



Bushfire Hazard Solutions

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C/- Smartblade Opening Roof System
Email: office@smartblade.com.au

31st May 2024
Our Ref. 241042

Attention: Ben McKelvie

**Re: PROPOSED ALUMINIUM OPENING PERGOLA
LOT 6 SECTION 10 DP 14048 / 24 RALSTON ROAD, PALM BEACH NSW
BUSHFIRE ASSESSMENT STATEMENT**

Dear Ben,

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

The development application relates to the construction of an aluminium opening pergola attached to an existing dwelling within an existing allotment known as 24 Ralston Road, Palm Beach (Lot 6 Section 10 DP 14048). The subject property is located within Northern Beaches Council's Local Government Area and has street frontage to Ralston Road to the north, Ebor Road to the east and abuts similar allotments to the south and 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 - 2019*' (PBP).

The most appropriate method of determining the site bushfire hazard under the terms of PBP is to consider the site in a singular form.

Bushfire prone areas are defined as those areas;

- *containing or within 100m of Category 1 Vegetation; or*
- *containing or within 30m of Category 2 or 3 Vegetation.*

Northern Beaches Council's Bushfire Prone Land Map indicates the subject property as containing the Vegetation Buffer therefore PBP must apply 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 new aluminium opening pergola 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 an aluminium opening pergola attached to an existing dwelling within an existing residential allotment (4.14 of the Environmental Planning & Assessment Act 1979, application). To accord with PBP the development is classified as infill development.

