



BUSHFIRE  
PLANNING  
AUSTRALIA

# BUSHFIRE ASSESSMENT REPORT

## Residential Subdivision

9 Dangar Road & 291 Thunderbolts Way,  
Gloucester

Prepared for Jim Dixon



## Bushfire Planning Australia

**Stuart Greville**

Accredited Bushfire Practitioner

BPAD-26202

☎ 0400 917 792

✉ [stuart@bfpa.com.au](mailto:stuart@bfpa.com.au)

Prepared for Jim Dixon c/- Site R&D Pty Ltd

Attention: Stuart Murray

✉ [stuart@siterd.com.au](mailto:stuart@siterd.com.au)

Reference: 2493 Gloucester

## Disclaimer and Limitation

This report is prepared solely for Site R&D Pty Ltd on behalf of Jim Dixon (the 'Client') for the specific purposes of only for which it is supplied (the 'Purpose'). This report is not for the benefit of any other person; either directly or indirectly and is strictly limited to the purpose and the facts and matters stated in it and will not be used for any other application.

This report is based on the site conditions surveyed at the time the document was prepared. The assessment of the bushfire threat made in this report is made in good faith based on the information available to Bushfire Planning Australia at the time.

The recommendations contained in this report are considered to be minimum standards and they do not guarantee that a building or assets will not be damaged in a bushfire. In the making of these comments and recommendations it should be understood that the focus of this document is to minimise the threat and impact of a bushfire.

Finally, the implementation of the adopted measures and recommendations within this report will contribute to the amelioration of the potential impact of any bushfire upon the development, but they do not and cannot guarantee that the area will not be affected by bushfire at some time.

## Document Status: 2493 – Rural Residential Subdivision

Version	Status	Purpose	Author	Review Date
1	Draft	Draft for Review	Katrina Greville	25 October 2024
2	Draft	Draft for Client Review	Stuart Greville	6 November 2024
3	Final	Final for Submission	Stuart Greville	6 November 2024

## Certification

As the author of this Bushfire Assessment Report (BAR), I certify this BAR provides the detailed information required by the NSW Rural Fire Service under Clause 45 of the Rural Fires Regulation 2022 and Appendix 2 of Planning for Bushfire Protection 2019 for the purposes of an application for a bush fire safety authority under section 100B(4) of the Rural Fires Act 1997.



**Stuart Greville**

Accredited Bushfire Practitioner

BPAD-26202



Date: 6 November 2024

In signing the above, I declare the report is true and accurate to the best of my knowledge at the time of issue.

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## Executive Summary

Bushfire Planning Australia (BPA) has been engaged by Site R&D Pty Ltd on behalf of Jim Dixon (the 'Client') to undertake a Bushfire Assessment Report (BAR) for a two (2) into two (2) rural residential lot subdivision (boundary adjustment) at 9 Dangar Road and 291 Thunderbolts Way, Gloucester. The proposed development includes Lot 47 DP1267740 and Lot 252 DP707512 respectively. Both sites are currently vacant and generally devoid of any remnant vegetation.

The proposed development will excise a portion of Lot 47 DP1267740 (Proposed Lot 471) to create a direct frontage to Dangar Road from Lot 252 DP707512 (Proposed Lot 472). The boundary adjustment is designed to make available a parcel of land suitable for the construction of a public road to provide a secondary access to Proposed Lot 472; as primary access is currently from Thunderbolts Way.

The proposed subdivision does not require any works, and any further development will be subject to a separate development application.

This BAR found the site was exposed to a low bushfire hazard located to the north / north-west of the Proposed Lot 471. The predominant vegetation in the vicinity the site of Proposed Lot 471 (within 140m) in unmanaged conditions is consistent with a *grassland* vegetation formation as described in the NSW Rural Fire Service document Planning for Bushfire Protection 2019 (PBP 2019).

Whilst Proposed Lot 472 is almost 200 hectares and encompasses a diverse landscape covering different terrains, topography and vegetation formations, no new works are proposed.

The BAR concludes that the hazard identified can be successfully mitigated for a future development by applying the requirements of PBP 2019, including vegetation management and road access.

The following key recommendations are suggested to enable the proposed development to maintain an acceptable level or risk to the adjoining properties on Dangar Road:

1. All existing surface fuel (grass) within Proposed Lot 471 shall be regularly maintained to ensure the height of the vegetation does not exceed 100mm; and
2. Consideration should be given to landscaping and fuel loads on site to decrease potential fire hazards on site.

This assessment has been made based on the bushfire hazards observed in and around the site at the time of inspection and production (November 2024).

Should the above recommendations be implemented, the existing bushfire risk should be suitably mitigated to offer an acceptable level of protection to life and property for those persons and assets occupying the site but they do not and cannot guarantee that the area will not be affected by bushfire at some time.

## 1. Introduction

Bushfire Planning Australia (BPA) has been engaged by Site R&D Pty Ltd on behalf of Jim Dixon (the 'Client') to undertake a Bushfire Assessment Report (BAR) for a two (2) into two (2) rural residential lot subdivision (boundary adjustment) at 9 Dangar Road and 291 Thunderbolts Way, Gloucester. The proposed development includes Lot 47 DP1267740 and Lot 252 DP707512 and hereafter referred to as the 'site' (**Figure 2**).

The assessment aims to consider and assess the bushfire hazard and associated potential bushfire threat relevant to the proposed development, and to outline the minimum mitigative measures which would be required in accordance with the provisions of the New South Wales Rural Fire Service (RFS) publication *Planning for Bushfire Protection 2019* (PBP 2019) that has been released and adopted through the *Environmental Planning and Assessment Amendment* (Planning for Bushfire Protection) *Regulation 2007* and the *Rural Fires Regulation 2022*.

### 1.1. Aims and Objectives

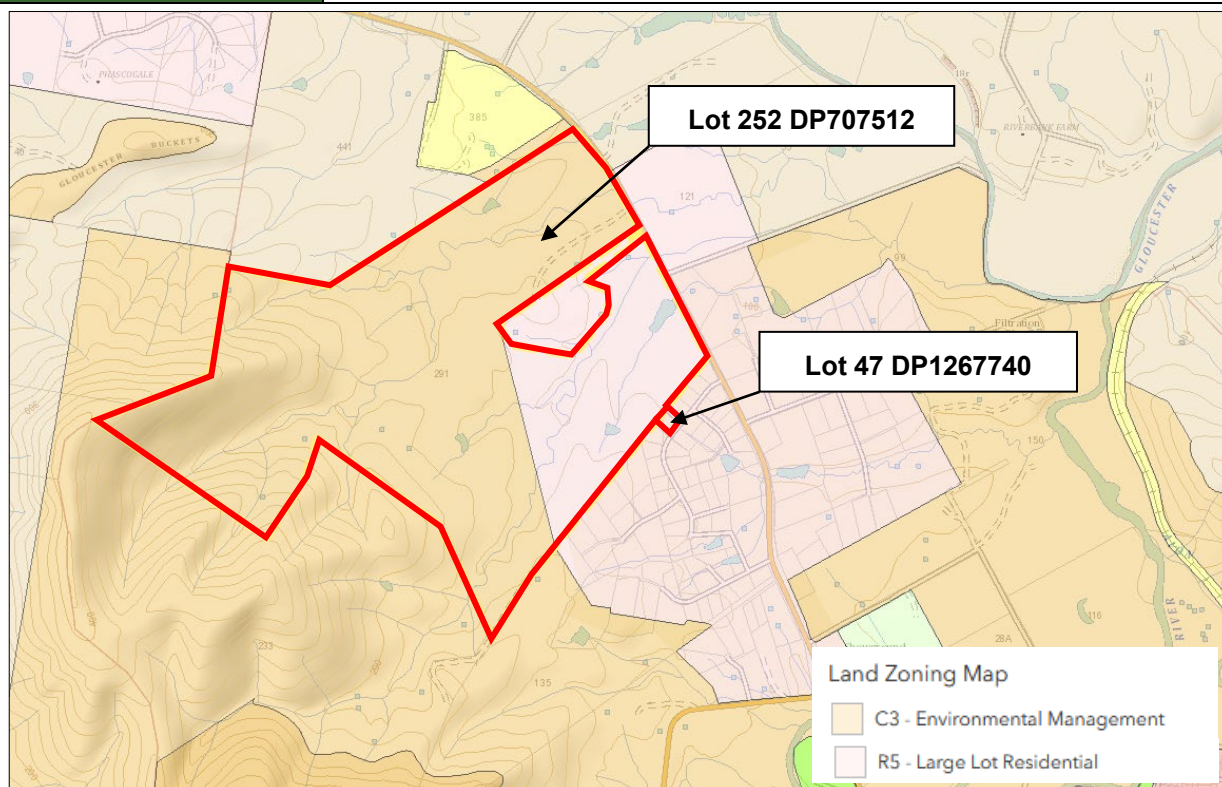
This Bushfire Assessment Report (BAR) addresses the aims and objectives of New South Wales Rural Fire Service (RFS) publication *Planning for Bushfire Protection 2019* (PBP 2019), being:

- ❑ Afford buildings and their occupants protection from exposure to a bushfire;
- ❑ Provide a defendable space to be located around buildings;
- ❑ Provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings;
- ❑ Ensure that appropriate operational access and egress for emergency service personnel and occupants is available;
- ❑ Provide for ongoing management and maintenance of bushfire protection measures (BPMs); and
- ❑ Ensure that utility services are adequate to meet the needs of firefighters.

