



Building Code & Bushfire Hazard Solutions

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Kieran McArdle
20A Amaroo Avenue
MOUNT COLAH NSW 2079

15th May 2020
Our Ref. 201415

**Re: PROPOSED ROOF REPLACEMENT
LOT 2 DP 1155697 / 20A AMAROO AVENUE, MOUNT COLAH
BUSHFIRE ASSESSMENT STATEMENT**

Dear Kieran,

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

The development proposal relates to the replacement of a tile roof with a metal sheet rood on an existing dwelling within an existing residential allotment known as 20A Amaroo Avenue, Mount Colah (Lot 2 DP 1155697). The subject property has street access to Amaroo Avenue to the south and abuts private residential allotments to all aspects.

The vegetation identified as being the hazard is within large vegetated allotments to the north of the subject property and within neighbouring allotments to the east.

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 - 2019' (PBP).

Hornsby Shire Council's Bushfire Prone Land Map indentiifies that the subject property contains the 100 metre buffer zone from Category 1 Vegetation. The application of 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 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 proposed new roof 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 replacement of a roof on an existing dwelling within an existing residential allotment (s4.14 application). To accord with PBP the development is classified as infill development.

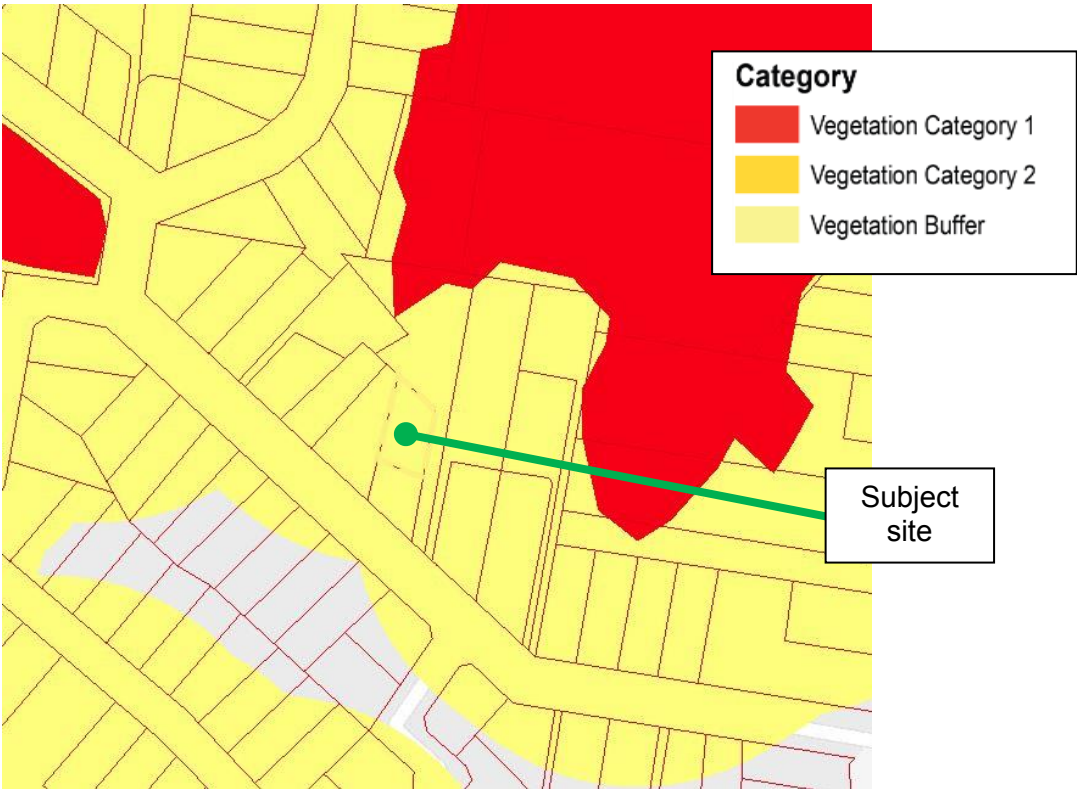


Image 01: Extract from Hornsby Shire Council's Bushfire Prone Land Map



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

Vegetation Identification:

The vegetation identified as being the hazard is within large vegetated allotments to the north of the subject property and neighbouring private allotments to the east.

