



Building Code & Bushfire Hazard Solutions

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Josh Locker
19 Bligh Crescent,
SEAFORTH NSW 2092

8th October 2021
Our Ref. 220341

**Re: PROPOSED ALTERATIONS AND ADDITIONS AND NEW SWIMMING POOL
LOT 21 DP 788398 / 1 BEATTY STREET, BALGOWLAH HEIGHTS NSW
BUSHFIRE ASSESSMENT STATEMENT**

Dear Josh,

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

The development proposal relates to the alterations and additions to an existing dwelling and construction of a new swimming pool within an existing residential allotment known as 1 Beatty Street, Balgowlah Heights (Lot 21 DP 788398). The subject property has street frontage to Beatty Street to the north and abuts neighbouring allotments to the south and west and Sydney Harbour National Park to the east.

The vegetation identified as being the hazard is located within Sydney Harbour National Park to the east of the proposed works.

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 relevant specifications and requirements detailed in 'Planning for Bush Fire Protection - 2019'.

Northern Beaches Council's Bushfire Prone Land Map identifies that the subject property contains the 100 metre buffer zone from Category 1 Vegetation. Planning for Bush Fire Protection - 2019 (PBP) is applicable in this instance.

The purpose of this bushfire assessment is to provide the owners and Council with an independent bushfire assessment 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 proposed alterations and additions and new swimming pool within the subject site. 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 alterations and additions to an existing dwelling and construction of a new swimming pool within an existing residential allotment (s4.14 application). To accord with PBP the development is classified as infill development and Chapter 7 & 8 applied.

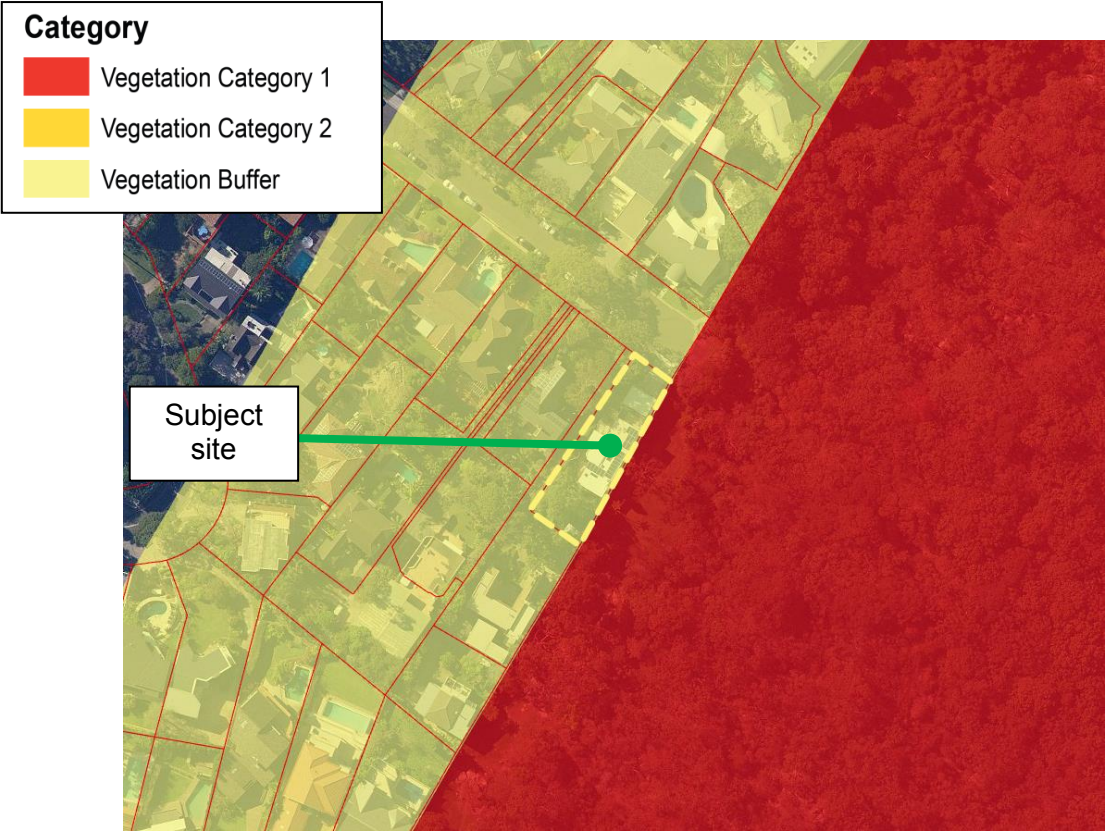


Image 01: Extract from Northern Beaches Council's Bushfire Prone Land Map



Image 02: Aerial view of the subject property C/- Nearmap – August 2021

Vegetation Identification:

The vegetation identified as being the hazard is located within Sydney Harbour National Park to the east of the proposed works.

