

Date: 09/02/2024

Our Ref: BR-682523-A

BUSH FIRE ASSESSMENT

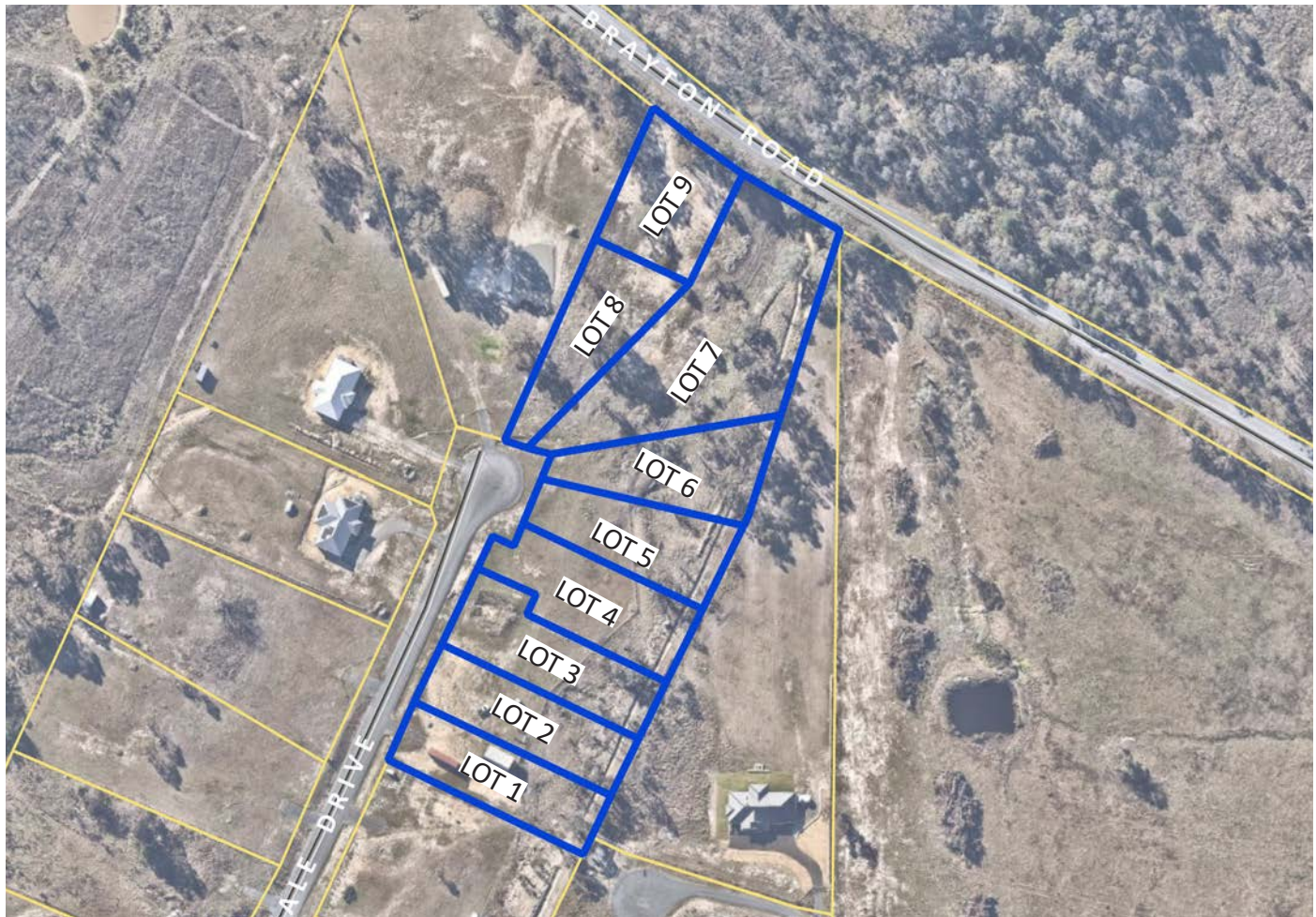
84 Corriedale Drive Marulan 2579

Assessed as: Residential Subdivision

Prepared by: Matthew Noone | BPAD Accreditation Number: BPAD-PD 25584

Site Address: 84 Corriedale Drive Marulan 2579 | Lot / DP: (Lot 26/-/DP1271846)

Project Description: Rural Residential Subdivision (One Lot into Nine)



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REPORT NUMBER
BR-682523-A

Date: 09/02/2024

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BAL ASSESSMENT CERTIFICATION

Provided to support the Development Application

84 Corriedale Drive Marulan 2579

Prepared by: Matthew Noone | BPAD Accreditation Number: BPAD-PD 25584




Site Address: 84 Corriedale Drive Marulan 2579 | Lot / DP: (Lot 26/-/DP1271846)

Project Description: Rural Residential Subdivision (One Lot into Nine)

PBP Development Type: Subdivision

I hereby certify that:

1	I (Matthew Noone) am a person recognised by the NSW Rural Fire Service as a qualified consultant in bushfire risk assessment holding accreditation with the Fire Protection Association (BPAD-PD 25584).
2	Subject to the recommendations contained in the attached Bushfire Risk Assessment Report the proposed development conforms to the relevant specifications and requirements *.
*	The relevant specifications and requirements being; specifications and requirements of 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 s.4.14 of the Environmental Planning and Assessment Act 1979.
*	The development complies with the relevant specifications and requirements. RFS referral is required.
3	I am aware that the Bushfire Assessment Report, prepared for the above mentioned site is to be submitted in support of a development application for this site and will be relied upon by Council as the basis for ensuring that the bushfire risk management aspects of the proposed development have been addressed in accordance with Planning for Bushfire Protection (2019).

CERTIFICATE NUMBER BR-682523-A			FPAA Accreditation Number BPAD-PD 2558 
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DOCUMENT TRACKING

Issue Date	Issued to	Description	Version
09/02/2024	AKT Engineering & Consulting	Issued for DA.	A (Draft 1)

DISCLAIMER and TERMS OF USE

“It should be borne in mind that the measures contained in this Standard cannot guarantee that a building will survive a bushfire event on every occasion. This is substantially due to the degree of vegetation management, the unpredictable nature of behaviour of fire, and extreme weather conditions.” (AS3959 2018).

Bushfire Planning & Design cannot be held liable for the loss of life or property caused by a bushfire event. This report has considered the relevant planning instruments, bushfire constructions codes and practices applicable at the time of writing. Should additional information be provided after this report has been issued, we reserve the right to review and if necessary modify our report. Bushfire Planning and Design has no control over workmanship, buildings degrade over time and vegetation if not managed will regrow. In addition legislation and construction standards are subject to change. Due to significant variance of bushfire behaviour, we do not guarantee that the dwelling will withstand the passage of bushfire even if this development is constructed to the prescribed standards.

This report has been based on our interpretation of Planning for Bushfire Protection (2019), AS3959 (2018) and the methodology for site specific bushfire assessment. As a consultant, our view can be subjective. Our opinions may differ from the opinions provided by you the Client (or Client Representative), the Council, the RFS or another bushfire consultant. The Rural Fire Service (RFS) has a higher authority and can upon their review, increase a nominated BAL-rating or entirely reject a development proposal. Any such recommendations made by the RFS take precedence. Our role is intermediary between our Client (or Client Representative) and the consenting authority. We apply our knowledge of the relevant bushfire protection standards to provide the best possible outcome for our Client (or Client Representative), both from a bushfire safety and financial perspective. Should the RFS modify our recommendations or reject the proposal to which this report relates to we will not be held liable for any financial losses as a result. By using this document, you the Client (or Client Representative) agree to and acknowledge the above statements

Bushfire Planning and Design accepts no liability or responsibility for any use or reliance upon this report and its supporting material by any unauthorized third party. The validity of this report is nullified if used for any other purpose than for which it was commissioned. Unauthorized use of this report in any form is deemed an infringement of our intellectual property. By using this document to support your development you the Client (or Client representative) agree to these terms.

TABLE OF CONTENTS

06	PART A - BACKGROUND AND BRIEFING NOTES
07	A.01 BUSHFIRE PRONE LAND
08	A.02 DEVELOPMENT PROPOSAL
09	A.03 REGULATORY FRAME WORK
10	A.04 SITE LOCATION, DESCRIPTION AND POTENTIAL BUSHFIRE THREATS
11	A.05 LAND USE, ZONING AND PERMISSIBILITY
12	A.06 SIGNIFICANT ENVIRONMENTAL FEATURES
12	A.07 DETAILS OF ABORIGINAL HERITAGE
12	A.08 THREATENED SPECIES, COMMUNITIES AND CRITICAL HABITATS
14	A.09 REPORT LIMITATIONS
15	PART B - BUSHFIRE ATTACK LEVEL (BAL) ASSESSMENT
15	B.01 INTRODUCTION
15	B.02 SLOPE DETERMINATION
15	B.03 HOW THE VEGETATION COVER IS MEASURED
15	B.04 PREDOMINANT VEGETATION FORMATIONS
17	B.05 BUSHFIRE ATTACK LEVEL (BAL) ASSESSMENT.
19	PART C BUSHFIRE PROTECTION MEASURES
20	C.01 ASSET PROTECTION ZONES (APZs)
21	C.02 ASSET PROTECTION ZONES (APZs) RECOMMENDATIONS
23	C.03 CONSTRUCTION
24	C.04 ACCESS
26	C.05 WATER
27	C.06 ELECTRICITY & GAS
28	C.07 RECOMMENDATIONS
29	PART D SUMMARY
31	D.01 REFERENCES
31	D.02 APPENDICES

GLOSSARY

The abbreviations that are commonly used are explained below. Not all are present in this report.

