



AEP

BIODIVERSITY | BUSHFIRE | ARBORICULTURE

NEWCASTLE SYDNEY CENTRAL COAST

Bushfire Assessment Report

Proposed Residential Subdivision
Stage 97 Waterford Living
2 Settlers Boulevard, Chisholm



Prepared for: Avid Property Group

AEP Ref: 5629

Revision: 00

May 2026

Document Control

Document Name	Bushfire Assessment Report for Proposed Residential Subdivision at Stage 97 Waterford Living (Lot 9120 DP 1295941 & Lot 9400 DP1313704)
Project Number	5629
Client Name	Avid Property Group c/-ADW Johnson
AEP Project Team	Chris Wark Maria Jedensjo Brendon Young

Revision

Revision	Date	Author	Reviewed	Approved
00	5 May 2026	Chris Wark	Brendon Young	Chris Wark

Distribution

Revision	Date	Name	Organisation
00	5 May 2026	Mark Kelly c/- Ben Jia	ADW Johnson

Disclaimer

Every effort has been made to ensure that the information within this report is accurate and represents the conditions of the site at the time the document was prepared.

The APZs, BALs and recommendations contained within this report should be considered the minimum standards and do not guarantee that buildings or assets will remain undamaged in a bushfire event.

While the implementation of the required and recommended BPMs will reduce the likely impact of a bushfire event on the development it can never be guaranteed that the site, residents and property therein will not, at some stage, be impacted by a bushfire event.




Chris Wark

Accredited Bushfire Practitioner

BPAD - 63455

Contents

1.0	Introduction	2
2.0	Site Particulars.....	3
3.0	Proposed Development	3
4.0	Bushfire Hazard Assessment	6
4.1	Bushfire Prone Land Mapping	6
4.2	Vegetation and Slope Analysis	8
4.2.1	Slope Calculations	8
4.3	Bushfire Protection Measures Assessment	10
4.3.1	Asset Protection Zones.....	10
4.3.2	Access.....	10
4.3.3	Landscaping.....	11
4.3.4	Services.....	11
5.0	Construction Standards and BALs	12
5.1	Construction Standards – AS 3959-2018.....	12
6.0	Other Considerations.....	14
7.0	Recommendations	15
8.0	Conclusion	17
9.0	References.....	18

Tables

Table 1 – Site Particulars	3
Table 2 – Hazard Vegetation and Slope Assessment	8
Table 3 – Radiant Heat and BAL Construction Standard	12
Table 4 – Other Site Constraints	14

Figures

Figure 1 – Site Location	4
Figure 2 – Proposed Development.....	5
Figure 3 – Bushfire Prone Land Mapping (Planning NSW, 2026)	7
Figure 4 – Vegetation and Slope Assessment	9
Figure 5 – Required BALs.....	13

Appendices

Appendix A – Site photographs
Appendix B – PBP 2019 BPM Assessment

Terms and Abbreviations

Abbreviation	Meaning
AEP	Anderson Environment & Planning
APZ	Asset Protection Zone
AS2419	Australian Standard 2419 – Fire Hydrant Installations
AS3959	Australian Standard 3959 – Construction of Buildings in Bushfire Prone Areas
BFAR	Bushfire Assessment Report
BAL	Bushfire Attack Level
BCA	Building Code of Australia
BC Act	<i>NSW Biodiversity and Conservation Act 2016</i>
BPL	Bushfire Prone Land
BPMs	Bushfire Protection Measures
Council	Maitland City Council
ELVIS	Elevation and Depth Foundation Spatial Data – Geoscience Australia
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
FDI	Fire Danger Index
FMP	Fuel Management Plan
FRNSW	Fire and Rescue NSW
ha	hectare
IPA	Inner Protection Area
LGA	Local Government Area
NCC 2022	National Construction Code 2022
NSP	Neighbourhood Safer Place
OPA	Outer Protection Area
PBP 2019	Planning for Bush Fire Protection – 2019
ROW	Right of Way
RF Act	<i>Rural Fires Act 1997</i>
RF Regulation	Rural Fires Regulation
RFS	NSW Rural Fire Service
SEPP	State Environmental Planning Policy
SFPP	Special Fire Protection Purpose
SWS	Static Water Supply

1.0 Introduction

A residential subdivision is proposed on land identified as Lot 9120 DP 1295941 and Lot 9400 DP1313704 as part of Stage 97 development within the Waterford Living Estate. The area is bounded to the North, East and West by previous stages of the Estate. Raymond Terrace Road runs east/west directly adjacent to the southern border of the Subject Site while further to the south is a large patch of Bushland. At the request of ADW Johnson on behalf of Avid Property Group (the client), Anderson Environment & Planning (AEP) have undertaken the necessary investigations to inform the production of a Bushfire Assessment Report (BFAR) addressing the proposed development.

This report is specifically intended to assess the bushfire hazard and potential bushfire threat to outline the Bushfire Protection Measures required by the NSW Rural Fire Service's "Planning for Bushfire Protection 2019" (PBP) and the bushfire construction requirements of the proposed development in accordance with the provisions of the Building Code of Australia – Volume 2, Edition 2022 and Australian Standard 3959-2018 (AS 3959) – "*Construction of buildings in bushfire-prone areas*". While no structures are proposed as part of this development consideration of NCC 2022 has been given to ensure future dwellings can comply.

The proposal involves the subdivision for residential purposes as per 100B of the Rural Fires Act 1997 (RF Act). As a result, a Bushfire Safety Authority (BSA) is required from the Rural Fire Service (RFS) to enable the development to proceed. This report addresses the required heads of consideration relevant to obtaining a BSA.

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

Anderson Environment & Planning (2026). *Bushfire Assessment Report for Proposed Residential Subdivision at Stage 97 Waterford Living (Lot 9120 DP 1295941 & Lot 9400 DP1313709)*. Unpublished report for Avid Property Group, May 2026.

2.0 Site Particulars

The proposed residential subdivision development is described as follows.

