



STATEMENT OF  
ENVIRONMENTAL EFFECTS

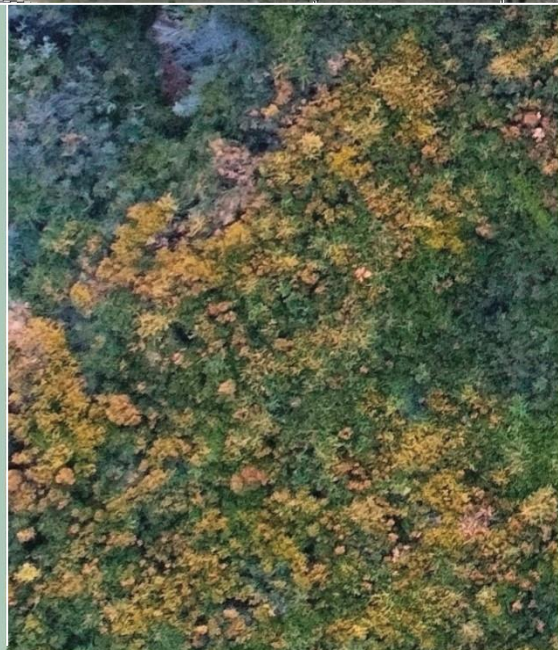
SEVEN LOT SUBDIVISION

65 Hope Street, Warialda

for  
Daniel Shepherd

M&P CONTACT  
Sally Cottom  
Planner

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Our Ref: 21/0220	7 February 2022
Project	Seven Lot Subdivision 65 Hope Street, Warialda
Client	Daniel Shepherd
Author	Sally Cottom Planner
Certification	<i>I hereby certify that this Statement of Environmental Effects has been prepared in accordance with the requirement of the Environmental Planning &amp; Assessment Act 1979 and its associated Regulations. I certify that to the best of my knowledge the information contained within this report is neither false nor misleading.</i>

Signature



Reviewer	Rebecca Boresch Senior Planner B U&R P RPIA
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Signature



This report was prepared by Monteath & Powys Pty Ltd.

Document Control					
Revision	Date	Revision Details	Author	Verifier	Approver
0	07/02/2022	Draft	SC	RB	RB
	14/02/2022	Final	SC	RB	RB

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**APPENDIX B: BUSHFIRE THREAT ASSESSMENT**

## 1. INTRODUCTION

This Statement of Environmental Effects (SOEE) has been prepared on behalf of the applicant Daniel Shepherd by Monteath & Powys Pty Ltd. This SOEE is to accompany a Development Application to Gwydir Shire Council to complete a subdivision of four lots into seven lots at 65 Hope Street, Warialda.

The subject site is zoned 'RU5 Village' with the proposed development being permissible with consent. The proposal is consistent with the relevant strategies for the Local Government Area and objectives of the development standards under the Gwydir *Local Environmental Plan 2013*.

This application has been prepared on behalf of the applicant Daniel Shepherd and addresses the matters referred to in Section 4.15(1) and Section 6 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the matters required to be considered by the consent authority.

The purpose of this SOEE is to:

- Describe the existing environment to which the DA relates and the character of the surrounding area.
- Describe the proposed development.
- Outline the statutory planning framework within which the DA is assessed and determined.
- Assess the proposed development in considering the relevant heads of consideration (Section 4.15(1) of the EP&A Act).

### 1.1 OWNER AND SITE DETAILS

#### **The Applicant:**

Daniel Shepherd  
C/- Monteath & Powys  
PO Box 2270  
DANGAR NSW 2309

#### **Contact:**

Sally Cottom  
Phone: 02 6541 1509

#### **The Owner(s):**

The site is legally identified as 65 Hope Street, Warialda, Lots 1, 2 and 3 Section 36 DP 759052 and Lot 233 DP 751137 and is owned by Daniel Shepherd.

### 1.2 LOCATION AND CONTEXT

The site is situated at 65 Hope Street, Warialda in the Gwydir Local Government Area (GLGA). The site is approximately 24,124m<sup>2</sup> in area (Refer **Figure 1**).





**Figure 1:** Location of Site (Source: Six Maps)

Lots 1 and 2 Section 36 DP 759052 are vacant, Lot 3 Section 36 DP 759052 contains an existing open two-bay carport proposed to be demolished, Lots 1, 2 and 3 Section 36 DP 759052 contain maintained vegetation and all have direct frontage to Hope Street. Lot 233 DP 751137 is vacant and contains maintained vegetation, this lot is landlocked and does not have direct access to Hope Street.

Surrounding development mainly consists of land used for the purposes of Village (Refer **Figure 2**).



**Figure 2:** Land Zoning Map (Source: GWYDIR LEP2013)

## 2. PROPOSED DEVELOPMENT

The development involves a four into seven lot village subdivision creating seven allotments, suitable for residential accommodation. There is a provision for access to the newly created lots from Hope Street (Refer **Figure 3 and Appendix A**).