APZ	Asset Protection Zone
AS3959	Australian Standard for the Construction of a Building in a Bushfire Prone Area
BAL	Bushfire Attack Level
BCA	Building Code of Australia
BFPL	Bush Fire Prone Land
BFPLM	Map Bush Fire Prone Land Map
BFDB	Bush Fire Design Brief
BPM	Bush Fire Protection Measure
DA	Development Application
DCP	Development Control Plan
DPIE	Department Of Planning, Industry And Environment
DTS	Deemed to Satisfy
EPA ACT	Environmental Planning And Assessment Act 1979
FDI	Fire Danger Index
FFDI	Forest Fire Danger Index
GFDI	Grassland Fire Danger Index
IPA	Inner Protection Area
LEP	Local Environmental Plan
NASH	National Association of Steel Framed Housing
NCC	National Construction Code
OPA	Outer Protection Area
PBP	Planning for Bush Fire Protection
RF ACT	Rural Fires Act
RF REG	Rural Fires Regulation
NSW RFS	New South Wales Rural Fire Service
SEPP	State Environmental Planning Policy
SFPP	Special Fire Protection Purpose
SFR	Short Fire Run
SSD	State Significant Development

PART A - BACKGROUND AND BRIEFING NOTES

Prior to establishing the Bushfire Attack Level and compliance with Planning for Bushfire Protection and AS3959, it is necessary to discuss the following items.

A.01 BUSHFIRE PRONE LAND

A.02 DEVELOPMENT PROPOSAL

A.03 REGULATORY FRAME WORK

A.04 SITE LOCATION, DESCRIPTION AND POTENTIAL BUSHFIRE THREATS

A.05 LAND USE, ZONING AND PERMISSIBILITY

A.06 SIGNIFICANT ENVIRONMENTAL FEATURES

A.07 DETAILS OF ABORIGINAL HERITAGE

A.08 THREATENED SPECIES, COMMUNITIES AND CRITICAL HABITATS

A.09 BIODIVERSITY VALUES

A.10 REPORT LIMITATIONS

A.01 BUSHFIRE PRONE LAND

The subject site whether in whole or part is recorded as bushfire affected on a relevant map certified under Section 10.3 (2) of the Environmental Planning and Assessment Act 1979 (Refer figure A.01). All developments on certified bushfire prone are required to address bushfire as per 4.14 Environmental Planning and Assessment Act 1979.

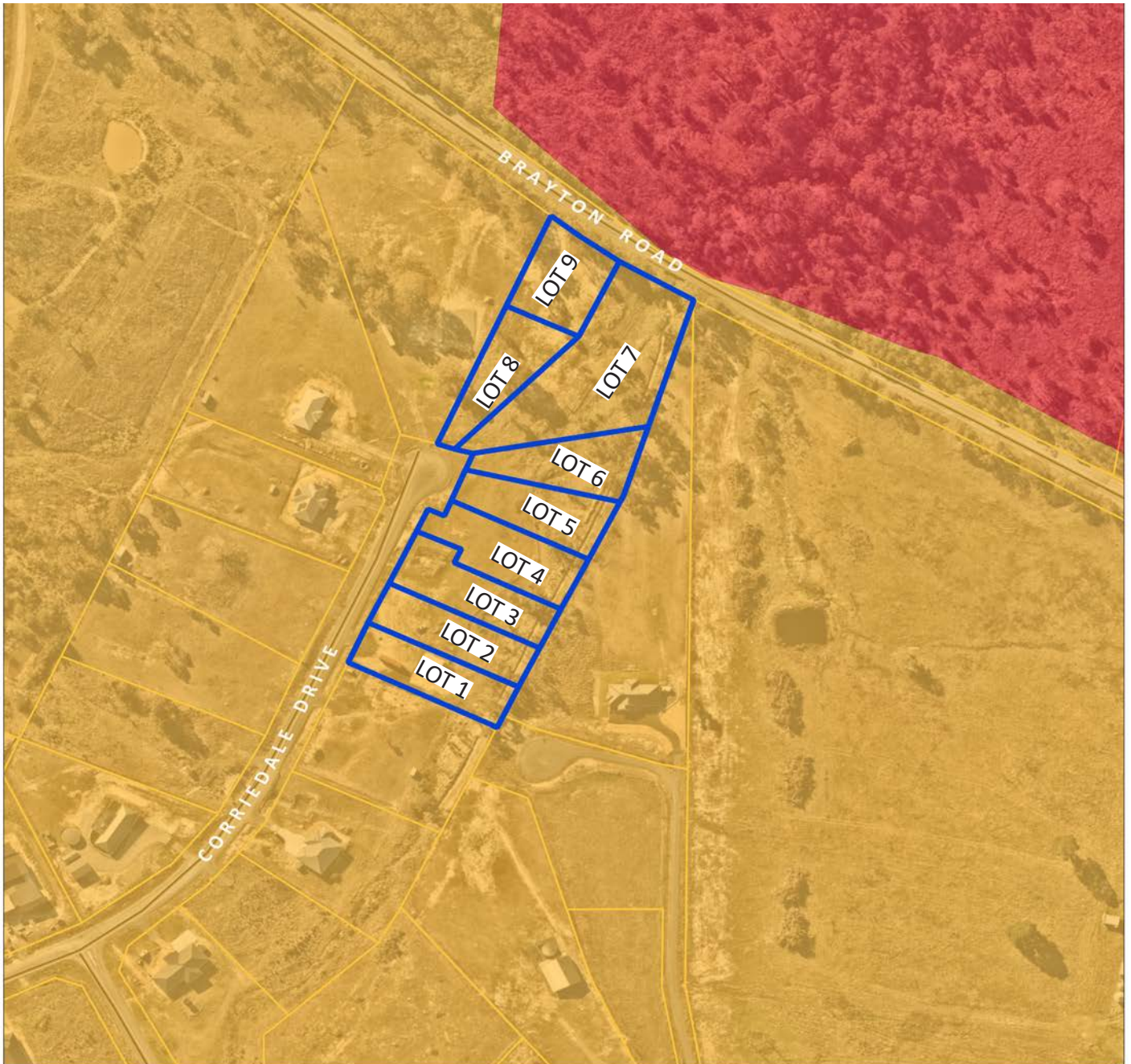
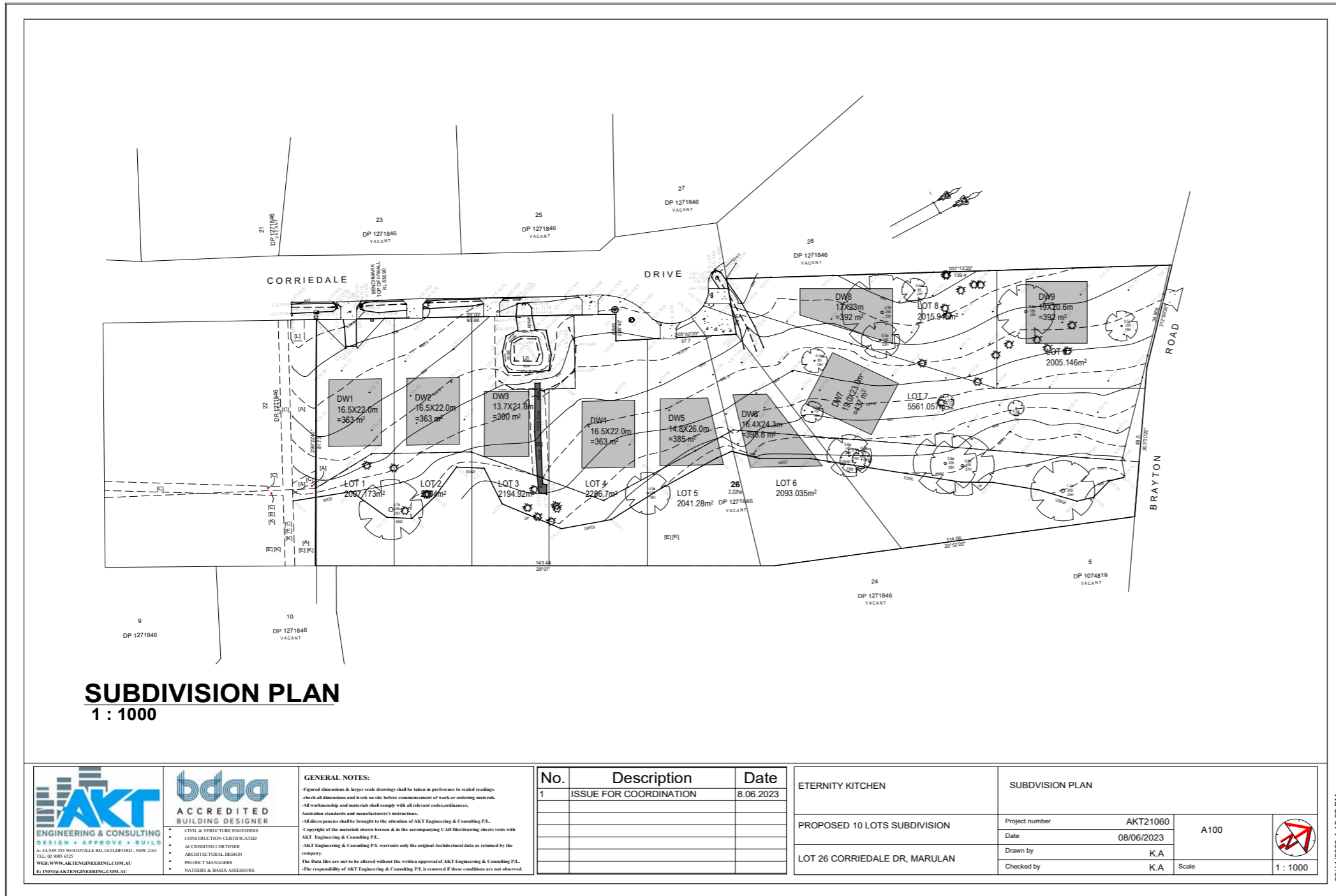


