

Topa Property Pty Ltd Attention: Olga Masella

Date: 01 December 2023

Via Email: olga@topaproperty.com.au

Our Ref: 2389.01

Dear Olga,

Response Letter to RFS letter for PLRZ: RZ/1/2022 located at 1377 Hue Hue Road, Wyee, NSW.

As requested, AEP has addressed the Rural Fire Services (RFS) additional requirements.

This Addendum is to be read in conjunction with AEP, 2023, Bushfire Threat Assessment Rev 04 for 1377 Hue Hue Road, Wyee, NSW (Lot 437 DP755242) in the Lake Macquarie Local Government Area.

The following amendments have been added to demonstrate the Subject Site is suitable for the proposed zoning change. The Subject Site has suitable are to support the requirements for bushfire protection as required by the Planning for Bushfire Protection (2019).

Additional commentary has been added to **Table 1** (refer below) supporting **Figure 5** which demonstrates that all Asset protection Zones can be achieved within the Subject Site, using Fire Danger Index Rating = 100, as stated below:

- North
 - 0-5 degrees downslope
 - Hazard Vegetation
 - o APZ 29m
- East
 - o Upslope / flat
 - Urban no hazard Vegetation
 - o APZ 0
- South east
 - 0-5 degrees downslope
 - Hazard Vegetation
 - o APZ 29m
- South
 - o Upslope / flat
 - Hazard Vegetation
 - o APZ 24m
- South west
 - 0-5 degrees downslope

2389.01 Wyee Hue Hue



- Hazard Vegetation
- o APZ 29m
- West
 - o Upslope / flat
 - Urban no hazard Vegetation
 - APZ 0
 - Northwest
 - o Upslope / flat
 - Hazard Vegetation
 - o APZ 24m

Additional commentary has also been added to Section 4.1 of the report showing that BAL construction standards applicable for the proposed development can be achieved across all lots (refer below):

- North
 - 0-5 degrees downslope
 - Hazard Vegetation
 - o APZ 29m
 - o BAL Requirements
 - BAL Flame Zone < 22
 - BAL 40 22 -< 29
 - BAL 29 29 -< 40
 - BAL 19 40 -< 54
 - BAL 12.5 54 -< 100
- East
 - o Upslope / flat
 - Urban no hazard Vegetation
 - APZ 0
 - o BAL Level less than 12.5
- South east
 - o 0-5 degrees downslope
 - Hazard Vegetation
 - o APZ 29m
 - o BAL Requirements
 - BAL Flame Zone < 22
 - BAL 40 22 -< 29
 - BAL 29 29 -< 40
 - BAL 19 40 -< 54
 - BAL 12.5 54 -< 100
- South
 - o Upslope / flat
 - Hazard Vegetation
 - APZ 24m
 - o BAL Requirements
 - BAL Fame Zone < 18
 - BAL 40 18 -< 24
 - BAL 29 24 -< 33



- BAL 19 33
- BAL 12.5 -< 45 45 -< 100
- South west
 - 0-5 degrees downslope
 - Hazard Vegetation
 - o APZ 29m
 - o BAL Requirements
 - BAL Flame Zone < 22
 - BAL 40 22 -< 29
 - BAL 29 29 -< 40
 - BAL 19 40 -< 54
 - BAL 12.5 54 -< 100
- West
 - Upslope / flat
 - Urban no hazard Vegetation
 - APZ 0
 - o BAL Level less than 12.5
- Northwest
 - o Upslope / flat
 - Hazard Vegetation
 - o APZ 24m
 - o BAL Requirements
 - BAL Fame Zone < 18
 - BAL 40 18 -< 24
 - BAL 29 24 -< 33
 - BAL 19 33
 - BAL 12.5 -< 45 45 -< 100

The above calculations demonstrate the Planning Proposal allows building to BAL-29 standards on proposed Lot.

