

# Bushfire Assessment

Proposed development including a second dwelling, wedding ceremony and reception centre and serviced apartment accommodation (five accommodation buildings)

Lot 4 DP 1247034

394 Gooda Creek Road, Murrumbateman

January 2025

Final

**Prepared for**

**394 Group Pty Ltd, c/- Heyward Lance Architecture**

Project No: 24314

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## 1. INTRODUCTION

This Bushfire Assessment has been prepared in relation to a proposed development on land at Lot 4 DP 1247034, 394 Gooda Creek Road, Murrumbateman.

The land within the site and surrounds is mapped as bushfire prone land for the purposes of Section 10.3 of the *Environmental Planning & Assessment Act 1979* (EP&A Act). As the proposal will include tourist accommodation on bushfire prone land, the proposal is development for a Special Fire Protection Purpose (SFPP) and requires the issue of a bushfire safety authority (BFSa) by the Commissioner of the NSW Rural Fire Service (RFS) pursuant to Section 100B of the *Rural Fires Act 1997*.

The purpose of this report is to carry out a bushfire assessment having regard to the provisions of the NSW Rural Fire Service guideline entitled *Planning for Bush Fire Protection 2019* (PBP) and the information requirements for obtaining a bushfire safety authority under Clause 45 of the *Rural Fires Regulation 2022*.

## 2. PROPOSED DEVELOPMENT

The proposed development is for:

- a second dwelling;
- a wedding ceremony and reception centre; and
- serviced apartment accommodation (five accommodation buildings).

The proposed development is shown on drawings prepared by Heyward Lance Architecture (Project no. 2331), 394 Gooda Creek Rd, Murrumbateman (Revision P7, Drawings A000-A301, dated 12.12.2024). An extract of the Site Overview is at Figure 2.1. An overlay of the proposed development showing site contours is at Figure 2.2.

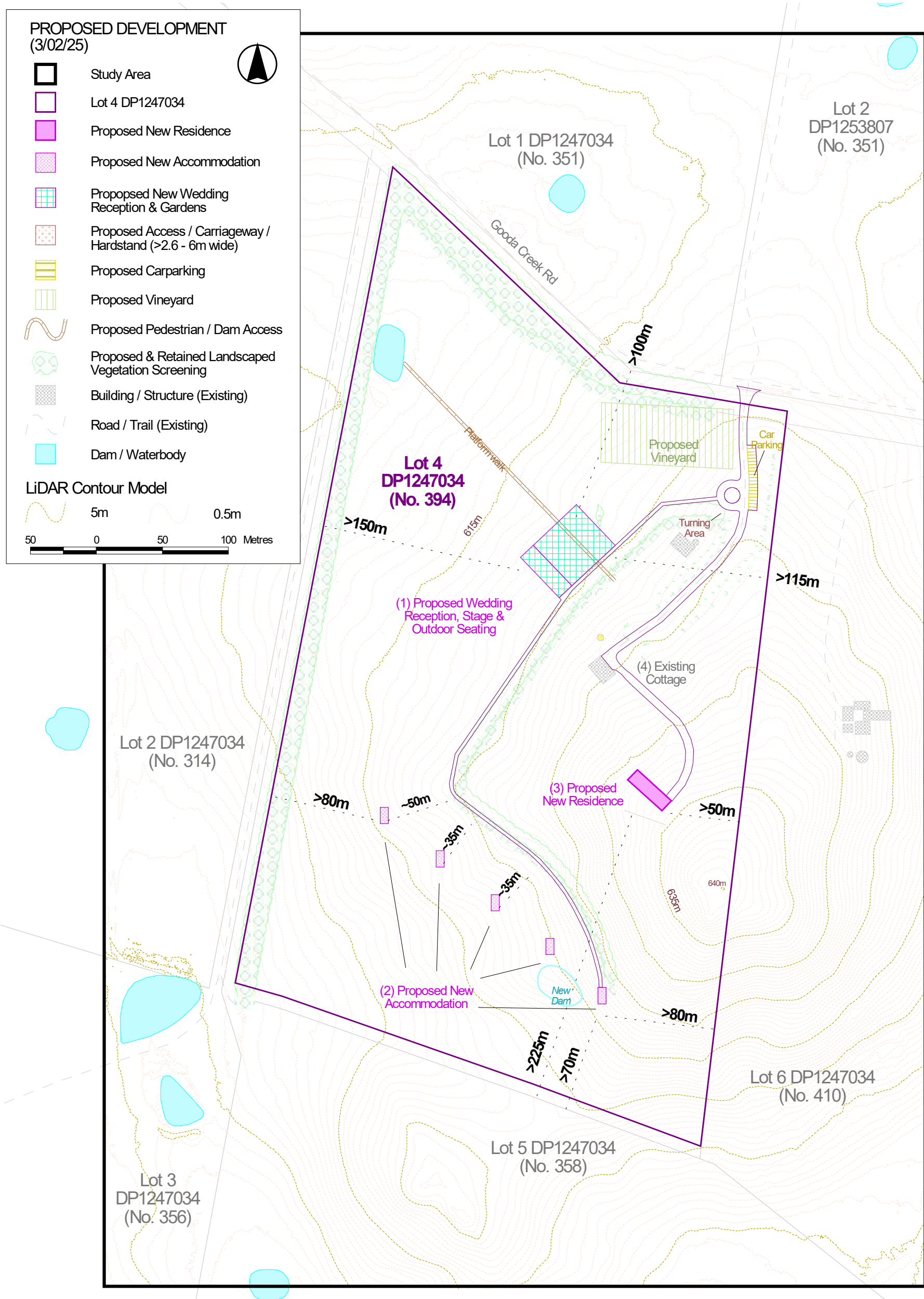
Access to the proposed development will be via the existing means of physical access from Gooda Creek Road at the north-eastern corner of the site. A right of carriageway (shown R2 on Deposited Plan 1247034) runs along the western side boundary of the site. A gateway (located about halfway along the western site boundary) provides physical alternative access from the site to that right of carriageway, and then to Gooda Creek Road at the northern end of the right of carriageway.





