



AUSTRALIAN BUSHFIRE CONSULTING SERVICES



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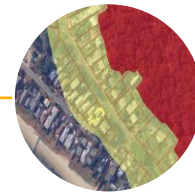
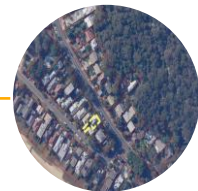


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Bush Fire Assessment Report



Coast Palm Beach

Alterations and additions & extended hours of operation:

**1031 Barrenjoey Road,
Palm Beach NSW 2108**

19th July 2021
Reference 21-260

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Abbreviations:

ABCS	Australian Bushfire Consulting Services Pty Ltd
APZ	Asset Protection Zone
AS3959	Australian Standard 3959 – 2018 Construction of buildings in bushfire prone areas
BAL	Bushfire Attack Level
BCA	Building Code of Australia
BIC	Building Information Certificate
BPMs	Bushfire Protection Measures
BPLM	Bushfire Prone Land Map
Council	Northern Beaches Council
DA	Development Application
DSF	Dry Sclerophyll Forest
EP&A Act	Environmental Planning and Assessment Act - 1979
ELVIS	Geoscience Australia Elevation Information System
ESD	Ecologically Sustainable Development
FR NSW	Fire & Rescue NSW
IPA	Inner Protection Area
LGA	Local Government Area
NCC	National Construction Codes
NP	National Park
NSP	Neighbourhood Safer Place
OPA	Outer Protection Area
PBP	Planning for Bush Fire Protection – 2019
ROW	Right of Way
RF Act	Rural Fires Act - 1997
RFS	NSW Rural Fire Service
SEPP	State Environmental Planning Policy
SFPP	Special Fire Protection Purpose
SWS	Static Water Supply
WSF	Wet Sclerophyll Forest

1.0 Introduction.

This assessment relates to the existing Coast Palm Beach café at 1031 Barrenjoey Road, Palm Beach, NSW. The café is attached to an existing dwelling within the subject site and is located within 6 metres of neighbouring dwellings. As such the intent of PBP 2019 section 8.3.10 would therefore dictate that, for the purpose of bushfire assessment and construction requirements, the café will be assessed as if it is a dwelling and chapter 7 of PBP 2019 is applied.

This assessment is intended to address:

- 1) a building information certificate application for the as constructed deck and pergola over attached to the existing café deck and awning and
- 2) A development application to use the deck as part of existing approved café operation and an extension to the café hours of operation.

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.

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: 1031 Barrenjoey Road, Palm Beach NSW, 2108.
 Lot/DP: Lot A DP 404349
 Zoned: R2 Low Density Residential
 LGA: Northern Beaches Council

The site has street frontage to Barrenjoey Road the northeast and Iluka Road to the southwest and abuts similar private R2 zoned residential allotments to the remaining northwest and southeast aspects. The main residential access to the site is from Iluka Street and the café entry and operation is solely on the street frontage to Barrenjoey Road. McKay Reserve and Pittwater is located to the northeast and southwest beyond roads and other developed allotments.

3.0 Legislative context.

The application is for a building information certificate under Division 6.7 of the EPA Act 1979 and a Development Application to Council under section 4.14 of the Environmental Planning and Assessment Act 1979.

A Building Information Certificate is commonly applied for when work is undertaken without the appropriate approvals issued or were required inspections by the building's Certifier have been missed. A building information certificate is usually needed by buyers or sellers of property before settlement to make sure that what is being bought or sold is not going to be the subject of action by the Council.

Clause 6.25 of the EPA Act defines that a building information certificate operates to prevent the Council, for a period of 7 years from the date of issue of the certificate, requiring the building to be repaired, demolished, altered, added to or rebuilt. However, a building information certificate does not operate to prevent a Council from making a development control order that is a fire safety order or a building product rectification order. Fire Safety Orders are made on essential fire safety measures as defined by Clause 166 of the Regulations as Statutory fire safety measures and are relate to NCC compliance with building fire safety regulations other than (exclusive of) bushfire requirements.

In terms of compliance with PBP 2019 the as built works are assessed as infill development (which would ordinarily be assessed under section 4.14 of the Environmental Planning and Assessment Act 1979 & section 7 of PBP 2019.

