

Bush Fire Assessment Report

in relation to two new dwellings
at:



**Lot 4 and Lot 5 Section 10 DP 14048
26 Ralston Road Palm Beach
(subject site)**

Document Tracking

Item	Detail
Project Name	Bush Fire Assessment Report, proposed two single occupancy dwellings
Project Address	Lot 4 and Lot 5 DP 14048 Section 10, 26 Ralston Road Palm Beach
Client Name	Georgina Nassif
Project Number	19/0595
Plan Reference	Site plan dated October 2019
Prepared by	Warwick Fear
Approved by	Catherine Gorrie
BAL	AS3959-2009 BAL FZ to the entire roof and south and west and BAL 40 to the north and east

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Document Control

Version	Primary Author	Description	Date Completed
1	Warwick Fear	Draft	25/09/2019
2	Catherine Gorrie	Draft for client approval	26/09/2019
3	Catherine Gorrie	Final site plans included	18/12/2019

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It should be borne in mind that the measures recommended in this report cannot guarantee that a building will survive a bushfire event on every occasion. This is due to the degree of vegetation management, the unpredictable behaviour of bushfires and extreme weather conditions. As such, the author is not liable to any person for any damage or loss whatsoever which has occurred or may occur in relation to the person taking action or not taking action based on the recommendations of this report.

NOTE: This bush fire assessment shall remain valid for 12 months from the date of issue.

Executive Summary

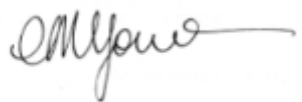
Bushfire Consulting Services was commissioned by Georgina Nassif to provide a bush fire assessment for the proposed development of two new single occupancy dwellings on each of Lot 4 and Lot 5 Section 10 DP 14048, 26 Ralston Road Palm Beach. The subject site is mapped as designated bush fire prone land by Northern Beaches Council and is located within 100 metres of bush fire prone (hazardous) vegetation. The bush fire attack level (BAL) associated with the development has been assessed as BAL FZ to the south and west and BAL 40 to the north and east.

The proposal is a form of infill development and, as such, this report makes recommendations in accordance with the aim, objectives, and performance criteria of section 4.3.5 of the NSW RFS document 'Planning for Bush Fire Protection' (PBP) (NSWRFS 2006). The recommendations address the required bush fire protection measures, including:

- establishment and maintenance of asset protection zones (APZs)
- siting and design of the development
- construction requirements, if applicable, under AS3959-2009 (Standards Australia 2009), and section A3.7 of PBP Addendum: Appendix 3 (NSWRFS 2010)
- adequate access for emergency personnel, if required
- adequate water supply, and utility requirements to reduce the risk of ignition by electrical or gas supplies
- landscaping to reduce the risk of ignition by embers, and to minimise flame contact and radiant heat on the proposed development

Where all recommendations are implemented, the report concludes that the proposal can comply with the aim, objectives and performance criteria of PBP.

Compliance Summary

<p>This Assessment has been Certified by:</p> <p>Catherine Gorrie</p> <p>BPAD-Level 3 Accredited Practitioner</p> <p>FPAA Cert No: BPAD20751</p>	
<p>What is the recommended level of compliance with AS3959-2009?</p>	<p>AS3959-2009 BAL FZ to the south and west and BAL 40 to the north and east</p>
<p>Can this proposal comply with AS 3959-2009 and Addendum to Appendix 3 of Planning for Bush Fire Protection (PBP)?</p>	<p>Yes</p>
<p>Does this development comply with the aim and objectives of PBP?</p>	<p>Yes</p>
<p>Is referral to the NSW Rural Fire Service (RFS) required?</p>	<p>Yes</p>

List of Abbreviations

APZ	Asset Protection Zone
AS3959	Australian Standard 3959 – 2009 including Amendment 3
BAL	Bushfire Attack Level
BCA	Building Code of Australia
BPAD	Bushfire Planning and Design (Accreditation Scheme)
BPMs	Bushfire Protection Measures
BPLM	Bushfire Prone Land Map
Council	Northern Beaches Council
DA	Development Application
<i>EP&A Act</i>	<i>Environmental Planning and Assessment Act – 1979</i>
FPA	Fire Protection Association of Australia
IPA	Inner Protection Area
LPMA	Land & Property Management Authority
NCC	National Construction Code
PBP	Planning for Bush Fire Protection 2006
<i>RF Act</i>	<i>Rural Fires Act – 1997</i>
RFS	NSW Rural Fire Service
SEPP	State Environmental Planning Policy
SIX	Spatial Information Exchange

Contents

Document Tracking	2
Executive Summary	4
Compliance Summary.....	5
List of Abbreviations.....	6
1. Introduction.....	8
2. Purpose of this Report	8
3. Location.....	9
3.1 Property Description.....	10
3.2 Zoning	10
4. The Proposal	11
5. Site Assessment	11
5.1 Vegetation Classification for Site and Surrounds	12
5.2 Slope	13
5.3 Fire Weather	14
5.4 Access and Egress	14
5.5 Water Supply.....	14
5.6 Biodiversity Values.....	15
5.7 Environmental Features	15
6. Assessment of Bushfire Risk	15
6.1 Reduction in BAL due to Shielding.....	16
7. Asset Protection Zones.....	18
8. Assessment of Compliance with PBP	19
9. Specific Objectives of PBP where APZs cannot be met	20
10. Recommendations	22
11. Summary	23
12. References	24
13. Legislation	25
Appendix 1 – Site Plan.....	26
Appendix 3 – Bushfire Risk Assessment Certificate	29

1. Introduction

The report has been commissioned by Georgina Nassif to provide a bush fire assessment for the proposed development of two new single occupancy dwellings, one on each of Lot 4 and Lot 5 Section 10 DP 14048, 26 Ralston Road Palm Beach.

