

BUSHFIRE ASSESSMENT REPORT (BAR)

REZONING (SCHEDULE 1) TO ENABLE A DWELLING HOUSE (PBP, 2019, PART 7 – RESIDENTIAL INFILL DEVELOPMENT)

1222 FOSTERTON ROAD, FOSTERTON, NSW, 2420
(LOT 1, DP 867951)

Prepared by Perception Planning Pty Ltd on behalf of Mr. Leslie Schwebel



Above: Photo of the existing property access to 1222 Fosterton Rd, Fosterton, NSW 2420

12 March 2020

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Table 1 – Document Versions and Disclaimer

No:	Perception Planning Reference:	Author:	Reviewer:
Version 1	4/03/20_BAR_ 1222 Fosterton Rd _Version1	JB	JB
Version 2	11/03/20_BAR_ 1222 Fosterton Rd, _Version2	JB	MM
Version 3	12/03/20_BAR_ 1222 Fosterton Rd, _Version3	JB	Client
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<p>Charitable Donation:</p> <p>Please note that a donation of \$10.00 will be made by Perception Planning to the Dungog Local Brigade of the NSW Rural Fire Service. The donation is made at the end of the financial year and is intended to assist the NSW RFS with community activities.</p>			

Table 2 – Council and RFS Summary

Question:	Response:
Has this Assessment been certified by a Bushfire Protection and Design (BPAD) Practitioner?	Yes - This Assessment has been completed by Jeffrey Bretag, who has completed the Graduate Diploma in Bushfire Protection from the University of Western Sydney and has current Bushfire Planning and Design (BPAD – Level 2) Accreditation from the Fire Protection Association (FPA). It has then been peer reviewed by Matilda Munn, who has completed the Graduate Certificate in Bushfire Protection from the University of Western Sydney.
What is the recommended level of compliance with AS3959-2018?	<p>The recommended level of compliance is that the future dwelling house be constructed to BAL-29 in accordance with AS3959-2018, as appropriate, with the exception of the construction requirements of the RFS, 2019, 'Planning for Bushfire Protection' (Clause 7.5.2 – NSW State Variations).</p> <p>No reduction requirements due to shielding are identified under AS3959 (Clause 3.5 – Reduction in Construction Requirements Due to Shielding) because neither of the building elevations are shielded from the bushfire.</p>
Can the proposed development comply with AS3959-2018 and RFS, 2019, Planning for Bushfire Protection?	Yes – Future Architectural Plans will need to identify that the building needs to be constructed to BAL-29. An additional note should be added to the Architectural Plans to ensure that consideration is provided to the RFS, 2019, 'Planning for Bushfire Protection' (Clause 7.5.2 – NSW State Variations).
Does the proposed development comply with the aims and objectives of the RFS, 2019, Planning for Bushfire Protection?	Yes – A table that demonstrates that the proposal is consistent with the aims and objectives of the RFS, 2019, Planning for Bushfire Protection is provided as (ATTACHMENT 3) .
Is referral to the NSW Rural Fire Service required?	<p>Yes– The development is not defined as residential subdivision, rural residential subdivision or Special Fire Protection Purpose (SFPP) under the Rural Fire Act 1997 (100B) and therefore does not require a Bush Fire Safety Authority (BFSA).</p> <p>However, the gateway determination is likely to require consultation with the NSW Rural Fire Service given that the site is mapped as Bushfire Prone Land. Any consultation requirements will be prescribed by the gateway determination.</p>
What is the Site Assessment Plan Reference?	<p>Perception Planning Pty Ltd</p> <p>Drawing No: Figure 6</p> <p>Date: 4/03/2020</p>

EXECUTIVE SUMMARY

Perception Planning has been engaged by Mr. Leslie Schwebel (the client) to prepare a Bushfire Assessment Report (BAR) for a planning proposal (i.e. rezoning) and subsequent dwelling house at 1222 Fosterton Rd, Fosterton, NSW 2420, (Lot 1, DP 867951) (the site).

The development is neither defined as residential subdivision, rural residential subdivision, nor a Special Fire Protection Purpose (SFPP) under RFS, 2019, 'Planning for Bushfire Protection' (PBP). It is therefore defined as 'infill development and other development'. A Bush Fire Safety Authority (BFSa) is not required from the RFS under the Rural Fire Act 1996 (s100B).

The site is an existing vegetated property, which is a 9-minute drive or 7km to the north of Dungog and is located within the Dungog Local Government Area (LGA). The site is identified as Bushfire Prone Land (BPL), being Vegetation Category 1, 2 and Buffer under the Environmental Planning & Assessment Act 1979 (s10.3) (EPA&A).

A site inspection took place on 21 February 2020. A Dial Before You Dig (DBYD) request identified that no mains electricity or water is located in the road reserve (**ATTACHMENT 4**). A Deposited Plan (DP) was also obtained from 'NSW Land Registry Services', which identified no restrictions in relation to Asset Protection Zones (APZ)s or site access.

This BAR identifies that the predominant bushfire hazard is located to the north of the site (**FIGURE 3**). This hazard is classified as Rainforest and is situated on land that has an effective slope of 14 degrees. The BAR provides a series of recommendations for the different Bushfire Protection Measures (BPM)s. In relation to Asset Protection Zones (APZ)s, it identifies:

Table 3– BAL Table

Direction	Vegetation	Surface Fuel (t/ha)	Overall Fuel (t/ha)	Rise (m)	Run (m)	Slope (°)	Separation(m)	BAL
Transect 1 (N)	Exotic - Rainforest	10	13.2	10	41	14	30	BAL-29
Transect 2 (E)	North Coast WSF	22	35.98	15	53	-16	80	BAL-12.5
Transect 3 (S)	Grassland	6	6	5	141	-2	20	BAL-12.5
Transect 4 (W)	Exotic - Rainforest	10	13.2	10	52	11	38	BAL-19

Based on the above, the future dwelling house is to be constructed to BAL-29 in accordance with AS3959 except for the construction requirements of the PBP (Clause 7.5.2 – NSW State Variations. The removal of native flora or fauna will not be required.

Notwithstanding the precautions adopted, it should always be remembered that bushfires burn under a wide range of conditions and an element of risk, no matter how small, always remains and although the standard is designed to improve the performance of such buildings, there can be no guarantee because of the variable nature of bushfires that any one building will withstand bushfire attack on every occasion.

This BAR provides the above required information to assist Council and the RFS in determining compliance in accordance with the PBP and AS 3959.

TERMS & ABBREVIATIONS

APZ	Asset Protection Zone
AS3959	Australian Standard 3959
BAL	Bushfire Attack Level
BAR	Bushfire Assessment Report
BFSA	Bush Fire Safety Authority
BPAD	Bushfire Planning and Design
BPL	Bushfire Prone Land
BPM	Bushfire Protection Measures
DA	Development Application
DBYD	Dial Before You Dig
DP	Deposited Plan
DSF	Dry Sclerophyll Forest
EP&A Act	Environmental Planning and Assessment Act 1979
FDI	Fire Danger Index
FPAA	Fire Protection Association of Australia
IPA	Inner Protection Area
LEP	Local Environmental Plan
LGA	Local Government Area
NCC	National Construction Code
OPA	Outer Protection Area
PBP	Planning for Bushfire Protection
RFS	NSW Rural Fire Service
RoW	Right of Way
SEED	Sharing and Enabling Environmental Data
SFPP	Special Fire Protection Purpose
URA	Urban Release Area
WSF	Wet Sclerophyll Forest

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1.0 INTRODUCTION

1.1 SITE PARTICULARS

Address:	1222 Fosterton Rd, Fosterton, NSW 2420 (the site)
Legal Description:	Lot 1, DP 867951
Total Area:	6.15ha (Approximate)
Local Government Area:	Dungog
Fire Danger Index (FDI):	100 - Greater Hunter
Boundaries:	Land zoned RU1 – Primary Production is located to the north, east, south and west of the site.
Boundary Lengths:	North – 134m, East – 651m, South – 195m and West – 667m
Current Land Use:	Vacant - Remnant Vegetation
Significant Features:	Fosterton is characterised by agricultural lands. The site has direct access via Fosterton Rd, which is currently an unsealed public road.
Environmental Features:	The site is not mapped as containing Biodiversity Values under the Biodiversity Conservation Act 2016 (FIGURE 3) .
Archaeological Features:	A basic search of the AHIMS database identified zero sites and/or places (ATTACHMENT 1) .
Climate/Fire History:	<p>The Lower Hunter Bushfire Management Committee, 2009, 'Bushfire Risk Management Plan' (the Plan) states that:</p> <p><i>'Prevailing weather conditions associated with the bush fire season in the Lower Hunter BFMC area are north-westerly winds accompanied by high daytime temperatures and low relative humidity. There are also frequently dry lightning storms in the western areas occurring during the bush fire season' (p.11).</i></p> <p>The Plan identifies several assets in the Dungog Local Government Area. This Plan maps the land to the north of the site at Main Creek and Dingadee as a Strategic Fire Advantage Zone.</p> <p>The Fire History Map (FIGURE 4) has not identified a recorded history of fires in proximity to the site. This does not mean that fires have not occurred in proximity, they may have just not been recorded.</p>
Fire Trails:	The Plan does not identify any fire trails that exist on the property that are on the Rural Fire Act (s.620 - Register of Certified Fire Trails).

Bushfire Prone Land Map:	The site is identified as BPL, being Vegetation Category 1, 2 and Buffer (FIGURE 1) .
Previous Approvals:	The existing development approvals listed in the table below have been sourced from the Dungog Application Tracking website on 5 March 2020 .

Table 4 – Development Application History

Application	Date Lodged	Description
-	-	-
-	-	-

No known compliance matters exist.

1.2 SCOPE

The scope of this BAR is to identify the bush fire hazard and provide measures to assist Council and the RFS that the identified fire hazard would be reduced to a level that is considered necessary to provide adequate protection to life and property.

This BAR provides the required information to assist Council and the RFS in determining compliance in accordance with the RFS, 2019, 'Planning for Bush Fire Protection' (PBP) and AS 3959-2018. Council is the final consenting authority and any future construction works must comply with the conditions listed in the Notice of Determination issued by Council.

1.3 PROPOSAL

The proposal is for a rezoning to enable a dwelling house (the development) at 1222 Fosterton Rd, Fosterton, NSW 2420 (the site).

Under the Dungog Local Environmental Plan, a dwelling house 'means a building containing only one dwelling'.