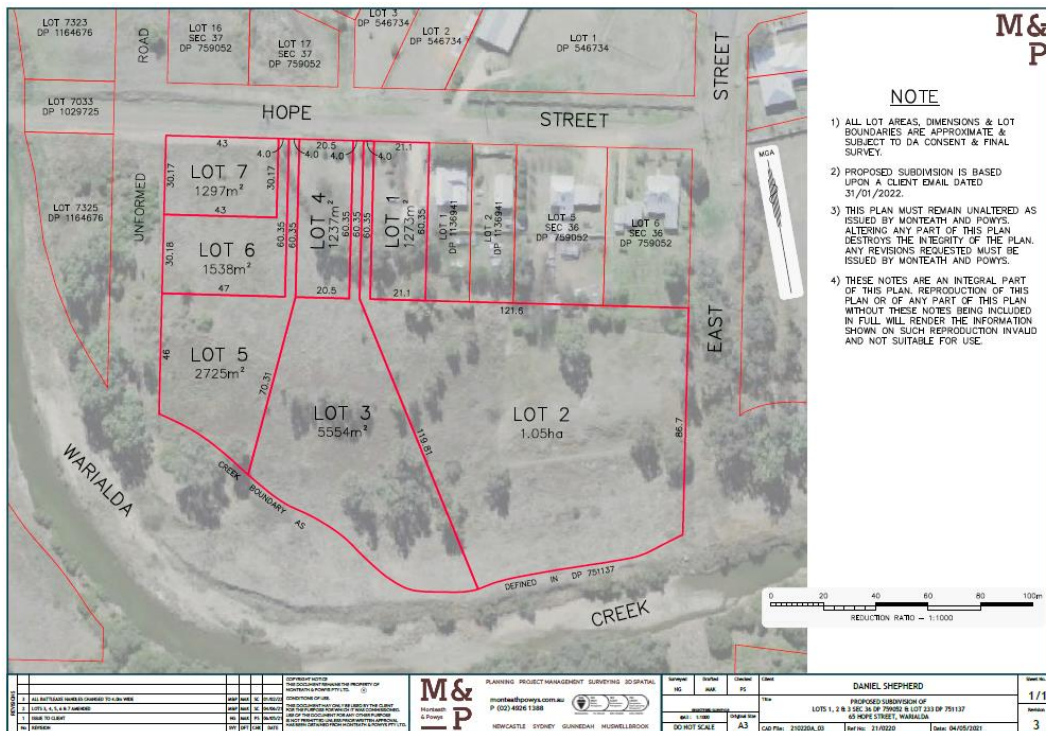


Figure 3: Diagram / Plan of Proposed Development

## 3. PLANNING CONSIDERATIONS

This section identifies the statutory planning provisions that apply to the subject site. The proposed development is being determined under the provisions of the *Environmental Planning and Assessment Act 1979* (EP&A Act), subject to determination by Council.

### 3.1 REGIONAL AND LOCAL STRATEGIC PLANNING CONSIDERATIONS

#### New England North-West Regional Plan 2036

The Regional Plan sets out four goals:

1. A strong and dynamic regional economy.
2. A healthy environment with pristine waterways.
3. Strong infrastructure and transport networks for a connected future.
4. Attractive and thriving communities.

The proposed development is consistent with these goals in that it will create lots which provide additional housing choice, will generate local jobs (construction), and will assist in the ongoing development of Warialda.

### **Warialda Community Plan 2008**

The vision of the Warialda Community Plan is to:

1. Become more walkable.
2. More housing density.
3. Provide essential services.
4. Create a more vibrant and active township.

The proposed development is consistent with the vision of the Warialda Community Plan as it will provide for new homes for families that have access to jobs, close to local centres, connected with local transport options, education, and health services.

## **3.2 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979**

The following details the proposal against the relevant heads of consideration in Section 4.15(1), EP&A Act, as outlined within the relevant headings of this report. Section 4.15 of the *EP&A Act* specifies the matters for consideration required for the evaluation of a development application as outlined below.

### **(1) Matters for Consideration – General**

*In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application:*

(a) *The provisions of:*

- (i) *Any environmental planning instrument, and*
- (ii) *Any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Planning Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and*
- (iii) *Any development control plan, and*
- (iiia) *Any planning agreement that has been entered into under Section 7.4, or any draft planning agreement that a developer has offered to enter into under Section 7.4, and*
- (iv) *The regulations (to the extent that they prescribe matters for the purposes of this paragraph),*
- (v) *(Repealed)*

*that apply to the land to which the development application relates,*

- (b) *The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,*
- (c) *The suitability of the site for the development,*
- (d) *Any submissions made in accordance with this Act or the regulations,*
- (e) *The public interest.*

These matters have been addressed under the relevant headings below.

### **3.3 OTHER LEGISLATION**

Consideration was afforded to the following legislation:

- *Fisheries Management Act 1994*
- *Threatened Species Conservation Act 1995 and Biodiversity Conservation Act 2016*
- *Heritage Act 1977*
- *Coal Mine Subsidence Compensation Act 2017*
- *Contaminated Land Management Act 1997*
- *National Parks and Wildlife 1974*
- *Protection of the Environment Operations Act 1997*
- *Roads Act 1993*
- *Rural Fires Act 1997*
- *Water Management Act 2000*

On review, it was considered that the proposal is not deemed integrated development under the above legislation. No further investigation is required pertaining to this development.

#### **3.3.1 Environmental Planning and Assessment Act 1979 Clause:**

##### **4.15(1)(A)(I) – Provisions of any Environmental Planning Instrument that apply to the Land**

##### **State Environmental Planning Policies**

The relevant State Environmental Planning Policies applicable to the land and the development types have been considered. No further investigation is required pertaining to this development.

##### **Local Environmental Plans**

The **Gwydir Local Environmental Plan 2013** applies to the land. The relevant provisions of the plan have been addressed in **Table 1** below.



**Table 1: Gwydir Local Environmental Plan 2013**

SECTION	PROVISION	STATEMENT OF COMPLIANCE
<b>Part 1</b>	<b>Preliminary</b>	
<b>Part 2</b>	<b>Permitted or prohibited development</b>	
2.1	Land use zones	The land is zoned RU5 Village under this plan. The proposal is permissible with consent.
2.2	Zoning to which Plan applies	RU5 Village
2.3	Zone objectives and Land Use Tables <b>RU5 Village</b>  • To provide for a range of land uses, services and facilities that are associated with a rural village.	Consistent with the objectives of the RU5 Village Zone.
2.6	Subdivision-consent requirements	The proposal requires consent thus the requirement of this application for consideration.
<b>Part 3</b>	<b>Exempt and complying development</b>	Not relevant.
<b>Part 4</b>	<b>Principal development standards</b>	
4.1	Minimum subdivision lot size	The land is identified as having a minimum lot size of 550m <sup>2</sup> . The proposal consists of creating seven new lots which have the following lot areas: -  <ul style="list-style-type: none"> <li>• Lot 1 – 1,273 m<sup>2</sup></li> <li>• Lot 2 – 1.05 ha</li> <li>• Lot 3 – 5,554 m<sup>2</sup></li> <li>• Lot 4 – 1,237 m<sup>2</sup></li> <li>• Lot 5 – 2,725 m<sup>2</sup></li> <li>• Lot 6 – 1,538 m<sup>2</sup></li> <li>• Lot 7 – 1,297 m<sup>2</sup></li> </ul> <p>All of the proposed lots are above the minimum lot size, as such the proposal is consistent with this provision.</p>
<b>Part 5</b>	<b>Miscellaneous provisions</b>	Not relevant.
<b>Part 6</b>	<b>Additional local provisions</b>	
6.1	Earthworks	Consistent.  The subdivision requires minor topsoil surface disturbance for the placement of relevant survey marks.
6.4	Essential Services	Consistent.  The proposed development has provision to essential services along Hope Street.

**3.3.2 Environmental Planning and Assessment Act 1979 Clause:**

***4.15(1)(A)(II) – Provisions of any Proposed Instrument that is or has been the Subject of Public Consultation under this Act and that has been Notified by the Consent Authority***

**Draft State Environmental Plans**

There are no draft State Environmental Plans that affect this development.