## 2. Site Description

**Table 1: Site Details**

<b>Address</b>	9 Dangar Road and 291 Thunderbolts Way, Gloucester
<b>Title</b>	Lot 47 DP1267740 and Lot 252 DP707512
<b>LGA</b>	Mid Coast Council
<b>Site Area</b>	199 ha
<b>Land Use Zone</b>	R5 Large Lot Residential and C3 Environmental Management
<b>Bushfire Prone Land</b>	Vegetation Category 1, Vegetation Category 2 and Vegetation Buffer
<b>Context</b>	The sites are located on the western side of Thunderbolts Way and the northern side of Dangar Road. Both sites are vacant from any building or dwelling. The larger of the two sites, Lot 252, contains some vegetation and dams although mostly grazed lands with exception within the western corner of the site which contains unmanaged vegetation that extends beyond the site (C3 zoned land). Lot 47 is cleared / managed land and forms part of an approved rural residential subdivision which exists largely to the south of the site. Similarly, rural residential properties exist on the eastern side of Thunderbolts Way and north of the site.
<b>Topography</b>	The site topography varies in slopes particularly where unmanaged vegetation exists.
<b>Fire History</b>	The site lies within a local government area with a Fire Danger Index (FDI) rating of 80.



**Figure 1: Land Use Zone (Gloucester LEP 2010)**

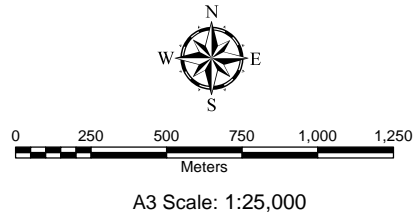


Figure 2  
Site  
Location



- Subject site
- 100m buffer
- 140m buffer

SOURCE:  
Basemap: NSW Department of Customer Service  
2023



File:2493-Gloucester-Fig1-SiteLocation-241022 Date: 22/10/2024

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## 2.1. Bushfire Prone Land

Bushfire activity is prevalent in landscapes that carry fuel and the two predominant bushfire types are grassland and forest fires. Factors such as topographic characteristics and quantity of fuel loads influence the intensity and spread of fire. The scale of a bushfire hazard is tailored to the characteristics of the hazard, the size and characteristics of the affected population, types of land use exposed to bushfire, predicted development growth pressures and other factors affecting bushfire risk.

**Figure 3** demonstrates the total subject site consists of Vegetation Category 1, Vegetation Category 3, Vegetation Buffer and a portion of non-portion bushfire prone land.

Vegetation Category 1 bushfire prone land exists towards the western portion of Lot 252 (Proposed Lot 2) which continues within and beyond 140m of the site and is identified as the primary bushfire hazard. The remainder of Lot 252 (Proposed Lot 2) is mapped as Vegetation Category 3 bushfire prone land which also extends within and beyond 140m north, east and a portion to the south of the site.

A narrow corridor of Vegetation Buffer also exists along the northern boundary of Lot 47 (Proposed Lot 1), whilst the remainder of this lot is not identified as bushfire prone land.





Project: Lot 252 DP 707512  
and Lot 47 DP 1267740  
Gloucester: Job No - 2493

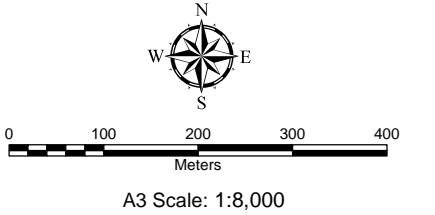
*Figure 3*

# NSW Bush Fire Prone Land



- Subject site
- 100m buffer
- 140m buffer
- Bushfire Prone Land**
- Vegetation Category 1
- Vegetation Category 2
- Vegetation Category 3
- Buffer

SOURCE:  
Cadastral Boundary: NSW Department of Finance,  
Services and Innovation 2024  
NSW Bush Fire Prone Land: NSW Rural Fire Service  
2024  
Aerial Photo: Nearmap 25/06/2024



File:2493-Gloucester-Fig2-BFPL-241022 Date: 22/10/2024

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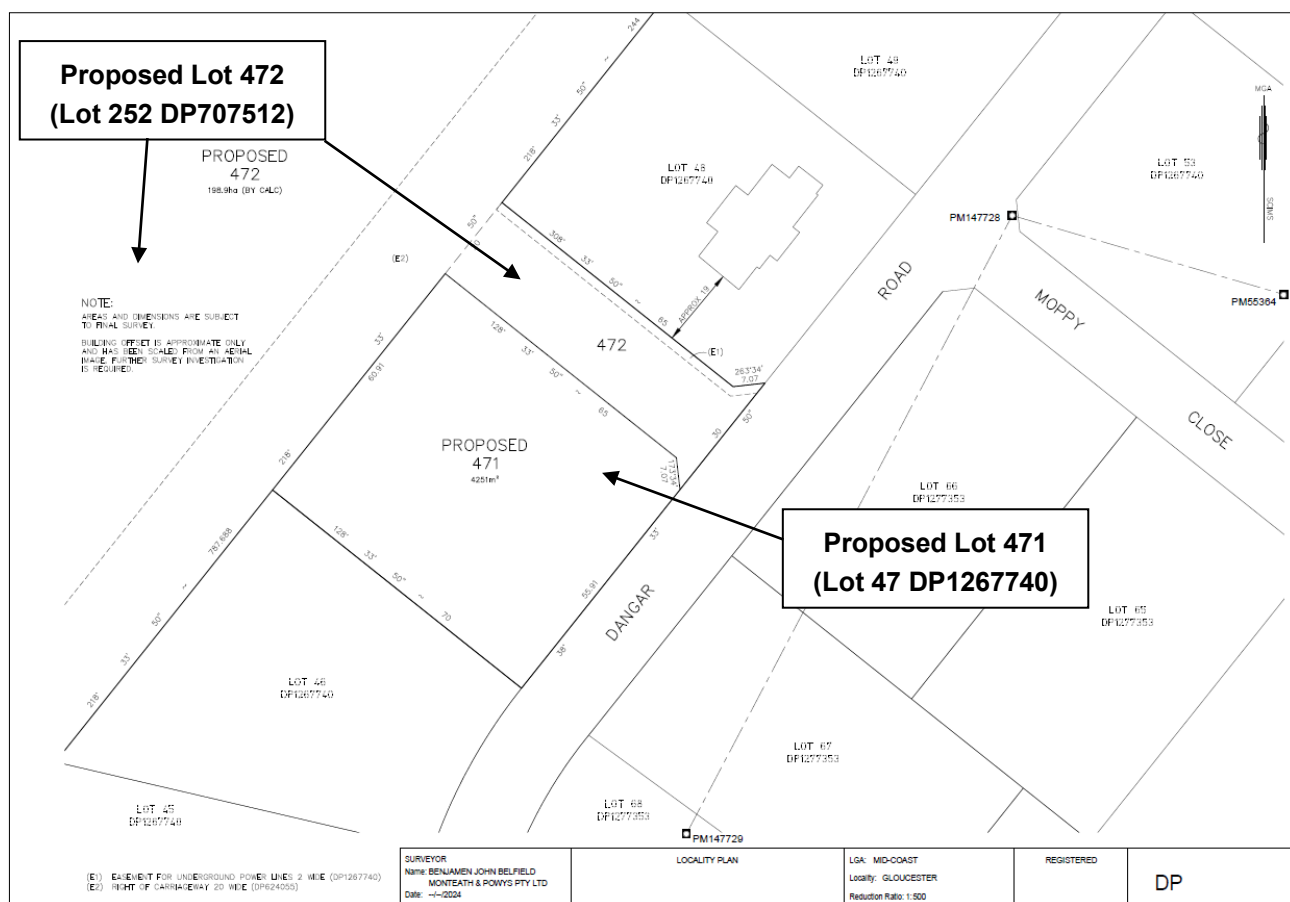


## 2.2. Proposed Development

The proposed development will create Lot 471 (Lot 47 DP1267740) to allow for the construction of a public access road within the eastern portion of the existing site. The proposed access road will become part of Proposed Lot 472 (Lot 252 DP707512) and provide direct access from Dangar Road to the Proposed Lot 472.

Separate to this development, it is proposed the Proposed Lot 471 will facilitate future infill development whilst the Proposed Lot 472 will remain in its existing state. Any further development will be subject to a separate development application.

A plan of the proposed subdivision is shown in **Figure 4**.



