



# Bush Fire Assessment Report

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New Dwelling

3 x Short-Term Rental Accommodation Cabins (STRA)

Address: 4948 Clarence Town Road Tabbil Creek

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## Document Tracking:

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Limit Liability	The author is not liable to any person for damage or loss of life resulting from actions taken or not taken as recommended in this report.
Changeable guidelines	This report is based on the author's interpretation of <i>Planning for Bush Fire Protection 2006 (PBP)</i> and <i>Australian Standard AS 3959-2009 'Construction of buildings in bushfire-prone areas</i> as at the time of writing.
Conflict of interest	This report reflects the opinions and recommendations of the author only, and not those of the Rural Fire Service (RFS). Should Council or the RFS modify the recommendations or reject an assessment or proposal the author will not be held liable for any financial loss incurred as a result.
Remaining risk	Notwithstanding the recommendations made by the author, there can be no absolute guarantee that a bushfire will not occur or cause damage to property because of the extreme number of variables that bushfires present.
Measures not upheld in perpetuity	It is the responsibility of the client to maintain all bushfire protection measures proposed on an ongoing basis.

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The subject Lot/site is ‘Bush fire prone land’ as determined by local council bush fire prone land mapping under s.146 of the Environmental Planning and Assessment Act (EP&A) 1974.

The purpose of this report to show that the proposed development will satisfy the broad aims and objectives of *Planning for Bushfire Protection 2019 (PBP)* and *Australian Standard AS 3959-2018 ‘Construction of buildings in bushfire-prone areas as (AS 3959 – 2018)* at the time of writing.

**1.2 Proposal description**

This report forms part of the submission requirements to Council to support an Infill development application and is summarised in **Table 1**.

**Table 1: Proposal summary**

Property Details	4948 Clarence Town Road Tabbil Creek 2420 Lot/Section/Plan no: 207/-/DP1282787 Council: DUNGOG SHIRE COUNCIL		
Type of Proposal	<input checked="" type="checkbox"/> Short term rental accommodation (STRA)	<input checked="" type="checkbox"/> RU2	
	<input checked="" type="checkbox"/> Residential Dwelling	(>10,000m <sup>2</sup> )	
Description	<ul style="list-style-type: none"> <li>Construction of 3 x tourism accommodation buildings (STRA) assessed as ‘Holiday Lets’ under PBP. <b>Refer Section 1.4</b></li> <li>Construction of an owner’s residence assessed as Residential (infill) development under PBP.</li> </ul>		
Information relied upon	<ul style="list-style-type: none"> <li>Site Plans provided by Manor Homes (<b>Figure 1</b>)</li> <li>FireMaps (FPAA) and ePlanning (NSW State Government) - cadastral and topographic information for New South Wales</li> </ul>		

### **1.3 Assessment pathway and other known constraints**

The proposal was assessed in accord with Section 4.14 of the EP&A Act 1974 and ‘Planning for Bush Fire Protection 2019’ (RFS 2019), herein referred to as PBP. This report pertains to bushfire specific control measures and should be read in conjunction with any recommendations or requirements under environmental law.

No threatened species or other known significant environmental or heritage constraints are known or have been advised by the client or other stakeholders. Council as the determining authority will assess more thoroughly any potential environmental and heritage issues.

### **1.4 Short Term Rental Accommodation under PBP**

It should be noted under Section 8 of the September 2022 Addendum to PBP, the NSW Government definition for ‘*Holiday Lets*’ has changed after the publication of PBP 2019.

As of 1 November 2021, Holiday Lets were renamed Short Term Rental Accommodation (STRA). STRA are now deemed as a “use” of a residential dwelling under the *State Environmental Planning Policy (Housing), 2021* rather than new development that was previously considered under section 100B of the *Rural Fires Act 1997*.

The approval process for a residential dwelling remains unchanged for developments referred to the NSW Rural Fire Service under section 4.14 and 4.15 of the *Environmental Planning and Assessment Act, 1979*. A Bush Fire Safety Authority (BFSA) from the NSW Rural Fire Service is not required.

The methodology remains unchanged and the PBP conditions for the Specific Tourism use of ‘Holiday Lets’ apply. The varied performance criteria and acceptable solutions for the Specific Tourism use ‘Holiday Lets’ is given in Tables 6.8a to 6.8d of PBP with specific recommendations provided in Section 3 of this report.

The development will include a manager living on site in the main residence, who is aware of the bush fire risk and appropriate emergency response procedures.

As part of the recommendations in this report, an Emergency and Evacuation Management Plan is to be prepared and made available to all occupants.