**Draft Local Environmental Plans**

There are no draft Local Environmental Plans that affect this development.

**3.3.3 Environmental Planning and Assessment Act 1979 Clause:**

***4.15(1)(A)(III) – Provisions of any Development Control Plan that apply to the Land***

**Development Control Plans**

The Gwydir Shire Council has not adopted a Development Control Plan.

**3.3.4 Environmental Planning and Assessment Act 1979 Clause:**

***4.15(1)(A)(IIIA) – Provisions of any Planning Agreement that has been entered into under Section 7.4, or any Draft Planning Agreement that a Developer has offered to enter into under Section 7.4***

**3.3.5 Environmental Planning and Assessment Act 1979 Clause:**

***4.15(1)(A)(IV) – Provisions of the Regulations that apply to the Land***

There are no sections of Regulation applicable to the land at the time of this report.

**3.3.6 Environmental Planning and Assessment Act 1979 Clause:**

***4.15(1)(B) – The Likely Impact of the Development including Environmental Impacts on both the Natural and Built Environments, and Social and Economic Impacts in the Locality***

**Context and Setting**

The site is situated at 65 Hope Street, Warialda in the Gwydir Local Government Area (GLGA). The site is approximately 24,124m<sup>2</sup> in area (Refer **Figure 1** and **Appendix A**).

Lots 1 and 2 Section 36 DP 759052 are vacant, Lot 3 Section 36 DP 759052 contains an existing open two-bay carport (proposed to be demolished), Lots 1, 2 and 3 Section 36 DP 759052 contain maintained vegetation and all have direct frontage to Hope Street. Lot 233 DP 751137 is vacant and contains maintained vegetation, this lot is landlocked and does not have access to Hope Street. Surrounding development mainly consists of land used for the purposes of Village (Refer **Figure 2**).

### Soils and Geology

Minimal impact, no further action is required.

### Earthworks

Earthworks relating to the subdivision are minor in nature, no further action is required.

### Hydrology, Flooding and Water Quality

Minimal impact, no further action is required.

### Flora and Fauna

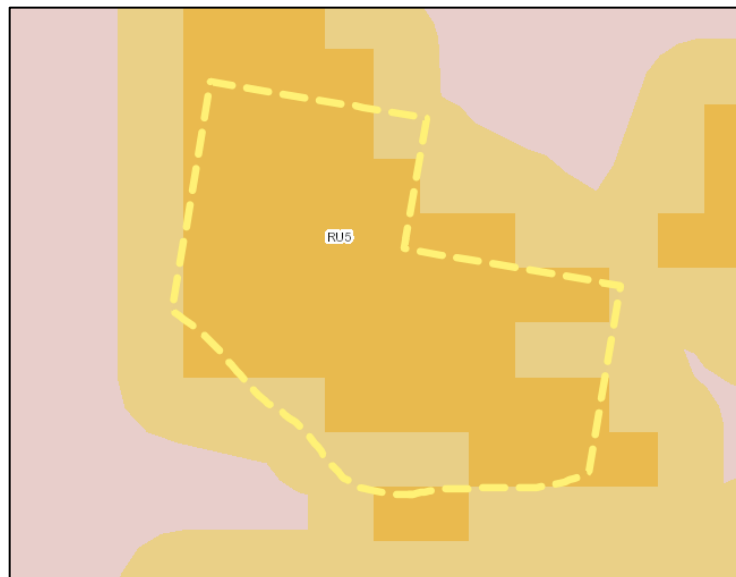
The proposed development site is not identified within 500 metres of land that contain items of environmental significance, wetlands or riparian corridors.

The proposed development does not include the removal of any vegetation except minor topsoil removal as part of the proposed subdivision, it would be considered that a flora and fauna survey is not required for this proposal due to the retainment of vegetation.

As the proposed subdivision will not significantly impact on flora and fauna on the site, contains minimal vegetation which is well maintained and will not affect the flora or fauna surrounding the site, no further action is required.

### Bushfire

The development site is identified within a bushfire buffer and vegetation Category 2 in accordance with the New South Wales Planning Portal (Refer **Figure 4**).



**Figure 4:** Bushfire Prone Land Map (Source: NSW Planning Portal, 2021)

***The recommendation of the Bushfire Assessment carried out by Eco Logical Australia dated 20 January 2022:***

This report provides a Bushfire Opportunities and Constraints Assessment of the proposed development of the subject land for residential subdivision.

**Current design constraints**

- Perimeter road access has not been provided;
- Property access roads do not meet all PBP acceptable solutions including the requirement for a 4 metre wide carriageway for Lots 2, 3 and 5; and
- APZ requirements impact the size / location of building envelopes on Lots 6 and 7.

**Opportunities**

- Development layout can be refined to address PBP acceptable solutions for access including the provision of perimeter access and property access;
- Development layout can be refined to increase dwelling entitlements on identified lots impacted by APZ requirements; and
- Engagement with the RFS is undertaken to gauge their support for proposed performance solutions based on current development concept prior to final subdivision design.

From a bushfire perspective, the proposed development is not precluded by any current bushfire planning requirements, however some subdivision plan re-design is required to address property access non-compliances and a performance solution may be required to address the lack of perimeter road access to surrounding bushfire hazards. Bushfire protection measures such as APZs, landscaping and utilities are capable of achieving the required bushfire protections measures under PBP.

The subdivision plan has been updated. The access handles have been widened to 4 metres to be consistent with the recommendations of the above assessment.

**Aboriginal and Cultural Heritage**

A search of the Aboriginal Heritage Information Management Services was undertaken on 23 April 2021 and did not identify any Aboriginal sites or places on or within a 50 metre buffer of the proposed development site, no further action is required.

**Noise and Vibration**

Minimal impact, no further action is required.

**Air Quality / Climate / Energy**

Minimal impact, no further action is required.



### **Traffic and Transportation**

Existing traffic and transportation arrangements are suitable for the proposed subdivision, the establishment of seven allotments will not significantly increase the traffic or need for transportation in the location, no further action is required.

### **Visual Characteristics**

The proposal will complement the existing village area of the locality, no further action is required.

### **Social / Economic**

Minimal impact, no further action is required.

### **Waste Management**

Minimal impact, no further action is required.

### **Cumulative Environmental Impacts**

Minimal impact, no further action is required.

### **Environmentally Sustainable Development**

Not applicable to this development, no further action is required.

### **Climate Change**

Not applicable to this development, no further action is required.

