


**Bushfire Assessment Report  
Proposed Residential Building Development  
Lot 2 DP 863876  
4A Barnes Road  
Frenchs Forest NSW 2086**



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<p>Reviewed by:</p>		

**Executive Summary – Achievable (Recommended) AS 3959:2018 Level of Compliance**

Construction Standard	Building Elevation
Flame Zone	
<b>BAL 40</b>	<b>All Elevations ('Alterations &amp; Additions' Only)</b>
BAL 29	
BAL 19	
<b>BAL 12.5</b>	<b>Upgrade existing/retained elements (where practicable)</b>
NCC Provisions Only	

## Table of Contents

<b>General Introduction</b>	4
<b>1.0 Property Details</b>	5
<b>2.0 Description of Proposal</b>	6
<b>3.0 Bushfire Assessment</b>	6
3.1 Vegetation (bushfire hazard) within 140m of the proposed building	6
3.2 Distance/Separation between building line and bushfire hazard	8
3.3 Effective slope that will influence bushfire behaviour	8
3.4 Fire Danger Index (FDI) for Local Government Area	8
3.5 Determination of Bushfire Attack Level	8
<b>4.0 Construction for Bushfire Attack Level</b>	9
<b>5.0 Bushfire Protection Measures</b>	9
5.1 Asset Protection Zones	9
5.2 Vehicle Access/Egress (Property Access)	10
5.3 Water Supplies	11
5.4 Electricity Services	12
5.5 Gas Services	12
<b>6.0 Bushfire Safety &amp; Compliance Recommendations</b>	13
6.1 Defendable Space / APZ Recommendations	13
6.2 Construction Standards Recommendations	14
6.3 Vehicle Access/Egress Recommendations	15
6.4 Water Supplies Recommendations	15
6.5 Electricity Services Recommendations	16

6.6	Gas Services Recommendations.....	16
6.7	Bush Fire Survival Plan Recommendations .....	16
7.0	<b>Compliance or Non Compliance with PBP 2019 Specific Objectives for Infill Development .....</b>	<b>17</b>
8.0	<b>Compliance or Non Compliance with PBP 2019 .....</b>	<b>17</b>
9.0	<b>Statement assessing the likely environmental impact of any proposed bushfire protection measures .....</b>	<b>19</b>
10.0	<b>Conclusion/Summary .....</b>	<b>20</b>

**References/Further Reading**

**Appendix 1 Site Maps and Plans**

**Appendix 2 Site Photos (16/4/2024)**

## General Introduction

The following report outlines an assessment for the statutory compliance of the proposed residential building development to occur within 4A Barnes Road, Frenchs Forest NSW 2086 – Lot 2 DP 863876 (herewith 'the subject property'), and at least 140m beyond (herewith 'the study area'). Appendix 1 / Map 1 denote the subject property and study area.

Methodology for this site assessment for bushfire attack is based on the planning guideline '*Planning for Bush Fire Protection 2019 (PBP 2019)*', produced by the NSW Rural Fire Service.

'*Australian Standard 3959:2018 – Construction of buildings in bush fire prone areas*', or alternately '*NASH Steel Framed Construction in Bush Fire Areas (NASH 2021)*', pursuant to the '*National Construction Code/Building Code of Australia 2022 (NCC/BCA 2022)*', are the primary building compliance documents considered for this assessment.

Terrain (slope) considered by this assessment is based on the Department of Lands Online Six Viewer contours and a site inspection (16/4/2024) of the subject property.

Vegetation extent within the subject area has been derived from available online public vegetation mapping studies, aerial photo interpretation and a site inspection (16/4/2024) conducted prior to finalising this report.

The extent and location of the proposed 'Alterations & Additions' to an existing residential building development are based on DA drawings by JJ Drafting Australia Pty Ltd, Mona Vale (Job No. 1241/24, Drawing Nos. DA.00 – DA.16, Revision F, Dated 19/09/2024).

Photographic evidence of the subject property and surrounds is appended to this report (Appendix 2 – Site Photos, Dated 16/4/2024).