The APZs and BAL levels have been calculated with the assumption that the land in the south (C2 Zone) will be regenerated to full forest and the residential zoned land will be managed in accordance with an approved landscape plan that will be prepared to comply with Appendix 4 of the PBP, 2019.

We thank you for the opportunity to be involved in this project. Should you require any further clarification on this matter, please contact Natalie Black (AEP Senior Environmental Manager – 0431 249 360).

Regards

Natalie Black Senior Environmental Manager BAAS No. 19076



Attachment 1: AEP BTA (December 2023)



Bushfire Threat Assessment

Planning Proposal Lot 437 DP 755242 1377 Hue Hue Road Wyee, NSW



Prepared for: Topa Property Pty Ltd

1 December 2023

- AEP Ref: 2389
 - Revision: 03



Document Control

Document Name	Bushfire Threat Assessment 1377 Hue Hue Road Wyee.	
Project Number	2389	
Client Name	me Topa Property Pty Ltd	
	Tim Mouton	
	Natalie Black	
AEP Project Team	Andrew Harker	
	Chris Wark	
	Oscar Anderson	

Revision

Revision	Date	Author	Reviewed	Approved
00	05/08/2021	Tim Mouton	Natalie Black	05/08/2021
01	06/08/2021	Natalie Black	Craig Anderson	06/08/2021
01	06/08/2021	Angela Metcalfe	Natalie Black	12/07/2022
03	13/11/2023	Oscar Anderson	Chris Wark	13/11/2023
04	01/12/2023	Oscar Anderson	Natalie Black	01/12/2023

Distribution

Revision	Date	Name	Organisation
00	05/08/2021	Olga Masella	Topa Property Pty Ltd
01	09/08/2021	Olga Masella	Topa Property Pty Ltd
02	12/07/2022	Olga Masella	Topa Property Pty Ltd
03	13/11/2023	Olga Masella	Topa Property Pty Ltd
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1.0 Introduction

Anderson Environment & Planning was commissioned by Topa Property Pty Ltd (the client) to undertake a Bushfire Threat Assessment (BTA) for a Planning Proposal to rezone RU2 – Rural landscape to R2 – Low Density at 1377 Hue Hue Road, Wyee (the Subject Site).

The Planning Proposal will be assessed as per Division 3.2 of the Environmental Planning and Assessment Act 1979 (EP&A Act). As a result, section 3.18 requires concurrence from the Rural Fire Service (RFS) to enable the planning proposal to proceed on Bushfire Prone Land. This report addresses the required heads of consideration relevant to obtaining concurrence from the RFS.

This report is specifically intended to assess the bushfire protection measures required by "Planning for Bushfire Protection 2019" (PBP) and the construction requirements for proposed development in accordance with the provisions of the Building Code of Australia – Volume 2, Edition 2010 and Australian Standard 3959-2009 (AS 3959) – "Construction of buildings in bushfire-prone areas", to provide direction for future development planning within the site.

For the purposes of referencing, this document should be referred to as:

Anderson Environment & Planning (2021). *Bushfire Threat Assessment Planning Proposal at 1377 Hue Hue Road Wyee, NSW*. Unpublished report for Topa Property Pty Ltd. August 2021.