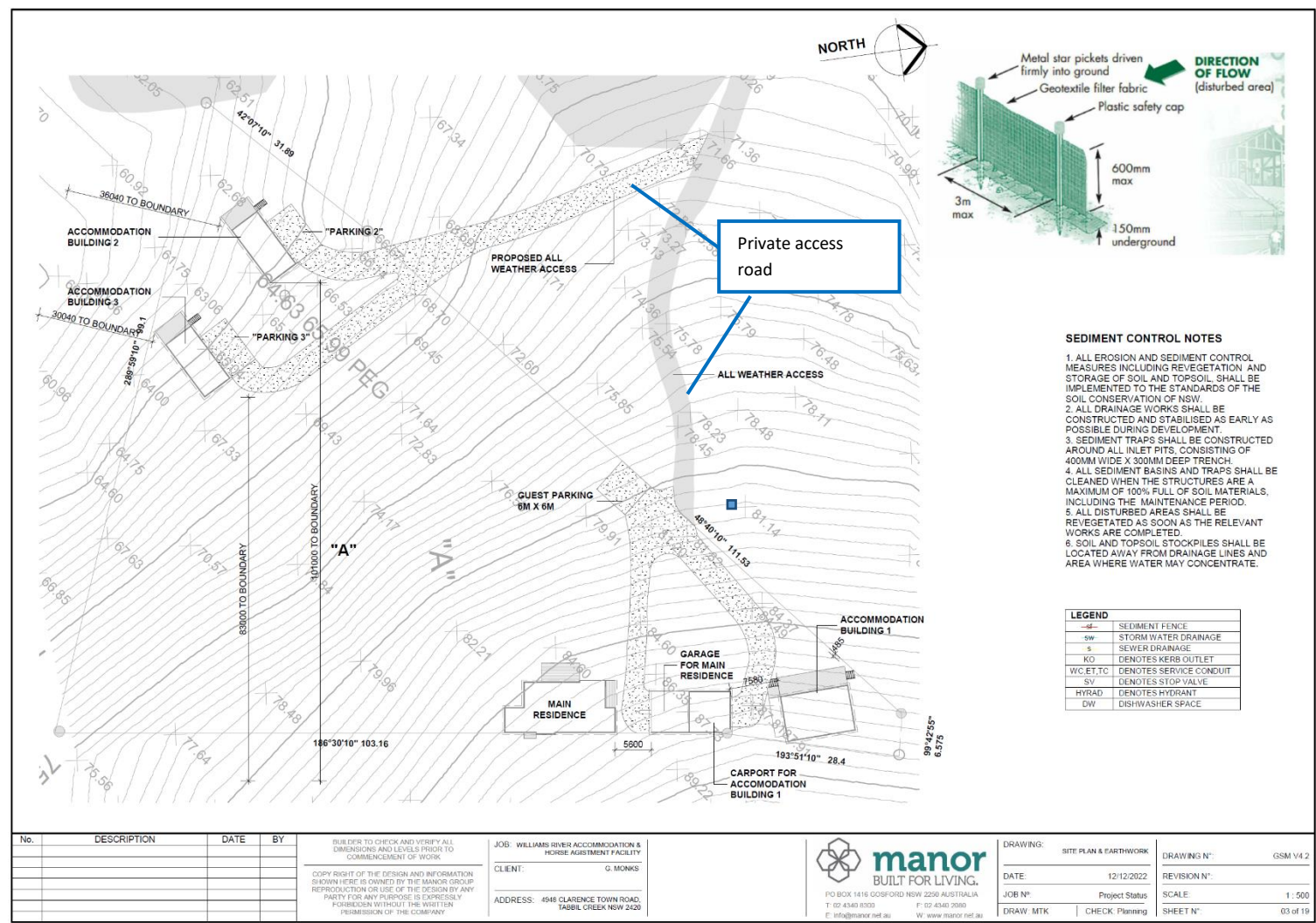


Figure 1: Site Plan showing locations of tourist accommodation (STRA) buildings 1-3 and new dwelling

## 2 Bush fire assessment

The bush fire hazard assessment methodology is detailed below and summarised in **Table 2**.

Refer **Figure 2** for building locations, vegetation and slope assessment.

### 2.1 Vegetation and slope

Vegetation formations according to Keith (2004) were identified in all directions around the proposed development to a distance of 140m.

The vegetation surrounding the proposed building footprints of the STRA buildings and residential dwelling is categorised as Grassland under PBP.

The effective slope is considered to be the slope that most significantly influences the bush fire behavior and has been derived from topographic 2 m contour data.

### 2.2 Fire weather

The local council area has a Forest Fire Danger Index (FFDI) of 100

### 2.3 Asset Protection Zones (APZ)

An APZ is an area around the building or asset that has the fuel (vegetation) reduced to provide a buffer from the bushfire hazard and provide defensible space for firefighting operations.

The Performance Criteria for STRA, buildings will not be exposed to radiant heat levels exceeding 29kW/m<sup>2</sup> (1090K). The minimum APZ will be provided in accordance with Table A1.12.2 (FFDI 100) in Appendix 1 of PBP.

The Proposed APZ for the 3 STRA buildings incorporates larger APZ's over the minimum to support **BAL 12.5** radiant heat setbacks in accord Table A1.12.5 (FFDI 100) in Appendix 1 of PBP.

