



# Building Code & Bushfire Hazard Solutions

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Northern Beaches Council  
C/- New South Homes,  
20/7 Sefton Road  
THORNLEIGH NSW 2120

3<sup>rd</sup> December 2019  
Our Ref. 200526

Attention: David Alfonse

**Re: NEW SOLE OCCUPANCY DWELLING  
LOT 30 / 41 WARRIEWOOD ROAD, WARRIEWOOD NSW  
BUSHFIRE ASSESSMENT STATEMENT**

Dear David,

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

The development proposal relates to the construction of a new two storey dwelling within a newly created residential allotment located at Lot 30 Bubalo Street, Warriewood. The subject property was created as part of the subdivision of Lot 32 Section C DP5464 (Land and Environment Court Case No. 2017/00053907).

The subject property has street frontage to Bubalo Street to the east and abuts neighbouring private allotments to the remaining aspects.

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).

Northern Beaches Council's DRAFT Bushfire Prone Land Map and Pittwater Council's Bushfire Prone Land Map (2013) indicates the subject allotment prior to subdivision partially contains Category 2 Vegetation, and the 30 metre buffer zone from Category 2 Vegetation, therefore the application of PBP must apply in this instance.

It is noted that the location of the subject allotment is not classified as Bushfire Prone and therefore the application of PBP and AS3959 – 2009 would not be applicable once the BPLM is updated to reflect the approved subdivision.

Regardless, the subject allotment is located within 100 metres of unmanaged vegetation and therefore has been assessed as being bushfire prone.

The vegetation identified as being the potential bushfire hazard to the subject property is located within retained vegetation to the southwest of the subject property.

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 construction of a new sole occupancy dwelling 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 dwelling within an existing residential allotment (4.14 application). To accord with PBP the development is classified as infill development.

| <b>Compliance Summary of Bushfire Protection Measures</b> |                                     |                             |                          |
|---|-------------------------------------|-----------------------------|--------------------------|
| <b>Bushfire Protection Measure</b>                        | <b>Acceptable Solution</b>          | <b>Performance Solution</b> | <b>Statement Section</b> |
| <b>Asset Protection Zones</b>                             | <input checked="" type="checkbox"/> | <input type="checkbox"/>    | Page 6                   |
| <b>Construction Standard</b>                              | <input checked="" type="checkbox"/> | <input type="checkbox"/>    | Page 6                   |
| <b>Access</b>   | <input checked="" type="checkbox"/> | <input type="checkbox"/>    | Page 6                   |
| <b>Water Supply</b>                                       | <input checked="" type="checkbox"/> | <input type="checkbox"/>    | Page 6                   |
| <b>Gas and Electrical Supplies</b>                        | <input checked="" type="checkbox"/> | <input type="checkbox"/>    | N/A                      |