### **3.3.7 Environmental Planning and Assessment Act 1979 Clause:**

#### ***4.15(1)(C) – The Suitability of the Site for the Development***

The proposal is in keeping with the existing and future character of the subject land, it is in alignment with the objectives of the relevant strategies, is deemed to satisfy the relevant development controls and standards as well as being consistent with the objectives of the RU5 Village zone. On this basis it is considered that the site is suitable for the proposed development.

### **3.3.8 Environmental Planning and Assessment Act 1979 Clause:**

#### ***4.15(1)(D) – Any Submissions made in accordance with this Act or the Regulations***

The application will be notified in accordance with the DCP at Council's discretion. Additional information required to address any submissions received will be provided to enable the assessment of the application.

**3.3.9 Environmental Planning and Assessment Act 1979 Clause:**

**4.15(1)(E) – The Public Interest**

The public interest is best served through the orderly use of the land for purposes which it is zoned and in accordance with the relevant planning controls and policies. The proposed development is consistent with the relevant strategies, is permissible with consent and complies substantially with the relevant policies and controls governing the land.

## **4. CONCLUSION**

This report has been prepared to accompany a Development Application to Gwydir Shire Council to complete a seven lot subdivision at 65 Hope Street, Warialda.

The proposal is consistent with the Regional and Local Strategies, the objectives of the RU5 Village zone and is permissible with development consent. The proposal overall complies with the development standards and development controls within the Local Environmental Plan that apply to the land.

The proposal has addressed the matters referred to in Section 4.15(1) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the matters required to be considered by the consent authority.

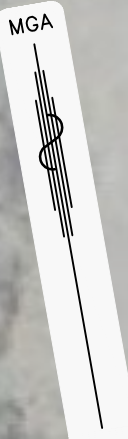
Overall, it is considered that the proposal will not have any significant environmental impact resulting from the subdivision, it is permissible with consent and will not jeopardise the public interest. As such, there is no reason as to why the approval of the subdivision should not be supported.

**APPENDIX A:** Site Plan



**NOTE**

- 1) ALL LOT AREAS, DIMENSIONS & LOT BOUNDARIES ARE APPROXIMATE & SUBJECT TO DA CONSENT & FINAL SURVEY.
- 2) PROPOSED SUBDIVISION IS BASED UPON A CLIENT EMAIL DATED 31/01/2022.
- 3) THIS PLAN MUST REMAIN UNALTERED AS ISSUED BY MONTEATH AND POWYS. ALTERING ANY PART OF THIS PLAN DESTROYS THE INTEGRITY OF THE PLAN. ANY REVISIONS REQUESTED MUST BE ISSUED BY MONTEATH AND POWYS.
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No	REVISION	SVY	DFT	CHK	DATE
3	ALL BATTLEAXE HANDLES CHANGED TO 4.0m WIDE	M&P	MAK	SC	01/02/22
2	LOTS 3, 4, 5, 6 & 7 AMENDED	M&P	MAK	SC	04/06/21
1	ISSUE TO CLIENT	NG	MAK	PS	06/05/21

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Surveyed NG	Drafted MAK	Checked PS	Client <b>DANIEL SHEPHERD</b>	Sheet No. <b>1/1</b>
REGISTERED SURVEYOR @A3 : 1:1000			Title PROPOSED SUBDIVISION OF LOTS 1, 2 & 3 SEC 36 DP 759052 & LOT 233 DP 751137 65 HOPE STREET, WARIALDA	Revision <b>3</b>
DO NOT SCALE	A3	CAD File: 210220A_03	Ref No: 21/0220	Date: 04/05/2021



**APPENDIX B:** Bushfire Threat Assessment

A decorative background on the left side of the page consisting of light green, wavy contour lines that resemble a topographic map. The lines are more densely packed in some areas and more spread out in others, creating a sense of depth and terrain.

Bushfire Opportunities and Constraints Assessment  
Proposed Subdivision  
65 Hope St, Warialda

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**Daniel and Yvette Shepherd**

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## DOCUMENT TRACKING

<b>Project Name</b>	Bushfire Opportunities and Constraints Assessment: Proposed Subdivision - 65 Hope St, Warialda
<b>Project Number</b>	21HNG_20252
<b>Project Manager</b>	Susan Courtney
<b>Prepared by</b>	Melinda Losh
<b>Reviewed by</b>	Susan Courtney – Senior Bushfire Planner
<b>Approved by</b>	Susan Courtney – Senior Bushfire Planner
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## ACKNOWLEDGEMENTS

This document has been prepared by Eco Logical Australia Pty Ltd with support from Daniel and Yvette Shepherd .

### *Disclaimer*

*This document may only be used for the purpose for which it was commissioned and in accordance with the contract between Eco Logical Australia Pty Ltd and Daniel and Yvette Shepherd. The scope of services was defined in consultation with Yvette Shepherd, by time and budgetary constraints imposed by the client, and the availability of reports and other data on the subject area. Changes to available information, legislation and schedules are made on an ongoing basis and readers should obtain up to date information. Eco Logical Australia Pty Ltd accepts no liability or responsibility whatsoever for or in respect of any use of or reliance upon this report and its supporting material by any third party. Information provided is not intended to be a substitute for site specific assessment or legal advice in relation to any matter. Unauthorised use of this report in any form is prohibited.*

Template 2.8.1

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# 1. Property and Proposal

Table 1 (below) identifies the subject property and outlines the type of development proposed.

**Table 1: Subject site and development proposal summary**

<b>Street address or property name:</b>	<b>65 Hope Street</b>		
Suburb, town or locality:	Warialda	Postcode:	2402
Lot/DP no:	Lots 1-3 DP 759052, Lot 233 DP 751137		
Local Government Area:	Gwydir Shire Council (GSC)		
Fire Danger Index (FDI):	80		
Current land zoning:	RU5 – Village		
Type of development proposed:	Residential subdivision		

## 1.1 Description of proposal

This report was commissioned by Daniel and Yvette Shepherd to investigate the bushfire protection requirements associated with the potential development of 65 Hope St, Warialda hereafter known as the ‘subject land’ and shown in Figure 1.

This report presents a due diligence assessment of a preliminary proposal to develop the subject land for a residential subdivision development.

Further assessment maybe required if there are significant changes to the development concept, proposed uses and/or in response to NSW Rural Fire Service (RFS) feedback.