FIGURE A.01 BUSHFIRE PRONE LAND MAP	Plot date:09/02/2024	Project CRS: EPSG:28356
<ul style="list-style-type: none"> Buffer 0 Category 1 Category 2 Category 3 	<p>0 40 80 120 160 m</p> <p>Meters</p>	<h1 style="writing-mode: vertical-rl; transform: rotate(180deg);">A.01</h1>
	<p>BUSHFIRE PLANNING & DESIGN bpad.matthew.noone@gmail.com / 0406077222</p>	

A.02 DEVELOPMENT PROPOSAL

The development relates to the subdivision of Lot 26/-/DP1271846 into nine allotments.



The development includes but is not limited to the following;

- Rural Residential Subdivision
- One Lot into Nine Residential Allotments

Concept Drawing

A.03 REGULATORY FRAME WORK

Bushfire Prone Land:

The subject site whether in whole or part is recorded as bushfire affected on a relevant map certified under Section 10.3 (2) of the Environmental Planning and Assessment Act 1979. The development relates to the development of bushfire prone land and therefore must address the legislative requirements stipulated in Section 100B Rural Fires Act 1997.

100B Rural Fires Act 1997:

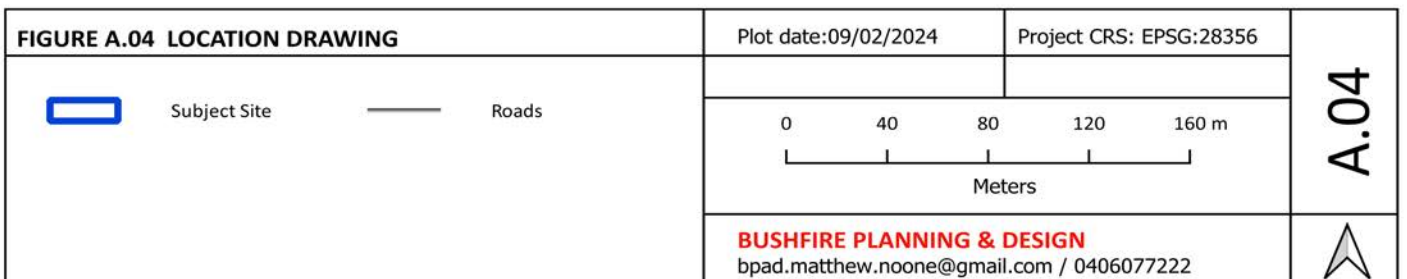
100B	Bush fire safety authorities.
(1)	The Commissioner may issue a bush fire safety authority for—
	(a) a subdivision of bush fire prone land that could lawfully be used for residential or rural residential purposes, or
	(b) development of bush fire prone land for a special fire protection purpose.
(2)	A bush fire safety authority authorises development for a purpose referred to in subsection (1) to the extent that it complies with standards regarding setbacks, provision of water supply and other matters considered by the Commissioner to be necessary to protect persons, property or the environment from danger that may arise from a bush fire.
(3)	A person must obtain such a bush fire safety authority before developing bush fire prone land for a purpose referred to in subsection (1).
(4)	Application for a bush fire safety authority is to be made to the Commissioner in accordance with the regulations.

Rural Fires Regulation 2022:

45	Application for bush fire safety authority —the Act, s 100B
(1)	For the purposes of the Act, section 100B(4), an application for a bush fire safety authority must be made in writing.
(2)	An application for a bush fire safety authority must include the following—.....”

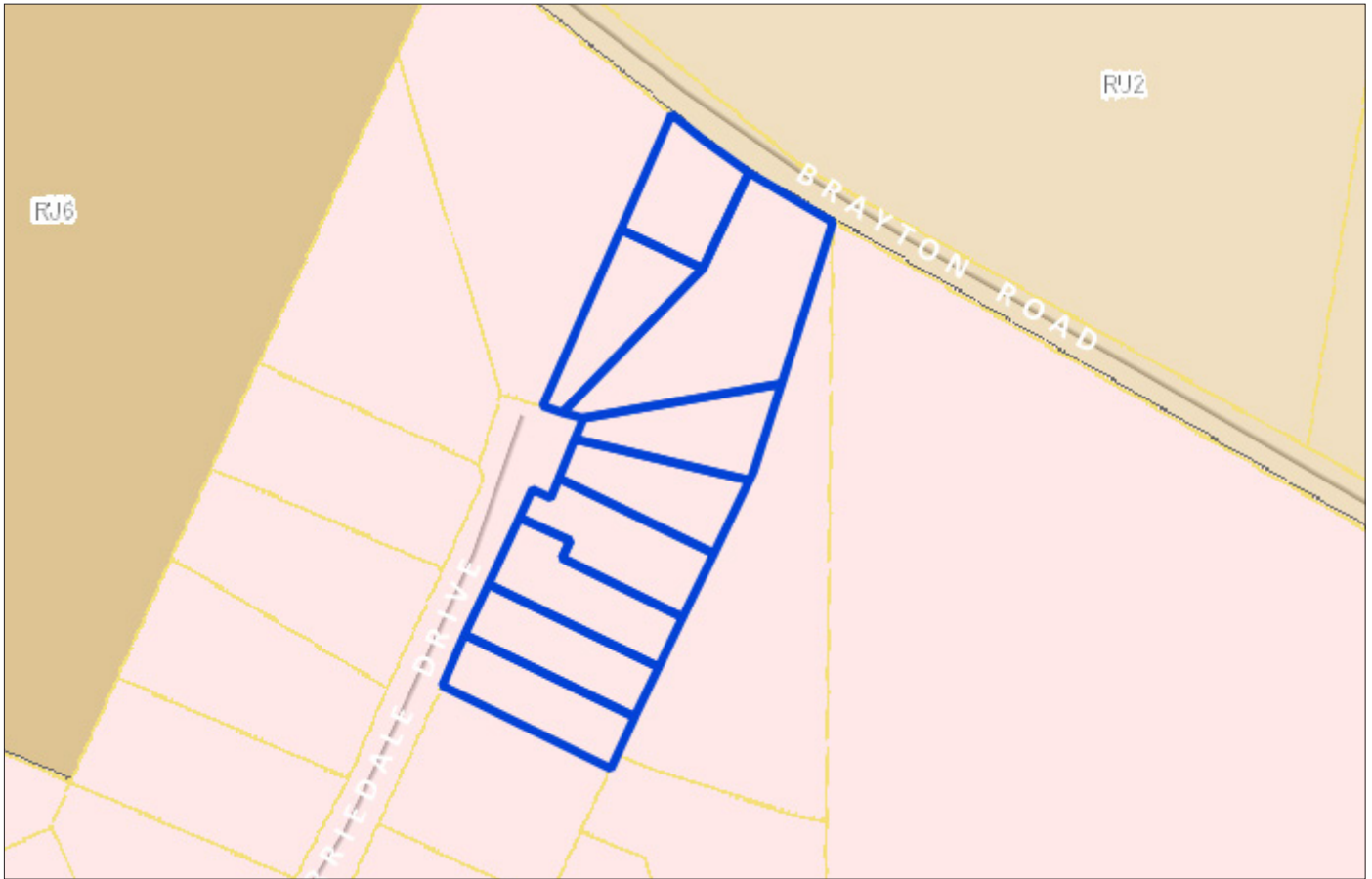
A.04 SITE LOCATION, DESCRIPTION AND POTENTIAL BUSHFIRE THREATS

The subject site is located in Marulan which is within the Goulburn Mulwaree Local Government Area (LGA). The parent allotment is currently vacant. Woodland vegetation is located to the north of Brayton Road and also to the east of the subject site. The land between the Woodland vegetation to the east and the subject site is a managed residential allotment. Proposed lots 1-9 will be accessed via Corriedale Drive. Proposed Lot 9 will be accessed via Brayton Road to the north.



