Table A1.12.5 PBP 2019 to be 'BAL 19'. The proposed new garage 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 19 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>Any new fencing within the subject site should be made from hardwoods or non-combustible materials except where a fence or gate is within 6 metres of any dwelling it should be made from non-combustible materials only.</p>			

Guideline Ref.	Proposed Development Determinations
Property Access	<p>The subject site has street frontages to Pittwater Road to the south. The most disadvantaged point of the proposed dwelling and garage will be within 70 metres of a road that supports the operational use of fire appliances (hydrants).</p> <p>Free pedestrian access will be available around the building footprint and to the foreshore area below the dwelling.</p> <p>Access to the hazard interface for fire suppression or hazard reduction activities is available without the need to enter the subject site.</p> <p>The access requirements of Table 7.4a within PBP 2019 are not applicable to this development.</p>
Water Supply	<p>The subject site is connected to reticulated water mains for domestic needs. Hydrants are located along Pittwater Road and are available for the replenishment of fire fighting appliances. The nearest hydrant is located within the roadside verge to the south immediately in front of the subject site.</p> <p>The most disadvantaged point of the proposed new dwelling and garage 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 for this development.</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 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.

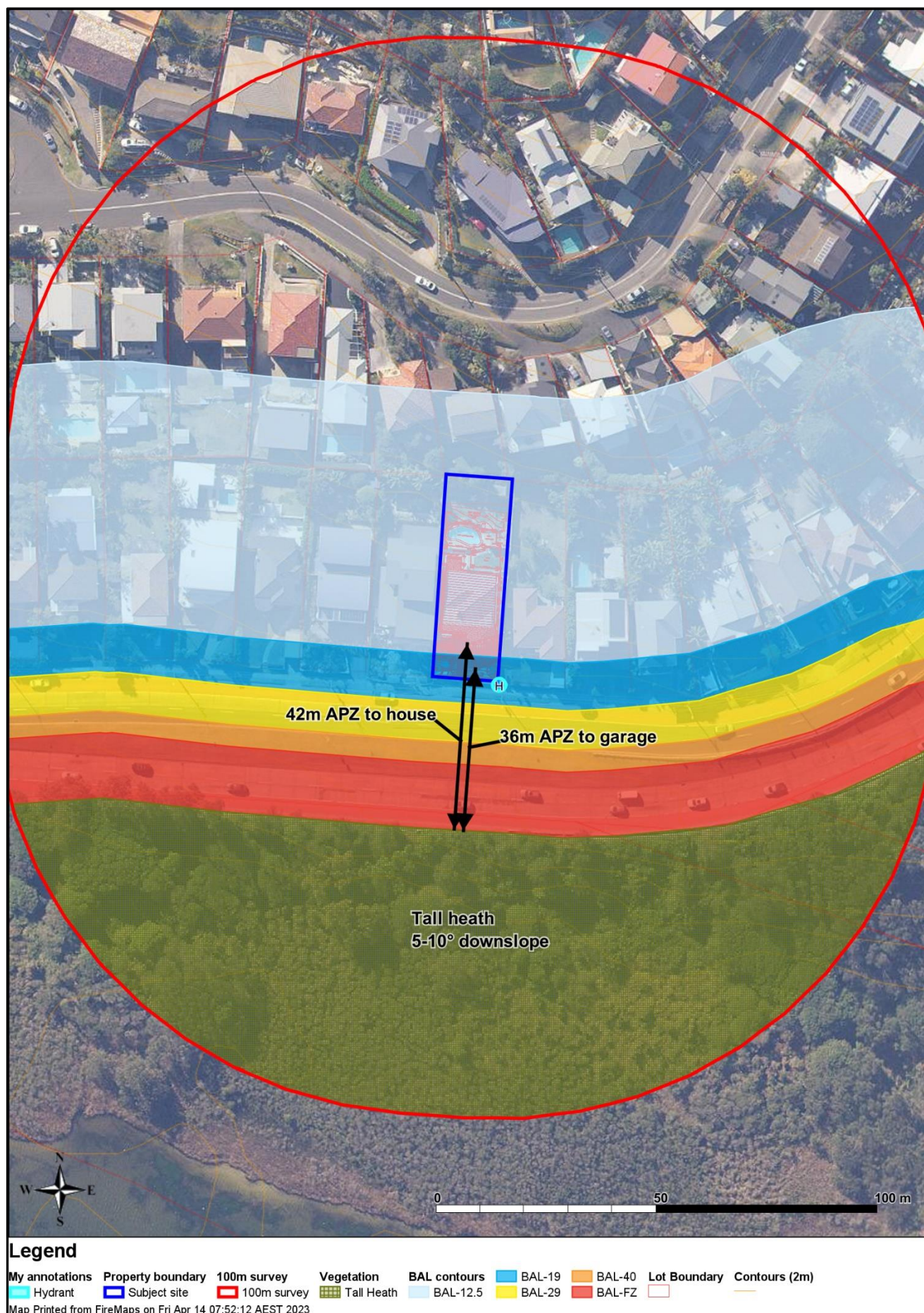


Image 01: BAL Contour overlay over the subject area.



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

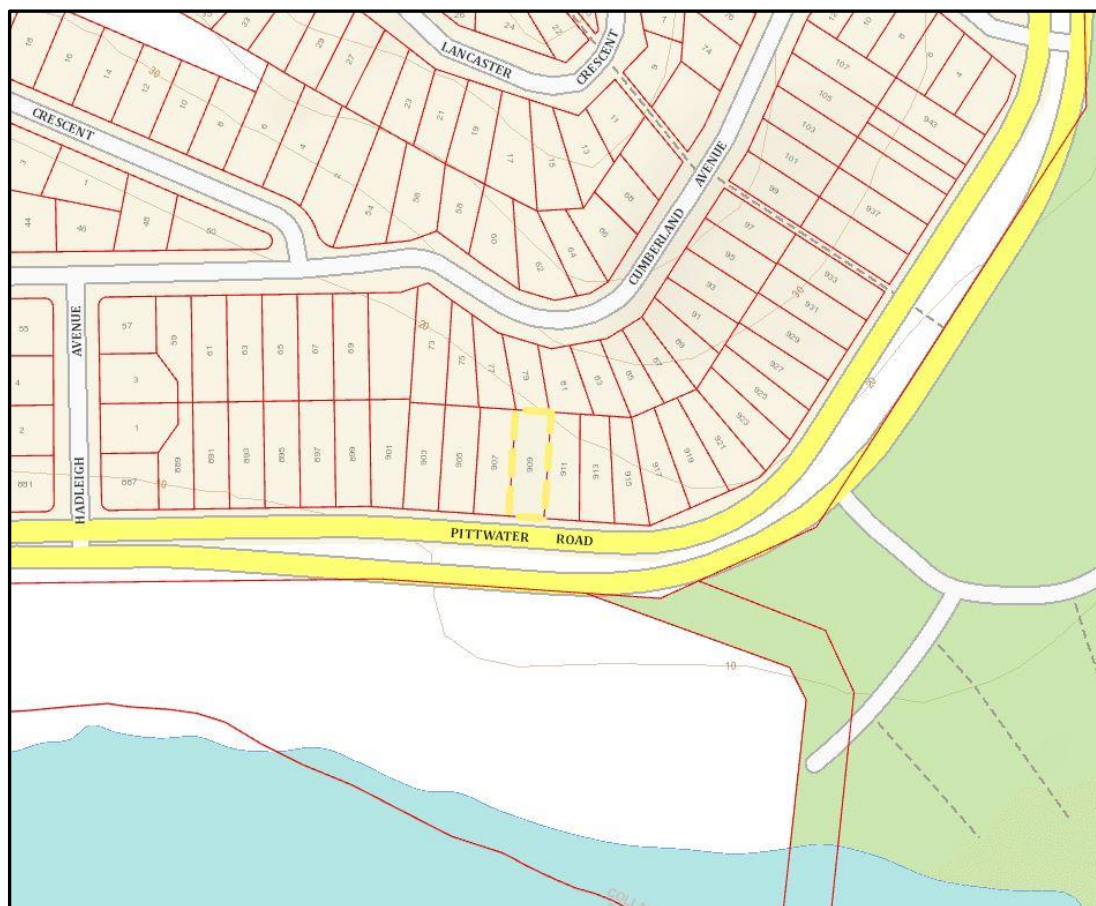


Image 05: Topographic image from NSW Government Planning Portal Property Information