Table 1 – Site Particulars

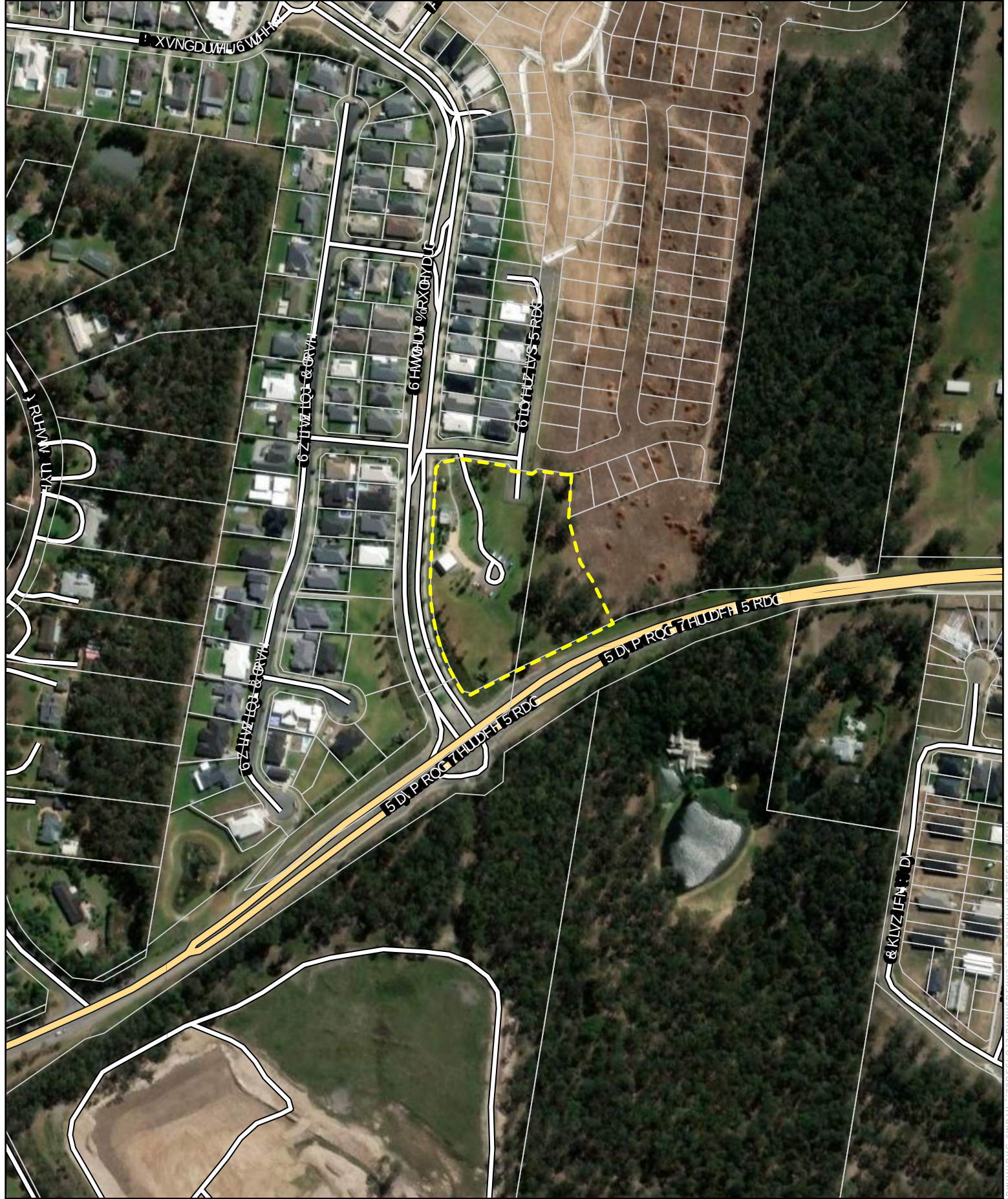
Item	Comments
Client	Avid Property Group C/- ADW Johnson Pty Ltd
Address	Waterford Living Estate, 2 Settlers Boulevard Chisholm, 2322, NSW
Title(s)	Lot 9120 DP 1295941 & Lot 9400 DP1313704
Study Area	Comprises the Subject Site plus an area out to 140m assessing hazard vegetation
Subject Site	Comprises Lot 9120 DP 1295941 & Part Lot 9400 DP1313704
LGA	Maitland City Council
Zoning	R1 – General Residential
Site context	The Subject Site consists of land that has been cleared and managed as part of the larger residential estate development. It is located at the entrance to the estate and part of it has been used as a café and sales office. Remnant trees are present in part of Lot 9400, most of which will be removed as part of this development proposal.
Surrounding Land Context	The Subject Site sits at the entrance to the Waterford Living Estate and represents Stage 97 of this project. Lands directly to the east, north and west are either completed houses, lots of land for sale or in the process of building. Further to the east and west are strips of vegetation that have been retained and are being managed under a biodiversity management plan (BMP to the west) or vegetation at the back of larger residential lots. Vegetation to the south and southeast is comprised of a mix of forested areas and large bushland lots. Fire hazards are most likely to stem from the south where larger areas of unmanaged forest hazard are present with larger potential fires runs. Fires in vegetation to the west and east are likely to be more constrained with smaller potential fire runs present.

Figure 1 depicts the extent of the Subject Site overlain on an aerial photograph of the locality.

3.0 Proposed Development

The proposed residential subdivision development includes the creation of 15 residential lots, ranging in size from 606m² to 2662m², along with associated civil infrastructure and a public road through the middle of the proposed Subject Site.

Figure 2 depicts the plan of proposed development within the Subject Site.

