

BUSHFIRE CERTIFICATE

PROPOSED LAND REZONING PROPOSAL



**LOT 22 DP 1143785
Part 40 Croudace Bay Road, Valentine**

Date: **19/03/2022**

Prepared for: **Lake Macquarie City Council**

NEWCASTLE BUSHFIRE CONSULTING

5 Chartley Street, Warners Bay NSW 2282
(ph) 02 40230149 (mob) 0423 923284
email: mail@newcastlebushfire.com.au

I hereby declare that I am a BPAD accredited bushfire practitioner.		
Accreditation No.	BPAD16132	
Signature		
Date	19/3/2022	

Couch Family Trust T/A
Newcastle Bushfire Consulting Pty Ltd A.B.N. 96 831 374 298
Bushfire and Building Sustainability Consultants

Document Status

Revision No.	Issue	Description	Reviewed	Approved by Director
1	19/03/2022	Final	E. Davis	P. Couch

Prepared By:



Phillip Couch GFireE
Bach Info Science
Grad Dip Design for Bushfire Prone Areas
FPAA BPAD – Level 3 Accreditation Number BPD-PA-16132
Director Newcastle Bushfire Consulting



TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY AND COMPLIANCE TABLES	4
2.0 INTRODUCTION	5
2.1 PURPOSE OF REPORT	5
2.2 PROPOSED DEVELOPMENT	5
2.3 LEGISLATIVE REQUIREMENTS	5
3.0 BUSHFIRE ATTACK ASSESSMENT	7
3.1 VEGETATION CLASSIFICATION	7
3.2 EFFECTIVE SLOPE.....	8
3.3 BUSHFIRE ATTACK LEVELS.....	8
4.0 UTILITY SERVICES AND INFRASTRUCTURE	11
4.1 WATER SERVICES.....	11
4.2 ELECTRICITY SERVICES.....	11
4.3 GAS SERVICES.....	11
5.0 PUBLIC ROAD ACCESS	13
6.0 LANDSCAPING MAINTENANCE	13
7.0 BUSHFIRE PROTECTION MEASURES.....	13
8.0 CONCLUSION	14
9.0 APPENDIX 1.0 – ASSET PROTECTION ZONES SUMMARY	15
10.0 REFERENCES AND DISCLAIMER	16

LIST OF TABLES

TABLE 1 – PROPERTY DETAILS AND TYPE OF PROPOSAL	4
TABLE 2 – BUSHFIRE THREAT ASSESSMENT ASSESSED FROM LAURINA COVE	4
TABLE 3 – PLANNING FOR BUSH FIRE PROTECTION 2019 COMPLIANCE SECTION 4.4.1 CONSIDERATION OF BUSH FIRE ISSUES	6

LIST OF FIGURES

FIGURE 1 – SITE CONSTRAINTS MAP	9
FIGURE 2 – LOCALITY MAP.....	10
FIGURE 3 – COUNCIL’S BUSHFIRE PRONE LAND MAP	10
FIGURE 4 – PROPOSED REZONING MAP	12

LIST OF PHOTOGRAPHS

PHOTOGRAPH 1 – SUBJECT LAND.....	7
PHOTOGRAPH 2 – NORTHERN EXOTIC HEATH AND FOREST.....	8
PHOTOGRAPH 3 – NORTHEASTERN PRIVATE ACCESS ROAD.....	11

1.0 EXECUTIVE SUMMARY AND COMPLIANCE TABLES

This report has assessed the land rezoning proposal against the requirements of Section 9.1(2) of the Environmental Planning and Assessment Act 1979 and Planning for Bush Fire Protection 2019.

This report establishes that the development is capable of complying with the objectives of Planning for Bush Fire Protection 2019.

