



Building Code & Bushfire Hazard Solutions

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Nick De Laine
7 Heathcliffe Crescent,
BALGOWAH HEIGHTS NSW 2093

29th July 2019
Our Ref. 200060

**Re: PROPOSED ALTERATIONS AND ADDITIONS
7 HEATHCLIFF CRESCENT, BALGOWLAH HEIGHTS NSW
BUSHFIRE ASSESSMENT STATEMENT**

Dear Nick,

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

The development proposal relates to the construction of a new roof over an existing deck within the rear yard of an existing residential allotment located at 7 Heathcliff Crescent, Balgowlah Heights (Lot 15 DP 758044). The subject property has street frontage to Heathcliff Crescent to the east and south 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 Bushfire Prone Land Map indicates the subject property contains the 100 metre buffer zone associated with Category 1 Vegetation, therefore the application of PBP must apply in this instance.

The vegetation identified as being the potential bushfire hazard to the subject property is located within a public reserve known as Tania Park to the south of the subject property beyond Heathcliff Crescent and neighbouring residential allotments.

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 alterations and additions 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 alterations and additions being the construction of a new roof over an existing deck within the rear yard of an existing residential allotment (4.14 application). To accord with PBP the development is classified as infill development.

Compliance Summary of Bushfire Protection Measures Assessed			
Bushfire Protection Measure	Acceptable Solution	Performance Solution	Statement Section
Asset Protection Zones	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Page 5
Construction Standard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Page 5
Access	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Page 5
Water Supply	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Page 5
Gas and Electrical Supplies	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A