The vegetation posing a hazard was found to consist of trees 10 - 20 metres in height with 30 - 70% foliage cover, the understorey consisted of low trees, shrubs and ferns.

For the purpose of assessment under PBP we have determined the vegetation posing a hazard to be 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 up slope toward the subject dwelling.

The slope that would **most significantly** influence bushfire impact was determined onsite using an inclinometer and verified from topographic imagery to be:

- 15 - 20 degrees down slope within the hazard to the east

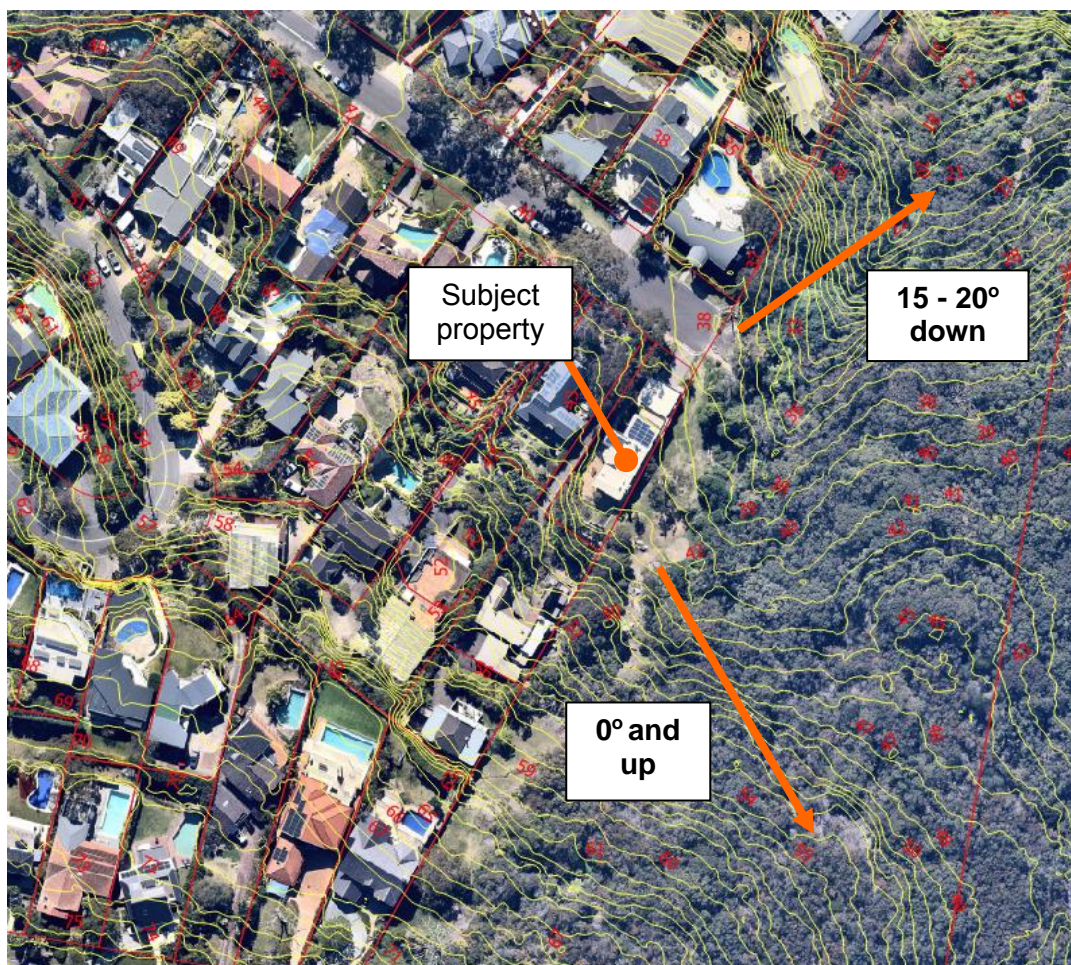


Image 03: Extract from ELVIS – Geoscience Australia (1m Contours)

Asset Protection Zones:

The vegetation identified as being the hazard is located within Sydney Harbour National Park to the east of the proposed works.