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

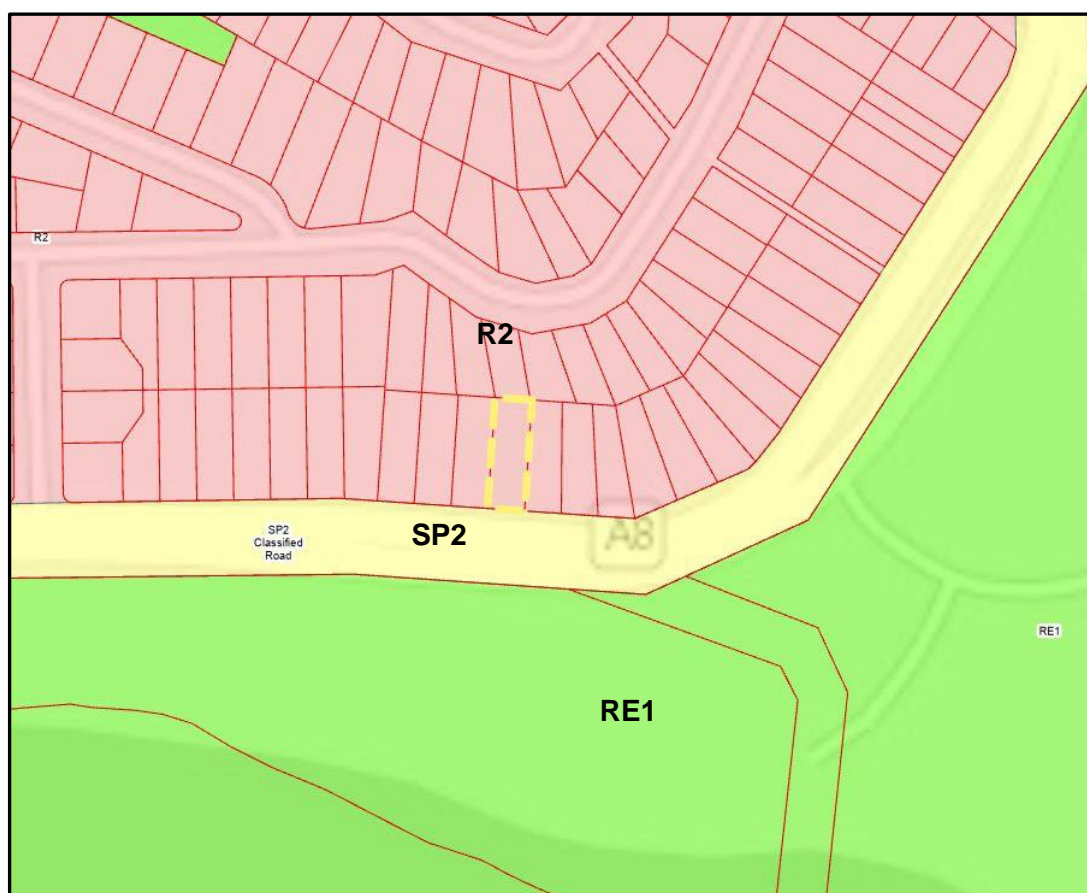


Image 07: Council LEP Zones from NSW Government Planning Portal Property Information