TABLE 1 – PROPERTY DETAILS AND TYPE OF PROPOSAL

Applicant Name	Lake Macquarie City Council		
Site Address	Part 40 Croudace Bay Road, Valentine	Lot/Sec/DP	Lot 22 DP 1143785
Local Government Area	Lake Macquarie	FDI	100
Bushfire Prone Land	Yes, mapped bushfire prone land		
Type of development	Land rezoning proposal	Type of Area	Urban/Bushland Interface
Special Fire Protection Purpose	No	Flame Temperature	1090K
Application Complies with Acceptable Solutions	Yes. Relevant specifications and requirements are satisfied	Referral to NSW Rural Fire Service (NSW RFS) required	No

TABLE 2 – BUSHFIRE THREAT ASSESSMENT ASSESSED FROM LAURINA COVE

	North	East	South	West
Vegetation Structure	Forest	Forest	Forest	Maintained Lands
Accurate Slope Measure	17 degrees downslope	9 degrees downslope	14 degrees downslope	N/A
Slope Range	16 to 20 degrees downslope	6 to 10 degrees downslope	11 to 15 degrees downslope	N/A
AS3959 (2018) Bushfire Attack Level (BAL) Minimum Setback BAL-29	56 metres	36 metres	45 metres	N/A

It is noted the properties located south and west of the subject site may have assessed the vegetation as remnant vegetation due to reduced fire runs, however the subject land is identified as forest for the purposes of this assessment due to changes to connected remnant vegetation classification in Planning for Bush Fire Protection 2019.

2.0 INTRODUCTION

2.1 PURPOSE OF REPORT

The purpose of this report is to establish suitable analysis of risk to surrounding development for the land rezoning proposal of part Lot 22 DP 1143785, 40 Croudace Bay Road, Valentine.

The recommendations within this report address the aims and objectives of Planning for Bush Fire Protection 2019 to reduce the risk of ignition of surrounding developed land in a bushfire event.

2.2 PROPOSED DEVELOPMENT

The proposed development includes the below changes to part of the land:

- Remove from Land Reservation Acquisition map the land located east of road reserve and retain existing SP2 Infrastructure zoning
- Retain acquisition west of road reserve and rezone from SP2 Infrastructure to C2 Environmental Conservation

The land to the east of Croudace Bay Road reserve is vegetated forest zoned C2 Environmental Conservation with no change to zoning proposed. The intent of the planning proposal addresses removal of this property from council's Land Reservation Acquisition map. The removal of the property from the acquisition map will not result in increased bush fire risk or zoning change.

2.3 LEGISLATIVE REQUIREMENTS

Environmental Planning and Assessment Act 1979

Section 9.1(2) of the Environmental Planning and Assessment Act 1979 issues directions to be followed when considering rezoning. Direction 4.4, Planning for Bushfire Protection identifies matters for consideration for planning proposals that will affect, or are in proximity to land mapped as bush fire prone. Under these directions, draft LEPs should follow the below objectives:

- i. to protect life, property and the environment from bush fire, by discouraging the establishment of incompatible land uses in bush fire prone areas; and
- ii. to encourage sound management of bush fire prone areas.

Under Direction 4.4, a relevant authority must consult with the Commissioner of the NSW RFS during the preparation of a draft LEP and take into account any comments made. The draft LEP shall also have regard to Planning for Bush Fire Protection 2019.

This document forms the submission for the rezoning identifying the suitability of the proposal in relation to bushfire.

Planning for Bush Fire Protection 2019

Planning for Bush Fire Protection 2019 was developed by the NSW Rural Fire Service to provide development standards for building in bush fire prone areas in NSW. It provides for the protection of human life and helps to minimise the impacts on property from the threat of bush fire. Examination of Planning for Bush Fire Protection 2019 Section 4.4 Local Environmental Plans is made in Table 3 below:

TABLE 3 – PLANNING FOR BUSH FIRE PROTECTION 2019 COMPLIANCE SECTION 4.4.1
CONSIDERATION OF BUSH FIRE ISSUES

Performance Criteria	Objective
Suitable Land Uses	To protect life, property and the environment from bush fire, by discouraging the establishment of incompatible land uses in bush fire prone areas
<p>Compliance: The subject land is forested vegetation located between vegetation with significant environmental value and a primary arterial road. The road is not intended to be expanded in the future and has slopes that do not make it suitable for road modification.</p> <p>The existing dwellings located south and west of the subject land, were likely assessed under Planning for Bush Fire Protection legislation current at time of planning approval, with the subject land assessed as unmanaged bushland.</p> <p>The existing management will remain unchanged following the zoning change.</p>	
Land Management	To encourage sound management of bush fire prone areas.
<p>Compliance: The subject site is presently forest vegetation. The Rural Fires Act 1997 requires all landowners to exercise a duty of care to prevent bushfire from spreading on or from their land under Section 63.</p> <p>The rezoning of the land will not remove the legal requirement to exercise a duty of care in managing the land and the rezoning may encourage weed management, reducing available fuel.</p>	
Private and or Public Road Infrastructure	Provision of safe access and egress to emergency service personnel and the public.
<p>Compliance: The subject land is forested vegetation located adjacent a two lane road. The zoning change will not restrict or change the current public road infrastructure which is deemed adequate to fight fire due to the narrow arm of vegetation.</p>	

Strategic Planning Considerations	Strategic Nature of the Development
Compliance: The subject land is small in area and will not reduce the suitability of existing public road infrastructure. The proposed zoning change is not deemed strategic in nature and a Strategic Bushfire Study is not required.	

3.0 BUSHFIRE ATTACK ASSESSMENT

3.1 VEGETATION CLASSIFICATION

Potential bushfire hazards were identified from Lake Macquarie Council's Bushfire Prone Mapping as occurring within the investigation area. Aerial mapping and inspection of the site reveals that the bushfire prone land map is reasonably accurate in respect to the current bushfire hazard.

The major vegetative threats have been determined using Keith (2004) to derive vegetation structures listed in Planning for Bush Fire Protection 2019.

Primary vegetation structures have been identified in Figure 1 – Site Constraints Map and separation distances shown in Table 2 – Bushfire Attack Assessment.



PHOTOGRAPH 1 – SUBJECT LAND

View of the subject vegetation located west of Croudace Bay Road. The vegetation is forest dominated by eucalypts, with a moderate density understorey of shrubs and grasses.

3.2 EFFECTIVE SLOPE

Effective Slope was measured using 0.5-metre contour data obtained from the Department of Lands and verified by a laser hypsometer on site. The laser hypsometer verified slope within the vegetation, calculating effective fire run slope from 5 separate measurements in each dominant direction.

Effective Slopes have been identified in Figure 1 – Site Constraints Map and slope ranges are shown in Table 2 – Bushfire Threat Assessment.

3.3 BUSHFIRE ATTACK LEVELS

BALs and relevant construction levels in accordance with Planning for Bush Fire Protection 2019 have been demonstrated in Section 1 Executive Summary and Compliance Tables.



PHOTOGRAPH 2 – NORTHERN EXOTIC HEATH AND FOREST

View of forest and exotic short heath located north of Croudace Bay Road.



