

BUSH FIRE ASSESSMENT REPORT

-Mr Tilse-
Residential dwelling
4 Lambert Close
Bolwarra Heights



PREPARED BY:



MAY 2022



PEAK LAND MANAGEMENT

Land management consulting services:

-Bush Fire-

-Ecological-

-Environmental-

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Cover Photo: View of subject site.



CONTENTS

1.0	INTRODUCTION.....	5
2.0	BUSH FIRE ATTACK SITE ASSESSMENT SUMMARY	5
3.0	SPECIFICATIONS, UTILITIES, ACCESS AND SURROUNDING LANDUSE.....	10
3.0	VEGETATION	10
4.0	SLOPE.....	11
5.0	BUSH FIRE ASSESSMENT.....	11
6.0	BUSH FIRE RECOMMENDATIONS.....	12
7.0	REFERENCES.....	13
	APPENDIX 1: PHOTOS OF SITE AND SURROUNDS	14

FIGURES AND TABLES

Figure 1: Aerial photo showing subject site (imagery from SIX maps, Department of Lands). North to top of all figures unless otherwise shown.	6
Figure 2: Proposed dwelling with Asset Protection Zone & vegetation assessment within 140m (imagery from SIX maps, Department of Lands)	7
Figure 3: Topographic map showing subject site and surrounding land use (imagery from SIX maps, Lands Department).....	8
Figure 4: Proposed dwelling site/landscape plan (from Martin Morrell Architect, dated 19 th May, 2022).....	9
Table 1: Bush Fire Site Assessment –FDI 100.....	11
Figure 5: Asset Protection Zone example (from PBP, 2006)	11

Document History

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Bush Fire Report	27.5.22	1	Brent and JeremyTilse

AUTHOR DETAILS

Ted Smith is the director of PEAK LAND MANAGEMENT. He is a qualified Land Management Consultant with a Bachelor of Science Honours Degree in Physical Geography. He has over 25 years experience commercially consulting with PEAK LAND MANAGEMENT PTY LTD and working within state government.

Ted has completed a Graduate Diploma in Design for Bush Fire Prone Areas from the University of Western Sydney and is a member of the Fire Protection Association of Australia (FPA of Australia), being a BPAD Accredited Bush Fire Practitioner Level 3.

CERTIFICATION

Ted Smith of PEAK LAND MANAGEMENT has carried out a Bush Fire Assessment including a site inspection on the subject property. A detailed Bush Fire Assessment Report is attached which includes the submission requirements set out in *Appendix 2 & 4 of Planning for Bush Fire Protection 2019* together with recommendations as to how the relevant specifications and requirements are to be achieved.

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 Bush Fire Risk Assessment; and
2. That subject to the recommendations contained in the attached Bush Fire Assessment Report the proposed development conforms to the **relevant specifications and requirements** being 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 4.14 of the *Environmental Planning and Assessment Act 1979 No 203*.



Signature

27th May, 2022

Date



1.0 INTRODUCTION

PEAK LAND MANAGEMENT has been engaged by Mr Tilse to prepare a Bush Fire Assessment Report for a proposed residential dwelling over land located at Lot 3 DP 1252857 / 4 Lambert Close, Bolwarra Heights (referred to hereafter as “subject site”).

Figures 1-5 show the subject site location, topographic map, vegetation assessment, site plan and Appendix 1 shows photos of the subject site.

Under the *Environmental Planning and Assessment Act, 1979* (and its regulations), and the *Rural Fires Act 1997* (and its regulations), councils are required to assess and control new developments in Bush fire prone areas. This land has been assessed as being part of a Bush Fire Prone Land Area as mapped by Council. It should be noted that Section 4.14 of the *Environmental Planning and Assessment Act 1979* requires Councils to be satisfied that developments in Bush fire Prone Areas comply with *Planning for Bush Fire Protection 2019* (PBP) guidelines, and relevant standards including the BCA which calls up AS 3959-2018 before granting development consent.