The vegetation posing a hazard to the north was found to consist of trees 10 - 30 metres in height with 30 - 70% foliage cover, the understorey consisted of low trees and ferns. The vegetation to the east was found to consist of camphor laurel and privet with a greater than 70% canopy cover.

For the purpose of assessment under PBP we have determined the vegetation posing a hazard to the north to be Forest and the vegetation posing a hazard to the east has been determined to be Rainforest in accordance with table A1.19 of PBP.

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 north is expected to be a bushfire travelling up slope toward the subject property.

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 north
- 0 degrees and up slope to the east

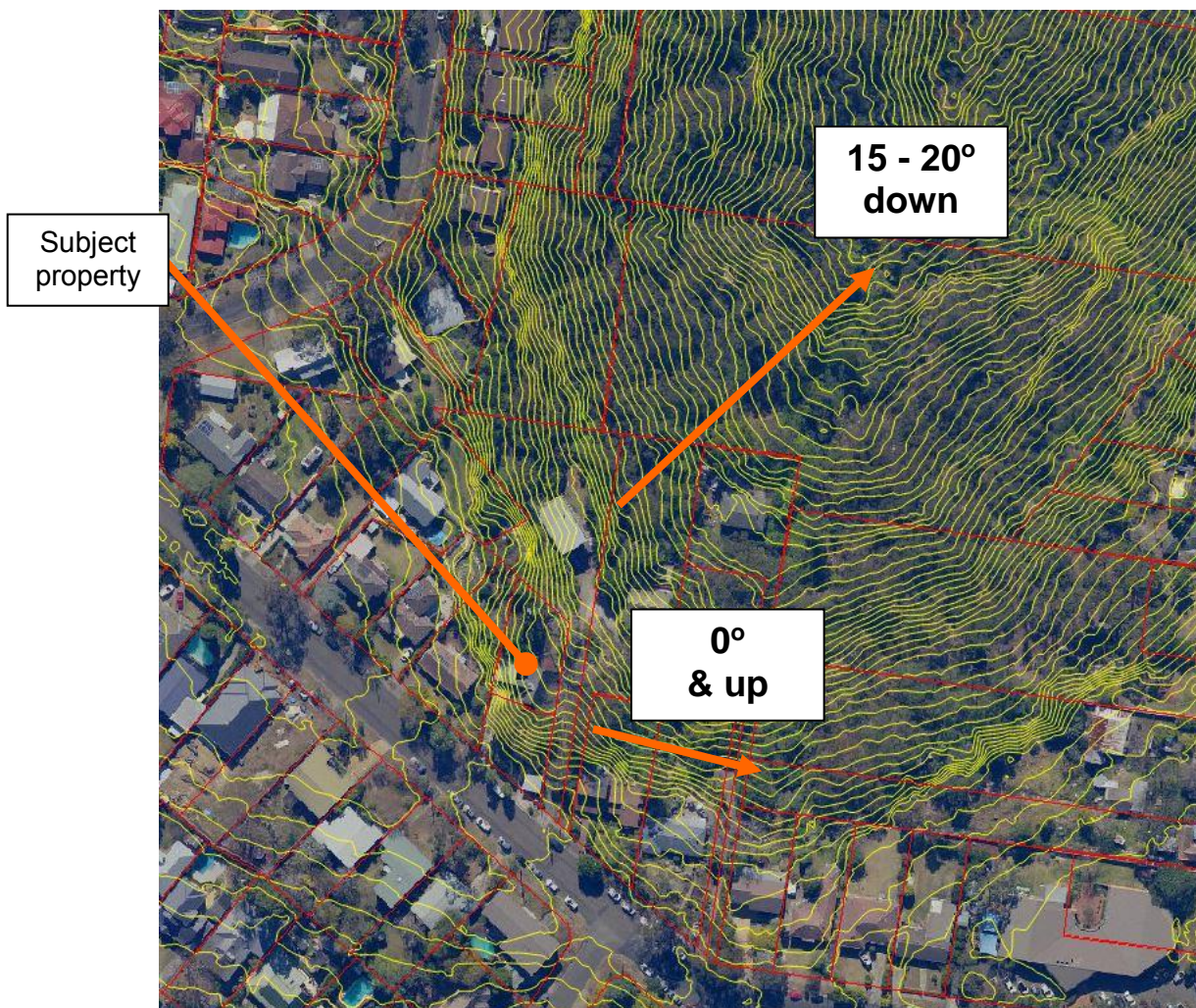


Image 03: Extract from ELVIS – Geoscience Australia (1 metre contours)

Asset Protection Zones:

The vegetation identified as being the hazard is within large vegetated allotments to the north of the subject property and neighbouring private residential allotment to the east.

The available Asset Protection Zones (APZs) were measured to be >46 metres to the north and >8 metres to the east. The APZs consist of maintained grounds within the subject property and land equivalent to an APZ being maintained grounds within the neighbouring residential allotments.

Fire Fighting Water Supply:

Hydrants are available throughout Amaroo Avenue and surrounding roads for the replenishment of fire service vehicles. The most distant external point of the subject dwelling is within 70 metres of a public road that supporting a hydrant network and therefore a Static Water Supply is not required under section 7.4 of PBP.

The existing water supply is considered adequate and is not being altered as part of this development.

Property Access:

The subject property has street access to Amaroo Avenue. 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 less than 70 metres from a public road supporting the operational use of fire fighting vehicles and therefore the Property Access requirements detailed in Table 7.4a of PBP 2019 are not applicable.

Access to the hazard is available via neighbouring allotments for hazard reduction for fire suppression activities. The existing access is considered adequate as part of this development

Summary:

	North	East
Vegetation Structure	Forest	Rainforest
Slope	15 - 20 degrees down	0 degrees and up
