

# BUSH FIRE ASSESSMENT REPORT

1 into 2 lot rural residential subdivision

39 Bower Bird Close

Vacy



PREPARED BY:



NOVEMBER 2023



## PEAK LAND MANAGEMENT

Land management consulting services:

**-Bush Fire-**

**-Ecological-**

**-Environmental-**

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Cover Photo: View of subject site.

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### Document History

Document Id.	Prep. Date	Version	Submitted to:
Draft Bush Fire Assessment Report	15.12.23	1	Perception Planning
Bush Fire Assessment Report	19.2.24	2	Perception Planning

## 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 *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*.



19<sup>th</sup> February, 2023

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Signature

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Date



## 1.0 INTRODUCTION

PEAK LAND MANAGEMENT has been engaged by Perception Planning to prepare a Bush Fire Assessment Report for a proposed one into two lot rural residential subdivision over land located at Lot 10 DP 1077159 / 39 Bower Bird Close, Vacy (termed “subject or development site”).

Figures 1-4 show the subject site location, topographic map, and proposed development site plans, 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 Area as mapped by Council (Figure 7).

This development is classed as a subdivision under PBP 2019 and falls under Section 100B of the *Rural Fires Act 1997* (and its regulations) and will require integrated development approval/ Bushfire Safety Authority from the Rural Fire Service. PBP 2019 states that a residential subdivision should have required Asset Protection Zones, adequate access, water, and services as stated under the Act.

This report has been prepared in accordance with “*Planning for Bush Fire Protection* (PBP) 2019” guidelines, and makes reference to AS 3959. Clause 46 of the *Rural Fires Regulation 2002* sets out these requirements, which are addressed in this report. A Bush Fire Assessment Report is required showing the current situation and recommending how the risk may be ameliorated, so consideration may be shown by Council & NSW Rural Fire Service to allow development approval for the proposed dwelling, and subdivision.

### 1.1 SCOPE OF WORKS

The proposal is for:

- Proposed 1 into 2 lot rural residential subdivision, with existing residential dwelling to be retained over proposed lot 192.



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





Figure 2: Aerial photo showing subject site and surrounds and distance to hazard.

