



Building Code & Bushfire Hazard Solutions

(Pty. Limited) ABN 19 057 337 774
PO Box 124, Berowra NSW 2081
Telephone: (02) 9457 6530 Facsimile: (02) 9457 6532
www.bushfirehazardsolutions.com.au



SMJ Investments P/L
C/- Vikram Flora,
Level 13, 23 Hunter Street
SYDNEY NSW 2000

26th August 2019
Our Ref. 191257

Attn: Stephen Girdis

**Re: PROPOSED BOAT SHED
967 BARRENJOEY ROAD, PALM BEACH NSW
BUSHFIRE ASSESSMENT STATEMENT**

Dear Stephen,

We thank you for the opportunity of undertaking this assessment for you.

The development proposal relates to the construction of a new boatshed within an existing residential allotment located at 967 Barrenjoey Road, Palm Beach (Lot 46 DP 13620). The subject property has street frontage to Barrenjoey Road to the east, abuts neighbouring private allotments to the north and south and Pittwater to the west.

Properties considered to be affected by possible bushfire impact are determined from local Bushfire Prone Land Map's as prepared by Council and or the Rural Fire Service. All property development within affected areas is subject to the conditions detailed in the document 'Planning for Bush Fire Protection - 2006' (PBP).

The Northern Beaches Council's Bushfire Prone Land Map indicates the subject property contains the 100 metre buffer zone from Category 1 Vegetation, therefore the application of *Planning for Bush Fire Protection - 2006* (PBP) must apply in this instance.

The vegetation identified as being the hazard is within the rear of private allotments and McKay Reserve to the east of the proposed boatshed.

The purpose of this bushfire assessment is to provide the owners and Council with an independent bushfire hazard determination together with appropriate recommendations for both building construction and bushfire mitigation measures considered necessary having regard to construction within a designated 'bushfire prone' area.

The scope of this statement is limited to providing a bushfire assessment and recommendations for the new boatshed within the subject property. Where reference has been made to the surrounding lands, this statement does not purport to directly assess those lands; rather it may discuss bushfire impact and/or progression through those lands and possible bushfire impact to the subject property.

The proposed development relates to the construction of a new boatshed within an existing residential allotment (4.14 application). To accord with PBP the development is classified as infill development.