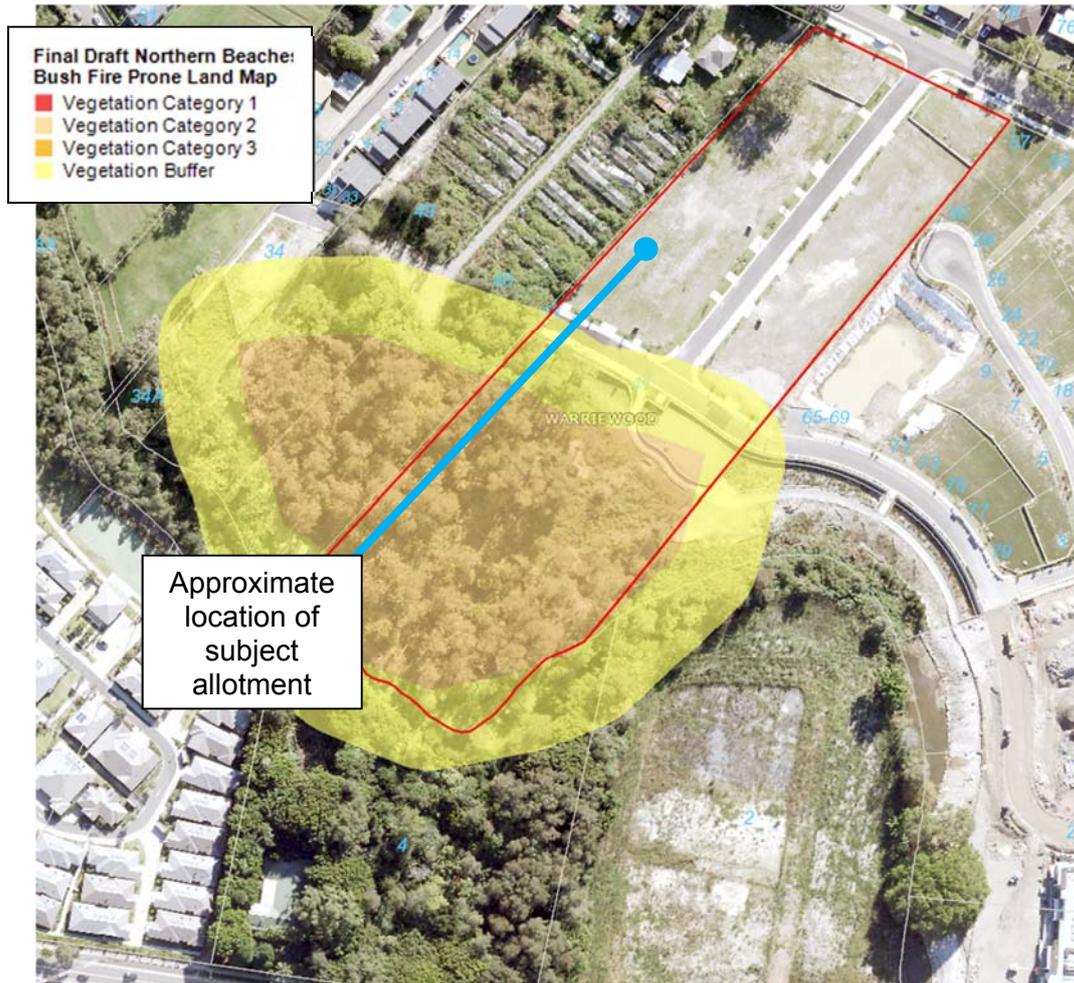


Image 01: Extract from Northern Beaches Council's FINAL DRAFT Bushfire Prone Land Map

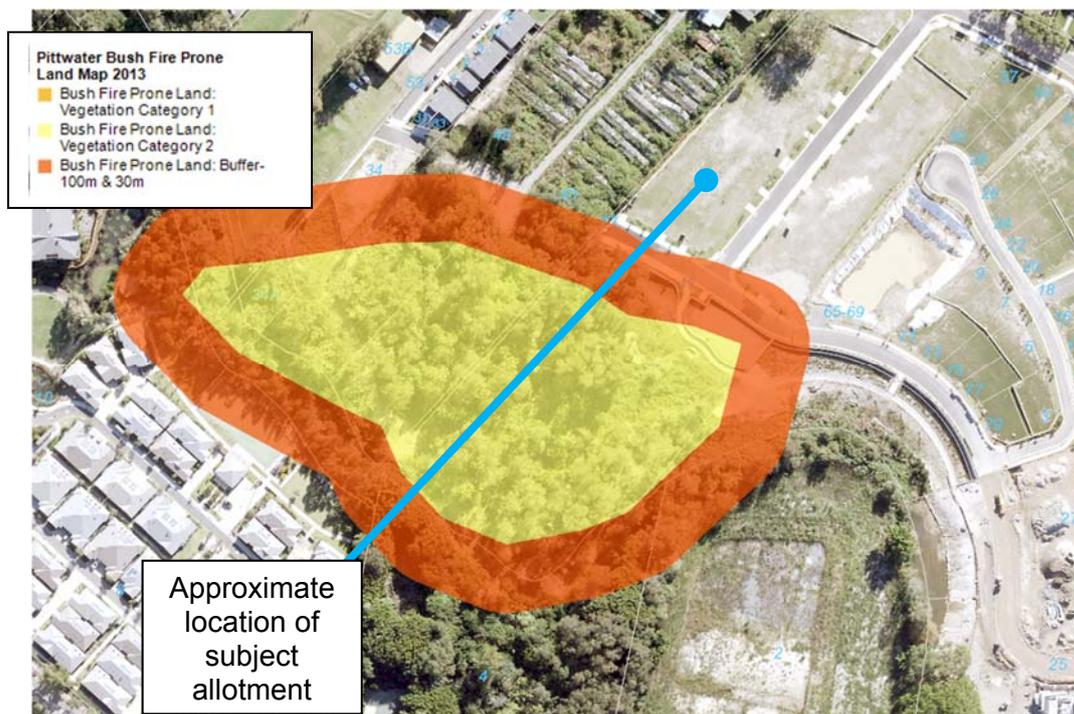


Image 02: Extract from Pittwater Council's Bushfire Prone Land Map 2013



Image 03: Aerial view from Nearmap November 2019 with Site Plan

## Vegetation Identification:

The predominant vegetation within the subject property and neighbouring residential allotments was found to consist of land cleared for development.