**NB: This Bushfire Opportunities and Constraints Assessment is valid as of the date of issue and is suitable for the purpose for which it was commissioned and is not a bushfire assessment report suitable for submission with a Development Application (DA).**

Once the final development plans have been determined and any other necessary reports have been commissioned/completed, a Bushfire Protection Assessment of the development will be required for DA submission in accordance with the *Environmental Planning and Assessment Act 1979*, Section 100B of the *Rural Fires Act 1997* and ‘Planning for Bush Fire Protection 2019’ (RFS 2019), herein referred to as ‘PBP’. A Bush Fire Safety Authority issued by the NSW Rural Fire Service (RFS) will be required for any subdivision of the subject land.

## 1.2 Subject Land

The subject land currently consists of 4 lots which total 2.4 ha of predominantly cleared land. It is connected to the public road system in the north to Hope Street and the eastern boundary adjoins the southern unformed portion of East Street while the property is bounded to the south and south-west by Warialda Creek.

It is proposed the 4 lots be consolidated then subdivided into 7 lots as shown in Figure 2 ELA understands that the proposal does not seek to rezone the land.

The site is located on land classified as bush fire prone on the Gwydir Shire Council (GSC) Bush Fire Prone Land (BFPL) Map<sup>1</sup>.

<sup>1</sup> <https://www.planningportal.nsw.gov.au/spatialviewer/#/find-a-property/address>



Figure 1: Location of subject land



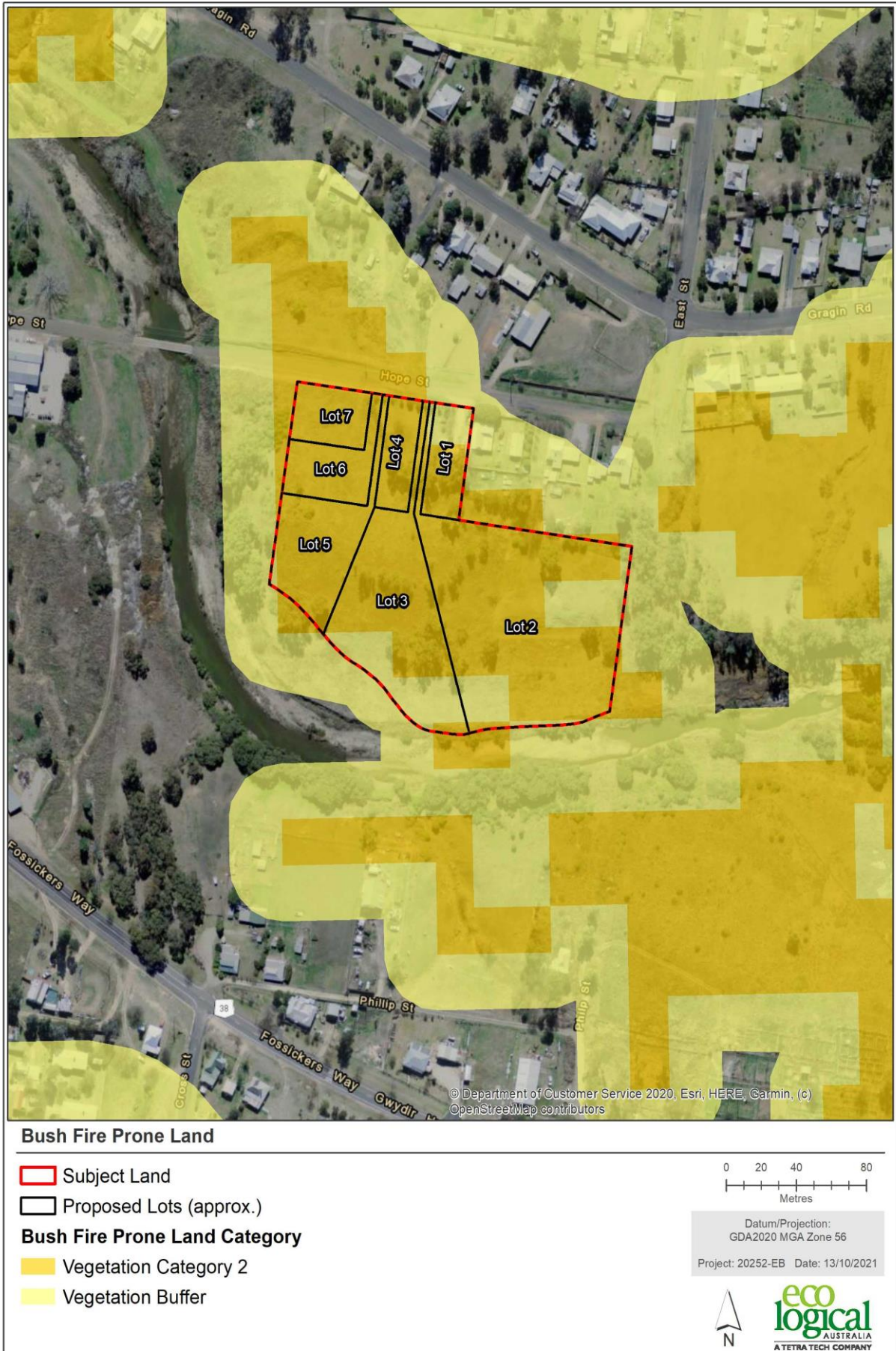


Figure 2: Excerpt of GSC Bush Fire Prone Land Map showing proposed subdivision layout



### 1.3 Methodology

The advice provided herein is based on the following research and knowledge:

- An analysis of the vegetation and topography within and surrounding the subject land;
- Provision of photographic evidence from clients dated 15 October 2021; and
- Online data from SIX Maps, Google Earth, Nearmap and the NSW Planning Portal.

This assessment identifies the minimum and recommended bushfire requirements for residential subdivision development to achieve compliance with PBP.

## 2. Bushfire hazard assessment

An assessment of the bushfire hazard has been undertaken in accord with the methodology in PBP as detailed below.

### 2.1 Vegetation

The predominant vegetation has been determined in accordance with the methodology within PBP and bushfire hazards have been identified within 140 m of the subject land.

Online vegetation mapping (DPIE 2016) identifies the surrounding vegetation as 'Black Tea-tree - River Oak - Wilga riparian low forest/shrubland wetland of rich soil depressions in the Brigalow Belt South Bioregion', and 'River Red Gum riparian tall woodland/open forest wetland in the Nandewar Bioregion and Brigalow Belt South Bioregion', both of which are classified as 'Forested Wetland' by PBP.

Provision of photos from client from within the subject land and aerial imagery shows that the subject land is predominantly mown grass with some scattered trees. While tree canopy cover is currently relatively sparse along the creek to the west and south (as shown within the photos provided by the client and aerial photography), the future vegetation management within Warialda Creek is not yet known and accordingly this report adopts a conservative approach in assigning the PBP classification 'Forested Wetland'.

