



Bushfire Assessment Report

1566 Chichester Road, Chichester

Lot 1 DP 1321283 (Consolidation of Lots 23, 82 & 2
DP753208)

Prepared for

S Hich & S Cutler C/- Derive A & D

Final V4 / September 2025

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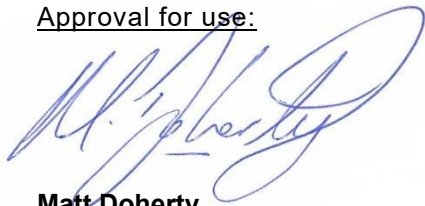
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DOCUMENT STATUS

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Approval for use:



Matt Doherty

26 September 2025

This report has been prepared in accordance with Planning for Bushfire Protection 2019 and certifies the development conforms to the specifications and requirements of S4.14 of the Environmental Planning and Assessment Act 1979.

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

EXECUTIVE SUMMARY

MJD Environmental has been engaged by the applicant, S Hicks & S Cutler C/- Derive A&D, to prepare a Bushfire Assessment Report (BAR) to accompany a Development Application (DA) to be submitted to Dungog Shire Council for the erection of a residential dwelling and shed at Lot 1 DP 1321283 (Consolidation of Lots 23, 82 & 2 DP753208), 1566 Chichester Road, Chichester, NSW.

The assessment has considered and assessed the bushfire hazard and associated potential threats relevant to the proposal, and to outline the minimum mitigative measures which would be required in accordance with *Planning for Bush Fire Protection 2019* (PBP), as adopted through the *Environmental Planning & Assessment Regulation 2021*.

In order to determine whether the proposed development is bushfire-prone, and if so, which setbacks and other relevant Bush Fire Protection Measures (BPM) will be appropriate, this assessment adhered to the methodology and procedures outlined in PBP (2019) via assessment of acceptable solutions as outlined in Chapter 7 of PBP (2019).

This assessment has been made based on the bushfire hazards in and around the site at the time of site inspection (28th May 2025) and report production.

The assessment found that hazard vegetation types occur within 140m of the site. The primary risk is from the forest-class vegetation located predominantly to the north and south of the site. The forest-class vegetation hazard has been assessed as having the greatest effect on bushfire behaviour to determine required separation distances from the hazard. The slope under the primary hazard vegetation to the south is 15-20° Downslope.

In summary, the following key recommendations have been generated to enable the proposal to comply with PBP (2019).

Asset Protection Zones & BAL

- APZ establishment is to achieve the IPA performance criteria outlined in Appendix 4 of PBP (2019) and be maintained for the life of development. The APZ is to be regularly maintained via slashing and grazing.

Direction of Hazard	Vegetation Classification	Slope Class	Required APZ (PBP 2019)	APZ Provided
T01	Forest	-12° (10-15° Downslope)	45m	56m
T02	Forest	14.1° (All upslope and flat)	24m	56m
T03	Forest	-19.8° (15-20° Downslope)	56m	56m
T04	Forest	-15.4° (15-20° Downslope)	56m	56m
T05	Forest	-5.8 (5-10° Downslope)	36m	56m

- With due consideration to the separation distance from the hazard, the dwelling is to be constructed to a **BAL-29** standard.
- The shed is located greater than 6m from the dwelling and has been excluded from assessment as per 8.3.2 PBP 2019.
- The slope under the vegetation to the southeast (T03) occurs over a slope greater than 18°, however, the slope under the APZ is less than 9° and will not result in maintenance difficulties.

Access

- The proposal is located greater than 200m from the public road system and therefore an alternative preexisting access road is provided to the southeast.
- A portion of the proposed access road is preexisting, occurring underneath the forest vegetation to the west and passing through an unnamed 3rd order stream via a shallow creek crossing that has been covered with gravel. The creek crossing is not less than 3.5m wide, extends approximately 2m with the

development being unable to reasonably avoid the stream, as such, the crossing has been assessed as a short constriction in accordance with the acceptable solutions.

- The primary property access will be extended to the dwelling from the existing access road. The driveway must comply with RFS requirements for access listed in Appendix 3 of PBP 2019 in terms of surface, vertical clearance, horizontal width, grades and minimum curve radius.
- The preexisting portion of the access road is fit for purpose and the remainder to be established over pasture to the east of the watercourse is able to comply with the width, grade and cross-fall criteria set out in PBP. Additionally, adequate space exists on both sides of the watercourse to pass on the side of the track over pasture areas
- Notably access to static water supply connections, if required, must be provided per the PBP (2019) Table 7.4a criteria

Services – Water supply, Gas and Electricity

- Services are to be provided and connected to the site in accordance with Table 7.4a PBP (2019) as summarised and assessed in Chapter 3, Section 3.4 of this report.

Landscaping and Fuel Management

- Careful consideration of future site landscaping and ongoing fuel management must occur to minimise the potential impact of bushfire on the site.
- All landscaping and fuel management must provide due consideration of PBP (2019) Appendix 4.

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GLOSSARY OF TERMS AND ABBREVIATIONS

Term/ Abbreviation	Meaning
ASL	Above Sea Level
APZ	Asset Protection Zone
AS2419-2005	Australian Standard – Fire Hydrant Installations
AS3959-2018	Australian Standard – Construction of Buildings in Bush Fire Prone Areas
BAR	Bushfire Assessment Report
BCA	Building Code of Australia
BC Act	Biodiversity Conservation Act 2016
BMP	Bush Fire Management Plan
BPA	Bush Fire Prone Area (Also Bushfire Prone Land)
BPL	Bush Fire Prone Land
BPLM	Bush Fire Prone Land Map
BPM	Bush Fire Protection Measures
CCC	Dungog Shire Council
Council	Dungog Shire Council
DoE	Commonwealth Department of the Environment
DPI Water	NSW Department of Primary Industries – Water
EPA Act	NSW Environmental Planning and Assessment Act 1979
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
FDI	Fire Danger Index
FMP	Fuel Management Plan
ha	hectare
IPA	Inner Protection Area
LGA	Local Government Area
LLS Act	Local Land Services Act 2013
OPA	Outer Protection Area
OEH	NSW Office of Environment and Heritage
PBP or PBP (2019)	Planning for Bushfire Protection 2019
RF Act	Rural Fires Act 1997
RF Regulation	Rural Fires Regulation
RFS	NSW Rural Fire Service
TSC Act	NSW Threatened Species Conservation Act 1995 (as repealed)

1 Introduction

MJD Environmental has been engaged by the applicant, S Hicks & S Cutler C/- Derive A&D, to prepare a Bushfire Assessment Report (BAR) to accompany a Development Application (DA) to be submitted to Dungog Shire Council for the erection of a residential dwelling and shed at Lot 1 DP 1321283 (Consolidation of Lots 23, 82 & 2 DP753208), 1566 Chichester Road, Chichester, NSW (refer to **Figure 1** - Site Location).

The assessment has considered and assessed the bushfire hazard and associated potential threats relevant to the proposal, and to outline the minimum mitigative measures which would be required in accordance with *Planning for Bush Fire Protection 2019 (PBP)*, as adopted through the *Environmental Planning & Assessment Regulation 2021*.

In order to determine whether the proposed development is bushfire-prone, and if so, which setbacks and other relevant Bush Fire Protection Measures (BPM) will be appropriate, this assessment adheres to the methodology and procedures outlined in PBP (2019) via assessment of acceptable solutions as outlined in Chapter 7 of PBP (2019).

This assessment has been made based on the bushfire hazards in and around the site at the time of the site inspection (12 May 2025) and report production.

1.1 Aims & Objectives

This BAR addresses the aims and objectives of PBP 2019, being:

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

1.2 Site Particulars

Locality	The site is located in Chichester, NSW
Land Title	Lot 1 DP 1321283 (Consolidation of Lots 23, 82 & 2 DP753208)
LGA	Dungog Shire Council
Area	189 ha (approx.)
Zoning	RU1: Primary Production
Boundaries	The study area is bound by Chichester Road to the west and a mix of forest vegetation and open paddocks north, east and south.
Current Land Use	An existing residential dwelling is located southwest of the lot approximately 44m from Chichester Road. The land is currently being used to hold cattle with a portion of the lot containing agricultural fencing. The lot is predominately vacant to the north eventually meeting Barrington National Park to the north.

Topography		The subject land is located on the outskirts of Barrington Tops National Park and has a peak elevation of 350 m ASL with the lowest point being 220 m ASL.
Climate / History	Fire	The site lies within a geographical area with a Fire Danger Index (FDI) rating of 100. The site is classified as being impacted by Category 1 and Category 3 Vegetation on the Bushfire Prone Land Map (DPE 2025). Refer to Figure 2 .
Environment / Cultural Significance	&	A search of the AHIMS register has been completed on the 12 May 2025 and confirmed that there are no recorded Aboriginal sites or places on or near the site.

1.3 Description of Proposal

The proposed development within the subject land includes the construction of a single dwelling, access road and associated infrastructure at Lot 74 DP 1321283. The proposal will require the removal of vegetation comprised of predominately exotic pasture and the selective removal of canopy species to achieve Asset Protection Zone standards.

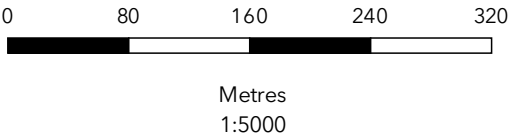
Refer to **Appendix A** for plans of the proposal.