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.*

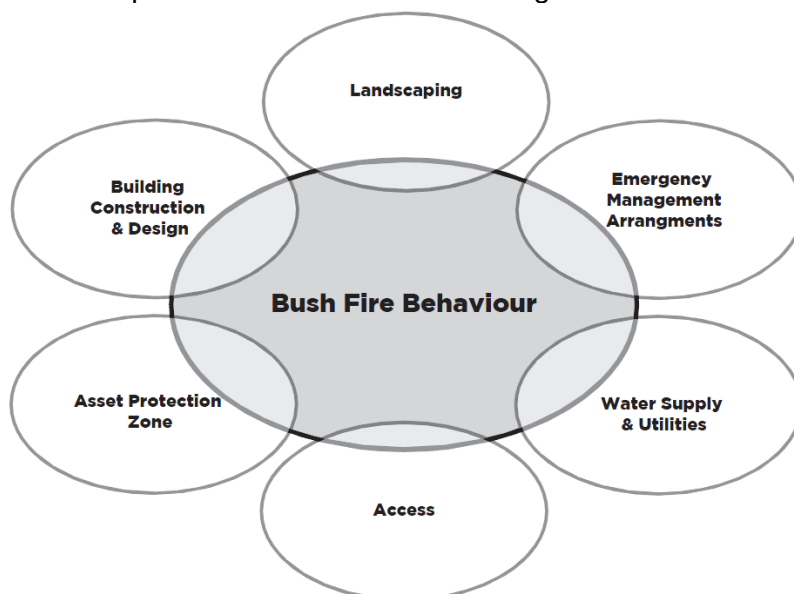
The NSW RFS document PBP – 2019 is applicable to all development on bushfire prone land, this includes an assessment of the proposals adequacy in providing an appropriate combination of bushfire protection measures in terms of asset protections zones, landscaping, access and service supply. This document 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 Pittwater Road to the south and abuts private R2 zoned allotments to the north, west and east aspects. Dee Why Lagoon Reserve is located to the south of the property beyond Pittwater Road. 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 to the south within Dee Why Lagoon Reserve and is associated with the foreshore of Dee Why Lagoon.

The vegetation is mapped as a mix of:

Vegetation Formation: Headland

Vegetation Class: Coastal Headland Heaths

PCT Name: Coast Banksia - Coast Tea-tree low moist forest on coastal sands and headlands, Sydney Basin Bioregion and South East Corner Bioregion

PCTID: 771

Vegetation Formation: Heathlands

Vegetation Class: Coastal Headland Heaths

PCT Name: Coastal Foredune Wattle Scrub

PCTID: 3788

Vegetation Formation: Forested Wetlands

Vegetation Class: Coastal Floodplain Wetlands

PCT Name: Southern Estuarine Swamp Paperbark Creekflat Scrub

PCTID: 4056

For the purpose of assessment under PBP 2019 the highest hazard to the south has been determined to be Coast Headland Hvegetation and a Tall Heath classification has been applied.



Photograph 01: Drone view looking east across the subject area

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:

- 5-10° downslope within the hazard to the south.

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:

- > 42 metres within the hazard to the south (dwelling).
- > 36 metres within the hazard to the south (garage).

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 existing maintained land within Pittwater Road road reserve. No vegetation modification is required to construct the asset protection zones and as such there is no impact on the environment of the proposed bushfire protection measures.

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*.

Inner Protection Areas (IPAs)

The IPA is the area closest to the building and creates a fuel-managed area which can minimise the impact of direct flame contact and radiant heat on the development and act as a defensible space. Vegetation within the IPA should be kept to a minimum level. Litter fuels within the IPA should be kept below 1cm in height and be discontinuous. When establishing and maintaining an IPA the following requirements apply:

Trees

- Tree canopy cover should be less than 15% at maturity;
- trees at maturity should not touch or overhang the building;
- lower limbs should be removed up to a height of 2m above the ground;
- tree canopies should be separated by 2 to 5m; and
- preference should be given to smooth barked and evergreen trees.

Shrubs

- create large discontinuities or gaps in the vegetation to slow down or break the progress of fire towards buildings should be provided;
- shrubs should not be located under trees;
- shrubs should not form more than 10% ground cover; and
- clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.

Grass

- grass should be kept mown (as a guide grass should be kept to no more than 100mm in height); and
- leaves and vegetation debris should be removed.

8.5 Access & egress

The subject site has street frontages to Pittwater Road to the south. 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).

Free pedestrian access will be available around the building footprint and to the foreshore area below the dwelling. Access to the hazard interface for fire suppression or hazard reduction activities is available without the need to enter the subject site.

The access requirements of Table 7.4a within PBP 2019 are not applicable to this development.

8.6 Services

The subject site is connected to reticulated water mains for domestic needs. Hydrants are located along Pittwater Road and are available for the replenishment of fire fighting appliances. The nearest hydrant is located within the roadside verge to the south immediately in front of the subject site.

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 for this development.

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 any new electrical services or gas connections are provided in accordance with Table 7.4a of PBP 2019.