The subject property is “bushfire prone land” as per the local Council bushfire prone land map (Figure 3) as defined by section 10.3 (s10.3) of the *Environmental Planning & Assessment Act (EP&A Act) 1979* and therefore the requirements stipulated by legislation apply to any new development on the site.

Planning for Bush Fire Protection 2006 (Chapter 4.3.5) describes this type of development as “infill development” and therefore the requirements of section 4.14 (s4.14) of the *EP&A Act* are applicable.

The bush fire assessment and recommendations are derived from the NSW *EP&A Act*, the Rural Fire Service document *Planning for Bush Fire Protection 2006* and Australian Standard 3959-2009 ‘Construction of Buildings in Bushfire Prone Areas’.

2. Purpose of this Report

The purpose of this report is to provide the owners, the Consent Authority, the Certifier and the Rural Fire Service with a description of the proposed development as well as the vegetation type, slope and any other factors influencing the likely bushfire behaviour, sufficient to show that the development will be protected from the likely bushfire threat as outlined in the current legislation.

This assessment includes an analysis of the hazard, threat and subsequent risk to the development and provides recommendations that satisfy the aim and objectives of *Planning for Bush Fire Protection*.

3. Location

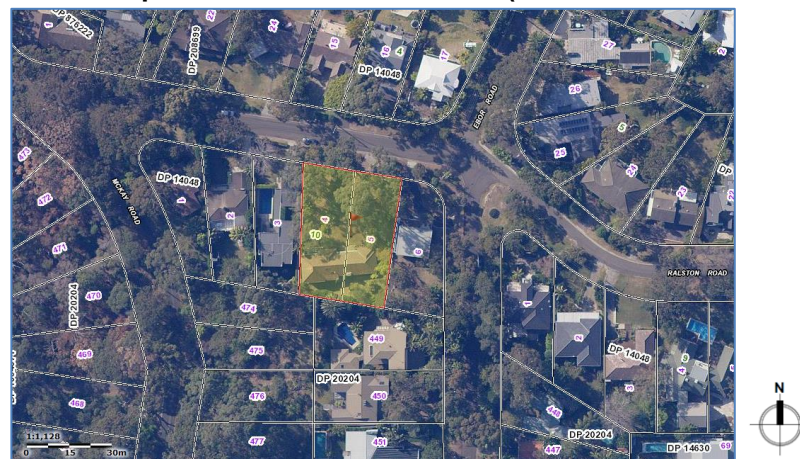
The site is located and known as Lot 4 and Lot 5 Section 10 DP 14048, 26 Ralston Road Palm Beach. The property is part of the Northern Beaches local government area.

Figure 1. Location Map. Source: LPMA SIX Viewer (NSW Government 2019a)



Site location outlined in red

Figure 2. Aerial Map. Source: LPMA SIX Viewer (NSW Government 2019a)

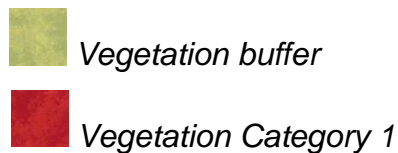


Site location outlined in red

**Figure 3. Bushfire Prone Land Map. Source: NSW Government Planning Portal
(NSW Government 2019b)**



Site location outlined in yellow



3.1 Property Description

The property is comprised of Lot 4 and Lot 5 Section 10 DP 14048, covering approximately 1494m² in combined area. Lot 4 is approximately 763m² in area and Lot 5 approximately 731m² (Figure 2). The site is bounded by Ralston Road to the north, private allotments with dwellings to the approximate east, south and west and vacant lands to the southwest. It currently contains a single occupancy development, comprising a single storey dwelling which is to be demolished.

3.2 Zoning

The land is zoned E4 - Environmental Living under Pittwater Local Environmental Plan 2014. Adjacent lands to the north, east, south and west are similarly zoned. Adjacent lands to the southwestern corner are zoned E2 - Environmental Conservation (Figure 4).

Figure 4. Zoning Map. Source: NSW Government Planning Viewer (NSW Government 2019b)



4. The Proposal

The proposal is for two single occupancy two storey dwellings, one on each of Lot 4 and Lot 5. Each dwelling includes an alfresco, roof terrace, detached garage, swimming pool and enclosed pool terrace. The detached garages and pool terraces will be within 10m of the respective dwellings. The proposal includes new boundary fencing. In terms of the BCA, the classification of the building is Class 1a, 10a and 10b.