A.05 LAND USE, ZONING AND PERMISSIBILITY

The subject site is zoned R5 Large Lot Residential.



LAND ZONING LEGEND

 B1 Neighbourhood Centre	 IN1 General Industrial	 RU1 Primary Production
 B2 Local Centre	 IN2 Light Industrial	 RU2 Rural Landscape
 B3 Commercial Core	 IN3 Heavy Industrial	 RU3 Forestry
 B4 Mixed Use	 IN4 Working Waterfront	 RU4 Primary Production Small Lots
 B5 Business Development	 R1 General Residential	 RU5 Village
 B6 Enterprise Corridor	 R2 Low Density Residential	 RU6 Transition
 B7 Business Park	 R3 Medium Density Residential	 SP1 Special Activities
 B8 Metropolitan Centre	 R4 High Density Residential	 SP2 Infrastructure
 C1 National Parks & Nature Reserves	 R5 Large Lot Residential	 SP3 Tourist
 C2 Environmental Conservation	 RE1 Public Recreation	 UR Urban
 C3 Environmental Management	 RE2 Private Recreation	 DM Deferred Matter
 C4 Environmental Living	 RO Regional Open Space	
 CA Complex Area	 RP Regional Park	

A.06 SIGNIFICANT ENVIRONMENTAL FEATURES

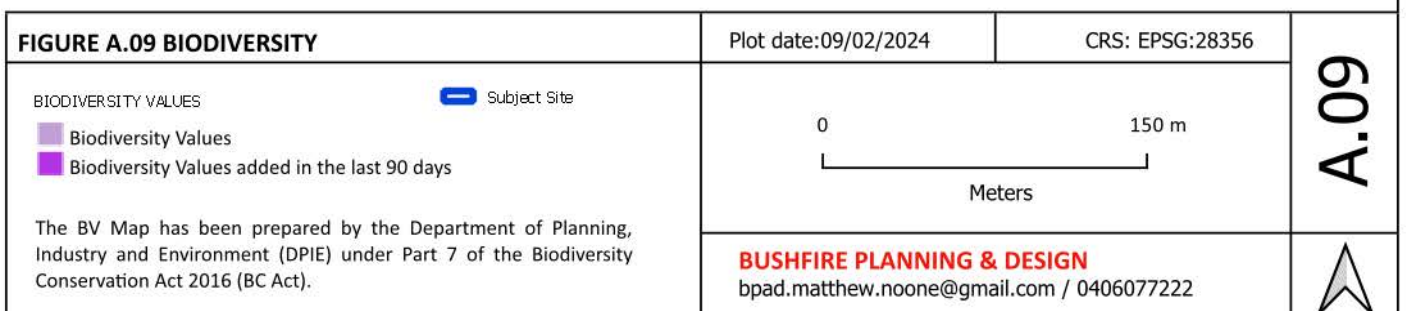
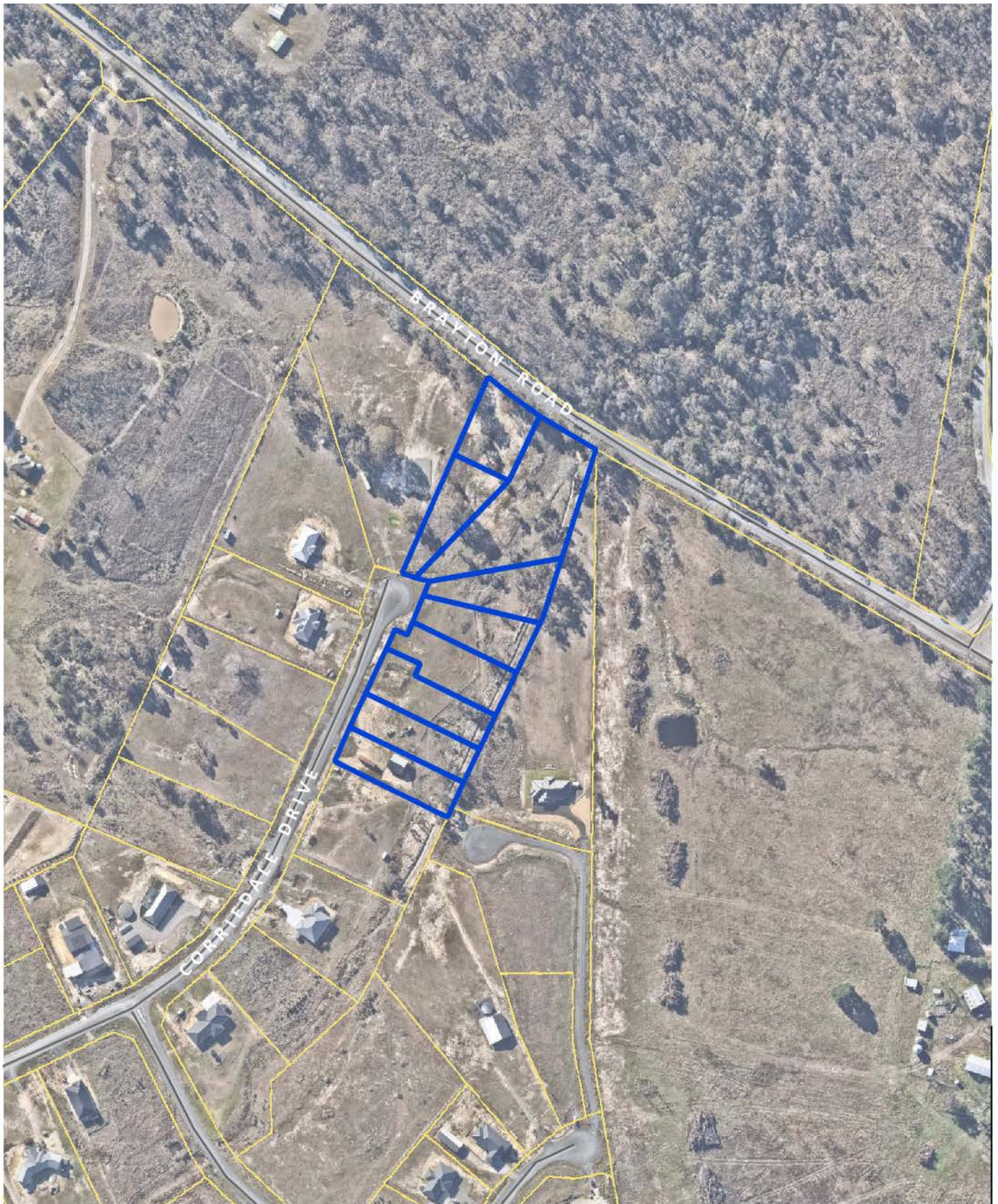
From a bushfire protection perspective, there are no significant environmental features within the subject site. The vacant allotment is occupied by grassland with scattered trees.

A.07 DETAILS OF ABORIGINAL HERITAGE

To our knowledge the site is not associated with any items of Aboriginal heritage.

A.08 THREATENED SPECIES, COMMUNITIES AND CRITICAL HABITATS

The subject site is not mapped by the Department of Planning, Industry and Environment (DPIE) under Part 7 of the Biodiversity Conservation Act 2016 (BC Act) as having Biodiversity Values (BV). There is no BV mapped land within the proposed development area. Refer to Figure A.09.



A.09 REPORT LIMITATIONS

This bushfire assessment is developed based on the current accepted standards. The severity of bushfire attack is reliant on many variables. Due to these variables the bushfire attack on any given day could be higher due to the limitations outline below. The bushfire protection measures contained in this document does not guarantee that loss of life, injury or property damage will not occur during a bush fire event.

Fire Danger Index

It may be possible that days of higher Fire Danger Index (FDI) may be experienced than the FDI levels used for assessment. This may result in fire situations where conditions challenge survivability of buildings and their occupants.

Fuel Load

The fuel loads and vegetation classes used in our assessment are based on the State Vegetation Mapping and Comprehensive Fuel Loads based on The University of Wollongong's (UoW) Fuels Modelling Project. Fuel loads in some areas may be higher than those used in this document. This can influence bush fire behaviour and the potential impact on property. The DTS APZs in PBP (2019) are based on the UoW fuel loads and are therefore suitable for design purposes.

Climate change

Climate change has led to longer, more intense fire seasons and an increase in the average number of elevated fire weather days, as measured by the Forest Fire Danger Index (FFDI). Last year saw the highest annual accumulated FFDI on record. Australia was the first country in the world to report the impact of climate change on bushfires through CSIRO's work to model the increase in high fire danger days.

Legislative Standards

Recommendations relating to development of bushfire prone land are a directive through the legislative standards applicable at the time of writing. Legislative standards change over time. All recommendations made are based on the current standards. We cannot guarantee that the current standards will be suitable in comparison to future standards.

Maintenance

After the issuance of an Occupancy Certificate (OC) it is imperative that the bushfire protection recommendations are carried out for the life of the development. Failure to maintain a property in accordance with the RFS standards for Asset Protection Zones could lead to the failure of the building, property and life. We have no control over the extent of how well a property will be maintained post OC.