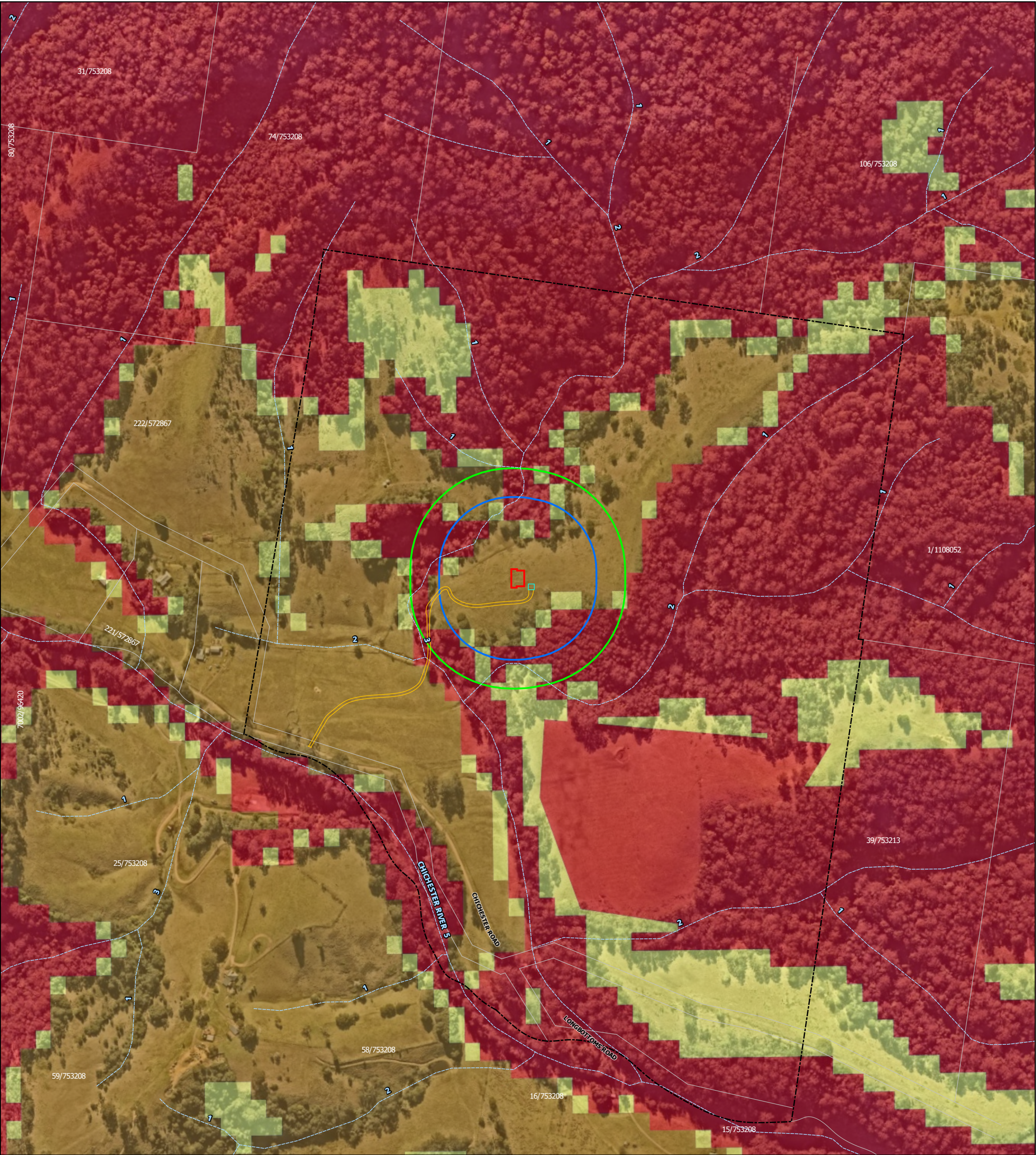
1566 CHICHESTER ROAD, CHICHESTER

FIGURE 1: SITE LOCATION

- Legend**
- Proposed Building Footprint
 - Proposed Garage
 - Proposed Driveway
 - Lot Boundary
 - Lot 1 / DP1321283
(Consolidation of Lots 2, 23, & 82 DP753208)
 - Watercourse
(Strahler order as labelled)



Aerial: Nearmap (2023) | Data: MJD Environmental, Derive Design, NSW Spatial Services (2025) | Datum/Projection: GDA2020 / MGA zone 56 | Date: 2025-08-25 | Version: 2 | Z:\24084 - 1566 Chichester Road, Chichester | This plan should not be relied upon for critical design dimensions.



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FIGURE 2: BUSH FIRE PRONE LAND

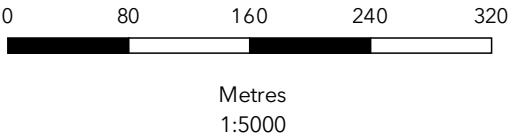
Legend

- Proposed Building Footprint
- Proposed Garage
- Proposed Driveway
- Slope Classification Buffer (100 m)
- Vegetation Classification Buffer (140 m)

Bush Fire Prone Vegetation

- BFPV Buffer
- Category 1
- Category 2

- Lot Boundary
- Lot 1 / DP1321283
(Consolidation of Lots 2, 23, & 82 DP753208)
- Watercourse
(Strahler order as labelled)



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2 Bushfire Hazard Analysis

2.1 Vegetation Assessment

Methodology

The vegetation in and around the site, to a distance of 140m, has been assessed in accordance with PBP 2019. This assessment has been made via a combination of:

- aerial photo interpretation;
- on-site vegetation classification aided by GPS; and
- reference to regional community vegetation mapping (including Greater Hunter and Keith).

These vegetation communities have been classified for bushfire purposes into structure and formation using the system adopted by Keith (2004) and using Figure A1.2 of PBP (2019) with due regard to Appendix 1 of PBP (2019).

Refer to **Appendix B** Site Photos for images of vegetation observed in and around the site during site inspection.

Vegetation Classification

Vegetation classification has been presented in **Table 1** below and **Figure 3**

Table 1 Vegetation Classification

Direction	Description	Vegetation Classification
T01	Forested vegetation corridor associated with the 3 rd order stream to the northwest	Forest
T02	Paddocks within the site are used for cattle grazing with land practices resulting in a mix of exotic and native pasture species. The forest vegetation within the surrounding landscape provides a greater hazard and has been used for the purpose of this analysis	Forest
T03	Forested vegetation corridor associated with the 2 nd order stream to the south	Forest
T04	Forested vegetation corridor associated with the 2 nd order stream to the south	Forest
T05	Paddocks within the site are used for cattle grazing with land practices resulting in a mix of exotic and native pasture species. The forest vegetation within the surrounding landscape provides a greater hazard and has been used for the purpose of this analysis	Forest

2.2 Slope Assessment

Methodology

In accordance with PBP (2019), an assessment of the slope was conducted throughout the site (where a hazard is present) and for a distance of 100m around the site in the hazard direction. Both the average slope and maximum slopes were considered to determine the level of gradient which will most significantly influence fire behaviour on the site. The slope transect was categorised within the slope classification under PBP Appendix A1.4.

Slope assessment was assisted by:

- Preparation of slope assessment based on 1m contours derived from the DEM;
- Aerial imagery overlay; and
- On-site slope classification.

Effective Slope

The slope class under the bushfire hazard within 100m is presented in **Table 2** below and **Figure 3**

Table 2 Slope Class

Direction	Vegetation Classification	Slope Class
T01	Forest	-12° (10-15° Downslope)
T02	Forest	14.1° (All upslope and flat)
T03	Forest	-19.8° (15-20° Downslope)
T04	Forest	-15.4° (15-20° Downslope)
T05	Forest	-5.8 (5-10° Downslope)



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FIGURE 3: VEGETATION & SLOPE CLASSIFICATION

Legend

- Proposed Building Footprint

Proposed Garage

Proposed Driveway

Forest

Grassland

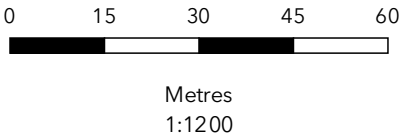
Development Footprint

Contours (1 m)

Transects

Watercourse
(Strahler order as labelled)

Elevation (m)



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3 Bushfire Protection Measures

PBP sets out a suite of BPMs and criteria that require consideration and assessment for applicable proposals on bushfire prone land in order to provide an adequate level of protection to new developments.

The measures required to be assessed are listed below and discussed throughout this chapter:

- Asset Protection Zones (APZ)
- Bushfire Attack Levels (BAL) set out in PBP 2019
- Access
- Services – Water supply, Gas and Electricity
- Landscaping and Fuel Management
- Emergency Management

3.1 Asset Protection Zone

An APZ is a buffer zone between the hazard and buildings that is progressively managed to minimise bushfire hazard (fuel loads and reduce potential radiant heat levels, flame, ember and smoke attack) PBP (2019), in order to mitigate risk to life and asset. Where a forest or woodland vegetation classification has been determined, an APZ can consist of two areas being:

- 1) Inner Protection Area (IPA) – The IPA extends from the edge of the development/ buildings to the OPA. The IPA aims to provide defensible space and reduce potential for direct or spontaneous ignition by providing a heavily reduced or fuel free zone.
- 2) Outer Protection Area (OPA) – The OPA is located adjacent to the hazard. Within the OPA any trees and shrubs should be maintained in a manner such that the vegetation is not continuous in order to reduce flame length and fire intensity. A properly managed OPA can aid in ember attack by filtering embers and slowing the fires rate of spread.

An APZ can include the following:

- lawns;
- discontinuous gardens;
- swimming pools;
- driveways;
- detached garages;
- open space / parkland;
- car parking; and
- cycleway and formed walkways.

3.1.1 Determining APZs

The site lies within the Dungog Shire Council LGA and therefore is assessed under an FFDI (Forest Fire Danger Index) rating of 100. As per Table 7.4a and Table A1.12.2 within PBP (2019), the acceptable solution setbacks have been calculated based on the bushfire hazard analysis, where a hazard occurs, presented in Chapter 2. Refer to **Table 3** below and **Figure 4** for the minimum required APZ.

