

This Report has been prepared and submitted by
Bushfire Consulting Services Pty Ltd
ACN: 161 040 295

Reference: 18/0794

PO Box 8468
PARRAMATTA WESTFIELD NSW 2150
Tel: 02 4744 5800
Mob: 0425 833 893
info@bfcs.com.au
www.bfcs.com.au

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Bush Fire Assessment Report

in relation to the proposed
warehouse and office (Building 6) at:

Lot 23 & 24 DP 262886
Hollinsworth Road Marsden Park
(subject site)



Executive Summary

This Assessment has been Certified by: Catherine Gorrie BPAD-LEVEL 3 Accredited Practitioner FPAA Cert No: BPAD20751	
Does this development comply with the aims and objectives of PBP?	Yes
Is referral to the NSW Rural Fire Service (RFS) required?	No
What is the recommended level of compliance with AS 3959-2009?	AS 35959-2009 Not a Deemed to Satisfy Solution for this building class
Plan Reference:	Plans by Nettleton Tribe Partnership Pty Ltd numbered 11001_ 101, issue C, dated 02/11/2018
Bushfire Consulting Services Report Issue Number: Date of Issue:	2 7/12/ 2018

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Disclaimer

Any recommendation or advice expressed in this report is made in good faith and in accordance with the relevant legislation for bushfire prone development in New South Wales. 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 report shall remain valid for 12 months from the date of issue.

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	Blacktown Council
CDC	Complying Development Certificate
DA	Development Application
<i>EP&A Act</i>	<i>Environmental Planning and Assessment Act – 1979</i>
FPAA	Fire Protection Association of Australia
IPA	Inner Protection Area
OPA	Outer Protection Area
PBP	Planning for Bush Fire Protection 2006
RF Act	Rural Fires Act – 1997
RFS	NSW Rural Fire Service
SEPP	State Environmental Planning Policy
SWS	Static Water Supply

Introduction

This report has been commissioned by FDC Construction (NSW) Pty Ltd to provide a bush fire assessment for the construction of a warehouse, awnings and attached office space at Lot 23 & 24 in DP 262886, Hollinsworth Road Marsden Park. Collectively, the proposed development is known as 'Building 6'. Building 6 is located wholly within Lot 23.

The subject property is "bushfire prone land" as per the local Council bushfire prone land map as defined by Section 10.3 (s10.3) of the *Environmental Planning & Assessment Act (EP&A) 1979* and therefore the requirements stipulated by legislation apply.

Planning for Bush Fire Protection 2006 (Chapter 1.3(b)) describes this type of development as "Other Classes of Buildings" and therefore the requirements of Section 4.14 (s4.14) of the EP&A Act are applicable, along with the aim and objectives of PBP that are applicable to the development type.

The bush fire assessment report and recommendations are derived from the NSW *EP&A Act*, and the Rural Fire Service document Planning for Bush Fire Protection 2006.

Purpose of this Report

The purpose of this report is to provide the owners, the Council, the Certifier and the Rural Fire Service with a description of the 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.

The proposal has already received conditional approval by Development Consent SSD 8606 issued by the NSW Government Department of Planning dated 16 August 2018 and this report seeks to delete condition B45, Design and Construction, Building 6 (f) and (g) and replace with the recommendations of this report. This report

demonstrates that the building can be adequately protected from the bushfire risk without the application of sections 3, 8 and 9 of AS3959-2009.

This independent report is submitted as part of the development application to Council to assist the Council in determining the conditions of consent appropriate to the development.

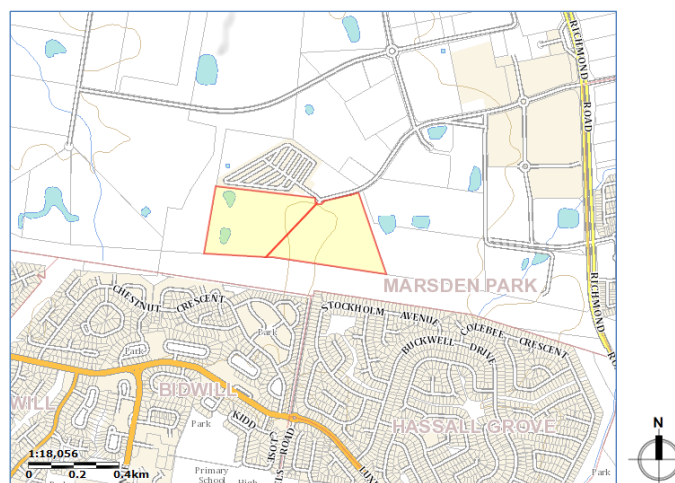
Site Assessment

Bushfire Consulting Services Pty Ltd attended the site on 3 December 2018. The assessment relates to the plans referenced on page 2 of this report. The NSW Department of Planning Spatial Information Exchange mapping website has also been used as a reference, and Ocean Shores to Desert Dunes by David Keith, in determining the vegetation type.