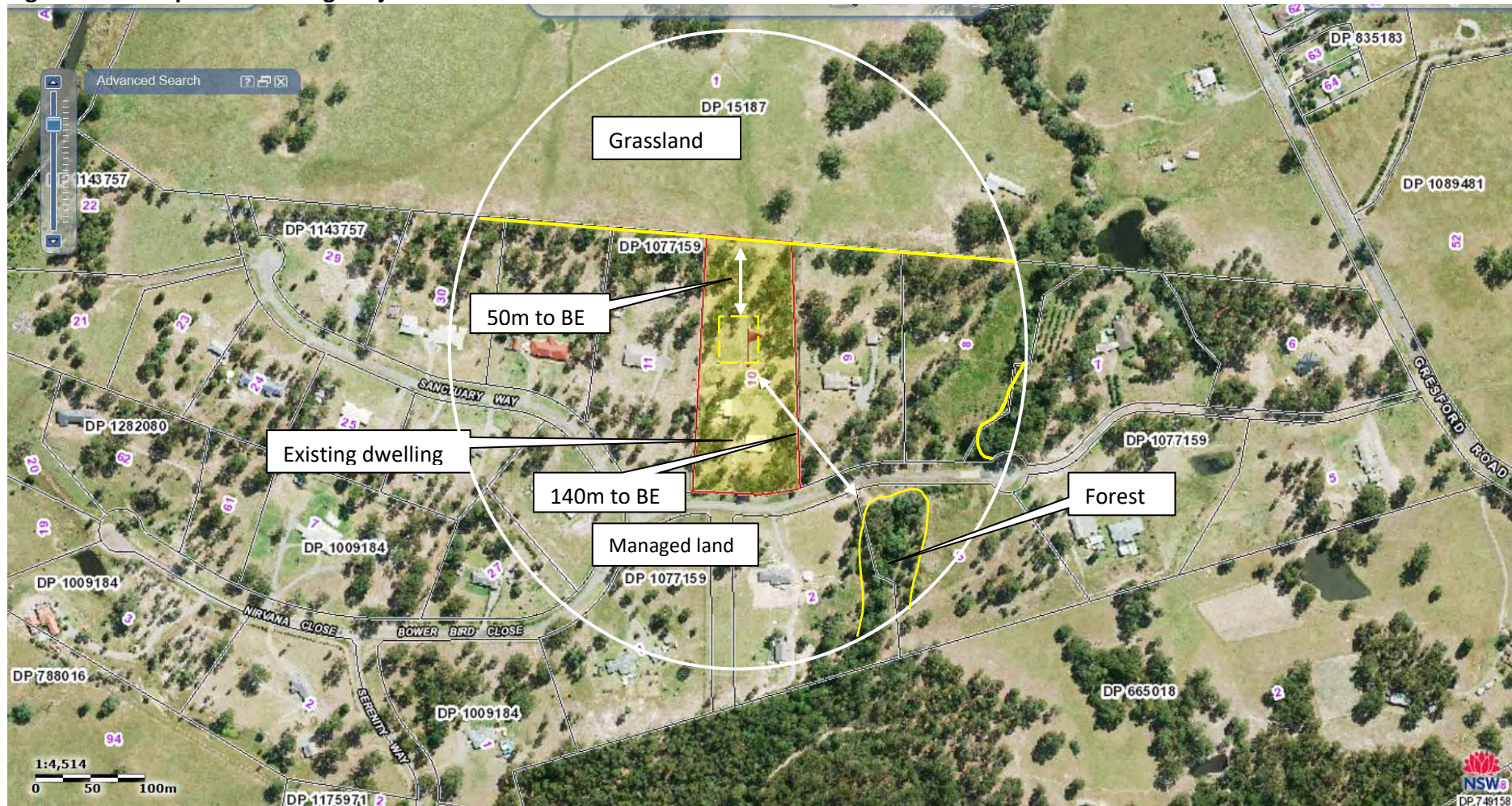




Figure 3: Topographic map showing subject site (imagery from SIX maps, Lands Department)