This report aims to address PBP, 2019 requirements so consideration may be shown by Council to allow development approval. The subject site is considered an Infill Development being an existing dwelling with an existing residential lot in an approved subdivision. Where habitable dwellings are assessed as Flame Zone, or an alternate solution is proposed (ie outside of “acceptable or deemed to satisfy solutions”) then council as consent authority is recommended to consult with the Rural Fire Service.

An alternate or performance-based solution is not presented in this case and the report can be assessed by Council.

2.0 BUSH FIRE ATTACK SITE ASSESSMENT SUMMARY

FDI:100

PREDOMINANT VEGETATION TYPES WITHIN 140 METRE RADIUS OF SITE (as per PBP 2019):

No hazard within 140m.

AVERAGE SIGNIFICANT SLOPE UNDER VEGETATION OUT TO 100 METRES: See Table 1.

BUSH FIRE ATTACK LEVEL (BAL- kW/m² Radiant Heat Flux) for dwelling: BAL LOW.

Figure 1: Aerial photo showing subject site (imagery from SIX maps, Department of Lands). North to top of all figures unless otherwise shown.



Figure 2: Proposed dwelling with Asset Protection Zone & vegetation assessment within 140m (imagery from SIX maps, Department of Lands)



Figure 3: Topographic map showing subject site and surrounding land use (imagery from SIX maps, Lands Department)