Location

The site is located and known as Lot 23 & 24 in DP 262886, Hollinsworth Road Marsden Park. The property is part of the Blacktown Council local government area.

Figure 1: Location Map: Source: Land & Property Management Authority (LPMA) SIX Viewer



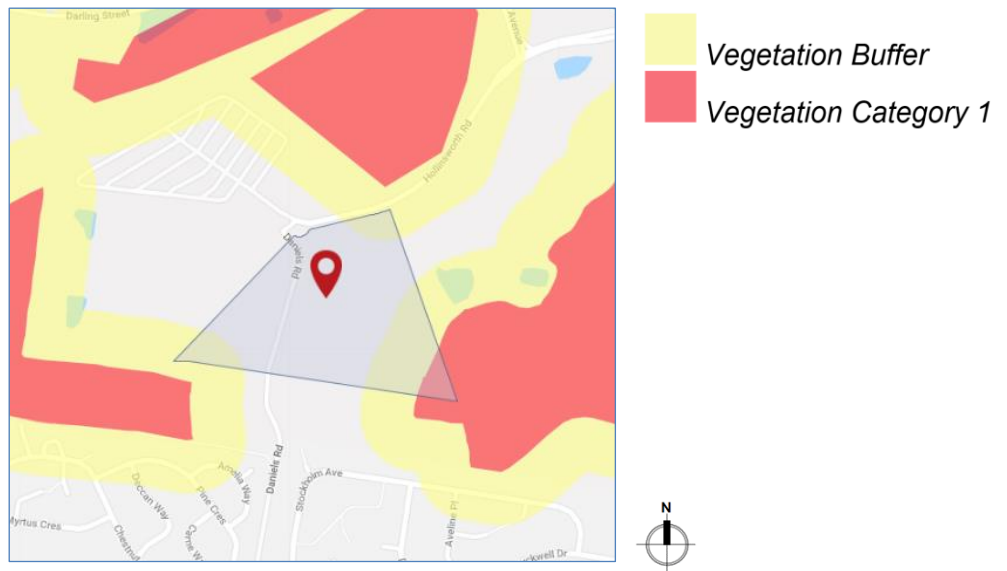
Site location outlined in red

Figure 2: Aerial Map: Source: LPMA SIX Viewer



Site location outlined in red

Figure 3: Bushfire Prone Land Map Lot 23: Source: NSW Government Planning Viewer



Site location outlined in blue

The Proposal

The proposal is for a warehouse, awnings and attached office space. In terms of the BCA, the classification of the building is Class 5 and 7b.

The BCA describes a Class 5 building as being “an office building used for professional or commercial purposes, excluding buildings of Class 6, 7, 8 or 9”. A Class 7b building is described as being “a building which is for storage or display of goods or produce for sale by wholesale”.

The BCA does not provide for any bushfire specific performance requirements for this class of building and, as such, AS3959-2009 does not apply as a deemed to satisfy provision. The proposal needs only to comply with the general fire safety provisions of the BCA, where it can be demonstrated that the aim and objectives of PBP are met.

However, it is a recommendation of this report that section 5 of AS 3959-2009 (BAL 12.5) be applied to the building where possible, to provide a level of protection from ember attack and radiant heat up to 12.5kW/m².