It is acknowledged that the required APZ outlined within this assessment will occur over Waterfront Land that is associated with the 3rd order stream to the northwest under the *Water Management Act* (WM Act). A Vegetated Riparian Zone (VRZ) of 30m applies on both sides of the watercourse with the establishment of an APZ considered an allowable activity within the outer 50% (15m) of the VRZ (with offsets), as per Controlled Activities Guidelines (DPE 2022). However, the portion of APZ that falls within the VRZ is currently used for cattle grazing with land management practices (grazing and slashing) frequently undertaken. As such, the proposal will not impact waterfront land, rather the proposal would be a

continuation of current land use practices in a rural setting. The APZ is to be regularly maintained via slashing and grazing.

Table 3 Required APZ (PBP 2019)

Direction of Hazard	Vegetation Classification	Slope Class	Required APZ (PBP 2019)	APZ Provided
T01	Forest	-12° (10-15° Downslope)	45m	56m
T02	Forest	14.1° (All upslope and flat)	24m	56m
T03	Forest	-19.8° (15-20° Downslope) ¹	56m	56m
T04	Forest	-15.4° (15-20° Downslope)	56m	56m
T05	Forest	-5.8 (5-10° Downslope)	36m	56m

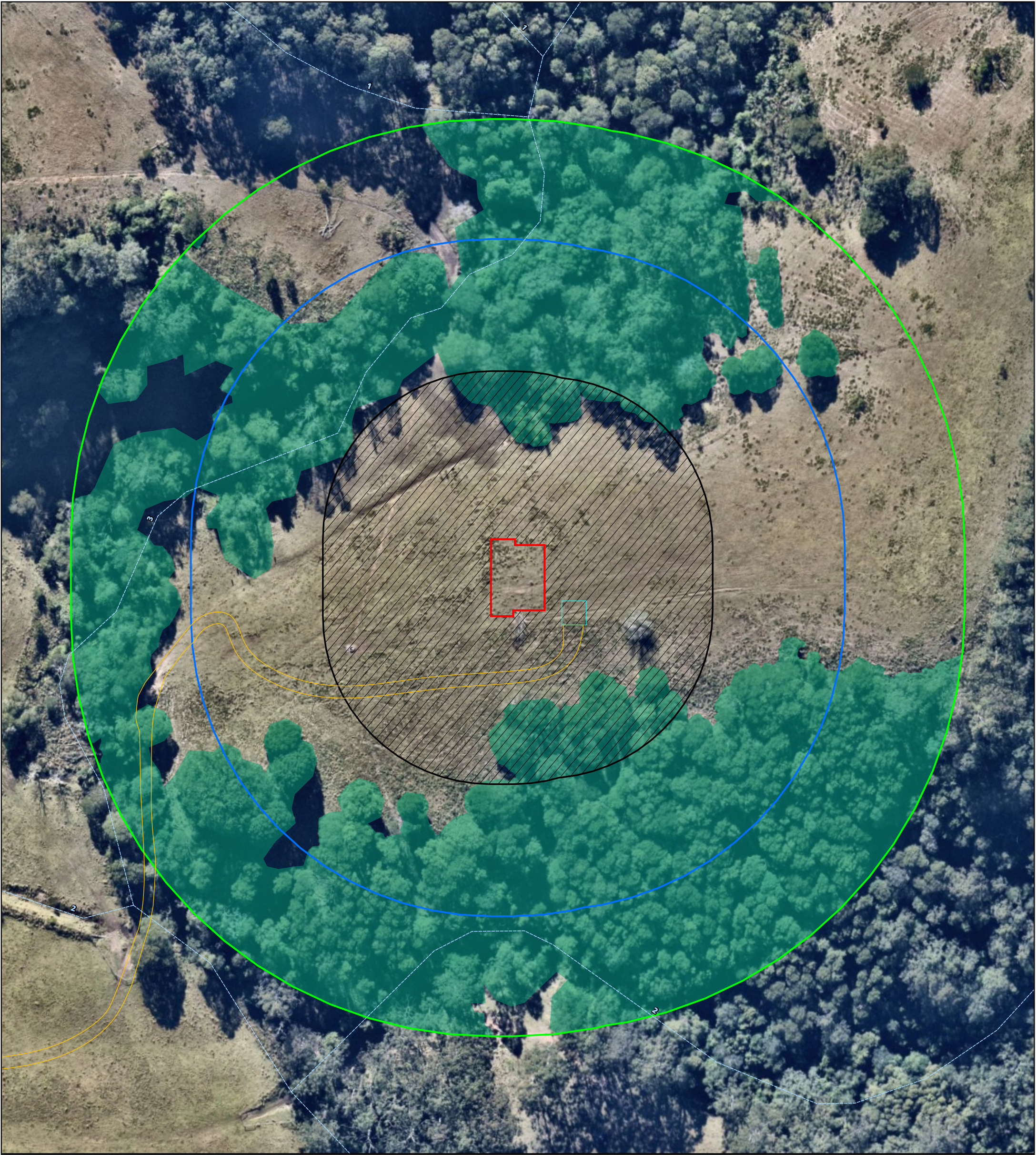
¹ The slope under the vegetation to the southeast (T03) occurs over a slope greater than 18°, however, the slope under the APZ is less than 9° and will not result in maintenance difficulties.

3.2 Determining BAL

By considering the bushfire hazard analysis outcomes presented in Chapter 2, Table A1.12.5 of Appendix 1 of PBP (2019) was applied to the vegetation classification and slope analysis to calculate the required BAL based on separation from the hazard for the site. The proposed shed is located greater than 6m from the dwelling and has been excluded from assessment as per 8.3.2 PBP 2019. Refer to **Table 4** and **Figure 5**.

Table 4 Required BAL (PBP 2019)

Direction of Hazard	Vegetation Classification	Slope Class	Required APZ (PBP 2019)	APZ Provided	Separation Distance (m)	BAL
T01	Forest	-12° (10-15° Downslope)	45m	56m	<36 36-<45 45-<60 60-<77 77-<100	BAL- FZ BAL-40 BAL-29 BAL-19 BAL-12.5
T02	Forest	14.1° (All upslope and flat)	24m	56m	<18 18-<24 24-<33 33-<45 45-<100	BAL- FZ BAL-40 BAL-29 BAL-19 BAL-12.5
T03	Forest	-19.8° (15-20° Downslope)	56m	56m	<46 46-<56 56-<73 73-<92 92-<100	BAL- FZ BAL-40 BAL-29 BAL-19 BAL-12.5
T04	Forest	-15.4° (15-20° Downslope)	56m	56m	<46 46-<56 56-<73 73-<92 92-<100	BAL- FZ BAL-40 BAL-29 BAL-19 BAL-12.5
T05	Forest	-5.8 (5-10° Downslope)	36m	56m	<28 28-<36 36-<49 49-<65 65-<100	BAL- FZ BAL-40 BAL-29 BAL-19 BAL-12.5

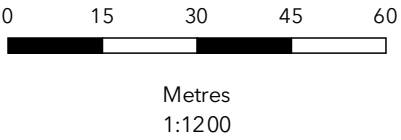


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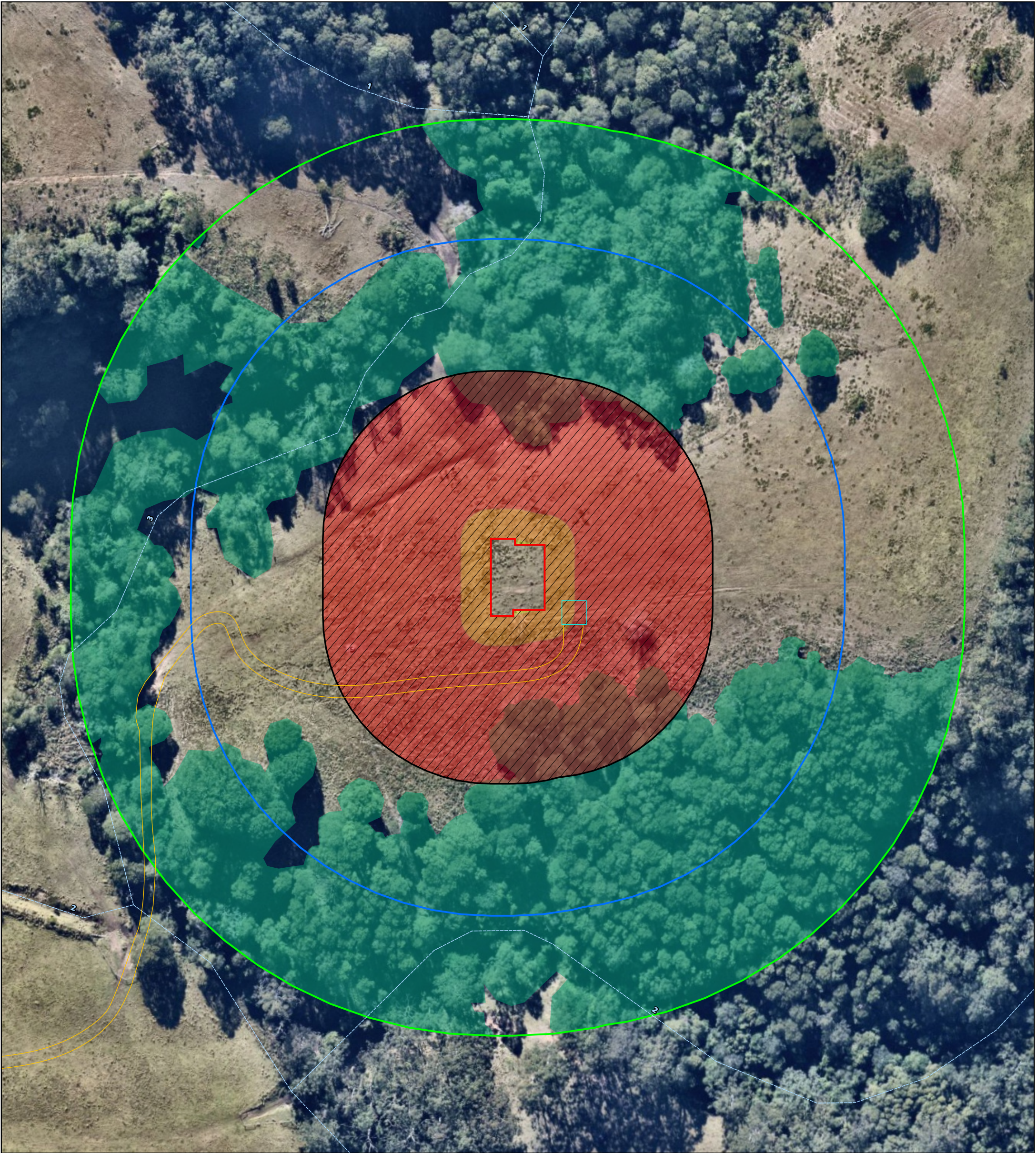
FIGURE 4: REQUIRED ASSET PROTECTION ZONE (PBP 2019)