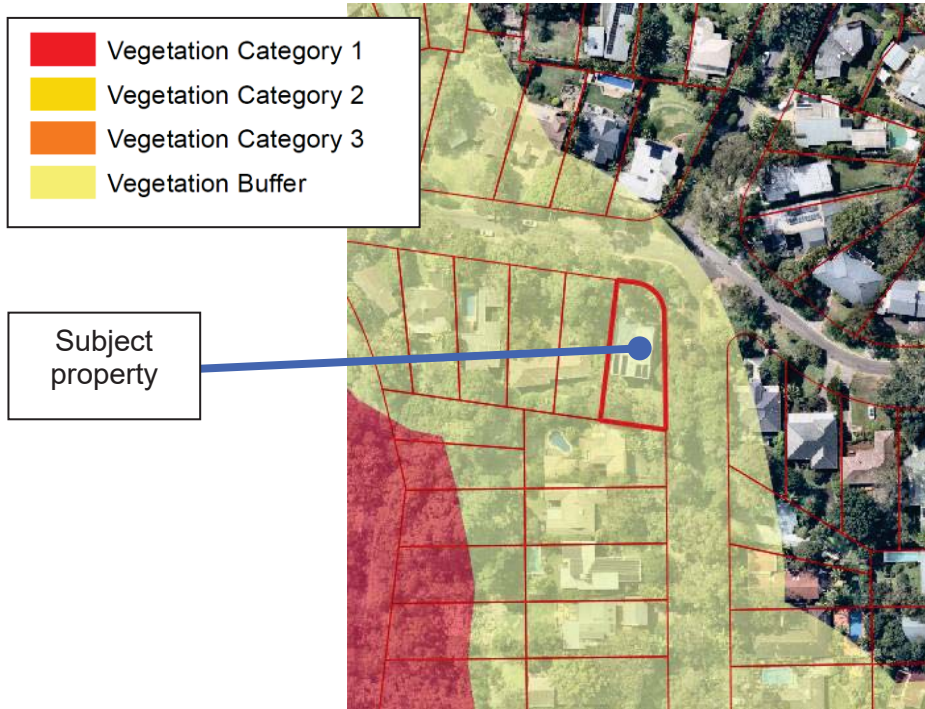


Figure 01: Extract from Northern Beaches Council's Bushfire Prone Land Map

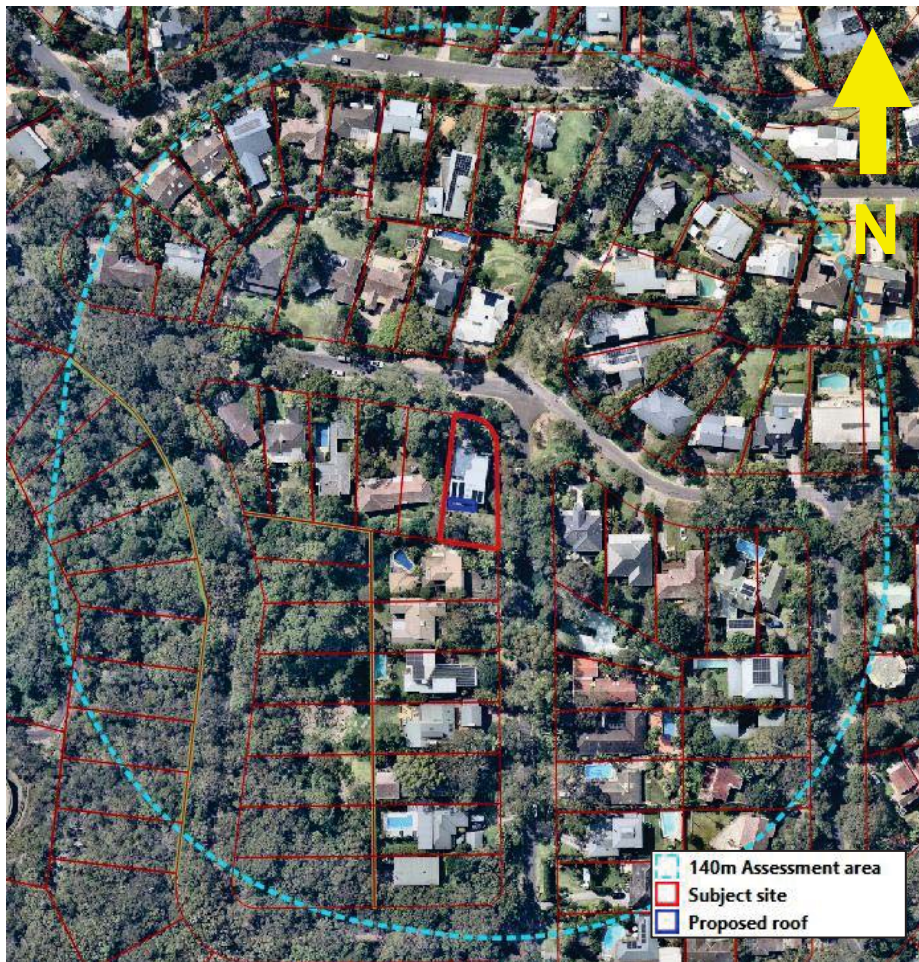


Figure 02: Aerial view of the subject area C/- Nearmap

A representative of Building Code & Bushfire Hazard Solutions completed a site inspection of the subject site and surrounding area on 24th May 2024.

In addition, the following external data sources have been relied upon for this assessment:

- Aerial imagery of the subject area (NSW Spatial Services & Nearmap).
- 1 metre contour mapping of the subject area (Elevation and Depth Foundation Spatial Data – Geoscience Australia)
- NSW Planning Portal Spatial Viewer
- Vegetation mapping (NSW State Vegetation Type Map)
- NSW Bush Fire Prone Land (NSW Rural Fire Service)
- Proposed Site Plan by Smartblade, Job No. 2553, Amendment B, Date 24/04/2024

Vegetation Identification:

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

The vegetation identified as being the hazard is to the southwest within vegetated allotments and McKay Reserve. The vegetation posing a bushfire hazard was found to consist of trees 10 – 20 metres in height with a 30 - 70% foliage cover and an understorey of small trees and ferns.

A review of vegetation mapping (Vegetation NSW) has found the vegetation posing a hazard to the subject site is classified as Sydney Coastal Sandstone Foreshores Forest (PCT: 3594).

For the purpose of assessment under Planning for Bush Fire Protection the vegetation posing a hazard to the southwest of the proposed works has been determined to be Forest.

