



## Bushfire Assessment

### Additions and alterations

11 Florence Terrace,  
Scotland Island

James Wish

24 October 2024

(Ref: 24064)

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report by  
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FPA AUSTRALIA (NO.BPAD18882)  
BPAD LEVEL 3 ACCREDITED PRACTITIONER  
ABN 28 607 444 833

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# 1 Introduction

<b>Street or property name:</b>	11 Florence Terrace	
<b>Suburb, town or locality:</b>	Scotland Island	<b>Postcode:</b> 2105
<b>Lot/DP no:</b>	Lot 108 DP 12749	
<b>Local Government Area:</b>	Northern Beaches	
<b>Type of development:</b>	Additions and alterations to existing dwelling	

## 1.1 Background

James Wish commissioned Peterson Bushfire to prepare a Bushfire Assessment Report for a proposed development at the above address, which is identified as 'bushfire prone land'.

This assessment has been prepared by a consultant accredited by the Fire Protection Association of Australia's BPAD scheme (Accreditation No. BPD-L3-18882). It demonstrates that the proposal complies with the NSW Rural Fire Service document *Planning for Bush Fire Protection 2019*.

This report acts as a certificate as described under Clause 4.14(1)(b) of the *Environmental Planning & Assessment Act 1979* whereby the proposed development, inclusive of the recommendations listed within, conforms with the relevant specifications and requirements (i.e. *Planning for Bush Fire Protection 2019*).

## 1.2 Location of subject land

The subject land spans between Florence Terrace and the Pittwater foreshore on the northern side of Scotland Island as shown on Figure 1. The subject land is within a built-up residential area and is surrounded by existing residential properties to the east, south and west with the Pittwater to the north. A description of the bushfire hazard is provided within Section 2.

## 1.3 Development proposal

The development consists of alterations and additions to the existing dwelling consisting primarily of an addition to the front of the house comprising of a new living room and covered deck.

## 1.4 Assessment requirements

The subject land is identified as being bushfire prone land as shown on Figure 2. Therefore, the proposed development is to be assessed by Council under the requirements of Section 4.14 of the *Environmental Planning and Assessment Act 1979* which includes the consideration of the NSW Rural Fire Service (RFS) document *Planning for Bush Fire Protection 2019* (NSWRFS 2019), referred to as 'PBP' throughout this report.