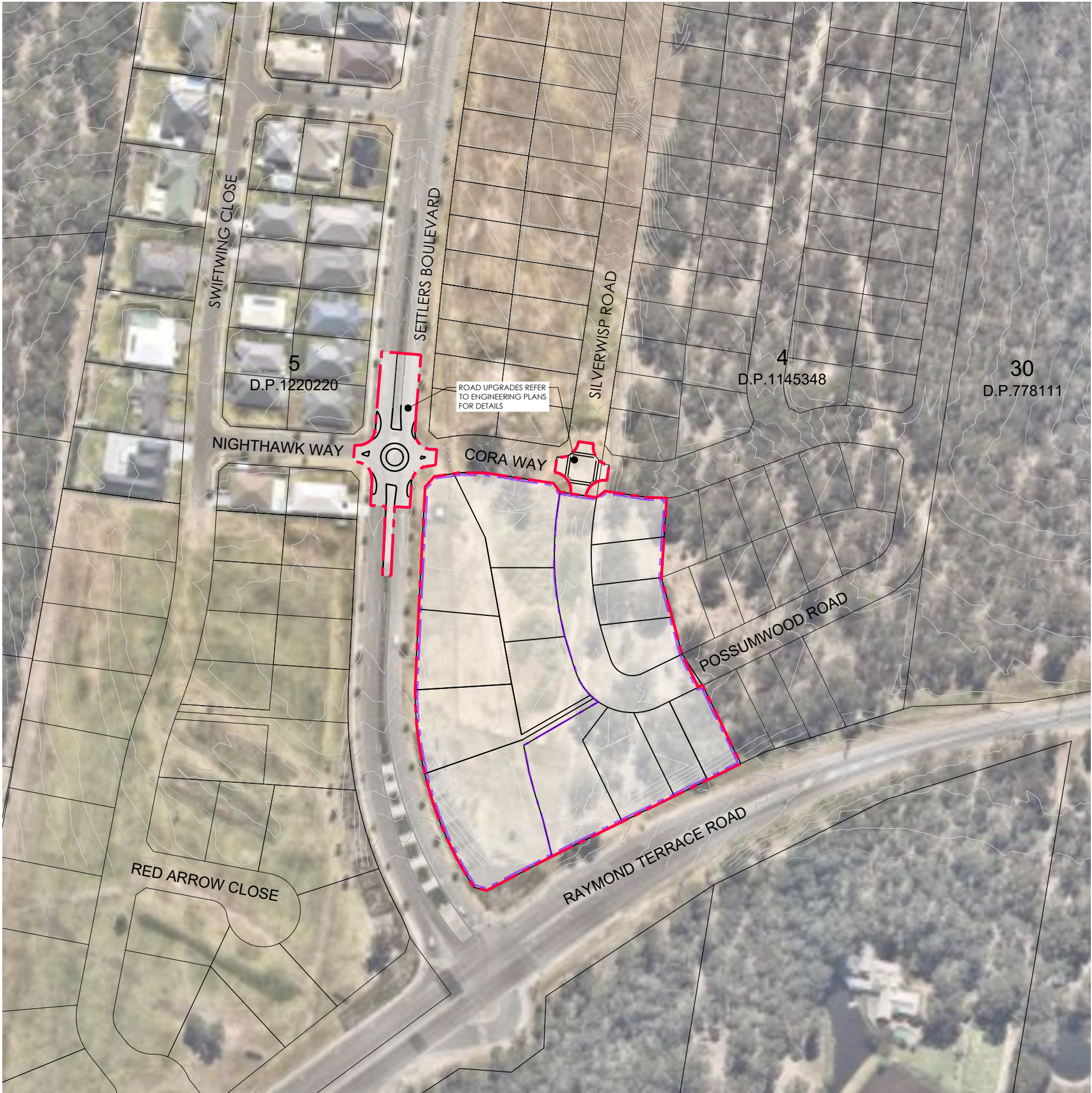


6XEMHFW 6LWH
&DGDVWUH

)LJXUH 6LWH /RFDWLRQ



SGGUHV, 6HWWOHUV %RXOYDU, PD 1 HUVK R 5 P 6SDWLD 0DSV 'LVFODLPHU, :KLOH UHVRQDEOH FDUH KDV EHHQ WDNHQ WR HQVX JH
&OLHQW, \$YLG 3URSHUW\ *URXS 6SDWLD 6SHIHUHQFH, **\$ 0*\$GDNH HUURUV RU RPLVVLRQV PD\ VWLOO RFFXU 3OHDVH YHUL\ WK
\$(3 5HI, ' - 'DWH, 0DUFK ERXQGDUHV DUH QRW VXUYH\ DFFXUDWH DQG GR QRW VFDOH RII WK



LEGEND

SITE CADASTRAL BOUNDARY

PROPOSED DEVELOPMENT APPLICATION

PROPOSED STAGE BOUNDARY

EXISTING BOUNDARY

FUTURE BOUNDARY (APPROVED)

PROPOSED BOUNDARY

NOT FOR CONSTRUCTION

ver.	date	comment	drawn	pm	level information	scale (A1 original size)	notes
A	29.04.2026	INITIAL ISSUE	BWe	MK	DATUM: GDA2020 MGA56 CONTOUR INTERVAL:	A1 1:3000 0 60 120 150m A3 1:6000	NOTE : PLANS ARE PREPARED IN COLOUR
• project management • civil engineering • infrastructure • superintendency • social impact • town planning • surveying • development feasibility • visualisation • urban design							

drawing title:

EXISTING SITE NATURAL
SURFACE PLAN

location: CHISHOLM

council: MAITLAND CITY COUNCIL

dwg ref: 190433(97)-DA-104

client:

AVID

Property Group

central coast office

hunter office

sydney office

ph: (02) 4305 4300

ph: (02) 4978 5100

ph: (02) 8046 7411

www.adwjohanson.com.au

adw

johnson

4.0 Bushfire Hazard Assessment

4.1 Bushfire Prone Land Mapping

Examination of the NSW Planning Portal, Bushfire Prone Land (BPL) mapping (2026) confirms that part of the Subject Site is mapped as “Bushfire Prone Land - Buffer”. This designation has triggered the need for the assessment herewith, noting that the landscape is likely to have significantly changed since this mapping was certified.

Appendix 1 of the PBP provides the steps required to determine the level of bushfire hazard that applies to the site. Factors influencing the hazard level include:

- The formation of vegetation surrounding the site (as defined by Keith 2004);
- The distance between vegetation and the site (or proposed buildings therein);
- The effective slope under each patch of hazard vegetation; and
- The Fire Danger Index (FDI) of the council area within which the development occurs.