The vegetation posing a hazard to the southwest was found to consist of scattered trees 10 - 20 metres in height with a 30 - 50% canopy foliage cover and an understorey of shrubs, ferns with a large percentage of weed varieties.

For the purpose of assessment under 'Planning for Bush Fire Protection' the vegetation posing a hazard to the southwest was determined to be Forested Wetlands, (Forest under AS3959 - 2009).

## 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 within the vegetation to the southwest is expected to be a bushfire travelling marginally upslope toward the subject site. 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:

- ❖ 1 degree down slope within the hazard to the southwest

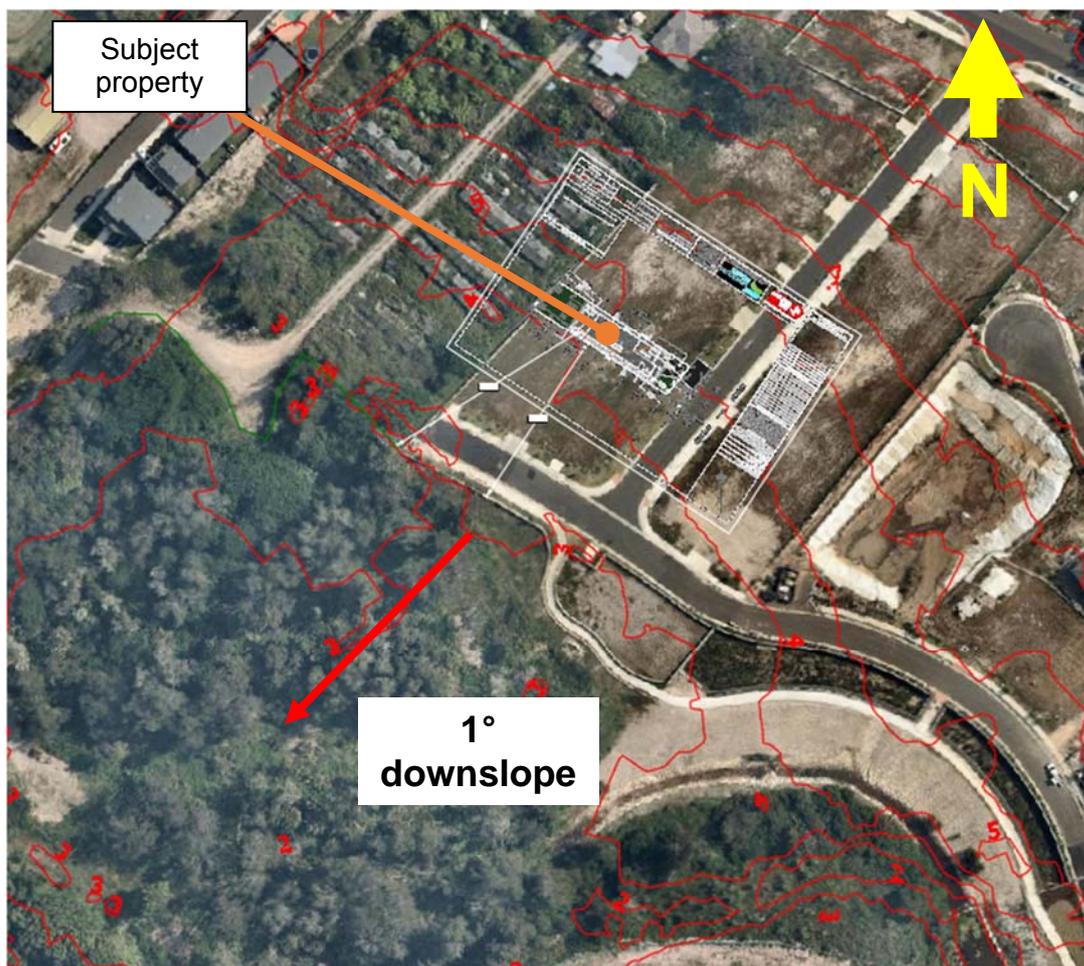


Image 04: Extract from ELVIS – Geoscience Australia (1m Contours) with site plan

## Asset Protection Zones:

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The available Asset Protection Zone (APZ) was measured from the location of the proposed new works to be  $\geq 46$  metres from the hazard interface to the southwest. The existing APZ was found to consist of maintained grounds within the subject property and land 'equivalent to an APZ' being maintained land within neighbouring residential properties and Lorikeet Grove.

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:

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Hydrants are available throughout Bubalo Street and surrounding streets for the replenishment of fire service vehicles. The most distant external point of the proposed dwelling is located within 70 metres of an existing hydrant and therefore a static water supply is not required.

