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PO Box 363 Balgowlah NSW 2093

# **Bush Fire Assessment Report**

In relation to proposed development at:

17 Farrer Place, Frenchs Forest, NSW

Report	Date:	Author:	Reviewed by:
No:	30.11.2022	Matthew Toghill	Kieran Taylor
17Far-01		(BPAD Accreditation No:	(BPAD Level 3: Accreditation No:
		31642)	23038)

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## 1. Introduction

The purpose of this report is to provide a bushfire risk assessment for the proposed new alfresco area and landscaping at No 17 Farrer Place, Frenchs Forest, NSW, and to certify that the plans and specifications provided are in accordance with the requirements of *Planning for Bushfire Protection 2019* and AS 3959-2018.

The proposed development is an 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.



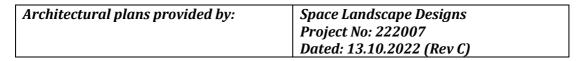
Figure 1: Aerial photo



Figure 2: Bushfire prone land map

## 2. Development Proposal

The development proposal is for the construction of a new alfresco area at the rear of the dwelling and landscaping.



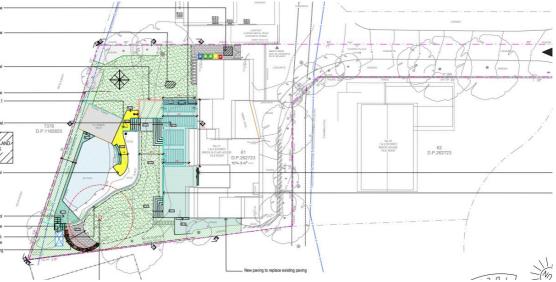


Figure 3: Site plan



Figure 4: West elevation

## 3. Classification of the Vegetation on and surrounding the site

For the purpose of a Bush Fire Risk Assessment, vegetation within 140m of the site is assessed and classified. In this instance, there is an area of Category 1 vegetation adjoining the western boundary of the site which is of most significance. The predominant vegetation formation within this area consists of Sydney Coastal Dry Sclerophyll Forest (refer to Figure 5), which for the purpose for this assessment will be classified as 'Forest'.



Figure 4: Aerial photo showing vegetation within 140m of the site.



Figure 5: Aerial photo showing vegetation formations surrounding the subject site (Source: NSW Government Central Resource for Sharing and Enabling Environmental Data)

## 4. Effective Slope

The effective slope of the vegetation to the west, wihtin T1 consists of a number of sandstone terraces and escarpments that step down steeply towards the water course below. Given this terracing, taking an average slope based on contour lines is not accurate. The effective slope has been based on the vegetated areas on the high and low sides of these escarpments which has been assessed as being >15-20 degrees downslope.

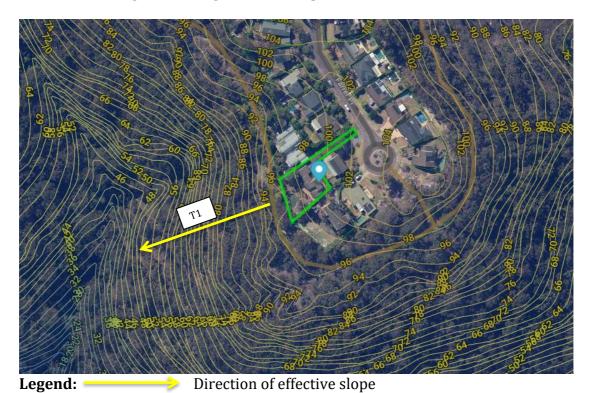


Figure 6: Contour map

Transect Line	Effective slope
T1	Downslope >15-20 degrees

## 5. Bushfire Risk Assessment



Figure 7: 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*).

Direction	Distance to classified vegetation	Vegetation Classification	Assessment of effective slope	FDI	Bushfire Attack Level
T1	14.00m	Forest	Downslope >15-20 degrees	100	BAL-FZ

**Summary:** Based upon the relevant provisions of PBP the anticipated radiant heat attack for the new works is >40 kW/m2 and the subsequent Bushfire Attack Level is BAL-FZ AS 3959- 2018.

# 6. Construction requirements

All new construction shall comply with a minimum standard of section 3 [construction general] and section 9 (BAL-FZ), AS3959-2018 and Chapter 7 of Planning for Bushfire Protection 2019.

### 6.1 Pool

For the purpose of this assessment the pool is considered a Class 10 structure. With reference to Planning for Bush Fire Protection 2019 Section 8.3.2, Class 10 structures that are located within 6m of a dwelling must be constructed in accordance with the NCC. Under the Deemed to Satisfy provisions of the NCC, building work on Bush Fire Prone Land must comply with AS 3959-2018 or the NASH Standard.

### 6.2 Pool fencing

With reference to *Planning for Bush Fire Protection 2019* Section 7.6, all fences in bush fire prone areas should be made of either hardwood or non-combustible material. However, in circumstances where the fence is within 6m of a building or in areas of BAL-29 or greater, they should be made of non-combustible material only.