These factors together provide an indication of the level of threat posed to the development from any vegetation retained within the site and surrounding vegetation in the event of a bushfire, and the required mitigation measures to be taken in the form of Asset Protection Zones (APZs) and building construction standards. These measures are detailed further in **Section 5**.

4.2 Vegetation and Slope Analysis

The site and surrounds occur within the Greater Hunter Region, with existing vegetation subsequently classified with a Fire Danger Index (FDI) of 100 as NSW Rural Fire Service (2017) NSW Local Government Areas FDI and Grassland Fire Danger Index (GFDI) of 130, as per NSW Rural Fire Service (2019) NSW Local Government Areas FDI.

Vegetation communities that will be present post-development within the Subject Site and out to 140m surrounding the development, have been classified and mapped. Hazard vegetation was identified using:

- Site inspection by Chris Wark and Maria Jedensjo (AEP) on 06 August 2025;
- Reference to NSW State Vegetation Type Mapping; and
- Aerial Photographic Interpretation (API) using up to date satellite mapping.

Effective slope has been calculated under identified hazard vegetation to provide an understanding of the likely effect the bushfire threat affecting the development. Slope assessment was undertaken using data from:

- Site inspection by Chris Wark and Maria Jedensjo (AEP) on 06 August 2025;
- Available contour data from government and client sources; and
- Review of LIDAR data using ELVIS DEMs

Transects under hazard vegetation identify the effective slope with the resulting data shown in **Table 2** and **Figure 4**. Also contained within **Table 2** is the required setback from hazard vegetation and the current distance of hazard vegetation from the proposal.

Table 2 – Hazard Vegetation and Slope Assessment

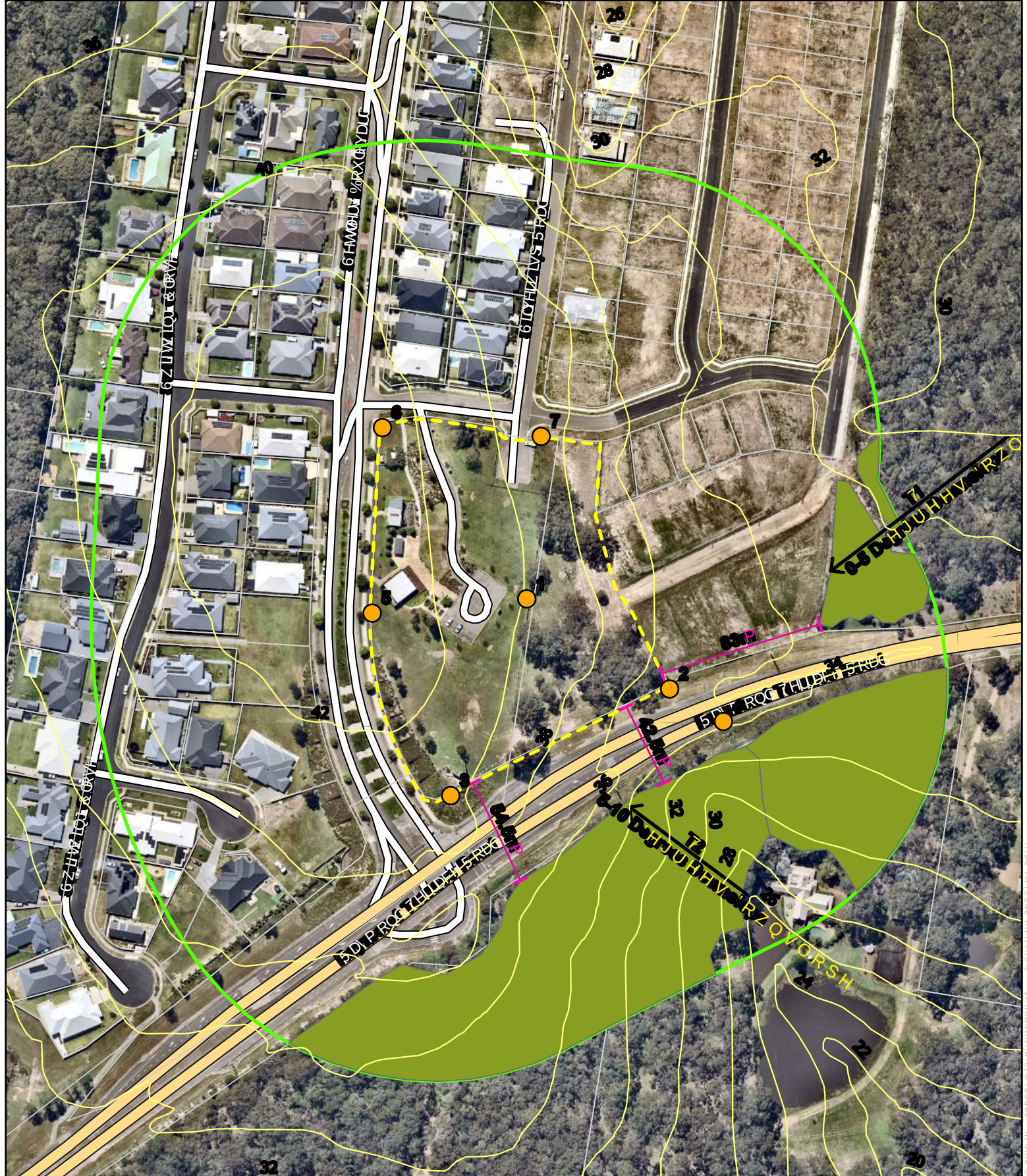
Transect	Hazard Vegetation (140m)	Effective Slope (100m)	Required APZ setback from Hazard Vegetation	Distance between Development and Hazard Vegetation
T1	Forest	0-5° Downslope	29m	83m
T2	Forest	5-10° Downslope	36m	47m

Appendix A contains photos showing the vegetation types within the 140m vegetation assessment buffer around the Subject Site as well as other points of interest.