2.0 Site Particulars

- Address 1377 Hue Hue Road Wyee, NSW.
- LGA Lake Macquarie Council.
- Title Details Lot 437 DP 755242.
- **Subject Site** The Subject Site encompasses the proposed subdivision footprint within Lot 437 DP 755242, including part of the Digary Road easement along the western boundary of the lot. The Subject Site covers approximately 3.8ha.
- **Zoning** Under the *Lake Macquarie Local Environmental Plan 2014* (the LEP), the Subject Site is currently zoned RU2 Rural Landscape, and C2 Environmental Conservation.
- Current Land Use Lot 437 DP 755242 is occupied by two residential dwellings at the front of the lot. The surrounding areas in the northern and central portion of the lot contain pasture, including stock fencing and a number of rural sheds and structures associated with keeping horses. The southern portion of the lot contains a patch of remnant native forest, associated with vegetation surrounding Mannering Creek, which flows through the far southern corner of the lot.
- Surrounding Land Use The site is bounded by Hue Hue Rd to the north, beyond which lies low density residential and semi-rural properties containing scattered patches of remnant bushland. Cleared agricultural land and the M1 Motorway lies to the west, and a residential subdivision lies to the east. Remnant vegetation occurs to the south, which is associated with riparian areas surrounding Mannering Creek.
- **Proposed Development** Planning Proposal to rezone RU2 -Rural Landscape to R2 Low Density Residential at 1377 Hue Hue Road, Wyee.

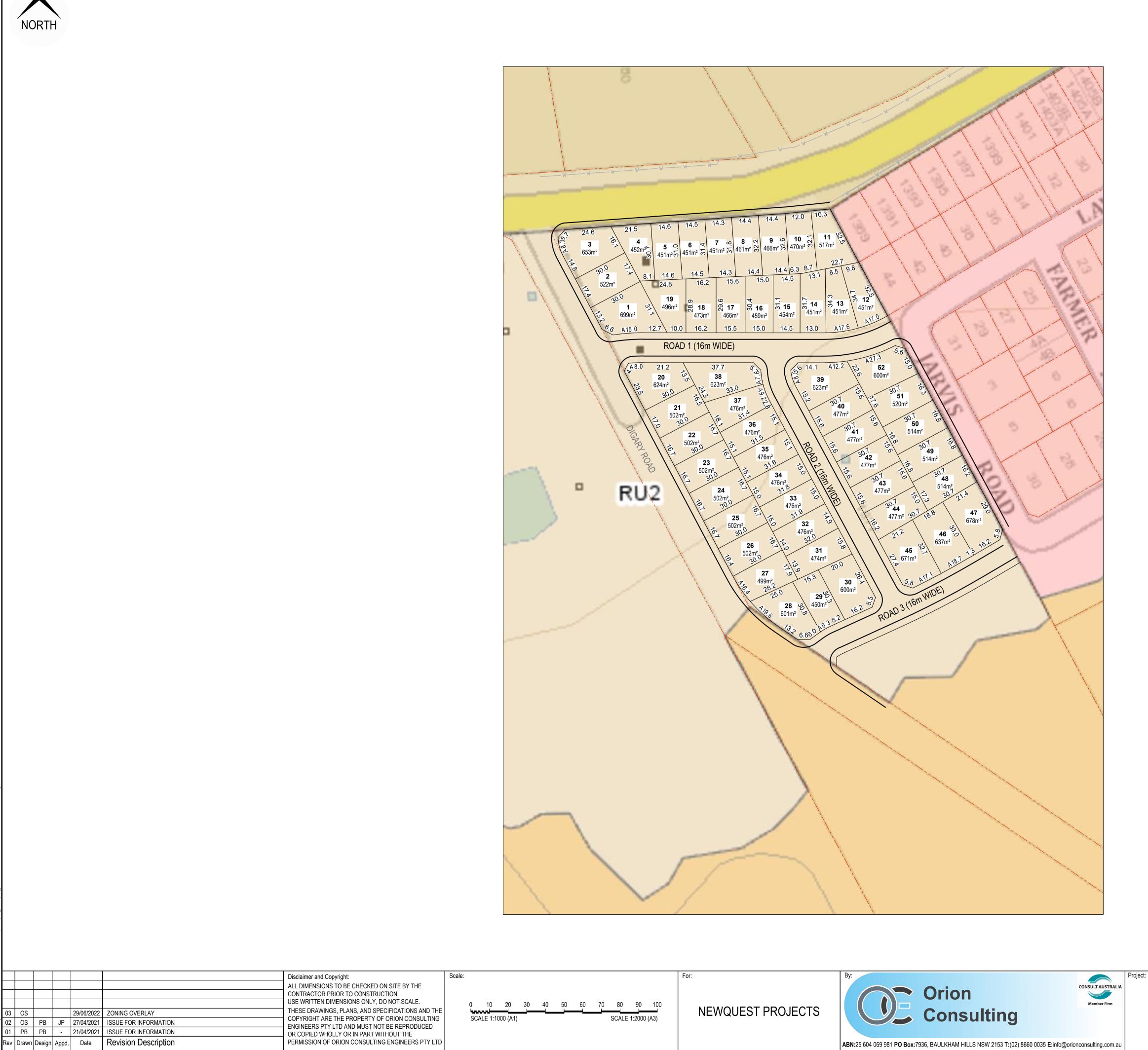
Figure 1 depicts the extent of the site overlain on an aerial photograph of the locality. **Figure 2** depicts the Concept Plan for the Planning Proposal within the Subject Site.