The vegetation to the north and east of the proposed development is predominantly unmanaged grass and shrubs with scattered trees as shown in Figure 1, however with current or future management of this vegetation unknown a conservative approach has been adopted and this vegetation has also been assigned the PBP classification of 'Forested Wetland'

### 2.2 Slopes influencing bushfire

The slope classes 'most significantly affecting fire behaviour' have been considered for a distance of at least 100 m out from each proposed development element in accordance with the methodology within PBP.

Figure 3 and Table 3 show the classification and location of the vegetation and slope assessed, with explanatory comments provided where required.

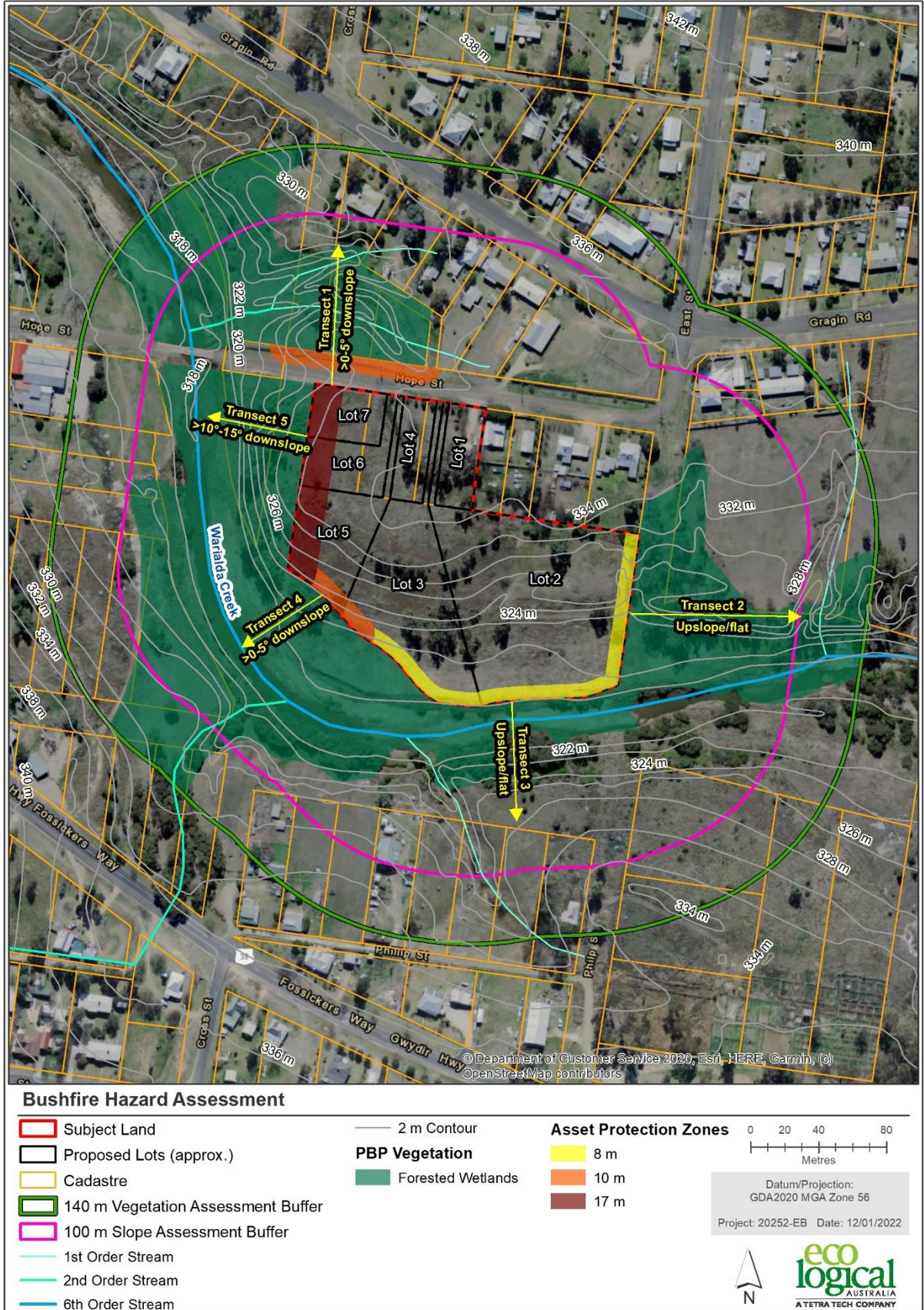


Figure 3: Bushfire hazard assessment and Asset Protection Zones (APZ)



### 3. Bushfire protection measures

PBP requires the assessment of the bushfire protection measures associated with a residential subdivision development listed in Table 2. These are discussed further in the remainder of this Section.

**Table 2: PBP bushfire protection measures**

Bushfire protection measures	Considerations
APZ	Location and dimension of APZ setbacks from vegetation including prescriptions of vegetation management within the APZ.
Access	Assessment to include access and egress in and out of a developable area such as alternate access, operational response and evacuation options. APZ perimeter access to be considered as is design standards of public roads and any fire trails.
Water supply and other utilities	List requirements for reticulated water supply and hydrant provisions, and any static water supplies for firefighting.
Building construction standards	Provide a guide on the application of construction standards for future buildings.
Landscaping	Principle aim to prevent flame impingement on buildings, provide defensible space for property protection, reduce fire spread, filter embers and reduce wind speed
Environmental issues	RFS requires sufficient information to ascertain whether environmental values are a constraint to development. The RFS is not providing an approval in relation to the loss or removal of these environmental assets, that is the role of the relevant consent authority.

#### 3.1 Asset Protection Zones (APZ)

Table A1.12.3 of PBP has been used to determine the width of APZ for the proposed development using the vegetation and slope data identified in Section 2. Table 3 identifies the results of this constraints assessment which are also shown in Figure 3.

APZs do not preclude the proposed development, however APZ requirements do impact on the area available for dwelling entitlements on Lots 6 and 7. There may be opportunities to refine the lot layout configuration to provide a larger area for future dwellings on these lots.

If vegetation management within the creek corridor included APZ managed in perpetuity under a Vegetation Management Plan, or Plan of Management, there may be an opportunity for APZ widths to be reduced within the southern boundaries of proposed Lots 2, 3 and 5.

It should be noted that if rehabilitation and/or management of the waterway is required to meet any requirements of the *Water Management Act 2000* the southern APZs may need to be reassessed.