4.2.1 Slope Calculations

T1 – Distance – 113m, Elevation Change – 2m downslope, Slope – 1.0° downslope

T2 – Distance – 74 m, Elevation Change – 8m downslope, Slope – 6.2° downslope



6XEMHFW 6LWH +DJDUG 9HJHWDWLRQ
&DGDVWUH &RQWRXU P
P 9HJHWDWLRQ D&KUR 3RLQWV
\$VVHVVP HQW

)LJXUH 9HJHWDWLRQ DQG 6ORSH \$VVHVVP HQW
6FDOH p AEP

\$GGUHV 6HWWOHUV %RXOHYDUG D&KUR 6HSHWPEHU 'LVFODLPHU :KLOH UHVRQDEOH FDUH KDV EHHQ WDNHQ WR HQVXU
&OLHQW \$YLG 3URSHUW\ *URXS 6SDWLDO 5HSHUHQFH **\$ 0*\$&RQH HUURUV RU RPLVVLRQV PDI VWLOO RFFXU 3OHVH YHULI WK
\$(3 5HI - 'DWH 0DUFK ERXQGDULHV DUH QRW VXUYH\ DFFXUDWH DQG GR QRW VFDOH RII WK

4.3 Bushfire Protection Measures Assessment

Bushfire Protection Measures (BPMs) required by the NSW Rural Fire Service's "Planning for Bushfire Protection 2019" (PBP) have been assessed to ensure that the aims and objectives of PBP 2019 have been met. Meeting these aims and objectives is considered necessary by the RFS to ensure that people, property and the environment is protected in the case of a bushfire emergency. Assessment against the Deemed to Satisfy (Acceptable Solutions) of PBP 2019 has been considered for the specific BPMs associated with Residential Subdivision in Chapter 5 of PBP 2019 relevant to the proposed development (**Appendix B**).

4.3.1 Asset Protection Zones

An Asset Protection Zone (APZ) is an area surrounding structures that is managed to provide sufficient space and maintain reduced fuel loads to ensure radiant heat levels around the building are below critical limits and prevent direct flame contact. Required APZ width is based on the type of hazard vegetation present and the effective slope underneath the hazard. APZs are generally the most important BPM affecting environmental impact area leading to site restrictions and the viability of development.

The hazard vegetation within 140m of this Stage of the larger subdivision requires setbacks from hazard vegetation (**Table 2**). Given the distance of the hazard vegetation from the boundary of the proposed subdivision stage boundary and the infrastructure already present APZs are not required within the Subject Site. Future residential dwellings within an approved subdivision to the east will create a large enough setback such that an APZ should not be required in this direction. To the south of this Stage is a 4-lane public road with a carriageway width of approximately 26m combined with 10m of managed verges and pavement on either side. Given that both the future residential dwellings to the east and the public road to the south will remain in perpetuity and will not constitute a hazard it is considered that these areas adequately address the requirement for APZ setbacks required for residential development in this stage.

Proposed Lots can provide for building envelopes with a radiant heat exposure of 29kW/m² or less. It is assumed that vegetation within the proposed Lots would be managed in accordance with PBP IPA standards.

Trees and shrubs can be present within an APZ but must meet the requirements of Appendix 4 in PBP 2019 for an Inner Protection Area (IPA).

Flammable materials including mulch piles, building materials, wooden structures and other items that could ignite are not considered appropriate within an APZ.

4.3.2 Access

Appropriate access and egress are important in the event of a bushfire emergency to provide safe operational access to structures and water supply for emergency services, while also allowing residents to evacuate from the area. Roads can be placed in the required APZ and can be used by RFS as an operational area to fight a fire.

The Waterford subdivision is accessed off Settlers Boulevard. This is a large public road with multiple lanes. Lots from within this Stage (97) will be provided access to the public road network via Settler's Boulevard, Cora Way and Silverwisp Road. An extension of Silverwisp Road is proposed as part of Stage 97 development with widths and design in line with previous stages. Previous roads meet the

internal road requirement of PBP 2019 and it is expected that the extension to this road would also meet PBP requirements for an all-weather, 2wd, through road. From design plans the carriage way looks to be between 6.5 and 7m in width.

No parking is proposed along Silverwisp Road and hydrants would be located outside of the carriageway.

4.3.3 Landscaping

Landscaping is an important consideration within the design of subdivisions and buildings to improve the outcome if a bushfire event occurs. Well-designed landscaping can provide bushfire protection by filtering embers, changing wind patterns or providing wind breaks and presenting a barrier for intense heat. However, badly designed landscaping can result in an increased risk to buildings.

It is important to ensure that the fuel load around buildings coming from landscaping is minimised, landscape planning considerations should include:

- Ensuring there are gaps within the landscaping to ensure fire runs towards buildings are interrupted;
- Priority being given to plants that are fire retardant or have a low flammability;
- Priority for species which do not create large amounts of leaf litter; and
- Priority for smooth barked species over stringy bark species or species with bark 'ribbons'.

Generally, PBP requires landscaping to align with the APZ management practices in Appendix 4 of PBP 2019. Where landscaping does not align with the PBP then it may constitute hazard vegetation and impact on subdivision APZs and future dwelling Bushfire Attack Levels (BALs).

4.3.4 Services

It is important to provide adequate services of water for the protection of buildings during and after the passage of a bushfire. It is also important to locate electricity and gas services in such a way as to not increase the risk of fire to a dwelling.

4.3.4.1 Water

The subdivision is to be serviced by a reticulated water supply in accordance with Table 5.3c of PBP 2019. Hydrants are to be installed in line with AS 2419.1:2021.

4.3.4.2 Electricity

Electrical services are proposed to be installed underground.

4.3.4.3 Gas

No provision for gas is proposed as part of the subdivision.