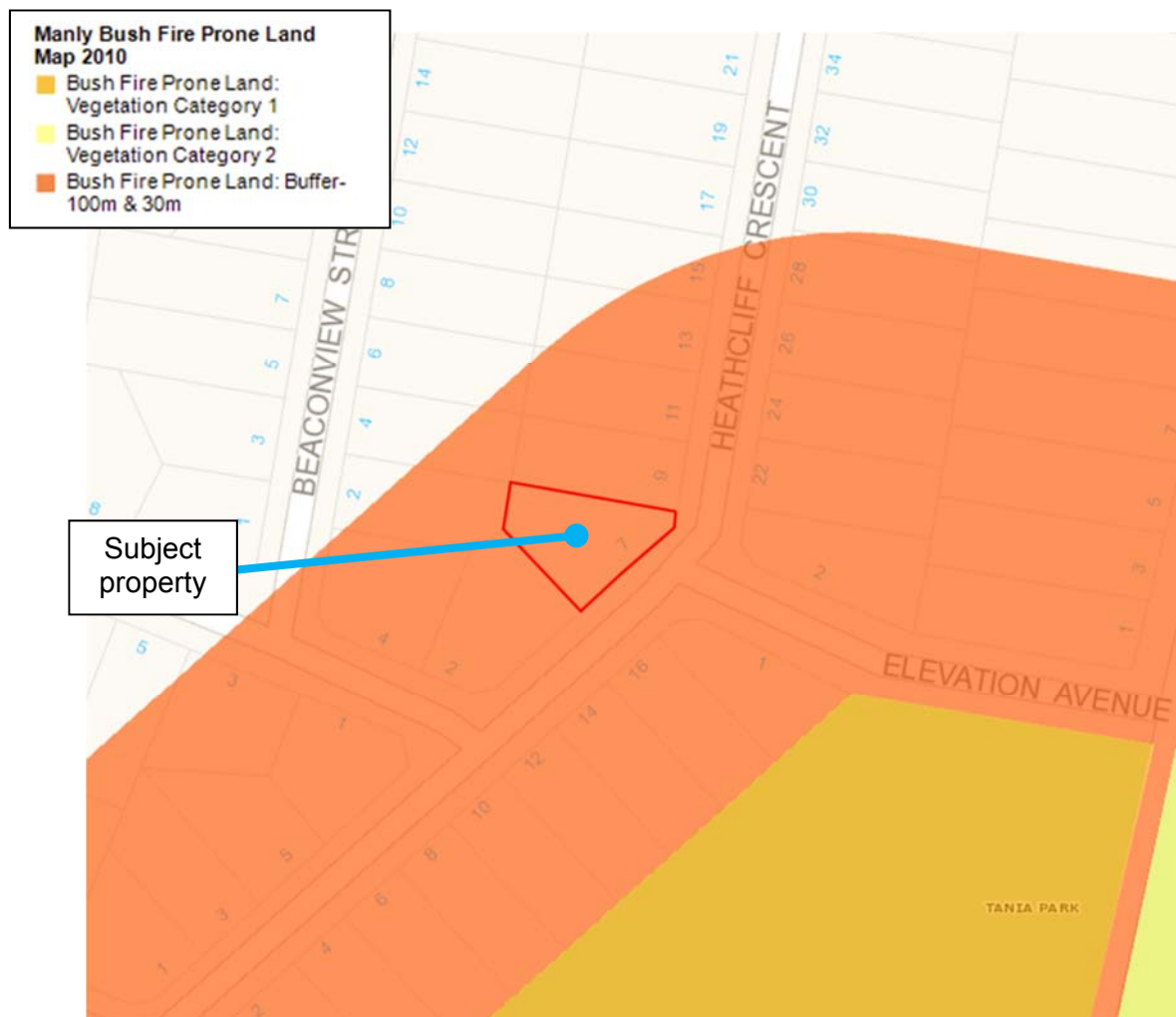


Image 01: Extract from Northern Beaches Council's Bushfire Prone Land Map

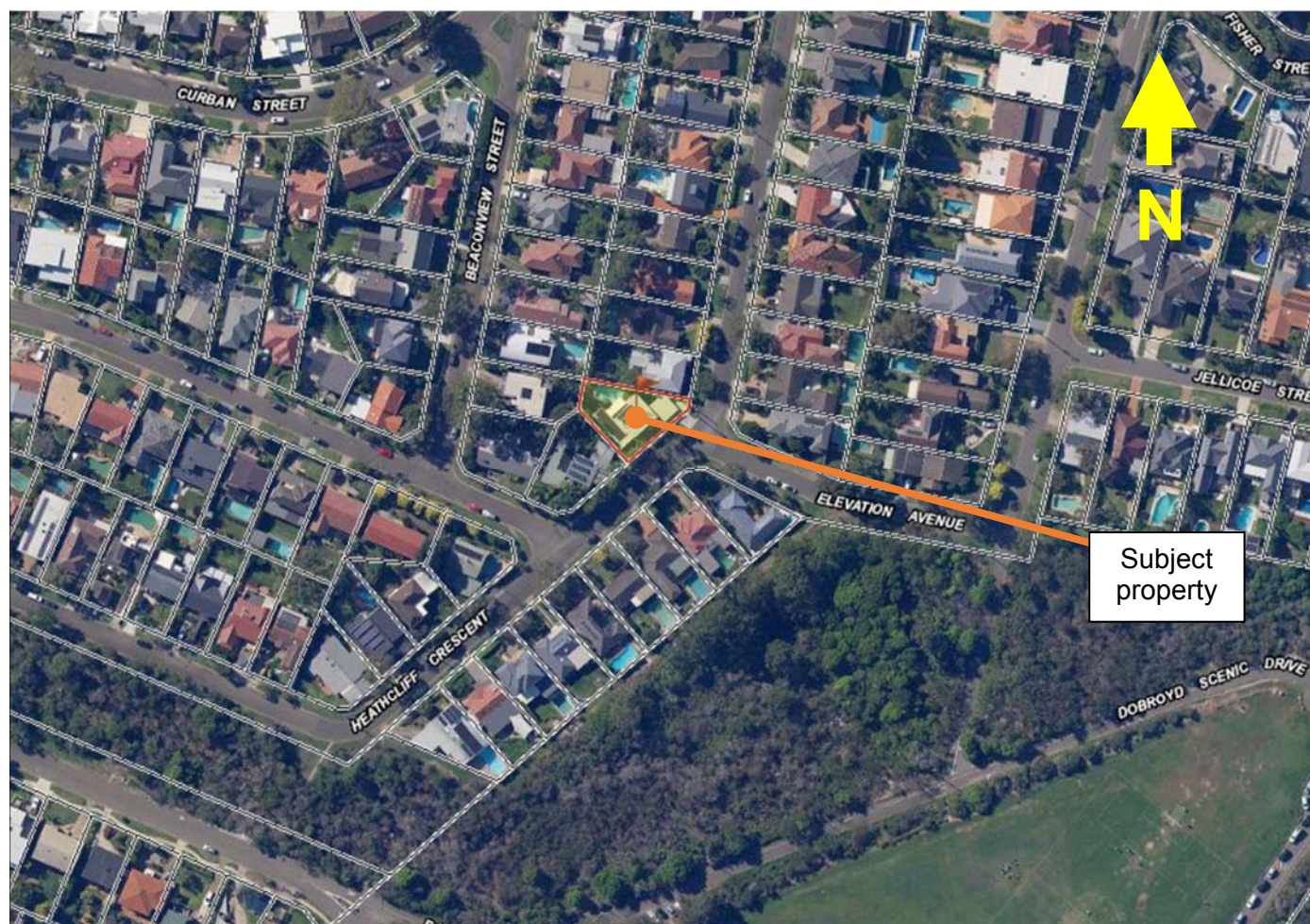


Image 02: Aerial view from NSW Dept. Lands SIXMaps 2019

Vegetation Identification:

The predominant vegetation within the subject property and neighbouring residential allotments was found to consist of landscaped gardens and mown lawns.

The vegetation identified as being the potential bushfire hazard to the subject property is located to the south within Tania Park. The vegetation posing a hazard was found to consist of emergent trees 2 – 5 metres in height with a 10-20% foliage cover, the understorey consists of shrubs 2 - 3 metres in height, grasses and weed varieties.

For the purpose of assessment under *Planning for Bush Fire Protection* the vegetation posing a hazard to the south was determined to be Tall Heath (Scrub).

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 south and southwest is expected to be a bushfire travelling down slope toward the subject dwelling.

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 & upslope within the hazard to the south



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

Asset Protection Zones:

The available Asset Protection Zone (APZ) was measured from the location of the proposed new works to be >67 metres from the hazard interface to the south. 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 Heathcliff Crescent.

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:

Hydrants are available throughout Heathcliff Crescent and surrounding streets for the replenishment of fire service vehicles. The most distant external point of the subject 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:

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 Elevation Avenue, Fisher Street or Dobroyd Scenic Drive 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 will not be altered as part of this development application.

Viable Construction Method:

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 12.5'. The proposed works are 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 additional construction detail contained within Addendum Appendix 3 of PBP 2006 will also apply.