Legend

- | | | |
|--|---|--|
|  Proposed Building Footprint |  Required Asset Protection Zone (PBP 2019) |  Watercourse (Strahler order as labelled) |
|  Proposed Garage |  Forest | |
|  Proposed Driveway | | |



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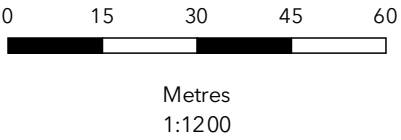


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FIGURE 5: REQUIRED BUSHFIRE ATTACK LEVELS (PBP 2019)

Legend

- | | | |
|--|--|---|
|  Proposed Building Footprint | Required Bushfire Attack Levels (PBP 2019) |  Required Asset Protection Zone (PBP 2019) |
|  Proposed Garage |  BAL-29 |  Forest |
|  Proposed Driveway |  BAL-40 |  Watercourse (Strahler order as labelled) |
| |  BAL-FZ | |



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3.3 Access

In the event of a serious bushfire threat to the proposed development, it will be essential to ensure that adequate ingress / egress and the provision of defendable space are afforded in the residential development design with due regard to the requirements of Table 7.4a, and Appendix 3 of PBP (2019) summarised in **Table 5** below.

The primary property access will be constructed to the proposed development from the public road system being Chichester Road. The proposal is located greater than 200m from the public road system and therefore is required to provide an alternative access road. A portion of the proposed access road is preexisting, occurring underneath the forest vegetation to the west and passing through an unnamed 3rd order stream via a shallow creek crossing that has been covered with gravel. The creek crossing is not less than 3.5m wide, extends approximately 2m with the development being unable to reasonably avoid the stream, as such, the crossing has been assessed as a short constriction in accordance with the acceptable solutions. The site assessment determined that the width and vegetation clearance comply with the acceptable solutions within Table 7.4a.

The preexisting portion of the access road is fit for purpose and the remainder to be established over pasture to the east of the watercourse is able to comply with the width, grade and cross-fall criteria set out in PBP. Additionally, adequate space exists on both sides of the watercourse to pass on the side of the track over pasture areas (refer to **Table 5** and **Appendix C**).

An alternative access road is provided to the southwest. Access must comply with RFS requirements for access listed in Appendix 3 of PBP (2019) in terms of surface, vertical clearance, horizontal width, grades and minimum curve radius (refer to **Appendix B**). Notably access to static water supply connections, if required, must be provided per the PBP (2019) Table 7.4a criteria.

Refer to **Appendix A** for Site Plan showing access.

Table 5 Acceptable solutions for access (PBP 2019)

Performance Criteria	Acceptable Solutions
The intent may be achieved where:	
firefighting vehicles are provided with safe, all-weather access to structures and hazard vegetation	property access roads are two-wheel drive, all-weather roads
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
there is appropriate access to water supply	- hydrants are provided in accordance with the relevant clauses of AS 2419.1:2005; - There is suitable access for a Category 1 fire appliance to within 4m of the static water supply where no reticulated supply is available
firefighting vehicles can access the dwelling and exit the property safely	- at least one alternative property access road is provided for individual dwellings or groups of dwellings that are located more than 200 metres from a public through road; - 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. In circumstances where this cannot occur, the following requirements apply: - minimum 4m carriageway width; - in forest, woodland and heath situations, rural property roads have passing bays every 200m that are 20m long by 2m wide, making a minimum trafficable width of 6m, at the passing bay;

Performance Criteria	Acceptable Solutions
	○ a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches; ○ property access must provide a suitable turning area in accordance with Appendix 3; ○ curves have a minimum inner radius of 6m and are minimal in number to allow for rapid access and egress; the minimum distance between inner and outer curves is 6m; ○ the crossfall is not more than 10 degrees; ○ maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads; and ○ a development comprising more than three dwellings has formalised access by dedication of a road and not by right of way. <i>Note: Some short constrictions in the access may be accepted where they are not less than 3.5m wide, extend for no more than 30m 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.</i>

3.4 Services – Water, Electricity, Gas

The site is to be developed in accordance with the Table 7.4a of PBP (2019) acceptable solutions for services summarised in **Table 6**.

The proposal is able to satisfy these requirements given:

- The site will provide a 20,000L static water supply for firefighting purposes in the form of a non-combustible tank. Appropriate fittings and connection point within 4m will be provided.
- Any future gas connection shall be installed in accordance with the provisions of PBP (2019).
- Any future gas connection shall be installed in accordance with the provisions of PBP (2019).

Table 6 Acceptable solutions for services (PBP 2019)

Performance Criteria	Acceptable Solutions
The intent may be achieved where:	
Water supplies ▪ an adequate water supply is provided for firefighting purposes.	▪ reticulated water is to be provided to the development, where available; and ▪ a static water supply is provided where no reticulated water is available.
▪ water supplies are located at regular intervals; and ▪ the water supply is accessible and reliable for firefighting operations.	▪ fire hydrant spacing, design and sizing comply with the relevant clauses of AS 2419.1:2005; ▪ hydrants are not located within any road carriageway; and ▪ reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads.
▪ flows and pressure are appropriate.	▪ fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2005.
▪ the integrity of the water supply is maintained.	▪ all above-ground water service pipes external to the building are metal, including and up to any taps.
▪ a static water supply is provided for firefighting purposes in areas where reticulated water is not available.	▪ where no reticulated water supply is available, water for firefighting purposes is provided in accordance with Table 5.3d (refer to insert on left);

Performance Criteria		Acceptable Solutions
Development Type	Water Requirements	- a connection for firefighting purposes is located within the IPA or non-hazard side and away from the structure; 65mm Storz outlet with a ball valve is fitted to the outlet; - ball valve and pipes are adequate for water flow and are metal; - supply pipes from tank to ball valve have the same bore size to ensure flow volume; - underground tanks have an access hole of 200mm to allow tankers to refill direct from the tank; - a hardened ground surface for truck access is supplied within 4m; - above-ground tanks are manufactured from concrete or metal; - raised tanks have their stands constructed from non-combustible material or bush fire-resisting timber (see Appendix F of AS 3959); - unobstructed access can be provided at all times; - underground tanks are clearly marked; - tanks on the hazard side of a building are provided with adequate shielding for the protection of firefighters; - all exposed water pipes external to the building are metal, including any fittings; - where pumps are provided, they are a minimum 5hp or 3kW petrol or diesel-powered pump, and are shielded against bush fire attack; any hose and reel for firefighting connected to the pump shall be 19mm internal diameter; and - fire hose reels are constructed in accordance with AS/NZS 1221:1997 and installed in accordance with the relevant clauses of AS 2441:2005.
Residential lots (<1000m ²)	5,000L/lot	
Rural-residential lots (1000-10,000m ²)	10,000L/lot	
Large rural/lifestyle lots (>10,000m ²)	20,000L/lot	
Multi-dwelling housing (including dual occupancies)	5,000L/dwelling	
Electricity Services location of electricity services limits the possibility of ignition of surrounding bushland or the fabric of buildings		- where practicable, electrical transmission lines are underground. - where overhead electrical transmission lines are proposed: - lines are installed with short pole spacing (30 metres), unless crossing gullies, gorges or riparian areas; and - no part of a tree is closer to a power line than the distance set out in accordance with the specifications in <i>ISSC3 Guideline for Managing Vegetation Near Power Lines</i>.
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 and the requirements of relevant authorities, and metal piping is used; - all fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side; - connections to and from gas cylinders are metal; - polymer-sheathed flexible gas supply lines are not used; - and above-ground gas service pipes are metal, including and up to any outlets.

3.5 Landscaping & Fuel Management

All future landscaping on the site should be designed and managed to minimise impact of bushfire based on the principles set out in PBP (2019) being:

- Prevent flame contact / direct ignition on the dwelling;
- Provide a defendable space for property protection;
- Reduce fire spread;
- Deflect and filter embers;
- Provide shelter from radiant heat; and
- Reduce wind speed.

In this manner, consideration should be given to species selection, planting location, flammability and size at maturity to ensure discontinuous canopy/ structure both vertically and horizontally to ensure the above principles are met.

Ongoing fuel management across the site as part of the maintenance regime should comply with the NSW RFS 'Asset protection zone standards' and *Appendix 4 - Asset Protection Zone Requirements* of PBP (2019) which provides guidance on maintenance activities to assist in achieving the landscape principles.

Fencing and gates are to be constructed in accordance with PBP (2019) section 7.6 as follows:

Fences and gates in bush fire prone areas may play a significant role in the vulnerability of structures during bush fires. In this regard, all fences in bush fire prone areas should be made of either hardwood or non-combustible material.