The development is defined as 'infill development and other development' under PBP and could be defined under the National Construction Code (NCC) as a single storey dwelling (Class 1a).

An illustration of the proposed siting is provided as **(FIGURE 6)**

1.4 ASSUMPTIONS OF THIS REPORT

The following assumptions have been made in the development of this report:

1. Access to the site was provided, so photos taken during the site inspection also include public areas, such as the road reserve.
2. The BAR will be assessed by Council and is likely to be considered by the NSW RFS as a condition of the gateway determination. They will develop conditions of consent. Any construction must comply the conditions issued by Council, not this BAR.

Figure 1 – Bushfire Prone Land Map

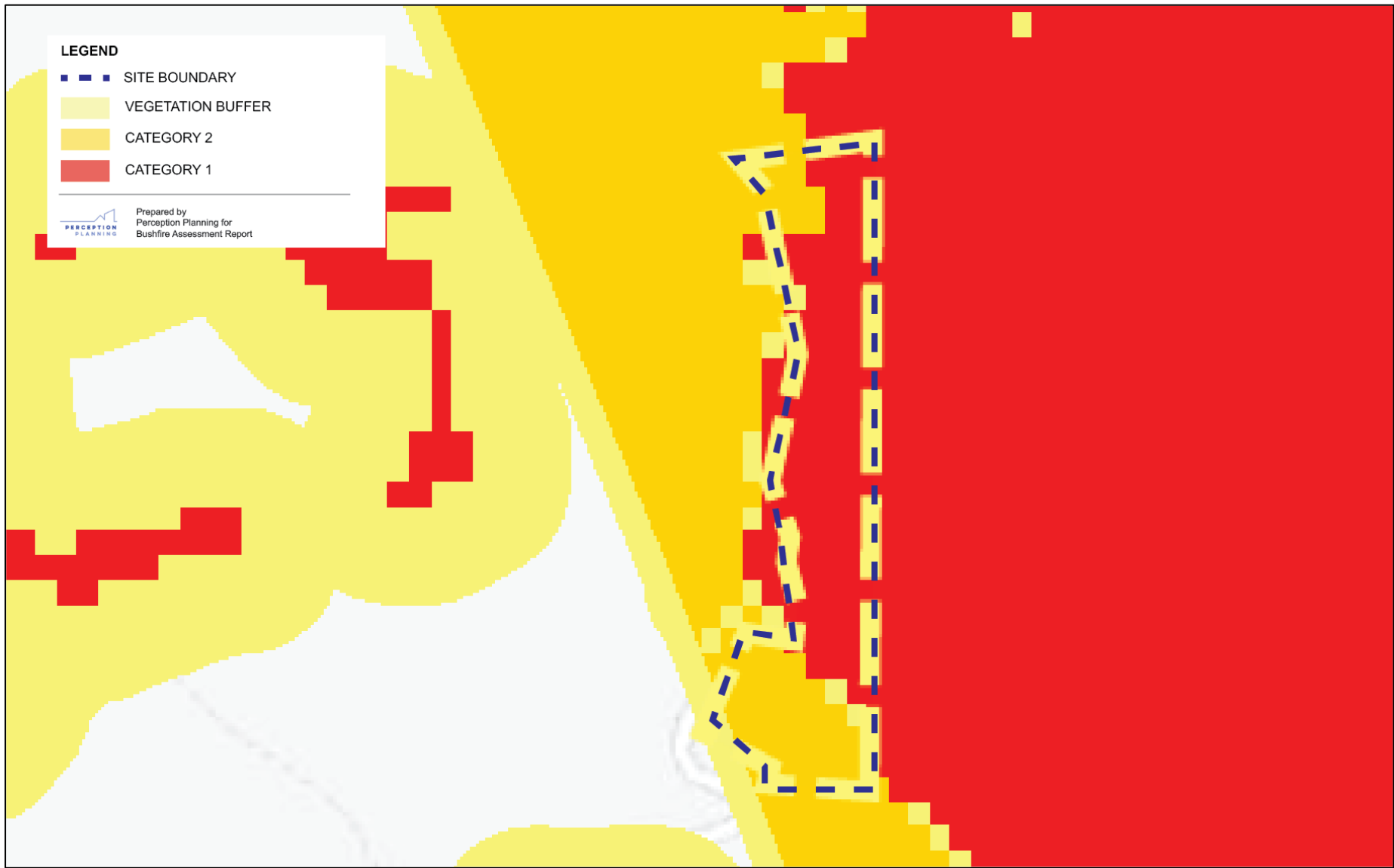


Figure 2 – Vegetation Map



Figure 3 – Biodiversity Values Map

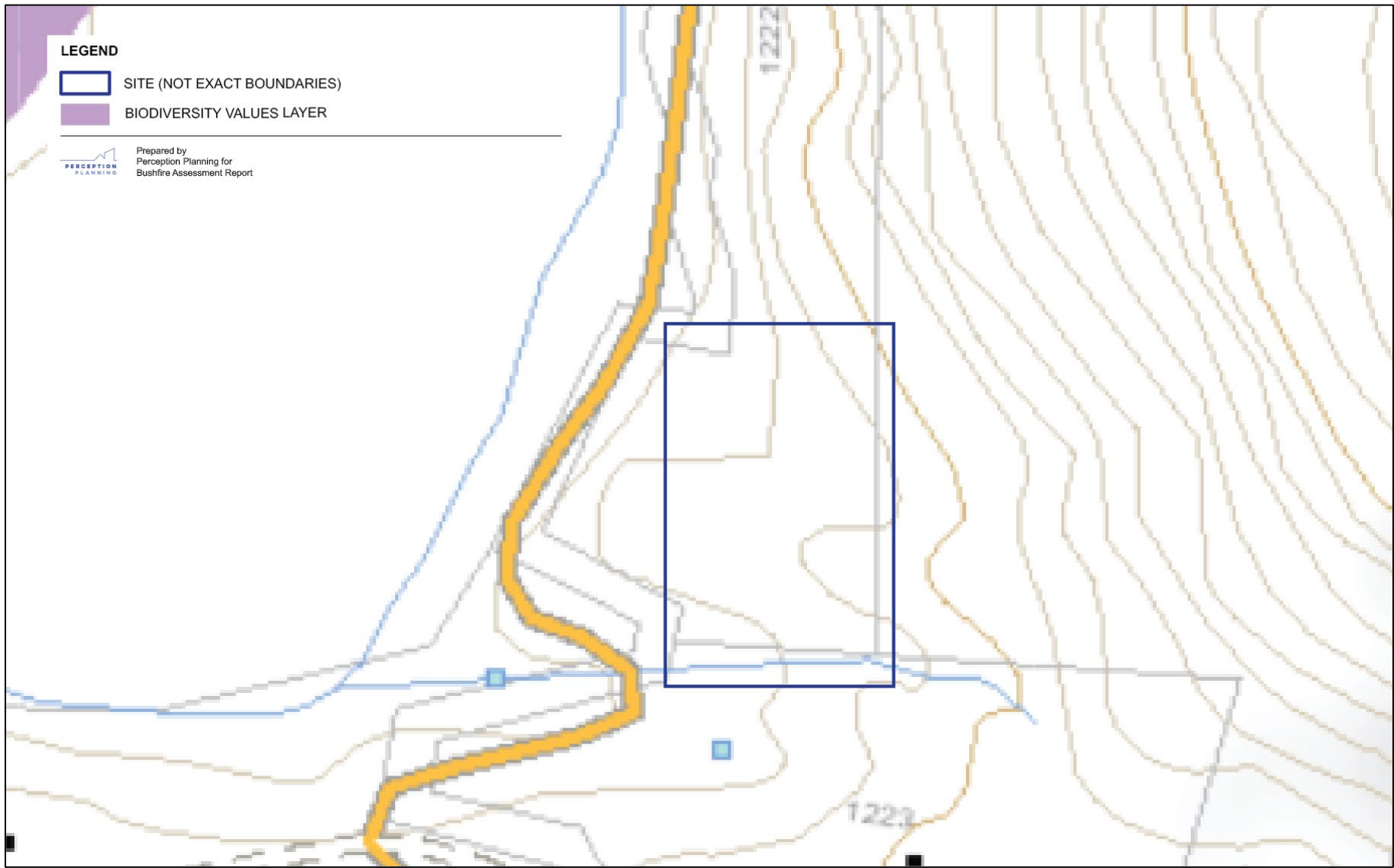








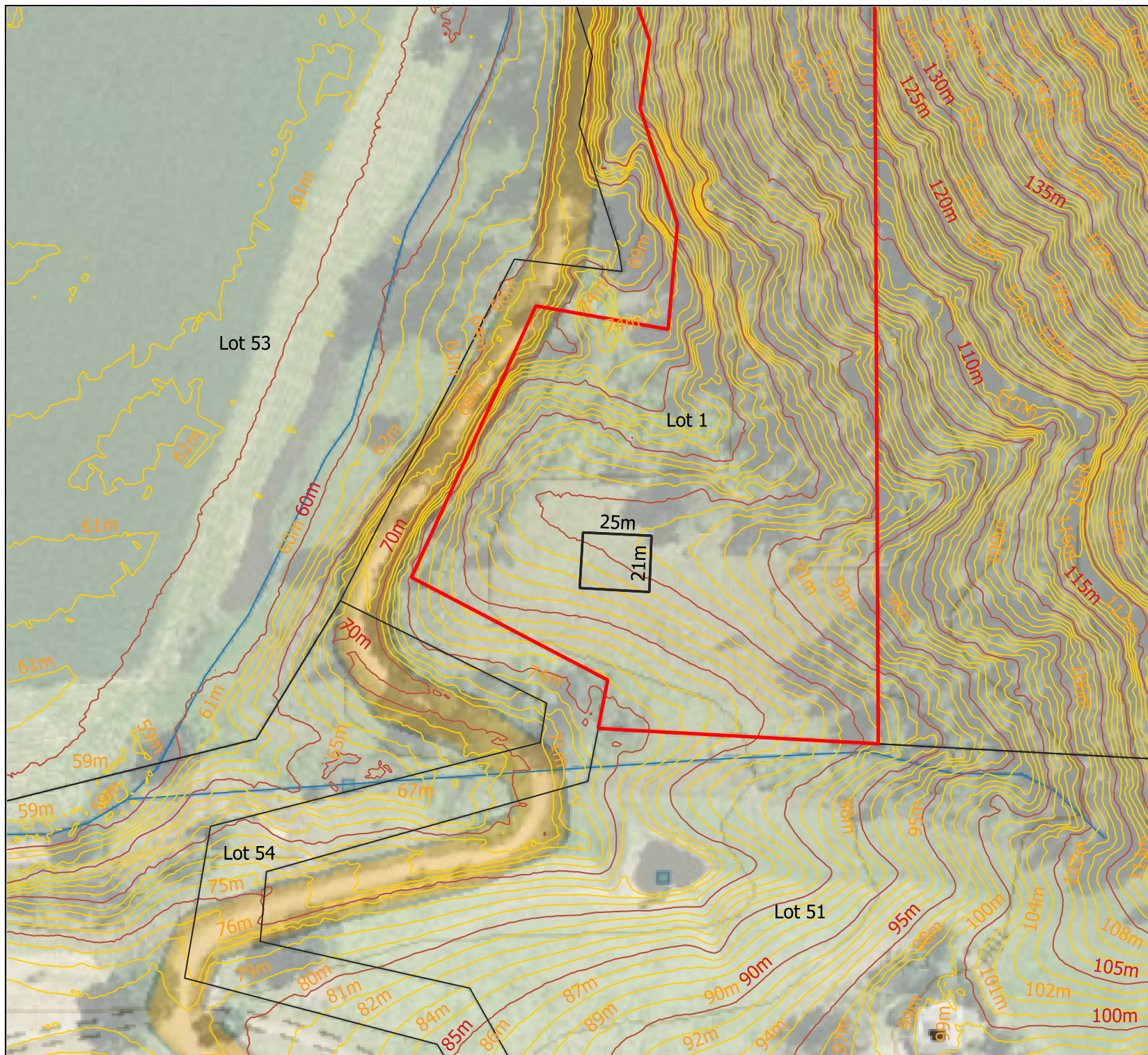
Figure 4 – Fire History



1222 Fosterton Rd, Fosterton

Figure 2 - Site Plan Map

-  Site Boundary
-  Lot
-  Potential Building Footprint
-  Contours (5m)
-  Contours (1m)
-  Watercourses
-  Waterbodies




















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While every effort is made to ensure this map is free of errors, there is no warrant the map or its features are either spatially or temporally accurate or fit for a particular use. This map is provided without any warranty of any kind whatsoever, either express or implied.

Job No: J001001 Date: 11/03/2020

1222 Moylans Rd, Fosterton

Figure 6 - Site Assessment Map

-  Site Boundary
-  Lot
-  Potential Building Footprint
-  Buffer - 100m
-  Buffer - 140m
-  Transect 1 (N)
-  Transect 2 (E)
-  Transect 3 (S)
-  Transect 4 (W)
-  Contours (5m)
-  Watercourses
-  Exotic - Rainforest
-  Grassland
-  Hunter Macleay DSF
-  North Coast WSF
-  Site Photos
-  IPA (24m)



0 25 50 m



While every effort is made to ensure this map is free of errors, there is no warrant the map or its features are either spatially or temporally accurate or fit for a particular use. This map is provided without any warranty of any kind whatsoever, either express or implied.

Job No: J001001 Date: 06/03/2020

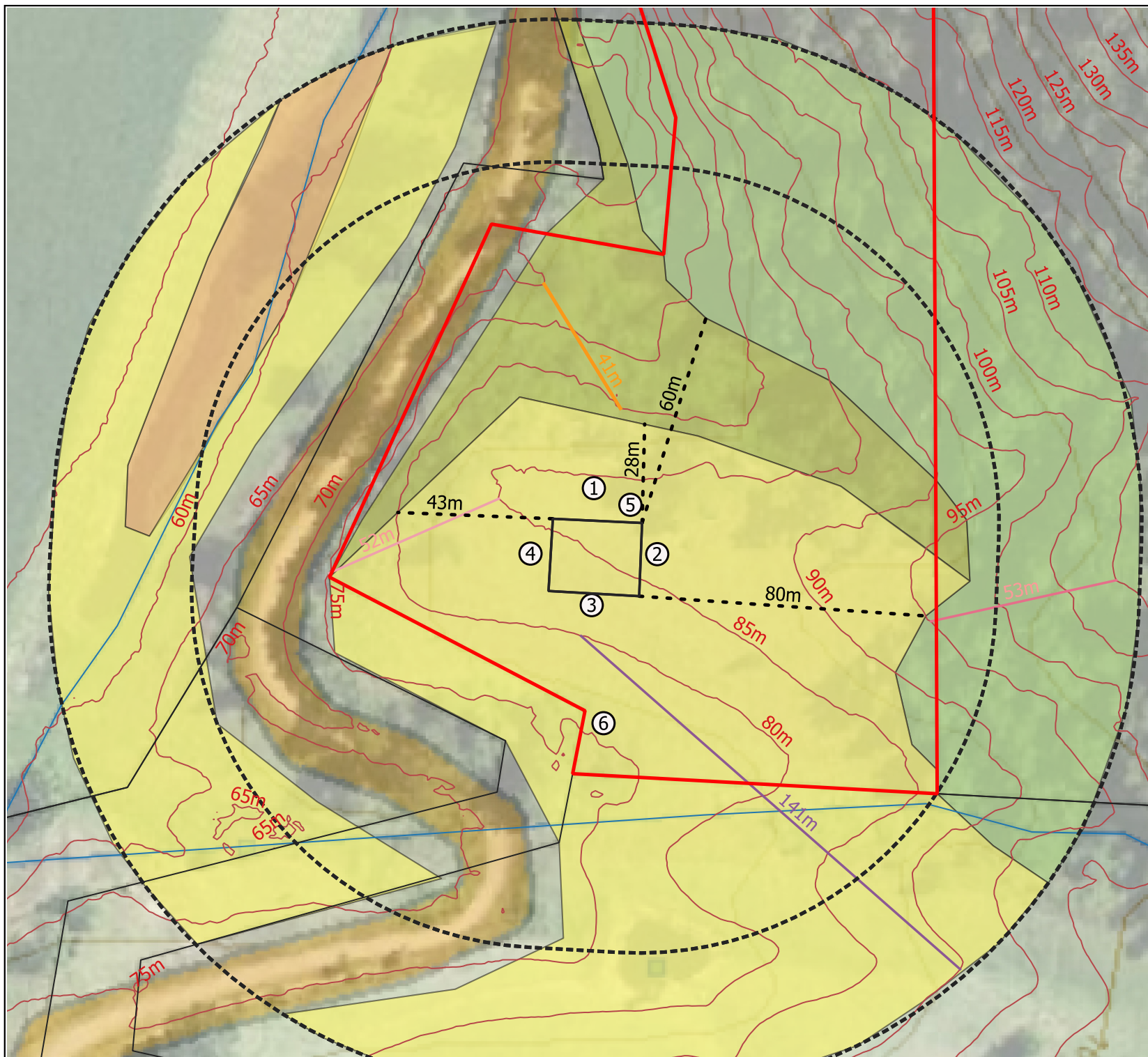


Photo 1 – Northern Perspective



Downslope

Photo 2 – Eastern Perspective



Upslope

Photo 3 - Southern Perspective



Upslope

Photo 4 – Western Perspective



Downslope

Photo 5 – Northern Perspective Vegetation – Exotic Rainforest



Downslope

Photo 6 – Western Perspective – Site Access



2.0 ASSESSMENT