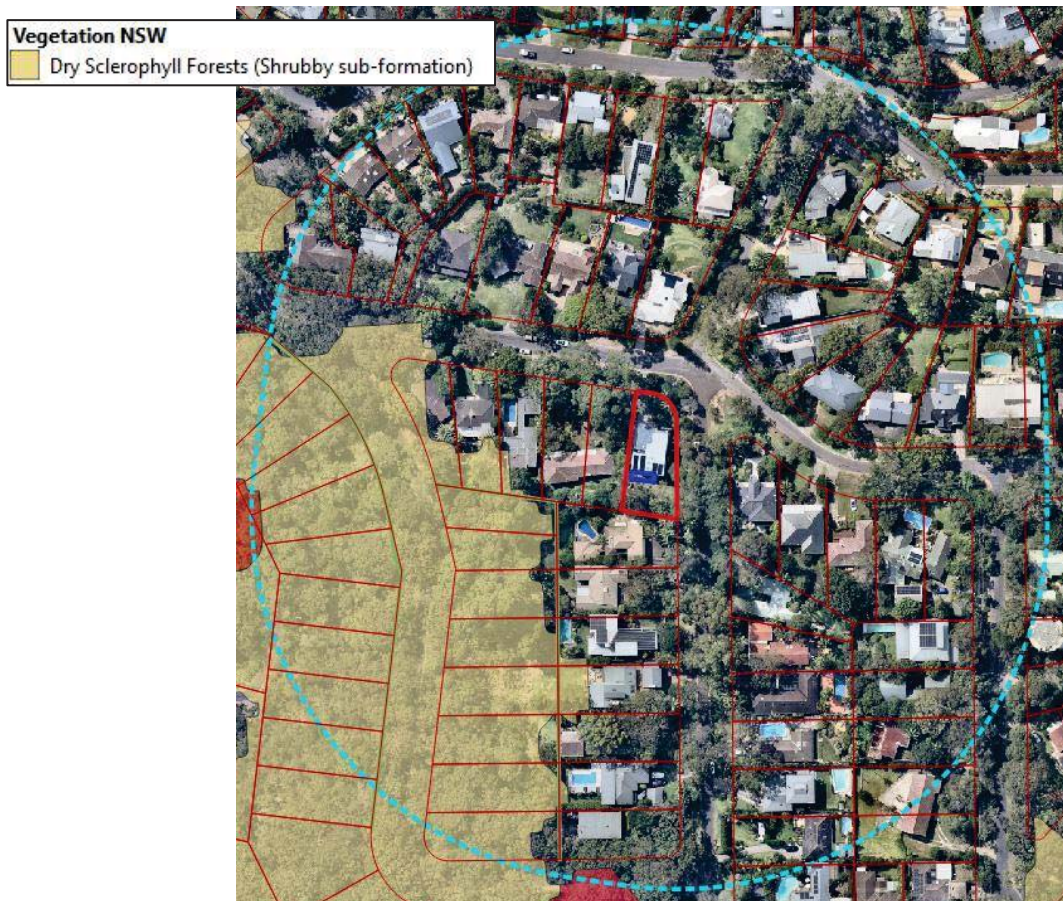


Figure 03: Aerial view of the subject area overlaid with vegetation mapping (Vegetation NSW)