However, in circumstances where the fence is within 6m of a building or in areas of BAL-29 or greater, they should be made of non-combustible material only.

3.6 Emergency Management

Any fire within the site would be attended in the first instance by Dungog Fire Station, with support from Clarence Town Rural Fire Brigade.

To assist emergency response from the NSW RFS and/or NSW Fire and Rescue, site access is to comply with the provisions set out in PBP (2019) and all tanks where provided including connection points be readily accessible and clearly marked. If pumps are to be made available, they must be regularly maintained and in good working order.

4 Conclusion & Recommendations

MJD Environmental has been engaged by the applicant, S Hicks & S Cutler C/- Derive A&D, to prepare a Bushfire Assessment Report (BAR) to accompany a Development Application (DA) to be submitted to Dungog Shire Council for the erection of a residential dwelling and shed at Lot 1 DP 1321283 (Consolidation of Lots 23, 82 & 2 DP753208), 1566 Chichester Road, Chichester, NSW.

The assessment has considered and assessed the bushfire hazard and associated potential threats relevant to the proposal, and to outline the minimum mitigative measures which would be required in accordance with *Planning for Bush Fire Protection 2019* (PBP), as adopted through the *Environmental Planning & Assessment Regulation 2021*.

In order to determine whether the proposed development is bushfire-prone, and if so, which setbacks and other relevant Bush Fire Protection Measures (BPM) will be appropriate, this assessment adhered to the methodology and procedures outlined in PBP (2019) via assessment of acceptable solutions as outlined in Chapter 7 of PBP (2019).

This assessment has been made based on the bushfire hazards in and around the site at the time of site inspection (28th May 2025) and report production.

The assessment found that hazard vegetation types occur within 140m of the site. The primary risk is from the forest-class vegetation located predominantly to the north and south of the site. The forest-class vegetation hazard has been assessed as having the greatest effect on bushfire behaviour to determine required separation distances from the hazard. The slope under the primary hazard vegetation to the south is 15-20° Downslope.

In summary, the following key recommendations have been generated to enable the proposal to comply with PBP (2019).

Asset Protection Zones & BAL

- APZ establishment is to achieve the IPA performance criteria outlined in Appendix 4 of PBP (2019) and be maintained for the life of development. The APZ is to be regularly maintained via slashing and grazing.

Direction of Hazard	Vegetation Classification	Slope Class	Required APZ (PBP 2019)	APZ Provided
T01	Forest	-12° (10-15° Downslope)	45m	56m
T02	Forest	14.1° (All upslope and flat)	24m	56m
T03	Forest	-19.8° (15-20° Downslope)	56m	56m
T04	Forest	-15.4° (15-20° Downslope)	56m	56m
T05	Forest	-5.8 (5-10° Downslope)	36m	56m

- With due consideration to the separation distance from the hazard, the dwelling is to be constructed to a **BAL-29** standard.
- The shed is located greater than 6m from the dwelling and has been excluded from assessment as per 8.3.2 PBP 2019.
- The slope under the vegetation to the southeast (T03) occurs over a slope greater than 18°, however, the slope under the APZ is less than 9° and will not result in maintenance difficulties.

Access

- The proposal is located greater than 200m from the public road system and therefore an alternative preexisting access road is provided to the southeast.
- A portion of the proposed access road is preexisting, occurring underneath the forest vegetation to the west and passing through an unnamed 3rd order stream via a shallow creek crossing that has

been covered with gravel. The creek crossing is not less than 3.5m wide, extends approximately 2m with the development being unable to reasonably avoid the stream, as such, the crossing has been assessed as a short constriction in accordance with the acceptable solutions.

- The primary property access will be extended to the dwelling from the existing access road. The driveway must comply with RFS requirements for access listed in Appendix 3 of PBP 2019 in terms of surface, vertical clearance, horizontal width, grades and minimum curve radius.
- The preexisting portion of the access road is fit for purpose and the remainder to be established over pasture to the east of the watercourse is able to comply with the width, grade and cross-fall criteria set out in PBP. Additionally, adequate space exists on both sides of the watercourse to pass on the side of the track over pasture areas
- Notably access to static water supply connections, if required, must be provided per the PBP (2019) Table 7.4a criteria

Services – Water supply, Gas and Electricity

- Services are to be provided and connected to the site in accordance with Table 7.4a PBP (2019) as summarised and assessed in Chapter 3, Section 3.4 of this report.

Landscaping and Fuel Management

- Careful consideration of future site landscaping and ongoing fuel management must occur to minimise the potential impact of bushfire on the site.
- All landscaping and fuel management must provide due consideration of PBP (2019) Appendix 4.

5 Bibliography

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

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Standards Australia (2018). *AS 3959 – 2018: Construction of Buildings in Bushfire-prone Areas*.

Appendix A Plan of Proposal



1 SITE LOCATION PLAN
- 1:5000@A1 / 1:10000@A3

NOTE: AREAS SHOWN IN SOLID GREEN HATCH FORM SUBJECT PROPERTY





1 PART SITE PLAN
- 1:1250@A1 / 1:2500@A3

A DA ISSUE TO DUNGOG SHIRE COUNCIL 25.09.25



CLIENT
S CUTLER + S HICKS

ADDRESS
1566 CHICHESTER ROAD CHICHESTER
Lot 1 DP 1321283 (Consolidation of Lots 2,23 & 82 in DP 753208)