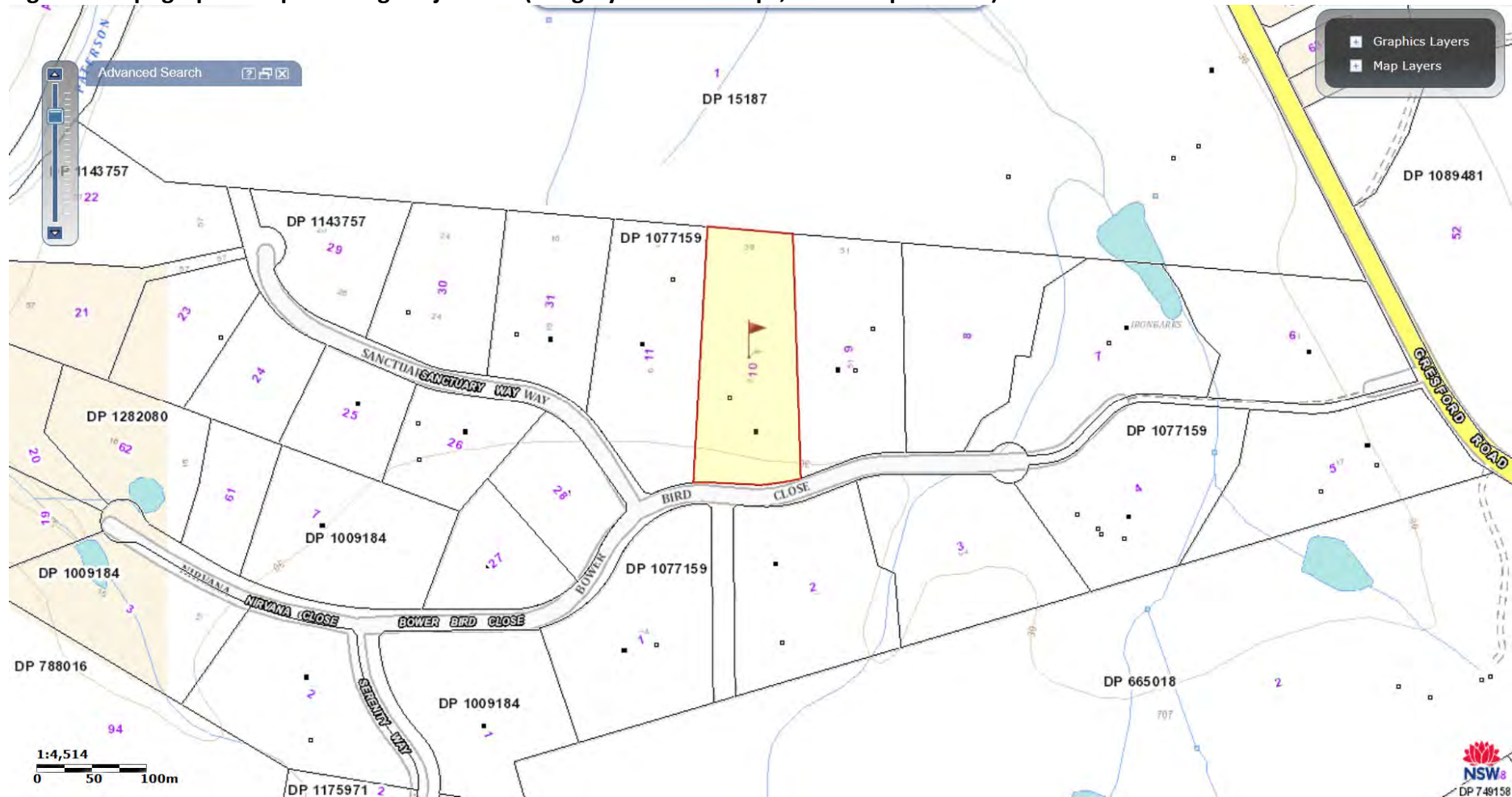
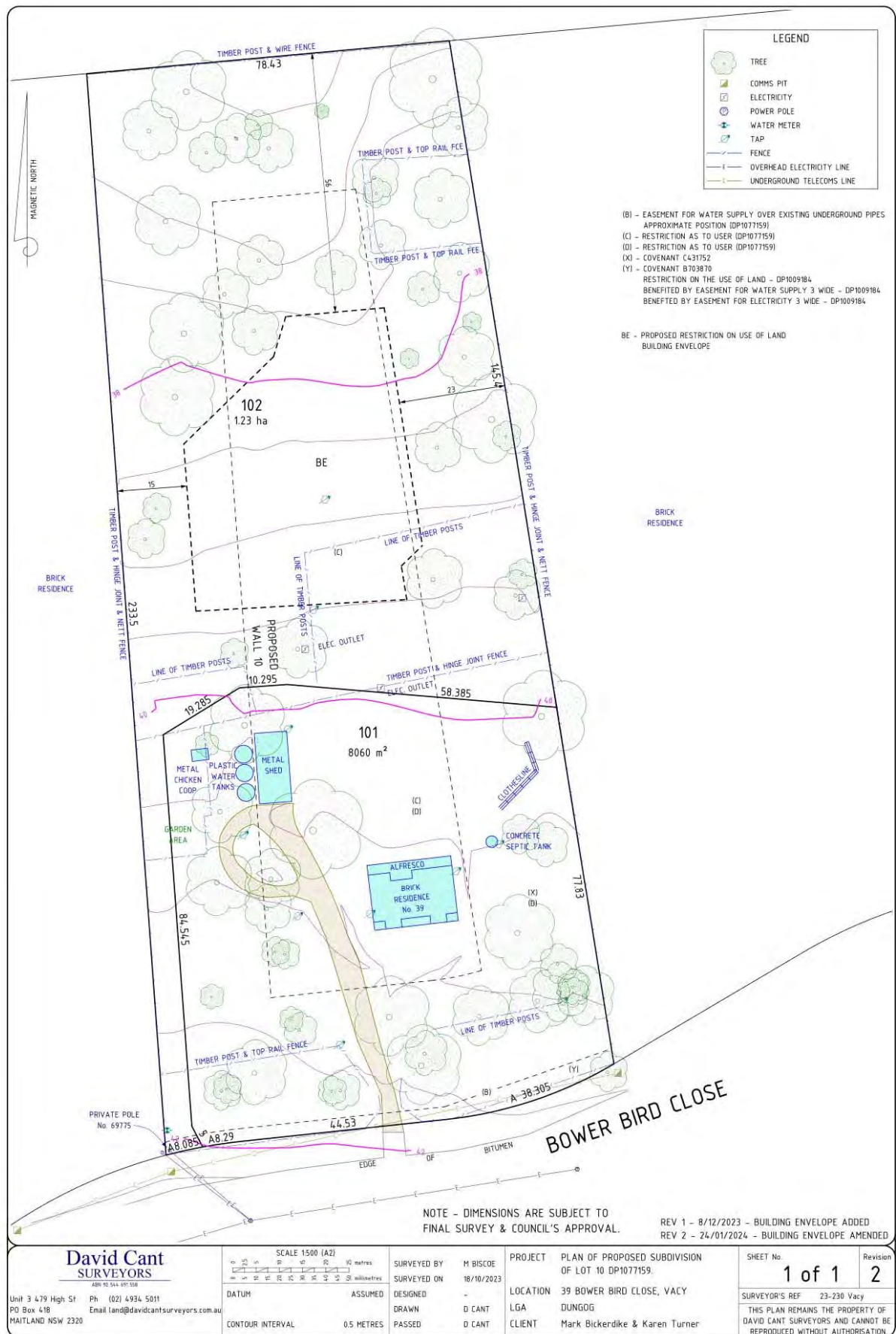
