



Building Code & Bushfire Hazard Solutions

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Paul Gill
1054 Barrenjoey Road
PALM BEACH NSW 2108

20th September 2022
Our Ref. 221218

**Re: PROPOSED SWIMMING POOL SURROUNDS AND STORAGE SHED
1054 BARRENJOEY ROAD, PALM BEACH NSW
PROVISION OF UPDATED BUSHFIRE ASSESSMENT**

Dear Paul,

We thank you for engaging us to undertake this assessment for you.

It is of our understanding that the proposed development application relates to the construction of a new in-ground concrete swimming pool surrounds and storage shed at 1054 Barrenjoey Road, Palm Beach (Lot 6C DP 13374).

The purpose of this statement is to ascertain compliance or otherwise with Australian Standard 3959 - 2018 'Construction of buildings in bushfire-prone areas' and 'Planning for Bush Fire Protection' 2019. This type of development is considered infill and is captured under section 4.14 of the *Environmental Planning and Assessment Act 1979*.

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 relevant specifications and requirements detailed in the document 'Planning for Bush Fire Protection - 2019' (PBP).

Set back distances for the purpose of creating an Asset Protection Zones (APZ) and / or determining separation distance from a hazard interface must be assessed and any buildings must then conform to corresponding regulations detailed in Australian Standard 3959 – 2018 'Construction of buildings in bushfire prone areas' (where applicable).

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 identifies the subject property as containing the Vegetation Buffer, therefore the application of PBP must apply in this instance.

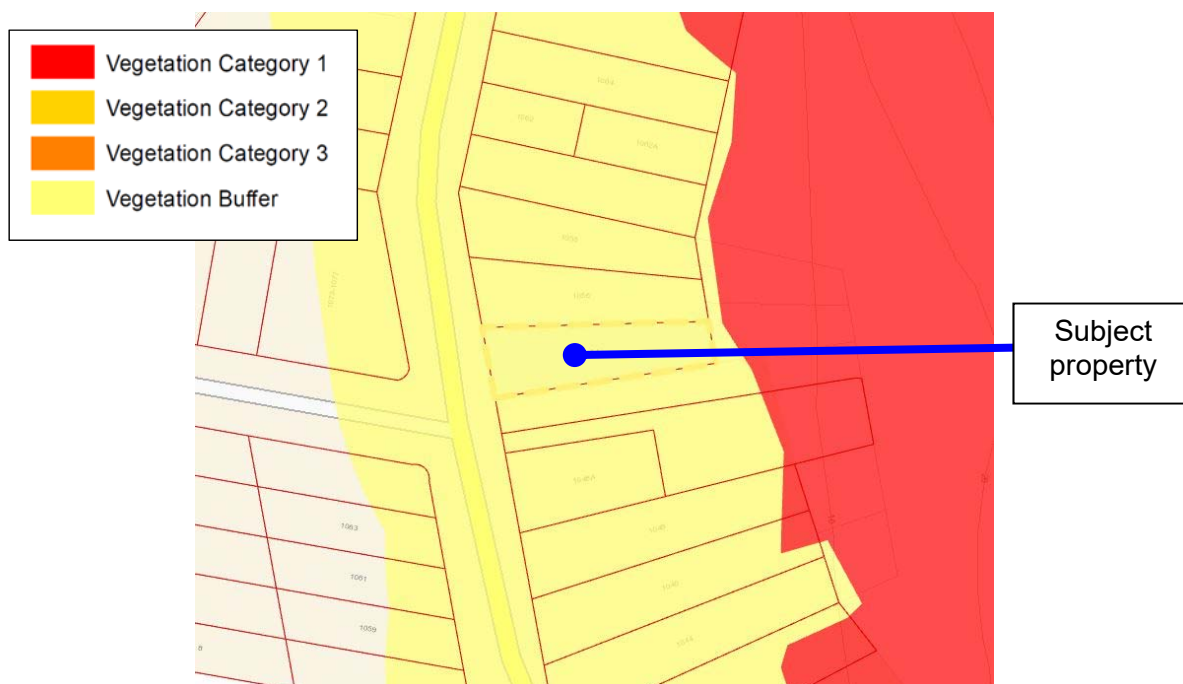


Image 01: Extract from Northern Beaches Council's Bushfire Prone Land Map



Image 02: Aerial view of the subject area C/- Nearmap – August 2022

Vegetation Identification:

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

The vegetation posing a hazard was found to consist of trees 10 - 20 metres in height with 50 - 70% foliage cover, the understorey consisted of low trees, ferns and exotics.