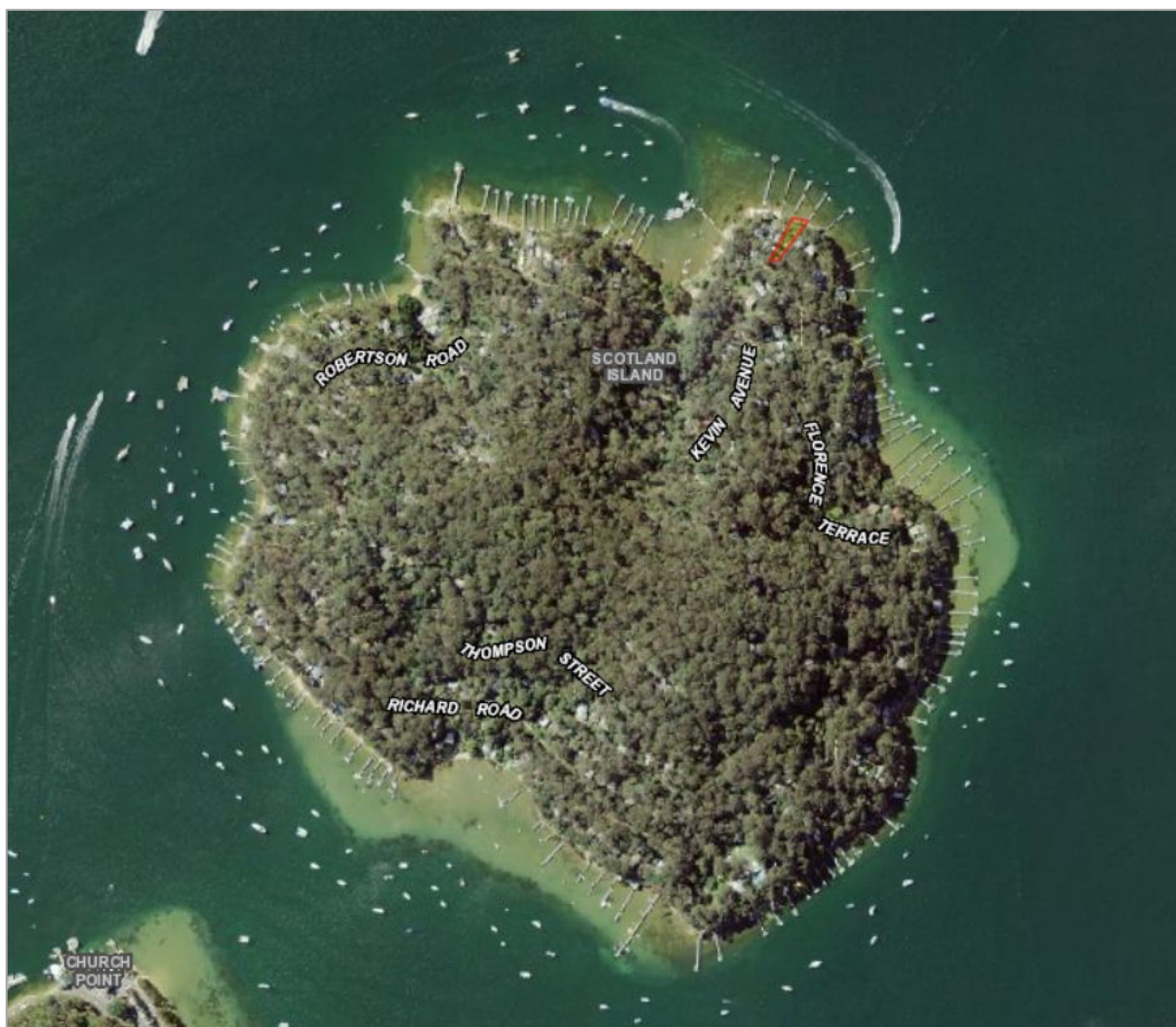


Figure 1: Location of subject land (Source: SIX Maps)

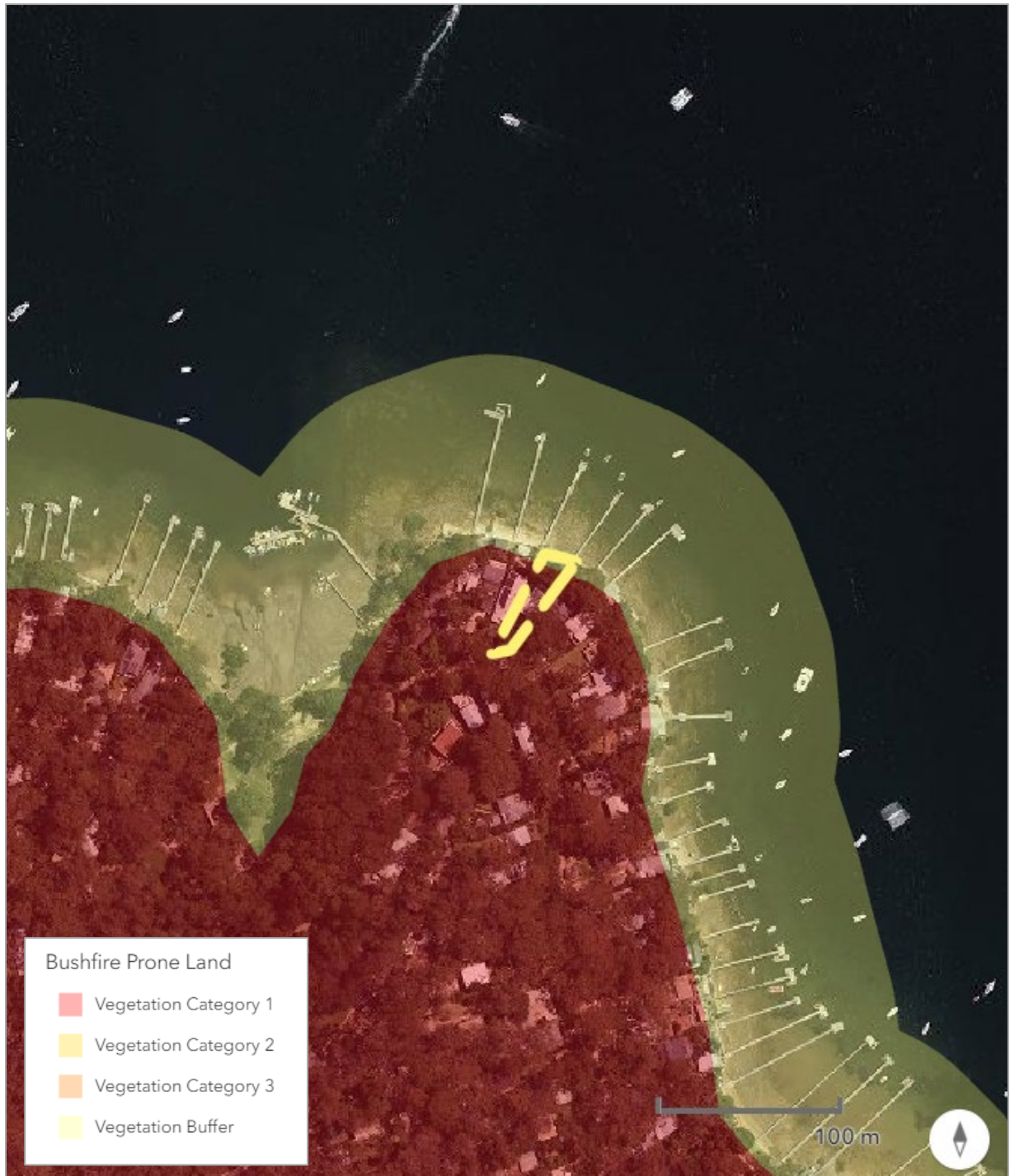


Figure 2: Bushfire prone land mapping (Source: NSW ePlanning Spatial Viewer)