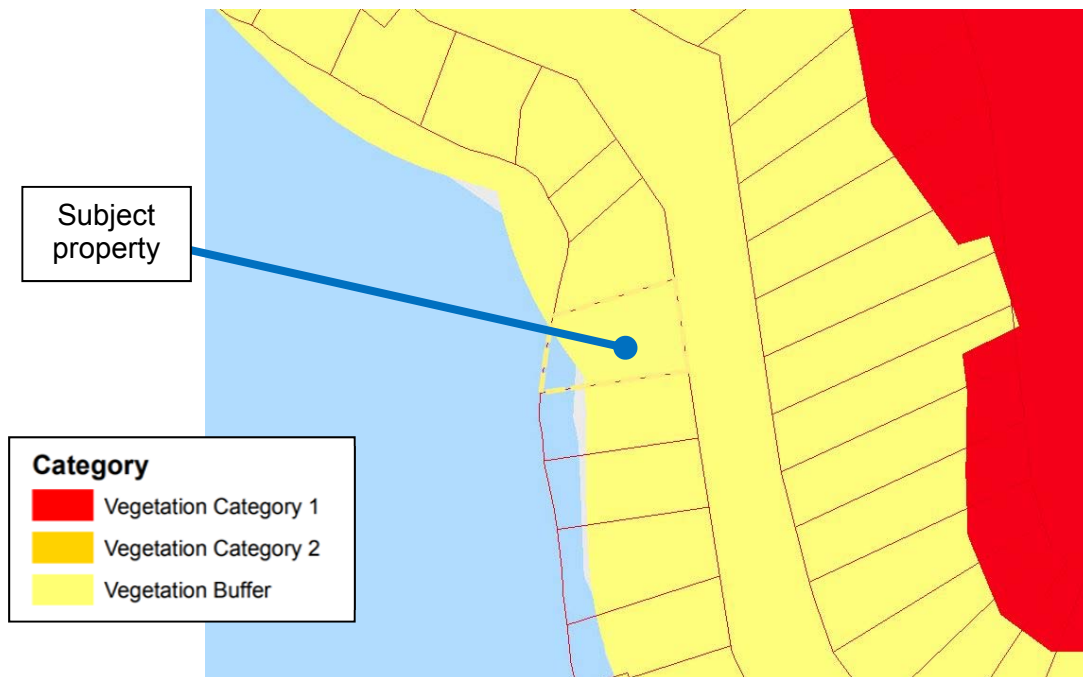


Image 01: Extract from Northern Beaches Council's Bushfire Prone Land Map



Image 02: Aerial view from the Land and Property Management Authority Sixmaps

Vegetation Identification:

The predominant vegetation found within most neighbouring private residential was found to consist of landscaped gardens and mown lawns.

The vegetation identified as posing a potential bushfire threat to the subject property was found to be located within the rear of neighbouring private allotments and McKay Reserve to the east. The vegetation posing a hazard was found to consist of trees 10 - 20 metres in height with a 30 - 70% canopy foliage cover and an understorey of low trees, shrubs and grasses.

For the purpose of this assessment the vegetation posing a hazard to the east of the subject property has been determined to be the Forest.

Slope Analysis:

The slope that would most significantly influence bushfire behaviour must be assessed for a distance of 100 metres from within the hazard. The most significant bushfire impact from the east is expected to be a bushfire travelling down slope toward the subject property.

The slope that would most significantly influence bushfire behaviour was measured onsite using an inclinometer and verified from topographic imagery of the subject area and found to be:

- ❖ 0 degrees and up slope within the hazard to the east

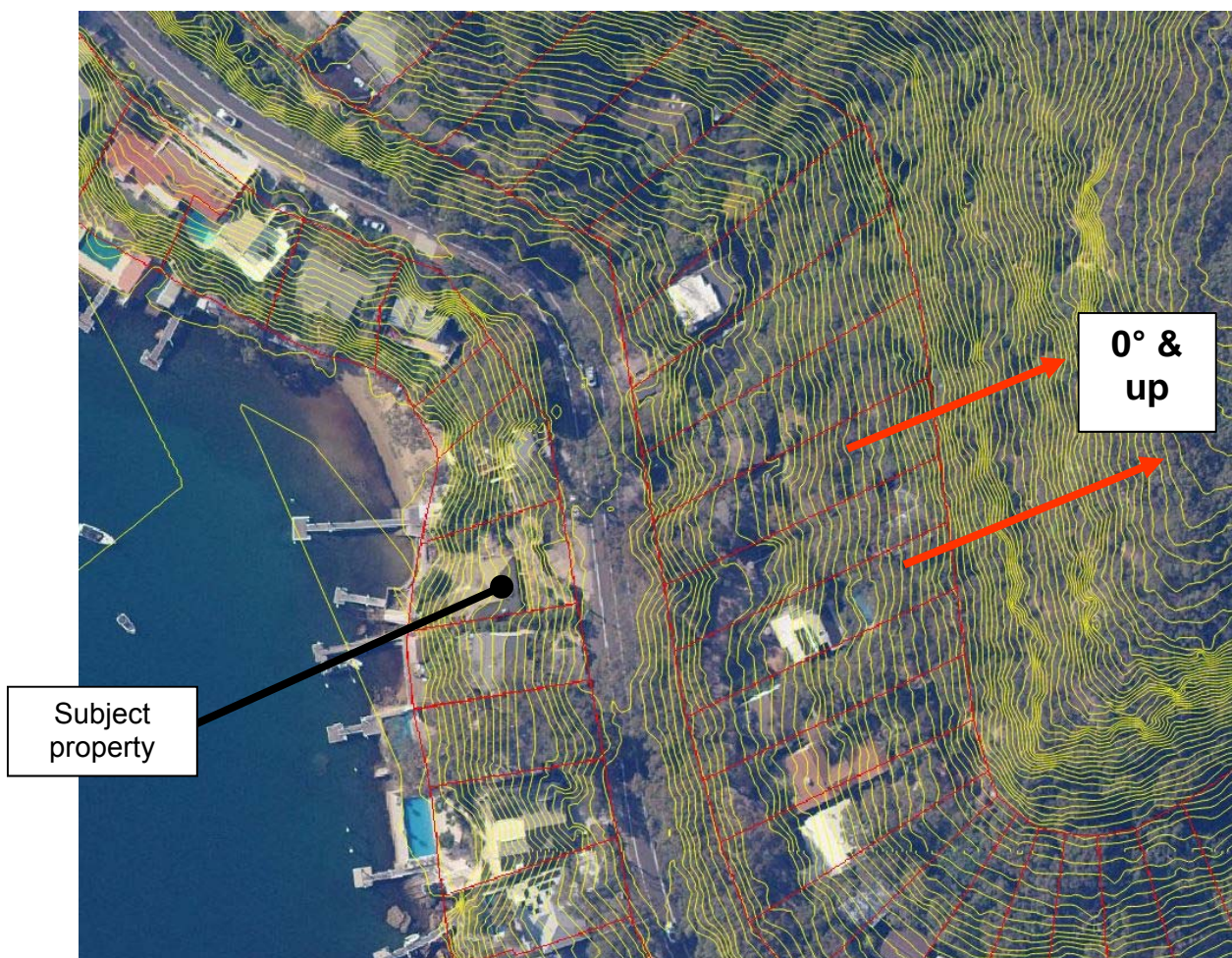


Image 03: Extract from ELVIS – Geoscience Australia

Asset Protection Zones:

The proposed boatshed is within the existing pattern of development and was found to be located >85 metres from the hazard interface to the east. The Asset Protection Zone includes maintained land considered to be “*equivalent to an Asset Protection Zone*” being Barrenjoey Road and within neighbouring private residential allotments.

Recommendations on the continued maintenance of the APZs within the subject property will be included within the recommendations of this statement.

Fire Fighting Water Supply:

The existing dwelling is connected to the reticulated town's water main in Barrenjoey Road for its domestic needs. Existing in ground hydrants are available along Barrenjoey Road and surrounding streets for the replenishment of attending fire services.

The most distant external point of the building footprint will be less than 70 metres from a public road supporting a hydrant network and therefore a Static Water Supply is not required. Regardless direct access to Pittwater/Careel Bay provides a significant water supply to the subject property.

The existing water supply is considered adequate for the replenishment of attending fire services.

Property Access:

Persons seeking to egress from the subject property can do so freely along the existing road infrastructure. Fire services have free access to the property from Barrenjoey Road to the east and can access the hazard via neighbouring residential allotments and surrounding streets for hazard reduction or fire suppression activities without the need to enter the subject property.

Access to the subject dwelling and hazard interface is considered satisfactory will not be altered as part of this development application.

Summary:

	East
Vegetation Structure	Forest
Slope	0 degrees & up
Asset Protection Zone	>85 metres
Significant environmental features	Barrenjoey Road / Neighbouring residential allotments
Threatened species	APZ Existing
Aboriginal Relics	APZ Existing
Bushfire Attack Level	BAL 12.5
Required Construction Level	BAL 12.5

The highest Bushfire Attack Level to the proposed boatshed was determined from Table 2.4.2 of AS3959 - 2009 to be 'BAL 12.5'. The proposed boatshed is therefore required to be constructed to that of BAL 12.5 under section 3 and section 5 of Australian Standard 3959 'Construction of buildings in bushfire-prone areas' 2009.

Recommendations

Asset Protection Zones

1. That all grounds within the subject property continue to be maintained as an Asset Protection Zone as detailed in the NSW Rural Fire Service's document 'Standards for Asset Protection Zones' and Appendix 2 of Planning for Bush Fire Protection 2006.