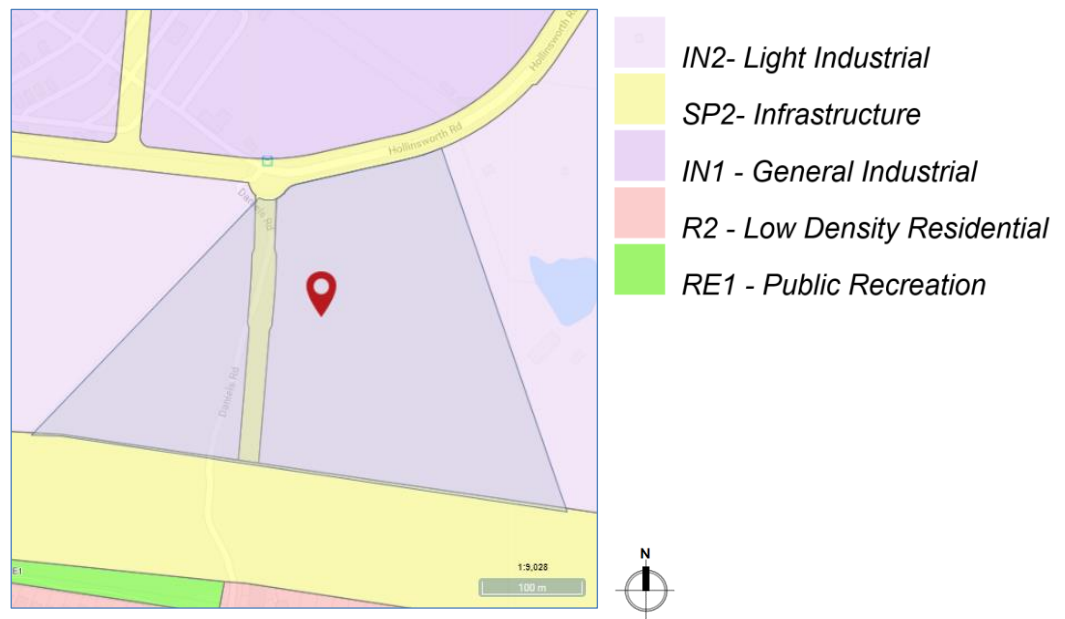
Property Description

Lots 23 and 24 are each approximately 10.7 ha in area. Lot 23 faces north, and Lot 24 faces approximately northeast, onto Hollinsworth Road. At the time of site inspection the lots were a mixture of vacant land involving bulk earthworks and buildings under construction. Building 6 is one of nine buildings proposed across the two lots and is sited at the southeast corner of Lot 23 (Figure 6). Lot 481 in DP 634363 immediately south of the subject site is identified as the future Roads and Maritime Services (RMS) M9 Motorway corridor. Lots 21 and 22 in DP 262886 to the east of the subject site have been identified by FDC building as owned by Busways Pty Ltd to be developed as a bus depot. Concrete block retaining walls have been constructed near the east and south lot boundaries surrounding Building 6, elevating the building above surrounding vegetation.

Zoning

The land is zoned IN2 - Light Industrial and SP2 - Infrastructure under State Environmental Planning Policy (Sydney Region Growth Centres) 2006. Adjacent lands to the east and west are zoned IN2 – Light Industrial, adjacent lands to the north are zoned IN1 – General Industrial and SP2 – Infrastructure, and adjacent lands to the south are zoned SP2 - Infrastructure.

Figure 4: Zoning Map: Lot 23: Source: NSW Government Planning Viewer

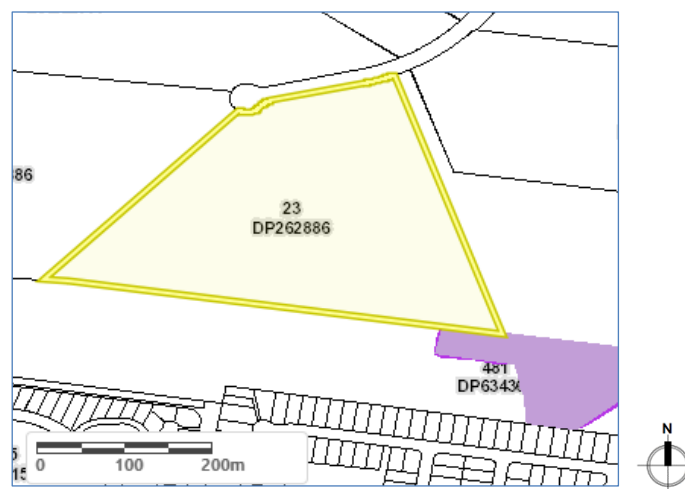


Site location outlined in blue

Biodiversity Values

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

Figure 5: Biodiversity Values Map: Lot 23: NSW Office of Environment and Heritage
<https://www.lmbc.nsw.gov.au/Maps/index.html?viewer=BOSETMap>



