

BUSHFIRE CERTIFICATE

PROPOSED BUILDING CHANGE OF USE TO DWELLING



**LOT 41 DP 785703
200 Torryburn Road, Torryburn**

Date: **17/01/2025**

Prepared for: **Maxman Pty Ltd**

NEWCASTLE BUSHFIRE CONSULTING

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I hereby declare that I am a BPAD accredited bushfire practitioner.		
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TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY AND COMPLIANCE TABLES	4
2.0 INTRODUCTION	6
2.1 PURPOSE OF REPORT	6
2.2 PROPOSED DEVELOPMENT	6
3.0 BUSHFIRE ATTACK ASSESSMENT	6
3.1 VEGETATION CLASSIFICATION	6
3.2 EFFECTIVE SLOPE.....	10
3.3 BUSHFIRE ATTACK LEVELS.....	10
4.0 UTILITY SERVICES AND INFRASTRUCTURE	10
4.1 WATER SERVICES.....	10
4.2 ELECTRICITY SERVICES.....	10
4.3 GAS SERVICES.....	10
5.0 PROPERTY ACCESS	11
6.0 LANDSCAPING MAINTENANCE	11
7.0 RECOMMENDATIONS.....	12
8.0 CONCLUSION.....	12
9.0 APPENDIX 1.0 – ASSET PROTECTION ZONES SUMMARY	13
10.0 REFERENCES AND DISCLAIMER.....	14

LIST OF TABLES

TABLE 1 – PROPERTY DETAILS AND TYPE OF PROPOSAL.....	4
TABLE 2 – BUSHFIRE THREAT ASSESSMENT.....	4
TABLE 3 – PLANNING FOR BUSH FIRE PROTECTION (2019) COMPLIANCE.....	5

LIST OF FIGURES

FIGURE 1 – SITE CONSTRAINTS MAP	8
FIGURE 2 – LOCALITY MAP.....	9
FIGURE 3 – COUNCIL’S BUSHFIRE PRONE LAND MAP	9

LIST OF PHOTOGRAPHS

PHOTO 1 - SITE PHOTO LOOKING SOUTHEAST.....	7
PHOTO 2 - EASTERN GRAZING PASTURE	7

1.0 EXECUTIVE SUMMARY AND COMPLIANCE TABLES

This report has assessed the proposed building change of use to dwelling against the requirements of Section 4.14 of the Environmental Planning and Assessment Act 1979, AS3959 (2018) Construction of buildings in bushfire-prone areas and Planning for Bush Fire Protection (2019).

This report establishes that the building change of use to dwelling is capable of complying with the acceptable solutions of Planning for Bush Fire Protection (2019).

TABLE 1 – PROPERTY DETAILS AND TYPE OF PROPOSAL

Applicant Name	Maxman Pty Ltd		
Site Address	200 Torryburn Road, Torryburn	Lot/Sec/DP	Lot 41 DP 785703
Local Government Area	Dungog	FDI	100
Bushfire Prone Land	Yes, mapped bushfire prone land		
Type of development	Building change of use to dwelling	Type of Area	Rural
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

	North	East	South	West
Vegetation Structure	Grassland	Grassland	Grassland	Grassland
Distance to Vegetation	50 metres	50 metres	50 metres	50 metres
Accurate Slope Measure	Upslope	2 degrees downslope	2 degrees downslope	5 degrees downslope
Slope Range	Level/Upslope	1 to 5 degrees downslope	1 to 5 degrees downslope	1 to 5 degrees downslope
AS3959 (2018) Bushfire Attack Level (BAL)	BAL-LOW	BAL-LOW	BAL-LOW	BAL-LOW

The above asset protection zone is determined using Planning for Bush Fire Protection (2019) Sections A1.3, Section 7.9 and Table 7.9a – Grassland deeming provisions.