2.1 VEGETATION ASSESSMENT

The vegetation was determined by the following methods:

- Near Map to identify vegetation cover;
- Sharing and Enabling Environmental Data (SEED) Portal to identify Vegetation Classification, Fire History and Biodiversity Values Map;
- ePlanning Spatial Viewer to identify Bushfire Prone Land Map;
- Site Inspection on 21 February 2020 to confirm vegetation formation using Keith, 2004, 'Ocean Shores to Desert Dunes'.

The predominant vegetation formation within 140m in all directions around the proposed building has been identified to be Exotic-Rainforest with a Surface & Elevated Fuel Load of 10t/ha and a Total Fuel Load of 13.2t/ha in accordance with the RFS, March 2019, 'Comprehensive Fuel Loads'.

The removal of native flora or fauna will be required to achieve the development, including the establishment of APZs.

2.2 SLOPE ASSESSMENT

The effective slope was determined by the following methods:

- Elevation and Depth – Foundation Spatial Data (ELVIS) to identify 2m Contours;
- Site Inspection on 21 February 2020 to confirm slope using a Nikon Rangefinder.

The effective slope of the land within 100m in all directions around the building ranges from 11 downslope to 16 upslope. The effective slope for each direction is outlined below.

2.3 DETERMINATION OF FIRE DANGER INDEX (FDI)

The FDI was determined by identifying the FDI rating within PBP (Part A1.6) (p.84). The FDI is 100 - Greater Hunter.

2.4 DETERMINATION OF BUSHFIRE ATTACK LEVEL (BAL)

The assessment of vegetation and slope has been used to calculate the following BALs:

Table 5 – BAL Table

Direction	Vegetation	Surface Fuel (t/ha)	Overall Fuel (t/ha)	Rise (m)	Run (m)	Slope (°)	Separation(m)	BAL
Transect 1 (N)	Exotic - Rainforest	10	13.2	10	41	14	30	BAL-29
Transect 2 (E)	North Coast WSF	22	35.98	15	53	-16	80	BAL-12.5
Transect 3 (S)	Grassland	6	6	5	141	-2	20	BAL-12.5

Transect 4 (W)	Exotic - Rainforest	10	13.2	10	52	11	38	BAL-19
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Due to the presence of exotic vegetation the predominant vegetation type of Rainforest has been converted to Exotic Vegetation in accordance with the RFS, 2019, PBP (Table A1.9 – Exotic vegetation conservations) (p.87).

The development is setback 28m from the classified vegetation to the north and therefore is required to be constructed to BAL-29 in accordance with National Construction Code (NCC) with the exception of the construction requirements of the RFS, 2019, 'Planning for Bushfire Protection' (Part 7 – Residential Infill Development). A description of this BAL is provided by the following table.