FIGURE 1 – SITE CONSTRAINTS MAP



FIGURE 2 – LOCALITY MAP
Courtesy of OpenStreetMap

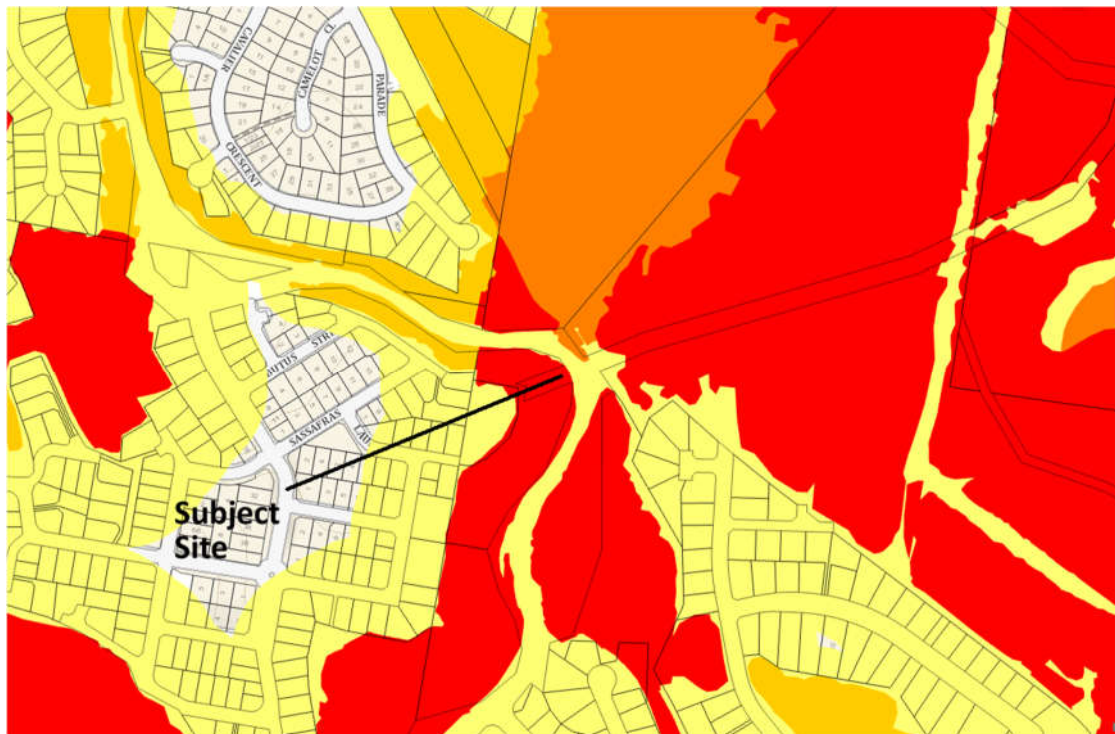


FIGURE 3 – COUNCIL'S BUSHFIRE PRONE LAND MAP

4.0 UTILITY SERVICES AND INFRASTRUCTURE

4.1 WATER SERVICES

A reticulated water supply and street hydrant access is available providing coverage to existing residential development. The proposed development will not increase building density or modify existing services.

4.2 ELECTRICITY SERVICES

The existing electrical supply to the local area is via overhead electrical transmission lines. The subject site shall be managed so that no part of a tree is closer to a power line than the distance set out in accordance with the specifications in 'Vegetation Safety Clearances' issued by Energy Australia (NS179, April 2002).

4.3 GAS SERVICES

No gas services are proposed for this rezoning.



PHOTOGRAPH 3 – NORTHEASTERN PRIVATE ACCESS ROAD

View of private property located northeast of the site with bitumen road dissecting the forest.