Figure 1 - Site Location Location: 1377 Hue Hue Rd, Wyee, NSW Client: Topa Property Pty Ltd

AEP ref: 2389.01



LEGEND	
EXISTING CADASTRAL PROPOSED LOT	

FOR INFORMATION

CONCEPT PLAN OF SUBDIVISION

HUE HUE ROAD WYEE

Project No.	
21-0089	

Title:

Set No. 02

Milestone SK

Plan **001**

Revision 03



3.0 Bushfire Hazard Assessment

3.1 Bushfire Prone Land Mapping

Examination of the Lake Macquarie Council LGA Bushfire Prone Land (BPL) Mapping (NSW Planning Portal) confirms that part of the site is mapped as "Vegetation Category 1" as shown in **Figure 3**. This designation has triggered the need for this assessment as part of the Planning Proposal submission.



Legend



Note: 1. Boundaries are not survey accurate 2. Do not scale off the plan



150 m

75

0

Figure 3 - Bushfire Prone Land Location: 1377 Hue Hue Road, Wyee Client: Topa Nominees No 1 Pty Ltd Date: November 2023

AEP ref: 2389.01



3.2 Planning for Bushfire Protection 2019

Planning for Bush Fire Protection 2019 aims to provide an assessment and review process for proposed development within NSW on land identified as bush fire prone to minimise the risk of bush fires to life and property.

Section 4.2 and Table 4.2.1 within the PBP (2019) outline the bush fires issues and assessment considerations for a strategic development proposal. **Table 1** outlines these components and assessment as relates to the Subject Site.



Issue	Detail	PBP 2019 Considerations	AEP Assessment
Bush fire landscape assessment	A Bush fire landscape assessment considers the likelihood of a bush fire, its potential severity and intensity and the potential impact on life and property in the context of the broader surrounding landscape.	 The bush fire hazard in the surrounding area, including: Vegetation Topography Weather 	 The site and surrounds occur within the Greater Hunter region, with existing vegetation subsequently classified with a Fire Danger Index (FDI) of 100 as per Appendix 1 Section A1.6 of the PBP. AEP understands that hazard vegetation directly to the south of the proposed development area within C2 zoned land will be retained, thus on and off-site vegetation will be considered within this bushfire assessment. All retained on-site vegetation and other vegetation within 140m of the site has been subject to this assessment as per PBP guidelines: North, south east, south west and west – has been determine as managed land, refer Plate 4. East – Residential development, refer Plate 3. South hazard vegetation - Vegetated areas to the south occur as Eucalypt-dominated Riparian and Swamp Forest that constitutes 'Forest' vegetation as defined in the PBP, which represent a future hazard to the development as proposed on the site, refer Plate 1. North east and north west hazard vegetation - Eucalypt-dominated 'Forest' vegetation as defined in the PBP, which represent future hazards to the development as proposed on the site, refer Plate 2. Figure 4 provides an indication of the vegetation surrounding the site that constitute the future hazard post development for the proposal.
		The potential fire behaviour that might be generated based on the above.	Canopy fire may occur in the C2 zoned land to the south.

