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PO Box 363 Balgowlah NSW 2093

Bush Fire Assessment Report

In relation to the development at:

78 Mccarrs Creek Road, Church Point, NSW


This assessment has been prepared and certified by: Matthew Toghil BPAD certified practitioner FPAA Accreditation No: BPAD31642 Report No: 78Mcc-01 Date: 28/01/2025	
Plans supplied by:	IA Engineering Job No: IA24-STR032 Dated: 25.11.2024 (Rev 1)

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1. Introduction

The purpose of the report is to determine the category of bushfire attack and subsequent construction standard for the proposed new retaining wall at No. 78 Mccarrs Creek Road, Church Point, NSW.

The site had been identified as 'bush fire prone land' for the purpose of Section 146 of the *Environmental Planning and Assessment Act 1979* and the Legislative requirements for building on bush fire prone lands are applicable.

The proposed development is in infill development as defined within Chapter 7 of *Planning for Bushfire Protection 2019* and this report has been prepared in accordance with the requirements of Section 4.14 of the Environment Planning and Assessment Act.

This assessment includes an analysis of the hazard, threat and subsequent risk of the development proposal and provides recommendations that satisfy the Objective and Performance requirements of the Building Code of Australia, Planning for Bushfire Protection 2019 [PBP] and Australian Standard AS3959, 2018.

2. Description of the subject property

- Property address: 78 Mccarrs Creek Road, Church Point, NSW
- Lot 2/-/DP505001
- Local Government Area: Northern Beaches
- Land Zoning: C4: Environmental Living



Figure 1: Location of the subject site.



Figure 2: Land Zoning Map (Source: NSW Planning Portal)

3. Development Proposal

The development proposal is for the construction of a new retaining wall at the front of the site.



Figure 3: Site plan.

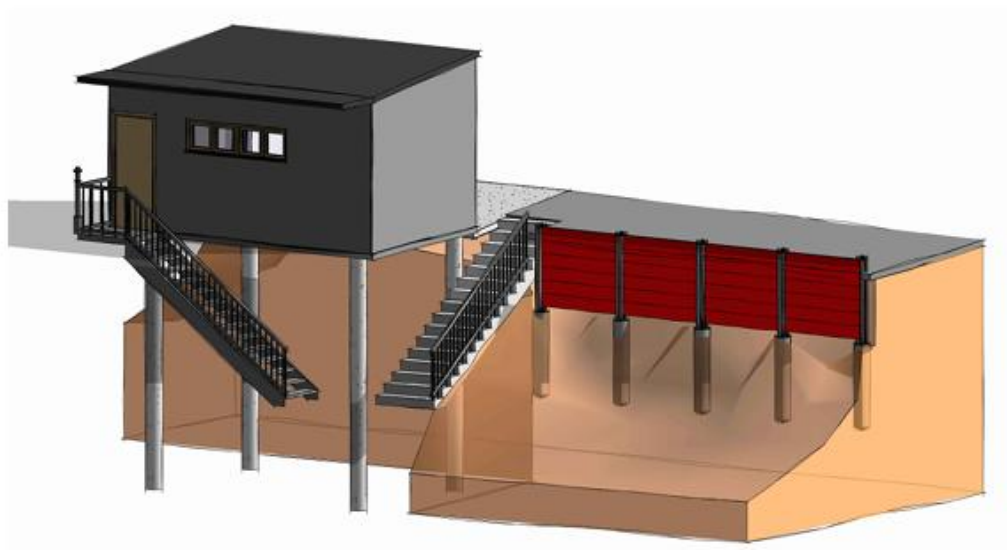


Figure 4: Perspective view

4. Classification of the Vegetation on and surrounding the site

For the purpose of a Bush Fire Risk Assessment, vegetation within 140m of the development is assessed and classified. In this instance, there is an area of Category 1 vegetation to the northeast of the site which is the most significant threat from bushfire. The vegetation formation within this area consists of Wet Sclerophyll Forest (Refer to Figure 6), which for the purpose of this assessment will be classified as 'Forest'.