DRAWING TITLE
PART SITE PLAN
PROJECT
CHICHESTER FARMHOUSE

REF
DD393

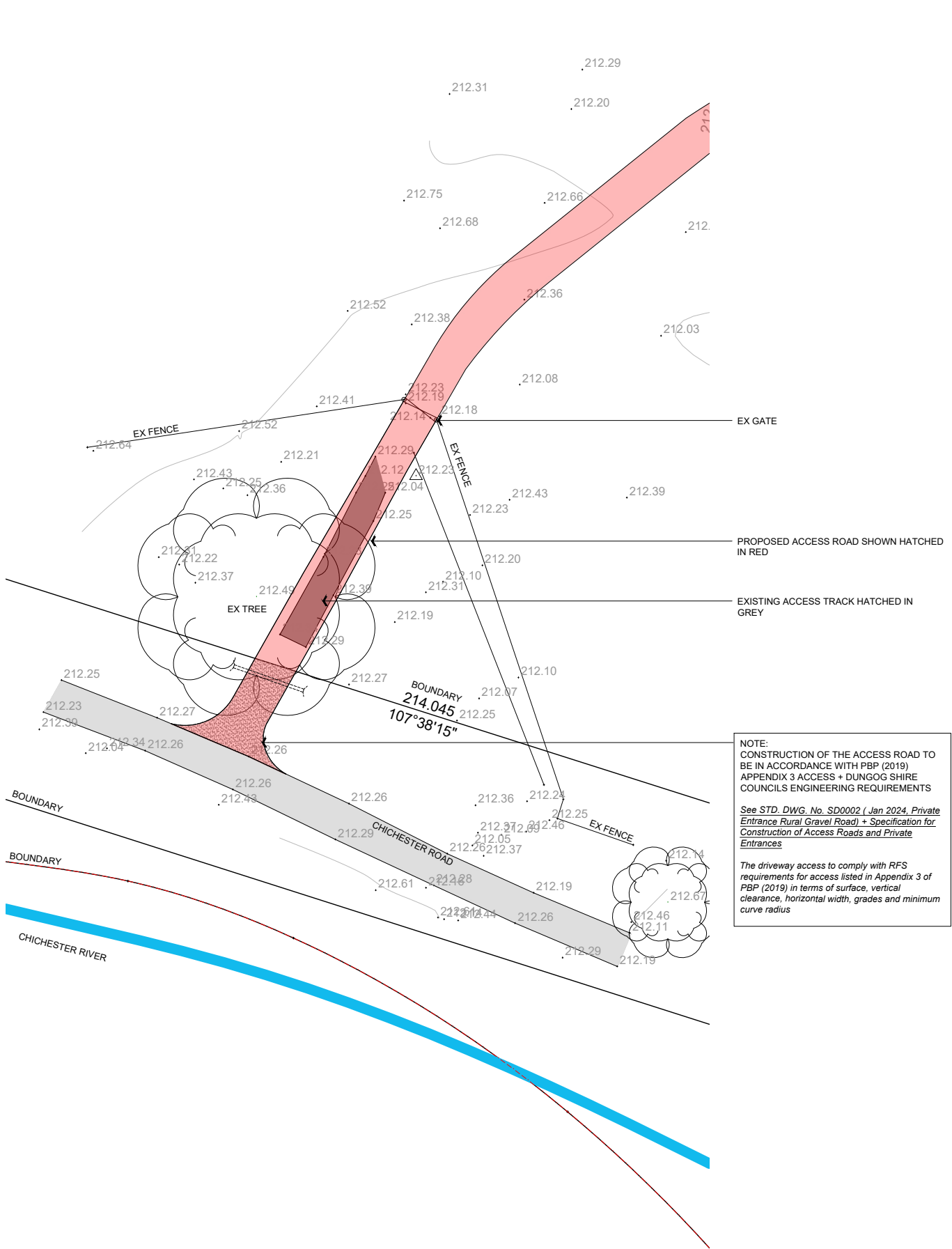
SCALE
1:2500@A3

A002

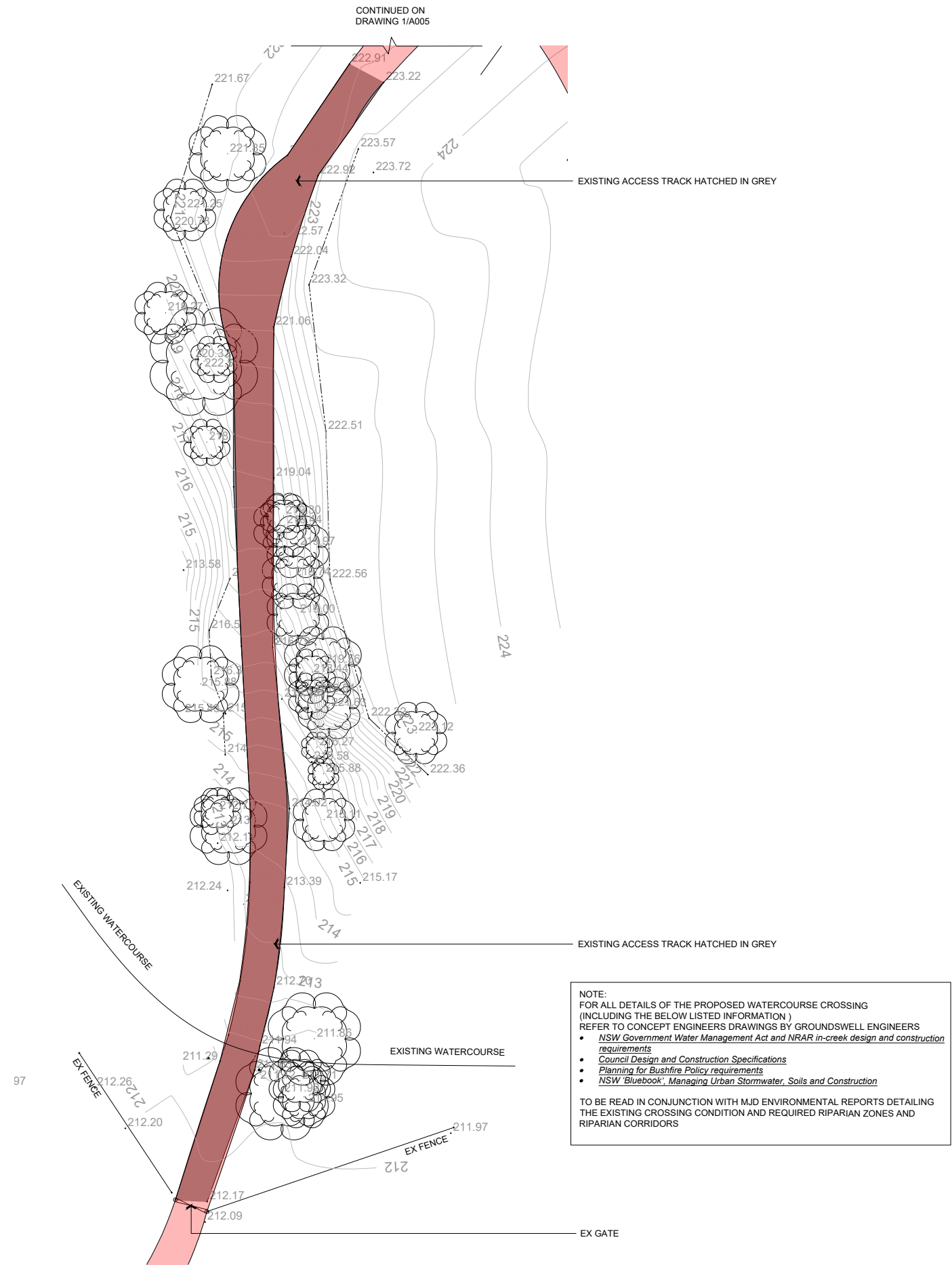
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& DESIGN

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NOMINATED ARCHITECT JASON ELSLEY (8819) ABN 62108638491



1 PROPOSED ACCESS ROAD - PART PLAN
A002 1:250@A1 / 1:500@A3



2 CROSSING DIAGRAM - PART PLAN
A002 1:250@A1 / 1:500@A3

Appendix B

Appendix 3 (PBP 2019)



NSW RURAL FIRE SERVICE



PLANNING FOR BUSH FIRE PROTECTION

A guide for councils, planners,
fire authorities and developers

NOVEMBER 2019



PREPARE.

ACT.

SURVIVE.

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APPENDIX 3

ACCESS

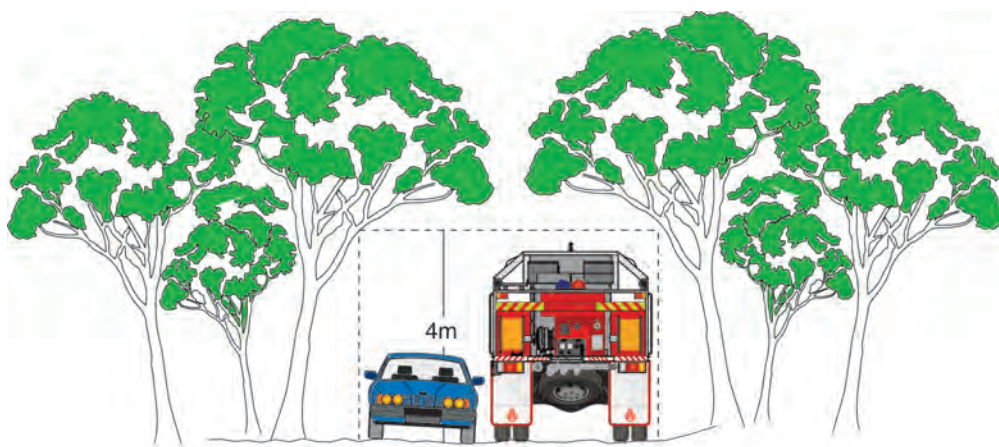
This appendix provides design principles for emergency service vehicle access.

A3.1 Vertical clearance

An unobstructed clearance height of 4 metres should be maintained above all access ways including clearance from building construction, archways, gateways and overhanging structures (e.g. ducts, pipes, sprinklers, walkways, signs and beams). This also applies to vegetation overhanging roads.

Figure A3.1

Vertical clearance.



A3.2 Vehicle turning requirements

Curved carriageways should be constructed using the minimum swept path as outlined in Table A3.2.

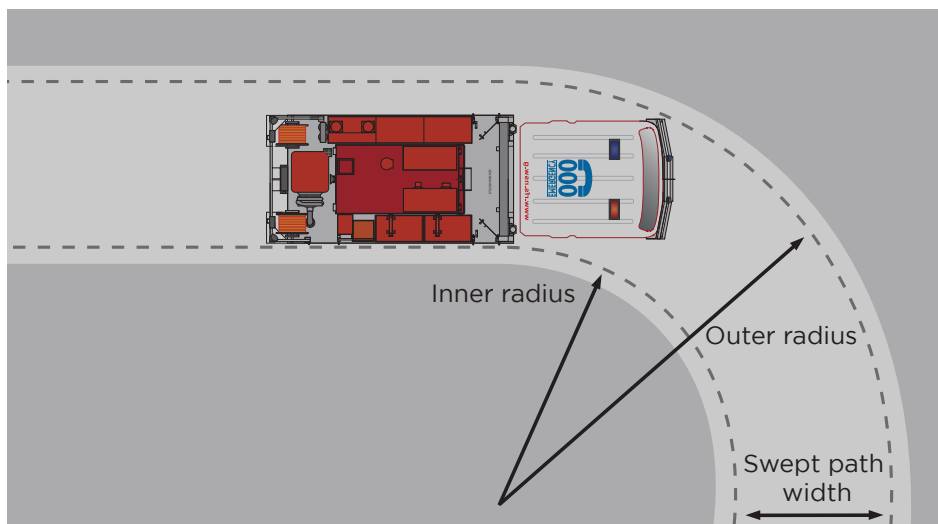
Table A3.2

Minimum curve radius for turning vehicles.

Curve radius (inside edge in metres)	Swept path (metres width)
< 40	4.0
40 - 69	3.0
70 - 100	2.7
> 100	2.5

Figure A3.2a

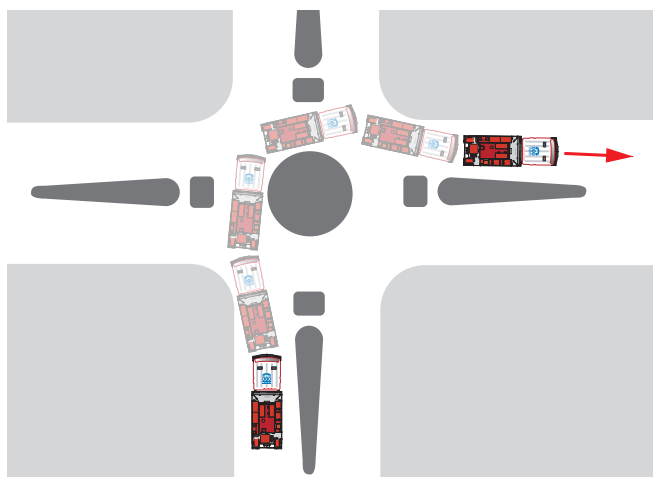
Swept path width for turning vehicles.



The radius dimensions given are for wall to wall clearance where body overhangs travel a wider arc than the wheel tracks (vehicle swept path). The swept path shall include an additional 500mm clearance either side of the vehicle.

Figure A3.2b

Roundabout swept path.



Example of a swept path as applied to a roundabout. The distance between inner and outer turning arcs allows for expected vehicle body swing of front and rear overhanging sections (the swept path).