Table 1 - Bush Fire Issues and Strategic Assessment



Issue	Detail	PBP 2019 Considerations	AEP Assessment
		Any history of bush fire in the area.	No information available on Lake Macquarie City Council webpage, Rural Fires Services webpage or other local historical sites.
		Potential fire runs into the site and the intensity of such fire runs.	Canopy fire may occur in the C2 zoned land to the south.
		The difficulty in accessing and suppressing a fire, the continuity of bush fire hazards or the fragmentation of landscape fuels and the complexity of the associated terrain.	The Proposal has ample space to provide the required APZs, perimeter roads, hydrants and, given the location to local fire station (2km), this is not considered an issue.
Land use assessment	The land use assessment will identify the most appropriate locations within the masterplan area or site layout for the proposed land uses.	The risk profile of different areas of the development layout based on the above landscape study.	 Slope Analysis From the plan presented in Figure 4, it is apparent that the site falls predominantly downslope to the south. Land to the north also falls downslope of Hue Hue Rd. Examination of slope class to relevant hazard areas reveals: North – 0-5 degrees downslope East – Upslope / flat South east – 0-5 degrees downslope South east – 0-5 degrees downslope South - Upslope / flat South west - 0-5 degrees downslope West – Upslope / flat Northwest - 0-5 degrees downslope West – Upslope / flat Northwest - Upslope / flat Based on the information presented previously, the following derivation of required Asset Protection Zones (APZ's) was concluded. Examination of slope class to relevant hazard areas reveals: Fire Danger Index Rating = 100 North 0-5 degrees downslope



Issue	Detail	PBP 2019 Considerations	AEP Assessment
			 Hazard Vegetation
			○ APZ – 29m
			• East
			 Upslope / flat
			 Urban no hazard Vegetation
			○ APZ 0
			South east
			 0-5 degrees downslope
			 Hazard Vegetation
			○ APZ – 29m
			South
			 Upslope / flat
			 Hazard Vegetation
			• APZ – 24m
			South west
			 0-5 degrees downslope
			 Hazard Vegetation
			o APZ – 29m
			• West
			 Upslope / flat
			 Urban no hazard Vegetation
			• APZ 0
			Northwest
			 ○ Upslope / flat
			 Hazard Vegetation
			○ APZ – 24m



Issue	Detail	PBP 2019 Considerations	AEP Assessment
			As per Section A4.1.2 of PBP2019, the APZ may be composed of an Inner Protection Area (IPA) and an Outer Protection Area (OPA) with management summarised as follows:
			 IPA: up to 15% canopy cover; 2-5m minimum canopy separation; no shrubs at the base of trees; shrub cover under 10%; grasses kept to no more than 100mm in height;
			 OPA: up to 30% canopy cover; 2-5m minimum canopy separation; shrub cover under 20%; grasses kept to no more than 100mm in height;
			• The OPA can be located within 10 metres from the outer edge of the APZ.
			Figure 5 shows the required APZs demonstrating the Subject site has the ability to provide the required APZs within the Subject Site.
		The proposed land use zones and permitted uses.	Given the above assessment the proposed Residential zone is deemed suitable within the Subject Site.
		The most appropriate siting of different land uses based on risk profiles within the site (i.e. not locating development on ridge tops).	Given the above assessment the proposal to rezone the RU2 land is deemed the most appropriate area within the Lot.
		The impact of the siting of these uses on APZ provision.	The APZs do not require the clearing of any vegetation, all clearing works associated with the planning proposal are required for road and other civil works.
Access a egress	A study of the existing and proposed road networks both within and external to the masterplan area or site layout.	The capacity for the proposed road network to deal with evacuating residents and responding emergency services, based on the existing and proposed community profile.	Future development would be serviced via the existing accessways including Hue Hue Road to the north, Digary Road to the west, and Jarvis Road to the east. Perimeter road is provided and as per Figure 2 shows there is adequate area to meet the required 8m wide and sealed.