The Proposed APZ for the main dwelling incorporates a larger APZ over the minimum to support **BAL 12.5** radiant heat setbacks in accord Table A1.12.5 (FFDI 100) in Appendix 1 of PBP.

## **2.4 Separation Distance**

The distance measured from the bushfire hazard to the closet building element. This represents the available APZ in that direction as shown in **Figure 3**.

## **2.5 Bush Fire Attack level (BAL)**

The site assessment methodology for determining the construction requirements for bushfire prone areas is calculated using Appendix 1 of PBP 2019 which determines the appropriate BAL.



**Table 2: Bush fire hazard assessment**

Structure	Vegetation providing greatest hazard	Effective Slope under Hazard	Minimum APZ <sup>1</sup>	Proposed APZ	BAL <sup>2</sup>	Comments
STRA Building 1	Grassland	Downslope 10-15°	15 m	≥32 m	<b>BAL -12.5</b>	<b>Figure 2 - Location and APZ</b> A min 32m APZ to be established and maintained around the proposed building
STRA Building 2	Grassland	Downslope 5-10°	13 m	≥28 m	<b>BAL -12.5</b>	<b>Figure 2 - Location and APZ</b> A min 28m APZ to be established and maintained around the proposed building
STRA Building 3	Grassland	Downslope 5-10°	13 m	≥28 m	<b>BAL -12.5</b>	<b>Figure 2 - Location and APZ</b> A min 28m APZ to be established and maintained around the proposed building
Residential dwelling	Grassland	Downslope 10-15°	15 m	≥32 m	<b>BAL -12.5</b>	<b>Figure 2 – Location and APZ</b> A 32 m APZ to be established and maintained around the proposed dwelling

<sup>1</sup>PBP 2019 – Table A1.12.2 - Minimum distances for APZs – residential infill development, FFDI 100 areas (<29kW/m<sup>2</sup>, 1090K)

<sup>2</sup>PBP 2019 - Table A1.12.5 - Determination of BAL, FFDI 100 – residential infill development