5. Site Assessment

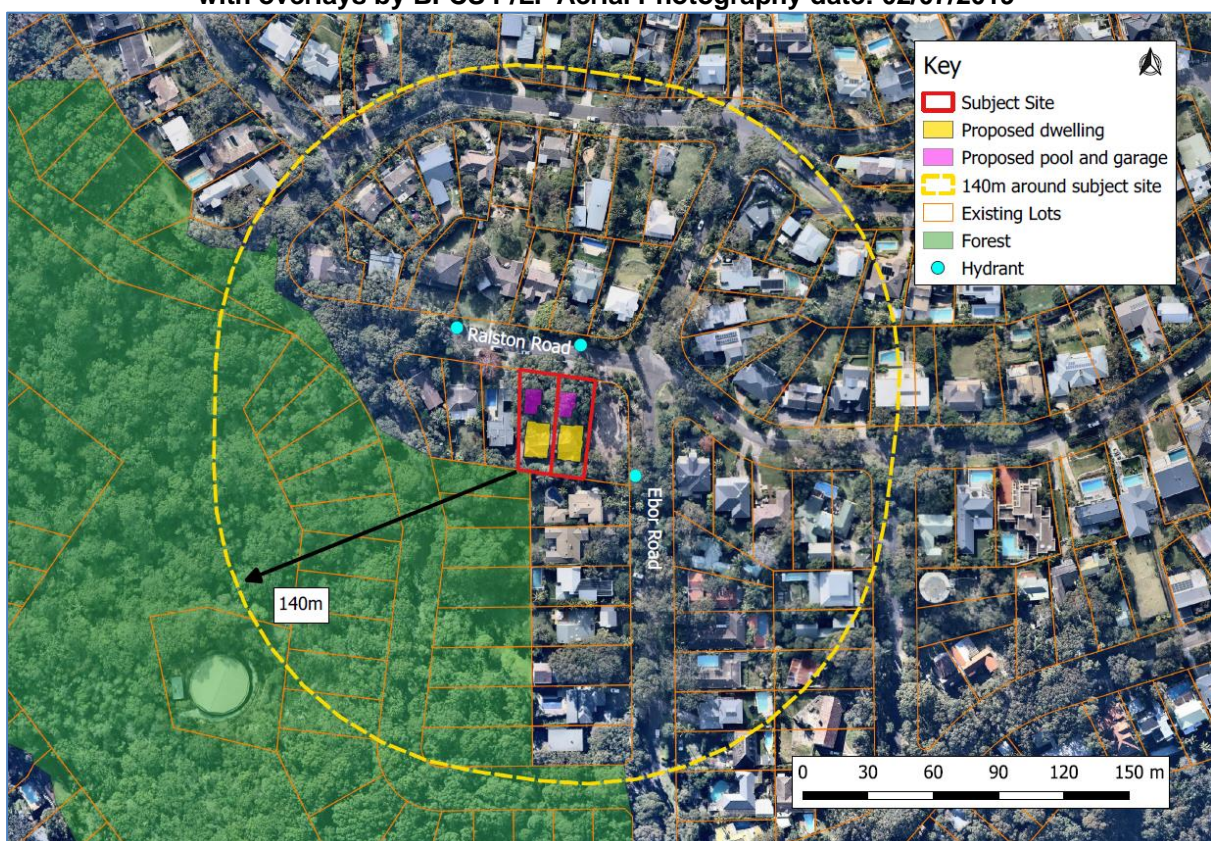
Bushfire Consulting Services Pty Ltd attended the site on 2 September 2019. The assessment relates to the site plans (Appendix 1). The NSW Spatial Services mapping website has also been used as a reference (NSW Government 2019a), and 'Ocean Shores to Desert Dunes' by David Keith (Keith 2004), in determining the vegetation type.

5.1 Vegetation Classification for Site and Surrounds

The bushfire threat emanates from bushland located to the southwest and west of the proposed development, located within vacant lots of the designated E2 – Environmental Conservation Zone. Hazardous vegetation was classified for a distance of 140m from the subject building according to the methodology of PBP Appendix 2 and PBP Addendum: Appendix 3 section A3.5.

Predominant vegetation is classified by structure or formation using the system adopted by Keith (2004). Based on a site visit and determination of vegetation formation using the Keith (2004) Identification Key, the primary bushland vegetation having the potential to affect the proposed development is most representative of Forest to the southwest and west (Figure 5).

Figure 5. Hazardous vegetation affecting the proposed development. Source: NearMap (2019) with overlays by BFCs P/L. Aerial Photography date: 02/07/2019



Subject site outlined in red. Vegetation was assessed to a distance of 140m from the subject building. The positions of the nearest street hydrants are indicated as blue circles.

Tables 1 and 2 below indicate the separation distance from the proposed development to hazardous vegetation once appropriate Asset Protection Zones (APZs) (see section 7) have been established on the subject site.

Table 1. Hazardous vegetation affecting Lot 4 proposed development

Direction	Vegetation Classification
North	Absence of Classified Vegetation for >140m
East	Absence of Classified Vegetation for >140m
South	Absence of Classified Vegetation for >140m
Southwest	Absence of Classified Vegetation for 6m then Forest
West	Absence of Classified Vegetation for 60m then Forest

Table 2. Hazardous vegetation affecting Lot 5 proposed development

Direction	Vegetation Classification
North	Absence of Classified Vegetation for >140m
East	Absence of Classified Vegetation for >140m
South	Absence of Classified Vegetation for >140m
Southwest	Absence of Classified Vegetation for 13m then Forest
West	Absence of Classified Vegetation for 75m then Forest