Figure 5: Aerial photo showing vegetation within 140m of the site.

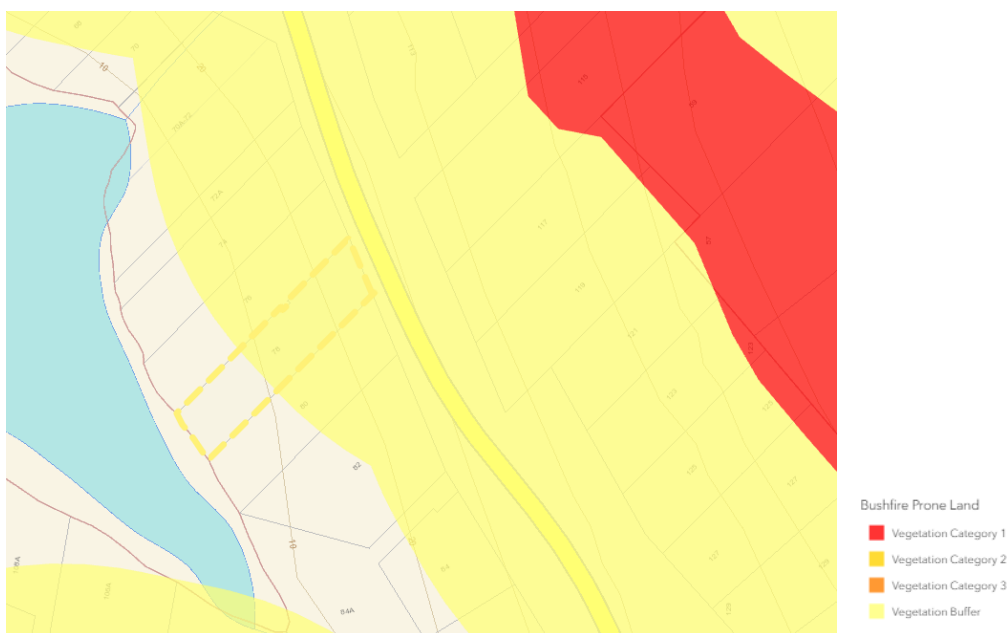


Figure 6: Bushfire prone land map (Source: NSW Planning Portal)

5. Effective Slope

The effective slope is the slope of the land under the classified vegetation. It has a direct influence on the rate of spread, intensity and ultimate level of radiant heat flux of a fire. The effective slope is the slope of the ground under the hazard (vegetation), not the slope between the vegetation and the building.



Legend:  Direction of effective slope

Figure 7: Contour map

Transect Line	Effective slope group as per PBP
T1	Upslope

6. Bushfire Attack Level (BAL) Assessment



Figure 8: Aerial photo showing the location of the site and distance to surrounding vegetation.

Table 1; Determination of the category of bushfire attack for the development, and subsequent required building standards (Reference Table A1.12.5 *Planning for Bush Fire Protection 2019*).

Transect	Distance to classified vegetation	Vegetation Classification	Assessment of effective slope	FDI	Bushfire Attack Level
T1	62.00m	Forest	Upslope	100	BAL-12.5

Summary: Based upon the relevant provisions of PBP the anticipated radiant heat attack for the new works is <12.5 kW/m² and the subsequent Bushfire Attack Level is BAL-12.5 AS 3959 2018.

7. Construction requirements

While *Planning for Bush Fire Protection 2019* does not provide for specific requirements for Class 10b structures, the principles for fences and gates on bushfire prone land can be applied. With reference to Section 7.6 of PBP, all fences in bushfire prone areas should be made of either hardwood or non-combustible material. In circumstances where the fence is within 6m of a building or in areas of BAL-29 and above they should be made of non-combustible material. In this instance the timber beams, in between the steel posts, should be hardwood.