TABLE 3 – PLANNING FOR BUSH FIRE PROTECTION (2019) COMPLIANCE

Performance Criteria	Proposed Development Determinations	Method of Assessment
Asset Protection Zone	Asset protection zones have been determined in accordance with Planning for Bush Fire Protection (2019). The asset protection zone will be maintained for the life of development and defensible space is provided onsite.	Acceptable Solution
Siting and Design	Buildings have been designed to minimise the risk of bushfire attack.	Acceptable Solution
Construction Standards AS3959 (2018)	Bushfire Attack Levels have been determined in accordance with Planning for Bush Fire Protection (2019). The highest BAL to the subject building was determined to be BAL-LOW. The proposed development increases dwelling density with the development complying with section 8.2.1 of Planning for Bush Fire Protection (2019). All dwellings will be exposed to radiant heat thresholds of less than 29 kw/m2.	Acceptable Solution
Private and or Public Road Infrastructure	The public road system is not affected or changed as part of this application.	Acceptable Solution
Property Access	Property access has been assessed under section 7.9 grassland deeming provisions.	Acceptable Solution
Water and Utility Services	Water, electricity and gas services has been assessed under section 7.9 grassland deeming provisions.	Acceptable Solution
Landscaping	Landscaping to comply with Planning for Bush Fire Protection (2019) Appendix 4.	Acceptable Solution

Bushfire Certification

This report has been prepared by Phillip Couch, a Fire Protection Association, Bushfire Planning and Design - Alternate Solutions Accredited Practitioner (FPAA BPAD-Level 3) and a Graduate Fire Engineer with the Institution of Fire Engineers. Phillip Couch certifies that the proposed development design conforms to the relevant specifications and requirements of AS3959 (2018) Construction of buildings in bushfire-prone areas and Planning for Bush Fire Protection (2019) detailed in Section 4.14 of the Environmental Planning and Assessment Act 1979.



17/01/2025

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Grad Dip Design for Bushfire Prone Areas

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2.0 INTRODUCTION

2.1 PURPOSE OF REPORT

The purpose of this report is to establish suitable bushfire mitigation measures for the proposed building change of use to dwelling to be constructed at Lot 41 DP 785703, 200 Torryburn Road, Torryburn, in order for the Council to make determination of the proposed development pursuant to the requirements of Section 4.14 of the Environmental Planning and Assessment Act 1979.

Features on or adjoining the site that may mitigate the impact of a bushfire on the proposed development

The site is surrounded by maintained landscaping and grazing pasture.

Likely environmental impact of any proposed bush fire protection measures

No native vegetation removal is required for the development.

The recommendations within this report address the aims and objectives of Planning for Bush Fire Protection (2019) to reduce the risk of ignition of the building change of use to dwelling in a bushfire event.

2.2 PROPOSED DEVELOPMENT

The proposed development includes the change of use of a storage building to a dwelling. An existing approved dwelling is located onsite with the development resulting in a dual occupancy.

3.0 BUSHFIRE ATTACK ASSESSMENT

3.1 VEGETATION CLASSIFICATION

Potential bushfire hazards were identified from Dungog 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 somewhat inaccurate 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.



PHOTO 1 - SITE PHOTO LOOKING SOUTHEAST

View of the subject site looking southeast towards the current storage building. Managed landscaping surrounds the building.



PHOTO 2 - EASTERN GRAZING PASTURE

View of grazing pasture located east of the buildings. The vegetation was less than 10 centimetres in length at time of site visit however has been conservatively assessed as grassland.