## 1.0 Property Details

**Applicants Name:** William Singe & Zoey Black (herewith, 'the proponent')

**Council:** Northern Beaches Council (Northern Beaches LGA)

**Council Reference:** N/A

**Lot: 2**                      **DP:** 863876                      **Area:** 520m<sup>2</sup> (approximately)

**Address/Location:** 4A Barnes Road, Frenchs Forest NSW 2086.

**Zoning:** 'R2 – Low Density Residential'  
Warringah LEP 2011

### **Bushfire Prone Land: YES**

The subject property is mapped as being bushfire prone as currently shown by Northern Beaches Council LGA Bushfire Prone Land Map (*s10.3 EP&A Act 1979*). The site is constrained by vegetation classified as 'Category 1 Bushfire Vegetation'. In this regard, any new building development should conform to the specifications and requirements of the document '*Planning for Bush Fire Protection 2019*', produced by the NSW Rural Fire Service, that are relevant to the development; as otherwise required under *Section 4.14 Environmental Planning & Assessment Act 1979 (EP&A Act 1979)*.

### **Other Known Constraints:**

It is **not** a recommendation of this assessment to remove or alter any significant vegetation within the study area, as part of the bushfire protection measures.

A desktop assessment of the publicly available council mapping and planning enquiry system has found no constraints to be considered in regard to development upon the subject property.

No known significant environmental features have been noted, recorded or advised of as part of this assessment.



**Extract Northern Beaches Council LGA Bushfire Prone Land Map**

## 2.0 Description of Proposal

- |  |  |   |
|--|--|---|
| <input type="checkbox"/> New Building      | <input checked="" type="checkbox"/> <b>Urban</b>                 | <input type="checkbox"/> Secondary Dwelling |
| <input type="checkbox"/> Rural Residential | <input checked="" type="checkbox"/> <b>Alterations/Additions</b> | <input type="checkbox"/> Isolated Rural     |

### Proposal Description

The proposed building development is to construct minor 'Alterations & Additions' to an existing residential building (Class 1 (a) – as defined by NCC – BCA). The works are minor in nature and are limited to minor alterations and the construction of a new covered decking element, attached to the front of the existing residence.

The extent and location of the proposed 'Alterations & Additions' to an existing residential building development are based on DA drawings by JJ Drafting Australia Pty Ltd, Mona Vale (Job No. 1241/24, Drawing Nos. DA.00 – DA.16, Revision F, Dated 19/09/2024).

The approximate location/site of the proposed building (herewith 'the subject development') is as denoted in Appendix 1 – Map 1.

## 3.0 Bushfire Assessment

### 3.1 Vegetation (bushfire hazard) within 100m of the proposed building

The vegetation within the study area is mapped as 'Bushfire Prone Vegetation Category 1' on Council Bushfire Prone Land Maps.

The vegetation constraining the development is initially located within some adjacent rural residential properties to the North – South East of the subject site, as well as extending into some public reserves to the North – North West of the subject site. All vegetation within this area is considered to be ‘Sydney Coastal Dry Sclerophyll Forest’.

Based on a determination of vegetation formation using the Keith 2004 Identification Key, the future bushfire vegetation having the potential to affect the subject development, based on a site visit, is most representative of ‘Forest’.

The subject development would potentially be prone to bushfire attack from the North West – South East directions. The extent of the current bushfire vegetation (hazard) is clearly denoted in Appendix 1 – Map 1.

*PBP 2019 (Appendix 1 Section A1.10) states, ‘The following exclusions of AS3959 apply, and are not required to be considered for the purposes of PBP, as detailed below:*

- *Single areas of vegetation less than 1 hectare in area and greater than 100metres separation from other areas of Category 1 and 2 vegetation.*
- *Multiple areas of vegetation less than 0.25 hectares in area and not within 20m of the site, or each other or of other areas of vegetation being classified vegetation.*
- *Strips of vegetation less than 20m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20m of the site or other areas of vegetation being Category 1, 2 or 3 vegetation.*
- *Vegetation regarded as low threat due to factors such as flammability, moisture content or fuel load, including grassland managed in a minimal fuel condition, mangroves and other saline wetlands, maintained lawns, golf courses such as playing areas and fairways, maintained public reserves and parklands, sporting fields, vineyards, orchards, banana plantations, market gardens and other non-curing crops, cultivated gardens, arboretums, commercial nurseries, nature strips and windbreaks.*
- *Existing areas of managed gardens and lawns within curtilage of buildings.*
- *Non-vegetated areas including waterways, roads, footpaths, buildings and rocky outcrops.*

The proposed development is located within an established subdivision and within a well-established urban residential area.

Adjoining urban residential sites are generally clear of persistent vegetation and could be considered ‘cleared and managed lands’.