B.01 INTRODUCTION

For the purpose of this bushfire assessment, the vegetation is required to be described to a distance of 140m from the boundary and the slope to 100m from boundary. Vegetation type and slope under vegetation are the factors that will significantly affect bushfire behaviour.

‘Research has shown that 85% of houses are lost in the first 100m from bushland and that ember attack is a significant form of attack on properties’ (RFS 2006).

B.02 SLOPE DETERMINATION

The effective slope has been assessed for a distance of at least 100m from the proposed development. The slope data has been calculated from a 1m LiDAR Digital Elevation Model (DEM). The source data sets have been captured to standards that are generally consistent with the Australian ICSM LiDAR Acquisition Specifications which require a fundamental vertical accuracy of at least 0.30m (95% confidence) and horizontal accuracy of at least 0.80m (95% confidence). The slope arrows indicated in figure A represent the slope calculated across the length of the arrow direct from the digital elevation model. The calculated slope as shown in Figure A has not been manipulated or modified in any way.

B.03 HOW THE VEGETATION COVER IS MEASURED

The distance to the vegetation is measured from the extent of vegetation cover interpolated from high resolution aerial imagery. This is the most conservative way to map the vegetation. A site visit was not undertaken.

B.04 PREDOMINANT VEGETATION FORMATIONS

This assessment considers the vegetation within the site and if relevant, vegetation external to the site boundaries. Where mixes of vegetation formations are located together, the vegetation formation providing the greater hazard (highest radiant heat load) shall be used to determine the BAL and APZ. The combination of vegetation and slope that yields the worst case scenario shall be used (A1.2 PBP 2019). The vegetation mapping provides an overview of the types of vegetation proximal to the site. The vegetation mapping shown in Figure B.04 is not intended to be conclusive.

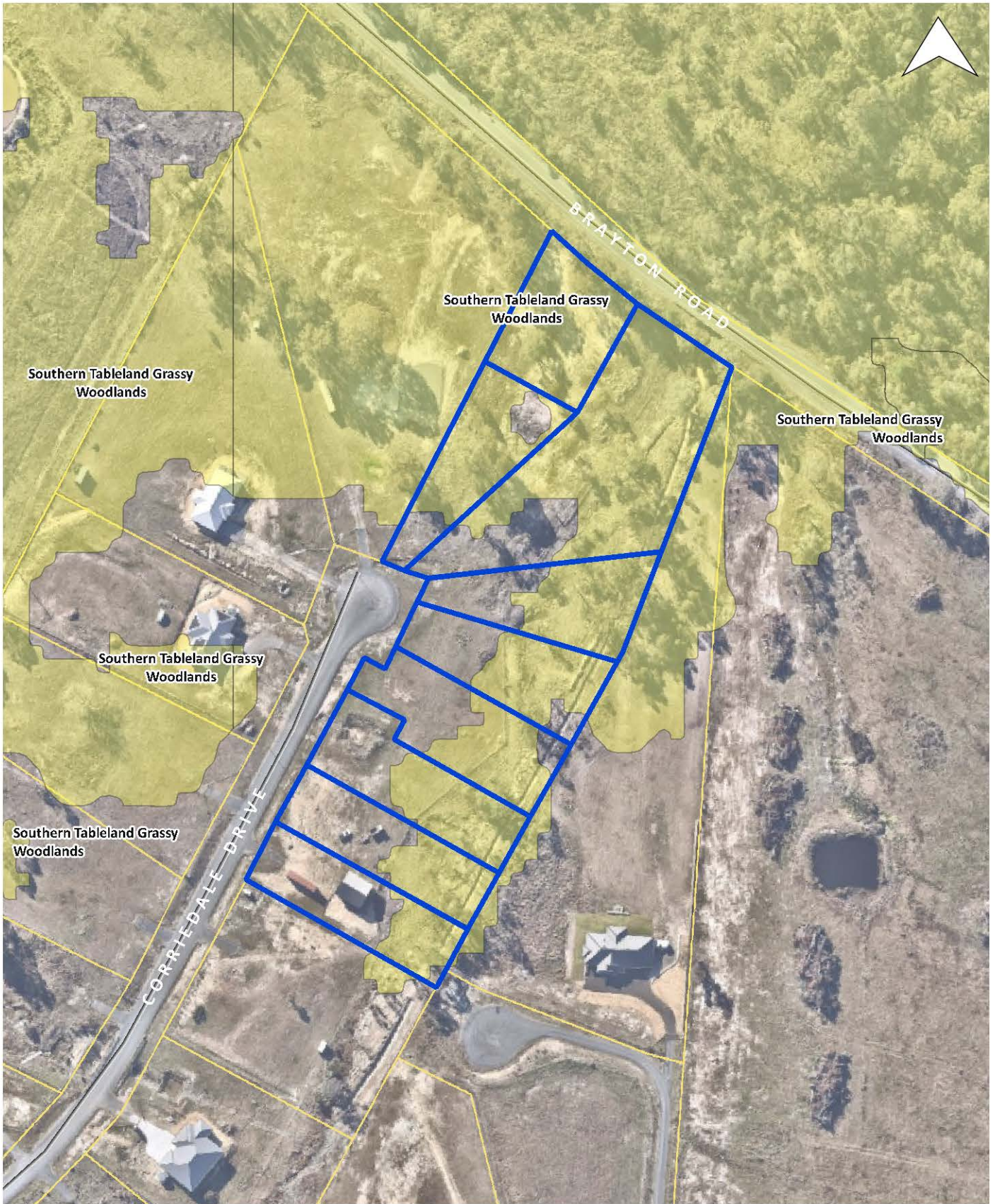


FIGURE B.04 VEGETATION CLASS

Subject Site
 Grassy Woodlands

CRS: EPSG:28356

Plot date: 09/02/2024

0 Meters 100 m

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B.05 BUSHFIRE ATTACK LEVEL (BAL) ASSESSMENT.

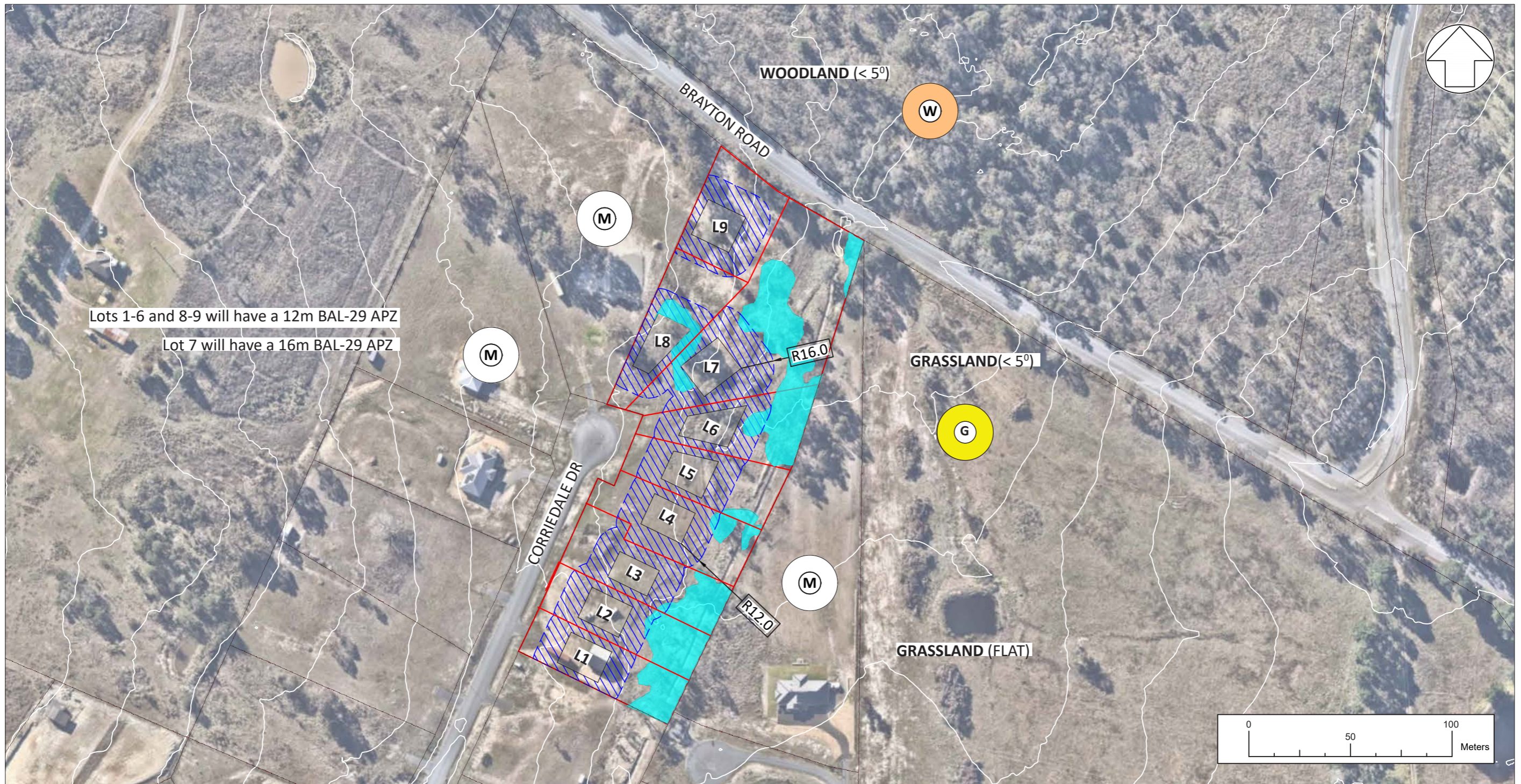
To clarify the findings below, Woodland vegetation is located to the north and east of the subject site. The adjoining block to the east of the subject site is a managed residential allotment. The land to the west of Corriedale Drive is managed land.