A3.3 Vehicle turning head requirements

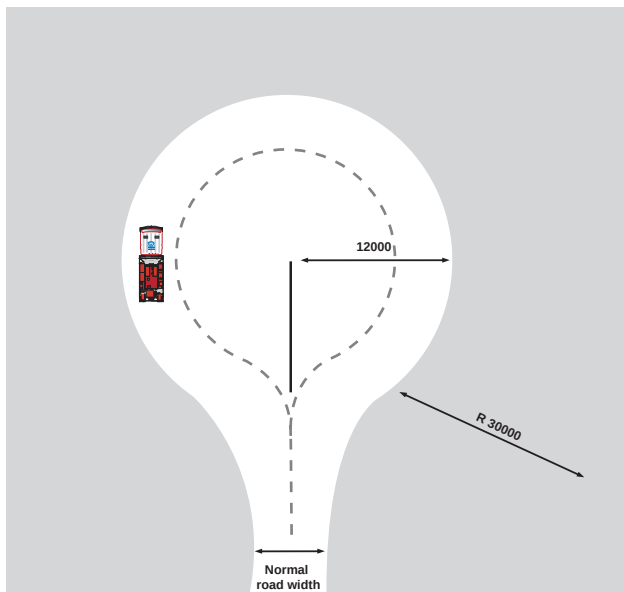
Dead ends that are longer than 200m must be provided with a turning head area that avoids multipoint turns. "No parking" signs are to be erected within the turning head.

The minimum turning radius shall be in accordance with Table A3.2. Where multipoint turning is proposed the NSW RFS will consider the following options:

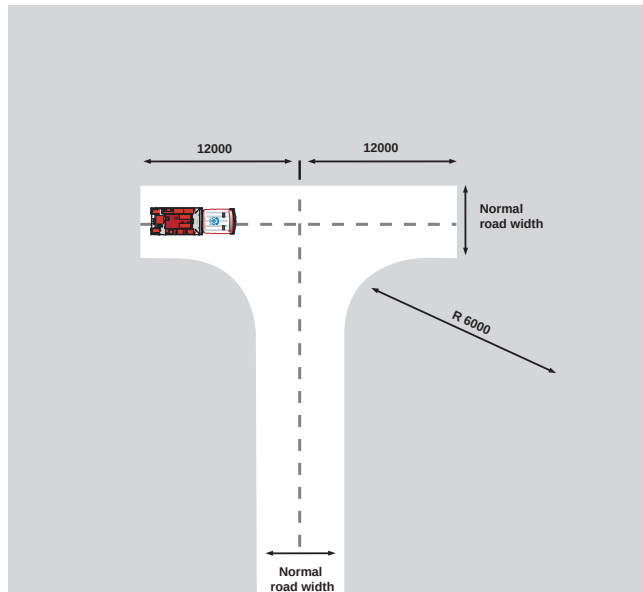
Figure A3.3

Multipoint turning options.

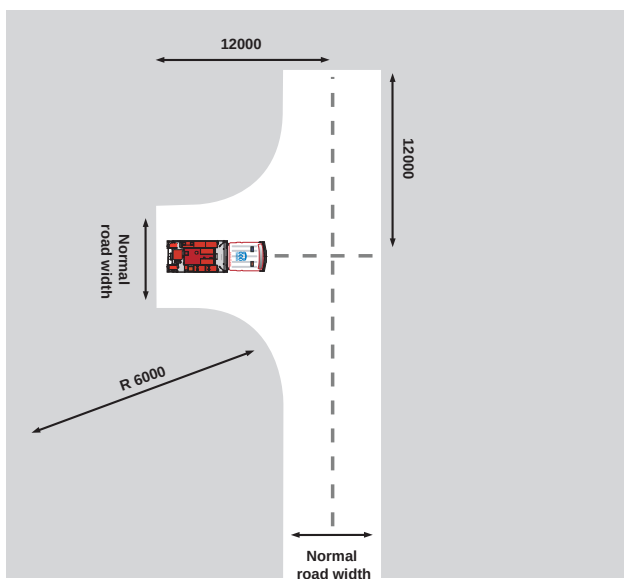
Type A



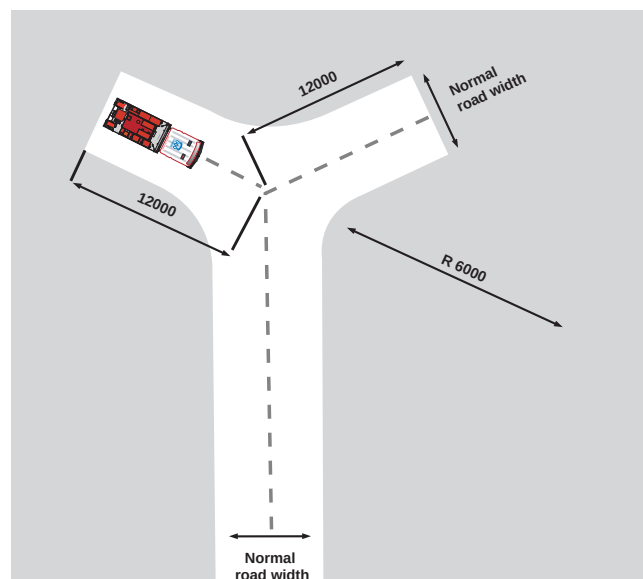
Type B



Type C



Type D



A3.4 Passing bays

The construction of passing bays, where required, shall be 20m in length and provide a minimum trafficable width at the passing point of 6m.

Figure A3.4

Passing bays can provide advantages when designed correctly. Poor design can and does severely impede access.



A3.5 Parking

Parking can create a pinch point in required access. The location of parking should be carefully considered to ensure fire appliance access is unimpeded. Hydrants shall be located outside of access ways and any parking areas to ensure that access is available at all times.

Figure A3.5

Hydrants and parking bays.

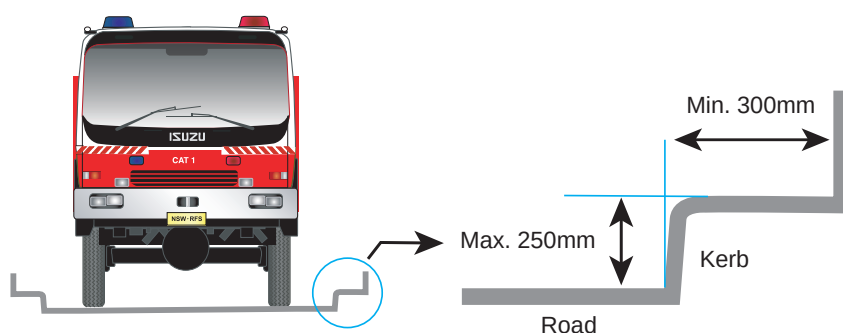


A3.6 Kerb dimensions

All kerbs constructed around access roads should be no higher than 250mm and free of vertical obstructions at least 300mm back from the kerb face to allow clearance for front and rear body overhang.

Figure A3.6

Carriageway kerb clearance dimensions.



A3.7 Services

Hydrant services should be located outside the carriageway and parking bays to permit traffic flow and access. Setup of standpipes within the carriageway may stop traffic flow. Hydrant services shall be located on the side of the road away from the bush fire threat where possible.

A3.8 Local Area Traffic Management (LATM)

The objective of LATM is to regulate traffic an acceptable level of speed and traffic volume within a local area.

Traffic engineers and planners should consider LATM devices when planning for local traffic control and their likely impact on emergency services. LATM devices by their nature are designed to restrict and impede the movement of traffic, especially large vehicles.

Where LATM devices are provided they are to be designed so that they do not impede fire vehicle access.

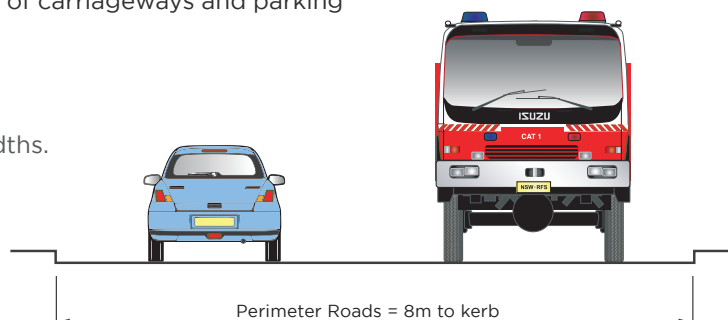
A3.9 Road types

A3.9.1 Perimeter Roads

Perimeter roads are to be provided with a minimum clear width of 8m. Parking and hydrants are to be provided outside of carriageways. Hydrants are to be located outside of carriageways and parking areas.

Figure A3.9a

Perimeter road widths.

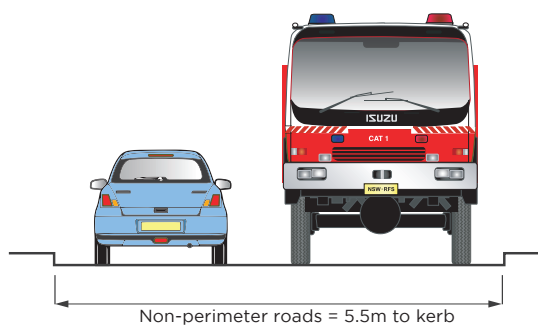


A3.9.2 Non-perimeter Roads

Non-perimeter roads shall be provided with a minimum clear width of 5.5m. Parking is to be provided outside of the carriageway and hydrants are not to be located in carriageways or parking areas.

Figure A3.9b

Non-perimeter road widths.



A3.9.3 Property access

Property access roads are to be a minimum of 4m wide.

Figure A3.9c

Property access road widths.