Issue	Detail	PBP 2019 Considerations	AEP Assessment
			Emergency response times would be expected to be prompt as the central hub of Wyee is under 2km from the site, including an RFS depot
		The location of key access routes and direction of travel.	As discussed above.
		The potential for development to be isolated in the event of a bush fire.	Given the development to the east and the location of Wyee Village it is unlikely that in the event of a fire the Subject Site would become isolated.
Emergency services	An assessment of the future impact of new development on emergency services.	Consideration of the increase in demand for emergency services responding to a bush fire emergency including the need for new stations/ brigades.	Given the proximity to the M1 Motorway and the local fire station it has been determined that the planning proposal to rezone the land would not significantly increase the demand on fire vehicles nor emergency timeframes.
		Impact on the ability of emergency services to carry out fire suppression in a bush fire emergency.	There is ample land for the C2 land to be accessed via a perimeter road, therefore it has been determined that this would provide suitable access to undertake suppression activities if required.
Infrastructure	An assessment of the issues associated with infrastructure and utilities.	The ability of the reticulated water system to deal with a major bush fire event in terms of pressures, flows, and spacing of hydrants.	It is expected that future development would be serviced by a reticulated water supply system extended from existing and proposed residential areas.
			The reticulated water supply and street hydrant access will need to be delivered in accordance with AS 2419.1–2021.
		Life safety issues associated with fire and proximity to high voltage power lines, natural gas supply lines etc.	There is a natural gas supply pipeline within the northern road reserve of Hue Hue Road. It has been considered and deemed a minimal risk given it is situated below ground.
Adjoining land	The impact of new development on adjoining landowners and their ability to undertake bush fire management.Consideration of the implications of a change in land use or adjoining land including increased pressure on BPMs through the implementation of Bush Fire Management Plans.		The planning proposal is likely to reduce the risk of Bush Fire to the adjoining land, given the area proposed residential zone land will be managed, reducing the risk of grass fires into the adjoining residential development to the east.





Plate 1: Forest Hazard Vegetation looking directly south



Plate 2: Hazard vegetation looking north across Hue Hue Rd





Plate 3: Cleared land and residential development looking south east



Plate 4: Cleared land looking west towards the M1 Motorway





4.0 Bushfire Hazard Determination

4.1 Construction Standards – AS 3959:2018

As outlined above, the identification of proximate hazards post development has resulted in the need for APZs, and hence consideration of related construction standards.

The Australian Standard 3959:2018 "Construction of buildings in bushfire prone areas", details six (6) levels of construction standard that are required for buildings, depending upon the expected impact of a bushfire from adjacent areas. These Bushfire Attack Levels (BAL) are measured from the edge of the hazard and incorporate vegetation type and slopes (Section 4) to determine the relevant distance for each BAL rating (and associated construction standard).

The relationship between the expected impact of a bushfire and the BAL rating is provided in **Table 2** below. BALs and APZs are shown in **Figure 5**.

Bushfire Attack Level	Maximum radiant heat impact (kW/m²)	Level of construction standard under AS 3959:2018
Low		No special construction requirements
12.5	≤12.5	BAL – 12.5
19	12.6 to 19.0	BAL – 19
29	19.1 to 29	BAL - 29
40	29 to 40	BAL – 40
Flame Zone	≥40	BAL – FZ (Not deemed to satisfy provisions)