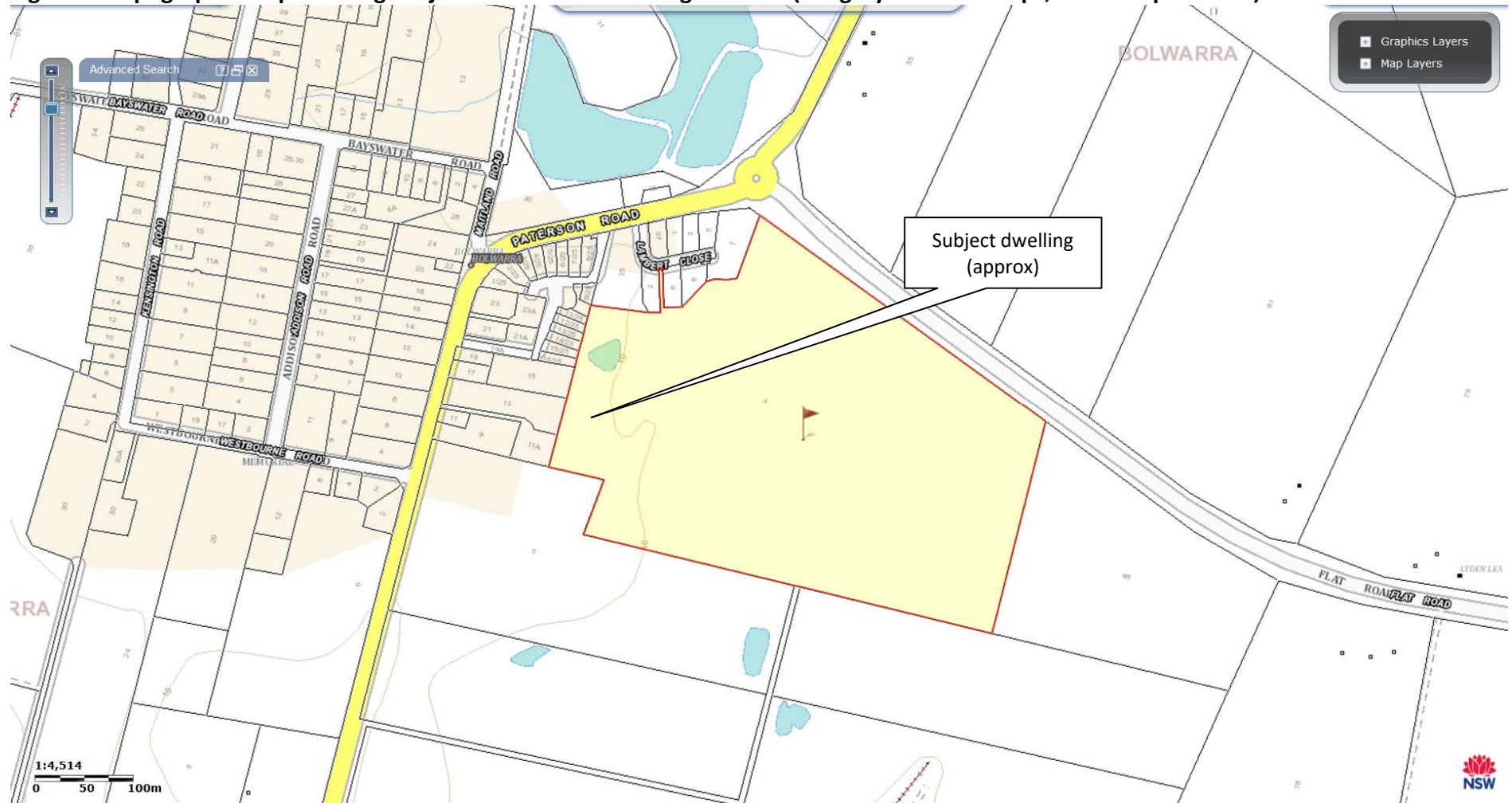


Figure 4: Proposed dwelling site/landscape plan (from Martin Morrell Architect, dated 19th May, 2022)



3.0 SPECIFICATIONS, UTILITIES, ACCESS AND SURROUNDING LANDUSE

3.1 SCOPE OF WORKS

Photos of the site and surrounds are shown in Appendix 1. The proposed dwelling site plan is shown in Figure 4.

The proposed dwelling will be constructed in conformation with PBP, 2019 & AS 3959-2018 as detailed within this report, and councils consent conditions.

3.2 SURROUNDING LAND USE

The subject site and surrounding vegetation and landuse/topography are shown in Figures 1-4.

The subject site is a rural residential lot, located in a rural/urban interface area, surrounded by managed grazed rural land, and dwellings to the west. The subject site is grazed.

3.3 ACCESS

The site is accessed from Lambert Close, a sealed no through public road which connects with Paterson Road, a sealed public short public road. The dwelling is within 140m of Lambert Close, accessed by a concrete property access road.

A turning area is provided for a fire tanker to turn at the dwelling, and traverse around the dwelling.

3.4 UTILITIES/WATER SUPPLIES

The proposed dwelling will be serviced by solar /overhead/underground electricity (unknown at time of writing), and unreticulated water supplies. It has one small dam 100 000l (approximately) present. At least one 20 000l static water tank for domestic use is proposed.

3.0 VEGETATION

The predominant vegetation type within 140m is managed Grassland, not considered a hazard assessed as per PBP 2019 (Figures 1-3, Appendix 1 - photos).

The subject site & surrounds within 140m are grazed land. All trees can be retained on site. A windbreak of single row of trees is not considered a hazard (exempt under PBP, 2019) and can be retained.

Grassland was <100mm in height at time of inspection over site and surrounds, intensively grazed, mulched, cropped, turf farmed, and is classified as managed land in accordance with NSW Rural Fire Service policy, and bush fire prone land mapping guidelines.

4.0 SLOPE

Slope assessment has been carried out under flammable vegetation within 100 metres of the dwelling additions as specified under the Guidelines Assessment Procedure. The angles have been measured in the field by an inclinometer, and measure the slope under the vegetation. See Table 1.

PBP, 2019 states: - *“The effective slope is considered to be the slope under the vegetation which will most significantly influence the bush fire behaviour for each aspect. This is usually the steepest slope. In situations where this is not the case, the proposed approach must be fully justified. Vegetation located closest to an asset may not necessarily be located on the effective slope”*.

5.0 BUSH FIRE ASSESSMENT

The legislation as it relates to this site calls for asset protection zones (APZ) to be established around the proposed development, provision of adequate access, design staging and citing of the development and provision of appropriate water supply for bush fire fighting purposes.

5.1 Setbacks including asset protection zones

Table 1 shows the bush fire assessment for the subject site and Figure 5 is an example.