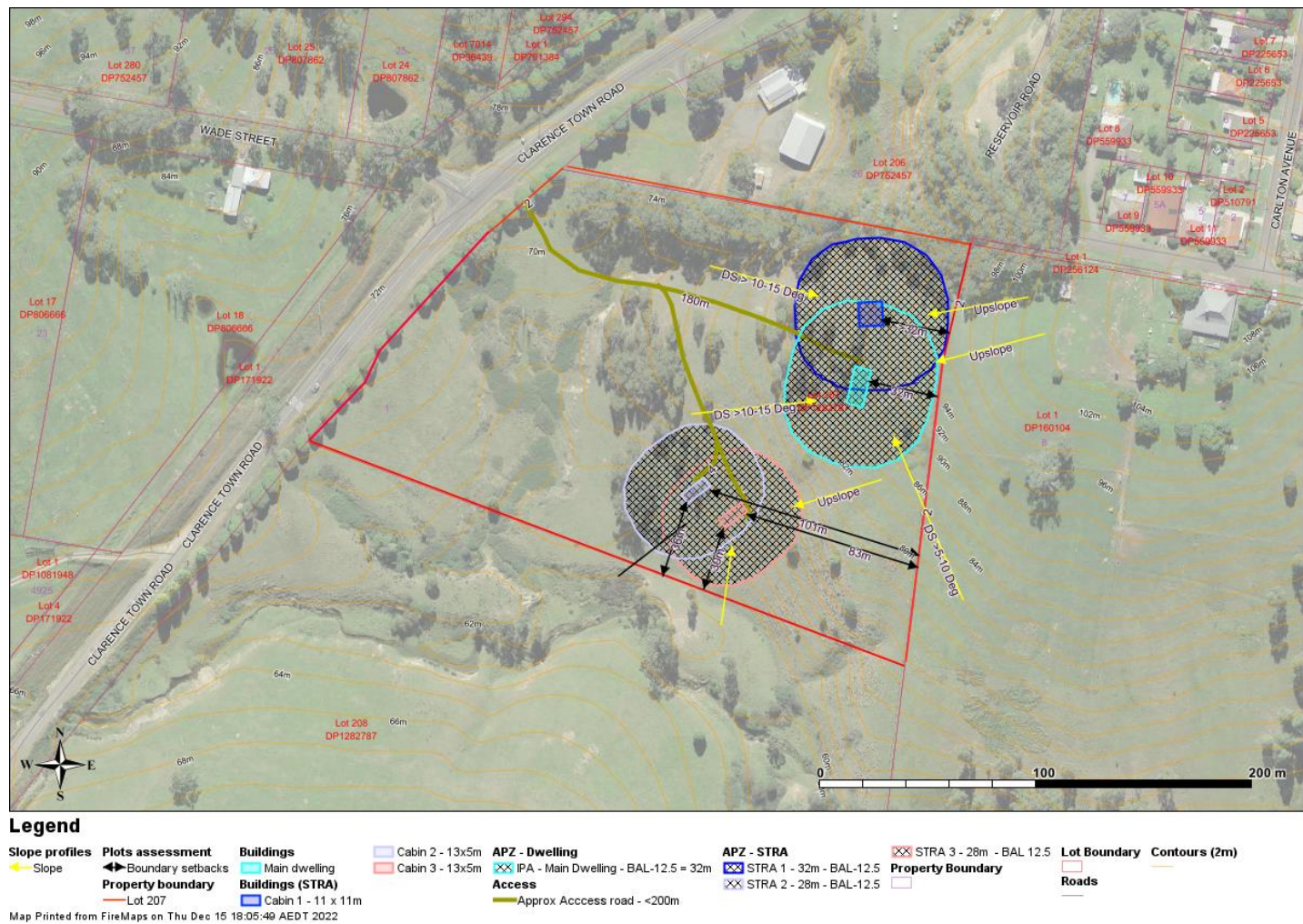


Figure 2: Bushfire Hazard Assessment

### 3 Bush fire protection measures

The following Bushfire Protection Measures are based on the development type and the assessed level of risk described in **Section 2**.

**Intent of measures:** to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting firefighting activities.

#### 3.1 Asset Protection Zone (APZ)

An APZ is a buffer zone between a bush fire hazard and buildings. The APZ is managed to minimise fuel loads and reduce potential radiant heat levels, flame, localised smoke and ember attack.

**STRA:** The Acceptable Solution for the APZ for the specific tourism use of Short-Term rental Accommodation (STRA) accommodation complies. A larger APZ is proposed to support BAL-12.5 radiant heat setbacks, in accordance with Table A1.12.3 (FDI 80) of Appendix 1 of PBP.

**Dwelling:** The Acceptable Solution for an APZ for Residential Infill complies. A larger APZ is proposed to support BAL-12.5 radiant heat setbacks, in accordance with Table A1.12.3 (FDI 80) of Appendix 1 of PBP.

#### **APZ Recommendations:**

At the commencement of building works and in perpetuity, the proposed APZ proposed will be established and managed as an Inner Protection Area (IPA) as outlined in Appendix 4 of PBP.

- Proposed APZ's to be managed as an IPA:
  - STRA building 1: 32m
  - STRA building 2 and 2: 28m
  - Residential dwelling: 32m
- It is recommended that the APZ areas should be delineated from the non-managed areas within the subject Lot by way of fence line or other boundary feature and actively maintained.
- When establishing an IPA, the following requirements are recommended:
  - Tree canopy cover be less than 15% at maturity;
  - Trees at maturity are not touching or overhang the building;

- Lower limbs are removed up to a height of 2m above the ground;
- Tree canopies are separated by 2 to 5m;
- Preference is given to smooth-barked and evergreen trees;
- Large discontinuities or gaps in vegetation are provided to slow down or break the progress of fire towards buildings;
- Shrubs are not located under trees;
- Shrubs do not form more than 10% of ground cover;
- Clumps of shrubs are separated from exposed windows and doors by a distance of at least twice the height of the vegetation.
- Grass to be kept mown (as a guide grass no more than 100mm in height);

### 3.2 Landscaping

Landscaping within the APZ is designed and managed in accordance with the requirements of 'Asset protection zone standards' outlined in Appendix 4 of PBP – 2019. A summary of the relevant requirements is provided below:

#### **Landscaping Recommendations:**

- 1m wide area suitable for pedestrian traffic provided around the curtilage of each cabin;
- Planting is limited in the immediate vicinity of the building;
- Planting does not provide a continuous canopy to the building (i.e. Plants are isolated)
- Landscape species are chosen to ensure tree canopy cover is less than 15% at maturity;
- Trees do not touch or overhang buildings;
- Avoid species with rough fibrous bark, or which retain/shed bark in long strips;
- Use smooth bark trees species which generally do not spread fire up into the crown;
- Avoid planting of deciduous species that increase fuel at surface/ ground level (i.e. leaf litter); Avoid climbing species to walls and pergolas;
- Locate combustible materials such as mulch, flammable fuel stores away from the building;
- Locate combustible structures such as garden sheds, pergolas and materials such as timber garden furniture away from the building;
- Low flammability vegetation species are used.

For a complete guide to APZs and landscaping, download the NSW RFS document *Standards for Asset Protection Zones* at: [www.rfs.nsw.gov.au/resources/publications](http://www.rfs.nsw.gov.au/resources/publications)

### 3.3 Access arrangements

Design of access roads shall provide safe operational access to structures and water supply for emergency services, while residents are seeking to evacuate from an area.

The subject Lot has direct access to Clarence Town Road, a public two-wheel drive all weather road. The private access road does not pass-through forest, woodland and heath vegetation

Access for firefighting vehicles is to be available with ample turning area in the vicinity of each the building with compliant APZ's to allow emergency personnel to conduct firefighting operations.

Once works are complete, the private access road is capable of complying with all PBP 2019 design specifications for Property Access, outlined in **Table 3** below.