Table 2 - BAL Construction Standard

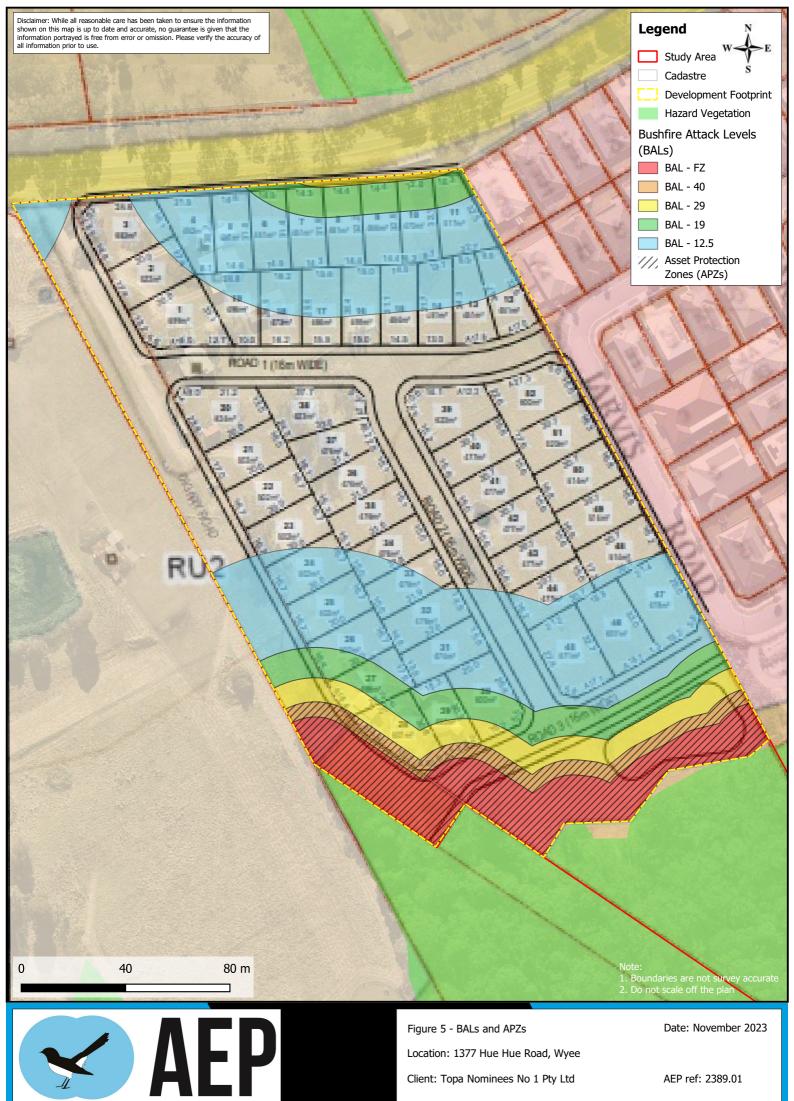
The BAL construction standards applicable for the proposed development are:

- North
 - o 0-5 degrees downslope
 - o Hazard Vegetation
 - o APZ 29m
 - o BAL Requirements
 - BAL Flame Zone < 22
 - BAL 40 22 -< 29
 - BAL 29 29 -< 40
 - BAL 19 40 -< 54
 - BAL 12.5 54 -< 100
- East
 - $\circ \quad \text{Upslope / flat} \\$
 - o Urban no hazard Vegetation
 - APZ 0
 - $\circ \quad \ \ BAL \ \ Level-less \ than \ 12.5$
- South east
 - o 0-5 degrees downslope
 - o Hazard Vegetation
 - o APZ 29m
 - o BAL Requirements



- BAL Flame Zone < 22
- BAL 40 22 -< 29
- BAL 29 29 -< 40
- BAL 19 40 -< 54
- BAL 12.5 54 -< 100
- South
 - o Upslope / flat
 - o Hazard Vegetation
 - \circ APZ 24m
 - o BAL Requirements
 - BAL Fame Zone < 18
 - BAL 40 18 -< 24
 - BAL 29 24 -< 33
 - BAL 19 33
 - BAL 12.5 -< 45 45 -< 100
- South west
 - \circ 0-5 degrees downslope
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 - o Urban no hazard Vegetation
 - APZ 0
 - \circ BAL Level less than 12.5
- Northwest
 - o Upslope / flat
 - o Hazard Vegetation
 - \circ APZ 24m
 - o BAL Requirements
 - BAL Fame Zone < 18
 - BAL 40 18 -< 24
 - BAL 29 24 -< 33
 - BAL 19 33
 - BAL 12.5 -< 45 45 -< 100

Figure 5 shows the required APZs for the Subject Site.