The approximate / estimated extent of these managed lands is clearly denoted in Appendix 1 – Map 1.

Relevant photos attached (Appendix 2 Site Photos).

### 3.2 Distance/Separation between building line and bushfire hazard

For the purposes of bushfire safety compliance, this assessment notes that the subject property is clear of all persistent bushfire vegetation.

Considering the location of the proposed development and the extent of the bushfire vegetation on adjoining lands, the achievable separation distance has been assessed as:

Direction	North	East	West
Distance	>68m	>28m	>65m

### 3.3 Effective slope that will influence bushfire behaviour

The effective slope within approximately 100m of the subject development site, which would influence bushfire behaviour, has been assessed as predominately;

Direction	North	East	West (NW)
Slope	>0 – 5 Degrees Downslope	>5 – 10 Degrees Downslope	>0 – 5 Degrees Downslope

### 3.4 Fire Danger Index (FDI) for Local Government Area (LGA)

100                       80                       50

The Northern Beaches Council – Greater Sydney Region

(NSW Local Government Areas Community Resilience May 2017 – NSW RFS)

### 3.5 Determination of Bushfire Attack Level (PBP 2019 – Table A1.12.5)

Direction	Vegetation	Slope	Minimum Distance	BAL Exposure Level
North	Forest	>0 – 5 Degrees Downslope	>68m	BAL – 12.5
East	Forest	>5 – 10 Degrees Downslope	>28m	BAL – 40
West (NW)	Forest	>0 – 5 Degrees Downslope	>65m	BAL – 12.5



#### 4.0 AS 3959:2018 Construction Standard for Bushfire Attack Level (NCC – BCA DtS)

Elevations	Vegetation	Slope	Minimum Distance	BAL Construction
All Elevations (Deck)	Forest	>5 – 10 Degrees Downslope	>28m	BAL – 40

Considering the subject developments location and the calculated extent of the APZ area recommended by this report, the subject development is technically capable of complying with AS 3959:2018 / NASH 2021.

#### 5.0 Bushfire Protection Measures

Pursuant to ‘PBP 2019 – Section 7 Residential Infill Development’, there is a requirement to address certain ‘Bushfire Protection Measures’ (BPM) under the Section 4.14 EP&A Act 1979 for new residential ‘infill’ development in bushfire prone areas.

The intent of the BPM’s *‘is to minimise the risk of bushfire attack and provide protection for emergency services personnel, residents and others assisting firefighting activities’*.

It is also noted *‘where a development expectation arises from the zoning of the land to build, rebuild, alter or add to a dwelling in pre-existing subdivisions, attempts should be made to find a solution taking into account the risk present. The expectation of building or altering a house is recognised even though the ability to provide for APZs or access requirements now required for residential development may not be possible’*.

Proposals for ‘infill development’ are to:

- Provide a defensible space to enable unimpeded access for firefighting around the building.
- Provide better bushfire outcomes on a redevelopment site than currently exists, commensurate to the level of development.
- Provide access, services and landscaping to aid firefighting operations.
- Not impose an increased bushfire management and maintenance responsibility on adjoining land owners.
- Increase the level of bushfire protection to existing dwellings based on the scale of the proposed work and level of bushfire risk.

#### 5.1 Asset Protection Zones

PBP 2019 acceptable solutions for Asset Protection Zones (for this specific development location) state that;

- An APZ is provided in accordance with Table A1.12.2 or A.1.12.3 in Appendix 1.
- APZs are managed in accordance with the requirements of Appendix 4 of PBP.
- APZs are wholly within the boundaries of the development site.
- APZs are located on lands with a slope less than 18 degrees.

The subject site benefits from managed lands within the site, and external to the site (being adjacent urban residential lands and a managed road reserve).

Asset Protection Zone recommendations are as listed in Section 6.1 (Bushfire Safety & Compliance Recommendations).

## **5.2 Access (Property Access)**

*PBP 2019* acceptable solutions for access (for this specific development location) state that;

*'There are no specific access requirements apply in an urban area where an unobstructed path (no greater than 70m) is provided between the most distant external part of the proposed dwelling and the nearest part of the public access road (where the road speed limit is not greater than 70kph) that supports the operational use of emergency firefighting vehicles'.*

Access to the subject property will continue to be by way of a sealed all-weather private road and driveway (located partially within the public road reserve), directly off the end of Barnes Road, which is part of the public road system.