Site location outlined in yellow

Areas mapped in purple indicate land with high biodiversity value

 Biodiversity Values

Actual Site Conditions

Figure 6: Aerial Map: Source: NearMaps, with overlays by BFCS P/L

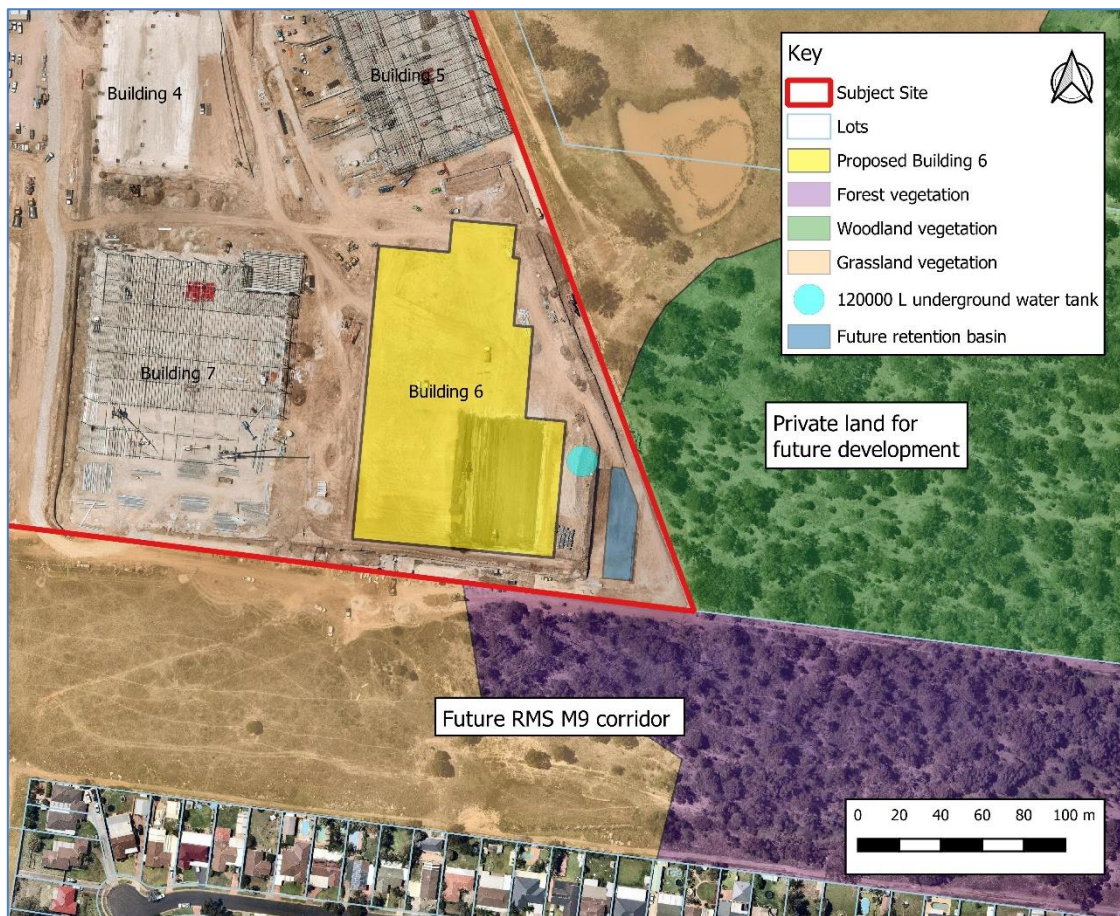


Figure 7: Site Photos: Source: BFCS P/L taken on 30/11/2018



View to the southwest from Hollinsworth Road showing the subject site



View to the southwest showing the site of proposed Building 6. Building 7 shown under construction in the background



Typical vegetation to the southeast of proposed Building 6 within the future M9 Motorway corridor



Typical vegetation to the south of proposed Building 6 within the future M9 Motorway corridor



Typical vegetation to the southwest of proposed Building 6 within the future M9 Motorway corridor