**Figure 4: Proposed Subdivision to create road access**

### 3. Bushfire Hazard Assessment

#### 3.1. Vegetation Assessment

Vegetation classification over the site and surrounding area has been carried out as follows:

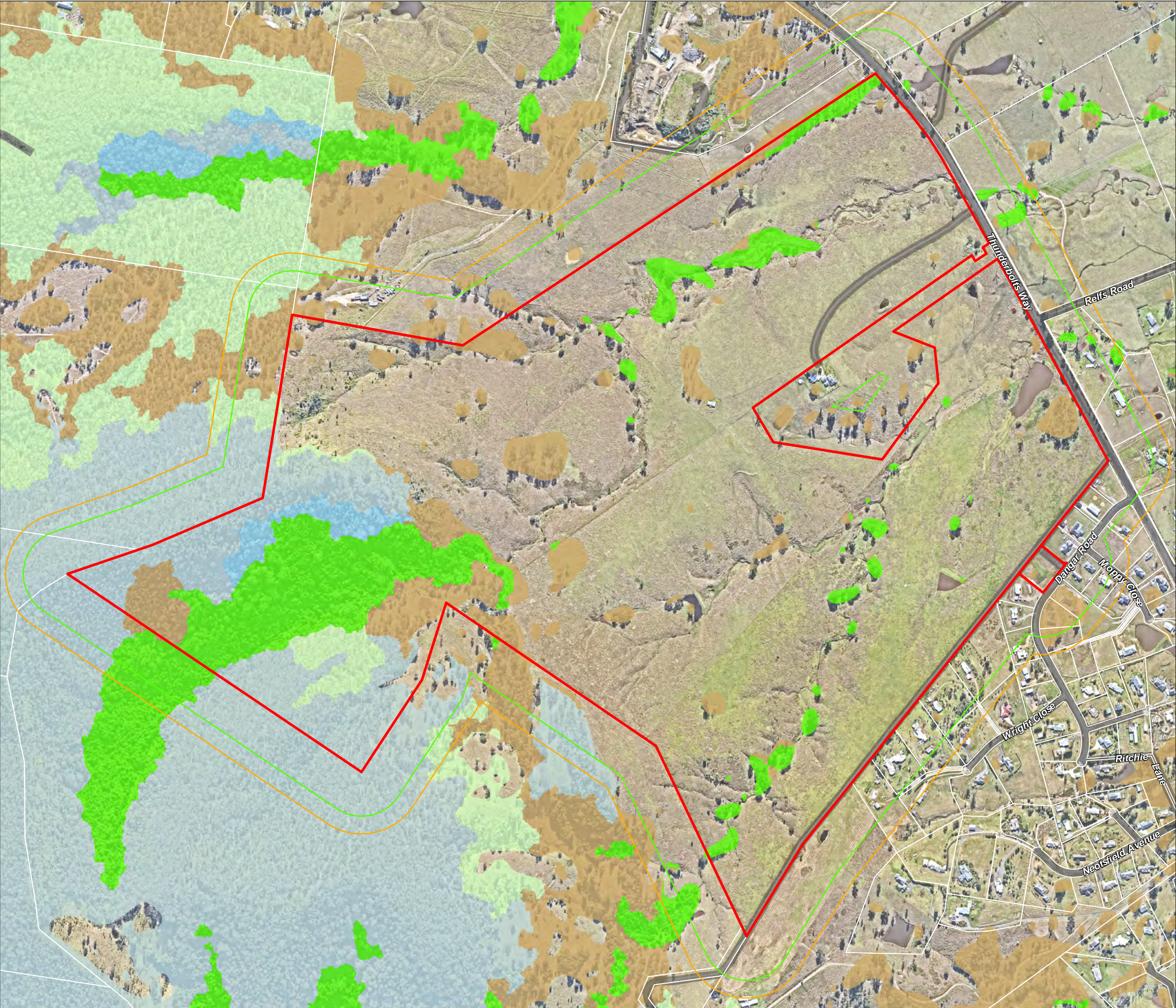
- ❑ Aerial Photograph Interpretation to map the vegetation classification and extent;
- ❑ Review of LiDAR point cloud data (NSW LPI); and
- ❑ Reference to NSW State Vegetation Type, NSW Department of Planning, Industry and Environment 2024 (**Figure 5**).

In accordance with PBP 2019, an assessment of the existing vegetation over a distance of 140m in all directions from the site was undertaken.

The findings of the site assessment were compared to the NSW State Vegetation Type mapping (**Figure 5**). The inconsistencies between the mapping sources were quantified during the site assessment. It was confirmed a *grassland* vegetation formation is present within 140m to the north and north-west of Proposed Lot 471.

There is no mature vegetation within 100m of the existing dwelling that presents a bushfire threat. All vegetation within 100m of the existing dwelling is actively grazed or kept lower than 100mm tall.





Project: Lot 252 DP 707512  
and Lot 47 DP 1267740  
Gloucester: Job No - 2493

Figure 5

# NSW State Vegetation Type (Class)

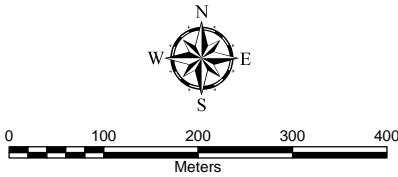


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- Subject site
- 100m buffer
- 140m buffer

- Vegetation Class**
- Coastal Valley Grassy Woodlands
  - Hunter-Macleay Dry Sclerophyll Forests
  - Northern Hinterland Wet Sclerophyll Forests
  - North Coast Wet Sclerophyll Forests
  - Rainforest

SOURCE:  
Cadastral Boundary: NSW Department of Finance,  
Services and Innovation 2024  
NSW Vegetation Type: NSW Department of Planning,  
Industry and Environment 2023  
Aerial Photo: Nearmap 25/06/2024



A3 Scale: 1:8,000

File:2493-Gloucester-Fig3-Vegetation-NSW-SVT-241022 Date: 22/10/2024

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### 3.2. Slope Assessment

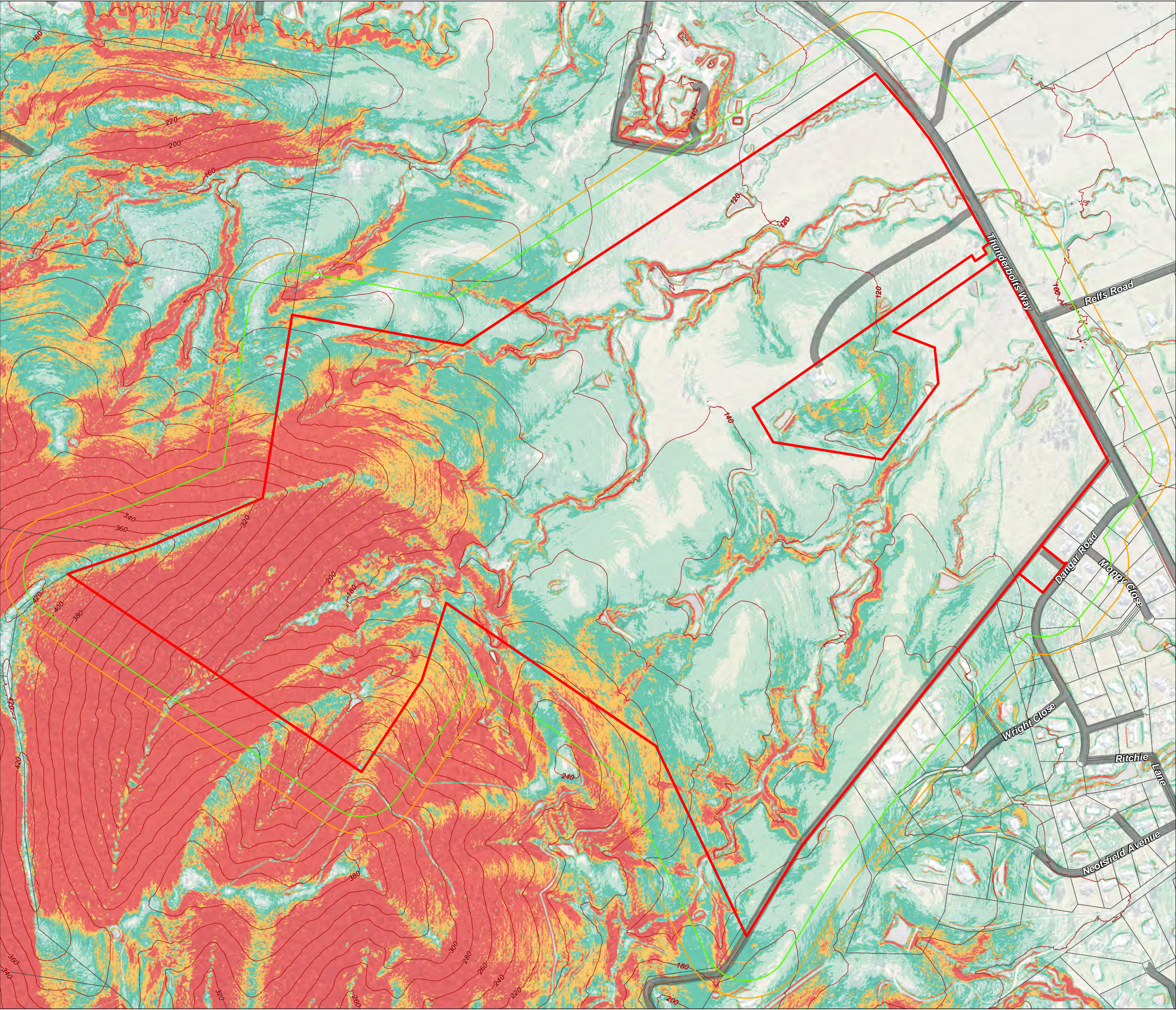
The slope assessment was undertaken as follows:

- ❑ Review of LiDAR point cloud data - including DEM (NSW LPI); and
- ❑ Detail survey of existing contours.