Provision of a perimeter road, as detailed in Section 3.4 could also constitute a portion of the required APZ.

**Table 3: Bushfire hazard assessment and APZ requirements**

Transect	Slope	Vegetation	Required Residential Subdivision APZ	Comment
1 North	>0-5° downslope	Forested wetland	10 m	APZ located within managed public road.
2 East	All upslopes and flat land	Forested wetland	8 m	APZ to be contained within subject land
3 South	All upslopes and flat land	Forested wetland	8 m	APZ to be contained within subject land
4 South-west	>0-5° downslope	Forested wetland	10 m	APZ to be contained within subject land
5 West	>10°-15° downslope	Forested wetland	17 m	APZ to be contained within subject land
All other directions			Managed land	

### 3.2 APZ maintenance and landscaping

Landscaping within the APZ specified in Figure 3 must achieve the specifications as described in Appendix 4 of PBP. Any future landscaping within the development will need to consider bushfire implications to ensure it does not create bushfire hazards within future allotments.

### 3.3 Building construction standard (BAL)

Residential subdivisions are required to demonstrate all buildings can achieve a maximum Bushfire Attack Level of BAL-29. The APZ detailed in Section 3.1 and shown in Figure 3 demonstrates that Lots 6 and 7 are most impacted by the minimum APZ required to achieve BAL 29. Lots 6 and 7 each have a remaining area of  $\geq 26 \text{ m} \times 30 \text{ m}$  within which to locate a future dwelling and still achieve a BAL rating of no greater than BAL-29.

### 3.4 Access provisions

Access to the proposed development is from Hope St which is an existing public road. (Figure 3). No additional public roads are proposed in relation to the subdivision development. Residential subdivisions are required to comply with the PBP access requirements in Table 5, Table 6, Table 7 and Table 8 (Appendix B) which specifically relate to perimeter roads, internal access roads and access to water supplies, parking etc.

There are no specific requirements for property access under PBP for Lots 1, 4, 6 and 7 where an unobstructed path (no greater than 70m) is provided between the most distant external part of the proposed dwelling and the nearest part of the public access road (where the road speed limit is not greater than 70kph) that supports the operational use of emergency firefighting vehicles.

To comply with PBP acceptable solutions for road design the development is required to provide:

- A perimeter road to any lots directly adjoining a bushfire hazard in accord with Table 5.3b of PBP; and
- Property access in accord with Table 5.3b of PBP and suitable turning areas in accord with Appendix 3 of PBP for all lots where future dwellings which will not be within 70 m of the public access road.

The current concept shows no perimeter road along the identified hazard and the following options have been identified to potentially address this non-compliance:

- The concept plan is redesigned to provide a perimeter road between the proposed lots and adjoining hazard from East Street clockwise around Lots 2, 3, 5, 6 and 7 back to Hope Street to the north-west of the subdivision;
- If future dwellings on Lots 6 and 7 can be located entirely within 70 m of the nearest hydrant in Hope Street, a perimeter road could be provided from the battleaxe entrance into Lot 2 and clockwise around through Lot 3 and Lot 5 and then back out through the battleaxe entrance to Lot 5 back onto Hope Street. It may then be possible to argue that a perimeter road along Lots 6 and 7 is not necessary given that access to that portion of the creekline vegetation is provided by Hope Street to the north; or
- Concept plan remains unchanged and a performance solution to address the lack of perimeter road and alternate access is addressed at DA stage which may include:
  - justification of limited hazard exposure based on the type and extent of the vegetation that has been identified to the west, south and east of the proposed subdivision;
  - isolation of adjoining creekline vegetation and proposed subdivision from other more extensive areas of bushfire hazard vegetation; and
  - the presence of multiple access points to the creekline vegetation from existing roads in all directions that facilitate firefighting mitigation and suppression operations.
- It should be noted that all performance solutions are subject to RFS approval and ELA cannot guarantee RFS acceptance.

The current concept does not achieve a minimum carriageway width of 4 m for property access to comply with PBP acceptable solutions. There is an opportunity to address this by amending plans to incorporate the minimum required width. Alternatively, a performance solution could be addressed at DA stage.



## 3.5 Services – Water, electricity and gas

### 3.5.1 Water

The proposed development will be serviced by reticulated water.

Dwellings on lots 1, 4, 6 and 7 can achieve the requirements of an unobstructed path no greater than 70 m from hydrant installation.

Future dwellings that are further than 70 m from the nearest hydrant will be required to provide a static water and hydrant supply. This will be a consideration for the proposed lots 2, 3 and 5 who will each require a minimum 10,000L static water supply. Static water supplies shall comply with Table 5.3d of PBP. Suitable access for Category 1 tankers will be required to within 4 m of the static water supply and turning areas in accordance with Appendix 3 of PBP.

Water supply requirements constrain but do not preclude the proposed subdivision.

### 3.5.2 Electricity and gas

No constraints were identified with regard to meeting electricity and gas service requirements subject to the services being designed and installed in accordance with the relevant specifications in Table 5.3c of PBP including electricity services to each allotment being located underground.

## 3.6 Staging

Staged development of areas often exposes the edge of each stage to a temporary bushfire risk. Clear information on how these risks are managed will be required e.g. temporary APZ maintained beyond buildings to the extent that the longer-term BAL is achieved for the effected buildings. Similarly, temporary perimeter roads may be required to ensure no building is inadequately protected. Alternate egress routes are also essential for each stage of development. This will need to be considered in any staging plan.

## 4. Conclusion and recommendations

This report provides a Bushfire Opportunities and Constraints Assessment of the proposed development of the subject land for residential subdivision.

Current design constraints:

- Perimeter road access has not been provided;
- Property access roads do not meet all PBP acceptable solutions including the requirement for a 4 m wide carriageway for Lots 2, 3 and 5; and
- APZ requirements impact the size/location of building envelopes on Lots 6 and 7.

Opportunities

- Development layout can be refined to address PBP acceptable solutions for access including the provision of perimeter access and property access;
- Development layout can be refined to increase dwelling entitlements on identified lots impacted by APZ requirements; and
- Engagement with the RFS is undertaken to gauge their support for proposed performance solutions based on current development concept prior to final subdivision design.

From a bushfire perspective, the proposed development is not precluded by any current bushfire planning requirements however some subdivision plan redesign is required to address property access non-compliances and a performance solution may be required to address the lack of perimeter road access to surrounding bushfire hazards. Bushfire protection measures such as APZs, landscaping and utilities are capable of achieving the required bushfire protections measures under PBP.