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

- 5 - 10 degrees down slope within the hazard to the southwest

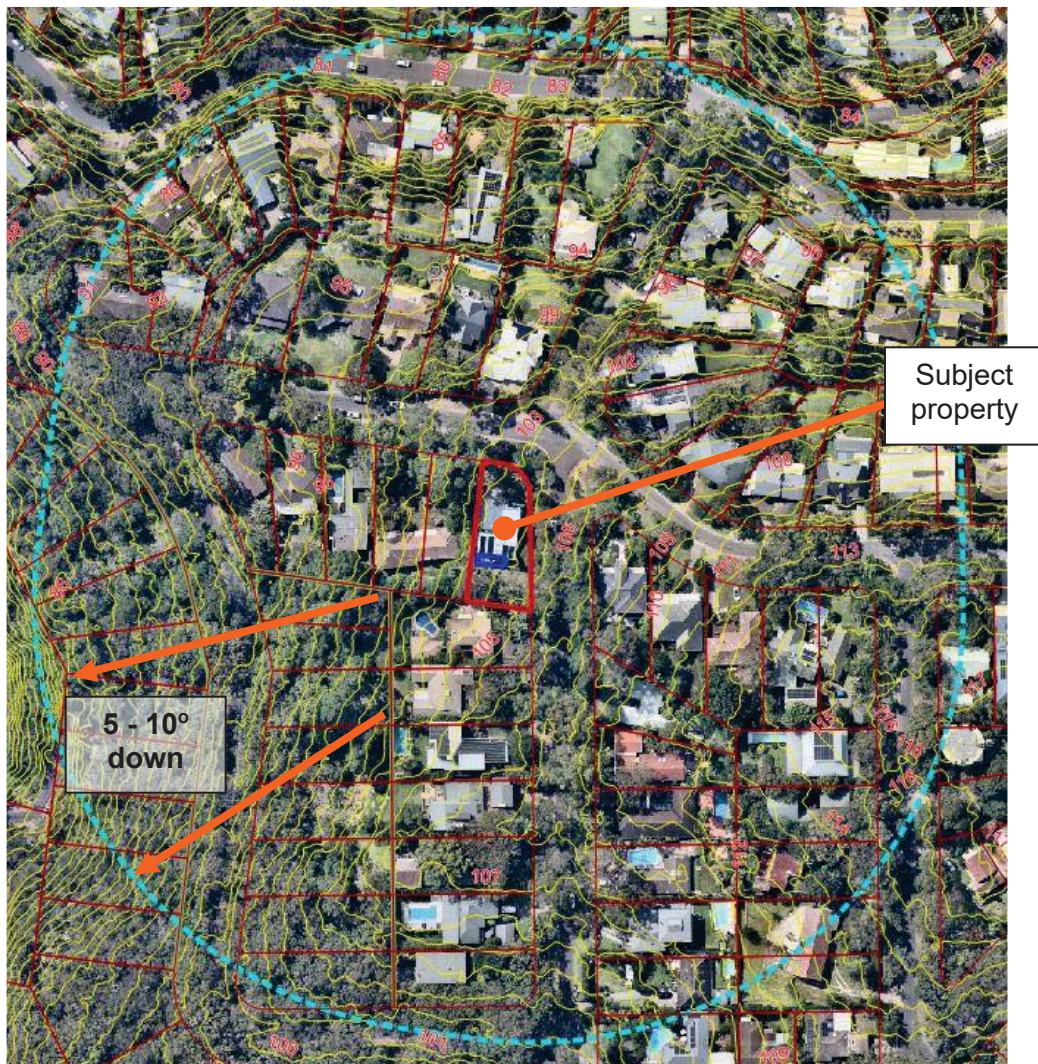


Figure 04: Extract from ELVIS – Geoscience Australia (1m Contours)

Asset Protection Zones:

The vegetation identified as being the hazard is to the southwest within vegetated allotments and McKay Reserve.

The available Asset Protection Zone (APZ) was measured to be >30 metres to the southwest. The APZ consists of maintained grounds within the subject property and land equivalent to an APZ within neighbouring residential allotments.

The subject site is currently considered to meet the performance requirements of an APZ with no tree removal required.

Fire Fighting Water Supply:

Existing in ground hydrants are available along Ralston Road and surrounding streets for the replenishment of attending fire services. The most distant external point of the proposed works will be located within 70 metres of a public road that supports the operational use of fire fighting vehicles and therefore a static water supply is not required.

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

Property Access:

Persons seeking to egress from the subject dwelling can do so freely along the existing road infrastructure. Fire services have free access to the property and around the subject dwelling. The most distant external point of the proposed works will be located within 70 metres of a public road that supports the operational use of fire fighting vehicles and therefore the Access requirements detailed in section 7.4 of PBP are not applicable.

Access to the subject property is considered adequate for attending emergency services.