An assessment of the slope over a distance of 140m in the hazard direction from the site boundary was undertaken. The effective slope was then calculated under the classified vegetation where there was a fire run greater than 50m. The topography of the site has been evaluated to identify both the average slope and by identifying the maximum slope present. These values help determine the level of gradient which will most significantly influence the fire behaviour of the site.

The effective slope in all directions is shown in **Figure 6**, **Figure 7** and **Table 2**.





Project: Lot 252 DP 707512  
and Lot 47 DP 1267740  
Gloucester: Job No - 2493

Figure 6

# Slope Analysis: LiDAR

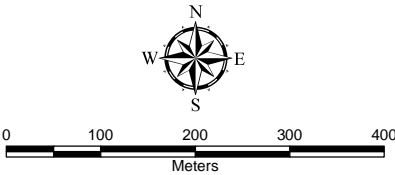


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AUSTRALIA

- Subject site
- 100m buffer
- 140m buffer
- Contour (20m)

- Slope
- 0° - 5°
  - 5° - 10°
  - 10° - 15°
  - 15° - 20°
  - >20°

SOURCE:  
Cadastral Boundary: NSW Department of Finance,  
Services and Innovation 2024  
Surface analysis: Derived from DUNGOG &  
UPPER MANNING 1m & 2m resolution LiDAR: ©  
Department Finance, Services and Innovation  
2018  
Aerial photo: Nearmap 25/06/2024



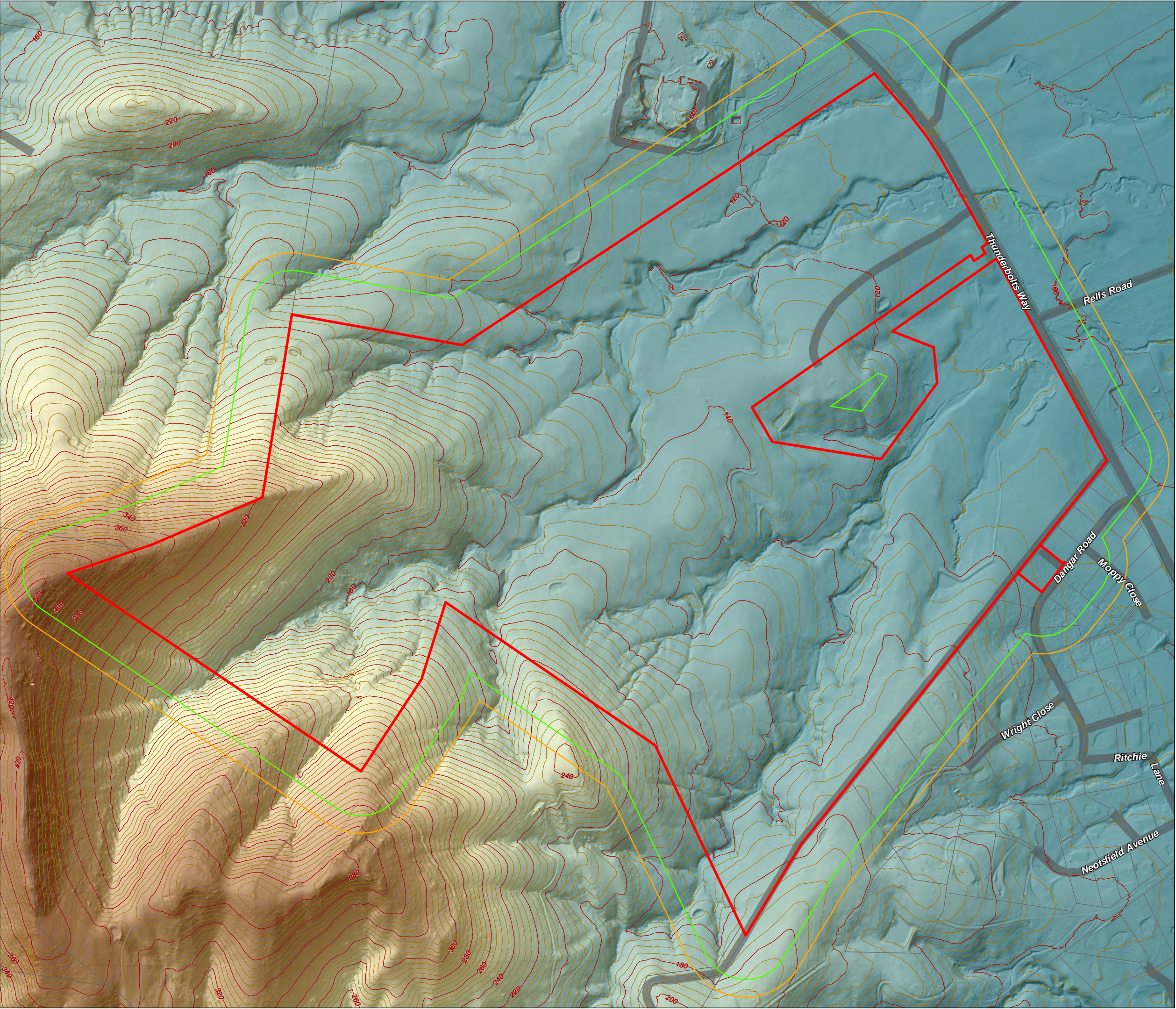
A3 Scale: 1:8,000

File:2493-Gloucester-Figs-SlopeLiDAR-241022 Date: 22/10/2024

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Project: Lot 252 DP 707512  
and Lot 47 DP 1267740  
Gloucester: Job No - 2493

# Figure 7

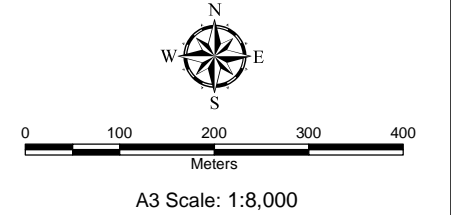
## Digital Elevation Model



BUSHFIRE  
PLANNING  
AUSTRALIA

- Subject site
- 100m buffer
- 140m buffer
- Contour (20m)
- Contour (5m)
- Elevation (AHD)
  - High : 430m
  - Low : 94m

SOURCE:  
Cadastral Boundary: NSW Department of Finance,  
Services and Innovation 2024  
Surface analysis: Derived from DUNGOG &  
UPPER MANNING 1m & 2m resolution LiDAR: ©  
Department Finance, Services and Innovation  
2018



File:2493-Gloucester-Fig4-DEM-241022 Date: 22/10/2024

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### 3.3. Results

The bushfire assessment is to determine whether the site's mapped characteristics were consistent with the actual slope and vegetation characteristics observed on the site.

It was confirmed the predominant vegetation classification presenting as the primary bushfire hazard within 140m to the north / north-west of Proposed Lot 471 was identified as a *grassland* vegetation formation in accordance with the descriptions contained in Keith (2004). Whilst there is evidence this vegetation is actively grazed, this assessment considers the potential of a bushfire hazard.

Vegetation that exists within Proposed Lot 472 consists of scattered *rainforest* and *woodland* vegetation, whilst the western portion of Proposed Lot 472 is an ecotone of *forest* and *rainforest* vegetation. The remainder of the site is consistent with *grassland* vegetation or grazed lands. Apart from the grassland vegetation identified within 140m of the Proposed Lot 471, all other vegetation within Proposed Lot 472 is greater than 140m and therefore not considered a bushfire hazard.

The vegetation formation is used to assess the hazard as shown in **Table 2** whilst the vegetation class and effective slope in all directions is shown in **Figure 8**.

**Table 2: Slope and Vegetation Assessment Results**

	Transect	Vegetation Description	Vegetation Classification (PBP 2019)	Slope
Proposed Lot 471	T1 North	Grassland vegetation north of Proposed Lot 1	<i>Grassland</i>	0.5° Downslope
	T2 North-west	Grassland vegetation north- west of Proposed Lot 1	<i>Grassland</i>	-0.2° Upslope
	T3 West	Grassland vegetation west of Proposed Lot 1	<i>Grassland</i>	-2.3° Upslope



Figure 8

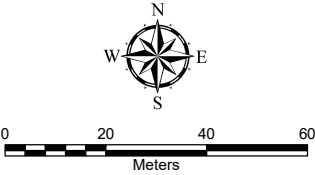
# Slope & Vegetation Assessment

(Lot 47 DP1267740)



<div></div>	Subject site	<b>Vegetation Class</b>
<div></div>	100m buffer	Grassland
<div></div>	140m buffer	Coastal Valley Grassy Woodlands
<div></div>	Proposed access	Rainforest
<div></div>	RL	Excluded – Low Threat Vegetation / Managed Land
<div></div>	Downslope transect	
<div></div>	Upslope transect	

SOURCE:  
Cadastral Boundary: NSW Department of Finance, Services and Innovation 2024  
Vegetation: Bushfire Planning Australia 2024  
Surface analysis: Derived from DUNGOG & UPPER MANNING 1m & 2m resolution LiDAR: © Department of Finance, Services and Innovation 2018  
Aerial Photo: Nearmap 25/06/2024



A3 Scale: 1:1,500

File:2493-Gloucester-Fig6b-SlopeVeg-DwellingLot-241030 Date: 30/10/2024

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### **3.4. Significant Environmental Features**

There are no known environmental features of significance within the development footprint or the balance of the site. The proposed subdivision does not require any physical works to separate existing site into individual parcels.