ABBREVIATIONS, DEFINITIONS AND REFERENCES

Abbreviations

AS 3959

Australian Standard AS 3959:2018 *Construction of buildings in bush fire-prone areas*

AS 2419.1:2005

Australian Standard AS 2419.1:2005 *Fire hydrant installations System design, installation and commissioning*

AS/NZS 1221:1997

Australian Standard AS/NZS 1221:1997 *Fire hose reels*

AS 2441:2005

Australian Standard AS 2441:2005 *Installation of fire hose reels*

AS 3745:2010

Australian Standard AS 3745:2010 *Planning for emergencies in facilities*

AS/NZS 1530.8.1

Australian Standard AS 1530.8.1:2018 *Methods for fire tests on building materials, components and structures - Tests on elements of construction for buildings exposed to simulated bush fire attack - Radiant heat and small flaming sources*

AS/NZS 1530.8.2

Australian Standard AS 1530.8.2:2018 *Methods for fire tests on building materials, components and structures - Tests on elements of construction for buildings exposed to simulated bush fire attack - Large flaming sources*

AS/NZS 1596:2014

Australian Standard AS/NZS 1596:2014 *The storage and handling of LP Gas*

APZ Asset Protection Zone

BAL Bush Fire Attack Level

BCA Building Code of Australia

BFPL Bush fire prone land

BFPL Map Bush fire prone land map

BFDB Bush Fire Design Brief

BPM Bush fire protection measure

BFSA Bush fire safety authority

DA Development application

DCP Development Control Plan

DPIE NSW Department of Planning, Industry and Environment

EP&A Act *Environmental Planning and Assessment Act 1979*

FDI Fire Danger Index

FFDI Forest Fire Danger Index

GFDI Grassland Fire Danger Index

IPA Inner Protection Area

kW/m² Kilowatts per metre squared

LEP Local Environmental Plan

NASH National Association of Steel Framed Housing (2014) Steel Framed Construction in Bush Fire Areas

NCC National Construction Code

OPA Outer Protection Area

PBP *Planning for Bush Fire Protection 2019*

RF Act *Rural Fires Act 1997*

RF Reg *Rural Fires Regulation 2013*

NSW RFS NSW Rural Fire Service

SEPP State Environmental Planning Policy

SFPP Special fire protection purpose

SFR Short fire run

SSD State significant development

SSI State significant infrastructure

URA Urban Release Area

Definitions

A word or expression used in this document has the same meaning as it has in the *EP&A Act* or the Standard Instrument – Principal Local Environmental Plan, unless otherwise defined in this document.

References in this document to legislation or a policy, guideline or standard are taken to be references to that legislation or a policy, guideline or standard as amended from time to time.

Acceptable solution

Measures which have been deemed to meet the specified performance criteria.

Assembly point

An area or building or structure that is used to assemble people or that have evacuated from a site in an emergency situation.

Asset Protection Zone (APZ)

A fuel-reduced area surrounding a built asset or structure which provides a buffer zone between a bush fire hazard and an asset. The APZ includes a defensible space within which firefighting operations can be carried out. The size of the required APZ varies with slope, vegetation and FFDI.

Australian Standard AS 3959 (AS 3959)

AS 3959:2018 *Construction of buildings in bush fire-prone areas*, Standards Australia, 2018.

BAL certificate

A certificate issued to identify the BAL of a proposed development in the complying development process.

Bush fire assessment report

A report submitted with the DA which establishes compliance with PBP. The report determines the extent of bush fire attack and the proposed mitigation measures. See also RF Reg cl.44.

Bush Fire Attack Level (BAL)

A means of measuring the severity of a building's potential exposure to ember attack, radiant heat and direct flame contact. In the NCC, the BAL is used as the basis for establishing the requirements for construction to improve protection of building elements.

Bush fire

An unplanned fire burning in vegetation; also referred to as wildfire.

Bush fire attack

Attack by burning embers, radiant heat or flame generated by a bush fire.

Bush fire hazard

Any vegetation that has the potential to threaten lives, property or the environment.

Bush fire prone land (BFPL)

An area of land that can support a bush fire or is likely to be subject to bush fire attack, as designated on a bush fire prone land map.

Bush fire prone land map (BFPL)

A map prepared in accordance with NSW RFS requirements and certified by the Commissioner of the NSW RFS under EP&A Act 1979 s.10.3(2).

Bush fire protection measures (BPMs)

A range of measures used to minimise the risk from a bush fire that need to be complied with. BPMs include APZs, construction provisions, suitable access, water and utility services, emergency management and landscaping.

Bush fire risk

Is the likelihood and consequence of a bush fire igniting, spreading and causing life loss or damage to buildings of value to the community.

Bush fire safety authority (BFSA)

An approval by the Commissioner of the NSW RFS that is required for a subdivision for residential or rural residential purpose or for a SFPP development listed under section 100B of the RF Act.

Certifier

As defined in the *EP&A Act 1979*, those with authority to issue Part 6 certificates and Complying Development Certificates (CDCs).

Complying development

Complying Development is a combined planning and construction approval for specified development that can be determined through a assessment by a council or private accredited certifier.

Consent authority

As defined in the *EP&A Act 1979*, in relation to development consents, usually the local council.

Defendable space

An area adjoining a building that is managed to reduce combustible elements free from constructed impediments. It is a safe working environment in which efforts can be undertaken to defend the structure, before and after the passage of a bush fire.

Development

As defined in the *EP&A Act 1979*.

Development application (DA)

An application for consent to carry out development such as building, subdivision, or the use of a building or land.

Applications are normally made to the local council.

Development footprint

The building envelope or area shown on a plan on which buildings and associated APZs are proposed to be located.

Ecologically sustainable development

As defined in Section 6 of the *Protection of the Environment Administration Act (NSW) 1991*.

Effective slope

The land beneath the vegetation which most significantly effects fire behaviour, having regard to the vegetation present.

Exit

A doorway opening to a road or open space, as defined in the NCC.

Fire Danger Index (FDI)

The chance of a fire starting, its rate of spread, its intensity and the difficulty potential for its suppression, according to various combinations of air temperature, relative humidity, wind speed and both the long- and short-term drought effects.

PBP refers to the Forest Fire Danger Index calculated by the McArthur Mk 5 Forest Fire Danger Meter using the equations published by Noble, I.R., Bary, G.A.V., and Gill, A.M., 1980.

Grassland Fire Danger Index (GFDI) values are calculated by the McArthur Mk 4 Grassland Fire Danger Meter using the equations published by Purton, C.M., 1982.

Flame zone

The distance from a bush fire at which there is considered to be significant potential for sustained flame contact to a building. The flame zone is determined by the calculated distance at which the radiant heat from the design fire exceeds 40kW/m².

Grasslands

Grassed areas capable of sustaining a fire. Under AS 3959, this is identified as low open shrubland, hummock grassland, closed tussock grassland, tussock grassland, open tussock, sparse open tussock, dense sown pasture, sown pasture, open herbfield, and sparse open herb field.

Grass, whether exotic or native, which is regularly maintained at or below 10cm in height (including maintained lawns, golf courses, maintained public reserves, parklands, nature strips and commercial nurseries) is regarded as managed land.

Grassland Deeming Provisions

An acceptable solution applying to properties in grassland hazard areas which can be used instead of the site assessment procedure in AS 3959.

Infill development

Refers to the development of land by the erection of or addition to a building, which is within an existing allotment and does not require the spatial extension of services. Existing services may include public roads, electricity, water or sewerage.

Inner Protection Area (IPA)

The component of an APZ which is closest to the asset (measured from unmanaged vegetation). It consists of an area maintained to minimal fuel loads so that a fire path is not created between the hazard and the building.

Integrated development

As referred to under EP&A Act s.4.46 (formerly s.91), an integrated development is one that requires development consent and approval from one or more government agencies, and is not a State Significant Development (SSD) or Complying Development.

Isolated development

Development which is located predominantly in native bushland or is considered to be within a remote area. Access and evacuation may be challenging due to distances that are required to be travelled through bush fire prone areas.

Local Environmental Plan (LEP)

An environmental planning instrument prepared under Part 3 of the *LEPs* guide planning decisions and the ways in which land is used through zoning and development controls.

Managed land

Land that has vegetation removed or maintained to a level that limits the spread and impact of bush fire. This may include developed land (residential, commercial or industrial), roads, golf course fairways, playgrounds, sports fields, vineyards, orchards, cultivated ornamental gardens and commercial nurseries. Most common will be gardens and lawns within curtilage of buildings. These areas are managed to meet the requirements of an APZ.

Multi-storey buildings

Buildings exceeding three storeys in height are considered to be multi-storey buildings. The rise in storeys should be calculated as per the definition within Volume 1 of the NCC 2019.

National Construction Code (NCC)

The National Construction Code, published by the Australian Building Codes Board, comprising the Building Code of Australia as Volumes One and Two, and the Plumbing Code of Australia as Volume Three.

Outer Protection Area (OPA)

The outer component of an APZ, where fuel loads are maintained at a level where the intensity of an approaching bush fire would be significantly reduced. Applies to forest vegetation only.

Performance based solution

A method of complying with the performance criteria other than by an acceptable solutions.

Primitive camping

A site which is part of a commercially operated venture where there may already be a site for a tent and a fire pit.

Setback

The distance required by planning provisions to separate a building from the bush fire hazard, street frontage or from adjacent buildings or property boundaries.

Short fire run

A parcel or area of vegetation which is considered to be of lower risk than the design fire associated with that in AS 3959 due to its size, shape, and orientation to buildings. This has a design fire head width of less than 100m.

Special fire protection purpose (SFPP) developments

Developments where the vulnerable nature of the occupants means that a lower radiant heat threshold needs to be accommodated for in order to allow for the evacuation of occupants and emergency services.

State Environmental Planning Policy (SEPP)

An environmental planning instrument prepared under Part 3 of the *EP&A Act 1979*.

Subdivision

As defined in the *EP&A Act 1979*.

Suitably qualified consultant

A consultant providing bush fire assessments and BAL Certificates who has been accredited by a recognised accreditation scheme.

Tourist accommodation

A building or place that provides temporary or short-term accommodation on a commercial basis including backpackers accommodation, bed and breakfast accommodation, farmstay accommodation, hotel or motel accommodation and serviced apartments.

Vegetation classification

Vegetation types identified using the formations and classifications within *Ocean Shores to Desert Dunes: The Native Vegetation of New South Wales and the ACT* (Keith, 2004).

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Appendix C Site Photos



Photo1: Pre-existing access road located under canopy to the south



Photo 2: Creek line crossing to the south



Photo 3: West of the site facing East toward development footprint