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.
Maintained curtilages*

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) has been determined to be BAL 12.5. 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 development 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;

- Northern Beaches Council's Bush Fire Prone Land Map,
- AS3959 – 2018 Construction of buildings in bushfire prone areas,
- Planning for Bush Fire Protection 2019
- Rural Fires Act 1997
- Rural Fires Regulation 2013
- 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,
- Identification Survey by C.M.S Surveyors Ref. 20386detail Sheet 1 of 1
- Works as executed drawings by 02 Architecture Ref. 2136 Dwgs BC00 BC01 BC02 & BC03
- Development Application Drawings by 02 Architecture Ref. 2136 Dwgs DA00 DA01 DA02 & DA03
- Site inspection of the property and the surrounding area by Australian Bushfire Consulting Services on 2/6/2021.

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 building certificate & development application to Council and cannot be relied upon for commencement of works or construction until it has been included within the notice of assessment issued by Council as part of the application for a building certificate. **The onus is on the applicant to cross reference this document with any conditions issued by Council or any requirements supplied by the NSW Rural Fire Service should they be consulted.** 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 Council notice (or the NSW Rural Fire Service requirements) is found then the Councils conditions 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	Northeast	Southwest	Northwest	Northeast
Vegetation Structure	Forest	n/a	n/a	n/a
Hazard slope	0° and upslope	n/a	n/a	n/a
Existing asset protection zone	≥ 65 metres	n/a	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 Barrenjoey Road road reserve and neighbouring private allotments.			
Noteworthy landform & environmental features.	Barrenjoey Road & maintained curtilages	Iluka Road	Maintained curtilages	Maintained curtilages
Aboriginal Relics	Not known APZ Existing	Not known APZ Existing	Not known APZ Existing	Not known APZ Existing
Aboriginal Relics	Not known APZ Existing	Not known APZ Existing	Not known APZ Existing	Not known APZ Existing
Bushfire Attack Level Table A1.12.5 PBP 2019	BAL 12.5	n/a	n/a	n/a
Required Construction Level	<p>The highest Bushfire Attack Level to the as built deck and roof over was determined from Table A1.12.5 PBP 2019 to be 'BAL 12.5'. The as built deck and roof over is required to be upgraded to comply with section 3 and 5 BAL 12.5 of AS3959 – 2018 <i>Construction of buildings in bushfire prone areas</i>.</p> <p>Note: Certain provisions of AS 3959 - 2018 are varied in NSW based on the findings of the Victorian Bush Fires Royal Commission and bush fire industry research. <i>Planning for Bush Fire Protection 2019</i> section 7.5.2 is also applicable to the as built deck. This provides a NSW State Variation that BAL 12.5 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.</p> <p>Full details on how construction compliance can be achieved is included within section 8.7 of this report.</p> <p>The DA for occupation of the deck as part of the café and change in operation hours does not involve any physical construction works and no further recommendations for construction compliance are necessary.</p>			

PBP 2019 Ref.	Proposed Development Determinations
Property Access (Driveway)	<p>The most disadvantaged point of the existing café, dwelling and all new works is 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>Access to the site is available from both Barrenjoey Road and Iluka Road.</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>
Water Supply	<p>The subject site is connected to reticulated water mains for commercial and domestic needs. Hydrants are located along both Barrenjoey Road and Iluka Road and are available for the replenishment of firefighting appliances.</p> <p>The most disadvantaged point of the existing café, dwelling and all new works is 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>
Gas & Electrical Supply	<p>Existing above ground electrical supply is available to the subject site and reticulated gas mains is available in this area. Both services are already connected to the subject building. No new electrical services or gas supply have been provided as part of the unauthorised works.</p>
Evacuation	<p>Evacuation is possible by utilising 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.</p>

7.0 Images and maps.



Image 01: Aerial image from NSW Government Planning Portal Property Information



Image 02: 10 m contour data from NSW Government Planning Portal Property Information



Image 036: Extract of Council's Bushfire Prone Land Map from NSW Government Planning Portal Property Information



Image 04: Extract of Council's LEP Zones Map from NSW Government Planning Portal Property Information