**Short Term Rental Accommodation (STRA):** The Acceptable Solutions for access for specific tourism use of STRA accommodation (Table 6.8b of PBP) requires access compliance in accordance with the property access requirements of Table 5.3b;

**Residential Dwelling.** The Acceptable Solutions for access for residential infill development requires compliance with the property access requirements of Table 7.4a of PBP 2019

Note: As private and emergency vehicles will share the private access road to both STRA and the dwelling, compliance with both tables is recommended.

#### 3.3a: Access Recommendations - STRA:

Private access road to be upgraded and maintained in accordance with the property access requirements of Table 5.3b of PBP 2019, as outlined in **Table 3** below.

**Table 3: PBP: Performance criteria and acceptable solutions – STRA**

Performance Criteria	Acceptable Solutions	Proposal Compliance
<b>The intent may be achieved where:</b>		
firefighting vehicles can access the dwelling and exit the property safely	<ul style="list-style-type: none"><li>• minimum 4m carriageway width</li></ul>	<b>To comply</b>  4m Carriageway recommended
	<ul style="list-style-type: none"><li>• in forest, woodland and heath situations, rural property access roads have passing bays every 200m that are</li></ul>	<b>Complies</b>  Does not pas through forest,

	20m long by 2m wide, making a minimum trafficable width of 6m at the passing bay;	woodland or heath
	<ul style="list-style-type: none"> <li>minimum vertical clearance of 4m to any overhanging obstructions, including tree branches;</li> </ul>	<b>To comply</b>
	<ul style="list-style-type: none"> <li>provide a suitable turning area in accordance with Appendix 3;</li> </ul>	<b>To comply</b>  Multipoint turning circle recommended at each building <b>(Appendix A)</b> .
	<ul style="list-style-type: none"> <li>curves have a minimum inner radius of 6m and are minimal in number to allow for rapid access and egress;</li> </ul>	<b>To comply</b>
	<ul style="list-style-type: none"> <li>the minimum distance between inner and outer curves is 6m;</li> </ul>	<b>To comply</b>
	<ul style="list-style-type: none"> <li>the crossfall is not more than 10 degrees</li> </ul>	<b>To comply</b>
	<ul style="list-style-type: none"> <li>maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads; and</li> </ul>	<b>To comply</b>  Some grades within lot exceed 10 and 15 degrees. Proposed route at time of writing <10 degrees.
	<ul style="list-style-type: none"> <li>a development comprising more than three dwellings has access by dedication of a road and not by right of way.</li> </ul>	<b>Complies</b>



### 3.3b: Access Recommendations – Residential dwelling:

- Private access road to be established and maintained in accordance with the property access requirements of Table 7.4a of PBP 2019, as outlined in **Table 4** below.

**Table 4: PBP Compliance for property access roads**

Performance Criteria	Acceptable Solutions	Complies
<b>The intent may be achieved where:</b>		
<ul style="list-style-type: none"> <li>• access to properties is provided in recognition of the risk to fire fighters and/or evacuating occupants</li> </ul>	<ul style="list-style-type: none"> <li>• at least one alternative property access road is provided for individual dwelling (or groups of dwellings) that are located more than 200 metres from a public through road</li> </ul>	<p><b>Complies</b></p> <p>Proposed dwelling is &lt;200m from is approximately 200m from public road</p>
<ul style="list-style-type: none"> <li>• the capacity of road surfaces and bridges is sufficient to carry fully loaded firefighting vehicles</li> <li>• all weather access is provided</li> </ul>	<ul style="list-style-type: none"> <li>• bridges clearly indicate load rating and pavements and bridges are capable of carrying a load of 15 tonnes</li> <li>• roads do not traverse a wetland or other land potentially subject to periodic inundation (other than a flood or storm surge)</li> </ul>	<p><b>Not applicable</b></p> <p><b>Not applicable</b></p>
<ul style="list-style-type: none"> <li>• road widths and design enable safe access for vehicles</li> </ul>	<ul style="list-style-type: none"> <li>• a minimum carriageway width of four metres for rural-residential areas, rural landholdings or urban areas with a distance of greater than 70 metres from the nearest hydrant point to the most external part of a proposed building (or footprint)</li> <li>• in forest, woodland and heath situations, rural property access roads have passing bays every 200 metres that are 20 metres long by two metres wide, making a minimum trafficable width of six metres at the passing bay</li> <li>• a minimum vertical clearance of four metres to any overhanging obstructions, including tree branches</li> </ul>	<p><b>To comply</b></p> <p>4m Carriageway recommended</p> <p><b>Not applicable</b></p> <p>Access road passes predominately through Grassland or managed APZ's</p> <p><b>Complies</b></p> <p>Access road passes through Grassland APZ .</p>

Performance Criteria	Acceptable Solutions	Complies
	<ul style="list-style-type: none"> <li>internal roads for rural properties provide a loop road around any dwelling or incorporate a turning circle with a minimum 12 metre outer radius</li> <li>curves have a minimum inner radius of six metres and are minimal in number to allow for rapid access and egress</li> <li>the minimum distance between inner and outer curves is six metres</li> <li>the crossfall is not more than 10 degrees</li> <li>maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads</li> <li>access to a development comprising more than three dwellings have formalised access by dedication of a road and not by right of way</li> </ul>	<p><b>To comply</b></p> <p>Multipoint turning circle recommended (<b>refer Appendix A</b>).</p> <p><b>To comply</b></p> <p><b>To comply</b></p> <p><b>To comply</b></p> <p><b>To comply</b></p> <p>Some grades within lot exceed 10 and 15 degrees. Proposed route at time of writing &lt;10 degrees.</p> <p><b>Not applicable</b></p>



### 3.4 Water supply

**Intent of measures:** to provide adequate services of water for the protection of buildings during and after the passage of a bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building.