The private road/driveway is 3m – 6m wide and travels for a distance of approximately 170m from the end of the public road. Access directly onto the subject site is constrained by the subdivision design, with part of the driveway width near the residence being insufficient to support a Category 1 Tanker, which would need to operate from the Barnes Road private extension only.

Barnes Road is a sealed all weather road, 6m in width, within a road reserve of 18m, which terminates just South West of the subject site (cul-de-sac 15m diameter). The local speed limit is 50 kph.

The public road system servicing the proposed development is able to provide safe operational access for emergency services and egress in varying directions for evacuating residents, although initial emergency egress is only available to the South, onto Myra Street through to Iris Street.

Access recommendations are as listed in Section 6.3 (Bushfire Safety & Compliance Recommendations).

### 5.3 Water Supplies (Reticulated)

Yes       No       Proposed

The existing residence is connected to a reticulated water supply, however due to hydrant travel distances to the existing residence (>100m) and as such the development should also provide for an onsite static water supply for firefighting operations.

*PBP 2019* acceptable solutions for a non-reticulated water supply area (relevant to the subject development) state that:

- Where no reticulated water supply is available, water for firefighting purposes is provided in accordance with **Table 5.3d (which specifies 5,000L in this instance)**.
- A connection for firefighting purposes is located within the IPA or non-hazard side and away from the structure; 65mm Stortz outlet with a ball valve is fitted to the outlet.
- Ball valve and pipes are adequate for water flow and are metal.
- Supply pipes from tank to ball valve have the same bore size to ensure flow volume.
- Underground tanks have an access hole of 200mm to allow tankers to refill direct from the tank.
- A hardened ground surface for truck access is supplied within 4m.
- Above-ground tanks are manufactured from concrete or metal.
- Raised tanks have their stands constructed from non-combustible material or bush fire-resisting timber (Appendix F of AS 3959).
- Unobstructed access can be provided at all times.
- Tanks on the hazard side of the building are provided with adequate shielding for the protection of firefighters.
- All exposed water pipes external to the building are metal, including any fittings.
- Where pumps are provided, they are a minimum 5hp or 3kW petrol or diesel powered pump, and are shielded against bushfire attack; any hose and reel for firefighting connected to the pump shall be 19mm internal diameter.

#### Table 5.3d

Water supply requirements for non-reticulated developments or where reticulated water supply cannot be guaranteed.

DEVELOPMENT TYPE	WATER REQUIREMENTS
Residential lots (<1,000m <sup>2</sup> )	5,000L/lot
Rural-residential lots (1,000-10,000m <sup>2</sup> )	10,000L/lot
Large rural/lifestyle lots (>10,000m <sup>2</sup> )	20,000L/lot
Multi-dwelling housing (including dual occupancies)	5,000L/dwelling

Firefighting water supply recommendations are as listed in Section 6.4 (Bushfire Safety & Compliance Recommendations).

#### 5.4 Electricity Services

*PBP 2019* acceptable solutions for electrical services (relevant to the subject development) state that:

- *Where practicable, electrical transmission lines are located underground; and*
- *Where overhead electrical transmission lines are proposed, as follows:*
  - *Lines are installed with short pole spacings (30m), unless crossing gullies, gorges or riparian areas; and*
  - *No part of a tree is closer to a power line than the distance set out in accordance with the specifications in 'ISSC3 Guideline for Managing Vegetation Near Power Lines'.*

The subject development site is currently serviced by an aboveground electrical supply grid which services the residential subdivision within Barnes Road.

The connection to the existing residence is then relocated underground.

It is not proposed, as part of this development to alter this arrangement.

Electrical service recommendations are as listed in Section 6.5 (Bushfire Safety & Compliance Recommendations).

#### 5.5 Gas Services

Reticulated Gas:      **Yes**    No (available to area)

Bottled Gas:          Yes    **No**

*PBP 2019* acceptable solutions for gas services (relevant to the subject development) state that:

- Reticulated or bottled gas is installed and maintained with AS/NZ 1596:2014 and the requirements of relevant authorities, and metal piping is used.
- Polymer-sheathed flexible gas supply lines are not used.

Gas service recommendations are as listed in Section 6.6 (Bushfire Safety & Compliance Recommendations).