5.0 Construction Standards and BALs

5.1 Construction Standards – AS 3959-2018

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

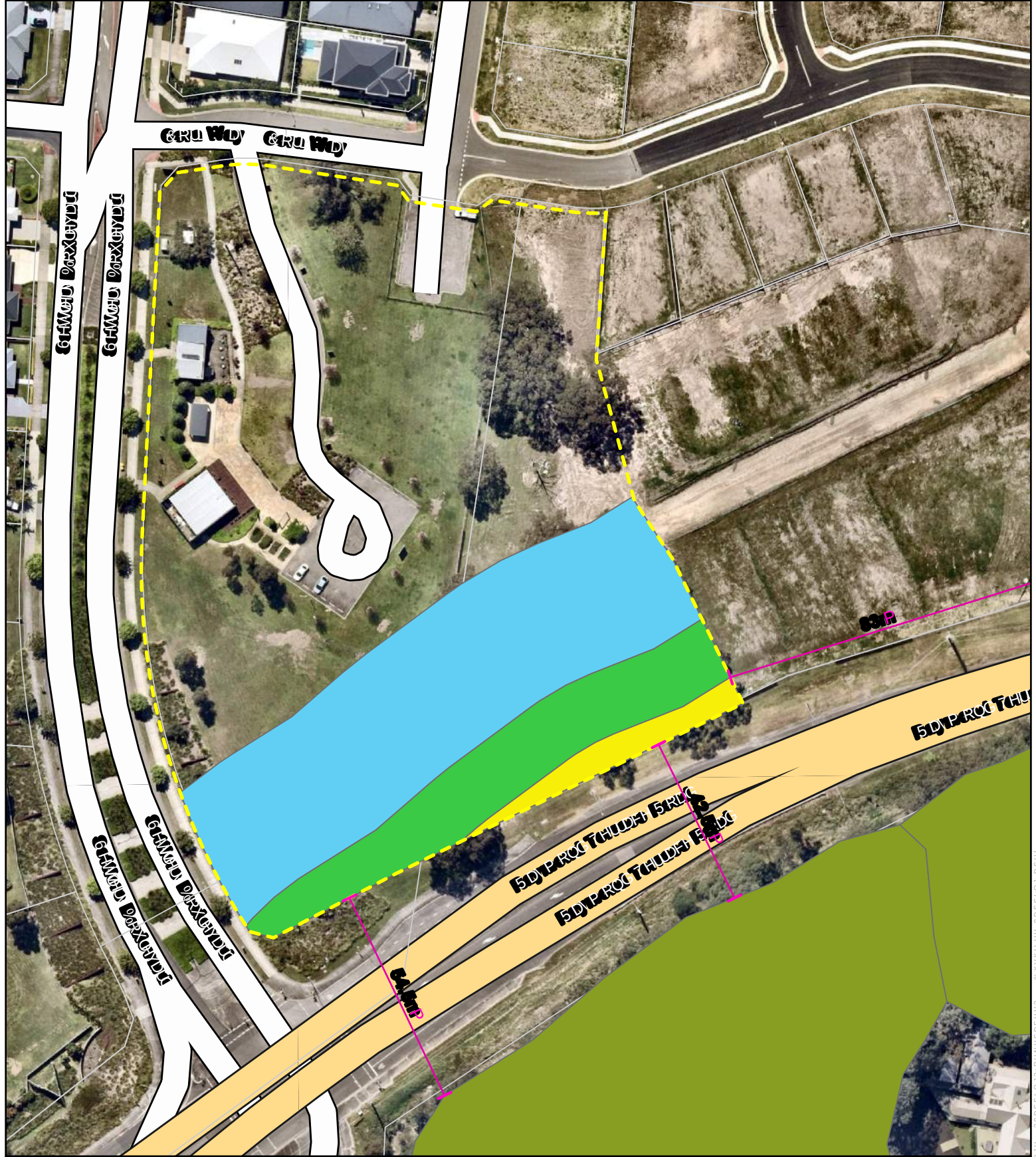
The relationship between the expected impact of a bushfire and the BAL rating is provided in **Table 3** below.

Table 3 – Radiant Heat and BAL Construction Standard

Bushfire Attack Level	Maximum radiant heat impact (kW/m ²)	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)

It is a requirement for subdivision development that all Lots can offer a building envelope to BAL – 29 or below. The proposed development complies with this requirement with all proposed Lots able to provide a building footprint within BAL – 29 or less.

The required BALs for the proposed subdivision are shown in **Figure 5** noting that APZ setbacks are provided outside of the Subject Site by the residential area to the east and Raymond Terrace Road to the South.



6XEMHFW 6LWH	%XVKILUH \$WWDFN /HYHOV
&DGDVWUH	%\$ /
+DJDUG 9HJHWDV	%\$ /
	Q%\$ /
	%\$ /
	%\$ /)=

6.0 Other Considerations

The following analysis has been applied to the Subject Site in reference to environmental features present.

Table 4 – Other Site Constraints

Item	Comments
Riparian Corridors	There are no riparian corridors within the proposed Subject Site.
State Environmental Planning Policy (Resilience and Hazards) 2021	A Biodiversity Development Assessment Report has been completed by AEP for this development and addresses any considerations associated with this SEPP arising from the proposed development.
State Environmental Planning Policy (Biodiversity Conservation) 2021	A Biodiversity Development Assessment Report has been completed by AEP for this development and addresses any considerations associated with this SEPP arising from the proposed development.
Areas of geological interest	There are no areas of geological interest within the Subject Site being a mostly flat already developed area.
Environmental protection zones or steep lands (>18°)	There are no environmental protection zones or steep lands associated with the proposed development.
Land slip or flood prone areas	No Landslip or flood prone areas are mapped over the Subject Site.
National Parks estate or various other reserves	The Subject Site is located within a larger staged residential development. No reserves or National Parks are present within the Subject Site though there is a retained vegetated area to the east.
Threatened species matters	A Biodiversity Development Assessment Report has been completed by AEP for this development and addresses any threatened species considerations associated arising from the proposed development.
Aboriginal Heritage	A basic AHIM search did not reveal any Aboriginal Heritage matters within the Subject Site.

7.0 Recommendations

The following recommendations are provided to ensure that future bushfire impacts to the development are mitigated by ensuring the BPMs meet the aims and objectives of PBP 2019 and the specific criteria of Chapter 5.

1. Before subdivision certification is released, all APZs should be implemented and maintained in perpetuity to Inner Protection Area (IPA) standards in accordance with Appendix 4 of PBP 2019.