Image 05: Extract from street-directory.com.au

8.0 Bush fire 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.*

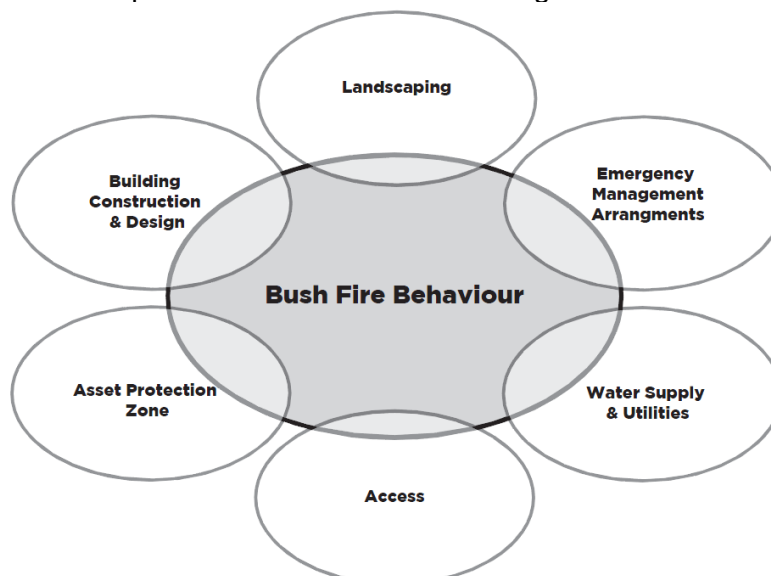
The NSW RFS document PBP – 2019 is applicable to all development on bushfire prone land, this includes an assessment of the proposals adequacy in providing an appropriate combination of bushfire protection measures in terms of asset protection zones, landscaping, access and service supply. This document also provides a means of determining the necessary level of building construction under AS3959 - 2019. 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 defensible 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 site has street frontage to Barrenjoey Road the northeast and Iluka Road to the southwest and abuts similar private R2 zoned residential allotments to the remaining northwest and southeast aspects. Councils Bushfire Prone Land Map identifies this property as being within the 100 metre buffer zone from a Category 1 Vegetation and therefore it is appropriate to apply PBP 2019 to the development.

8.2 Vegetation

PBP 2019 requires a classification of the vegetation on and surrounding the property out to a distance of 140 metres from property boundary (or building footprint). The vegetation identified as posing a potential bushfire threat to the subject site is to the northeast within McKay Reserve. The vegetation is identified as a mix of the following vegetation communities:

NSW Formation: Wet Sclerophyll Forests
 NSW Class: Southern Lowland Wet Sclerophyll Forests
 PCTId: 1214
 Community: Spotted Gum - Grey Ironbark open forest in the Pittwater and Wagstaffe area, Sydney Basin Bioregion

NSW Formation: Wet Sclerophyll Forests
 NSW Class: North Coast Wet Sclerophyll Forest
 PCTId: 1841
 Community: Smooth-barked Apple - Turpentine - Blackbutt tall open forest on enriched sandstone slopes and gullies of the Sydney region

NSW Formation: Dry Sclerophyll Forests
 NSW Class: Sydney Coastal Dry Sclerophyll Forests
 PCTId: 1776
 Community: Smooth-barked Apple - Red Bloodwood open forest on enriched sandstone slopes around Sydney and the Central Coast

The vegetation has a consistent cover of trees with a > 65 % canopy cover and an understorey of smaller trees and shrubs. For the purpose of assessment under Table A1.12.5 of PBP 2019 the vegetation to the northeast has been assessed as a forest hazard.

8.3 Topography

The slope must be assessed over a distance of at least 100 m 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 effective slope was measured onsite and determined by topographic mapping to be:

0 degrees & upslope within the vegetation to the northeast

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 available asset protection zones from the location onsite of the as built deck with awning over has been determined to be:

≥ 65 metres to the northeast

The asset protection zones are existing, and no tree removal or other vegetation modification is necessary to establish them, 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 in perpetuity all land not built upon within the subject site continues to be maintained as an Asset Protection Zone / Inner Protection Area as detailed in the NSW Rural Fire Service's document 'Standards for Asset Protection Zones' and Appendix 4 of Planning for Bush Fire Protection 2019.

8.5 Access & egress

The subject site has street frontage to Barrenjoey Road to the northeast and Iluka Road to the southwest. Evacuation is possible by utilising 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.