The available Asset Protection Zone (APZ) was measured to be less than 1 metre to the east. The APZs consist of maintained grounds entirely within the subject property. It is acknowledged that there is an additional 10 – 15 metre external managed area to the east of the property within Sydney Harbour National Park, although the ongoing management of this area cannot be guaranteed. Regardless the inclusion of this area will not alter the recommendations of this statement.

Fire Fighting Water Supply:

Hydrants are available throughout Beatty Street and surrounding roads for the replenishment of fire service vehicles. The most distant external point of the subject dwelling is <70 metres of a public road that supporting a hydrant network and therefore a Static Water Supply is not required.

The existing water supply is considered adequate for this development and will be supplemented as part of the works.

Property Access:

The subject property has street access to Beatty Street to the north. Persons seeking to egress from the subject property are able to do so via the existing access drive and public roads. The most distant external point of the proposed footprint is <70 metres from a public road supporting the operational use of fire fighting vehicles and therefore the Access requirements detailed in Table 7.4a of PBP are not applicable.

Access to the hazard is available via Beatty Street for hazard reduction for fire suppression activities. The existing access is not being altered and is considered adequate for this development.

Summary:

	East
Vegetation Structure	Forest
Slope	15 -20 degrees down
Asset Protection Zone	<1 metre
Significant landscape features	Sydney Harbour National Park
Bushfire Attack Level	BAL FZ
Required Construction Level	BAL FZ

The highest Bushfire Attack Level to the proposed works was determined from table A1.12.5 of PBP to be 'BAL FZ'.

Recommendations

Asset Protection Zones

1. That all grounds within the subject property are to 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 Section 4 of Planning for Bush Fire Protection 2019.

Construction

2. That all new construction shall comply with Australian Standard AS3959-2018 "Construction of buildings in bush fire-prone areas" Section 3 and 9 & section 7.5 of Planning for Bush Fire Protection 2019.
3. The proposed swimming pool and surrounds be constructed out of non-combustible materials.

Conclusion:

Given that the property is deemed bushfire prone under Northern Beaches Council's Bushfire Prone Land Map any development would need to meet the requirements of '*Planning for Bush Fire Protection*' 2019 and of the construction requirements of Australian Standard 3959 'Construction of buildings in bushfire-prone areas' 2018. 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 subject property is a residential allotment within an area of similar properties. The vegetation identified as being the hazard is located within Sydney Harbour National Parks to the east of the proposed works. The vegetation posing a hazard was determined to be Forest.

The available Asset Protection Zone (APZ) was measured to be <1 metre to the east. The APZs consist of maintained grounds entirely within the subject property. It is acknowledged that there is an additional 10 – 15 metre external managed area to the east of the property within Sydney Harbour National Park, although the ongoing management of this area cannot be guaranteed. Regardless the inclusion of this area will not alter the recommendations of this statement.

The highest Bushfire Attack Level to the proposed works was determined from table A1.12.5 of Planning for Bush Fire Protection 2019 to be 'Flame Zone' and construction requirements within NSW are therefore outside the scope of AS 3959 – 2018. As 'BAL FZ' has not been adopted as a set of deemed to satisfy provisions by NSWRFSS, the proposed pergola and deck will be constructed to a varied BAL FZ under AS 3959 – 2018 and the additional construction requirements under section 7.5 of PBP.

The existing access and water provisions are considered satisfactory for attending fire services.

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

I am therefore in support of the development application.

Should you have any questions please do not hesitate in contacting me.

Prepared by
Building Code & Bushfire Hazard Solutions



Andrew Muirhead

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



Quote from Planning for Bush Fire Protection 2019, 'While the material within this publication is current at the time of writing changes in circumstances after the time of publication may impact on the accuracy of the material. Individuals are responsible for ensuring they have the most current version of this publication.'

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Similarly the interpretations and opinions provided by Building Code and Bushfire Hazard Solutions in regard to bushfire design, protection and mitigation 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:	1 Beatty Street, Balgowlah Heights
DESCRIPTION OF PROPOSAL:	Alterations and Additions & Swimming Pool
PLAN REFERENCE: (relied upon in report preparation)	Site Plan by Sandberg Schoffel architects, Revid A-WIP, Date 13/09/2021
BAL RATING:	BAL FZ <small>(If the BAL rating is FZ the application is to be referred to NSW RFS for assessment)</small>
BUSHFIRE ASSESSMENT REPORT REFERENCE:	220341
REPORT DATE	8 th October 2021
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 2019*.

Signature:  Date: 8th October 2021

