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Bush Fire Assessment Report

In relation to a proposed development at:

23 Compton Drive, East Ballina, NSW


<p>This assessment has been prepared and certified by: Matthew Toghill. BPAD certified practitioner FPAA Accreditation No: BPAD31642 Report No: 23Com-01 Date: 06/09/2019</p>	
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Table of Contents

Executive Summary	3
1. Description of the subject property.....	4
2. Classification of the Vegetation on and surrounding the site	6
3. Assessment of effective slope	6
4. Bushfire Risk Assessment.....	7
5. The extent to which the construction conforms or deviates from Chapter 7 of ‘Planning for Bushfire Protection 2018’	8
6. Summary	10
7. References.....	11

Executive Summary

The purpose of the report is to determine the suitability of two existing blocks at No 23 Compton Drive, East Ballina, which are currently mapped as DM (Deferred Matter under the BLEP 2012) and are zoned 7(d)-Environmental Protection Zone (scenic/escarpment) under the BLEP 1987, for residential zoning/use as per the requirements of Chapter 7 of *Planning for Bush Fire Protection 2018*.

The site had been identified as 'bush fire prone land' for the purpose of Section 146 of the *Environmental Planning and Assessment Act 1979* and the Legislative requirements for building on bush fire prone lands are applicable.

The proposed development is in infill development as defined within Chapter 7 of *Planning for Bushfire Protection 2018* and this report has been prepared in accordance with the requirements of Section 4.14 of the Environment Planning and Assessment Act.

This assessment includes an analysis of the hazard, threat and subsequent risk of the development proposal and provides recommendations that satisfy the Objective and Performance requirements of the Building Code of Australia, Planning for Bushfire Protection 2018 [PBP] and Australian Standard AS3959, 2009.

1. Description of the subject property

Property address: Lot 3 DP 525783 & Lot 1 DP 781542, 23 Compton Drive, East Ballina

Local Government Area: Ballina

The development site is located on the northwest side of Compton Drive. The following sections 4-8 describe in detail the vegetation, slope, access and egress, availability of water supplies and environmental considerations for the site.



Figure 1: Location of the subject site

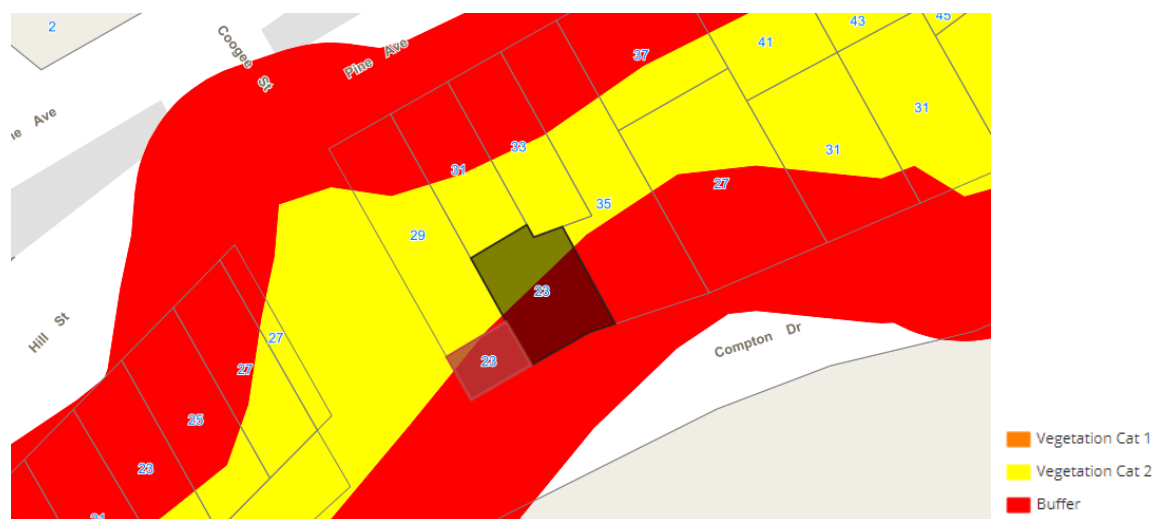


Figure 2: Bushfire prone land map showing the location of the subject site.