Table 6 – Heat flux exposure and appropriate BAL

Heat flux exposure	Description	BAL
N/A	Minimal attack from radiant heat and flame due to the distance of the building from the vegetation, although some attack by burning debris is possible. There is insufficient threat to warrant specific construction requirements.	BAL-LOW
<12.5	Attack from burning debris is significant with radiant heat (not greater than 12.5kW/m ²). Radiant heat is unlikely to threaten building elements (such as unscreened glass). Specific construction requirements for ember protection and accumulation of debris are warranted.	BAL-12.5
>12.5 ≤ 19	Attack by burning debris is significant with radiant heat flux (not greater than 19kW/m ²) threatening some building elements (such as screened glass). Specific construction requirements for embers and radiant heat are warranted.	BAL-19
>19 ≤ 29	Attack by burning debris is significant and radiant heat flux (not greater than 29 kW/m ²) threatens building integrity. Specific construction requirements for ember and higher levels of radiant heat are warranted. Some flame contact is possible.	BAL-29
>29 ≤ 40	Radiant heat flux and potential flame contact could threaten building integrity.	BAL-40
>40	Significant radiant heat and significantly higher likelihood of flame contact from the fire front will threaten building integrity and result in significant risk to residents.	BAL-FZ

2.5 SHIELDING

The RFS, 2019, PBP states that 'Where an elevation is shielded from direct radiant heat arising from a bushfire attack, then the construction requirements for that elevation can be reduced to the next lower BAL' (p. 86).

For the development, no reduction requirements due to shielding are identified under AS3959 (Clause 3.5 – Reduction in Construction Requirements Due to Shielding) because neither of the building elevations are considered to be shielded from the bushfire.

2.6 STRATEGIC MATTERS

The following table lists the matters to be addressed by a Bush Fire Strategic Study under the NSW RFS, 2019, 'Planning for Bushfire Protection' in order to demonstrate that strategic consideration has been provided to the site from a bushfire perspective.

Table 7 – Strategic Matters Table (NSW RFS, 2018, p.35)

No	Issue	Detail	Assessment Considerations	Assessment
1	Bush fire landscape assessment	A bushfire landscape assessment considers the likelihood of a bush fire, its potential severity and intensity and the potential impact on life and property in the context of the broader surrounding landscape.	The bush fire hazard in the surrounding area, including: <ul style="list-style-type: none"> • Vegetation • Topography • Weather 	The vegetation, topography and weather (i.e. FDI) is discussed within this BAR (Part 2.0 – Assessment). A discussion of the potential fire behaviour in terms of Climate/Fire History is provided within this BAR (Part 1.0 – Introduction).
2			The potential fire behaviour that might be generated based on the above.	
3			Any history of bush fire in the area.	A discussion of Fire History and Potential Fire Runs is provided within this BAR (Part 1.0 – Introduction).
4			Potential fire runs into the site and intensity of such fire runs.	
5	Land use assessment	The land use assessment will identify the most appropriate locations within the masterplan area or site layout for the proposed land uses.	The risk profile of different areas of the development layout based on the above landscape study.	The highest risk comes from the identified bushfire hazard to the north and west in relation to the proposed building envelope. This BAR demonstrates that a future dwelling could be sited to achieve BAL-29 and the application of other Bushfire Protection Measures (BPM) can reduce this risk for people, buildings and the environment.
6			The proposed land use zones and the resultant permitted land uses.	The planning proposal seeks to amend Schedule 1 of the Dungog Local Environmental Plan to enable a dwelling to be permissible with development consent on the site. No change to the land-use zoning is proposed.

7			The most appropriate siting of different uses based on risk profiles within the site (i.e. not locating development on ridge tops, SFPP development to be in lower risk areas of the site); and	<p>The proposed site is located on relatively flat land; however, two aspects have downslopes of 10-15 degrees.</p> <p>The siting is considered the most appropriate, because it is the flattest part of the existing lot and the only part of the lot that does not contain vegetation.</p>
8			The impact of the siting of these uses on APZ provision.	
9	Access and egress	A study of the existing and proposed road networks both within and external to the masterplan area or site layout.	The capacity for the proposed road network to deal with evacuating residents and responding emergency services, based on the existing and proposed community profile.	Fosterton Road has the capacity to deal with evacuating residents. In this case, the proposed rezoning and proposed future dwelling addresses the needs of the inhabitants on this site and not a residential subdivision.
10			The location of key access routes and direction of travel.	The site has direct access to Fosterton Road which provides direction of travel away from the identified bushfire hazard.
11			The potential for development to be isolated in the event of a bush fire.	The development is unlikely to become isolated in the event of a bush fire as Fosterton Road is effectively a loop to escape to Dungog in two different directions.
12	Emergency services	An assessment of the future impact of new development on emergency service provision.	Consideration of the increase in demand for emergency services responding to a bush fire emergency (including the need for new stations/bridges); and	<p>The development is to rezone the lot for a possible future dwelling. This should not have an impact on the demand for emergency services.</p> <p>It is suggested that the Dungog NSW RFS be consulted during the public exhibition period of the planning proposal in order to understand their capacity.</p>
13			Impact on the ability of emergency services to carry out fire suppression in a bush fire emergency.	The proposed dwelling will have direct access to Fosterton Road and will be less than 200m from this public road. The access road will circumnavigate the proposed site which provide emergency services the

				ability to carry out fire suppression as well exit in safety.
14	Infrastructure	An assessment of the issues associated with infrastructure provision.	The ability of the reticulated water system to deal with a major bush fire event (particularly in terms of water pressure); and	Reticulated water is not available, and it will be necessary to have tank water as a requirement in this development.
15			Life safety issues associated with fire and proximity to high voltage power lines, natural gas supply lines, etc.	The proposal has the potential to place power lines underground.
16	Adjoining land	The impact of new development on adjoining landowners and their ability to undertake bush fire management.	<p>Consideration of the implications of a change in land use on adjoining land including:</p> <ul style="list-style-type: none"> • The ability of adjoining and nearby land to carry a bush fire; and • Consideration of increased pressure on adjoining landowners to introduce or increase BPMs through the implementation of Bush Fire Management Plans as a result of the changes in land use. 	The size and shape of the proposed lot means that the required APZs have been demonstrated to be accommodated within the existing property boundaries.

2.7 MINISTERIAL DIRECTION (4.4 – PLANNING FOR BUSFHIRE)

The Environmental Planning & Assessment Act 1979 (Section 9.1, Ministerial Direction 4.4 – Planning for Bush Fire Protection) identifies that a planning proposal must, where development is proposed, comply with the appropriate provisions.

These provisions are listed, and a response provided, within the following table.

Table 8 – Ministerial Direction Table (EP&A Act 1979, Section 9.1)

No	Provision	Response
1	Provide an APZ incorporating: <ul style="list-style-type: none"> - An Inner Protection Area (IPA) bounded by a perimeter road or reserve, which circumstances the hazard side of the land intended for development and has a building line consistent with the incorporation of an APZ, within the property. - An Outer Protection Area (OPA) managed for hazard reduction and located on the bushland side of the perimeter road. 	This BAR recommends an APZ around a future dwelling house that is within the boundaries of the site. This is to be managed as an IPA.
2	For infill development (that is development within an already subdivided area), where an appropriate APZ cannot be achieved, provide an appropriate performance standard, in consultation with the NSW Rural Fire Service. If the provisions of the planning proposal permit Special Fire Protection Purposes (as defined under section 100B of the Rural Fires Act 1997), the APZ provisions must be complied with.	The development is for residential infill development and the APZ can be achieved within the boundaries of the site.
3	Contain provisions for adequate water supply for firefighting purposes,	This BAR identifies that reticulated water is not available and a provision of adequate tank water will be a requirement of this development.
4	Minimise the perimeter of the area of land interfacing the hazard, which may be developed,	The proposed siting of the dwelling house will minimise the major threat of vegetation bush fire hazard to the north and west. The aspect of the front of the house will be south with the access road to the east being away from the major threat.
5	Introduce controls on the placement of combustible materials in the IPA.	The description of how the IPA will be managed can be conditioned as part of the Development Approval for the proposed dwelling house.

3.0 BUSHFIRE PROTECTION MEASURES

3.1 ASSET PROTECTION ZONES

The RFS, 2019, PBP states that the intent of these Bushfire Protection Measures is 'to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting firefighting activities' (p.65).

Compliance with Table 7.4a – Performance criteria and acceptable solutions for residential infill development in relation to APZs is demonstrated below.

Table 9 - Compliance with PBP for Asset Protection Zones

No	Performance Criteria	Acceptable Solution	Complies	Response
1	<ul style="list-style-type: none"> APZs are provided commensurate with the construction of the building; and A defensible space is provided onsite 	An APZ is provided in accordance with Table A1.12.2 or A1.12.3 in Appendix 1.	Yes	This BAR identifies that the APZ has been calculated in accordance with tables A1.12.2 and A1.12.3 to demonstrate that building may be capable of achieving BAL-29, which relates to not exceeding 29kW/m ² .
2	<ul style="list-style-type: none"> APZs are managed and maintained to prevent the spread of a fire to the building. 	APZs are managed in accordance with the requirements of Appendix 4 of PBP.	Yes	<p>The BAR identifies that the APZ managed as an Inner Protection Area (IPA) is in accordance with Appendix 4 of PBP.</p> <p>The requirements of Appendix 4 are repeated in the recommendations of this BAR.</p>
3	<ul style="list-style-type: none"> The APZ is provided in perpetuity. APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimised. 	APZs are wholly within the boundaries of the development site.	Yes	The BAR identifies that the APZ is wholly within the boundaries of the site.
4		APZs are located on lands with a slope less than 18 degrees.	Yes	The slope of lands on which APZs are located are no greater than 18 degrees.
5	Home-based child care: The building must not be exposed to radiant heat levels exceeding 29kW/m ² (1090K).	An APZ is provided in accordance with Table A1.12.2 or A1.12.3 in Appendix 1	Not Applicable	The development is not for home-based child-care and therefore this performance criteria does not apply.

3.2 SITING AND DESIGN PRINCIPLES

The RFS, 2019, PBP does not include siting and design principles. In turn, the siting and design principles from the RFS, 2006, PBP (Section 4.3.5 – Specifications and Requirements for Bush Fire Protection Measures for Infill Development) have been discussed below.

Commentary regarding these Siting and Design principles of the development is outlined below.

Table 10 – Compliance with PBP for Siting and Design

No	Performance Criteria	Acceptable Solution	Complies	Response
1	Buildings are sited and designed to minimise the risk of bush fire attack.	Buildings are designed and sited in accordance with the siting and design principles in this section (see also Figure 4.7 (p.42)).	Able to Comply	<p>The performance of the proposed future dwelling house will be enhanced through the following siting and design principles:</p> <ol style="list-style-type: none"> 1. Not built on a ridge top or saddle; 2. Reduction in the bulk of a building (height and width) facing a bushfire hazard; 3. Simple building design with reduced numbers of re-entrant corners; 4. Provision of a simplified roofline; and 5. Avoiding raised floors and utilising concrete slabs (raft construction); 6. Reducing the number of windows facing the bushfire hazard.