8. Summary

This report consists of a bushfire risk assessment for the proposed new retaining wall at No. 78 Mccarrs Creek Road, Church Point, NSW.

The report concludes that the proposed development is on designated bushfire prone land and the legislative requirements for development of bushfire prone areas are applicable.

This report has considered all of the elements of bushfire attack and provided the proposed development is constructed in accordance with the recommendations of this report, the development satisfies the Objectives and Performance requirements of the *Building Code of Australia, Planning for bushfire Protection 2019* and *Australian Standard AS3959, 2018*.

Note: Not with standing the precautions adopted, it should always be remembered that bushfires burn under a wide range of conditions and an element of risk, no matter how small always remains, and although the standard is designed to improve the performance of such buildings, there can be no guarantee, because of the variable nature of bushfires, that any one building will withstand a bushfire attack on every occasion. This report is a Bushfire Hazard Assessment that provides the required information to assist Local Councils and the Rural fire Service in determining compliance in accordance with Planning for Bushfire Protection 2019 and AS3959, 2018. The local Council is the final consenting authority and the construction of the building must comply with the recommendations included in the council's conditions of consent.



Matthew Toghil- Bushfire Consultant
Grad Cert Bushfire Protection, UWS 2012
Certificate IV Building & Construction
Certificate III in Public Safety
(Firefighting and Emergency Operations)



Appendix 1: Northern Beaches Council Bushfire Assessment Certificate.

BUSHFIRE RISK ASSESSMENT CERTIFICATE

THIS FORM IS TO BE COMPLETED BY A RECOGNISED CONSULTANT IN BUSHFIRE RISK ASSESSMENT IN ACCORDANCE WITH SECTION 4.14 1(b) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 NO 203

PROPERTY ADDRESS:	78 McCarrs Creek Rd Church Point
DESCRIPTION OF PROPOSAL:	New retaining wall.
PLAN REFERENCE: (relied upon in report preparation)	1A Engineering Dated: 25.11.2024
BAL RATING:	BAL-12.5 (If the BAL rating is FZ the application is to be referred to NSW RFS for assessment.)
DOES THE PROPOSAL RELY ON ALTERNATE SOLUTIONS:	YES <input checked="" type="radio"/> NO (Circle the relevant response) (If YES the application is to be referred to NSW RFS for assessment.)

I Matthew Toghil of Bushcon Australia Pty Ltd.
(Print Name) (Trading or Company Name)

have carried out a bushfire risk assessment on the above mentioned proposal and property. A detailed Bushfire Assessment Report is attached which includes the submission requirements set out in *Appendix 2 of Planning for Bushfire Protection 2019* together with recommendations as to how the relevant specifications and requirements are to be achieved.

REPORT REFERENCE:	78 Mcc -01
REPORT DATE:	28.01.2025
CERTIFICATION No/ACCREDITED SCHEME:	BPAD31642

I hereby certify, in accordance with 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 attached Bushfire Risk Assessment Report the proposed development conforms to the relevant specifications and requirements

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 Northern Beaches 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: [Signature] DATE: 28.01.2025

Note: this certificate must be completed and signed by a person recognised by the NSW Rural Fire Service as a qualified consultant in bush fire risk assessment in accordance with Section 4.14 of the EP&A Act 1979 No 203.

This form has been prepared by Northern Beaches Council for attachment to the Bushfire Assessment Report.