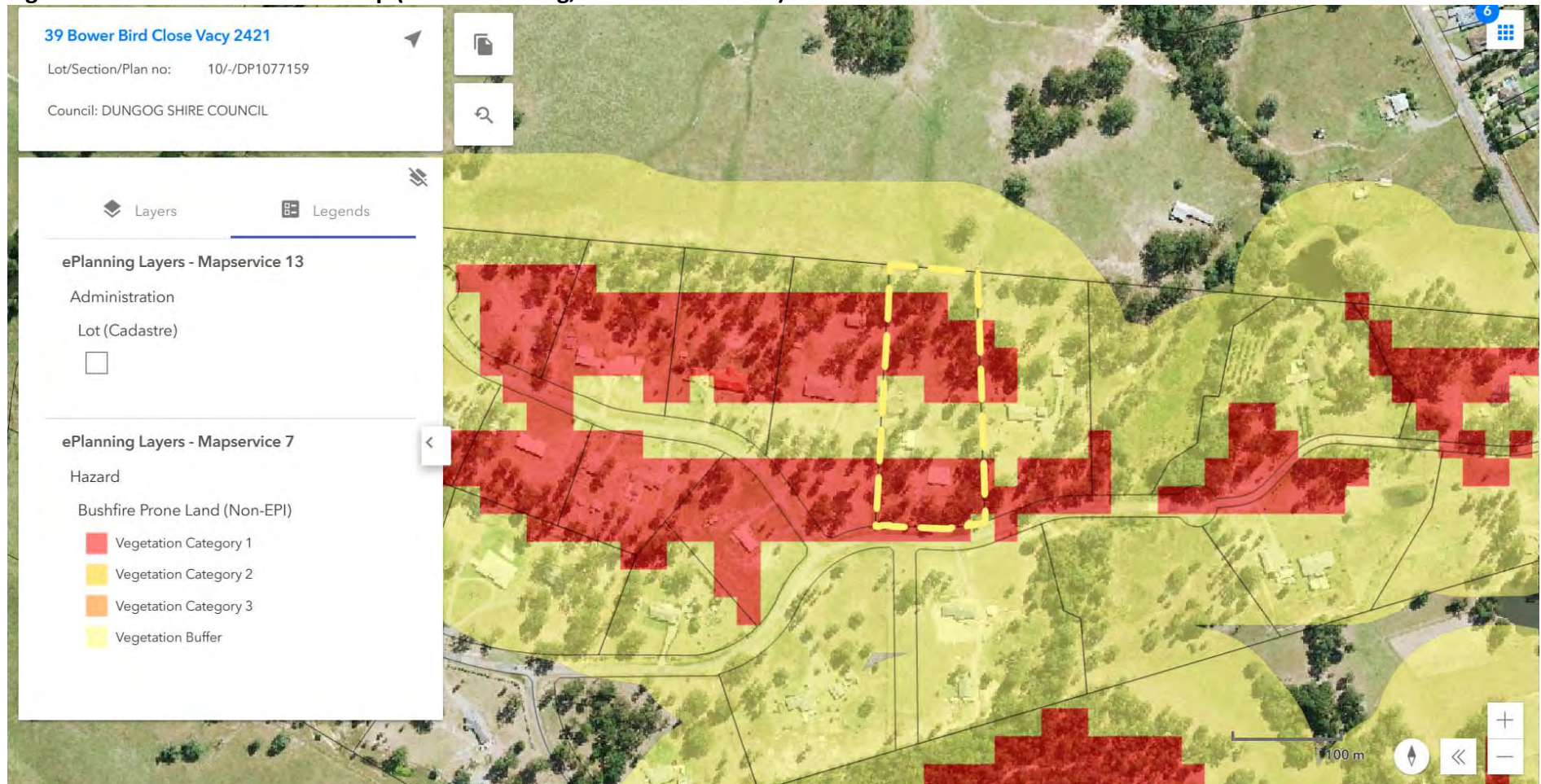