5.2 Slope

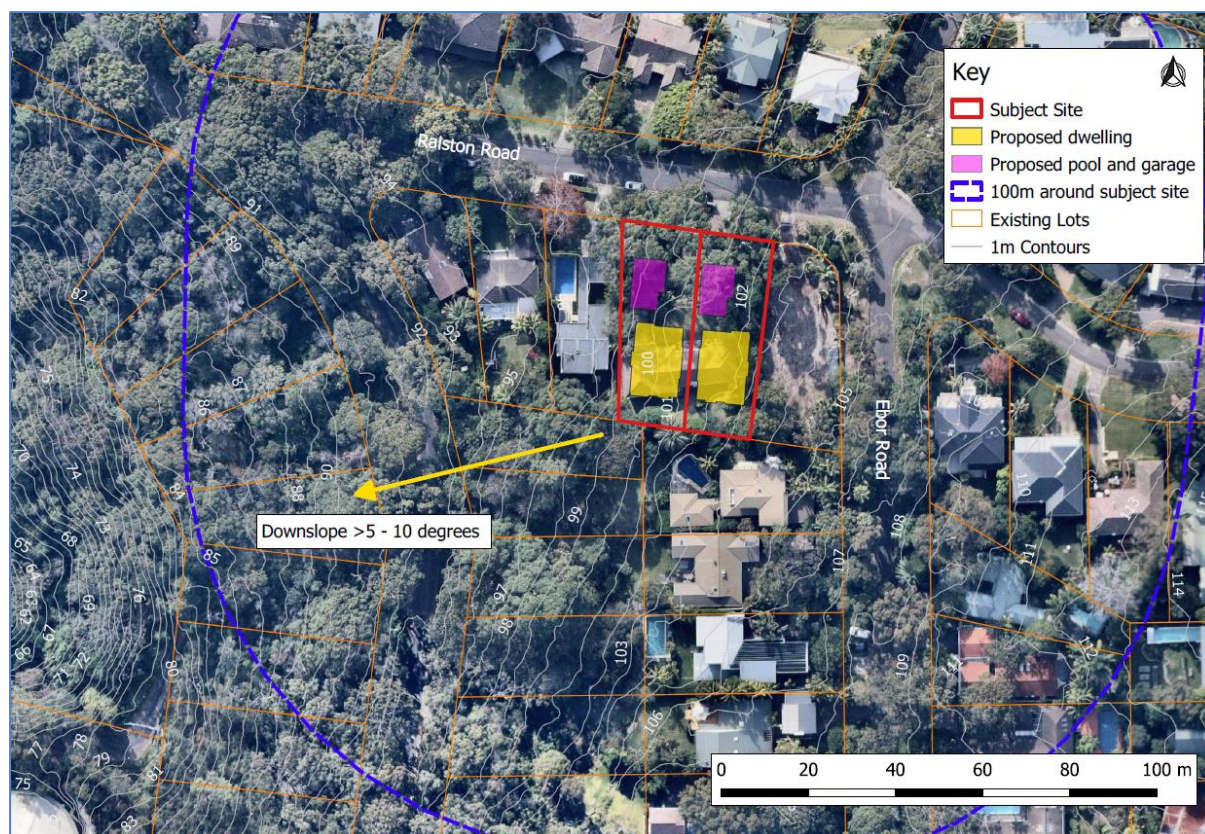
The effective slope has been measured manually on site over a distance of 100m from the proposed development where accessible, under the classified vegetation community constituting the hazard. The slope was found to be consistent with the topographical information from NSW Spatial Services LiDAR data (Figure 6).

Table 3. Slope Analysis

Direction from Building Footprint	Slope Description
North	N/A
East	N/A
South	N/A
Southwest	Downslope >5-10°
West	Downslope >5-10°

Note: Effective 'slope' refers to the slope under the classified vegetation in relation to the building, not the slope between the building and the classified vegetation.

Figure 6. Slope Diagram. Source: NearMap (2019) and LiDAR (NSW Government 2019a) with overlays by BFCs P/L: Aerial Photography Date: 02/07/2019



Site location outlined in red, 1m contours

5.3 Fire Weather

The development is located in the Northern Beaches Council area, a part of the Greater Sydney Region, which has a Fire Danger Index of 100.

5.4 Access and Egress

Lots 4 and 5 each have direct access to Ralston Road, which is a public road. Suitable access for fire-fighting vehicles and evacuation is available.

5.5 Water Supply

The area has a reticulated water supply and a fire hydrant is located approximately 15m from Lot 5 to the north, and approximately 17m from Lot 4 to the northeast, within the distance prescribed by PBP.

5.6 Biodiversity Values

A search of the NSW Office of Heritage and Environment and Heritage's Biodiversity Values Map (NSW Government 2019c) has been carried out and has not revealed any high biodiversity values on the land.

5.7 Environmental Features

In this instance, there are no features on or adjoining the site which may mitigate the impact of a high intensity bushfire on the proposed development. The proposed bushfire protection measures will not adversely impact on the environment. It should be noted that this report has not focused on environmental issues and as such they may require further specialist investigation.

6. Assessment of Bushfire Risk

The bushfire risk to the subject buildings was assessed by considering the classification of the vegetation threats, the effective slope under the classified vegetation, the separation distance between the building and the classified vegetation, and the potential fire weather typical of the area which is represented as a Fire Danger Index (FDI) of 100 for a 1 in 50 year event. The information shown in Tables 4 and 5 is derived from AS3959-2009 Table 2.4.2 and the simplified method for determining the Bushfire Attack Level – Method 1, as outlined in AS3959-2009 for residential developments at FDI 100.