**Figure 2.1: Site plan extract**  
(Source: Heyward Lance Architecture). Not to scale.





**Figure 2.2: Overlay of proposed development showing site contours, etc.**

### 3. SITE DESCRIPTION

The subject site comprises land described as Lot 4 DP 1247034, 394 Gooda Creek Road, Murrumbateman. An aerial photo showing the site is at Figure 3.1.

The site is located within the Yass Valley Local Government Area and is zoned *RU1 Primary Production* for the purposes of *Yass Valley Local Environmental Plan 2013* (LEP).

An existing shed and associated facilities are in the north-eastern part of the site, about 115 metres south of the access point from Gooda Creek Road. An existing dwelling is to the south of the shed, about 220 metres south of Gooda Creek Road. The existing dwelling is not considered further in this assessment.

The site appears to have been previously used for intensive cattle grazing and is mostly cleared of any woody vegetation.

Otherwise, vegetation over the land within the site is grassland.

A row of planted trees lines the western site boundary with the right of carriageway and the area between the southern side of Gooda Creek Road and the northern site boundary.

The surrounding land comprises rural allotments occupied by existing residential buildings. Vegetation on land within surrounding allotments is predominantly grassland.

Land within the site is mapped as Category 3 potential bushfire hazard vegetation, consistent with the predominant grassland vegetation. While land about 550 metres south-west of the site is mapped as containing Category 1 potential bushfire hazard vegetation, there are no areas of forest vegetation within several kilometres of the site.

The site is not serviced by reticulated water or sewer.

Access to the site is via an existing property access road from Gooda Creek Road at the north-eastern corner of the site.