8.7 Construction

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.

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.



The dwelling and the garage are two separate building elements connected by a common wall and have been assessed in accordance with section 3.2 of AS3959-2018. PBP-2019 and AS3959:2018 do not have provisions preventing multiple BALs when shielding is not needed. The NSW RFS have recently confirmed this in their Policy Advice Note: *Multiple Downgrade of Bush Fire Attack Levels (BALs) for Buildings Located in the Flame Zone (FZ)*.

The highest Bushfire Attack Level to the proposed new dwelling was determined from Table A1.12.5 PBP 2019 to be 'BAL 12.5'. The proposed new dwelling is required to comply with section 3 and 5 BAL 12.5 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 highest Bushfire Attack Level to the proposed new garage was determined from Table A1.12.5 PBP 2019 to be 'BAL 19'. The proposed new garage 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 19 construction.

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

PBP 2019 Fences and gates:

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 hardwoods or non-combustible materials except where a fence or gate is within 6 metres of any dwelling it 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.

9.2 Construction

2. That the proposed new dwelling is to be constructed in accordance with section 3 and 5 BAL 12.5 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.
3. That the proposed new garage is to be 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 Standard Steel Framed Construction in Bushfire Areas 2014* as appropriate for BAL 19 construction.
4. That the proposed new works are also constructed to that of the 'Additional Construction Requirements' detailed within section 7.5.2 of *Planning for Bush Fire Protection 2019*.
5. That any new fencing or gates within the subject site is made from made from hardwoods or non-combustible materials except where a fence or gate is within 6 metres of any dwelling it should be made from non-combustible materials only.

9.3 Services

Electricity

6. That electricity supply is to comply with Table 7.4a of Planning for Bush Fire Protection 2019, in particular;
 - 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

7. That gas supply is to comply with Table 7.4a of Planning for Bush Fire Protection 2019, in particular;
 - 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 12.5' (dwelling) and BAL 19 (garage). 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



AUSTRALIAN BUSHFIRE CONSULTING SERVICES



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ABN 23 622 676 493
PO Box 212 Berowra Heights 2082

BUSH FIRE RISK ASSESSMENT CERTIFICATE

Issued in accordance with Section 4.14 of the Environmental Planning Act 1979 No.203

PROPERTY DETAILS	909 Pittwater Road, Collaroy, NSW, 2097. Lot 24 Sec 6 DP 10609				
DEVELOPMENT TYPE	Infill – Proposed new dwelling and attached garage				
PLAN REFERENCE	The plans by DUKTIG Design Pty for Mr Vern and Ms Lynne Jackson Ref 23001 Dwgs DA00-DA11 and DA13				
BAL RATING	BAL 12.5 & 19	NOTE - If BAL FZ the application is to be referred to the NSW RFS.			
ARE ALTERNATE SOLUTIONS REQUIRED	No	NOTE - If YES the application is to be referred to the NSW RFS.			
IS REFERRAL TO NSW RFS REQUIRED	No	ABCS REF.	23-105	Issue date:	13 th April 2023

I *Wayne Tucker*, of Australian Bushfire Consulting Services Pty. Ltd., hereby certify in accordance with Section 4.14 of the Environmental Planning Act 1979 No.203 that –

1. I am a person recognized by the NSW Rural Fire Service as a qualified consultant in bushfire risk assessment and
2. Subject to the recommendations contained in the Bush Fire Assessment Report, the proposed development conforms to specifications and requirements of the document entitled *Planning for Bush Fire Protection* (prepared by the NSW Rural Fire Service in co-operation with the Department of Planning) and any other documents as prescribed by Section 4.14 of the Environmental Planning and Assessment Act 1979 No.203.

Further, I am aware that the Bush Fire Assessment Report prepared for the abovementioned site is to be submitted in support of a Development Application for this site. This report will be relied upon by Council as the basis for ensuring that the bushfire risk management aspects of the proposed development have been addressed in accordance with the document entitled *Planning for Bush Fire Protection 2019*.

Australian Bushfire Consulting Services:



Wayne Tucker

Managing Director.
G. D. Design in Bushfire Prone Areas.
Certificate IV Fire Technology
Ass Dip Applied Science
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