FIGURE 1 – SITE CONSTRAINTS MAP



FIGURE 2 – LOCALITY MAP
Courtesy of OpenStreetMap

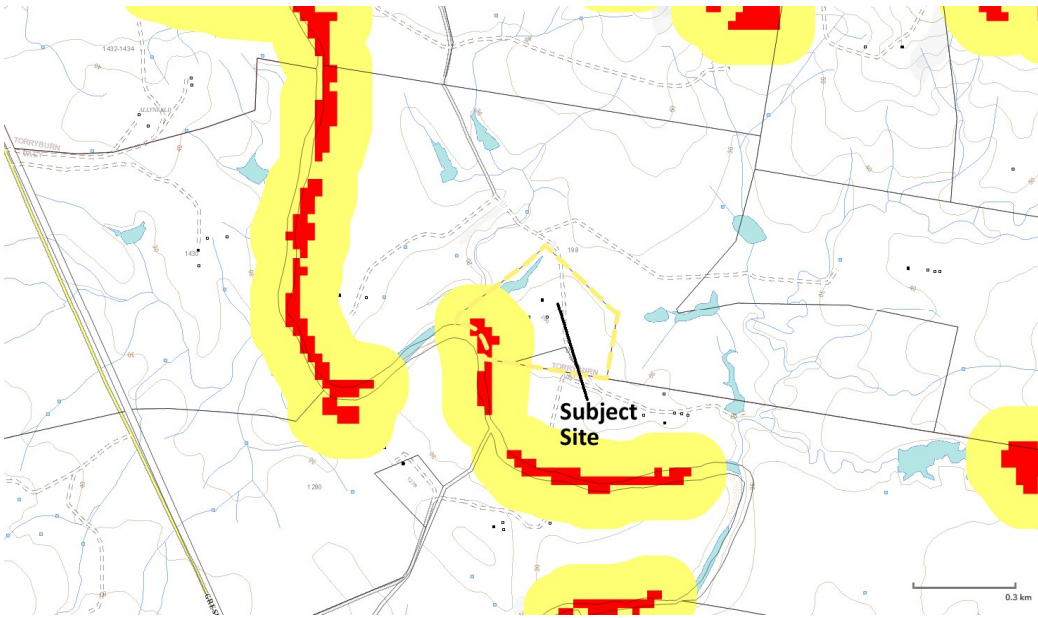


FIGURE 3 – COUNCIL'S BUSHFIRE PRONE LAND MAP

3.2 EFFECTIVE SLOPE

Effective Slope was measured using 2-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.

4.0 UTILITY SERVICES AND INFRASTRUCTURE

4.1 WATER SERVICES

Planning for Bush Fire Protection (2019) section 7.9 Grassland Deeming Provisions identifies that where an APZ of 50m can be provided, no further bushfire protection measures (BPMs) are required.

4.2 ELECTRICITY SERVICES

Planning for Bush Fire Protection (2019) section 7.9 Grassland Deeming Provisions identifies that where an APZ of 50m can be provided, no further bushfire protection measures (BPMs) are required.

4.3 GAS SERVICES

Planning for Bush Fire Protection (2019) section 7.9 Grassland Deeming Provisions identifies that where an APZ of 50m can be provided, no further bushfire protection measures (BPMs) are required.

5.0 PROPERTY ACCESS

Property access is by way of Torryburn Road and right of way.

Planning for Bush Fire Protection (2019) section 7.9 Grassland Deeming Provisions identifies that where an APZ of 50m can be provided, no further bushfire protection measures (BPMs) are required.

6.0 LANDSCAPING MAINTENANCE

It is recommended that landscaping is undertaken 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 RECOMMENDATIONS

Based upon an assessment of the plans and information received for the proposal, it is recommended that development consent be granted subject to the following conditions:

1. At the commencement of building works and in perpetuity, the property around the building to a distance of 50 metres, shall be maintained as an inner protection area (IPA) as outlined within Appendix 4 of Planning for Bush Fire Protection 2019 and the NSW Rural Fire Service's document Standards for Asset Protection Zones.
2. Planning for Bush Fire Protection (2019) section 7.9 Grassland Deeming Provisions states that where an asset protection zone of 50 metres can be provided, no further bushfire protection measures (BPMs) are required.
3. It is recommended that the property owner and occupants familiarise themselves with the relevant bushfire preparation and survival information provided by the NSW RFS.

8.0 CONCLUSION

The final recommendation is that the proposed development offers compliance with Planning for Bush Fire Protection (2019). There is potential for bushfire attack at this site and a list of recommendations has been included in the above assessment to reduce that risk.

9.0 APPENDIX 1.0 – ASSET PROTECTION ZONES SUMMARY

Below is a summary of Asset Protection Zones outlined in appendix 4 of Planning for Bush Fire Protection (2019) and the NSW Rural Fire Services “Standards for Asset Protection Zones”. The property owner(s) should obtain these two documents and familiarise themselves with their content.

Generally

Asset Protection Zones (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 Inner Protection Area (IPA). Refer to the plans for locations of APZ and distances from Assets.

Inner Protection Area (IPA)

The inner protection area 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. Create large discontinuities or gaps in the vegetation to slow down or break the progress of fire towards buildings should be provided;
2. Shrubs should not be located under trees;
3. Shrubs should not form more than 10% ground cover; and
4. Clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.

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

1. Tree canopy cover should be less than 15% at maturity;
2. Trees at maturity should not touch or overhang the building;
3. Lower limbs should be removed up to a height of 2m above the ground;
4. Tree canopies should be separated by 2 to 5m; and
5. Preference should be given to smooth barked and evergreen trees.

Outer Protection Area (OPA)

The Outer Protection Area (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. Shrubs should not form a continuous canopy;
2. Shrubs should form no more than 20% of ground cover.

B. Trees:

1. Existing trees can be retained.
2. Tree canopy cover should be less than 30%; and
3. Canopies should be separated by 2 to 5m.

Grass (throughout the entire asset protection zone)

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.

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. External combustible cladding is not recommended.