The subject Lot is not connected to reticulated water supply.

**STRA:** In accordance with Table 6.8c of PBP for Water services, a static water supply is to be provided for non-reticulated developments.

**Dwelling:** In accordance with Table 7.4c of PBP for Water services, a static water supply is to be provided for non-reticulated developments.

#### **Recommendations for Water Supply:**

To be provided for both the STRA Building and Residential Dwelling:

- Minimum 20,000-litre static water supply reserved for firefighting, with unobstructed access will be provided for the proposed residential dwelling
- Minimum 10,000 litre static water supply reserved for firefighting, with unobstructed access will be provided for at each cabin location (3 in total);

For each static water supply:

- A hardened ground surface for truck access is supplied within 4m;
- 65mm Storz outlet with a metal ball valve is fitted to the outlet, located within the IPA or non-hazard side, and away from the structure;
- Exposed water pipes are adequate for water flow and are metal including any fittings;
- The supply pipes from tank to ball valve have the same bore size to ensure flow volume;
- Underground tanks are clearly marked and have an access hole of 200mm to allow refill direct from the tank;
- Above-ground tanks are manufactured from concrete or metal;
- Raised tanks have their stands constructed from non-combustible materials;
- Tanks on the hazard side of a building are provided with adequate shielding for the protection of firefighters;
- 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 be connected to the pump and be 19mm internal diameter, and firehose reels are constructed in accordance with AS/NZS 1221:1997, and installed in accordance with the relevant clauses of AS 2441:2005;

### 3.5 Electricity services

The location of electricity services limits the possibility of ignition of surrounding bush land or the fabric of buildings.

The relevant Acceptable Solutions in Table 6.8c (STRA) and Table 7.4a (Residential) of PBP for Electricity services apply:

#### **Recommendations for Electricity services:**

- Where practicable, new electrical transmission lines are underground;
- Where overhead, are installed with short pole spacing (30m), unless crossing gullies, gorges or riparian areas; and
- No part of a tree is closer to a power line than the distance set out in accordance with the specifications in *ISSC3 Guideline for Managing Vegetation Near Power Lines*.

### 3.6 Gas services

The location and design of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.

The relevant Acceptable Solutions in Table 6.8c (STRA) and Table 7.4a (Residential) of PBP for Gas services apply:

#### **Recommendations for Gas Services:**

- 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.

### 3.7 Construction standards

The Bush fire attack level (BAL) is used as the basis for establishing the construction requirements for development of Class 1, 2, 3 and 4 (part) buildings in NSW in bush fire prone areas.

#### **Recommendations for Construction - STRA**

In accordance with the SFPP Specific Tourism use under Section 6.3.1 of PBP 2019 for 'Short term rental accommodation (STRA)', the construction standards are applied in accordance with the methodology of Appendix 1 of PBP 2019.

With the proposed APZ's established and maintained, the development footprint of the STRA building is exposed to **BAL– 12.5** as shown in **Table 2**.

- The construction of proposed STRA building is to comply with Section 3 (Construction General) and Section 5 (BAL–12.5) of *Australian Standard AS 3959-2018 'Construction of buildings in bushfire-prone areas* as (AS 3959 – 20018);
- In accordance with Section 7.5.2 of PBP, variations to AS 3959 apply in NSW for the purposes of NSW G5.2(a)(i) of Volume One and NSW 3.10.5.0(c)(i) of Volume Two of the National Construction Code (NCC);

#### **Recommendations for Construction - Residential dwelling:**

With the proposed APZ's established and maintained, the development footprint of the STRA building is exposed to **BAL– 12.5** as shown in **Table 2**.

- The construction of proposed residential dwelling is to comply with Section 3 (Construction General) and Section 5 (BAL–12.5) of *Australian Standard AS 3959-2018 'Construction of buildings in bushfire-prone areas* as (AS 3959 – 20018);
- In accordance with Section 7.5.2 of PBP, variations to AS 3959 apply in NSW for the purposes of NSW G5.2(a)(i) of Volume One and NSW 3.10.5.0(c)(i) of Volume Two of the National Construction Code (NCC);

**Additional Construction Measures – SRA and Residential:**

- It is recommended that the additional construction measures outlined in Section 7 of *Planning for Bush Fire Protection 2019 (PBP)* be implemented as applicable including:

**Adjacent Structures - Sheds, Carports, Garages:**

Where these are proposed it should be constructed in accordance with the BAL construction requirements of the dual occupancy or should be separated by a minimum of 6m. There is no bush fire protection requirements for Class 10a buildings located more than 6m from a dwelling in bush fire prone areas.