Access to the hazard interface for fire suppression or hazard reduction activities is available without the need to enter the subject site.

The most disadvantaged point of the existing café, dwelling and all new works is 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.

8.6 Services

The subject site is connected to reticulated water mains for commercial and domestic needs. Hydrants are located along both Barrenjoey Road and Iluka Road and are available for the replenishment of firefighting appliances.

The most disadvantaged point of the existing café, dwelling and all new works is 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. Both services are already connected to the subject building. No new electrical services or gas supply have been provided as part of the unauthorised works.

8.7 Construction

Australian Standard 3959 – 2018 'Construction of buildings in bushfire-prone areas' provides for six (6) levels of building construction these being BAL - Low, BAL - 12.5, BAL - 19, BAL - 29, BAL - 40 and BAL - FZ. The Australian Standard 3959 specifies construction standards for buildings within various Bushfire Attack Levels as determined by the Planning for Bush Fire Protection – 2019 document. The NSW Rural Fire Service will not accept deemed to satisfy provisions for BAL Flame Zone and the NCC requires consultation with the RFS during a development application process. This is further enforced under s4.14 of the EPA Act 1979.

The highest Bushfire Attack Level to the as built deck and roof over was determined from Table A1.12.5 PBP 2019 to be 'BAL 12.5'. The as built deck and roof over is required to be upgraded to comply with section 3 and 5 BAL 22.5 of AS3959 – 2018 *Construction of buildings in bushfire prone areas*.

Note: Certain provisions of AS 3959 - 2018 are varied in NSW based on the findings of the Victorian Bush Fires Royal Commission and bush fire industry research. *Planning for Bush Fire Protection 2019* section 7.5.2 is also applicable to the as built deck. This provides a NSW State Variation that BAL 12.5 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.

The DA for occupation of the deck as part of the café and change in operation hours does not involve and physical construction works and no further recommendations for construction compliance are necessary.

The following list is a considered opinion of the most practical means of achieving compliance however it must be noted that alternatives may exist. Photos have been included for explanation though there may be similar treatments necessary in other areas.

Construction element	Recommendation
<p>Deck support structure</p> <p>Structure appears to be treated pine. The subfloor structure is only partly enclosed as the enclosing is ad hoc using an abutting fence, garden planter and there are numerous gaps in many areas.</p> <p>The subfloor is required to be fully enclosed, or the support structure must be made from AS3959 – 2018 Appendix F hardwoods or non-combustible materials.</p>	<p>The subfloor shall be either;</p> <ul style="list-style-type: none"> a) fully enclosed with a wall that complies with Clause 5.4 of AS3959 – 2018 (see Note 2), or b) the entire support frame shall be treated with a fire retardant treatment compliant with Appendix F (See Note 4). Note that this would require removal of the decking to access the subfloor frame for complete treatment, or c) the support frame shall be replaced with hardwoods compliant with Appendix F AS3959 – 2018 (See Note 3), or d) the support frame shall be replaced with non-combustible materials.