## **6.0 Bushfire Safety & Compliance Recommendations**

### **6.1 Defendable Space / Asset Protection Zone (APZ) Recommendations**

#### **Recommendation 1.**

##### **Inner Protection Area**

As denoted in Appendix 1 – Map 1, the area identified as ‘**Inner Protection Area**’ (IPA) is to be managed / maintained as an APZ for the life of the development.

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 2m 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;
- 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.

## 6.2 Construction Standard Recommendations

Construction standards have been determined from the following sections of the planning guidelines and are based on the relevant bushfire assessment as discussed above.

*AS 3959:2018 Section 3 Construction General*

(See Recommendation 2)

*AS 3959:2018 Section 5 Construction for Bushfire Attack Level 12.5 (BAL – 12.5)*

(See Recommendation 4)

*AS 3959:2018 Section 8 Construction for Bushfire Attack Level 40 (BAL – 40)*

(See Recommendation 3)

*Steel Framed Construction in Bushfire Areas (NASH 2021)*

### **Recommendation 2.**

Where any part of a garage, carport, veranda or similar roofed structure is attached to, or shares a common roof space with, or is within 6m of, a building required to comply with the standard, the entire structure shall comply with the construction requirements of the standard (as per Recommendation 3), as applicable to the subject building.

Alternatively, the structure may be separated from the subject building by a wall complying with *AS 3959:2018 Section 3.2.1 a) or b)* i.e. fire rated construction as specified.

### **Recommendation 3.**

Predicated upon the maintenance of the APZ area as per Recommendation No. 1 of this report, it is recommended the proposed development incorporate, as a minimum, the following levels of construction as per *AS 3959:2018 Construction of buildings in bushfire prone areas*;

#### ***All Elevations ('Alterations & Additions' Only)***

#### **Construction for Bushfire Attack Level 40 (BAL – 40) – Section 8 (AS 3959:2018)**

**Alternately, the relevant sections of '*NASH Standard – Steel Framed Construction in Bushfire Areas (NASH 2021)*' may be applied.**

#### **Recommendation 4.**

##### ***Existing / Retained Building Elements***

The existing building is required to be upgraded to improve ember protection, as per the *Building Best Practice Guide – Upgrading of Existing Buildings (Development Assessment & Planning, NSW Rural Fire Service, Reference 0914)*.

This is to be achieved by enclosing all openings (excluding roof tile spaces) or covering openings with a non-corrosive metal screen mesh with a maximum aperture of 2mm.

Where applicable, this includes any sub floor areas, open able windows, vents, weepholes and eaves. External doors are to be fitted with draft excluders.

##### ***Fences & Gates***

Any new fences and gates should be constructed of a non-combustible material.

##### ***Retaining Walls***

Any new retaining walls should be constructed of a non-combustible material.

#### **6.3 Vehicle Access / Egress Recommendations**

##### **Recommendation 5.**

The proposed building development will continue to incorporate an all-weather driveway area for vehicle access and parking within the subject property. The access road / driveway will continue to provide direct access from Barnes Road.

No additional vehicle access requirements are recommended, and the development will rely on the existing arrangements.

#### **6.4 Water Supplies Recommendations**

##### **Recommendation 6.**

- A non-reticulated water supply, for firefighting purposes, will be provided in accordance with Table 5.3d (**i.e. 5,000L in this instance**).
- A connection for firefighting purposes is located within the IPA or non-hazard side and away from the structure; 65mm Stortz outlet with a ball valve is fitted to the outlet.
- Ball valve and pipes are adequate for water flow and are metal.
- Supply pipes from tank to ball valve have the same bore size to ensure flow volume.
- Above-ground tanks are manufactured from concrete or metal.

- Raised tanks have their stands constructed from non-combustible material or bush fire-resisting timber (Appendix F of AS 3959).
- Unobstructed pedestrian access can be provided at all times.
- Tanks on the hazard side of the building are provided with adequate shielding for the protection of firefighters.
- All exposed water supply pipes external to the building are metal, including any fittings.
- A portable pump is provided, and is a minimum 5hp or 3kW petrol or diesel powered pump, and is shielded against bushfire attack; any hose and reel for firefighting connected to the pump shall be 19mm internal diameter.

## **6.5 Electricity Services Recommendations**

### **Recommendation 7.**

As the existing electricity supply has been previously located underground, no additional electricity supply conditions (above and beyond standard Council and Energy Supplier conditions) are required for *PBP 2019* compliance.