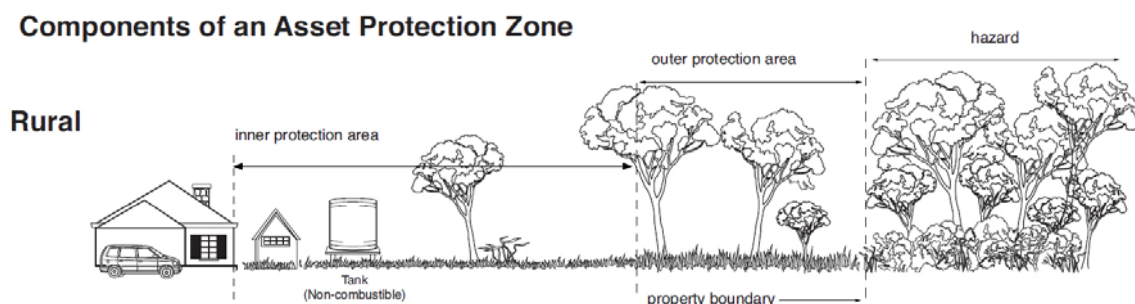
Table 1: Bush Fire Site Assessment –FDI 100

DIRECTION TO BUSH FIRE HAZARD	EFFECTIVE SLOPE	PREDOMINANT VEGETATION TYPE WITHIN 100m as per PBP 2019	Distance to edge of hazard	Bush Fire Attack Level (BAL) (from PBP, 2019)
All directions	-	Managed Land	-	BAL LOW

Note: BAL refers to the maximum Bush fire attack level expressed in kW/m² radiant heat flux exposure for the given slope, distance to hazard, and type of hazard (ie vegetation type and fuel load).

A lowering of one BAL is supported by PBP 2019 and AS 3959 where the elevation of the building is not exposed directly to the source of bush fire attack and/or is shielded by the building/other buildings/landforms, or is set back sufficiently to achieve the next lower BAL as described in AS 3959. This is not applicable in this case.

Figure 5: Asset Protection Zone example (from PBP, 2006)



6.0 BUSH FIRE RECOMMENDATIONS

The development will comply with PBP, 2019:

- ❑ Serviced by unreticulated water tanks (at least 20 000l to be provided), 100 000l dam-complies with PBP, 2019.
- ❑ Serviced by electricity- complies with PBP, 2019.
- ❑ Serviced by a public road, & internal property access road (<200m long) –complies with PBP, 2019.
- ❑ Asset Protection Zone is provided- provides a defensible space around the dwelling-complies with PBP, 2019
- ❑ Dwelling to be built in conformance with AS 3959 & PBP 2019 & Council consent condition.
- ❑ Landscaping- to comply with PBP 2019 & recommendations below.

The following recommendations are made:

- ❑ **Design and Construction:** - The intent of measures is that buildings are designed and constructed to withstand the potential impacts of bush fire attack. To achieve this, the following conditions are recommended:
 - The residential dwelling shall comply with BAL LOW.

The site has no/minor bush fire risk, and no requirements. The bush fire risk is considered to be adequately managed through the recommendations made above, and in conjunction with any DA consent conditions from Council.

Report prepared by:



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PEAK LAND MANAGEMENT PTY LTD

DISCLAIMER: Whilst every effort is made to present clear and factual information based on fieldwork and current legislation no guarantee is made that the development or its occupants are safe from bush fire, or development will be approved, or to the recommended BAL, as this is in the hands of the approving statutory authorities/certifier. No warranty or guarantee, whether expressed or implied, is made with respect to the observations, information, findings and inclusions expressed within this report. No liability is accepted for losses, expenses or damages occurring as a result of information presented in this document.

7.0 REFERENCES

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Robinson, L. 2003 (3rd ed). *Field guide to the Plants of Sydney*. Kangaroo Press.

Standards Australia AS 3959-2018. *Construction of buildings in Bush Fire prone area*.

Websites

www.rfs.nsw.gov.au

Lands Department- SIX Maps

Maitland City Council

APPENDIX 1: PHOTOS OF SITE AND SURROUNDS

Looking north from proposed dwelling site



Looking east from proposed dwelling site





Looking south from proposed dwelling site



Looking west from proposed dwelling site



Property access Road



Property access Road to Lambert Cl