The existing water supply is considered satisfactory and will not be altered as part of this development.

## Property Access:

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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 and can access the hazard via existing public roads for hazard reduction or fire suppression activities without the need to enter the subject property.

The subject dwelling is located <70 metres from a public through road that supports a hydrant network therefore the access provisions under s4.1.3 of PBP are not applicable.

Access to the subject dwelling and hazard interface is considered satisfactory.

## Viable Construction Method:

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The objectives of Planning for Bush Fire Protection – 2006 are for the protection of life including fire fighters. Provided these objectives can be met the construction of buildings is feasible and both the Rural Fire Service and Council should be in a position to consider such applications.

The highest Bushfire Attack Level to the proposed works was determined from Table 2.4.2 of AS3959 - 2009 to be 'BAL 19'. The proposed works are therefore required to be constructed to that of BAL 19 under section 3 and section 5 of Australian Standard 3959 'Construction of buildings in bushfire-prone areas' 2009.

In applying s3.5 of AS3959 – 2009, works to the northern elevation have been downgraded to BAL 12.5.

The additional construction detail contained within Addendum Appendix 3 of PBP 2006 will also apply.

## Summary:

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### Southern Aspect:

- Vegetation – Forest
- Slope 1 degree down
- $\geq 46$  metre APZ is available
- The Bushfire Attack Level was determined to be 'BAL 19'

## Recommendations

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### Asset Protection Zones

1. That all grounds within the subject property that are not built upon continue to be maintained in accordance with an Asset Protection Zone as detailed within Appendix 2 of Planning for Bush Fire Protection 2006 and the NSW Rural Fire Service document Standards for Asset Protection Zones.

### Landscaping

2. That any new landscaping is to comply with Appendix 5 'Landscaping and Property Maintenance' under *Planning for Bush Fire Protection 2006*.

### Construction

3. The roof and all construction to the eastern, southern and western elevations shall comply with section 6 (BAL 19) 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".
4. Construction to the northern elevation shall comply with section 5 (BAL 12.5) under s3.5 of AS3959 – 2009.

## Conclusion:

Given that the original property prior to subdivision was 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 potential bushfire hazard to the subject property is located to the southwest within the residual allotment created as part of the approved subdivision and was determined to be Forest under AS3959 – 2009, (Forested Wetlands).

The existing Asset Protection Zone (APZ) was measured to be ≥46 metres to the southwest. The APZ consists of maintained grounds within the subject property and land equivalent to an APZ being maintained land within neighbouring allotments and Lorikeet Grove.

The highest Bushfire Attack Level to the proposed works was determined from Table 2.4.2 of AS3959 – 2009 to be ‘BAL 19’. The proposed works are therefore required to comply with BAL 19 as detailed within section 3 and section 6 within AS 3959 – 2009 and Appendix 3 under PBP 2006.

In applying s3.5 of AS3959 – 2009, works to the northern elevation of the proposed dwelling have been downgraded to BAL 12.5

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

We are therefore in support of the proposed Development Application.

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

Prepared by  
Building Code & Bushfire Hazard Solutions

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



**Ian Tyerman**  
Bushfire Consultant  
Planning for Bushfire Prone Areas  
UTS Sydney



**Stuart McMonnies**  
G. D. Design in Bushfire Prone Areas.  
Certificate IV Fire Technology  
FPA Australia BPAD Level 3 Accredited Practitioner  
BPAD Accreditation No. BPAD9400



**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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| Version Control |           |             |   |                 |
|-----------------|-----------|-------------|---|-----------------|
| Version         | Date      | Author      | Reviewed by                                     | Details         |
| 1               | 3/12/2019 | Ian Tyerman | Stuart McMonnies<br>BPAD Accreditation No. 9400 | Final Statement |



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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:                                      | Lot 30 Bubalo Street (41 Warriewood Road), Warriewood  |
| DESCRIPTION OF PROPOSAL:                               | New Sole Occupancy Dwelling  |
| PLAN REFERENCE:<br>(relied upon in report preparation) | Site Plan by New South Homes, Job No. N195509, Sheet No. 1; Rev. F, Dated 15.11.2019   |
| BAL RATING:  | BAL 19<br><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 type="radio"/> NO <input checked="" type="radio"/> <small>(Circle the relevant response)</small><br><small>(If YES the application is to be referred to NSW RFS for assessment)</small> |
| BUSHFIRE ASSESSMENT REPORT REFERENCE:                  | 200526   |
| REPORT DATE:   | 3 <sup>rd</sup> December 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: 3<sup>rd</sup> December 2019