Table 4 – Bushfire Risk Assessment to Lot 4 proposed development

Aspect	Possible APZ	Vegetation Classification	Slope Under Classified Vegetation	Anticipated Radiant Heat Flux kW/m ²	Bushfire Attack Level (BAL) required
North	>100m	N/A	N/A	N/A	*BAL 40
East	>100m	N/A	N/A	N/A	*BAL 40
South	>100m	N/A	N/A	N/A	BAL FZ
Southwest	6m	Forest	Downslope >5-10°	>40	BAL FZ
West	60m	Forest	Downslope >5-10°	<19	BAL FZ

**Due to shielding, see section 6.1*

Table 5 – Bushfire Risk Assessment to Lot 5 proposed development

Aspect	Possible APZ	Vegetation Classification	Slope Under Classified Vegetation	Anticipated Radiant Heat Flux kW/m ²	Bushfire Attack Level (BAL) required
North	>100m	N/A	N/A	N/A	*BAL 40
East	>100m	N/A	N/A	N/A	*BAL 40
South	>100m	N/A	N/A	N/A	BAL FZ
Southwest	13m	Forest	Downslope >5-10°	>40	BAL FZ
West	75m	Forest	Downslope >5-10°	<12.5	BAL FZ

**Due to shielding, see section 6.1*

The assessment indicates that the proposed developments on Lot 4 and Lot 5 would experience radiant heat levels of >40 kW/m² to the south and west facing elevations, as a result of foreseeable local bushfires under conditions of an FDI of 100. FDI 100 represents catastrophic fire conditions and is therefore a worst-case scenario. The expected radiant heat levels translate to a Bushfire Attack Level (BAL) on the buildings of BAL FZ according to Table 2.4.2 of AS3959-2009 'Construction of buildings in bushfire-prone areas'. BAL FZ represents the highest level of threat for buildings on bushfire prone land within 100m of classified hazardous vegetation. Construction of any new development to BAL FZ specifications is *'primarily concerned with protection from flame contact together with ember attack and radiant heat of more than 40kW/m²'* (Standards Australia 2009). The north and east facing elevations of the proposed developments will be shielded from the major source of bushfire attack, allowing the required construction level for these elevations to be reduced to BAL 40 (section 6.1). The detached garages and pool terrace areas will be within 10m of their respective proposed dwellings and will require the same construction requirements as the dwellings per PBP 2006 section 4.3.6 (f).

6.1 Reduction in BAL due to Shielding

Under normal circumstances a proposed development approval would be issued with the same construction level for each elevation of the dwelling. According to the RFS Fast Fact 2/10 (NSW RFS 2012), it is acceptable to recommend a lower construction

level on the elevation furthest from the hazard. Facades of the dwelling directly exposed to the hazard (in line of sight from the hazard), still require the assessed level of construction. The construction requirements for the next lower BAL than determined for the site may be applied to an elevation of the building where the elevation is not exposed to the source of the bushfire attack (AS3959-2009 clause 3.5). An elevation is deemed to be not exposed to the source of the bushfire attack if all the straight lines between that elevation and the source of bushfire attack are obstructed by another part of the building.

In this instance, the north and east aspects of the proposed developments on Lot 4 and Lot 5 will be fully shielded from exposure to the source of the greatest bushfire attack by the buildings themselves. Therefore, the BAL for the north and east elevations on each dwelling and the detached garages and pool terraces can be reduced by one level to BAL 40. The BAL is only permitted to be reduced by one level (Figure 7).

Figure 7. Shielding Diagram. Source: NearMap (2019) with overlays by BFCS P/L: Aerial Photography Date: 02/07/2019