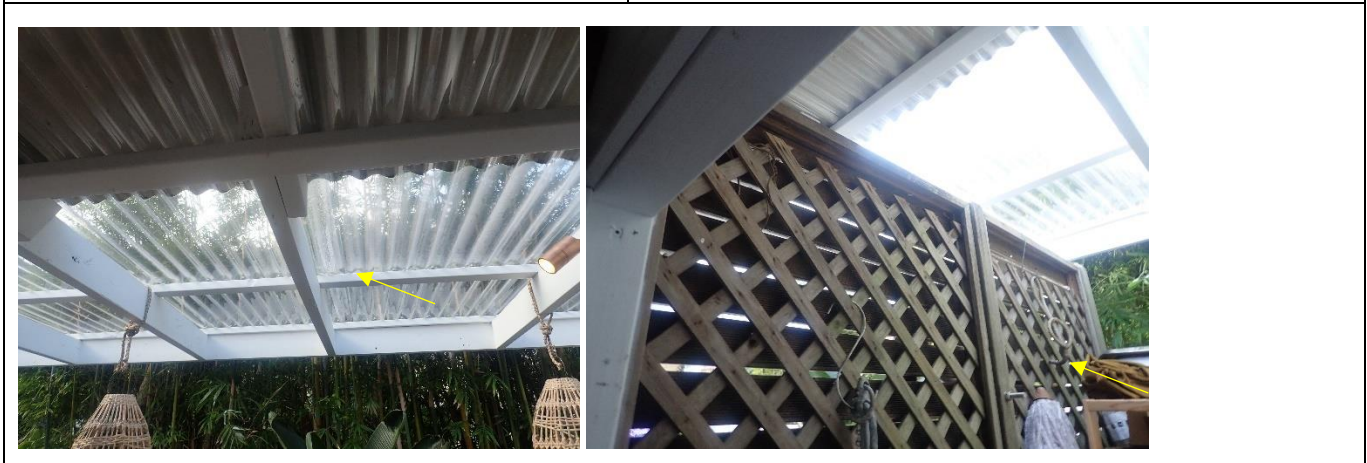


Construction element	Recommendation
<p>Decking timbers.</p> <p>Having inspected the deck, it is thought to be hardwood although the species cannot be specifically identified.</p> <p>The decking must be made from AS3959 – 2018 Appendix F hardwoods or non-combustible materials.</p> <p>Decking may be spaced.</p>	<p>The decking shall be;</p> <ul style="list-style-type: none"> a) identified as been constructed with a compliant hardwood Appendix F AS3959 – 2018 (See Note 3) or b) replaced with hardwoods compliant with Appendix F AS3959 – 2018 (See Note 3) or c) replaced with non-combustible materials. <p>Note: Fire retardant treatment is not suitable for trafficable areas.</p>

<p>Veranda posts (vertical support posts).</p> <p>Having inspected the support posts the species of timber cannot be specifically identified as it has been painted over.</p>	<p>The veranda posts shall be;</p> <ul style="list-style-type: none"> a) identified as been constructed with a compliant hardwood Appendix F AS3959 – 2018 (See Note 3) or b) encased (i.e. shrouded) with a non-combustible material or c) treated with a fire retardant treatment compliant with Appendix F (See Note 4), or d) replaced with hardwoods compliant with Appendix F AS3959 – 2018 (See note 3), or e) replaced with non-combustible materials.
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<p>Roof support frame and polycarbonate sheeting</p> <p>Privacy screen balustrades and other barriers.</p>	<p>Nil requirements</p>
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Note 1:

Any element of construction or system that satisfies the test criteria of AS 1530.8.1 may be used in lieu of the applicable requirements listed above.

Note 2:

AS3959 – 2018 section 5.4.1 - Walls General

The exposed components of an external wall that are less than 400 mm from the ground or less than 400 mm above decks, carport roofs, awnings and similar elements or fittings having an angle of less than 18 degrees to the horizontal and extending more than 110 mm in width from the wall (see Figure D3, Appendix D) shall be one of the following:

- (a) Non-combustible material including the following provided the minimum thickness is 90 mm:
 - (i) Full masonry or masonry veneer walls with an outer leaf of clay, concrete, calcium silicate or natural stone.
 - (ii) Precast or in situ walls of concrete or aerated concrete.
 - (iii) Earth wall including mud brick; or
- (b) Timber logs of a species with a density of 680 kg/m³ or greater at a 12% moisture content; of a minimum nominal overall thickness of 90 mm and a minimum thickness of 70 mm and gauge planed; or
- (c) Cladding that is fixed externally to a timber-framed or a steel-framed wall and is-
 - (i) non-combustible material; or
 - (ii) fibre-cement a minimum of 6 mm in thickness; or
 - (iii) bushfire-resisting timber (see Appendix F); or
 - (iv) a timber species as specified in Paragraph E1, Appendix E; or
 - (v) a combination of any of Items (i), (ii), (iii) or (iv); or
- (d) A combination of any of Items (a), (b) or (c).

This Standard does not provide construction requirements for the exposed components of an external wall that are 400 mm or more from the ground or 400 mm or more above decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the wall (see Figure D3, Appendix D).

5.4.2 Joints

All joints in the external surface material of walls shall be covered, sealed, overlapped, backed or butt-jointed.

5.4.3 Vents and weepholes

Except for exclusions provided in Clause 3.6, vents and weepholes in external walls shall be screened with a mesh made of corrosion-resistant steel, bronze or aluminium.

Note 3:

APPENDIX F

F1 General

Bushfire resisting timber is timber that is deemed to be acceptable to withstand exposure up to BAL 29 condition.