Summary:

	Southwest
Vegetation Structure	Forest
Slope	5 - 10 degrees down
Asset Protection Zone	>30 metres
Threatened species	APZ Existing
Aboriginal Relics	APZ Existing
Bushfire Attack Level	BAL 40

The highest Bushfire Attack Level to the proposed new aluminium opening pergola was determined from Table A1.12.5 of PBP to be 'BAL 40'.

Recommendations

Asset Protection Zones

1. That all grounds within the subject site shall be maintained as an Asset Protection Zone as detailed in the NSW Rural Fire Service's document 'Standards for Asset Protection Zones' and Section 3.7 of Planning for Bush Fire Protection 2019.

Note: No tree removal is required to achieve the aforementioned APZs. No additional canopy tree planting is recommended.

Construction

2. That the new aluminium opening pergola shall comply with Australian Standard AS3959-2018 "Construction of buildings in bush fire-prone areas" Sections 3 and 8 (BAL 40) & section 7.5 of Planning for Bush Fire Protection 2019.

Landscaping

3. That any new landscaping is to comply with Section 3.7 'Landscaping' under *Planning for Bush Fire Protection* 2019.

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. 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 to the southwest within vegetated allotments and McKay Reserve. The vegetation posing a hazard was determined to be Forest.

The available Asset Protection Zone (APZ) was measured to be >30 metres to the southwest. The APZ consists 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 new aluminium opening pergola was determined from Table A1.12.5 of PBP to be 'BAL 40'. The proposed new aluminium opening pergola is required to comply with sections 3 & 8 (BAL 40) under AS 3959 – 2018 and the additional construction requirements under section 7.5 of PBP.

The existing access and proposed 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.

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



Duncan Armour
Bushfire Consultant

Reviewed and endorsed by
Building Code & Bushfire Hazard Solutions



Andrew Muirhead

Bushfire Consultant
Graduate Certificate in Bushfire Protection
Diploma of Engineering.
FPA Australia BPAD Level 2 Accredited Practitioner
BPAD Accreditation No. BPAD46966



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.

Bush Fire Certificate

Certificate issued under 4.14(1)(b) of the *Environmental Planning & Assessment Act, 1979* and *Planning for Bush Fire Protection 2019*

This Certificate has been issued by a person accredited by Fire Protection Association Australia (FPA Australia) under the Bush Fire Planning and Design (BPAD) Accreditation Scheme and who is recognised by the NSW Rural Fire Service as a qualified consultant in bushfire risk assessment within the meaning of section 4.14(1)(b) of the *Environmental Planning and Assessment Act 1979* (NSW).



Property Details and Description of Works

Address Details	Unit no	Street no	Street name	Lot/Sec/DP
		24	Ralston Road	6/10/14048
Local Government Area BCA class of the building Description of the proposal Development Application Reference	Suburb	State		Postcode
	Palm Beach	NSW		2108
	Northern Beaches			
	1A			
Aluminium Opening Pergola				

Bush Fire Assessment Report

A detailed Bush Fire Assessment Report is attached, which includes the relevant submission requirements set out in <i>Appendix 2</i> of <i>Planning for Bush Fire Protection 2019</i> together with recommendations as to how the relevant specifications and requirements are to be achieved.	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Report Reference and date	
Bushfire Assessment Report 241042	31st May 2024

BPAD Certification

Name Andrew Muirhead	I hereby certify, in accordance with Section 4.14(1)(b) of the <i>Environmental Planning and Assessment Act 1979</i> that:	
Company Details & ABN Bushfire Hazard Solutions 19 057 337 774	<ul style="list-style-type: none"> I am a person recognised by the NSW Rural Fire Service as a qualified consultant in bush fire risk assessment; and the development conforms to the relevant specifications and requirements of <i>Planning for Bush Fire Protection 2019</i> in accordance with section 4.14(1)(b) of the <i>Environmental Planning and Assessment Act 1979</i> (NSW). 	
BPAD Accreditation Number 46966 	Signature 	Date 31st May 2024