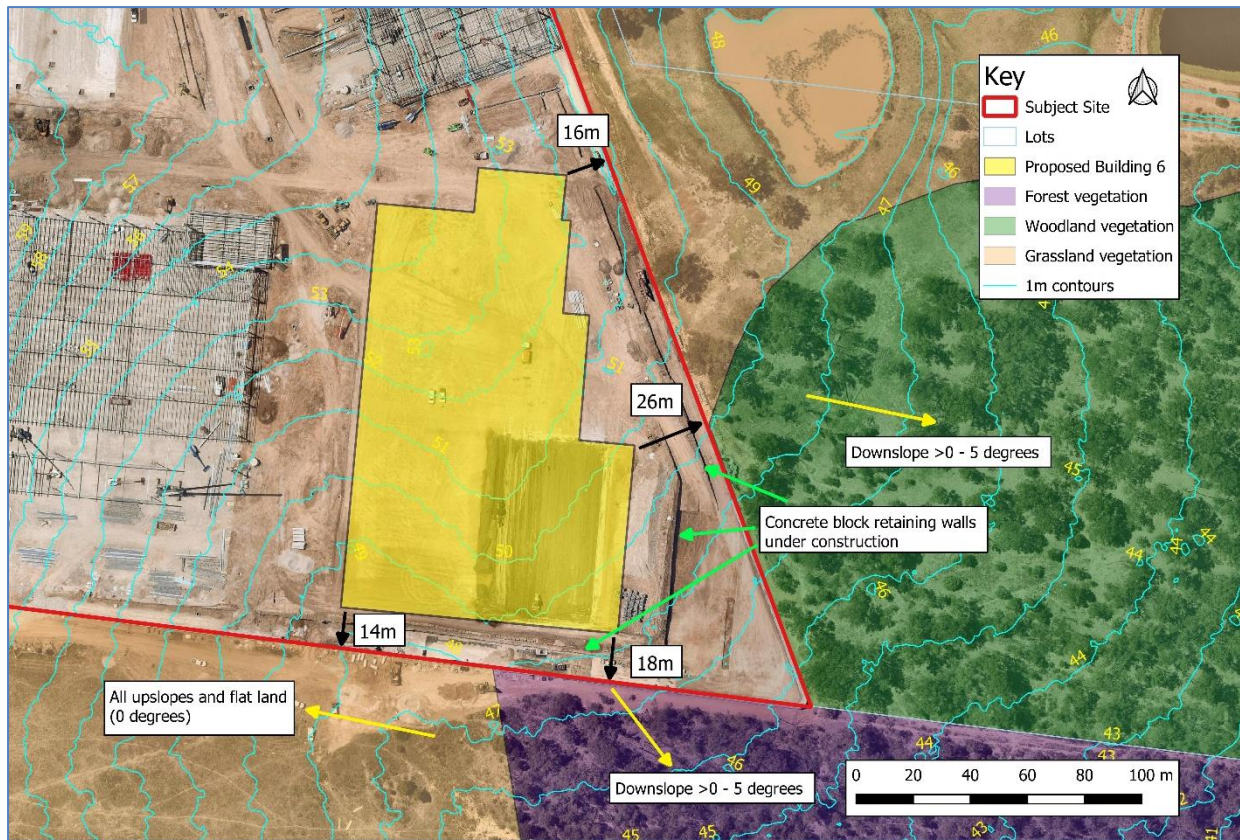
Typical vegetation to the east of the southern end of proposed Building 6



Typical vegetation to the east of the northern end of proposed Building 6 and concrete block retaining wall shown under construction

Figure 8: Development separation distances to classified vegetation:

Source: NearMaps, with overlays by BFCS P/L



Approximate distances to the classified vegetation shown

Aim and objectives of Planning For Bush Fire Protection

2006

Planning for Bush Fire Protection (PBP) states that the general fire safety construction provisions (BCA) are taken as acceptable solutions **but the aim and objectives of PBP** apply in relation to other matters such as access, water and services, emergency planning and landscaping/vegetation management”.

Given the above, the aim and objectives of PBP are as follows:

- Afford occupants of any building adequate 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 direct flame contact and material ignition.
- Ensure that safe operational access and egress for emergency service personnel and residents is available.
- Provide for ongoing management and maintenance of bushfire protection measures, including fuel loads in the asset protection zone (APZ).
- Ensure that utility services are adequate to meet the needs of fire fighters (and others assisting in bushfire fighting).