3.3 ACCESS

The RFS, 2019, PBP states that the intent of these Bushfire Protection Measures is ‘to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting firefighting activities’ (p.65).

Compliance with Table 7.4a – Performance criteria and acceptable solutions for residential infill development in relation to Access is demonstrated below.

Table 9 – Compliance with PBP for Access

No	Performance Criteria	Acceptable Solutions	Complies	Response
1	Firefighting vehicles are provided with safe, all-weather access to	Property access roads are two-wheel, all weather roads.	Able to Comply	The property access road will be a two-wheel, all weather road.

	structures and hazard vegetation.			
2	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.	Able to Comply	The capacity of road surfaces and any bridges/causeways can be designed to carry fully loaded firefighting vehicles (up to 23 tonnes).
3	There is appropriate access to water supply.	Hydrants are provided in accordance with the relevant causes of AS2419.1:2005	Able to Comply	A static water and hydrant supply are required because reticulated water is not available.
4		There is suitable access for a Category 1 fire appliance to within 4m of the static water supply where no reticulated supply is available.	Able to Comply	A static water and hydrant supply are required because reticulated water is not available.
5	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.	Not Applicable	The proposed future dwelling is not greater than 200m from a public road.
6		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 70 kph) that supports the operational use of emergency firefighting vehicles. In circumstances where this cannot occur, the following requirements apply:	Not Applicable	The proposed future dwelling is more than 70m from Fosterton Road and requires specific access requirements.
7		Minimum 4m carriageway width	Able to Comply	
8		In forest, woodland and health situations, rural property roads have passing bays every 200m that are 20m long by 2m wide,	Not Applicable	Passing bay not required as access to Fosterton Road is less than 200m

		making a minimum trafficable width of 6m, at the passing bay		
9		A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches.	Able to Comply	A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches.
10		Property access must provide a suitable turning head in accordance with Appendix 3	Able to Comply	Property access must provide a suitable turning head in accordance with Appendix 3
11		Curves have a minimum inner radius of 6m and are minimal in number to allow for rapid access and egress.	Able to Comply	Curves have a minimum inner radius of 6m and are minimal in number to allow for rapid access and egress.
12		The minimum distance between inner and outer curves is 6m.	Able to Comply	The minimum distance between inner and outer curves is 6m.
13		The crossfall is not more than 10 degrees.	Able to Comply	The crossfall is not more than 10 degrees.
14		Maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads.	Able to Comply	Maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads.
15		A development compromising more than three dwellings has formalised access by dedication of a road and not a right of way.	Not Applicable	Does not apply.
16		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.	Not Applicable	Does not apply.

3.4 WATER SUPPLIES

The RFS, 2019, PBP states that the intent of these Bushfire Protection Measures is 'to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting firefighting activities' (p.65).

Compliance with Table 7.4a – Performance criteria and acceptable solutions for residential infill development in relation to Water Supplies is demonstrated below.

Table 10 – Compliance with PBP for Water Supplies

No	Performance Solutions	Acceptable Solutions	Complies	Response
1	An adequate water supply is provided for firefighting purposes.	Reticulated water is provided to the development, where available, and	Not Applicable	Does not apply.
2		A static water supply is provided where no reticulated water is available	Able to Comply	A static water and hydrant supply are required because reticulated water is not available.
3	<ul style="list-style-type: none"> Water supplies are located at regular intervals The water supply is accessible and reliable for firefighting purposes 	Fire hydrant spacing, design and sizing comply with the relevant clauses of AS 2419.1:2005	Able to Comply	A static water and hydrant supply are required because reticulated water is not available.
4		Hydrants are not located within any road carriageway	Not Applicable	No hydrants currently exist.
5		Reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads.	Not Applicable	Does not apply.
6	Flows and pressure are appropriate.	Fire hydrant flows and pressures comply with the relevant clauses of AS 2419.1:2005	Able to Comply	A static water and hydrant supply are required because reticulated water is not available.
7	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.	Able to Comply	A static water and hydrant supply are required because reticulated water is not available.
8	A static water supply is provided for	Where no reticulated water supply is available, water for firefighting	Able to Comply	A static water and hydrant supply is required because

	<p>firefighting purposes in areas where reticulated water is not available.</p>	<p>purposes is provided in accordance with Table 5.3d, being:</p> <ul style="list-style-type: none"> • Residential lots (<1000m²) are to provide 5,000L/lot • Rural residential lots (1,000-10,000m²) are to provide 10,000L/lot • Large rural/lifestyle lots (>10,000m²) are to provide 20,000L/lot • Multi-dwelling housing (including dual occupancies) are to provide 5,000L/dwelling 		<p>reticulated water is not available. The site is 6.15ha and therefore 20,000 litres will be required.</p>
9		<p>A connection for firefighting purposes is located within the IPA or non-hazard side an away from the structure; 65mm Storz outlet with a ball valve is fitted to the outlet.</p>	Able to Comply	<p>A connection for firefighting purposes is located within the IPA or non-hazard side an away from the structure; 65mm Storz outlet with a ball valve is fitted to the outlet.</p>
10		<p>Ball valve and pipes are adequate for water flow and are metal.</p>	Able to Comply	<p>Ball valve and pipes are adequate for water flow and are metal.</p>
11		<p>Supply pipes from tank to ball valve have the same bore size to ensure flow volume.</p>	Able to Comply	<p>Supply pipes from tank to ball valve have the same bore size to ensure flow volume.</p>
12		<p>Underground tanks have an access hole of 200mm to allow tankers to refill direct from the tank.</p>	Able to Comply	<p>Underground tanks have an access hole of 200mm to allow tankers to refill direct from the tank.</p>
13		<p>A hardened ground surface is supplied within 4m.</p>	Able to Comply	<p>A hardened ground surface is supplied within 4m.</p>
14		<p>Above-ground tanks are manufactured from concrete or metal.</p>	Able to Comply	<p>Above-ground tanks are manufactured from concrete or metal.</p>
15		<p>Raised tanks have their stands constructed from non-combustible material or bush fire-resisting timber (see Appendix F of AS 3959).</p>	Able to Comply	<p>Raised tanks have their stands constructed from non-combustible material or bush fire-resisting timber (see Appendix F of AS 3959).</p>

16		Unobstructed access can be provided at all times.	Able to Comply	Unobstructed access can be provided at all times.
17		Underground tanks are clearly marked.	Able to Comply	A static water tank is required. If an underground tank is built it will be clearly marked.
18		Tanks on the hazard side of a building are provided with adequate shielding for the protection of firefighters.	Not Applicable	The static water tank is required to be built on the non-hazard side.
19		All exposed water pipes external to the building are metal, including the fittings.	Able to Comply	All exposed water pipes external to the building are metal, including the fittings.
20		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.	Able to Comply	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.
21		Fire hose reels are constructed in accordance with AS/NZS 1221:1997 and installed in accordance with the relevant clauses of AS 2441:2005.	Able to Comply	Fire hose reels are constructed in accordance with AS/NZS 1221:1997 and installed in accordance with the relevant clauses of AS 2441:2005.

3.5 GAS SERVICES

The RFS, 2019, PBP states that the intent of these Bushfire Protection Measures is 'to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting firefighting activities' (p.65).

Compliance with Table 7.4a – Performance criteria and acceptable solutions for residential infill development in relation to Gas Services is demonstrated below.

Table 11 – Compliance with PBP for Gas Services

No	Performance Solutions	Acceptable Solutions	Complies	Response
1	Location and design of gas	Reticulated or bottled gas is installed and maintained	Able to Comply	Reticulated or bottled gas is installed and maintained in

	services will not lead to ignition of surrounding bushland or the fabric of buildings.	in accordance with AS/NZS 1596:2014 and the requirements of relevant authorities, and metal piping is used.		accordance with AS/NZS 1596:2014 and the requirements of relevant authorities, and metal piping is used.
2		All fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side.	Able to Comply	All fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side.
3		Connections to and from gas cylinders are metal.	Able to Comply	Connections to and from gas cylinders are metal.
4		Polymer-sheathed flexible gas supply lines are not used.	Able to Comply	Polymer-sheathed flexible gas supply lines are not used.
5		Above-ground gas service pipes are metal, including and up to any outlets.	Able to Comply	Above-ground gas service pipes are metal, including and up to any outlets.

3.6 CONSTRUCTION STANDARDS

The NSW RFS, 2019, 'Planning for Bushfire Protection' states that:

'The NCC contains Performance Requirements and Deemed-to-Satisfy provisions relating to the construction of buildings in bush fire prone areas. In NSW, these provisions apply to Class 1, 2 and 3 buildings, Class 4 parts of a building, Class 9 buildings that are SFPP, and associated class 10a buildings and decks' (p.21).

The National Construction Code 2019 (NCC) (P2.7.5 – Buildings in bushfire prone areas) identifies that 'A Class 1 building or Class 10a building or deck associated with a Class 1 building that is constructed in a designated bushfire prone area must, to the degree necessary, be designed and constructed to reduce the risk of ignition from a bushfire, appropriate to the: a) potential for ignition caused by burning embers, radiant heat or flame generated by a bushfire; and b) intensity of the bushfire attack of the building' (p.73).

Compliance with Table 7.4a – Performance criteria and acceptable solutions for residential infill development in relation to Construction Standards is demonstrated below.