Summary:

Southern Aspect:

- Vegetation – Scrub
- Slope 0 degrees & upslope
- >67 metre APZ is available
- The Bushfire Attack Level was determined to be 'BAL 12.5'

Recommendations

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.

Note: There is no tree removal necessary to achieve the aforementioned APZ.

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. 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 potential bushfire hazard to the subject property is located to the south within Tania Park, and was determined to be Scrub.

The existing Asset Protection Zone (APZ) was measured to be >67 metres to the south. The APZ consists of maintained grounds within the subject property and land equivalent to an APZ being maintained land within neighbouring allotments and Heathcliff Crescent.

The highest Bushfire Attack Level to the proposed works was determined from Table 2.4.2 of AS3959 – 2009 to be 'BAL 12.5'. The proposed works are therefore required to comply with BAL 12.5 as detailed within section 3 and section 5 within AS 3959 – 2009 and Appendix 3 under PBP 2006.

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



Ian Tyerman

Bushfire Consultant
Planning for Bushfire Prone Areas
UTS Sydney

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



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	29/07/2019	Ian Tyerman	Stuart McMonnies BPAD Accreditation No. 9400	Final Report



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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:	7 Heathcliff Crescent, North Balgowlah
DESCRIPTION OF PROPOSAL:	Alterations and Additions
PLAN REFERENCE: (relied upon in report preparation)	Plans by JJ Drafting; Job No. 722/19; Dated: 10/07/2019
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 NO <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:	200060
REPORT DATE:	29 th July 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*:

- That I am a person recognised by the *NSW Rural Fire Service* as a qualified consultant in bushfire risk assessment; and
- 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: 29th July 2019