## 6.3 Retaining walls

For the purpose of this assessment the retaining walls are considered a Class 10b structure. With reference to Planning for Bush Fire Protection 2019 Section 8.3.2, Class 10a and 10b structures that are located within 6m of a dwelling must be constructed in accordance with the NCC.

All new retaining walls should be constructed of masonry or other non-combustible material.

### 6.4 Fences and gates

All fences in bushfire prone areas should be made of either hardwood or non-combustible material. However, in circumstances where the fences in within 6m of a building or in areas of BAL-29 or greater, they should be made of non-combustible material only

### 6.5 Landscaping

All new landscaping has been designed in accordance with Appendix 4 of *Planning for Bushfire Protection 2019* outlines the requirements for Asset Protection Zones (APZ's)

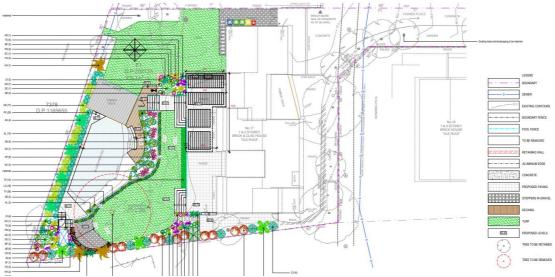


Figure 8: landscape plan

## 7. Summary

This report consists of a bushfire risk assessment for the proposed alfresco area and landscaping at No 17 Farrer Place, Frenchs Forest, NSW.

This report has considered all elements of bushfire attack and based on the plans and specification provided the development can satisfy the Objectives and Performance requirements of *Planning for bushfire Protection 2019* and *AS 3959 2018* if constructed in accordance with the recommendations made within this report.

<u>Note:</u> Notwithstanding 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 id designed to improve the performance of such buildings, there can be no guarantee, because of the variable nature of bushfires, that any one building with 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.

Mh.

Matthew Toghill- Bushfire Consultant Accreditation No. BPAD31642 Grad Cert Bushfire Protection, UWS 2012 Certificate IV Building & Construction Certificate III in Public Safety (Firefighting and Emergency Operations)



# Appendix 1: Performance criteria and acceptable solutions as per Table 7 *Planning for bushfire Protection 2019*



# Appendix 2: 7.5.2 NSW State Variations under G5.2(a)(i) and 3.10.5.0(c)(i) of the NCC

Certain provisions of AS 3959 are varied in NSW based on the findings of the Victorian Bush Fires Royal Commission and bush fire industry research.

The following variations to AS 3959 apply in NSW for the purposes of NSW G5.2(a)(i) of Volume One and NSW 3.10.5.0(c)(i) of Volume Two of the NCC; clause 3.10 of AS 3959 is deleted and any sarking used for BAL-12.5, BAL-19, BAL-29 or BAL-40 shall:

- be non-combustible; or
- comply with AS/NZS 4200.1, be installed on the outside of the frame and have a flammability index of not more than 5 as determined by AS 1530.2; and
- clause 5.2 and 6.2 of AS 3959 is replaced by clause 7.2 of AS 3959, except that any wall enclosing the subfloor space need only comply with the wall requirements for the respective BAL; and
- clause 5.7 and 6.7 of AS 3959 is replaced by clause 7.7 of AS 3959, except that any wall enclosing the subfloor space need only comply with the wall requirements for the respective BAL; and
- fascias and bargeboards, in BAL-40, shall comply with:
- clause 8.4.1(b) of AS 3959; or
- clause 8.6.6 of AS 3959.

The interpretation of this variation is:

<u>Enclosed subfloors</u>: For subfloor supports there are no requirements for supporting posts, columns, stumps, stringers piers and poles for subfloor supports for BAL 12.5 and BAL 19 when the subfloor space is enclosed with a wall that complies with the determined BAL level for the site.

<u>Unenclosed subfloors</u>: For unenclosed subfloor supporting posts, columns, stumps, stringers piers and poles the requirements are upgraded from BAL 12.5 and BAL 19 to BAL 29 level.

<u>Enclosed verandas</u>: There are no requirements for supporting posts, columns, stumps, stringers piers and poles for verandas, decks, steps and landings when the subfloor space is enclosed with a wall that complies with the determined BAL level for the site. <u>Unenclosed verandas</u>: The requirements for supporting posts, columns, stumps, stringers piers and poles for verandas, decks, steps, and landings are upgraded from BAL 19 and BAL 12.5 to BAL 29 level.