Based on the parameters identified in Table 1 below and as depicted in Figure A, a building envelope that achieves a maximum predicted radiant heat load less than 29 kW/m² in the event of a bushfire can be provided within all nine allotments.

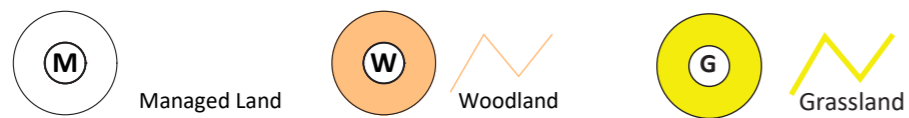
TABLE 1 (To be read in conjunction with Figure A).						
LGA = Goulburn Mulwaree Council				Forest Fire Danger Index = FDI 100		
ASPECT ¹	Vegetation Class ²	Max Effective Slope ³	Site slope ³	Required APZ ⁴	Proposed APZ / EML ⁵	BAL-Rating
E, N	Woodland	0-5° D-S	N/A	16-23m	> 16m	BAL-29
E, SE	Woodland	U-S (Flat)	N/A	12-18m	> 12m	BAL-29
W	Managed residential land					

Abbreviations		
AOD All other directions	EML Extent of managed land	NVC Narrow vegetation corridor

¹	<i>Cardinal direction from each proposed building facade based on grid north.</i>
²	<i>Vegetation Classifications are as described in PBP (2019) A1.2.</i>
³	<i>Site slope is calculated from 1m LiDAR contours.</i>
⁴	<i>Minimum APZ required stated as Acceptable Solutions within Table 1.12.2 and A1.12.5. PBP (2019).</i>
⁵	<i>Actual dimensional setback from the face of the building to the assessed vegetation. Achieved Asset Protection Zone (APZ) or extent of managed land (EML).</i>
⁶	<i>Where the direct line of sight between the proposed building and assessed vegetation is obstructed (by a wall or building) the assessed rating can be lowered by one BAL-rating (PBP 2019, s. A1.8).</i>
⁷	<i>Remnant bushland and narrow vegetation corridors (NVC) as stated in PBP (2019) s.A1.11 can be assessed as rainforest as a simplified approach or be assessed as Short Fire Run using method 2 (AS3959).</i>
⁸	<i>Deeming provisions for grassland s.7.9 PBP (2019).</i>



VEGETATION KEY (Not all used in this drawing)



DRAWING LEGEND



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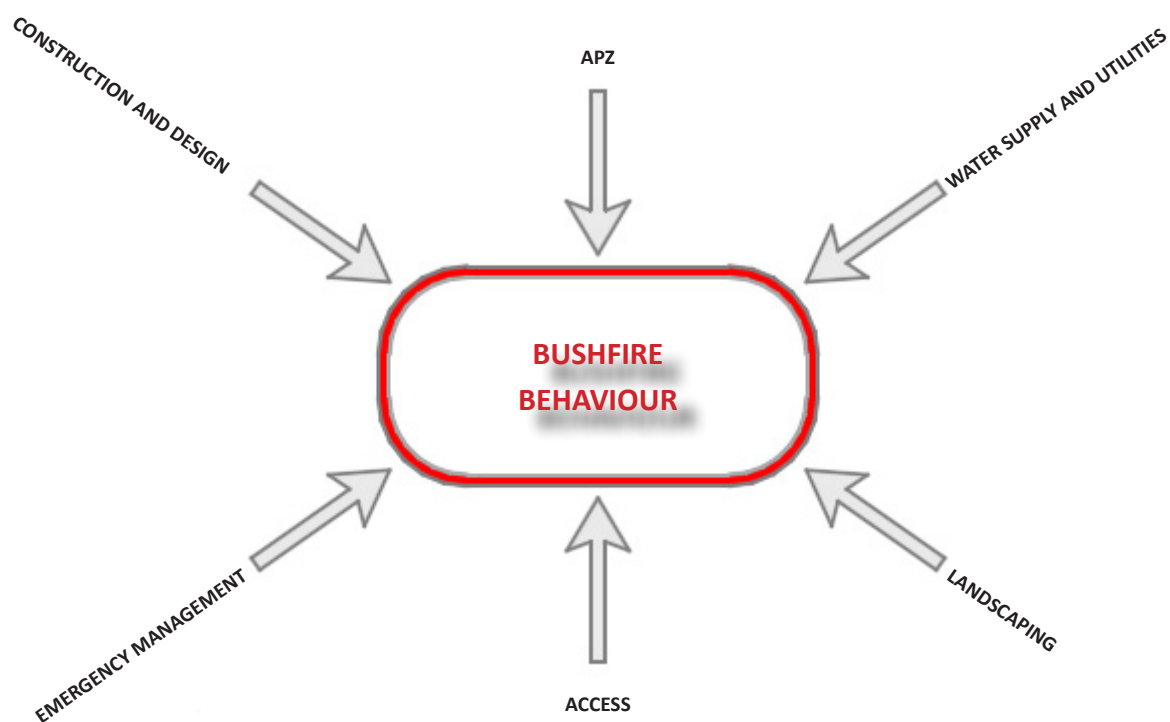
bpad.matthew.noone@gmail.com
 0406077222

Figure:

A

PART C BUSHFIRE PROTECTION MEASURES

BPMs can mitigate the impact of bush fire attack on people and assets. The types of protection measures include APZs, access, landscaping, water supply, building design and construction and emergency management arrangements. These measures assist building survival during a bush fire. They also contribute to the safety of firefighters and members of the community occupying buildings during the passage of a bush fire front. There are a range of different BPMs which should be applied in combination based upon the development type and the level of bush fire risk. All requirements for BPMs that relate to the development must be provided, as required by this document.



C.01 ASSET PROTECTION ZONES (APZs)

C.03 CONSTRUCTION

C.04 ACCESS

C.05 WATER

C.06 ELECTRICITY & GAS

C.01 ASSET PROTECTION ZONES (APZs)

APZ Intent of measures: to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting fire fighting activities.

The asset protection zones (APZ) recommendations in this report have been derived from the methodology of A1.12.2 or A1.12.3 in Appendix 1 of PBP (2019). Asset protection zones and in particular the Inner Asset Protection Zones are critical for providing defensible space and reducing flame length and rate of spread (PBP 2019). APZs are designed to provide sufficient open space for emergency workers to operate and for occupants to egress the site safely. They are divided into Inner and Outer Asset Protection Zones (IPAs and OPAs) and are required to be maintained for the life of the development. The IPA provides for defensible space and a reduction of radiant heat levels at the building line and the OPA provides for the reduction of the rate of spread and filtering of embers.

PERFORMANCE CRITERIA (PBP 2019)

- APZs are to be provided commensurate with the construction of the building.
- A defensible space is to be provided.
- APZs are to be managed and maintained to prevent the spread of a fire to the building.
- The APZ is to be provided in perpetuity.
- APZ maintenance is to be practical, soil stability is not compromised and the potential for crown fires is minimised.

Refer to our APZ discussion and recommendations on page 21.

C.02 ASSET PROTECTION ZONES (APZs) RECOMMENDATIONS

There is sufficient space within the proposed allotments to provide an asset protection zone (APZ). A 12m APZ is required and can be achieved within proposed lots 1-6 and lots 8-9. A 16m APZ is required and can be achieved within proposed lot 7. These separation distances will provide for a maximum predicted radiant heat load of 29 kW/m² in the event of a bushfire. The development therefore satisfies the maximum 29 kW/m² requirement for residential subdivision.

3.1 - INNER APZ (IPA) GUIDELINES

The Inner APZ (IPA) is the managed area closest to the asset (eg. dwelling). The IPA is managed to minimal fuel conditions and aims to mitigate the impact of direct flame contact and radiant heat on the development. The IPA also aims to provide defensible space.

TREES

- Canopy cover should be less than 15% (at maturity) within the Inner APZ.
- Trees (at maturity) should not touch or overhang the building.
- Lower limbs should be removed up to a height of 2m above ground.
- Canopies should be separated by 2 to 5m (horizontal and or vertical displacement).
- Preference should be given to smooth barked and evergreen trees.

SHRUBS

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

GRASS

- Should be kept mown (as a guide grass should be kept to no more than 100mm in height).
- Leaves and vegetation debris should be removed.