Construction

2. New construction shall comply with section 5 (BAL 12.5) Australian Standard AS3959-2009 "Construction of buildings in bush fire-prone areas' and section A3.7 Addendum Appendix 3 of "Planning for Bush Fire Protection"

Conclusion:

Given that the property is deemed bushfire prone under Northern Beaches Council's Bush Fire Prone Land Map any proposed development including the building would need to meet the requirements or the intent of *Planning for Bush Fire Protection – 2006* and of the construction requirements of *Australian Standard 3959 'Construction of buildings in bushfire-prone areas' – 2009*. The determination of any bushfire hazard must be made on a site-specific basis that includes an assessment of the local bushland area and its possible impact to the subject property.

The vegetation identified as being the hazard is within the rear of private allotments and McKay Reserve to the east of the proposed boatshed. The vegetation posing a hazard was determined to be Forest.

The existing Asset Protection Zone (APZ) was measured onsite and from aerial imagery to be >85 metres to the east. The existing APZ consists of maintained grounds within the subject property and land equivalent to an APZ being maintained land within Barrenjoey Road and neighbouring residential allotments.

The highest Bushfire Attack Level to the proposed boatshed was determined from Table 2.4.2 of AS3959 - 2009 to be 'BAL 12.5'. The proposed boatshed is therefore required to be constructed to that of BAL 12.5 under section 3 and section 5 of Australian Standard 3959 'Construction of buildings in bushfire-prone areas' 2009.

The existing access provisions and water supply are considered adequate and will not be altered as part of this development.

In accordance with the bushfire safety measures contained in this report, and consideration of the site specific bushfire risk assessment and existing approved building footprints it is my opinion that the recommendations made herein will provide a reasonable level of bushfire protection.

Should you have any enquiries regarding this project please contact me at our office.

Prepared by
Building Code & Bushfire Hazard Solutions



Duncan Armour

Bushfire Consultant
Diploma of Engineering

Reviewed and endorsed by
Building Code & Bushfire Hazard Solutions P/L



Stuart McMonnies

Manager Bushfire Section
G. D. Design in Bushfire Prone Areas.
Certificate IV Fire Technology
Fire Protection Association of Australia BPAD – L3 Accredited Practitioner
Certification number – BPAD 9400



Disclaimer:

Quote from *Planning for Bush Fire Protection 2006*, 'Any representation, statement opinion, or advice expressed or implied in this publication is made in good faith on the basis that the State of New South Wales, the NSW Rural Fire Service, its agents and employees are not liable (whether by reason of negligence, lack of care or otherwise) 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 referred to above.'

Similarly the interpretations and opinions provided by Building Code and Bushfire Hazard Solutions in regard to bushfire protection are also given in the same good faith.

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BUSHFIRE RISK ASSESSMENT CERTIFICATE UNDER PART 4 DIVISION 4.3 SECTION 4.14 OF THE EP&A ACT 1979 NO 203

PROPERTY ADDRESS:	967 Barrenjoey Road, Palm Beach
DESCRIPTION OF PROPOSAL:	Boatshed
PLAN REFERENCE: (relied upon in report preparation)	Site Plan prepared by Blue Sky Building Designs, Project No. 2018074, Revision 6, Dated 12.06.2019
BAL RATING:	BAL 12.5 <small>(If the BAL rating is FZ the application is to be referred to NSW RFS for assessment)</small>
DOES THE PROPOSAL RELY ON ALTERNATE SOLUTIONS:	YES <input checked="" type="radio"/> NO <input type="radio"/> <small>(Circle the relevant response)</small> <small>(If YES the application is to be referred to NSW RFS for assessment)</small>
BUSHFIRE ASSESSMENT REPORT REFERENCE:	191257
REPORT DATE:	26 th August 2019
CERTIFICATION NO/ACCREDITED SCHEME	BPAD9400

I Stuart McMonnies of Building Code and Bushfire Hazard Solutions Pty Ltd hereby certify, in accordance with Part 4 Division 4.3 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 Bushfire Risk Assessment Report the proposed development conforms specifications and requirements of the documents 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 Part 4 Division 4.3 Section 4.14 of the *Environmental Planning and Assessment Act 1979 No 203*.

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 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 2006*.

Signature:  Date: 26th August 2019