## 2 Bushfire hazard assessment

This section describes the bushfire hazard. An understanding of the hazard is necessary in order to determine the application of bushfire protection measures required by PBP, such as Asset Protection Zones (APZ) and Bushfire Attack Levels (BAL).

In accordance with PBP, the bushfire hazard is a combination of slope and vegetation which gives rise to the bushfire threat in the context of the development. A description of predominant vegetation and effective slope is provided below.

The subject land and bushfire hazard were inspected on 1<sup>st</sup> July 2024. Photographs are provided in Appendix A.

### 2.1 Vegetation types

The only bushfire hazard within the 140 m assessment area measured from the subject land is a remnant of forest to the south-west within Catherine Park (refer to Figure 3). The forest vegetation is classified as 'low hazard' in accordance with Section A1.11.1 of PBP as it forms a corridor no wider than 50 m around the edge of the park parallel to Kevin Avenue, Thompson Street and Robertson Road.

The subject land and surrounding properties on Scotland Island are heavily landscaped and feature a connecting canopy in most parts. These properties have been accepted as 'managed land' for previous BAL assessments including those approved by Council for development applications. The accepted BAL assessment methodology for Scotland Island has been to classify Elizabeth Park within the centre of the island as forest hazard as well as any other remnant patches such as Catherine Park.

### 2.2 Effective slope

The effective slope underneath the low hazard to the south-west is within the PBP slope class of 'downslope 5-10° measured across the slope using a 2 m contour layer (refer to Figure 4).



Figure 3: Hazard location and separation (Source: Nearmap)



Figure 4: Effective slope determination (Source: Spatial Map Viewer)

### 3 Bushfire protection measures

PBP requires the assessment of a suite of bushfire protection measures that in total provide an adequate level of protection for residential development. The measures required to be assessed are listed in Table 1 below and are discussed in detail in the remainder of this section.

**Table 1: PBP bushfire protection measures**

Bushfire protection measures	Considerations
Asset Protection Zones (APZ)	Location and dimension of APZ building setbacks from vegetation including prescriptions of vegetation management within the APZ.
Landscaping	New landscaping to comply with Inner Protection Area (IPA) standard.
Building construction standards	Determination of the Bushfire Attack Level (BAL) to apply to corresponding construction specifications listed in AS 3959.
Access	Assessment to include fire-fighter access and design standards of any roads.
Water supply and other utilities	List requirements for reticulated water supply and hydrant provisions, and any static water supplies for fire-fighting.

#### 3.1 Asset Protection Zone (APZ)

Using the hazard parameters of vegetation and slope discussed in Section 2, the required Asset Protection Zone (APZ) from the identified bushfire hazards has been determined using Table A1.12.2 of PBP. The APZ results are listed in Table 2 below.

PBP requires an APZ of 18 m between the proposed works and the forest to the south-west. The available APZ far exceeds this distance as shown on Figure 3. Additional APZ establishment is not required for the proposal.

**Table 2: APZ determination**

Location <sup>1</sup>	Vegetation <sup>2</sup>	Slope <sup>3</sup>	Required APZ <sup>4</sup>	APZ provided <sup>5</sup>	How will the APZ be accommodated
South-west	Low hazard	Downslope 5-10°	18 m	>80m	Residential properties
Remaining directions	Managed lands	Not required	Not required	>100 m	No hazards within 100 m

<sup>1</sup> Direction of assessment from dwelling. Refer to Figure 3.

<sup>2</sup> Predominant vegetation classification over 140 m from dwelling.

<sup>3</sup> Effective slope assessed over 100 m from dwelling where the bushfire hazard occurs.

<sup>4</sup> APZ required by Table A1.12.2 of Planning for Bush Fire Protection 2019.

<sup>5</sup> APZ provided by existing surrounding management or proposed measures.



### 3.2 Vegetation management

The subject land is considered to be managed to achieve the performance objectives of an Inner Protection Area (IPA) as described within Section A4.1.1 of PBP.