### **3.5. Threatened Species, populations or ecological communities**

The area of the site to be affected by the proposed development has been identified to minimise impact on any threatened species, population or EEC. All bushfire mitigation measures, including APZs, have considered the existing and potential biodiversity values to minimise impact where possible.

### **3.6. Aboriginal Objects**

A search of the AHIMS database (results contained in **Appendix B**) revealed there are no Aboriginal sites or places recorded in or near the subject site.

## 4. Bushfire Protection Measures

This BAR has adopted the methodology to determine the appropriate Bushfire Protection Measures (BPMs) detailed in PBP 2019. As part of the BAR, the recommended BPMs demonstrate the aims and objectives of PBP 2019 have been satisfied; including the matters considered by the RFS necessary to protect persons, property and the environment from the danger that may arise from a bushfire.

### 4.1. Asset Protection Zones

An Asset Protection Zone (APZ) is an area surrounding a development that is managed to reduce the bushfire hazard to an acceptable level to mitigate the risk to life and property. The required width of the APZ varies with slope and the type of hazard. An APZ can consist of both an inner protection area (IPA) and an outer protection area (OPA) as seen in **Figure 9** and **Figure 10**. In this instance it is recommended Proposed Lot 471 is managed as an IPA.

An APZ can include the following:

- ❑ Lawns;
- ❑ Discontinuous gardens;
- ❑ Swimming pools;
- ❑ Roads, driveways and managed verges;
- ❑ Unattached non-combustible garages with suitable separation from the dwelling;
- ❑ Open space / parkland; and
- ❑ Car parking.

The presence of a few shrubs or trees in the APZ is acceptable provided that they:

- ❑ Do not touch or overhang any buildings;
- ❑ Are well spread out and do not form a continuous canopy;
- ❑ Are not species that retain dead material or deposit excessive quantities of ground fuel in a short period or in a danger period; and
- ❑ Are located far enough away from any dwelling so that they will not ignite the dwelling by direct flame contact or radiant heat emission.

Woodpiles, wooden sheds, combustible material storage areas, large areas / quantities of garden mulch, stacked flammable building materials etc. are not recommended in the APZ.



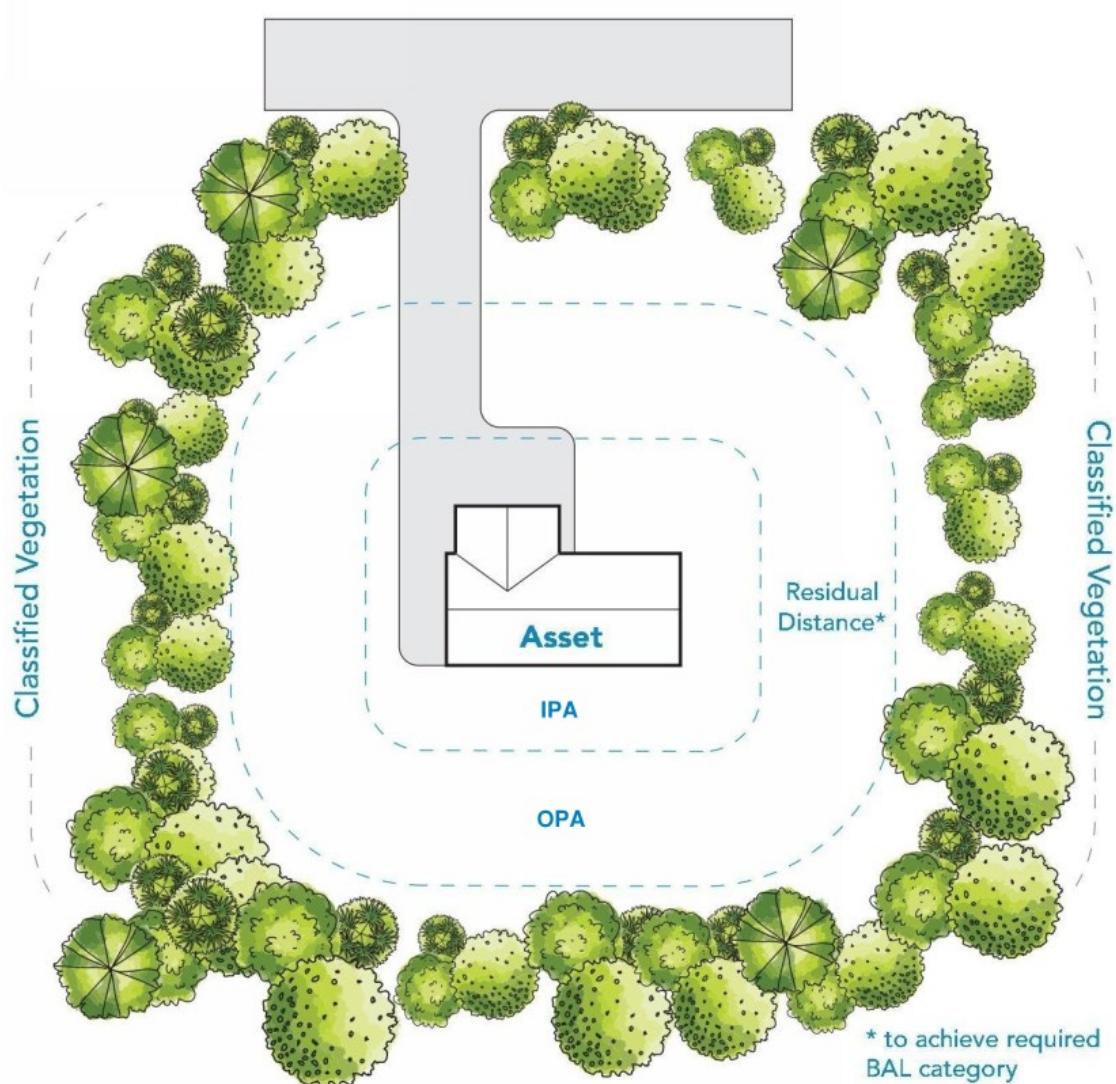


Figure 9: Asset Protection Zone Defined

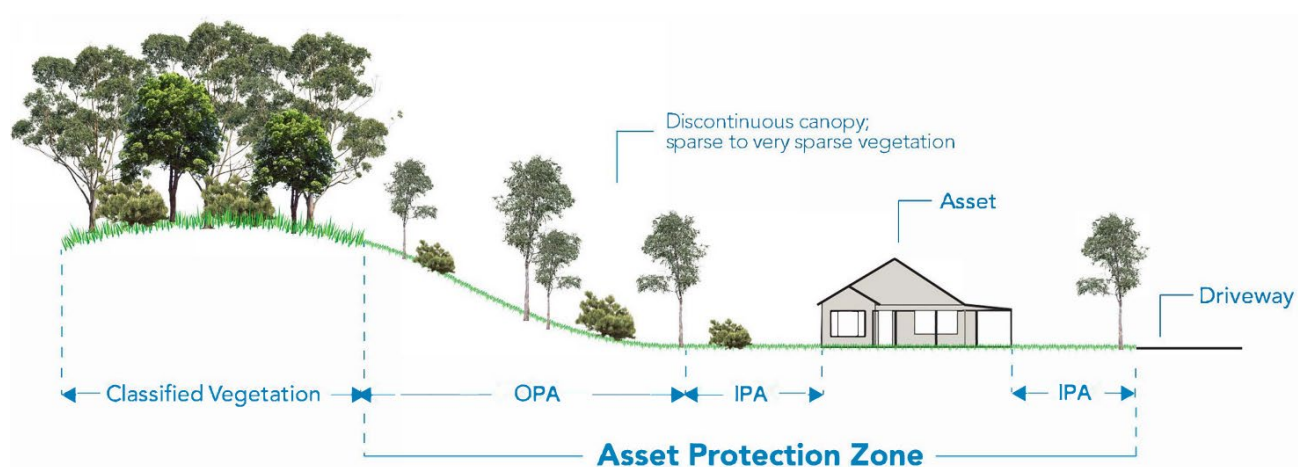


Figure 10: APZ profile

#### 4.1.1. Determining the Appropriate Setbacks

To achieve compliance with the performance criteria for APZs (Table 5.3a), the Acceptable Solutions outlined in Table A1.12.3 of PBP 2019 will be adopted as a deemed-to-satisfy solution.

As the site lies within the Mid-Coast Council LGA, it is assessed under a FDI rating of 80. To ensure the APZs achieve the intent of Section 5.3.1 of PBP 2019, the APZs have been determined to ensure any future dwelling on Proposed Lot 1 is not be exposed to radiant heat levels exceeding 29kW/m<sup>2</sup> as shown in Table 3.

The Proposed Lot 471 is primarily exposed to the risk of bushfire attack from the north / north-west, however as there is no development proposed on this lot, there is no requirement for an APZ to be established.

**Table 3: Potential APZ (Table A1.12.3)**

	Transect	Vegetation Classification (PBP 2019)	Slope	APZ PBP Table A1.2.3
Proposed Lot 1	T1 North	<i>Grassland</i>	Flat* (0.5° Downslope)	10m
	T2 North-west	<i>Grassland</i>	-0.2° Upslope	10m
	T3 West	<i>Grassland</i>	-2.3° Upslope	10m

\* Any slope less than 1 degree is considered insignificant and therefore has been assessed as 'Flat'.