For unenclosed subfloors of the main building or verandas, decks, steps and landings for BAL 12.5, 19 and BAL29 supporting posts, columns, stumps, stringers piers and poles shall be:

- 1. A non-combustible material: or
- 2. A Bushfire resistant timber: or
- 3. A combination of 1 and 2

Acceptable timber species:

Black-butt, Turpentine, Silver Top Ash, Spotted Gum, Red Iron Bark, Kwila, Red River Gum

Sarking: To comply with the NSW State variation any sarking used for BAL 12.5 shall:

- Be Non-combustible; or
- Comply with AS/NZ 4200.1 be installed on the outside of the frame and have a flammability index of not more than 5 as determined by AS1530.2

## Appendix 3: Asset Protection Zones (APZ's)

### A4.1.1 Inner Protection Areas (IPAs)

The IPA is the area closest to the building and creates a fuel-managed area which can minimise the impact of direct flame contact and radiant heat on the development and act as a defendable space. Vegetation within the IPA should be kept to a minimum level. Litter fuels within the IPA should be kept below 1cm in height and be discontinuous.

In practical terms the IPA is typically the curtilage around the building, consisting of a mown lawn and well maintained gardens.

When establishing and maintaining an IPA the following requirements apply:

### Trees

- tree canopy cover should be less than 15% at maturity;
- trees at maturity should not touch or overhang the building;
- lower limbs should be removed up to a height of 2m above the ground;
- tree canopies should be separated by 2 to 5m; and
- preference should be given to smooth barked and evergreen trees.

### Shrubs

- create large discontinuities or gaps in the vegetation to slow down or break the progress of fire towards buildings should be provided;
- > shrubs should not be located under trees;
- shrubs should not form more than 10% ground cover; and
- clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.

### Grass

- grass should be kept mown (as a guide grass should be kept to no more than 100mm in height); and
- > leaves and vegetation debris should be removed.

### A4.1.2 Outer Protection Areas (OPAs)

An OPA is located between the IPA and the unmanaged vegetation. It is an area where there is maintenance of the understorey and some separation in the canopy. The reduction of fuel in this area aims to decrease the intensity of an approaching fire and restricts the potential for fire spread from crowns; reducing the level of direct flame, radiant heat and ember attack on the IPA.

Because of the nature of an OPA, they are only applicable in forest vegetation.

When establishing and maintaining an OPA the following requirements apply:

### Trees

- > tree canopy cover should be less than 30%; and
- canopies should be separated by 2 to 5m.

### Shrubs

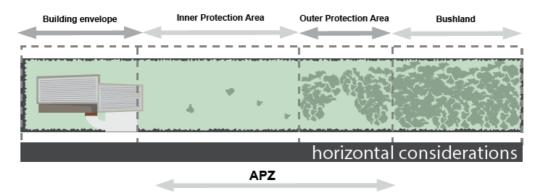
- > shrubs should not form a continuous canopy; and
- shrubs should form no more than 20% of ground cover.

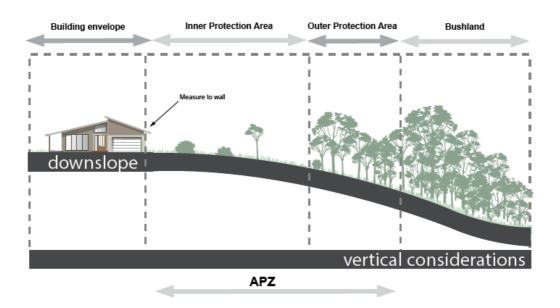
### Grass

- grass should be kept mown to a height of less than 100mm; and
- leaf and other debris should be removed.

An APZ should be maintained in perpetuity to ensure ongoing protection from the impact of bush fires. Maintenance of the IPA and OPA as described above should be undertaken regularly, particularly in advance of the bush fire season.

Figure A4.1
Typlical Inner and Outer Protection Areas.





# Appendix 4: Northern Beaches Council Bushfire 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:	17 Farrer Place Frenchs Forest				
DESCRIPTION OF PROPOSAL:	New offresco area and landocaping				
PLAN REFERENCE; (relied upon in report preparation)	Space Landscape Doign Project No. 222007 Daled: 1310. Porz (Rev C)				
BAL RATING:	BAZ-FZ  (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 (Circle the relevant response)  (If YES the application is to be referred to NSW RFS for assessment.)				
specifications and requirements a	1.000				
REPORT REFERENCE:	17/a/-01				
REPORT DATE:	30.11.2022 .				
CERTIFICATION No/ACCREDITED SCHEME:	814031642				
hereby certify, in accordance with	h Section 4.14 of the Environmental Planning and Assessment Act 1979 No.				
	nised by the NSW Rural Fire Service as a qualified consultant in bushfire				
<ol> <li>That subject to the recommendation the proposed development</li> </ol>	That subject to the recommendations contained in the attached Bushfire Risk Assessment Report the proposed development conforms to the relevant specifications and requirements				
support of a development applicat	essment Report, prepared for the above mentioned site is to be submitted in tion for this site and will be relied upon by Northern Beaches Council as the e risk management aspects of the proposed development have been				

SIGNATURE: DATE: 30-11-2022

addressed in accordance with Planning for Bushfire Protection 2019.

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 EPSA Act 1979 No 203.

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