Table 12 – Compliance with PBP for Construction Standards

No	Performance Criteria	Acceptable Solution	Complies	Response
1	The proposed building can withstand bush fire	BAL is determined in accordance with Tables A1.12.5 to A1.12.7	Yes	This BAR identifies that the APZ has been calculated in accordance with Table A1.12.2 or A1.12.3 in Appendix 1 to demonstrate that the

	attack in the form of embers, radiant heat and flame contact.			development is to be constructed to BAL-29. For the development, no reduction requirements due to shielding are identified under AS3959 (Clause 3.5 – Reduction in Construction Requirements Due to Shielding) because neither of the building elevations are shielded from the bushfire.
2		Construction is provided in accordance with the NCC and as modified by section 7.5 (please see advice on construction in the flame zone)	Able to Comply	The proposed north, east, south and west elevations of the development and the entire roof shall be constructed to comply with Sections 3 and 7 (BAL-29) of Australian Standard AS3959-2018– 'Construction of buildings in bushfire prone areas' or NASH Standard (1.7.14) – National Standard Steel Framed Construction in Bushfire Areas – 2014', except where varied to be consistent with the RFS, 2019, 'Planning for Bushfire Protection' (Clause 7.5.2 – NSW State Variations).
3	Proposed fences and gates are designed to minimise the spread of bush fire	Fencing and gates are constructed in accordance with section 7.6	Able to Comply	Fences and gates can be constructed to be in accordance with section 7.6 (i.e. fences should be hard-wood or non-combustible in bushfire prone areas. When they are less than 6m from the dwelling house, then they should be non-combustible).
4	Proposed Class 10a buildings are designed to minimise the spread of bush fire	Class 10a buildings are constructed in accordance with section 8.2.3	Not Applicable	No class 10a buildings are proposed.

5	Home-based child-care: the proposed building can withstand bush fire attack in the form of wind, localised smoke, embers and expected levels of radiant heat.	An APZ is provided in accordance with Table A1.12.2 or A1.12.3 in Appendix 1 of this document around the entire building or structure.	Not Applicable	The development is not for home-based child-care and therefore this performance criteria does not apply.
6		The existing dwelling is required to be upgraded to improve ember protection. This is to be achieved by enclosing or covering all openings with a corrosion-resistant steel, bronze or aluminium mesh with a maximum aperture of 2mm. Where applicable, this includes the openable portion of the windows, vents, weepholes and eaves, but does not include roof tile spaces. Weather strips, draught excluders or draught seals shall be installed at the base of side hung external doors as per AS3959. The subfloor space must be enclosed.	Not Applicable	The development is not for home-based child-care and therefore this performance criteria does not apply.

3.7 LANDSCAPING

The RFS, 2019, PBP states that the intent of these Bushfire Protection Measures is 'to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting firefighting activities' (p.65).

Compliance with Table 7.4a – Performance criteria and acceptable solutions for residential infill development in relation to Landscaping is demonstrated below.

Table 13 – Compliance with PBP for Landscaping

No	Performance Solutions	Acceptable Solutions	Complies	Response
1	Landscaping is designed and managed to minimise flame contact and	Compliance with the NSW RFS 'Asset protection zone standards' (see Appendix 4).	Able to Comply	The BAR identifies that the entire site is to be managed as an Inner Protection Area in accordance with PBP (Appendix 4).

	radiant heat to buildings, and the potential for wind drive embers to cause ignitions.			The requirements of Appendix 4 are repeated in the recommendations of this BAR.
		A clear area of low-cut lawn or pavement is maintained adjacent to the house.	Able to Comply	A clear area of low-cut lawn or pavement is required in the future.
2		Fencing is construction in accordance with section 7.6.	Able to Comply	Fencing is to be constructed in accordance with PBP (Section 7.6).
3		<p>Trees and shrubs are located so that:</p> <ul style="list-style-type: none"> • The branches will not overhang the roof • The tree canopy is not continuous • Any proposed windbreak is located on the elevation from which fires are likely to approach. 	Able to Comply	<p>Trees and shrubs are located so that:</p> <ul style="list-style-type: none"> • The branches will not overhang the roof • The tree canopy is not continuous • Any proposed windbreak is located on the elevation from which fires are likely to approach.

3.8 EMERGENCY MANAGEMENT

The RFS, 2019, PBP states that the intent of these Bushfire Protection Measures is 'to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting firefighting activities' (p.65).

Compliance with Table 7.4a – Performance criteria and acceptable solutions for residential infill development in relation to Landscaping is demonstrated below.

Table 14 – Compliance with PBP for Emergency Management

No	Performance Solutions	Acceptable Solutions	Complies	Response
1	Home-based child-care: a bushfire emergency and evacuation management	A Bush Fire Emergency Management and Evacuation Plan is prepared by the operator consistent with the NSW RFS	Not Applicable	The development is not for home-based child-care and therefore this performance criteria does not apply.

	plan is prepared.	publication: A guide to Developing a Bush Fire Emergency and Evacuation Plan, and the AS 3745:2010		
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4.0 RECOMMENDATIONS

This BAR provides the following recommendations:

General

1. Council to refer the Planning Proposal to the NSW RFS if it is listed as a condition on the Gateway Determination.

Asset Protection Zones

2. At the commencement of building works and in perpetuity the area from the dwelling house the north for a distance of 30m, to the east for a distance of 80m, to the south for a distance of 20m and to the west for a distance of 38m is to be managed as an Inner Protection Area as outlined in the NSW RFS document 'Standards for Asset Protection Zones' and the RFS, 2019, 'Planning for Bushfire Protection' (Clause 7.5.2 – NSW State Variations).

The following dot points are to guide the establishment and ongoing management of the area identified to be an IPA:

a. Trees

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

b. Shrubs

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

c. Grass

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

3. Fencing is to be constructed in accordance with RFS, 2019, 'Planning for Bushfire Protection' (Section 7.6).

Access

4. Property Access is to comply with the NSW RFS, 2019, 'Planning for Bushfire Protection' (Table 7.4a – Performance criteria and acceptable solutions for residential infill development).

Gutter Guards

5. Roofing shall be gutter less or have leafless guttering and valleys to prevent the build-up of flammable material. Any materials used to prevent the build-up of debris in the gutter shall have a flammability index of no greater than 5.

Water Supplies

6. The development is to be linked to a static water supply in accordance with NSW RFS, 2019, 'Planning for Bushfire Protection' (Table 7.4a – Performance criteria and acceptable solutions for residential infill development).

Electricity and Gas Supplies

7. New electricity and gas supplies shall be installed in accordance with the NSW RFS, 2019, 'Planning for Bushfire Protection' (Table 7.4a – Performance criteria and acceptable solutions for residential infill development).

Construction

8. New works shall be constructed to Sections 3 and 7 (BAL-29) with the exception that the construction requirements shall be varied to comply with the requirements of the NSW Rural Fire Service, 2019, 'Planning for Bushfire Protection' (Part 7 – Residential Infill Development).

Landscaping

9. A landscape plan should be prepared that is consistent with the requirements of NSW RFS, 2019, 'Planning for Bushfire Protection' (Appendix 4 – Asset Protection Zone Requirements)
















Emergency Management

10. The need to formulate an emergency evacuation plan is suggested. To do so, occupants can complete a Bush Fire Safety Plan on the NSW RFS Website (www.rfs.nsw.gov.au) under publications/bushfire safety.

Note: The above are recommendations of the BAR. Any development approval is to comply with the Conditions listed on the Council Notice of Determination, not the above recommendations. The above recommendations are only intended to assist Council in their assessment of the DA.

1222 Fosterton Rd, Fosterton

Figure 7 - Bushfire Protection Measure Map

-  Site Boundary
-  Lot
-  Potential Building Footprint
-  Buffer - 100m
-  Buffer - 140m
-  Property Access
-  Future Water Tank
-  BAL-FZ
-  BAL- 40
-  BAL-29
-  Contours (5m)
-  Watercourses
-  Exotic - Rainforest
-  Hunter Macleay DSF
-  North Coast WSF

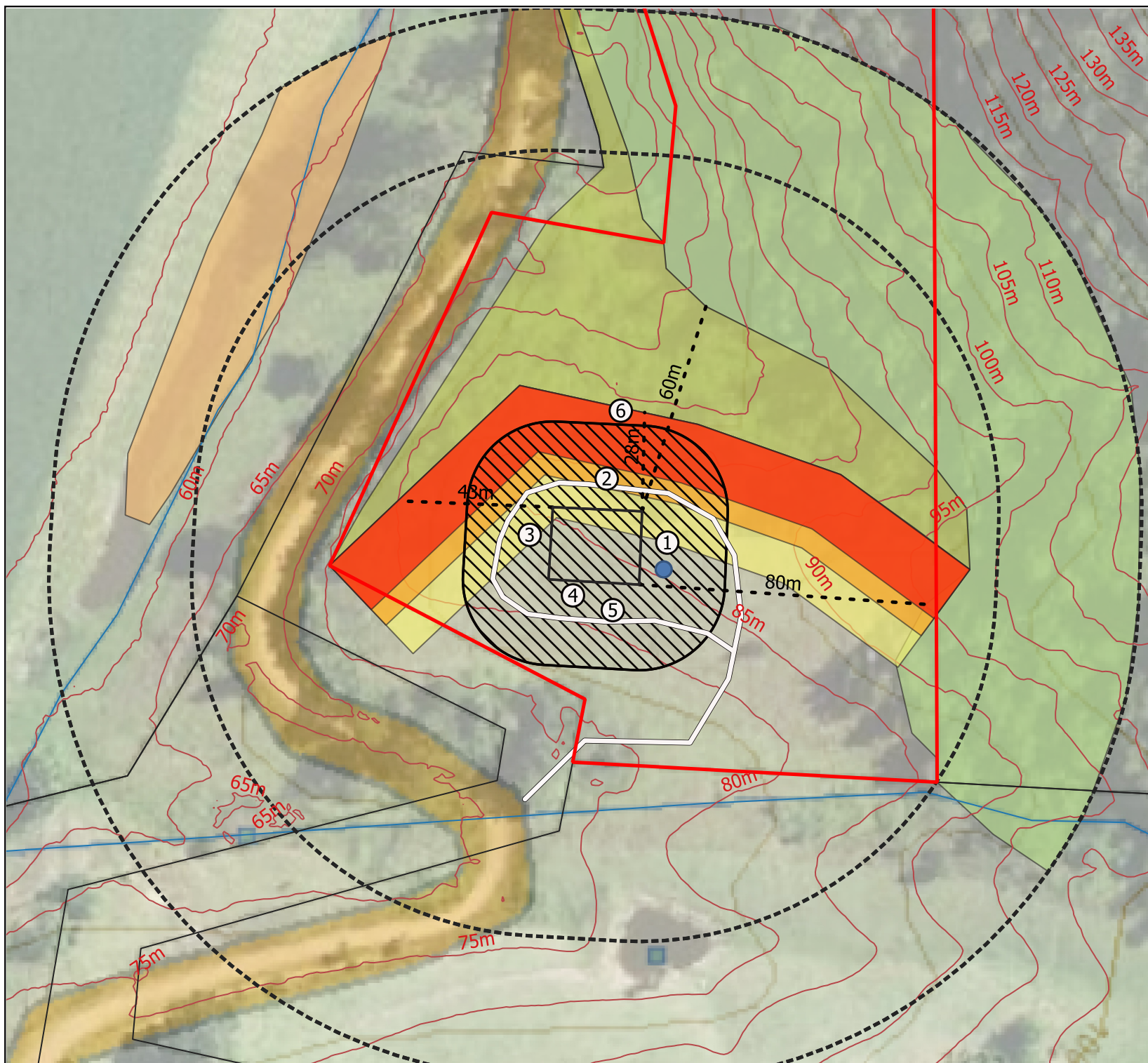


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While every effort is made to ensure this map is free of errors, there is no warrant the map or its features are either spatially or temporally accurate or fit for a particular use. This map is provided without any warranty of any kind whatsoever, either express or implied.