## **4.2. Access**

Primary access to Proposed Lot 471 will continue to be provided directly from Dangar Road whilst access for Proposed Lot 472 will continue to be provided directly from Thunderbolts Way.

The proposed development will create a new public road frontage from Dangar Road connecting to the broader Proposed Lot 472.

## **4.3. Services - water, electricity and gas**

### **4.3.1. Water**

A reticulated water supply is able to be connected to both new lots in accordance with Table 5.3c of PBP 2019.

### **4.3.2. Electricity**

Any new electricity services will be located underground and connected to the existing overhead transmission line.

### **4.3.3. Gas**

Any reticulated or bottled gas will be installed and maintained according to the requirements of the relevant authorities and AS 1596-2002. It is expected that the location of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.

## **4.4. Landscaping and Vegetation Management**

There is no proposed landscaping within the proposed development.

## **4.5. Construction Standards - Bushfire Attack Level**

Whilst all new dwellings must comply with PBP 2019, the proposed subdivision does not seek consent for any new dwellings, nor will the subdivision generate any additional dwelling entitlements.

The objective of the subdivision is to create a new public road to connect from Dangar Road to Proposed Lot 472.

## 4.6. Emergency Services

There is a NSW Rural Fire Brigade located at 40 King Street, Gloucester approximately 3.3kms or 5 minutes away from the site (**Figure 12**) and will be first responders to an emergency at the proposed site. There is also a second NSW Fire & Rescue station located at 3-5 Lowe Street, Gloucester 5.8kms or 8 minutes away from the site (**Figure 13**).



Figure 11: NSW Fire & Rescue - Gloucester

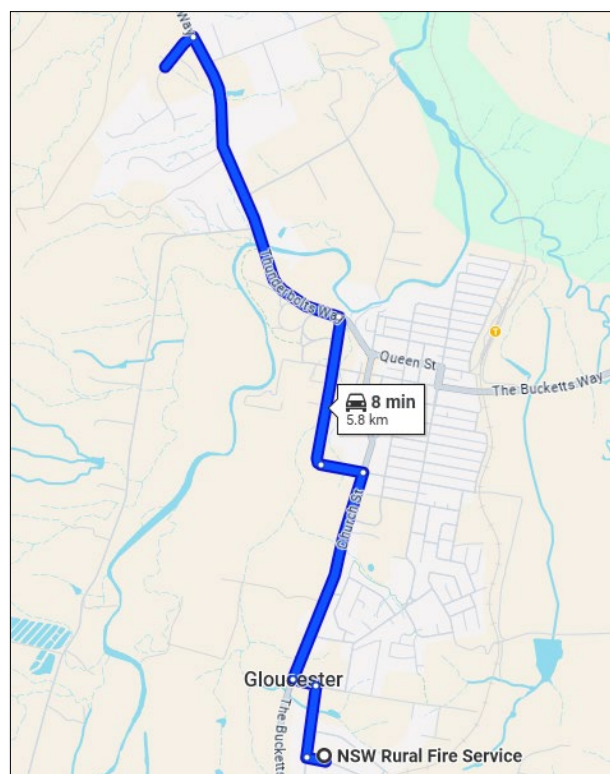


Figure 12: NSW Rural Fire Brigade - Gloucester





## 5. Conclusion and Recommendations

Bushfire Planning Australia (BPA) has been engaged by Site R&D Pty Ltd on behalf of Jim Dixon (the 'Client') to undertake a Bushfire Assessment Report (BAR) for a two (2) into two (2) rural residential lot subdivision (boundary adjustment) at 9 Dangar Road and 291 Thunderbolts Way, Gloucester. The proposed development includes Lot 47 DP1267740 and Lot 252 DP707512 respectively. Both sites are currently vacant and generally devoid of any remnant vegetation.

The proposed development will excise a portion of Lot 47 DP1267740 (Proposed Lot 471) to create a direct frontage to Dangar Road from Lot 252 DP707512 (Proposed Lot 472). The boundary adjustment is designed to make available a parcel of land suitable for the construction of a public road to provide a secondary access to Proposed Lot 472; as primary access is currently from Thunderbolts Way.

The following key recommendations are suggested to enable the proposed development to maintain an acceptable level of risk to the adjoining properties on Dangar Road:

1. All existing surface fuel (grass) within Proposed Lot 471 shall be regularly maintained to ensure the height of the vegetation does not exceed 100mm; and
2. Consideration should be given to landscaping and fuel loads on site to decrease potential fire hazards on site.

This assessment has been made based on the bushfire hazards observed in and around the site at the time of inspection and production (November 2024).

Should the above recommendations be implemented, the existing bushfire risk should be suitably mitigated to offer an acceptable level of protection to life and property for those persons and assets occupying the site but they do not and cannot guarantee that the area will not be affected by bushfire at some time.

## 6. References

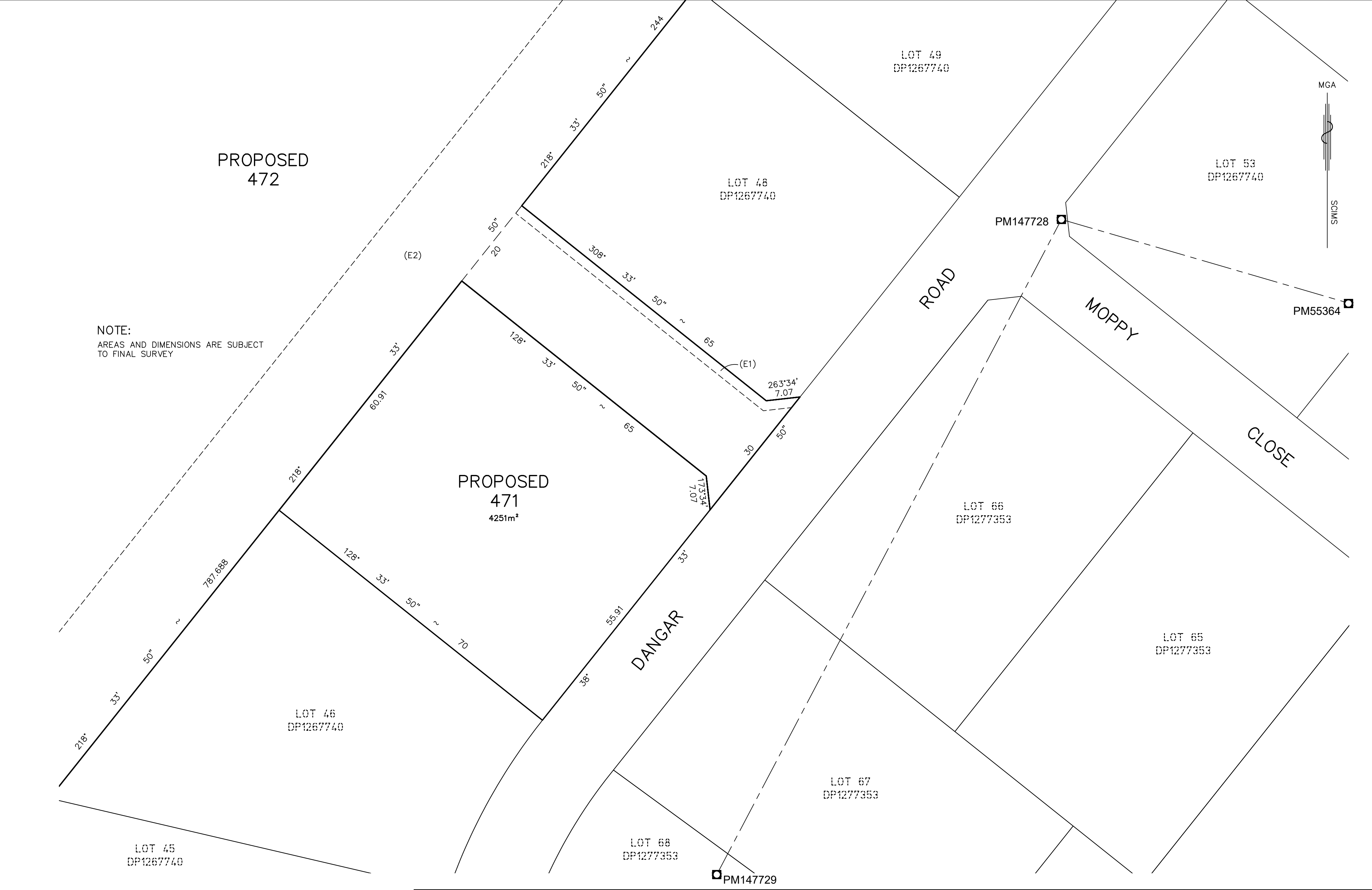
- ❑ Keith, D (2004). Ocean Shores to Desert Dunes – The Native Vegetation of New South Wales and the ACT.
- ❑ NSW Rural Fire Service (2005). Standards for Asset Protection Zones. NSW Rural Fire Service.
- ❑ NSW Rural Fire Service (2019). Planning for Bushfire Protection – A Guide for Councils, Planners, Fire Authorities, Developers and Home Owners.
- ❑ Ramsay, GC and Dawkins, D (1993). Building in Bushfire-prone Areas – Information and Advice. CSIRO and Standards Australia.
- ❑ Rural Fires and Environmental Assessment Legislation Amendment Act 2002.
- ❑ Standards Australia (2018). AS 3959 – 2018: Construction of Buildings in Bushfire-prone Areas.