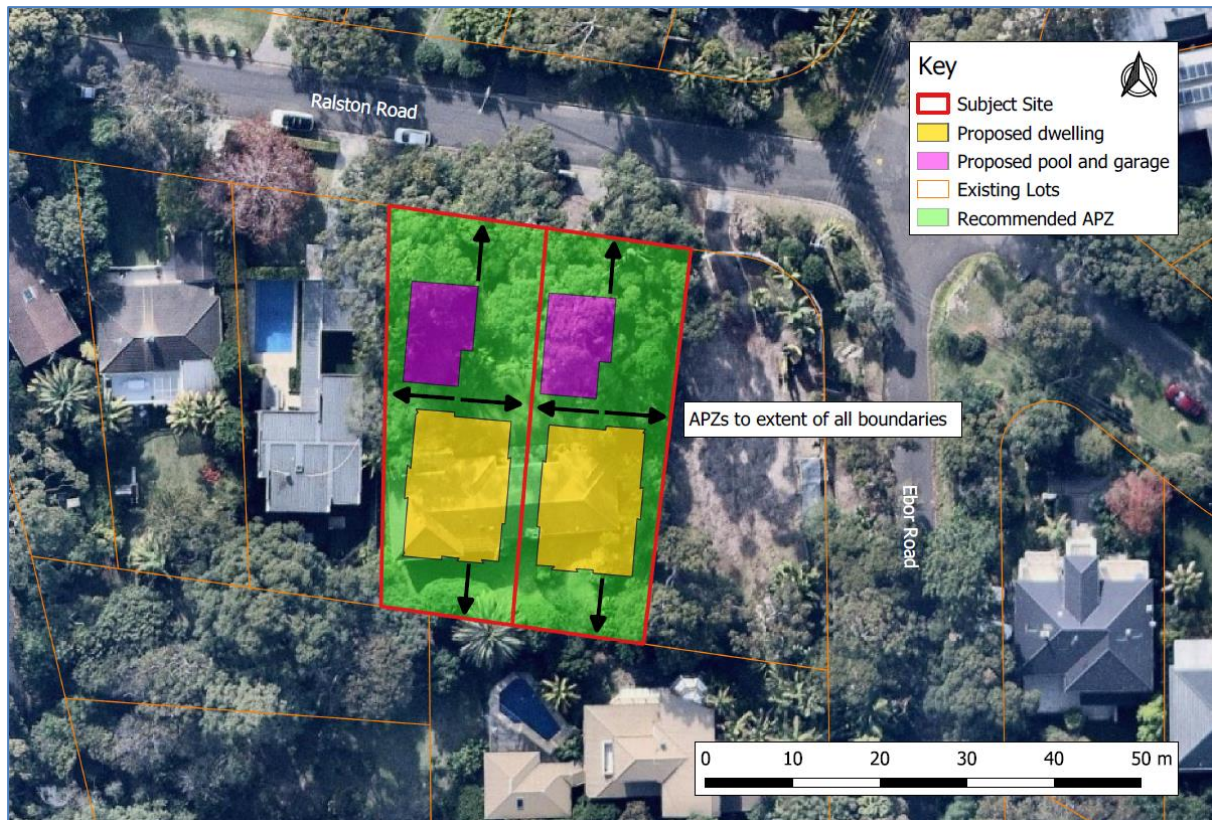
7. Asset Protection Zones

An Asset Protection Zone (APZ) is a fuel-reduced area surrounding a built asset or structure. An APZ provides a buffer zone between a bush fire hazard and an asset and an area of reduced bush fire fuel that allows suppression of fire. It also provides an area from which backburning or hazard reduction can be conducted and allows emergency services access as well as providing a relatively safe area for firefighters and home owners to defend their property.

Potential bush fire fuels should be minimised within an APZ. This is so that the vegetation within the planned zone does not provide a path for the transfer of fire to the asset either from the ground level or through the tree canopy. PBP has minimum specifications for APZs to be established around a dwelling to be managed as an Inner Protection Area (IPA). In this instance, it is recommended that the entire site be managed as an IPA (see section 10). As the existing dwelling is to be demolished as part of the development proposal it is assumed that a large portion of the subject site will be cleared of vegetation in the process. Residual trees may, however, need to be removed or selectively trimmed to ensure that they do not touch or overhang the new development, with any tree trunks being at least 2m from buildings. This is particularly applicable at the front (north end) of the subject site and along the rear (south) boundary.

Figure 8 shows the recommended APZ to be established around the proposed developments within the subject site.

Figure 8. Recommended APZ distances from proposed development. Source: NearMap (2019) with overlays by BFCS P/L. Aerial Photography date: 02/07/2019



8. Assessment of Compliance with PBP

The development conforms to PBP as follows:

Performance Criteria	Meets or not	Comment
APZs	N	According to PBP 2006 Table A2.4, the minimum APZ required for this development is 35m from hazardous vegetation. It is proposed that each of Lot 4 and Lot 5 are managed in their entirety as an Inner Protection Area (IPA) Asset Protection Zone. The required APZs are not attainable within the allotments, therefore the specific objectives of PBP must be met as discussed below
Defendable Space	Y	A defendable space of at least 10m ² is available to the front of the subject buildings and pedestrian firefighter access is available to the rear

Performance Criteria	Meets or not	Comment
Siting and Design	Y	Siting and design is in accordance with local council requirements for the allotment
Landscaping	Y	Any future landscaping is to comply with PBP 2006 Appendix 5
Construction Standards	Y	Development on Lot 4 and Lot 5 must comply with AS3959-2009 BAL FZ to the entire roof and the south and west, and BAL 40 to the north and east. These conditions also apply to the detached garages and pool terrace areas as they are within 10m of the proposed respective dwellings
Access and egress	Y	Safe operational access is available to emergency services personnel while residents are seeking to relocate in advance of a bushfire
Water Supply	Y	The site has a reticulated water supply and a fire hydrant is located within the distance prescribed by PBP
Electricity and Gas Supply	Y	Any proposed bottled gas supply location will comply with PBP where it is located so as to not lead to ignition of the surrounding bushland or the building. Where practicable, electrical transmission lines will be located underground
Emergency and Evacuation Planning	Y	The need to formulate an emergency evacuation is suggested. To do so, occupants can complete a Bush Fire Safety Plan on the NSW RFS Website http://www.rfs.nsw.gov.au/ under publications / bushfire safety

9. Specific Objectives of PBP where APZs cannot be met

While the proposed development does not meet the minimum APZ for residential development, it complies with the aim and objectives of PBP 2006 section 4.3.2 for infill development. The Specific Objectives for infill development and a comment as to how they are achieved by the proposed development is provided below:

Specific Objective 1 for infill development is to “ensure that the bushfire risk to adjoining lands is not increased”.

The development does not increase the bushfire risk to adjoining lands. The bushfire risk to adjoining lands will be decreased as the dwellings will be provided with a formalised APZ which does not currently exist on the lot, which satisfies this objective.

Specific Objective 2 for infill development is to “provide a minimum defensible space”.

The proposed development will have defensible space of at least 10m² at the front of the dwellings. Pedestrian access is available to both sides and the rear of the dwellings, which satisfies this objective.

Specific Objective 3 for infill development is to “provide a better bushfire protection outcome and should not result in new works being exposed to greater risk than the existing building”.