## **6.6 Gas Services Recommendations**

### **Recommendation 8.**

- Any future / new reticulated gas connection is installed and maintained with AS/NZ 1596:2014 and the requirements of relevant authorities.
- Metal piping should be used.
- Polymer sheathed flexible gas supply lines to gas meters adjacent to the building are not used.

## **6.7 Bush Fire Survival Plan Recommendations**

### **Recommendation 9.**

Discuss and prepare a simple 'Bush Fire Survival Plan' pursuant to the NSW Rural Fire Service's advice (<https://www.rfs.nsw.gov.au/plan-and-prepare/bush-fire-survival-plan>).



### 7.0 Compliance or non-compliance with PBP 2019 Specific Objectives for Infill Development (as per PBP 2019 Section 7.3)

Specific Objective	Comment
Provide a defensible space to enable unimpeded access for firefighting around the building	A complying APZ (defensible space) has been recommended. This space consists of an area maintained as an IPA.
Provide better bushfire outcomes on a redevelopment site than currently exists, commensurate with the scale of works proposed.	Bushfire fuel management, and other bushfire protection measures, contained within the subject property will effectively reduce the risk to both the subject property and adjoining premises.
Design and construct buildings commensurate with the bushfire risk.	Recommendations, relating to the construction of the new works include BAL 40 building construction standards.
Provide access, services and landscaping to aid firefighting operations.	The recommendations (above) relating to the design and construction of the development include a range of 'bushfire protection measures' that will enhance the chances of occupant and building survival.
Not impose an increased bushfire management and maintenance responsibility on adjoining landowners.	The subdivision is pre-existing. The construction of this development will not increase the bushfire risk to adjoining land, nor increase bushfire management and maintenance responsibility on adjoining landowners.
Increase the level of bushfire protection to existing dwellings based on the scale of the proposed work and level of bushfire risk.	The site is located within an established residential subdivision. The existing residence will be subject to a minor upgrade to improve ember proofing.

### 8.0 Compliance or non-compliance with PBP 2019 Performance Criteria and intent for bushfire safety protection measures for infill development.

Performance Criteria	Comment
<p><b>APZ</b></p> <p>APZs are provided commensurate with the construction of the building.</p> <p>A defensible space is provided.</p>	<p><b>Can Comply</b> – Recommendation No. 1</p> <p>A defensible space will be provided within the site boundaries with the entire site being maintained as an IPA.</p>

<p>APZs are managed and maintained to prevent the spread of fire to the building.</p> <p>The APZ is provided into perpetuity.</p> <p>APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimised.</p>	<p>This is complimented by 'cleared and managed lands' on adjoining properties.</p>
<p><b>Access</b></p> <p>Firefighting vehicles are provided with safe all-weather access to structures and hazard vegetation.</p> <p>The capacity of access roads is adequate for firefighting vehicles.</p> <p>There is appropriate access to water supply.</p> <p>Firefighting vehicles can access the dwelling and exit the property safely.</p>	<p><b>Can Comply</b> – Recommendation No. 5</p> <p>Access/Egress is provided from Barnes Road.</p> <p>The access arrangements are sufficient for operational firefighting and emergency egress.</p>
<p><b>Water Supplies</b></p> <p>An adequate water supply is provided for firefighting purposes.</p> <p>Water supplies are located at regular intervals.</p> <p>The water supply is accessible and reliable for firefighting operations.</p> <p>Flows and pressures are appropriate.</p> <p>The integrity of the water supply is maintained.</p> <p>A static supply is provided for firefighting purposes in areas where reticulated water is not available.</p>	<p><b>Can Comply</b> – Recommendation No. 6</p>
<p><b>Electrical Services</b></p> <p>Location of the electrical services limits the possibility of ignition of surrounding bushland or the fabric of the buildings.</p>	<p><b>Can Comply</b> – Recommendation No. 7</p>
<p><b>Gas Services</b></p> <p>Location and design of the gas services will not lead to of ignition of surrounding bushland or the fabric of the buildings</p>	<p><b>Can Comply</b> – Recommendation No. 8</p>

<p><b>Construction Standards</b></p> <p>The proposed building can withstand bushfire attack in the form of embers, radiant heat and flame contact.</p> <p>Proposed fences and gates are designed to minimise the spread of bushfire.</p> <p>Proposed Class 10a buildings are designed to minimise the spread of bushfire.</p>	<p><b>Can Comply</b> – Recommendation Nos. 2 – 4</p> <p>Predicated upon the recommended APZ areas and siting requirements, BAL 40 building construction standards can achieve the performance requirements of the planning legislation.</p>
<p><b>Landscaping</b></p> <p>Landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind driven embers to cause ignitions.</p>	<p><b>Can Comply</b> – Recommendation No. 1</p>