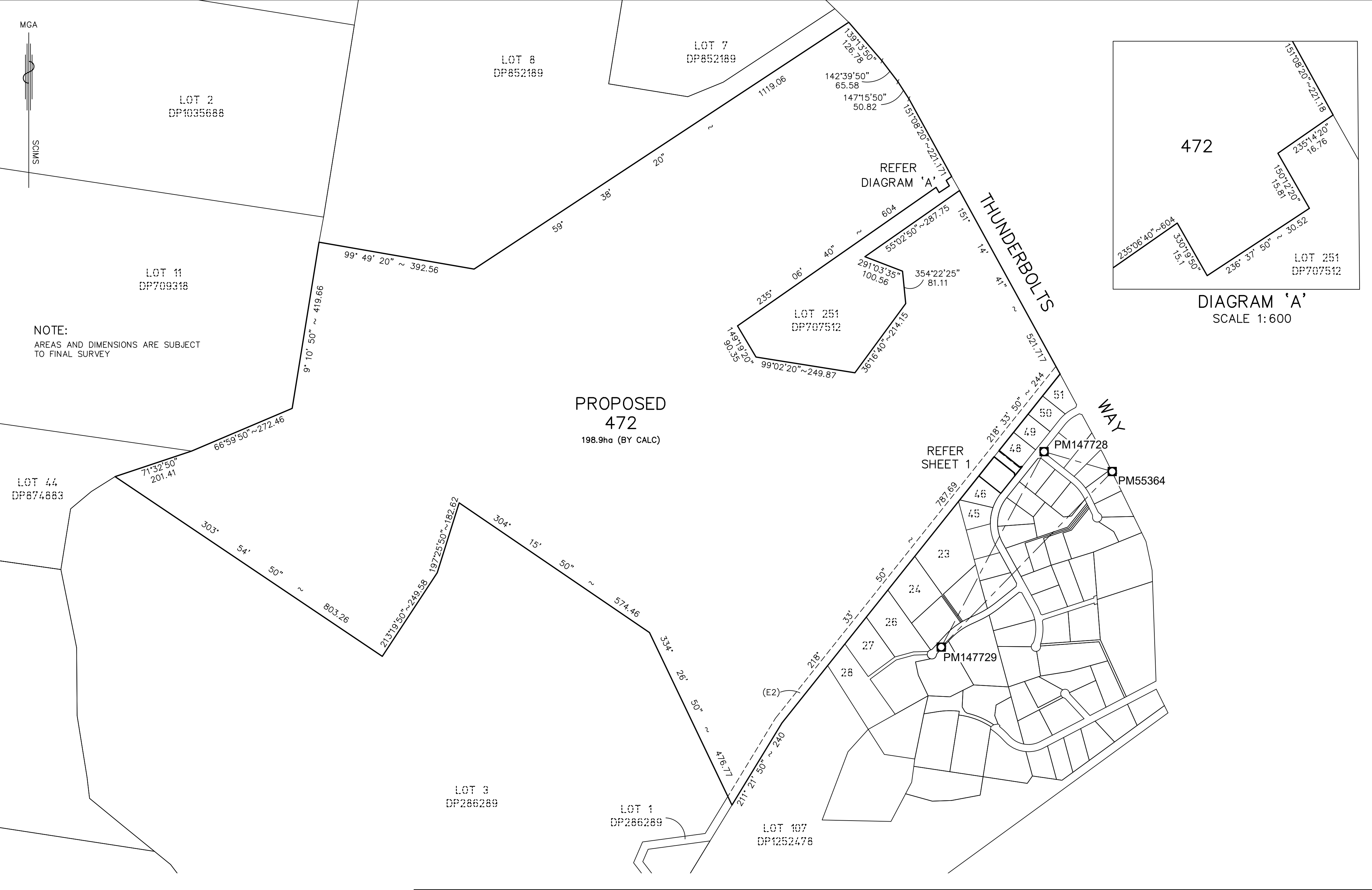


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## Appendix A: Proposed Plan of Subdivision







240497DPAA_01 REV 01 — 15/10/2024	(E2) RIGHT OF CARRIAGEWAY 20 WIDE (DP624055)	SURVEYOR Name: BENJAMEN JOHN BELFIELD MONTEATH & POWYS PTY LTD Date: --/--/2024 Reference: 240497DPAA	PLAN OF SUBDIVISION OF LOT 47 DP 1267740 AND LOT 252 DP 707512	LGA: MID-COAST Locality: GLOUCESTER Reduction Ratio: 1:500 Lengths are in metres.	REGISTERED	DP

PROPOSED  
472  
198.9ha (BY CALC)

NOTE:  
AREAS AND DIMENSIONS ARE SUBJECT  
TO FINAL SURVEY.  
  
BUILDING OFFSET IS APPROXIMATE ONLY  
AND HAS BEEN SCALED FROM AN AERIAL  
IMAGE, FURTHER SURVEY INVESTIGATION  
IS REQUIRED.

PROPOSED  
471  
4251m<sup>2</sup>

LOT 48  
DP1267740

LOT 49  
DP1267740

LOT 53  
DP1267740

MGA

SCIMS

PM55364

PM147728

ROAD

MOPPY

CLOSE

LOT 66  
DP1277353

LOT 65  
DP1277353

LOT 67  
DP1277353

LOT 68  
DP1277353

LOT 46  
DP1267740

LOT 45  
DP1267740

PM147729

SURVEYOR  
Name: BENJAMEN JOHN BELFIELD  
MONTEATH & POWYS PTY LTD  
Date: --/--/2024  
Reference: 240497DPAA

LOCALITY PLAN

LGA: MID-COAST  
Locality: GLOUCESTER  
Reduction Ratio: 1:500  
Lengths are in metres.

REGISTERED

DP

(E1) EASEMENT FOR UNDERGROUND POWER LINES 2 WIDE (DP1267740)  
(E2) RIGHT OF CARRIAGEWAY 20 WIDE (DP624055)

A240497AA\_01 REV 01 — 15/10/2024





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## Appendix B: AHIMS Search Results

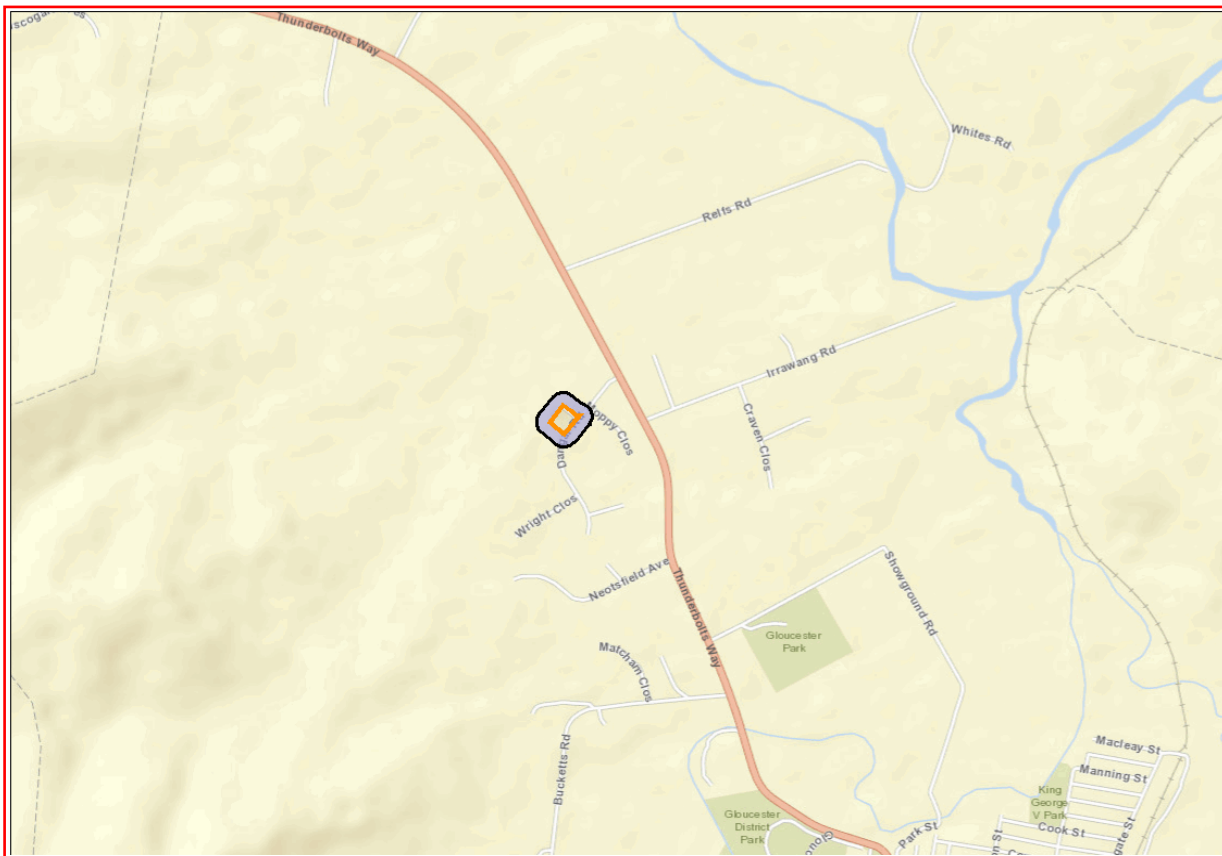
Katrina Greville  
 21 Costata Crescent  
 Adamstown New South Wales 2289  
 Attention: Katrina Greville  
 Email: klmukevski@bigpond.com

Date: 06 November 2024

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Lot : 47, DP:DP1267740, Section : - with a Buffer of 50 meters, conducted by Katrina Greville on 06 November 2024.**

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *



**If your search shows Aboriginal sites or places what should you do?**

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(https://www.legislation.nsw.gov.au/gazette\)](https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

**Important information about your AHIMS search**

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.