**Fences and Gates:**

All fences in bush fire prone areas should be made of either hardwood or non-combustible material. 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.

### **3.8 Emergency Management**

**Short-term rental accommodation (STRA)** requires that an Emergency and Evacuation Management Plan be prepared and made available to all occupants staying at the location.

The emergency and evacuation management plan should include a mechanism for the early relocation of occupants. Emergency management requirements and procedures must be clearly displayed within the property to ensure current occupants are aware of the bush fire risk

**Recommendations for Emergency Management**

- Emergency and Evacuation Management Plans is to be prepared consistent with the NSW RFS publication: *A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan*.
- Emergency management requirements and procedures must be clearly displayed within the property to ensure current occupants are aware of the bush fire risk
- A copy of the bush fire emergency management plan should be provided to the Local Emergency Management Committee (LEMC)

## 4 Specific objectives for STRA development:

**Table 5** lists the specific objectives for SFPP development from PBP and how they are satisfied.

**Table 5: Specific objectives**

Specific Objective	Comment
Minimise levels of radiant heat, localised smoke and ember attack through increased APZ, building design and siting;	<p>Construction works will comply with the prescribed BAL and meet all Bush fire protection measures (refer section 3).</p> <p>All proposed APZ's are compliant, and building is positioned with access to the public road.</p>
Provide an appropriate operational environment for emergency service personnel during firefighting and emergency management;	<p>Provision for vehicle access to with turning area proposed, with have ample space to conduct firefighting operations within the prescribed APZ.</p> <p>Static water supply of 20,000L proposed at dwelling and 10,000 at each cabin.</p> <p>Emergency and Evacuation Management Plan to be prepared for occupants on site.</p>
Ensure the capacity of existing infrastructure (such as roads and utilities) can accommodate the increase in demand during emergencies as a result of the development;	<p>Proposal can comply with all Acceptable Solutions for Access including turning areas constructed at all buildings.</p> <p>Provisions for access, utilities, and landscaping are outlined in Section 3.2 -3.6</p>
Ensure emergency evacuation procedures and management which provides for the special characteristics and needs of occupants.	<p>Emergency and Evacuation Management Plan will be prepared and made available to all occupants staying at the location (Section 3.8)</p>

## 5 Specific Objectives for Infill Development

**Table 6** lists the specific objectives for Infill development from PBP and how they are satisfied.

**Table 4: Specific objectives**

Specific Objective	Comment
Provide a defensible space to enable unimpeded access for firefighting around all elevations of the building	<ul style="list-style-type: none"> <li>Provision for access to all elevations with ample space to conduct firefighting operations within the prescribed APZ.</li> </ul>
Provide better bush fire outcome on a redevelopment site than currently exists, commensurate to the scale of works proposed	<ul style="list-style-type: none"> <li>The proposal can meet all recommended Bush fire protection measures (BPM's) holistically providing a significant improvement than currently exists.</li> </ul>
Design and construct buildings commensurate with the bush fire risk	<ul style="list-style-type: none"> <li>Construction works can comply with the prescribed BAL and construction recommendations (Section 3.4).</li> </ul>
Provide access, services and landscaping to aid firefighting operations	<ul style="list-style-type: none"> <li>The proposal can comply with the acceptable solutions under PBP for access, utilities and landscaping,</li> <li>Outlined in Section 3.2, 3.3, 3.4 and 3.7</li> </ul>
Not impose an increased bush fire management and maintenance responsibility on adjoining land owners	<ul style="list-style-type: none"> <li>The proposed building and APZ's are contained wholly within the subject Lot and do not rely or impose a burden on neighbouring Lots.</li> </ul>
Increase the level of bush fire protection to existing dwellings based on the scale of the proposed work and level of potential risk	<ul style="list-style-type: none"> <li>Construction works can comply with the recommended BAL</li> <li>Development will comply with the relevant recommendations for all Bush fire protection measures (BPM's)</li> </ul>

## 6 Conclusions and recommendations

Proposed STRA buildings and residential dwelling can meet the requirements for the specific objectives of STRA and Infill development (**Section 4 and 5**) by compliance with the acceptable solutions for all Bush fire protection measures within ‘Planning for Bush Fire Protection 2019’:

**Table 7: Conclusions and Recommendations**

Performance Criteria	Report Section	Summary of Recommendations
		<ul style="list-style-type: none"> <li>Refer Dot points in report section for detailed recommendations</li> </ul>
Asset Protection Zones	3.1	<ul style="list-style-type: none"> <li>Proposed APZ’s to be managed as an IPA:                             <ul style="list-style-type: none"> <li>STRA building 1: 32m</li> <li>STRA building 2 and 2: 28m</li> <li>Residential dwelling: 32m</li> </ul> </li> <li>All APZ’s are to be established and managed as an Inner Protection Area (IPA) as outlined in Appendix 4 of PBP.</li> </ul>
Landscaping	3.2	<ul style="list-style-type: none"> <li>Designed and managed in accordance with Appendix 4 of <i>PBP</i>.</li> </ul>
Access	3.3	<ul style="list-style-type: none"> <li>Access road to be upgraded and maintained in accordance with the property access requirements of Table 5.3b (STRA) and Table 7.4a (Infill) of PBP 2019, as outlined in <b>Table 3 and Table 4</b></li> </ul>
Water supply	3.4	<ul style="list-style-type: none"> <li>10,000L tank dedicated for firefighting purposes with 65mm Storz fitting for STRA building and 20,000L for residential dwelling. Above ground water service pipes and fittings are metal.</li> </ul>
Electricity service	3.5	<ul style="list-style-type: none"> <li>Any new transmission lines and poles to be installed in compliance with ISSC3 <i>Guideline for Managing Vegetation Near Power Lines</i>.</li> </ul>
Gas service	3.6	<ul style="list-style-type: none"> <li>Gas services are to be installed and maintained in accordance with AS/NZS 1596:2014.</li> </ul>
Construction standards	3.7	<ul style="list-style-type: none"> <li>Construction of proposed STRA buildings and residential dwellings are to comply with Section 3 (Construction General) and Section 5 (BAL–12.5) of 3959-2018 including variations under Section 7.5.2 of PBP,</li> <li>Adjacent Structures: Meet the BAL construction requirements of the building or separated by 6m</li> <li>Fences and gates: hardwood or non-combustible material</li> </ul>
Emergency management	3.8	<ul style="list-style-type: none"> <li>STRA: Emergency and Evacuation Management Plan is prepared and made available to all occupants.</li> </ul>

Provided all Bushfire fire protection measures for the STRA buildings and the Residential dwelling, including APZ areas, Landscaping, Access, Utilities and Emergency Management on site are constructed, designed and maintained in accordance with the recommendations described in this report, this assessment concludes that the proposed development **can comply** with the requirements for the specific objectives of STRA and Infill development by compliance with the acceptable for all Bush fire protection measures within 'Planning for Bush Fire Protection 2019' relevant to the development under Section 4.14 of the EP&A Act 1974

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## 7 References

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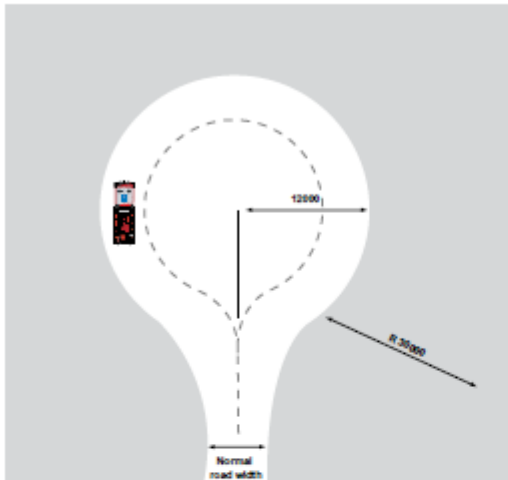
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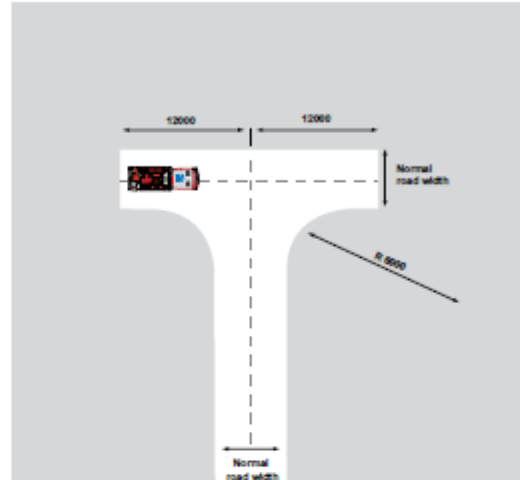
## 8 Appendix A – Turning head requirements

Multipoint turning options

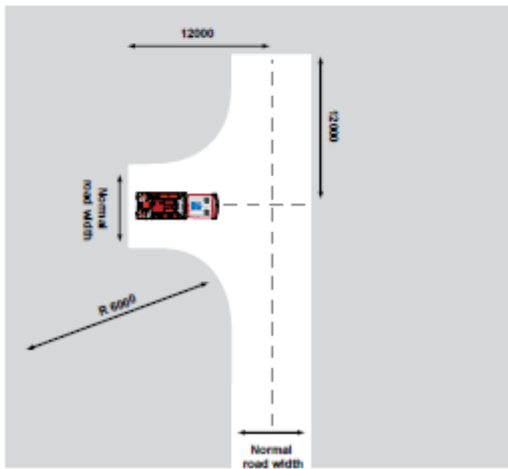
Type A



Type B



Type C



Type D