Job No: J001001 Date: 04/03/2020



5.0 CONCLUSION

This BAR identifies that the predominant bushfire hazard is located to the north of the site (**FIGURE 3**). This hazard is classified as Rainforest and is situated on land that has an effective slope of 14 degrees. The BAR provides a series of recommendations for the different Bushfire Protection Measures (BPM)s. In relation to Asset Protection Zones (APZs), it identifies:

Table 15– BAL Table

Direction	Vegetation	Surface Fuel (t/ha)	Overall Fuel (t/ha)	Rise (m)	Run (m)	Slope (°)	Separation(m)	BAL
Transect 1 (N)	Exotic - Rainforest	10	13.2	10	41	14	30	BAL-29
Transect 2 (E)	North Coast WSF	22	35.98	15	53	-16	80	BAL-12.5
Transect 3 (S)	Grassland	6	6	5	141	-2	20	BAL-12.5
Transect 4 (W)	Exotic - Rainforest	10	13.2	10	52	11	38	BAL-19

Based on the above, the future dwelling house is to be constructed to BAL-29 in accordance with AS3959 except for the construction requirements of the PBP (Clause 7.5.2 – NSW State Variations The removal of native flora or fauna will not be required.

Notwithstanding the precautions adopted, it should always be remembered that bushfires burn under a wide range of conditions and an element of risk, no matter how small, always remains and although the standard is designed to improve the performance of such buildings, there can be no guarantee because of the variable nature of bushfires that any one building will withstand bushfire attack on every occasion.

This BAR provides the above required information to assist Council and the RFS in determining compliance in accordance with the PBP and AS 3959. Council is the final consenting authority and the future construction works must comply with the recommendations included in the Council's conditions of consent.

REFERENCE LIST

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NSW Government, 2016, 'NSW Legislation', viewed 6 March 2020, <<http://www.legislation.nsw.gov.au/#/browse>>

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Tan, Z, Douglas, G & Midgley, S, 2006, 'Bushfire Risk Register, A Tool for Bushfire Risk Management Planning', viewed 22 September 2018, <vuws.westernsydney.edu.au>

ATTACHMENT 1 – AHIMS RESULTS

A basic search of the AHIMS database identified zero sites and/or places.



Office of
Environment
& Heritage

AHIMS Web Services (AWS) Search Result

Purchase Order/Reference : 1222 fosterton Rd

Client Service ID : 489201

Mark Bretag
159 Adelaide St
Raymond Terrace New South Wales 2324
Attention: Mark Bretag
Email: mark@perceptionplanning.com.au

Date: 05 March 2020

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 1, DP:DP867951 with a Buffer of 50 meters, conducted by Mark Bretag on 05 March 2020.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location.*

ATTACHMENT 2 – INFORMATION TO BE PROVIDED IN A BAR

The checklist below demonstrates that this BAR is in accordance with PBP (Appendix 2) (p.96).

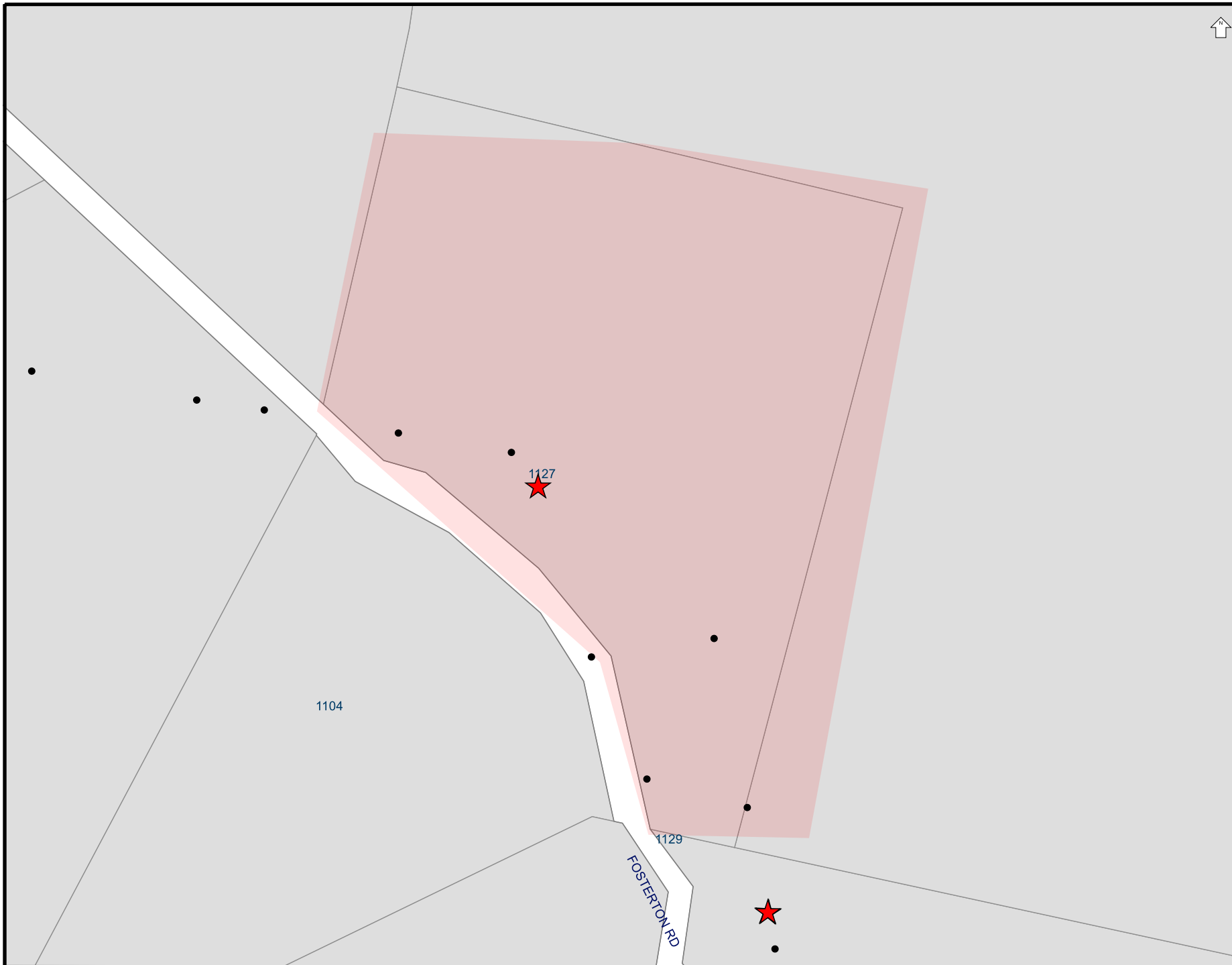
No	General	Response
1	A statement that the site is Bush Fire Prone Land (BFPL).	Please refer to Part 1 – Introduction.
2	The location, extent and vegetation formation of any bushland on or within 140 metres of the site.	Please refer to Part 2 – Assessment.
3	The slope and aspect of the site and of any BFPL within 100 metres of the site.	Please refer to Part 2 – Assessment.
4	Any features on or adjoining the site that may mitigate the impact of a bush fire on the proposed development.	Please refer to Part 1 – Introduction.
5	A statement assessing the likely environmental impact of any proposed Bushfire Protection Measures (BPM)s.	Please refer to Part 1 – Introduction.
6	A site plan showing access, water supplies, APZs, BAL requirements and building footprint in relation to the bush fire hazards.	Please refer to Figures.
7	Calculated BAL construction levels.	Please refer to Part 2 – Assessment.

ATTACHMENT 3 – AIMS AND OBJECTIVES OF PBP

The below table demonstrates consistency with the aims and objectives of PBP.

Aims and Objectives – General (p.10)		
No	Objective	Bushfire Assessment Report (BAR)
1	Afford occupants of any building adequate protection from exposure to bush fire.	Please refer to Part 4 – Recommendations.
2	Provide for defensible space to be located around buildings.	Please refer to Part 4 – Recommendations.
3	Provide appropriate separation between a hazard and buildings, which, in combination with other measures, prevent the likely spread to buildings.	Please refer to Part 4 – Recommendations.
4	Ensure that safe operational access and egress for emergency service personnel and residents is available.	Please refer to Part 4 – Recommendations.
5	Provide for ongoing management and maintenance of bush fire protection measures.	Please refer to Part 4 – Recommendations.
6	Ensure utility services are adequate to meet the needs of firefighters.	Please refer to Part 4 – Recommendations.
Specific Objectives – Infill Development (p.64)		
No	Objective	Bushfire Assessment Report (BAR)
1	Provide a defensible space to enable unimpeded access for firefighting around the building.	Please refer to Part 4 – Recommendations.
2	Provide better bush fire outcomes on a redevelopment site than currently exists, commensurate with the scale of the works proposed.	Please refer to Part 4 – Recommendations.
3	Design and construct buildings commensurate with the bush fire risk.	Please refer to Part 4 – Recommendations.
4	Provide access, services and landscaping to aid firefighting operations.	Please refer to Part 4 – Recommendations.
5	Not impose an increase bush fire management and maintenance responsibly on adjoining landowners.	Please refer to Part 4 – Recommendations.
6	Increase the level of bush fire protection to existing dwellings based on the scale of the proposed work and level of bush fire risk.	Please refer to Part 4 – Recommendations.

ATTACHMENT 4 – WATER AND ELECTRICITY



Overhead wires not shown
LOOK UP & LIVE!