Timber may be bushfire resisting timber by means of one or more of;

- (a) The inherent properties of the material itself or,
- (b) Being impregnated with fire retardant chemicals or,
- (c) The application of fire retardant coatings or substrates.

F2 Testing:

- (a) To satisfy the requirements for bushfire-resisting timber, timber shall be tested in accordance with AS/NZS 3837 and shall meet the following criteria:
 - (i) The maximum heat release rate shall be not greater than 100 kW/m²•
 - (ii) The average heat release rate for 10 min following ignition shall be not greater than 60 kW/m² when the material is exposed to an irradiance level of 25 kW/m²•
- (b) Where the timber has been altered by chemicals, the test samples shall be subjected to the regime of accelerated weathering described in Paragraph F3 except that where the timber is protected from the weather, as described in AS 1684.2 and AS 1684.3 (for example, cladding protected by a veranda), accelerated weathering of the test samples is not required before being tested to AS/NZS 3837.

External timbers are deemed to be protected if they are covered by a roof projection (or similar) at 30 degrees or greater to the vertical and they are well detailed and maintained (painted or stained and kept well ventilated).

F3 Accelerated weathering

Where accelerated weathering is required before testing to AS/NZS 3837, external fire-retardant-coated substrates shall be subjected to the ASTM D2898 Method B weathering regime, with the water flow rate modified to be the same as that within ASTM D2898 Method A.

F4 Bushfire resisting species. Some species have been tested and have met the requirements of Paragraph F2 above.

APPENDIX H

The following species have been tested and have met the requirements of Appendix F for Bushfire Resisting Timber;

Standard trade name	Botanical name
Ash, silvertop	Eucalyptus sieberi
Blackbutt	Eucalyptus pilularis
Gum, red, river	Eucalyptus camaldulensis
Gum, spotted	Corymbia maculata Corymbia henryi Corymbia citriodora
Ironbark, red	Eucalyptus sideroxylon
Kwila (Merbau)	Intsia bijuga
Turpentine	Syncarpia glomulifera

Note 4:

Fire retardant coating acceptable under Appendix F of AS3959 – 2018 can be Exfire Fireshell F1E™ or similar. I do not specifically promote Exfire Fireshell F1E™ as the only suitable fire retardant coating however I retain test certificates on file for this product. Where an alternate treatment is used test certificates *including accelerated weather test* shall be provided to assess the products suitability.

9.0 Recommendations

9.1 Asset Protection Zones / landscaping

1. That in perpetuity all land not built upon within the subject site shall continue to be maintained as an Asset Protection Zone / Inner Protection Area as detailed in the NSW Rural Fire Service's document 'Standards for Asset Protection Zones' and Appendix 4 of Planning for Bush Fire Protection 2019.

9.2 Construction

2. That the as built deck and roof over is required to be upgraded to comply with section 3 and 5 BAL 12.5 of AS3959 – 2018 *Construction of buildings in bushfire prone areas* inclusive of the additional requirements detailed within section 7.5.2 of Planning for Bush Fire Protection 2019.

Note: See section 8.7 of this report for a detail list of ways the construction recommendations can be achieved.

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 (where applicable) measures to mitigate against the impacts from bushfire including smoke, embers, radiant heat and flame contact and also 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 as built deck addition and roof over was determined from Table A1.12.5 of PBP 2019 to be 'BAL 12.5'. The as built deck and roof over is required to be upgraded to comply with section 3 and 5 BAL 12.5 of AS3959 – 2018 *Construction of buildings in bushfire prone areas* inclusive of the additional requirements detailed within section 7.5.2 of Planning for Bush Fire Protection 2019. The works required to achieve compliance with these requirements are listed in detail within section 8.7 of this report.

In consideration of the bushfire risk posed to the proposed development in conjunction 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 development subject to the Building Information Certificate 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

List of attachments

Attachment 01: 4.14 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)

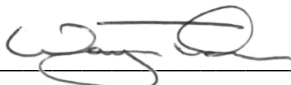
have carried out a bushfire risk assessment on the above mentioned proposal and property. A detailed Bushfire Assessment Report is attached which includes the submission requirements set out in *Appendix 2 of Planning for Bushfire Protection 2019* together with recommendations as to how the relevant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