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5.0 Other Considerations

The following analysis applies to the site in reference to environmental features present.

- **Riparian Corridors** Mannering Creek forms the southern boundary of the site and is a 3rd order watercourse. The hazard vegetation is associated with parts of the riparian corridor that would be protected.
- SEPP (Resilience and Hazards) N/A.
- SEPP (Biodiversity Conservation 2021) no 'Core Koala Habitat' present within the development footprint.
- Areas of geological interest none present.
- Environmental protection zones or steep lands (>18°) none present.
- Land slip or flood prone areas Flood prone land is identified in the C2 zoned Land.
- National Parks estate or various other reserves none present.
- **Threatened species matters** Several threatened species known from the area. An Ecological Assessment Report prepared by AEP accompanies this BTA report as part of the submitted Planning Proposal. No threatened species would be notably impacted by the proposed land use.
- Aboriginal Heritage none known to be present.



6.0 Conclusion

Investigations undertaken for this Bushfire Threat Assessment report have revealed that the Planning Proposal will be affected by Forest vegetation to the north east, north west and south post rezoning and development.

Required Asset Protection Zones and associated BAL construction standards have been derived and applied to the site. It has been shown that existing and future hazards associated with the bushland to the south will result in the required APZ encroaching into the Subject Site. As such, the position of future building envelopes along the southern interface will need to take this into consideration. Based on a review of the Concept Plan, it is not considered that the APZ encroachments prohibit a building envelope to be positioned to allow building to BAL-29 standards on any proposed Lot.

The APZs and BAL levels have been calculated with the assumption that the land in the south (C2 Zone) will be regenerated to full forest and the residential zoned land will be managed in accordance with an approved landscape plan that will be prepared to comply with Appendix 4 of the PBP, 2019.

Suitable access / egress is provided off Hue Hue Road, Digary Road and via the proposed internal road network. It is considered that the proposed access and egress arrangements are appropriate, and no issues have been identified with evacuation, safe haven zones, or firefighting logistics.

A reticulated water supply system from established residential areas is expected to service the site, and street hydrant access will need to be delivered in accordance with AS2419.1 - 2021.

It is considered that the proposed protection measures, principally APZ's, perimeter roads and relevant construction standards, would comply with the relevant requirements of PBP 2019 and AS-3959. When applied, these measures should provide adequate protection to life and property within the proposed development in the event of a bushfire occurring in the immediate locality.

As such, it is considered that the Planning Proposal is able to meet the required objectives and principles of PBP 2019. However, it can never be guaranteed that the site and residents and property therein will not at some stage be affected by a bushfire event.



7.0 References

NSW Government (1979). *Environment and Planning & Assessment Act 1979*. NSW Government, Sydney.

NSW Government (2013). Rural Fires Regulation 2013. NSW Government, Sydney.

NSW Government (2013). Rural Fires Act 1997. NSW Government, Sydney.

NSW Government (2014). *Lake Macquarie City Council Local Environmental Plan.* www.legislation.nsw.gov.au.

NSW Government (2021). Planning Portal. www.planningportal.nsw.gov.au.

NSW Office of Environment and Heritage (OEH) (2019). *Planning for Bushfire Protection*. NSW Rural Fire Service / NSW Department of Planning, Sydney.

Standards Australia (2018) AS-3959 *Construction of Buildings in Bushfire-Prone Areas.* Standards Australia, Sydney.