The following table outlines the relevant items and their compliance:

Aim and Objective	Comment	Compliance
Afford occupants of any building adequate protection from exposure to a bushfire	Given the classified vegetation and effective slopes under the vegetation there are suitable setbacks to the north, east and west of the proposed building to ensure that these elevations are not BAL 40 or BAL Flame Zone. There is a maximum setback for the southeast corner of the proposed building of 14m from the classified Forest vegetation. Future development to the south and east will remove existing vegetation and associated hazard	Yes, the building is a non-habitable structure
Provide for a defendable space to be located around buildings	There is ample defendable space around the structure to all elevations	Yes

Aim and Objective	Comment	Compliance
Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent direct flame contact and material ignition	Separation from the vegetation forming a hazard is provided. Additionally, proposed Building 6 is elevated from the surrounding vegetation by concrete block retaining walls to the south and east boundaries. Additionally, future development to the east and south will effectively remove the bushfire hazard in the future	Yes
Ensure that safe operational access and egress for emergency service personnel is available	Access is available and considered adequate	Yes
Provide for ongoing management and maintenance of bushfire protection measures, including fuel loads in the asset protection zone (APZ)	Normal building and landscaping maintenance will provide this	Yes
Ensure that utility services are adequate to meet the needs of fire fighters (and others assisting in bushfire fighting)	The building is to be constructed to the general fire safety requirements of the BCA. A ring mains system for hydrants and boosters is proposed around the subject Building 6	Yes

Although the general fire safety provisions of BCA are considered to be adequate, they lack one key bushfire objective and that is to protect the building from ember attack. Therefore section 5 of AS3959 is recommended where possible, to provide for ember protection for the building.

To aid in the reduction of the potential bushfire attack, the following recommendations are made.

Recommendations

The following recommendations are made for the bushfire measures for the proposed warehouse and office at Lot 23 & 24 in DP 262886, Hollinsworth Road Marsden Park, and are based upon the relevant provisions of the NSW Rural Fire Service Guideline entitled *Planning for Bush Fire Protection 2006*.

That Condition B45 (f) & (g) for 'Building 6' be deleted and replaced with the following;

Building 6

(f) The roof, northern, southern, eastern and western elevation(s) of the proposed development shall be constructed to sections 3 and 5 of AS3959-2009 (BAL 12.5), with the exception that the construction requirements shall be varied to comply with the requirements of Section A3.7 of the NSW Rural Fire Service Addendum to Appendix 3 of Planning for Bush Fire Protection 2006.

Conclusion

This proposal falls outside the requirements for specific bushfire safety construction standards as outlined in the BCA and requires only the general fire safety provisions of the BCA. *Planning for Bush Fire Protection* requires only that this proposal complies with the aim and objectives of that document. It is shown in the table above that the proposal can comply with the aims and objectives of *Planning for Bush Fire Protection*. This report has considered the elements of bushfire attack and provided the proposed development is constructed in accordance with the recommendations of this report, it is my opinion that the development satisfies the aim and objectives of *Planning for Bush Fire Protection 2006*.

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 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. The local Council is the final consenting authority and the construction of the building must comply with the requirements included in the Council's conditions of consent.

If any further clarification is required for this report, please do not hesitate to contact me using the details below.



Catherine Gorrie

Accredited Bushfire Consultant

Fire Protection Association Australia BPAD- LEVEL 3 (BPAD20751)

Grad Dip Bushfire Protection (UWS 2010)

Diploma Environmental Health & Building Surveying (TAFE 2005)

Corporate Bronze Member Fire Protection Association Australia

Bushfire Consulting Services Pty Ltd

Mob: 0425 833 893

References

Environmental Planning & Assessment Act 1979

Planning for Bush Fire Protection 2006 (Rural Fire Service)

Addendum: Appendix 3, Planning for Bush Fire Protection 2010 (Rural Fire Service)

Australian Standard 3959-2009 'Construction of Buildings in Bushfire Prone Areas'

NSW Department of Planning Spatial Information Exchange mapping website

Building Code of Australia (Building Codes Board)

Keith, D., Ocean Shores to Desert Dunes, the Native Vegetation of NSW and the ACT

Department of Environment and Conservation, NSW 2006.

Bushfire Consulting Services Pty Ltd Report No. 18/0794