LEGEND

- LV Underground Cable
- HV Underground Cable
- Underground Pipe
- ★ Underground Earth or Wires
- ▲ Ground Substation
- Pole
- ⊠ Cubicle
- Pit
- Area of Interest

Critical Assets

Contact Essential Energy
on 13 23 91

- Zone Substation
- Underground Cable
- Underground Fibre

Proposed Works

- Area of proposed works

Proposed assets are shown as
orange symbols

THE INFORMATION ON THIS
MAP MAY NOT BE
ACCURATE.

If details are incorrect,
please notify
Essential Energy on
13 23 91
(or fax 1800 354 636)

ISSUE DATE: 19/07/2019

You must resubmit your
request if you have not
started work within 4 weeks
of the 'Issue Date' above

A4 SCALE: 1:3933





HUNTER WATER CORPORATION

A.B.N. 46 228 513 446

DIAL BEFORE YOU DIG SERVICES PLAN - OVERVIEW

Enquiries: 1300 657 657

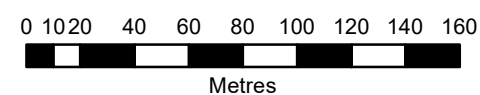
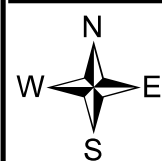
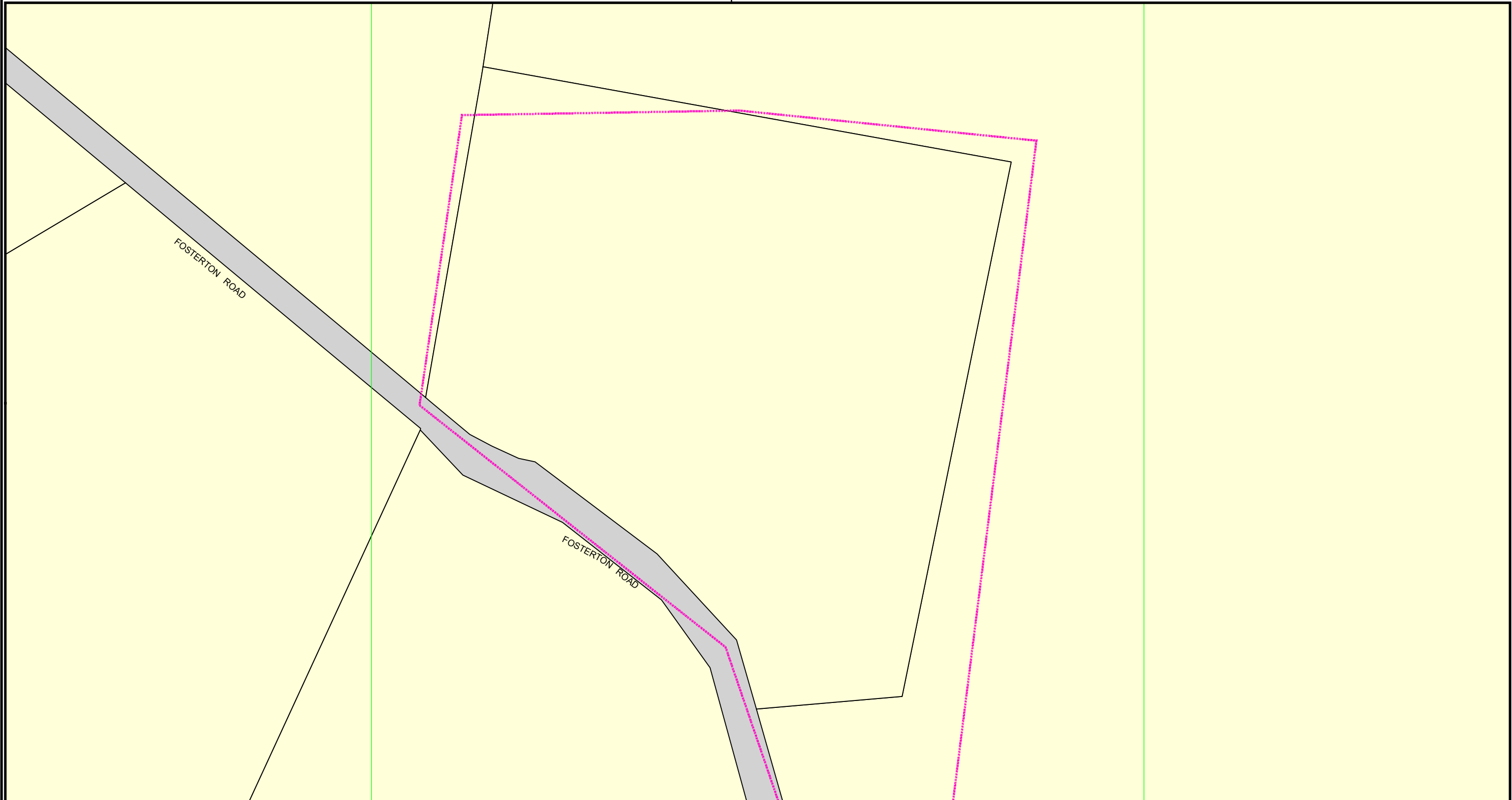


APPLICANT: Miss Elysha j

SEQUENCE NO.: 85759671

NOTIFICATION NO.: 16678778

DATE OF ISSUE: 19/07/2019



CADASTRAL DATA © LPI OF NSW 2019

SEWER/WATER/RECYCLED WATER/
ELECTRICAL - UTILITY DATA
© HUNTER WATER CORPORATION 2019

SERVICE LOCATIONS ARE APPROXIMATE.
HAND DIG UNTIL ACTUAL LOCATIONS ARE IDENTIFIED.
PROPERTY SERVICES ARE NOT SHOWN.

IMPORTANT **THIS PLAN IS NOT TO BE USED FOR CONVEYANCING**
THIS INFORMATION IS VALID FOR 30 DAYS FROM THE DATE OF ISSUE
ANY INFORMATION ON THIS PLAN MAY NOT BE UP TO DATE
AND THE CORPORATION ACCEPTS NO RESPONSIBILITY FOR ITS ACCURACY.
REFER TO ATTACHED ADVICE SHEET FOR FURTHER ARNINGS.

ATTACHMENT 5 – DEPOSITED PLAN

ATTACHMENT 6 – RFS FACT SHEET

Reuse of Rezoning Reports on Bush Fire Prone Land

This Practice Note provides guidance on when bush fire assessments prepared as part of a rezoning in a bush fire prone area can be used for subsequent development applications submitted to the NSW Rural Fire Service (RFS)¹.

There are three main stages for planning and development on bush fire prone land; strategic planning (planning proposals), development applications (DAs) for subdivision or Special Fire Protection Purposes (SFPPs) and DAs for infill development. The consideration of bush fire is different at each stage as outlined below:

1. **Strategic Planning** – includes planning proposals for the rezoning of land and the creation of Local Environment Plans. Under the *Environmental Planning and Assessment Act 1979* (EP&A Act), Section 117 Direction 4.4 requires that where planning proposals will affect or are in proximity to bush fire prone land, certain requirements must be met regarding bush fire. The RFS is consulted prior to exhibition and the Department of Planning and Infrastructure (DoPI) determines compliance with the direction.
2. **DAs for Subdivision/SFPPs** – applications for subdivisions or SFPPs on bush fire prone land must obtain a Bush Fire Safety Authority (BFSA) under Section 100B of the *Rural Fires Act 1997*

(RF Act). This requires compliance with the relevant requirements of *Planning for Bush Fire Protection*. The RFS is an approval body.

3. **DAs for Infill Development** - applications for infill development (including dwellings and alterations and additions) are required to be assessed against the provisions of PBP under 79BA of the EP&A Act. The RFS is consulted when the proposal cannot meet the deemed to satisfy provisions of PBP. Where infill development is not mapped as bush fire prone but the consent authority believes there is a bush fire hazard, PBP can be considered under 79C of the EPA Act.

Requirements at each stage

Each stage has different requirements for assessing the impact of bush fire. For the majority of circumstances a bush fire assessment must be undertaken at the various stages irrespective of what has been previously approved. Detailed below are the key considerations for the 3 stages.

Planning Proposals – requirements and outcomes for bush fire are broad and often lack the detail required for subsequent development applications. The focus tends to be on the zoning of land uses relevant to bush fire risk and any environmental impacts on the provision of asset protection zones (APZs. Written advice from the RFS is

¹ Department of Planning and Infrastructure Planning Circular S12-003 Issued 06 June 2012



required detailing that no objection is made to the progression of the planning proposal.

Ultimately the DoPI will determine what level of detail is required for the planning proposal and the RFS will be guided by the information received with any referral.

DAs for Subdivision/SFPPs – legislative requirements and bush fire protection measures for subdivisions/SFPP are generally more detailed and specific than at the planning proposal stage. Unlike planning proposals, DAs for subdivisions must demonstrate compliance with PBP, or the RFS will not issue a BFSa.

DAs for Infill –infill requirements are also more detailed and specific compared to planning proposals. They also differ to subdivision and focus more on achieving the best outcome for the site in terms of bush fire (e.g. balancing construction levels and APZs).

When can rezoning bush fire assessments be used for subsequent DAs?

Although a development is required to be assessed at multiple stages it is possible for a single bush fire assessment to be used more than once.

For example a bush fire report for rezoning that includes an indicative lot layout with relevant bush fire protection measures and a

detailed sit assessment can then be used at the subdivision stage (if circumstances remain the same). To be considered for future DAs, a rezoning report should address the requirements outlined in Clause 44 of the *Rural Fires Regulation 2008*.

Another example is a bush fire report prepared at the subdivision stage that outlines bush fire protection measures for each specific lot that can then be used at the 79BA stage (if the situation remains the same). For this to occur the bush fire report would need to outline specific construction requirements for each lot in addition to the requirements outlined in Clause 44.

In other cases reports will merely need to be updated to include the relevant development, current site characteristics and specific bush fire protection measures.

In all circumstances, the person responsible for signing off the bush fire report is to be consulted to ensure it has addressed issues specific to the proposed development. Advice is to be obtained that their intellectual property can be used and that copyright will not be breached.

Further information

For further information contact the NSW RFS on 1300 NSW RFS.

Disclaimer: Any representation, statement opinion, or advice expressed or implied in this publication is made in good faith on the basis that the State of New South Wales, the NSW Rural Fire Service, its agents and employees are not liable (whether by reason of negligence, lack of care or otherwise) to any person for any damage or loss whatsoever which has occurred or may occur in relation to that person taking or not taking (as the case may be) action in respect of any representation, statement or advice referred to above.





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