Figure 4: Subdivision plan (from Delfs Lascelles, dated 24.1.24)



**Figure 5: Bush Fire Prone Land Map (from ePlanning, NSW Government)**





## 2.0 SITE DESCRIPTION AND SURROUNDING LANDUSE

The subject site and surrounding vegetation and landuse/topography are shown in Figures 1-6. The subject site is a rural residential lot, zoned R5, in an older subdivision, surrounded by residential dwellings/managed land in all directions within 50m of proposed building envelope (BE).

The building envelope is as shown in Figure 4. It has been placed to avoid any tree clearing over the envelope itself, and setback to allow BAL LOW future dwelling construction.

## 3.0 VEGETATION

**The predominant vegetation type within 140m is Forest & Grassland assessed as per PBP, 2019 (Figure 3, Appendix 1 - photos).**

The Forest has trees to 25m tall, with a shrub understorey.

A rural lot occurs to the north. It has Grass >100mm in height, and is assessed as Grassland, despite cattle grazing occurring.

Remaining areas surrounding the proposed building envelope including over the subject lot are managed slashed land, and assessed as managed land as Grass <100mm in height/regularly slashed & managed & no shrub cover over all private lots adjoining within 100m, and scattered tree cover not connecting with any unmanaged vegetation and complying to Asset Protection Zone standards under PBP, 2019 (see Appendix 1 photos).

## 4.0 SLOPE

Slope assessment has been carried out around the subject site under hazardous vegetation out to 100 metres as specified under the Guidelines Assessment Procedure. The angles have been measured in the field by an inclinometer. Table 1 shows the results.

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 ENVIRONMENTAL FEATURES

The subject site has environmental features, with large remnant trees present, however no tree clearing required/no native vegetation impact for the BE, access road or Asset Protection Zone being fully cleared/managed already to an Asset Protection Zone standard, and therefore no Ecological impact proposed, or an Ecological Report likely to be required by Council. The site is not mapped on the Biodiversity Values Map.

## 6.0 ABORIGINAL FEATURES

An Aboriginal archeological due diligence survey/or AHIMS search has not been undertaken to the authors knowledge. It is Councils decision whether required or not.

## 7.0 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.

### 7.1 SETBACKS INCLUDING ASSET PROTECTION ZONES

Table 1 shows the bush fire risk assessment for the subject site. An Asset Protection Zone has been provided which complies with PBP 2019 (Table A1.12.2) subdivision requirements.

**Table 1: Bush Fire Site Assessment –FDI 100**

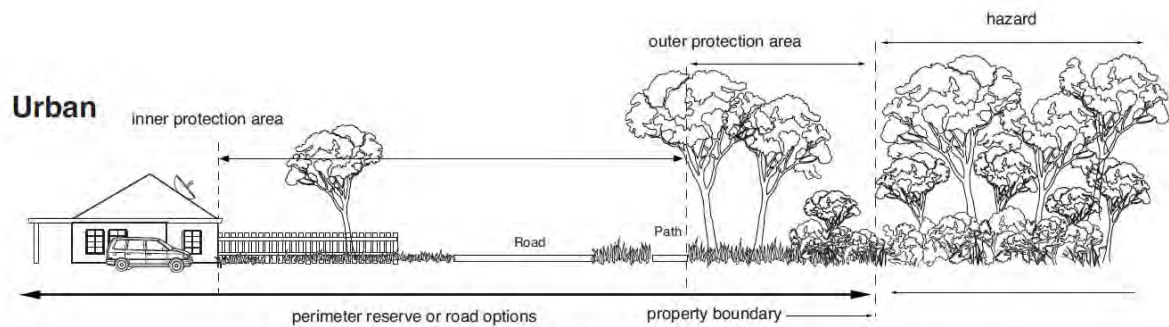
Direction to bush fire hazard	Effective slope	Predominant vegetation type within 140m as per PBP 2019	Distance to hazard (from proposed BE)	Required minimum asset protection zone (from Table A1.12.1 PBP, 2019)	Conformance & BAL
North	0-5 <sup>0</sup> downslope	Grassland	56m	12m	√ BAL LOW
South-east	0-5 <sup>0</sup> downslope	Forest	140m	29m	√ BAL LOW
Other directions	Managed land within 140m	-	-	-	-

Note: BAL refers to the maximum Bush Fire attack level expressed in kW/m<sup>2</sup> 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 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 PBP, 2019. This is not applicable in this case.