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 down 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:

- 0 degrees and up slope within the hazard to the east



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

Asset Protection Zones:

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

The available Asset Protection Zone (APZ) for the storage shed was measured to be >46 metres from the hazard interface to east. The APZ consists of maintained grounds within the subject allotment.

Fire Fighting Water Supply:

Hydrants are available throughout Barrenjoey Road 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. Regardless the proposed pool provides an additional supply.

The existing water supply is considered adequate and is being supplemented as part of this development.

Property Access:

The subject property has street frontage to Barrenjoey Road to the west. 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 are not applicable.

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

Summary:

	East
Vegetation Structure	Forest
Slope	0 degrees & up
Asset Protection Zone	>46 metres
Significant landscape features	Maintained grounds
Threatened species	APZ Existing
Aboriginal Relics	APZ Existing
Bushfire Attack Level	BAL 12.5
Required Construction Level	BAL 12.5

The highest Bushfire Attack Level to the proposed storage shed was determined from Table A1.12.5 of PBP to be 'BAL 12.5'. The proposed storage shed is required to comply with BAL 12.5 section 3 & 5 under AS 3959 – 2018 and the additional construction requirements under section 7.5 of PBP.

In relation to the proposed swimming pool and surrounds section 8.3.2 of PBP states:

The NCC defines a Class 10 building as a non-habitable building or structure such as a:

- a. Class 10a – a non-habitable building being a private garage, carport, shed or the like; or*
- b. Class 10b – a structure being a fence, mast, antenna, retaining or free-standing wall, swimming pool, or the like; or*
- c. Class 10c – a private bush fire shelter*

There is no bush fire protection requirements for Class 10a buildings located more than 6m from a dwelling in bush fire prone areas. Where a Class 10a building is located within 6m of a dwelling it must be constructed in accordance with the NCC.

The proposed swimming pool and surrounds will be located less than 6 metres from a dwelling and within the APZ. The proposed swimming pool and surrounds will be constructed entirely from non-combustible materials, which satisfies the requirements of PBP and AS3959 by meeting the requirements of the highest Bushfire Attack Level.

Recommendations

Asset Protection Zones

1. That all grounds within the subject property not built upon 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.

The Landscape Plan prepared by Volker Klemm Landscape Design, Drawing No. DA01, Revision D was reviewed and complies with an APZ.

Construction

2. That the proposed storage shed shall comply with Australian Standard AS3959 - 2018 "Construction of buildings in bush fire-prone areas" Section 3 & 5 (BAL 12.5) & section 7.5 of Planning for Bushfire Protection 2019.
3. That the proposed swimming pool and surrounds are constructed entirely from non-combustible materials.

Conclusion:

Given that the property is deemed bushfire prone under The Hills 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 to the east within neighbouring vegetated allotments and McKay Reserve. The vegetation posing a hazard was determined to be Forest.

The available Asset Protection Zone (APZ) for the storage shed was measured to be >46 metres from the hazard interface to the east. The APZ consists of maintained grounds within the subject property.

The highest Bushfire Attack Level to the proposed storage shed was determined from Table A1.12.5 of PBP to be 'BAL 12.5'. The proposed storage shed is required to comply with BAL 12.5 section 5 under AS 3959 – 2018 and the additional construction requirements under section 7.5 of PBP - 2019.

The proposed swimming pool and surrounds will be located less than 6 metres from a dwelling and within the APZ. The proposed swimming pool and surrounds will be constructed entirely from non-combustible materials.

Hydrants are available throughout Barrenjoey Road 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 P/L



Duncan Armour
Bushfire Consultant

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



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.



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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:	1054 Barrenjoey Road, Palm Beach
DESCRIPTION OF PROPOSAL:	Swimming Pool surrounds and shed
PLAN REFERENCE: (relied upon in report preparation)	Landscape Plan prepared by Volker Klemm Landscape Design, Drawing No. DA01, Revision D
BAL RATING:	BAL 12.5
BUSHFIRE ASSESSMENT REPORT REFERENCE:	221218
REPORT DATE	20 th September 2022
CERTIFICATION NO/ACCREDITED SCHEME	BPAD46966

I, Alvin, 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 Bush Fire Protection 2019*.

Signature: Alvin Date: 20th September 2022