**9.0 Statement assessing the environmental impact of any proposed bushfire protection measures.**

<b>Bushfire Protection Measure</b>	<b>Likely Environmental Impact</b>	<b>Comment</b>
<p><b>APZ</b> (Rec. No. 1)</p>	<p>Insignificant</p>	<p>The subject property is currently clear of all persistent vegetation.</p>
<p><b>Construction Standard</b> (Rec. Nos. 2 - 4)</p>	<p>Insignificant</p>	<p>Development to be constructed within approved / current building envelope.</p>
<p><b>Water Supply for fire fighting</b> (Rec. No. 6)</p>	<p>Insignificant</p>	<p>A reticulated water supply currently services the existing development, which will be supplemented by a SWS located within the IPA.</p>
<p><b>Utility service protection</b> (Rec. Nos. 6 - 8)</p>	<p>Insignificant</p>	<p>Utilities are currently located within the APZ, or underground.</p>
<p><b>Vehicle Access</b> (Rec. No. 5)</p>	<p>Insignificant</p>	<p>Direct access to public road system is by way of short cleared driveway.</p>

## 10.0 Conclusion/Summary

Based on the above assessment and the 9 recommendations to protect persons and property from danger that may arise from a bushfire, the Consent Authority should determine that this development proposal can comply with *Planning for Bush Fire Protection 2019* as required under *Section 4.14 of the Environmental Planning and Assessment Act 1979*.

As a considered opinion, the recommended mitigation measures and construction requirements as stated in this report would reasonably address the aims and objectives of *PBP 2019*, consistent within the relative and current bushfire risk to the subject development site.

As infill development, the residence will be able to fully comply with the Acceptable Solutions provided within *PBP 2019*. In this regard, the subject development can reasonably facilitate *PBP 2019* objectives in as far as:

- Afford buildings and their occupants protection from exposure to a bushfire;
- Provide for a defensible space to be located around buildings;
- Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely spread to buildings;
- Ensure the appropriate operational access and egress for emergency service personnel and residents is available;
- Provide for ongoing management and maintenance of bushfire protection measures; and
- Ensure that utility services are adequate to meet the needs of firefighters.

Should any of the above information require clarification or further discussion, please contact the author.



### Scott Jarvis

Graduate Diploma Design for Bushfire Prone Areas  
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**(Note: Scott Jarvis is a recognised / suitably qualified consultant pursuant to Rural Fire Service of NSW requirements - Community Resilience Fact Sheet - Requirements for Suitably Qualified Consultants 8/15, Fast Fact 5/10 Version 3 Dated 7 March 2011 & Development Control Practice Note 1/10 Version 2 Dated 4 February 2011)**

## References/Further Reading

*Australian Standard 3959:2018, Construction of buildings in bushfire prone areas* – Standards Australia.

*Building Best Practice Guide – Upgrading of Existing Buildings* (Development Assessment & Planning, NSW Rural Fire Service, Reference 0914).

*NASH Standard – Steel Framed Construction in Bushfire Areas (2021)* – National Association of Steel-Framed Housing Inc.

*National Construction Code/Building Code of Australia (2022)* – Australian Building Codes Board, Canprint.

*Environmental Planning and Assessment Act (1979)* – NSW Government Printer.

- Section 4.14 Consultation and Development Consent Certain Bushfire Prone Land
- Section 10.3 Bushfire Prone Land