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## Appendix C: Planning for Bushfire Protection 2019 - Compliance Table



**Table 1: Aims and Objectives of Planning for Bushfire Protection 2019**

Objectives	Satisfied	Comment
➤ Afford buildings and their occupants protection from exposure to a bush fire	✓	Proposed Lot 471 (Lot 47 DP1267740) within the proposed development is provided with sufficient separation from the nearest bushfire hazard.
➤ Provide for a defensible space to be located around buildings	✓	Defensible space is able to be provided on Proposed Lot 471 for a future dwelling by a 10m APZ from Proposed Lot 472 to ensure radiant heat levels are below critical limits (29kW/m <sup>2</sup> ).
➤ Provide appropriate separation between a hazard and buildings, which, in combination with other measures, prevent the likely fire spread to buildings	✓	Appropriate separation and defensible is able to be provided by a 10m APZ will provide an acceptable level of protection and prevent the spread of fire to Proposed Lot 471; when required.
➤ Ensure that safe operational access and egress for emergency service personnel and residents is available	✓	Access to Proposed Lot 471 and Proposed Lot 472 will continue to be provided by Dangar Road and Thunderbolts Way respectively. The proposed development will provide the opportunity to construct a new public road directly from Dangar Road and a connection to Proposed Lot 472.
➤ Provide for ongoing management and maintenance of BPMs	✓	All owners will be responsible for the management and maintenance of the private property.
➤ Ensure that utility services are adequate to meet the needs of firefighters	✓	Future development will include all essential utility services to meet the needs of firefighters.

**Table 2: Performance Criteria and Acceptable Solutions for residential subdivisions (Chapter 5 PBP 2019)**

Intent of Measure	Performance Criteria	Acceptable Solution	Complies	Comment
			✓ - Acceptable Solution AS - Alternative Solution	
<b>5.3.1 ASSET PROTECTION ZONES</b>  Table 5.3a To provide sufficient space and maintain reduced fuel loads, so as to ensure radiant heat levels at buildings are below critical limits and to prevent direct flame contact with a building.	Potential building footprints must not be exposed to radiant heat levels exceeding 29kW/m <sup>2</sup> on each proposed lot.	APZs are provided in accordance with Tables A1.12.2 and A1.12.3 based on the FFDI.	✓	Proposed Lot 471 may be exposed to a maximum potential radiant heat level no greater than 29W/m <sup>2</sup> in accordance with PBP 2019.
	APZs are managed and maintained to prevent the spread of a fire towards the building.	The APZ is managed in accordance with the requirements of Appendix 4	✓	Proposed Lot 471 shall be managed as an IPA.
	The APZ is provided in perpetuity.	APZs are wholly within the boundaries of the development site.	✓	There are no exceptional circumstances that would require an APZ to be located external to the development site.
	APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is negated.	The APZ is not located on lands with a slope exceeding 18°	✓	The site and surrounding properties are flat (<5 degrees downslope).
<b>LANDSCAPING</b>	Landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions.	Landscaping is in accordance with APZ standards (see Appendix 4). Fencing is constructed in accordance with section 7.6.	✓	All future landscaping shall consider the requirements of APZs per Appendix 4. Any new fencing will be colorbond or similar non-combustible material.
<b>5.3.2 ACCESS (General Requirements) Table 5.3b</b> To provide safe operational access for emergency services personnel in suppressing a bush fire, while residents are accessing or egressing an area.	Fire fighters are provided with safe all weather access to structures	Property access roads are two-wheel drive, all-weather roads	✓	Access to Proposed Lot 471 and Proposed Lot 472 will continue to be provided by Dangar Road and Thunderbolts Way respectively. The objective of the proposed development is to provide a new public road directly from Dangar Road and a connection to Proposed Lot 472 (Lot 252 DP707512).
		Perimeter roads are provided for residential subdivisions of three or more allotments	✓	
		Subdivisions of three or more allotments have more than one access in and out of the development		
		Traffic management devices are constructed to not prohibit access by emergency services vehicles.	✓	
		Access roads must provide suitable turning areas in accordance with Appendix 3.	✓	



Intent of Measure	Performance Criteria	Acceptable Solution	Complies	Comment
			<b>✓ - Acceptable Solution</b> <b>AS - Alternative Solution</b>	
<b>ACCESS ROAD CAPACITY</b>	The capacity of access roads is adequate for firefighting vehicles.	The capacity of road surfaces and any bridges/causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes); bridges and causeways are to clearly indicate load rating.	✓	
<b>ACCESS TO WATER</b>	There is appropriate access to water supply.	Hydrants are located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression.	✓	A reticulated water supply is able to be provided.
		Hydrants are provided in accordance with AS2419.1:2005	✓	
		There is suitable access for Category 1 fire appliance to within 4m of the static water supply where no reticulated supply is available.	✓	
<b>PERIMETER ROADS</b>	Perimeter access roads are designed to allow safe access and egress for medium rigid firefighting vehicles while occupants are evacuating as well as providing a safe operational environment for emergency service personnel during firefighting and emergency management on the interface.	There are two-way sealed roads.	✓	The proposed development will provide a new public road directly from Dangar Road and a connection to Proposed Lot 472 (Lot 252 DP707512).
		8m carriageway width kerb to kerb.	✓	
		Hydrants are to be located clear of parking areas.	✓	
		There are through roads, and these are linked to the internal road system at an interval of no greater than 500m.	✓	
		Curves of roads have a minimum inner radius of 6m.	✓	
		The maximum grade road is 15° and average grade is 10°.	✓	
		The road crossfall does not exceed 3°.	✓	
		A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches; and	✓	

Intent of Measure	Performance Criteria	Acceptable Solution	Complies	Comment
			<b>✓ - Acceptable Solution</b> <b>AS - Alternative Solution</b>	
<b>NON-PERIMETER ROADS</b>	Non-perimeter access roads are designed to allow safe access and egress for medium rigid firefighting vehicles while occupants are evacuating.	Minimum 5.5m width kerb to kerb.	✓	No new non-perimeter roads are proposed as part of this development.
		Parking is provided outside of the carriageway.	✓	
		Hydrants are to be located clear of parking areas.	✓	
		There are through roads, and these are linked to the internal road system at an interval of no greater than 500m.	✓	
		Curves of roads have a minimum inner radius of 6m.	✓	
		The maximum grade road is 15° and average grade is 10°.	✓	
		The road crossfall does not exceed 3°.	✓	
		A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches; and	✓	
<b>5.3.3 SERVICES</b> <b>Table 5.3c</b>  To provide adequate services for water for the protection of buildings during and after the passage of a bushfire, and not to locate gas and electricity so as not to contribute to the risk of fire to a building.	Adequate water supplies is provided for firefighting purposes	Reticulated water is to be provided to the development, where available	✓	A reticulated water supply is able to be provided.
		A static water supply is provided where no reticulated water is available	N/A	
		Static water supplies shall comply with Table 5.3d	N/A	
	Water supplies are located at regular intervals  The water supply is accessible and reliable for firefighting operations	Fire hydrant spacing, design and sizing comply with AS2419.1:2005;	✓	
		Hydrants are not located within any road carriageway;	✓	
		Reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads.	✓	
<b>WATER</b>				

Intent of Measure		Performance Criteria	Acceptable Solution	Complies	Comment
				<b>✓ - Acceptable Solution</b> <b>AS - Alternative Solution</b>	
	Flows and pressures are appropriate		Fire hydrant flows and pressures comply with AS2419.1:2005.	✓	
	The integrity of the water supply is maintained		All above ground water service pipes are metal, including and up to any taps.	<b>Able to comply</b>	
<b>ELECTRICITY</b>	Location of electricity services limits the possibility of ignition of surrounding bushland or the fabric of buildings.		Where practicable, electrical transmission lines are underground.	✓	Any new electricity services will be located underground.
			Where overhead electrical transmission lines are proposed as follows: → lines are installed with short pole spacing (30 metres), unless crossing gullies, gorges or riparian areas; and → no part of a tree is closer to a power line than the distance set out in accordance with the specifications in ISSC3 Guideline for Managing Vegetation Near Power Lines	<b>N/A</b>	
<b>GAS</b>	Location of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.		Reticulated or bottled gas is installed and maintained in accordance with AS 1596:2014 and the requirements of relevant authorities, metal piping is to be used.	✓	Any new gas connections will be underground and will be unlikely to create an additional hazard risk to surrounding bushland.
			All fixed gas cylinders are kept clear of all flammable materials to a distance of 10 metres and shielded on the hazard side.		
			Connections to and from gas cylinders are metal		
			Polymer-sheathed flexible gas supply lines are not used; and		
			Above-ground gas service pipes are metal, including and up to any outlets.		