When establishing and maintaining an IPA the following requirements apply:

- tree canopy cover should be less than 15% at maturity;
 - trees at maturity should not touch or overhang the building;
 - lower limbs should be removed up to a height of 2m above the ground;
 - tree canopies should be separated by 2 to 5m;
 - preference should be given to smooth barked and evergreen trees;
 - large discontinuities or gaps in vegetation should be provided 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.
2. Access, Perimeter and internal roads are to be implemented as per the plan on **Figure 2** in accordance with Table 5.3b of PBP 2019.

No parking is to occur within the carriageway of Silverwisp Road. All properties have access to a public/internal road.

3. Landscaping within the Subject Site is to comply with IPA standards, as outlined in Recommendation 1. In addition, the following principles are to be incorporated:
 - A minimum 1-metre-wide area (Or to the property boundary where the setbacks are less than 1 metre) suitable for pedestrian traffic must be provided around the immediate curtilage of the building;
 - Planting is limited in the immediate vicinity of the building;
 - Avoid planting of deciduous species that may increase fuel at surface/ ground level (i.e. leaf litter);
 - Avoid climbing species to walls and pergolas;
 - Locate combustible materials such as woodchips/mulch, flammable fuel stores away from the building;
 - Locate combustible structures such as garden sheds, pergolas and materials such as timber garden furniture away from any building; and
 - Give priority to low flammability and fire-retardant vegetation species.

4. Water and Electricity services are to be designed to comply and should be installed in line with the appropriate Australian Standards and in accordance with Table 5.3c of PBP 2019.
5. It is recommended that future residents create a personalised Bushfire Survival Plan to provide direction in the case of Bushfire event.

8.0 Conclusion

Investigations undertaken for this Bushfire Assessment Report have revealed that the proposed development will be affected by forest hazard from the south and east.

Setbacks for Asset Protection Zones (APZs) have been considered and the distance from hazard vegetation to the edges of the subdivision with the residential area to the east and the large public road to the south providing the required setback distance. Both these areas would be expected to remain in the same managed, low hazard state, in perpetuity. They are of sufficient width to allow all proposed lots within the subdivision to provide a building envelope that is exposed to radiant heat of 29kW/m² or less.

Proposed Lots will have access to either Settlers Boulevard, Cora Way or Silverwisp Road. Silverwisp Road runs through the proposed development and connects to other already existing parts of the road, creating a through road. Raymond Terrace Road to the south and the extension of Silverwisp Road into a previous Stage act as perimeter roads are through roads, present between all hazard vegetation and proposed lots. 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.

Landscaping is to be provided in accordance with IPA standards (Appendix 4 PBP 2019) and is to take into consideration the recommendations made in Section 7.

AEP understands that the development will be serviced by the existing reticulated water supply and street hydrant access in accordance with AS 2419.1–2021.

It is considered that the proposed BPMs, principally APZs and relevant construction standards, comply with the relevant requirements of Planning for Bushfire Protection 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. However, it can never be guaranteed that the site, residents and property therein will not at some stage be impacted by a bushfire event.

9.0 References

- Australian Building Codes Board. *International Fire Engineering Guidelines*. Edition 2005.
- Environmental Planning & Assessment Act 1979*. NSW Government.
- Keith D (2004). *Ocean Shores to Desert Dunes*. DEC, Sydney.
- NSW Rural Fire Service (2019). *Planning for Bushfire Protection: A guide for councils, planners, fire authorities and developers*. November 2019.
- NSW Government, *ePlanning Spatial Viewer – Bushfire Prone Land Map*, accessed March 2026.
- Rural Fires Act 1997*. NSW Government.
- Rural Fires Act Regulation 2013*. NSW Government.
- Standards Australia (2018) AS-3959 Construction of Buildings in Bushfire-Prone Areas.

Appendix A – Site photographs



Above: Photo Point 1 - Forest hazard vegetation in the distance to the east across previously approved stage.

Below: Photo Point 2 - Forest hazard vegetation to the south of Raymond Terrace Road.





Above: Photo Point 6 - Northwest corner of development looking north along Settlers Boulevard.

Below: Photo Point 5 - Looking west across Settlers Boulevard with managed landscaping and managed lawn.





Above: Photo Point 4 - Mix of Forest with understorey and Forest with managed understorey to the southeast of the proposed development.

Below: Photo Point 3 - Intersection of Settlers Boulevard and Raymond Terrace Road looking Southwest





Above: Photo Point 7 - Extension of Cora Way into previously completed stage of the larger residential subdivision.

Appendix B – PBP 2019 BPM Assessment

Protection Measure	Deemed to Satisfy	Assessment	Complies
Assets Protection Zones			
Potential building footprints must not be exposed to radiant heat levels exceeding 29 kW/m ² on each proposed lot.	APZs are provided in accordance with Tables A1.12.2 based on the FFDI.	Setbacks are provided from hazard vegetation by Raymond Terrace Road and a previous stage of the development	Yes
APZs are managed and maintained to prevent the spread of a fire towards the building	APZs are managed in accordance with the requirements of Appendix 4.	APZs are a large public road and part of the previous residential development stage. It is expected that these areas would be maintained in accordance with Appendix 4.	Yes
The APZs is provided in perpetuity.	APZs are wholly within the boundaries of the development site	The APZs are located within a previous stage of the larger development and a main public road to the south. As the main road is unlikely to change it is considered acceptable that this is relied upon as an APZ outside of the boundaries of the development.	Yes
APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimised.	APZs are located on lands with a slope less than 18 degrees.	The APZs are located on predominantly flat lands with very minor slopes.	Yes
Landscape			
Landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions.	Landscaping is in accordance with Appendix 4.	It is expected that landscaping could be designed to comply with the requirements of Appendix 4.	Can comply
	Fencing is constructed in accordance with section 7.6.	Fencing is to be delivered in accordance with Section 7.6 of PBP 2019.	Can comply
Access (General Requirements)			
Firefighting vehicles are provided with safe, all-weather access to structures.	Property access roads are two-wheel drive, all-weather roads.	All roads are 2wd all weather roads suitable for general traffic	Yes
	Perimeter roads are provided for residential subdivisions of three or more allotments.	Raymon Terrace Road and the extension of Silverwisp way built as part of a previous stage act as perimeter roads, separating the development from hazard vegetation and allowing for fire-fighting operations	Yes
	Subdivisions of three or more allotments have more than one access in	This development is part of a larger residential subdivision development	Yes