*Rural Fires Act (1997)* – NSW Government Printer

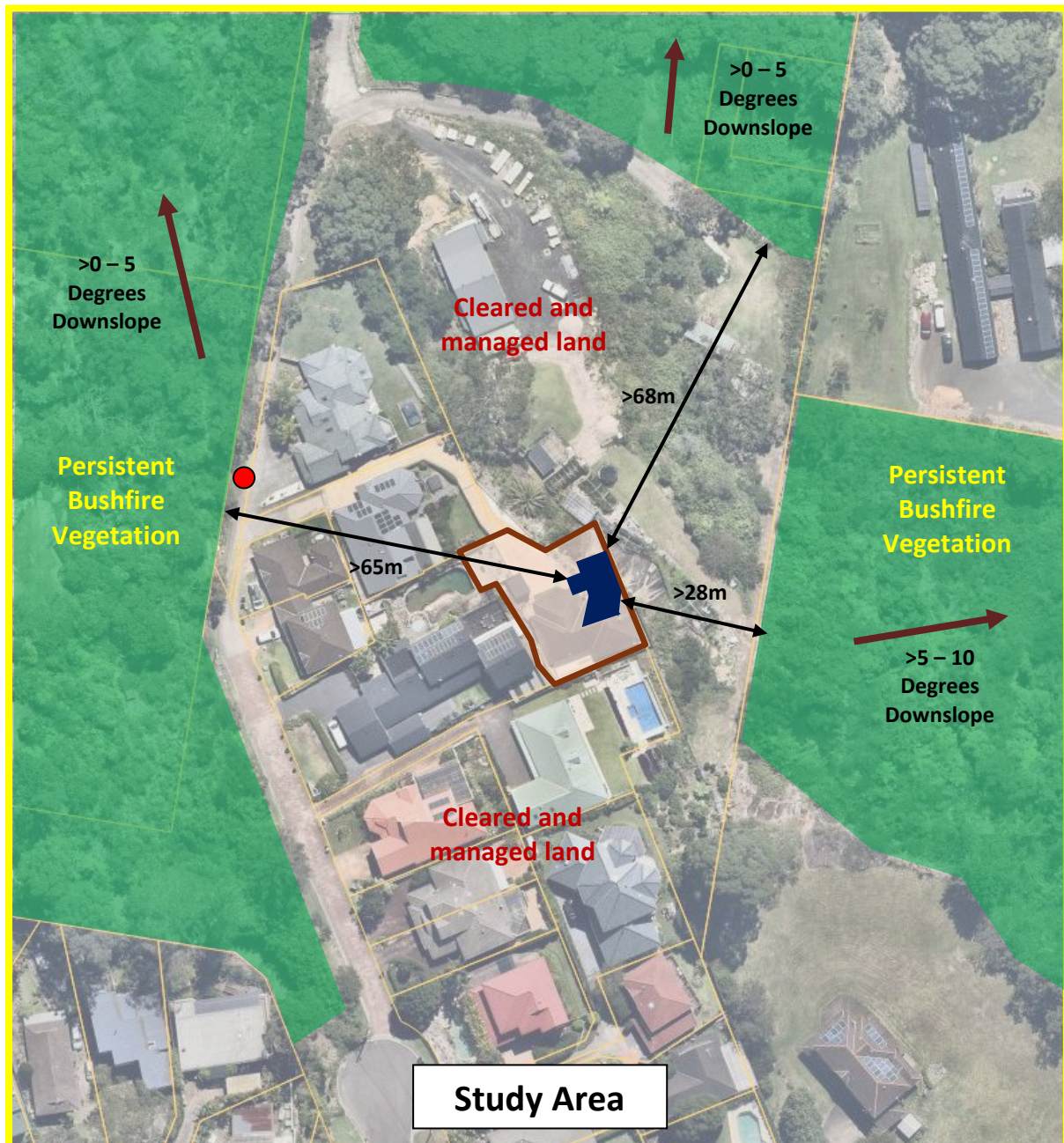
*Landscape and building design for bushfire areas (2003)* – Ramsay G C & Rudolf L, CSIRO Publishing, Collingwood Victoria.

*Ocean shores to desert dunes: the native vegetation of NSW and the ACT (2004)* – Keith D, NSW Dept of Environment and Conservation, Hurstville NSW.

*Planning for Bush Fire Protection. A guide for councils, planners, fire authorities and developers (November 2019)* – NSW Rural Fire Service.

## Appendix 1

### Map 1 – Study Area / Subject Lot / Slopes / APZ extent



- |   |                                     |   |                       |
|---|-------------------------------------|---|-----------------------|
|  | Proposed development                |  | Hydrant               |
|  | Subject Property<br>Lot 2 DP 863876 |  | Inner Protection Area |

**Appendix 2 – Site Photos (16/4/2024)**



**Subject site, looking South East**



**Existing driveway, looking South West**



**Barnes Road, looking South**



**Private access road, looking North**



**Above ground electrical supply redirection point**



**Reticulated water hydrant in pathway**



**Bushland within Reserve, looking North West from private access road**



**Bushland within adjacent site, looking South East**