Abbreviations and definitions

AS 3959	Australian Standard AS 3959:2018 <i>Construction of buildings in bush fire-prone areas</i>
AS 2419.1:2005	Australian Standard AS 2419.1:2005 <i>Fire hydrant installations System design, installation and commissioning</i>
AS 2441:2005	Australian Standard AS 2441:2005 <i>Planning for emergencies in facilities</i>
APZ	Asset Protection Zone
BAL	Bushfire Attack Level
BFPL	Bushfire prone land
BRPL Map	Bushfire prone land map
BPM's	Bushfire protection measures
BFSA	Bushfire safety authority
DA	Development application
DCP	Development Control Plan
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
FDI	Fire Danger index
FFDI	Forest Fire Danger Index
IPA	Inner Protection Area
kW/m ²	Kilowatts per metre squared
LGA	Local government area
NASH	Nation Association of Steel Framed Housing Steel Framed Construction in Bushfire Areas 2021
NCC	National Construction Code
OPA	Outer Protection Area
PBP	<i>Planning for Bush Fire protection 2019</i>
RF Act	<i>Rural Fires Act 1997</i>
RF Reg	<i>Rural Fires Regulation 2013</i>
NSW RFS	NSW Rural Fire Service
SEPP	State Environmental Planning Policy
SFPP	Special Fire protection Purpose
SFR	Short fire run

Asset Protection Zone: A fuel reduced area surrounding a built asset or structure which provides a buffer zone between a bush fire hazard and an asset. The APZ includes a defensible space within which firefighting operations can be carried out. The size of the required APZ varies with slope, vegetation and FFDI.

Bush Fire Attack level (BAL): A means of measuring the severity of a building's potential exposure to ember attack, radiant heat and direct flame contact. IN the NCC, the BAL is used as the basis for establishing the requirements for construction to improve protection of building elements.

Bush fire: An unplanned fire burning in vegetation, also referred to as wildfire.

Bush fire prone land (BFPL): An area of land that can support a bush fire or is likely to be subject to bush fire attack, as designated on a bush fire prone land map.

Bush fire prone land map: A map prepared in accordance with the NSW RFS requirements and certified by the Commissioner of the NSW RFS under EP&A Act s.10.3(2).

Bush fire protection measures (BPMs): A range of measures used to minimise the risk from a bushfire that need to be complied with. BPM's include APZ's, construction provisions, suitable access, water and utility services, emergency management and landscaping.

Bush fire safety authority (BFSA): An approval by the commissioner of the NSW RFS that is required for a subdivision for residential or rural residential purpose or for a SFPP development listed under section 100B of the RF Act.

Consent authority: As identified in the EP&A Act, in relation to development consents, usually the local council.

Defendable space: An area adjoining a building that is managed to reduce combustible elements free from constructed impediments. It is a safe working environment in which efforts can be undertaken to defend the structure, before and after the passage of a bush fire.

Effective slope: The land beneath the vegetation which most significantly effects fire behaviour, having regard to the vegetation present.

Fire Danger Index (FDI): The chance of a fire starting, its rate of spread, its intensity and the difficulty potential for its suppression, according to various combinations of air temperature, relative humidity, wind speed and both the long- and short-term drought effects.

Inner protection Area (IPA): The component of a APZ which is closest to the asset (measured from unmanaged vegetation). It consists of an area maintained to minimal fuel loads so that a fire path is not created between the hazard and the building.

Managed land: Land that has vegetation removed or maintained to a level that limits the spread and impact of bush fire. This may include developed land (residential, commercial or industrial), roads, golf course fairways, playgrounds, sports fields, vineyards, orchards, cultivated ornamental gardens and commercial nurseries. Most common will be gardens and lawns within curtilage of buildings. These areas are managed to meet the requirements of an APZ.

Outer Protection Area (OPA): The outer component of an APZ, where fuel loads are maintained at a level where the intensity of an approaching bush fire would be significantly reduced. Applies to Forest vegetation only.

Special Fire Protection Purpose (SFPP) developments: Developments where the vulnerable nature of the occupants means that a lower radiant heat threshold needs to be accommodated for in order to allow for the evacuation of occupants and emergency services.

Vegetation classification: Vegetation types identified using the formations and classifications within *Ocean Shores to Desert Dunes: The Native Vegetation of New South Wales and ACT* (Keith, 2004).