Protection Measure	Deemed to Satisfy	Assessment	Complies
	and out of the development.	which has two potential exits onto Raymond Terrace Road.	
	Traffic management devices are constructed to not prohibit access by emergency services vehicles.	No traffic management devices are proposed that would hinder RFS	Yes
	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.	Grades are not expected to exceed allowed standards given the flatness of the site and surrounds.	Yes
	All roads are through roads.	Roads are through roads.	Yes
	Dead end roads are not recommended, but if unavoidable, are not more than 200 metres in length, incorporate a minimum 12 metres outer radius turning circle, and are clearly sign posted as a dead end.	No dead-end roads proposed as part of this stage.	Yes
	Where kerb and guttering is provided on perimeter roads, roll top kerbing should be used to the hazard side of the road.	No perimeter roads being constructed as part of this stage.	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.	Not applicable – Silverwisp Road does not travel through woodland or forest vegetation.	N/A
	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.	Not applicable – no one-way roads proposed.	N/A

Protection Measure	Deemed to Satisfy	Assessment	Complies
The capacity of access roads is adequate for firefighting vehicles.	The capacity of perimeter and non-perimeter road surfaces and any bridges/causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes); bridges/ causeways are to clearly indicate load rating.	The capacity of the roads can be designed and built to accommodate the required weights.	Can comply
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.	Hydrants are to be located outside of the road carriageway.	Can comply
	Hydrants are provided in accordance with the relevant clauses of AS 2419.1:2021 - Fire hydrant installations System design, installation and commissioning.	Hydrants are to meet the current standards for installation of hydrants, currently AS 2419.1:2021	Can comply
	There is suitable access for a Category 1 fire appliance to within 4m of the static water supply where no reticulated supply is available.	Not applicable – no static water supply proposed	N/A
Perimeter Roads			
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.	Are two-way sealed roads.	Not applicable no perimeter roads proposed as part of the development. Perimeter roads already in place as part of previous stage works.	N/A
	Minimum 8m carriageway width kerb to kerb.		
	Parking is provided outside of the carriageway width.		
	Hydrants are located clear of parking areas.		
	Are through roads, and these are linked to the internal road system at an interval of no greater than 500m.		
	Curves of roads have a minimum inner radius of 6m.		

Protection Measure	Deemed to Satisfy	Assessment	Complies
	The maximum grade road is 15 degrees and average grade of not more than 10 degrees. The road crossfall does not exceed 3 degrees. A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.	N/A – see above	N/A
Non-Perimeter Roads			
Access roads are designed to allow safe access and egress for firefighting vehicles while residents are evacuating.	Minimum 5.5m carriageway width kerb to kerb.	Silverwisp Road is approximately 6.5-7m wide.	Yes
	Parking is provided outside of the carriageway width.	Parking is not proposed within the carriageway.	Yes
	Hydrants are located clear of parking areas.	Hydrants are to be located outside of the carriageway.	Can comply
	Roads are through roads, and these are linked to the internal road system at an interval of no greater than 500m.	Silverwisp Road is a through road that connects to the rest of the internal road network.	Yes
	Curves of roads have a minimum inner radius of 6m.	The road proposed as part of this stage of development has more than a 6m inner curve radius.	Yes
	The road crossfall does not exceed 3 degrees.	It is expected that the road crossfall will be designed and built to less than 3 degrees.	Can comply
	A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.	Maintenance of any trees overhanging Silverwisp Road would need to ensure that a vertical clearance of 4m is maintained.	Can comply
Property Access			
Firefighting vehicles can access the dwelling and exit the property safely	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	NA – development is within an urban area with all dwellings less than 70m from a public access road.	N/A

Protection Measure	Deemed to Satisfy	Assessment	Complies
	the road speed limit is not greater than 70kph) that supports the operational use of emergency firefighting vehicles.		
Water Services			
Adequate water supplies is provided for firefighting purposes	Reticulated water is to be provided to the development where available.	It is expected that the development is serviced by reticulated water connection.	Yes
	A static water and hydrant supply is provided for non-reticulated developments or where reticulated water supply cannot be guaranteed.	N/A – reticulated water provided	N/A
	Static water supplies shall comply with Table 5.3d.		
Water supplies are located at regular intervals; and the water supply is accessible and reliable for firefighting operations.	Fire hydrant, spacing, design and sizing complies with the relevant clauses of Australian Standard AS 2419.1:2021.	It expected that any hydrants installed will meet the required Australian Standards. Currently AS 2419.1:2021	Yes
	Hydrants are not located within any road carriageway.	Hydrants are not to be located within the road carriageway	Can comply
	Reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads.	N/A – no perimeter roads to be constructed as part of this stage of development.	Yes
Flows and pressure are appropriate.	Fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2021.	It is expected that hydrants installed will have flows and pressures that comply with AS 2419.1:2021 or such that the certifier is satisfied.	Can Comply
The integrity of the water supply is maintained.	All above-ground water service pipes are metal, including and up to any taps.	All connections are to be metal	Can comply
	Above-ground water storage tanks shall be of concrete or metal.	N/A – not static water proposed	N/A
Electricity Services			
Location of electricity services limits the possibility of ignition	Where practicable, electrical transmission lines are underground.	All electrical transmission is proposed to be delivered underground	Yes

Protection Measure	Deemed to Satisfy	Assessment	Complies
of surrounding bush land or the fabric of buildings.	Where overhead, electrical transmission lines are proposed as follows: lines are installed with short pole spacing of 30m, 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 ISSC3 Guideline for Managing Vegetation Near Power Lines.	N/A- no overhead transmission proposed	N/A
Gas Services			
Location and design of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.	Reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 - The storage and handling of LP Gas, the requirements of relevant authorities, and metal piping is used.	N/A – no gas services proposed	N/A
	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 metal.		
	Polymer-sheathed flexible gas supply lines are not used.		
	Above-ground gas service pipes are metal, including and up to any outlets.		