**Figure 7: Asset Protection Zone standard (from PBP, 2019)**



## 7.2 WATER SUPPLIES AND UTILITIES

The subject site is serviced by unreticulated town water supplies, and above ground electricity transmission wires.

The proposed building envelope will be serviced by static water tank (s) with at least 20 000 litre storage of water, in non combustible static water supply tank(s), and a separate 20 000 litre tank is to be used as a dedicated fire fighting water supply.

The existing dwelling has three 22 500 litre plastic water tanks, one with a Storz fitting.

## 7.3 ACCESS

The site is accessed from Bower Bird Close, a sealed two way no through public road. The proposed building envelope is within 200m of the public road.

## 7.4 CONSTRUCTION STANDARDS

The proposed building envelope is assessed as BAL LOW in accordance with PBP 2019 (Table A1.12.5).

The existing dwelling is ember proofed, and was approved & constructed to BAL 19.

## 7.5 OTHER FIRE PROTECTION MEASURES

Recommendations are made below to address further non compulsory bush fire protection measures.

## 8.0 BUSH FIRE RECOMMENDATIONS

The development complies with PBP, 2019:

- ❑ Serviced by unreticulated water - complies with PBP, 2019.
- ❑ Serviced by above ground electricity power- complies with PBP, 2019.
- ❑ Serviced by a public road & property access road <200m –complies with, PBP, 2019.
- ❑ Asset Protection Zone provided–complies with Table A1.12.2, PBP, 2019.

- ❑ Dwellings to be constructed in conformance with PBP, 2019, and AS 3959.
- ❑ 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:
  - Any future residential dwelling constructed within the nominated BE shall comply with BAL LOW, and has no bush fire construction requirements under Australian Standard AS3959-2018 'Construction of buildings in Bush Fire-prone areas', or the NASH Standard - Steel Framed Construction in Bushfire Areas, 2021, or as modified by Section 7.5 of PBP, 2019.
- ❑ **Asset Protection Zone:** - The intent of measures for Asset Protection Zones is to provide suitable building design, construction and sufficient space to ensure that radiant heat levels do not exceed critical limits for firefighters and other emergency services personnel undertaking operations, including supporting or evacuating occupants.
  - An Asset Protection Zone over the entire site has been provided & complies to PBP, 2019.
- ❑ **Water and Utilities:** - The intent of measures is to provide adequate services of water for the protection of buildings during and after the passage of a bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building. To achieve this, the following conditions should apply:
  - Water, electricity and gas shall comply with Table 7.4a of '*Planning for Bush Fire Protection 2019*'.
- ❑ **Landscaping** - The intent of measures is landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions. To achieve this, the following conditions should apply:
  - Landscaping to the site is to comply with the principles of Appendix 5 of '*Planning for Bush Fire Protection 2019*'. This includes all new fencing if within 6m of the dwelling shall be non-combustible, and landscaping is managed to minimise flame contact with dwelling, reduce radiant heat levels, minimise embers and reduce the effect of smoke on residents and firefighters.



The bush fire risk is considered to be adequately managed through the recommendations made above, and in conjunction with recommendations/approval conditions from the NSW Rural Fire Service and 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 stated 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.

## 9.0 REFERENCES

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

### Websites

[www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au)

Lands Department- SIX Maps

Dungog Shire Council

Nearmap

NSW Planning Portal Spatial Viewer



## APPENDIX 1: PHOTOS OF SITE AND SURROUNDS

Subject site—looking north



Subject site—looking east along Bower Bird Close





Subject site—looking west along Bower Bird Close



Managed land to south of subject site





Forest to the south-east of subject site



Proposed lot & BE location





Grassland to the north of subject site



Existing dwelling





Existing water tanks



Existing & proposed access road





Managed land to west adjoining subject site



Managed land to east adjoining subject site