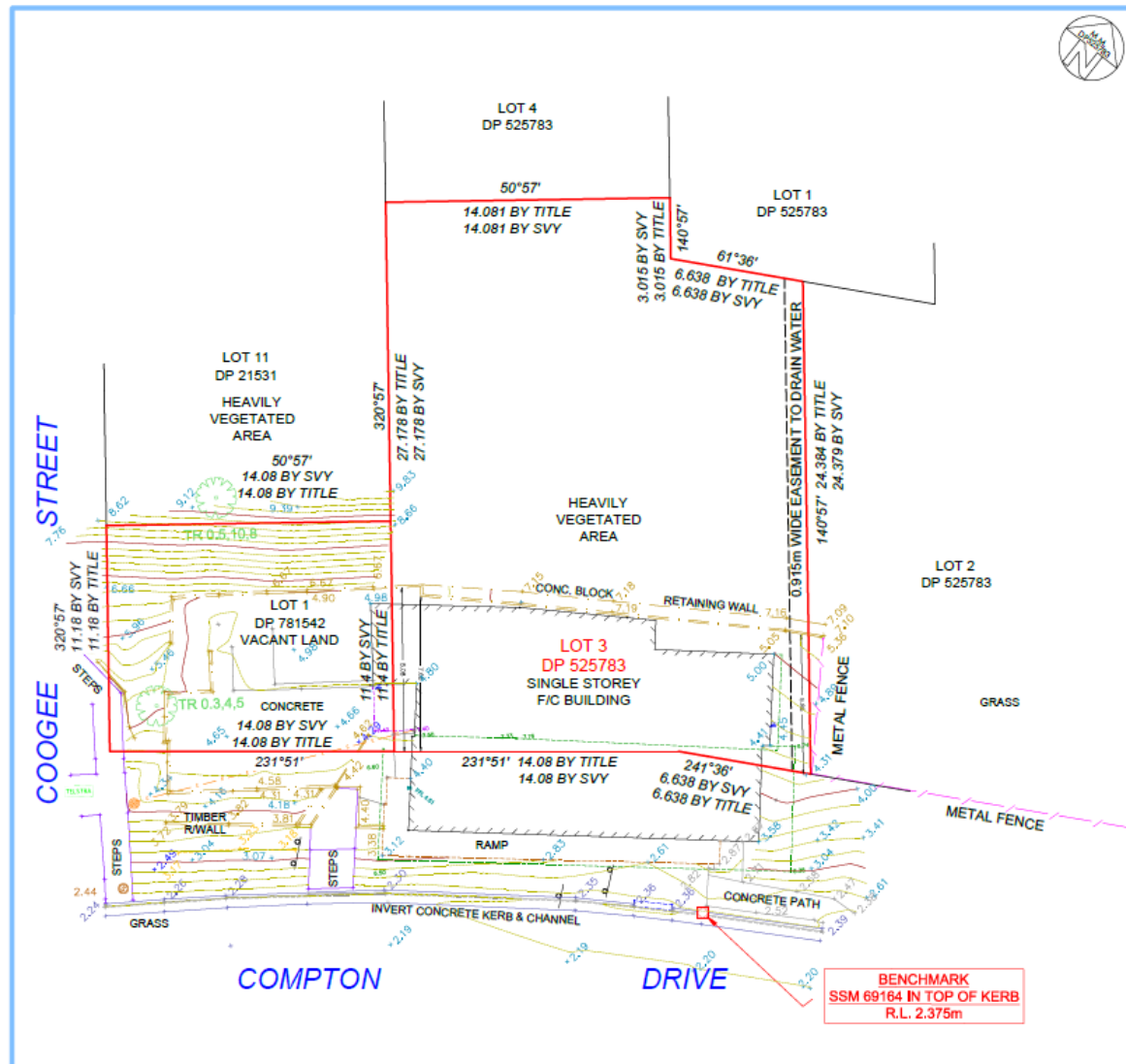


Figure 3: Site survey

2. Classification of the Vegetation on and surrounding the site

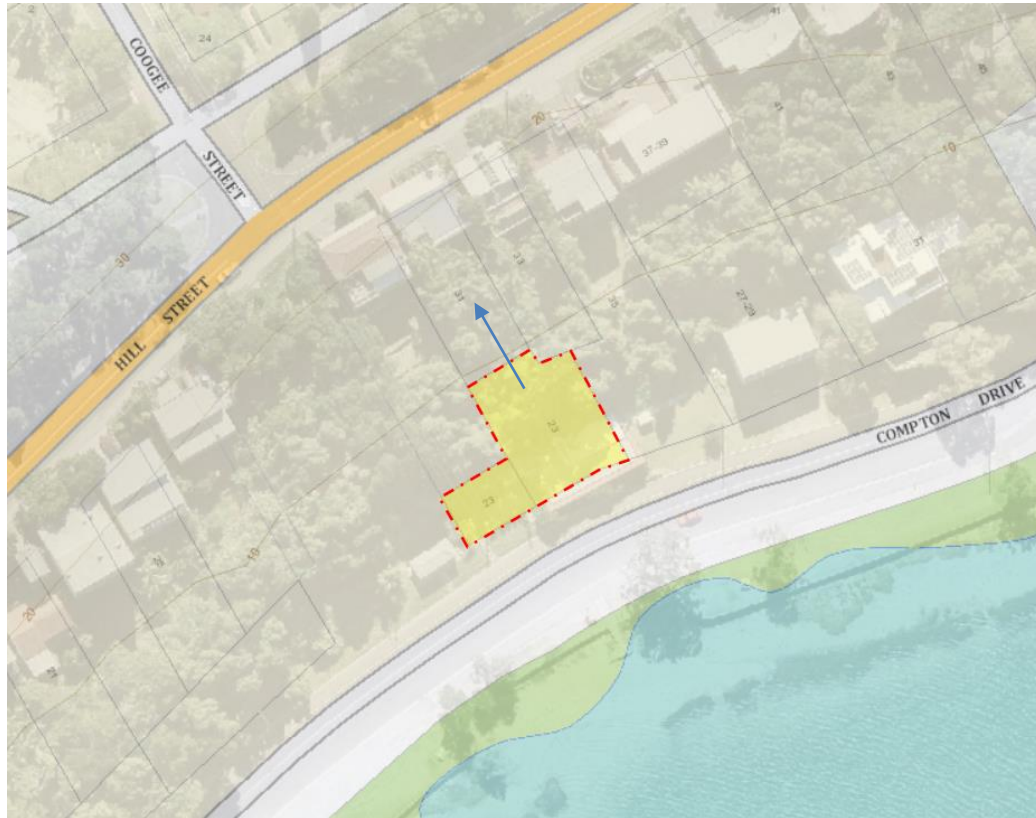
The site is located within an existing subdivision and developed urban area. For the purpose of assessing the bush fire threat, there is an area of Category 2 vegetation that is present to the northwest. For the purpose of this assessment, the vegetation will be classified as 'Rainforest'.



Figure 4: Aerial photo showing the location of the site and surrounding 'Rainforest' vegetation.

3. Assessment of effective slope

Direction	Hazard type	Effective Slope
Northwest	Rainforest	Upslope (17 degrees)
Northeast	No hazard >100m	N/A
Southeast	No hazard >100m	N/A
Southwest	No hazard >100m	N/A



Legend:

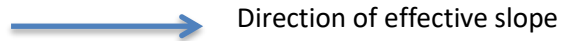


Figure 5: Contour map.

4. Bushfire Risk Assessment

Table 1; reference Method 2, AS 3959-2009

Asset Protection Zone specifications (m) for each Bush Fire Attack Level (BAL)

Inputs:

- Vegetation formation: Rainforest
- Vegetation slope: 17 degrees upslope
- Site slope: 0 Degrees (level)
- FDI: 80

Direction	BAL-FZ	BAL-40	BAL-29	BAL-19	BAL-12.5
Northwest	0-3.4m	3.4-4m	4-6m	6-8.9m	8.9-100m