3.2 - OUTER APZ (OPA) GUIDELINES

The Outer APZ (OPA) is the part of the APZ that is located between the IPA and the bushfire vegetation threat. The reduction in the available fuels and canopy connections in the OPA aims to mitigate the intensity of an approaching fire and restricts the pathways to crown fuels thus reducing the level of direct flame, radiant heat and ember attack on the IPA and asset (dwelling).

TREES

- Canopy cover should be less than 30% (at maturity) within the Outer APZ.
- Trees should have canopy separation canopies should be separated by 2 to 5m.

SHRUBS

- Shrubs should not form a continuous canopy.
- Shrubs should form no more than 20% of ground cover.

C.03 CONSTRUCTION

PERFORMANCE CRITERIA (PBP 2019)

This application relates to the subdivision of the land only. All future infill development is required to provide a site specific bushfire report or BAL-Certificate to ascertain the required Bushfire Attack Level. This report should not be used to support future infill development.

Space left intentionally blank.

C.04 ACCESS

Intent of measures: To provide safe operational access for emergency services personnel in suppressing a bush fire, while residents are accessing or egressing an area.

PERFORMANCE CRITERIA (PBP 2019)

- Fire-fighting vehicles are provided with safe, all-weather access to structures and hazard vegetation.
- The capacity of access roads is adequate for fire-fighting vehicles.
- There is appropriate access to water supply.
- Fire-fighting vehicles can access the dwelling and exit the property safely.

ACCESS - GENERAL REQUIREMENTS

The public road system is suitable for emergency response vehicles. Proposed Lots 1-8 are accessed from Corriedale Drive. Proposed Lot 9 is the only allotment that will be accessed via Brayton Road to the north. Provide the following where applicable

BPB (2019) access for subdivision	Complies
- Property access roads to be two-wheel drive, all-weather roads.	Y
- Perimeter roads to be provided for residential subdivisions of three or more allotments.	N*
- Subdivisions of three or more allotments have more than one access in and out of the development.	N*
- Maximum grades for sealed roads do not exceed 15 degrees and an average grade of not more than 10 degrees or other gradient specified by road design standards, whichever is the lesser gradient.	Y
- All roads to be through roads.	N/A
- Dead end roads are not recommended, but if unavoidable, are not more than 200m in length, incorporate a minimum 12m outer radius turning circle, and are clearly sign posted as a dead end.	N/A
- Where kerb and guttering is provided on perimeter roads, roll top kerbing should be used to the hazard side of the road.	N/A
- Where access/egress can only be achieved through forest, woodland and heath vegetation, secondary access shall be provided to an alternate point on the existing public road system.	N/A
- One way only public access roads to be no less than 3.5 metres wide.	N/A
- The capacity of perimeter and non-perimeter road surfaces and any bridges/causeways to be sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes); bridges / causeways are to clearly indicate load rating.	N/A

* See additional comments in relation to access provisions on page 25.

-	Hydrants to be located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression.	N/A
-	Hydrants to be provided in accordance with the relevant clauses of AS 2419.1:2005 - Fire hydrant installations System design, installation and commissioning.	N/A
-	Provided suitable access for a Category 1 fire appliance to within 4m of the static water supply where no reticulated supply is available.	N/A

ADDITIONAL COMMENTS IN RELATION TO ACCESS PROVISIONS

There is no proposed perimeter road. The intent of the perimeter road is to provide RFS access to the bushfire prone vegetation. The block to the east of the subject site is a managed residential block. Providing a perimeter road will not provide any additional bushfire protection benefit. The proposed access provisions for this development are similar to recently approved subdivisions to the west and south west (e.g., these do not have perimeter roads).

C.05 WATER

Intent of measures: 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.

WATER - SPECIFIC REQUIREMENTS

The proposed development can comply with the PBP (2019) with regards to water requirements. The proposed allotments will rely on tank water. The following points are to be adhered to for the life of the development.

ADDITIONAL COMMENTS IN RELATION TO THE PROVISION OF WATER

The proposed development can comply with PBP (2019). All allotments are less than 10,000m² in size. Reticulated water is not available on Corriedale Drive. Each allotment is required to have 10,000L of water for fire fighting purposes.

C.06 ELECTRICITY & GAS

Intent of measures: To locate gas and electricity so as not to contribute to the risk of fire to a building.

PERFORMANCE CRITERIA (PBP 2019)

- Location of electricity services is to limit the possibility of ignition of surrounding bush land or the fabric of buildings.
- Location and design of gas services is not to not lead to the ignition of surrounding bushland or the fabric of buildings.

ELECTRICITY (RFS RECOMMENDATIONS FOR CONSIDERATION)

Generally the electrical frame work will be an existing condition. Should there be a need to install new electrical connections the following should be considered;

- Where practicable place electrical transmission lines are underground or,
- If overhead electrical transmission lines are proposed:- 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 'Vegetation Safety Clearances' issued by Energy Australia (NS179, April 2002).
- No part of a tree is to be closer to a power line than the distance set out in accordance with the specifications in ISSC3 Guideline for Managing Vegetation Near Power Lines.

GAS SUPPLY RECOMMENDATIONS (IF APPLICABLE)

Should the Applicant wish to install a gas supply to the dwelling or structure, the following criteria are to be complied with.

- Reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 and the requirements of relevant authorities, and metal piping is to be used.
- All fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side.
- Connections to and from gas cylinders are to be metal.
- Polymer-sheathed flexible gas supply lines are not to be used.
- Above-ground gas service pipes are to be metal, including and up to any outlets.

C.07 RECOMMENDATIONS

The development is required to be referred to NSW Rural Fire Service. RFS will provide their requirements in their General Terms of Approval letter to Council. Provided Council agrees with the RFS recommendations, Council will reference the RFS requirements in the DA consent.

Once Council receives the RFS General Terms of Approval letter this report and any recommendation within becomes obsolete and is no longer to be used or referenced unless directed otherwise by in the RFS General Terms of Approval.

PART D SUMMARY

The development relates to the subdivision of Lot 26/-/DP1271846 into nine allotments.

For the purpose of bushfire assessment and pursuant of clause 4.46 of the EP&A Act 1979 and 100B of the Rural Fire Act 1997, this project is considered to be an integrated development and is required to be referred to the RFS for their approval and issuance of a Bushfire Safety Authority (BFSA).

The subject site is located in Marulan which is within the Goulburn Mulwaree Local Government Area (LGA). The parent allotment is currently vacant. Woodland vegetation is located to the north of Brayton Road and also to the east of the subject site. The land between the Woodland vegetation to the east and the subject site is a managed residential allotment. Proposed lots 1-9 will be accessed via Corriedale Drive. Proposed Lot 9 will be accessed via Brayton Road to the north.

There is sufficient space within the proposed allotments to provide an asset protection zone (APZ). A 12m APZ is required and can be achieved within proposed lots 1-6 and lots 8-9. A 16m APZ is required and can be achieved within proposed lot 7. These separation distances will provide for a maximum predicted radiant heat load of 29 kW/m² in the event of a bushfire. The development therefore satisfies the maximum 29 kW/m² requirement for residential subdivision.

Access to the site via the public road system is suitable for emergency response vehicles. RFS do not require vehicular site access.

There is no reticulated water available on Corriedale Drive. An additional 10,000L is required for fire fighting for each proposed allotment.

In the event that Council or the NSW Rural Fire Service has any questions in relation this report please get in contact to discuss.

Report peer reviewed by:



Matthew Noone

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T/A Bushfire Planning and Design PTY LTD

Report prepared by:

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Intermediate Bushfire Consultant
BA (Criminology)