As the proposal is for new dwellings, this objective is not applicable.

Specific Objective 4 for infill developments is to “ensure that the footprint of the proposed building does not extend towards the hazard beyond existing building lines on neighbouring land”.

The proposed development has setbacks to the hazard which are consistent with adjoining lots, which satisfies this objective.

Specific Objective 5 for infill development is to “not result in an increased bushfire management and maintenance responsibility on adjoining land-owners unless they have agreed to the development”.

The development does not increase or offset bushfire management onto neighbouring lands.

Specific Objective 6 for infill development is to “ensure building design and construction enhances the chances of occupant and building survival”.

The development will comply with construction standards for bushfire protection, which satisfies this objective.

10. Recommendations

The following recommendations are made for the bushfire measures for the proposed residential development of two new single occupancy dwellings, one on each of Lot 4 and Lot 5 Section 10 DP 14048, 26 Ralston Road Palm Beach, and are based upon the relevant provisions of the NSW Rural Fire Service Guideline entitled *Planning for Bush Fire Protection 2006*.

1. Design and Construction

New construction to both dwellings, and the respective detached Class 10a garages and pool terraces, on the south and west elevations and the entire roof shall comply with Sections 3 and 9 (BAL FZ) of Australian Standard AS3959-2009 'Construction of buildings in bush fire-prone areas' or NASH Standard (1.7.14 updated) 'National Standard Steel Framed Construction in Bushfire Areas – 2014' as appropriate. Except for windows, flaming of the specimen is not permitted and there shall be no exposed timber.

New construction on the north and east elevations to both dwellings, and the respective detached Class 10a garages and pool terraces, shall comply with Sections 3 and 8 (BAL 40) of Australian Standard AS3959-2009 'Construction of buildings in bush fire-prone areas' and Section A3.7 of the NSW Rural Fire Service Addendum to Appendix 3 of Planning for Bush Fire Protection 2006, or NASH Standard (1.7.14 updated) 'National Standard Steel Framed Construction in Bushfire Areas – 2014' as appropriate.

The Class 10b swimming pools are to be non-combustible.

Any new Class 10b fencing and retaining walls are to be non-combustible.

2. Asset Protection Zones

At the commencement of the development, and in perpetuity, each of Lot 4 and Lot 5 are to be managed in their entirety as an Inner Protection Area (IPA) Asset Protection Zone, as outlined in PBP 2006 Appendix 5 and the NSW RFS document 'Standards for Asset Protection Zones' (NSW RFS undated).

The following points are a guide to Asset Protection Zone Area requirements. The Asset Protection Zone Area should comprise the following:

- Minimal fine fuel on the ground.
- Vegetation that does not provide a continuous path to the building for the transfer of fire.
- Shrubs and trees that do not form a continuous canopy and vegetation is planted in clumps, rather than continuous rows.
- Species that retain dead material or deposit excessive quantities of ground fuel are avoided.
- Shrubs and trees are pruned so that they do not touch or overhang the building.
- Vegetation is located far enough away from the building so that plants will not ignite the building by direct flame contact or radiant heat emission.

3. Emergency and Evacuation Planning

The need to formulate an emergency evacuation plan is suggested. To do so, occupants can complete a Bush Fire Safety Plan on the NSW RFS Website <http://www.rfs.nsw.gov.au/> under publications / bushfire safety.

11. Summary

This report consists of a bush fire assessment for the proposed development of two new single occupancy dwellings, one on each of Lot 4 and Lot 5 Section 10 DP 14048, 26 Ralston Road Palm Beach. The report concludes that the proposed development is on designated bushfire prone land and the legislative requirements for development in bushfire prone areas are applicable.


This report has considered all the elements of bushfire attack and finds that the development has a Bushfire Attack Level of BAL FZ to the entire roof, the south and west and BAL 40 to the north and east. The proposed development satisfies the aim and objectives of 'Planning for Bush Fire Protection' 2006 and Australian Standard 3959-2009, subject to implementation of the recommendations made by this report.

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

Bushfire Consulting Services Pty Ltd Report No. 19/0595 *page 23 of 30*

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 bushfire attack on every occasion.

This report is a bush fire assessment that provides the required information to assist local Council and the Rural Fire Service in determining compliance in accordance with Planning for Bush Fire Protection and AS3959-2009. 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.