There are overhanging trees and landscaping important for slope stability. The overhanging trees and landscaping are usually accepted in the older, established areas of the Northern Beaches where land and environmental constraints prevent clearing. Additionally, existing landscaping is also usually accepted for development proposals where the proposed works are minor (e.g. alterations versus a new dwelling). Removal of trees within the subject land will not offer any significant improvement in bushfire protection due to the large number of surrounding trees within adjoining residential properties including the road reserves.

### 3.3 Bushfire Attack Level (BAL)

BAL specifications are contained within Australian Standard *AS 3959-2018 Constructions of buildings in bushfire-prone areas* (AS 3959) and NSW has a variation to AS 3959 as listed within Section 7.5.2 of PBP.

The BAL for the proposed works has been determined in accordance with Table A1.12.5 of PBP. The proposed external works are impacted by BAL-12.5. It is recommended that all external works be designed and constructed to comply with BAL-12.5 and the NSW variation.

### 3.4 Supply of water and other utilities

#### 3.4.1 Water supply

Florence Terrace does not have hydrants that comply with Australian Standard *AS 2419.1-2021 Fire hydrant installations - System design, installation and commissioning* (Standards Australia 2021). A static water supply is therefore required for the subject land.

PBP requires a water supply of minimum 5,000 litres. Existing water supply tanks exceed the volume requirement and are accessible to fire-fighters, located just behind the front fence alongside Florence Terrace.

To inform responding brigades of the presence of a static water supply at the property, a 'SWS' marker obtained from the local NSW Rural Fire Service brigade is to be positioned on the front gate fronting Florence Terrace.

#### 3.4.2 Electrical supply

The vegetation clearance distances to the overhead powerline within the subject land are to comply with *ISSC 3 Guideline for Managing Vegetation Near Power Lines* (Industry Safety Steering Committee 2005). The guidelines specify a clearance distance of 0.5 m for a typical connection for residential dwellings.

#### 3.4.3 Gas supply

Any gas services are to be installed and maintained in accordance with *AS/NZS 1596-2014 The storage and handling of LP gas*.

### 3.5 Access

The subject land is accessed by boat only. The subject land has a private jetty, and the dwelling is accessed on foot via the jetty. Alternatively, the subject land can be accessed from Florence Terrace via a public wharf. There are no specific access provisions required for the proposal.

## 4 Conclusion and recommendations

The proposal consists of alterations and additions to an existing dwelling on land identified as bushfire prone. The available APZ far exceeds the minimum requirement resulting in a BAL-12.5 rating for the proposed external works.

Recommendations made within this report are provided to achieve compliance. The recommendations made are repeated below:

1. The external works are to be designed and constructed to comply with BAL-12.5 of the Australian Standard *AS 3959-2018 Constructions of buildings in bushfire-prone areas* (AS 3959) and the NSW variation to AS 3959 as listed within Section 7.5.2 of PBP.
2. To inform responding brigades of the presence of a static water supply at the property, a 'SWS' marker obtained from the local NSW Rural Fire Service brigade is to be positioned on the front gate fronting Florence Terrace.
3. The vegetation clearance distances to the overhead powerline within the subject land are to comply with *ISSC 3 Guideline for Managing Vegetation Near Power Lines* (Industry Safety Steering Committee 2005). The guidelines specify a clearance distance of 0.5 m for a typical connection for residential dwellings.
4. The installation of any gas services is to be done in accordance with *AS/NZS 1596-2014 The storage and handling of LP gas*.

In the author's professional opinion, the proposed development will comply with *Planning for Bush Fire Protection 2019* with the adoption of the above recommendations.



David Peterson



# References

Industry Safety Steering Committee. 2005. *ISSC 3 Guideline for Managing Vegetation Near Power Lines*. (updated from Energy Australia. 2002. *Network Standard NS 179 (Vegetation Safety Clearances)*).

NSW Rural Fire Service (RFS). 2019. *Planning for Bush Fire Protection: A Guide for Councils, Planners, Fire Authorities and Developers*. State of New South Wales through the NSW Rural Fire Service.

Standards Australia. 2014. *The storage and handling of LP Gas*, AS/NZS 1596:2014, Standards Australia International Ltd, Sydney.

Standards Australia. 2018. *Construction of buildings in bushfire-prone areas*, AS 3959, Standards Australia International Ltd, Sydney.

Standards Australia. 2021. *Fire hydrant installations - System design, installation and commissioning*, AS2419.1, Standards Australia International Ltd, Sydney.

## Appendix A - Photographs



Photograph 1: Northern side of existing dwelling



**Photograph 2: Southern side of existing dwelling**



**Photograph 3: Yard on southern side of dwelling**



**Photograph 4: Static water supply within yard on southern side of dwelling**





**Photograph 5: Front of subject land fronting Florence Terrace**



**Photograph 6: Commence of low hazard to the south-west**



**Photograph 7: Low hazard corridor wrapping around Catherine Park**



**Photograph 8: Scotland Island Rural Fire Brigade Station 145 m to the south of the subject land**