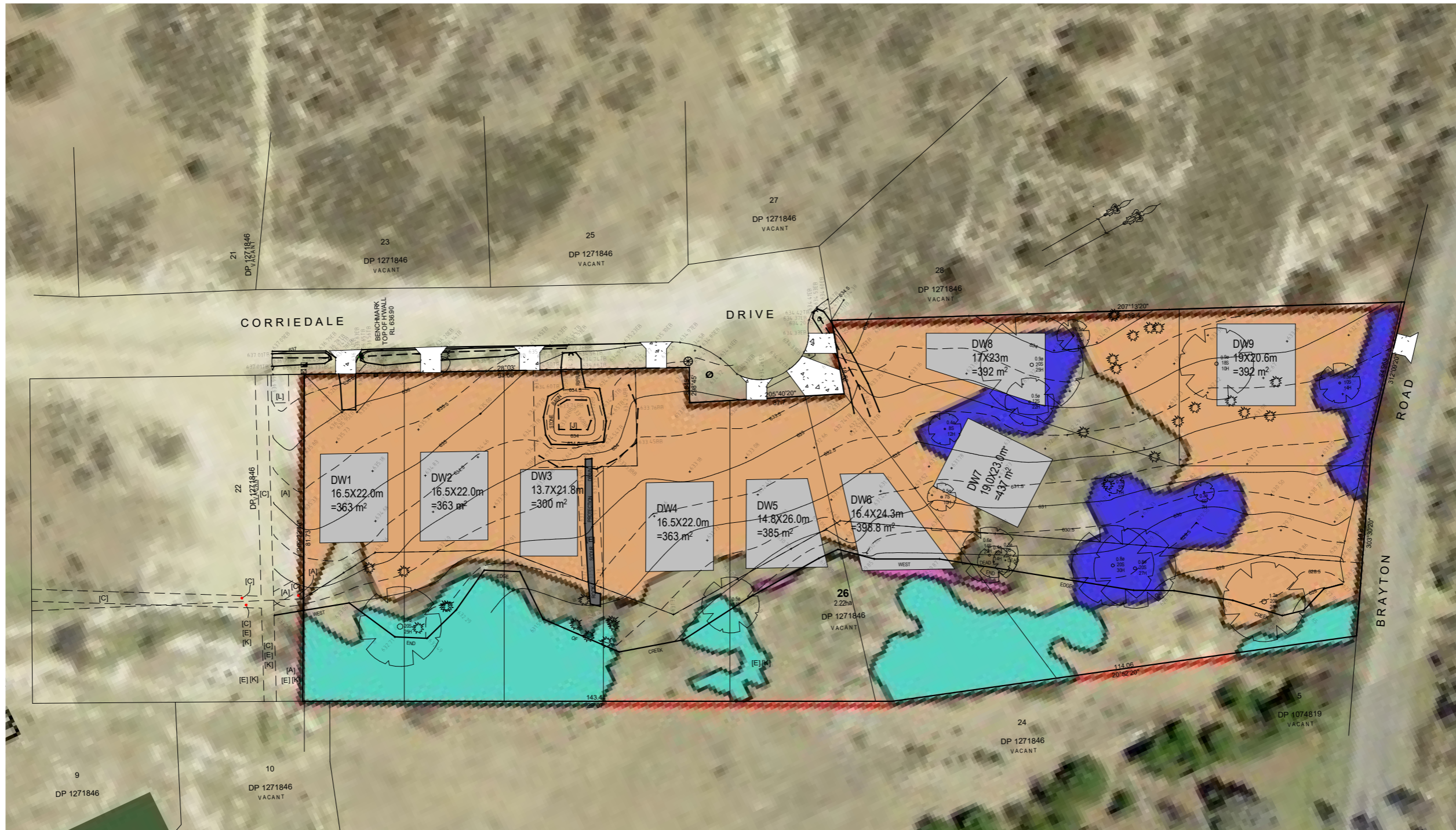
D.01 REFERENCES

AS3959 (2018)	Australian Standard, Construction of buildings in bushfire-prone areas, AS 3959, Third edition 2018 Standards Australia International Ltd, Sydney.
BCA (2019)	Building Code of Australia 2019, Building Code of Australia, Australian Building Codes Board, Canberra 2019.
EPA Act (1979)	Environmental Planning and Assessment Act 1979, NSW Government, NSW, legislation found at www.legislation.nsw.gov.au
Keith (2004)	Keith, D.A. (2004), Ocean shores to desert dunes: The Native Vegetation of New South Wales and the ACT. NSW Department of Environment and Conservation (2004).
PBP (2019)	Planning for Bushfire Protection, a Guide for Councils,Planners, Fire Authorities, Developers and Home Owners. Rural Fire Service 2019, Australian Government Publishing Service, Canberra.
RFS (2015)	Rural Fire Service, Guide For Bush Fire Prone Land Mapping, Version 5b.

D.02 APPENDICES

Appendix A - Subdivision Plans

APPENDIX A - SUBDIVISION PLANS



PCT SUBDIVISION PLAN

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GENERAL NOTES:

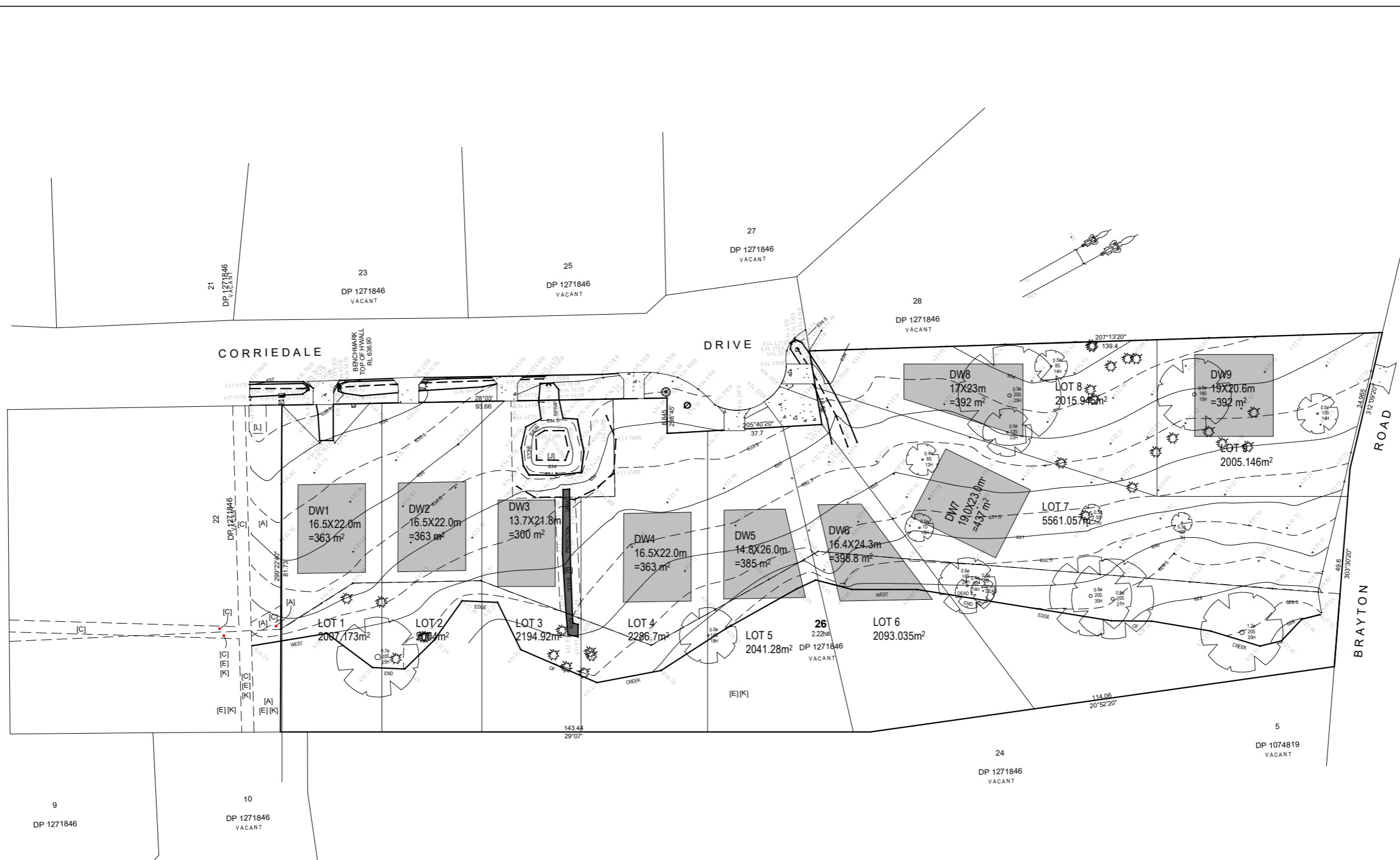
- Figured dimensions & larger scale drawings shall be taken in preference to scaled readings.
- check all dimensions and levels on site before commencement of work or ordering materials.
- All workmanship and materials shall comply with all relevant codes, ordinances, Australian standards and manufacturers's instructions.
- All discrepancies shall be brought to the attention of AKT Engineering & Consulting P/L.
- Copyright of the materials shown hereon & in the accompanying CAD files/drawing sheets vests with AKT Engineering & Consulting P/L.
- AKT Engineering & Consulting P/L warrants only the original Architectural data as retained by the company.
- The Data files are not to be altered without the written approval of AKT Engineering & Consulting P/L.
- The responsibility of AKT Engineering & Consulting P/L is removed if these conditions are not observed.

No.	Description	Date
1	ISSUE FOR COORDINATION	8.06.2023

ETERNITY KITCHEN		PCT MAP & SUBDIVISION PLAN	
PROPOSED 10 LOTS SUBDIVISION	Project number	AKT21060	A101
LOT 26 CORRIEDALE DR, MARULAN	Date	08/06/2023	
	Drawn by	K.A	
	Checked by	K.A	Scale



1/02/2024 3:51:21 PM



SUBDIVISION PLAN

1 : 1000

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- CIVIL & STRUCTURE ENGINEERS
- CONSTRUCTION CERTIFICATED
- ACCREDITED CERTIFIER
- ARCHITECTURAL DESIGN
- PROJECT MANAGERS
- NATHERS & BASIX ASSESSORS

GENERAL NOTES:

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No.	Description	Date
1	ISSUE FOR COORDINATION	8.06.2023

ETERNITY KITCHEN	
PROPOSED 10 LOTS SUBDIVISION	
LOT 26 CORRIEDALE DR, MARULAN	

SUBDIVISION PLAN			
Project number	AKT21060	A100	
Date	08/06/2023		
Drawn by	K.A	Scale	1 : 1000
Checked by	K.A		