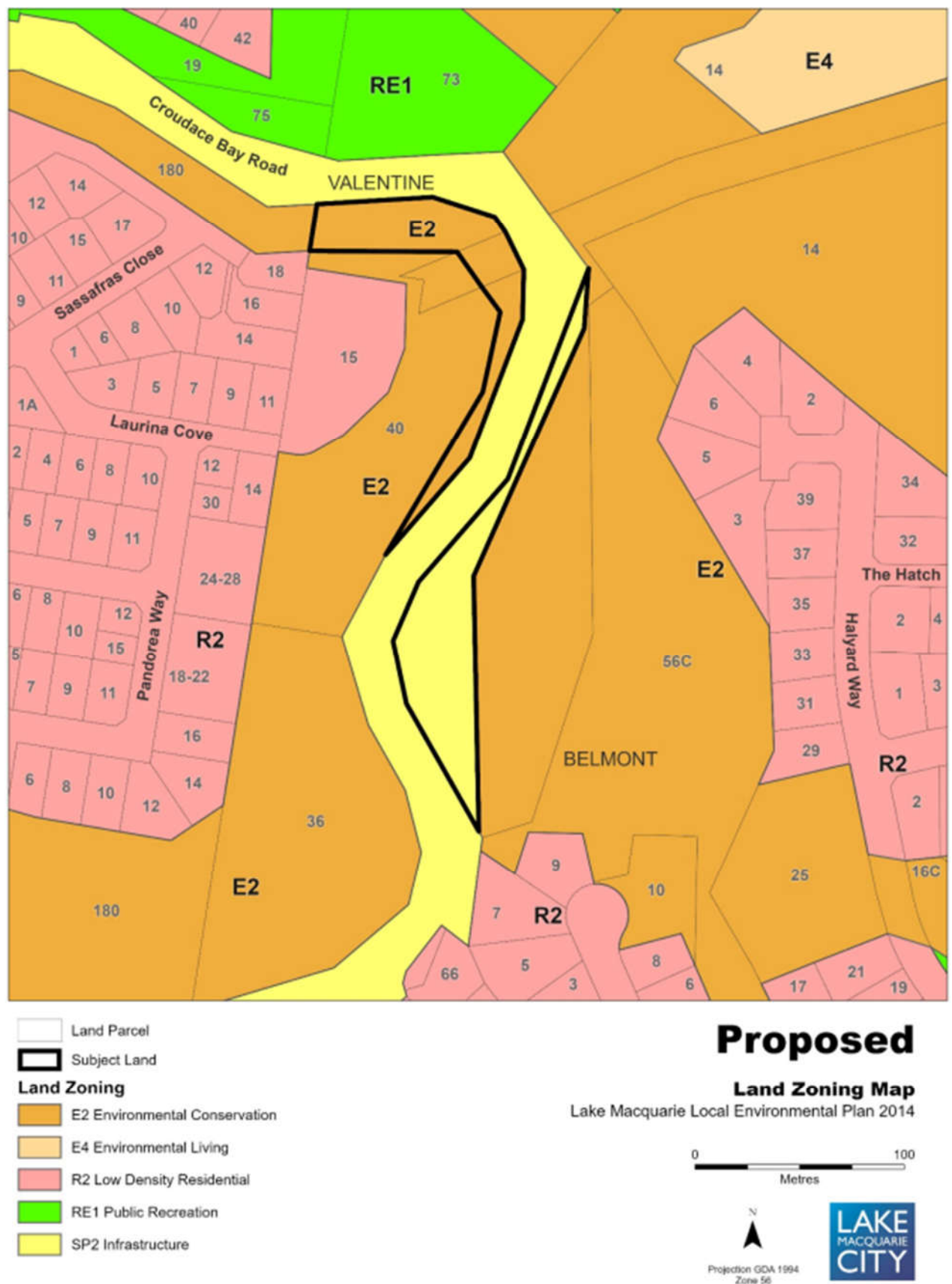


FIGURE 4 – PROPOSED REZONING MAP

5.0 PUBLIC ROAD ACCESS

The existing public road access is by way of Croudace Bay Road being a two lane road with road verges. The public road network will support direct and parallel firefighting efforts for low intensity fires and complies with Planning for Bush Fire Protection 2019.

6.0 LANDSCAPING MAINTENANCE

The residential development adjacent the bushland should have existing asset protection zones and landscaping maintenance imposed on the development as part of the development approval.

If no recommendations are in place for wider surrounding residential properties, the below landscaping maintenance is recommended to be reviewed and implemented. Landscaping is maintained in accordance with Planning for Bush Fire Protection (2019) Appendix 4 and be maintained for the life of the development.

Trees should be located greater than 2 metres from any part of the roofline of a building. Garden beds of flammable shrubs are not to be located under trees and should be no closer than 10 metres from an exposed window or door. Trees should have lower limbs removed up to a height of 2 metres above the ground.

The landscaped area should be maintained free of leaf litter and debris. The gutter and roof should be maintained free of leaf litter and debris.

Landscaping should be managed so that flammable vegetation is not located directly under windows.

Ground fuels such as fallen leaves, twigs (less than 6 millimetres in diameter) and branches should be removed on a regular basis, and grass needs to be kept closely mown and, where possible, green.