Asset Protection Zone	>46 metres	>8 metres
Significant landscape features	Maintained grounds	Maintained grounds
Threatened species	APZ Existing	APZ Existing
Aboriginal Relics	APZ Existing	APZ Existing
Bushfire Attack Level	BAL 40	BAL 40
Required Construction Level	BAL 40	BAL 40

The highest Bushfire Attack Level to the proposed works was determined from Table A1.12.5 of PBP 19 to be 'BAL 40'.

Recommendations

Asset Protection Zones

1. That all grounds within the subject property not built upon 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 Appendix 4 of Planning for Bush Fire Protection 2019.

Note: At the time of our inspection there was no vegetation management required to implement the above APZ.

Construction

2. That all new construction shall comply with Australian Standard AS3959 - 2018 "Construction of buildings in bush fire-prone areas" Section 8 & section 7.5 of PBP 19.

Conclusion:

Given that the property is deemed bushfire prone under Hornsby Shire 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 within large vegetated allotments to the north and private residential allotments to the east of the subject property. The vegetation posing a hazard was determined to be Forest to the north and Rainforest in accordance with table A1.19 of PBP to the east.

The available Asset Protection Zones (APZs) was measured to be >46 metres to the north and >8 metres to the east. The APZs consist of maintained grounds within the subject property and land equivalent to an APZ within neighbouring residential allotments.

The highest Bushfire Attack Level to the proposed works was determined from Table A1.12.5 of PBP - 2019 to be 'BAL 40'. The proposed new roof and associated work are required to comply with BAL 40 section 8 under AS 3959 – 2018 and the additional construction requirements under section 7.5 of PBP - 2019.

Hydrants are available throughout Amaroo Avenue and surrounding streets for the replenishment of attending fire services. 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



Duncan Armour

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



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:	20A Amaroo Avenue, Mount Colah
DESCRIPTION OF PROPOSAL:	Roof Replacement
PLAN REFERENCE: (relied upon in report preparation)	N/A
BAL RATING:	BAL 40 <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:	201415
REPORT DATE:	15 th May 2020
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: 15th May 2020