5. The extent to which the construction conforms or deviates from Chapter 7 of 'Planning for Bushfire Protection 2018'

Performance Criteria	How this development meets acceptable solutions
The intent may be achieved where:	
<u>In relation to APZ's:</u> -Defendable space is provided onsite. -APZ's are managed and maintained to prevent the spread of a fire towards the building. -The APZ is provided in perpetuity.	-Defendable space can be provided on all sides of the building. -Asset protection zones can be provided for on-site and by adjoining development and public roads.
<u>In relation to construction standards:</u> -The proposed building can withstand bushfire attack in the form of embers, radiant heat and flame contact. -Proposed fences and gates are designed to minimise the spread of bush fire. -Proposed class 10a buildings are designed to minimise the spread of bush fire.	-Construction standards for any future dwelling should be recommended in accordance with the requirements of <i>Planning for Bushfire Protection 2018</i> and <i>AS 3959-2009 Construction of buildings in bushfire prone areas</i> . -Fencing and gates should be constructed in accordance with Section 7.8 of <i>Planning for Bushfire Protection 2018</i> . -Class 10a buildings should be constructed in accordance with Section 8.3.2 of <i>Planning for Bushfire Protection 2018</i> .
<u>In relation to access requirements:</u> -Firefighting vehicles are provided with safe, all-weather access to structures and hazard vegetation. -The capacity of access roads is adequate for fire fighting vehicles. -There is appropriate access to water supply. -Firefighting vehicles can access the dwelling and exit safely.	This site has direct access to public roads, and the access and egress for emergency vehicles and evacuation appears to be adequate.
<u>In relation to water supply:</u> -A water supply is provided for firefighting purposes. -water supplies are located at regular intervals. -water supply is accessible and reliable for firefighting operations. -flows and pressures are appropriate. -the integrity of the water supply is maintained.	The area has reticulated water supply and the nearest street hydrant is within the minimum required distance from the most distant point of the subject site in accordance with the requirements of PBP and AS2419.1 2005.

<p><u>In relation to landscaping:</u> It is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind driven embers to cause ignition.</p>	<p>-Landscaping for future dwelling can meet the requirements of Appendix 4 of <i>Planning for Bushfire Protection 2018</i>. -a clear area of low-cut lawn or pavement is maintained adjacent to the house. -Fences and retaining walls are constructed in accordance with Section 7.8 of <i>Planning for Bushfire Protection 2018</i>. -Trees and shrubs are planted such that:</p> <ul style="list-style-type: none">➤ The branches will not overhang the roof;➤ The tree canopy is not continuous; and➤ If proposed, a windbreak, is located on the elevation from which fires are likely to approach.
<p><u>Emergency management</u></p>	<p>It is advised the residents should complete a <i>Bushfire Survival Plan</i> as formulated by the NSW Rural Fire Service and Fire and Rescue NSW.</p>

6. Summary

This report consists of a bushfire risk assessment as to the suitability of the existing sites at No 23 Compton Drive, East Ballina for rezoning for residential purposes as per the requirements of Chapter 7 of *Planning for Bush Fire Protection 2018*.

The report concludes that the subject land is on designated bushfire prone land and the legislative requirements for development of bushfire prone areas are applicable. Any proposed future development will be constructed to the minimum standard required in accordance with the guidelines of *Planning for Bushfire Protection 2018* and *AS 3959-2009 Construction of buildings in bushfire prone areas*.

This report has considered all elements of bushfire attack and concludes the site is suitable for residential use when assessed against the requirements of Chapter 7 of *Planning for Bush Fire Protection 2018* and can satisfy the Objectives and Performance requirements of the *NCC, Planning for bushfire Protection 2018* and *Australian Standard AS3959, 2009*.

*Note: Notwithstanding the precautions adopted, it should always be remembered that bushfires burn under a wide range of conditions and an element of risk, no matter how small always remains, and although the standard 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 a bushfire attack on every occasion. This report is a Bushfire Hazard Assessment that provides the required information to assist Local Councils and the Rural fire Service in determining compliance in accordance with *Planning for Bushfire Protection 2006* 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.*



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Accreditation No: BPAD31642

Grad Cert in Bushfire Protection, UWS 2012

Certificate IV Building and Construction

Certificate III in Public Safety (firefighting and emergency operations)



7. References

Australian Building Codes Board

Building Code of Australia

Volume 1 & 2

Canprint

Australian Building Codes Board [2001]

Fire Safety Engineering Guidelines

Edition 2001

ABCB Canberra

D. Drysdale D. [1998]

Introduction to Fire Dynamics 2nd Edition

John Wiley & Sons Ltd

NSW Government Environmental Planning and Assessment Act [1979]

Part 79BA-Consultation and development consent- Certain bushfire prone land

NSW Government Printer

Planning for Bushfire Protection 2018

A guide for Councils, Planners, Fire Authorities, Developers and Home Owners

This document provides the necessary planning considerations when developing areas for residential use in residential, rural residential, rural and urban areas when development sites are in close proximity to areas likely to be affected by bushfire events and replaces Planning for Bushfire Protection 2006.

This document is essential reading. Download a copy from the RFS website or purchase a copy through the NSW Government online shop or phone 9228 6333.

Ramsay C & Rudolph L [2003]

Landscape and building design for bushfire prone areas

CSIRO Publishing

Standards Australia [2009]

Australian Standards 3959

Australian Building Code Board