Catherine Gorrie

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12. References

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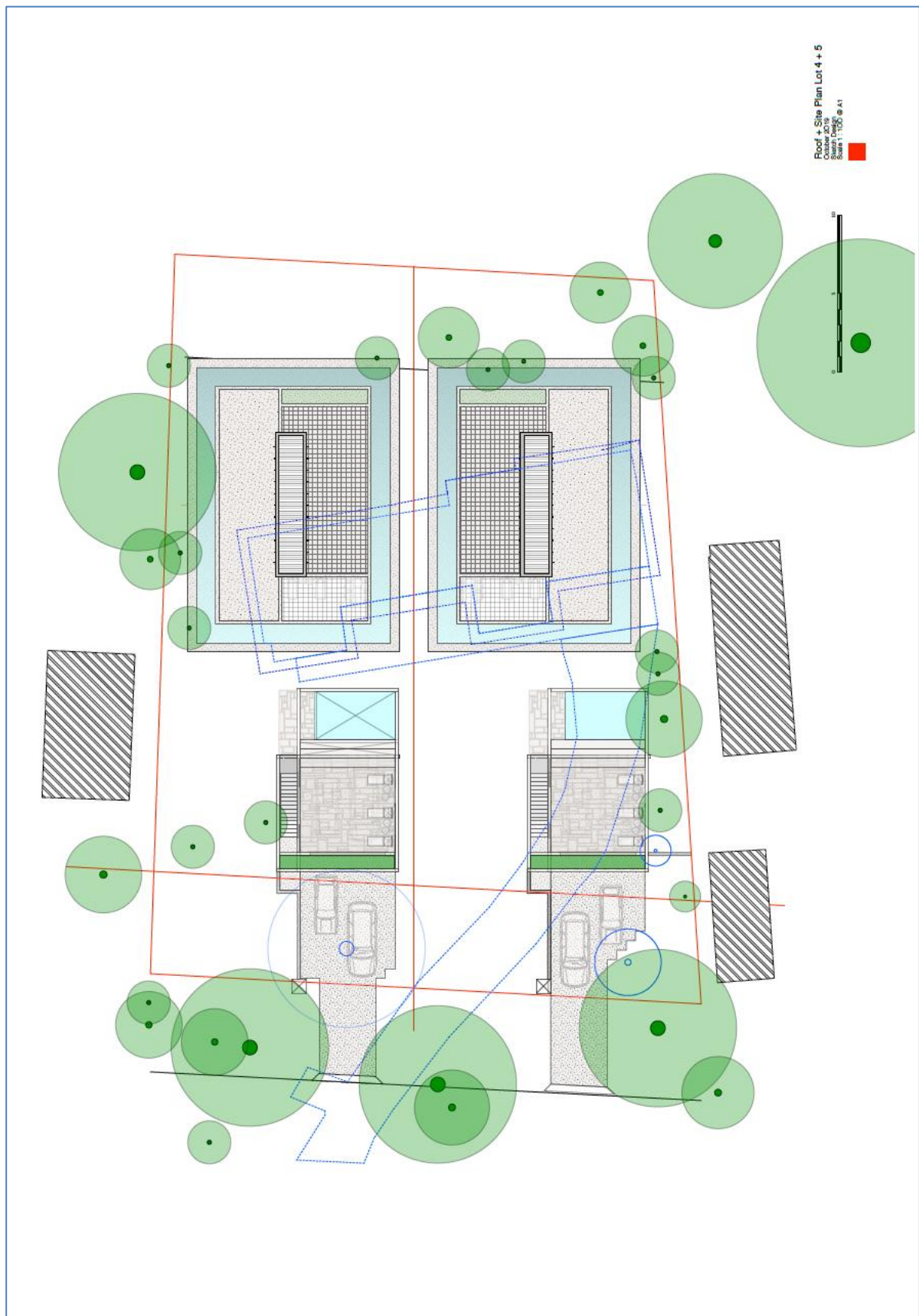
13. Legislation

Environmental Planning & Assessment Act 1979

Rural Fires Act 1997

Rural Fires Regulation 2013

Appendix 1 – Site Plan



Appendix 2 – Photos of Site and Surrounds

Source: BFCS P/L 2/09/2019



View to the south from Ralston Road showing the subject site and existing dwelling



View to the south across the rear boundary of the subject site showing managed land at the rear of adjoining lots containing dwellings and unmanaged vegetation to the southwest on adjoining vacant lots



View to the southwest showing typical vegetation adjacent to the southwest corner of the subject site



View to the northeast from McKay Road showing typical vegetation to the southwest of the subject site



View to the southwest from McKay Road showing typical vegetation to the west of the subject site

Appendix 3 – Bushfire Risk Assessment Certificate

This form is completed by a recognized consultant in bushfire risk assessment in accordance with section s4.14 of the Environmental Planning and Assessment Act 1979 No 203

PROPERTY ADDRESS:	Lot 4 and Lot 5 Section 10 DP 14048 26 Ralston Road Palm Beach
DESCRIPTION OF PROPOSAL:	Two new single occupancy dwellings
PLAN REFERENCE: (relied upon in report preparation)	Site plan by Stephen Lesiuk, dated October 2019
BAL RATING	AS3959-2009 BAL FZ to the entire roof, the south and west and BAL 40 to the north and east (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 type="radio"/> NO <input checked="" type="radio"/> (Circle the relevant response) (If YES the application is to be referred to NSW RFS for assessment.)

I, Catherine Gorrie, of Bushfire Consulting Services Pty Ltd, 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 A2.2 of Planning for Bushfire Protection 2018 together with recommendations as to how the relevant specifications and requirements are to be achieved.

REPORT REFERENCE:	19/0595
REPORT DATE:	26/09/2019
CERTIFICATION NO/ACCREDITED SCHEME:	BPAD-Level 3 Accredited Practitioner FPAA Cert No: BPAD20751

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 s4.14 of the EP&A Act 1979 No 203.

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

* The relevant specifications and requirements being; specifications and requirements of the document entitled *Planning for Bush Fire Protection* prepared by the NSW Rural Fire Service in co-operation with the Department of Planning and any other document as prescribed by Section s4.14 of the Environmental Planning and Assessment Act 1979 No 203.

I am aware that the bush fire 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 2006.

Attachments:

- ☒ Bushfire Risk Assessment Report
- ☒ Recommendations
- ☒ Statement of vegetation impact in relation to APZ



SIGNATURE:

DATE: 26/09/2019