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## Appendix A – APZ Specifications

**Table 4: APZ management specifications**

Vegetation Strata	Inner Protection Area (IPA)	Outer Protection Area (OPA)
Trees	<ul style="list-style-type: none"> <li>• Tree canopy cover should be less than 15% at maturity;</li> <li>• Trees (at maturity) should not touch or overhang the building;</li> <li>• Lower limbs should be removed up to a height of 2 m above ground;</li> <li>• Canopies should be separated by 2 to 5 m; and</li> <li>• Preference should be given to smooth barked and evergreen trees.</li> </ul>	<ul style="list-style-type: none"> <li>• Tree canopy cover should be less than 30%; and</li> <li>• Canopies should be separated by 2 to 5 m.</li> </ul>
Shrubs	<ul style="list-style-type: none"> <li>• Create large discontinuities or gaps in the vegetation to slow down or break the progress of fire towards buildings should be provided;</li> <li>• Shrubs should not be located under trees;</li> <li>• Shrubs should not form more than 10% ground cover; and</li> <li>• Clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.</li> </ul>	<ul style="list-style-type: none"> <li>• Shrubs should not form a continuous canopy; and</li> <li>• Shrubs should form no more than 20% of ground cover.</li> </ul>
Grass	<ul style="list-style-type: none"> <li>• Should be kept mown (as a guide grass should be kept to no more than 100 mm in height); and</li> <li>• Leaves and vegetation debris should be removed.</li> </ul>	<ul style="list-style-type: none"> <li>• Should be kept mown to a height less than 100 mm; and</li> <li>• Leaf and other debris should be removed.</li> </ul>

## Appendix B- Access specifications

**Table 5: General access requirements (PBP)**

Performance Criteria	Acceptable Solutions	Comments
<b>Access (General Requirements)</b>		
firefighting vehicles are provided with safe, all-weather access to structures	<ul style="list-style-type: none"> <li>Access roads are two-wheel drive, all-weather roads;</li> <li>access is provided to all structures;</li> <li>traffic management devices are constructed to not prohibit access by emergency services vehicles;</li> <li>dead end roads are not recommended, but if unavoidable, are not more than 200 m in length, incorporate a minimum 12 metre outer radius turning circle, and are clearly sign posted as a dead end;</li> <li>where kerb and guttering is provided on perimeter roads roll top kerbing should be used to the hazard side of the road; and</li> <li>one way only public access roads are no less than 3.5 metres wide and have designated parking bays with hydrants located outside of these areas to ensure accessibility to reticulated water for fire suppression.</li> </ul>	<ul style="list-style-type: none"> <li>Can comply</li> <li>Can comply</li> <li>Not applicable</li> <li>Not applicable</li> <li>Not applicable</li> <li>Not applicable</li> </ul>
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	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
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, and	<ul style="list-style-type: none"> <li>Can comply</li> </ul>
	hydrants are provided in accordance with the relevant clauses of AS 2419.1:2005	<ul style="list-style-type: none"> <li>Can comply</li> </ul>

**Table 6: Perimeter road requirements (PBP)**

Performance Criteria	Acceptable Solutions	Comments
<b>Perimeter Roads</b>		
access roads are designed to allow safe access and egress for firefighting vehicles while residents are evacuating as well as providing a safe operational environment for emergency service personnel during firefighting and emergency management on the interface	<ul style="list-style-type: none"> <li>there are two-way sealed roads,</li> <li>8 m carriageway width kerb to kerb;</li> <li>parking is provided outside of the carriageway width;</li> <li>hydrants are to be located clear of parking areas;</li> <li>there are through roads, and these are linked to the internal road system at an interval of no greater than 500 m;</li> <li>curves of roads have a minimum inner radius of 6 m;</li> <li>the maximum grade road is 15° and average grade of not more than 10°;</li> <li>the road crossfall does not exceed 3°; and</li> <li>a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable.</li> <li>No new public roads are proposed.</li> </ul>

**Table 7: Non-perimeter road requirements (PBP)**

Performance Criteria	Acceptable Solutions	Comments
<b>Non-Perimeter Roads</b>		
access roads are designed to allow safe access and egress for firefighting vehicles while residents are evacuating	<ul style="list-style-type: none"> <li>• minimum 5.5 m width kerb to kerb;</li> <li>• parking is provided outside of the carriageway width;</li> <li>• hydrants are located clear of parking areas;</li> <li>• there are through roads, and these are linked to the internal road system at an interval of no greater than 500 m;</li> <li>• curves of roads have a minimum inner radius of 6 m;</li> <li>• the road crossfall does not exceed 3°; and</li> <li>• a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable.</li> <li>• No new public access roads are proposed.</li> </ul>

**Table 8: Property access requirements (PBP)**

Performance Criteria	Acceptable Solutions	Comments
<b>Property access</b>		
Firefighting vehicles can access the dwelling and exit the property safely	<p>There are no specific access requirements in an urban area where an unobstructed path (no greater than 70m) is provided between the most distant external part of the proposed dwelling and the nearest part of the public access road (where the road speed limit is not greater than 70kph) that supports the operational use of emergency firefighting vehicles.</p> <p>In circumstances where this cannot occur, the following requirements apply:</p> <ul style="list-style-type: none"> <li>• Minimum 4 m carriageway width;</li> <li>• In forest, woodland and heath situations, rural property access roads have passing bays every 200 m that are 20 m long by 2 m wide, making a minimum trafficable width of 6 m at the passing bay;</li> <li>• A minimum vertical clearance of 4 m to any overhanging obstructions, including tree branches;</li> <li>• Provide a suitable turning area in accordance with Appendix 3;</li> <li>• Curves have a minimum inner radius of 6 m and are minimal in number to allow for rapid access and egress;</li> <li>• The minimum distance between inner and outer curves is 6 m;</li> <li>• The crossfall is not more than 10 degrees;</li> <li>• Maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads;</li> <li>• A development comprising more than three dwellings has access by dedication of a road and not by right of way.</li> </ul> <p>Note: Some short constrictions in the access may be accepted where they are not less than the minimum (3.5 m), extend for no more than 30 m and where the obstruction cannot be reasonably avoided or removed. the gradients applicable to public roads also apply to community style development property access roads in addition to the above.</p>	<ul style="list-style-type: none"> <li>• Applies to Lots 1, 4, 6 and 7.</li> <li>• To comply</li> <li>• Not applicable</li> <li>• To comply</li> <li>• To comply</li> <li>• To comply</li> <li>• To comply</li> <li>• To comply</li> <li>• To comply</li> <li>• Not applicable</li> </ul>





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