7.0 BUSHFIRE PROTECTION MEASURES

Bushfire protection measures described in Planning for Bush Fire Protection 2019 aim to minimise the risks from bushfire and ensure that the aims and objectives of Planning for Bush Fire Protection 2019 are met. The following key bushfire protection measures have been addressed in this assessment:

- Asset Protection Zones (APZs)
- Water supplies
- Infrastructure (including access road provisions and other services)
- Landscape management and garden design principles.

8.0 CONCLUSION

Based upon an assessment of the plans and information received for the proposal, the Draft Amendment to Lake Macquarie Local Environmental Plan 2014 rezoning for the subject site is deemed appropriate. The proposed development offers compliance with the intent of Planning for Bush Fire Protection 2019.

9.0 APPENDIX 1.0 – ASSET PROTECTION ZONES SUMMARY

Below is a summary of asset protection zones (APZ) outlined in Planning for Bush Fire Protection 2019 Appendix 4 and the NSW RFS' Standards for Asset Protection Zones. The property owner(s) should obtain these two documents and familiarise themselves with their content.

Generally

APZ refer to the area between the bushfire threat and the asset (i.e. building). The APZ may contain two areas; the Inner Protection Area (IPA) and the Outer Protection Area (OPA). Some areas should be managed entirely as an IPA. Refer to the plans for locations of APZ and distances from assets.

IPA

The IPA is located adjacent to the asset and is identified as a fuel-free zone.

A. Shrubs (consisting of plants that are not considered to be trees)

1. Shrubs must be located away from a building's glazing and vent openings.
2. Avoid planting around entryways if the vegetation is flammable.
3. A maximum 20% of the IPA may contain shrubs.
4. A minimum 1.5 metre separation of shrubby vegetation from the building shall be maintained.
5. Shrubs must not have a connection with the tree canopy layer; remove/trim shrubs or underprune trees.
6. Ensure turf is suitably mown and/or grasslands are continually slashed to restrict to maximum 100 millimetres high.

B. Trees: Maintain a minimum 2-5 metre canopy separation.

1. Trees are allowed in the IPA however they should not touch or overhang buildings. No tree should be within 2 metres of the roofline.
2. Underprune branches between the shrub layer and the canopy layer.
3. Ensure branches do not overhang buildings.
4. Ensure all trees in the IPA within 3 metres of buildings do not provide a serious fire threat.
5. Trees should have lower limbs removed up to a height of 2 metres above the ground.

OPA

The OPA is located adjoining the vegetation. The OPA should be maintained as a fuel-reduced area. This assumes trees may remain but with a significantly reduced shrub, grass, and leaf litter layer. In many situations leaf litter and the shrub layer may not require maintenance at all.

A. Shrubs:

1. Reduce or trim large stands of shrubs.

B. Trees:

1. Existing trees can be retained.
2. Ensure a separation is available between shrubs and tree canopy.
3. Reduce tree canopy so there is no interlocking canopy.

10.0 REFERENCES AND DISCLAIMER

References

Standards Australia AS3959 (2018) Construction of buildings in bushfire-prone areas.

Keith D. "Ocean Shores to Desert Dunes", Department of Environment and Conservation, Sydney, (2004).

Environmental Planning and Assessment Act 1979.

New South Wales Rural Fire Service Planning for Bush Fire Protection 2019.

Disclaimer

Despite the recommendations in this report, it is impossible to remove the risk of fire damage to the building entirely. This report assesses and provides recommendations to reduce that risk to a manageable level. It is of paramount importance that the recommendations are adhered to for the life of the structure and that all maintenance is performed to ensure a level of protection is provided to the building, occupants and firefighters.

Planning for Bush Fire Protection 2019 states that 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.

AS3959 (2018) Construction of buildings in bushfire-prone areas states that the standard is designed to lessen the risk of damage to buildings occurring in the event of the onslaught of bushfire. There can be no guarantee, because of the variable nature of bushfires, that any one building will withstand bushfire attack on every occasion.

This bushfire assessment is limited to the subject land only and does not provide comment on the suitability of existing approved development surrounding the site.