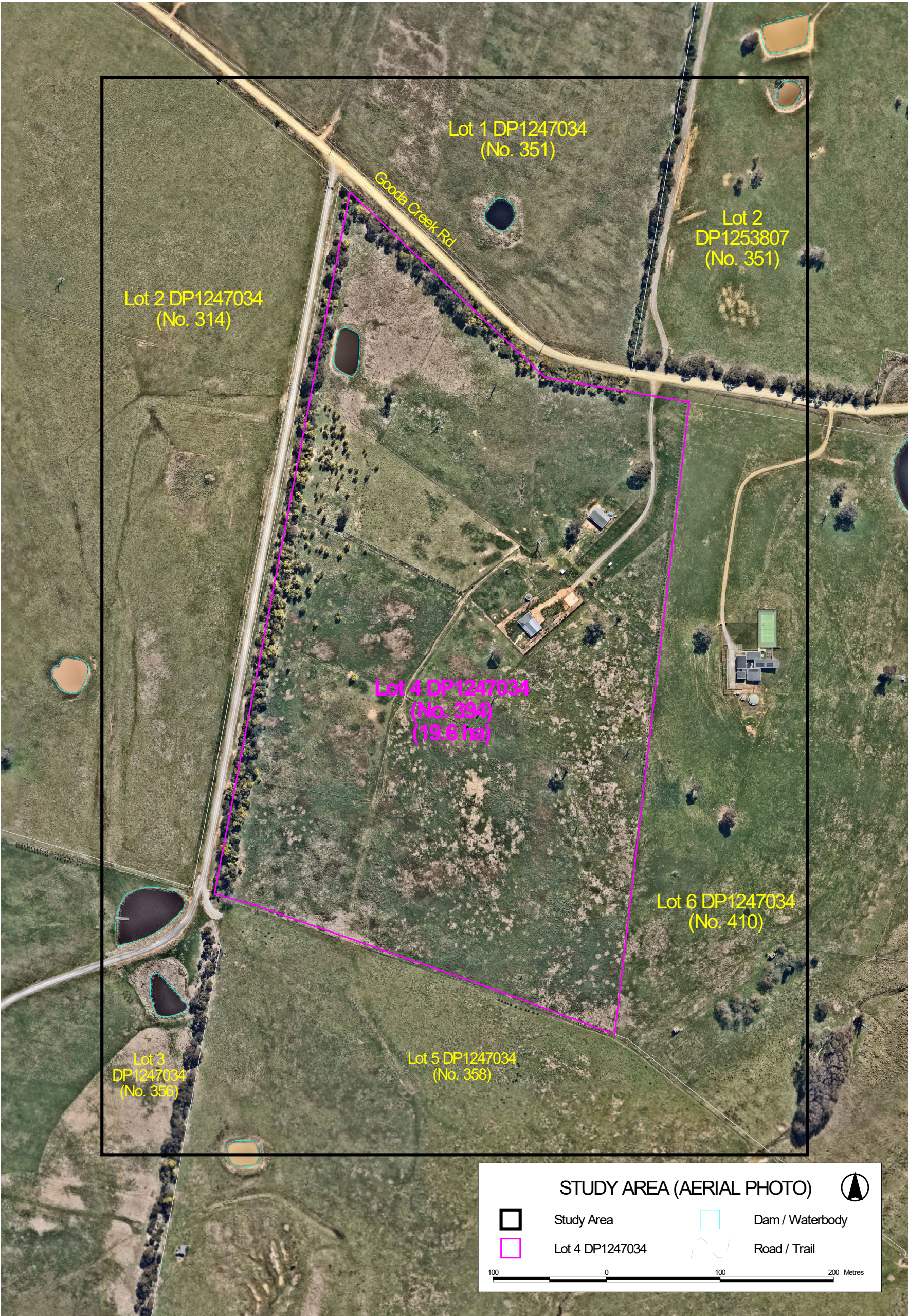


Figure 3.1: Aerial photo showing the site



The following photos show the condition of land on and around the site.



**Photo 3.1: Areas of grassland within the site looking west.**



**Photo 3.2: Areas of grassland within the site. Land to the south of the site is shown in the background.**





**Photo 3.3: Areas of grassland within the site.**



**Photo 3.4 View looking generally north-west though the site (from approximately the location of the proposed new dwelling) showing the existing dwelling.**



**Photo 3.5: Part of the existing property access road from Gooda Creek Road.**



**Photo 3.6: The existing property access from Gooda Creek Road.**





**Photo 3.7: Condition of Gooda Creek Road along the northern site boundary, looking west.**

### **3.1 Environmental Features**

There are no known or apparent significant environmental features on the land.

The proposal will involve the maintenance of grasses for Asset Protection Zone (APZ) purposes within the site only. No other areas of vegetation will be affected.

### **3.2 Any Aboriginal Relics**

An AHIMS basic search (ID 971262) was conducted in relation to the site. The results of the search indicate that there are no known or apparent items/relics of Aboriginal cultural heritage significance known to exist on the site.

### **3.3 Vegetation Classification**

The land within the site is mostly clear of native (sclerophyllous) vegetation and is predominantly grassland.

The nearest areas of vegetation have been considered as *grassland* for the purposes of determining Asset Protection Zones (APZs) and Bushfire Attack Levels (BALs) in accordance with Appendix 1 of PBP.

### **3.4 Slope Assessment**

The assessment of slope has been undertaken in accordance with the methodology in Section A1.5 of PBP.

The assessment of slope was undertaken via analysis of 1 metre resolution Digital Elevation Model (DEM) and through field analysis using a hand-held inclinometer and range finder.

For the purposes of this assessment, the slope of land most likely to influence bushfire behaviour has been assessed as:

- North, east and north-east: upslope;
- West/north-west: >0-5° downslope; and
- South and south-west: >5-10° downslope.



## **4. BUSHFIRE ASSESSMENT**

### **4.1 Submission Requirements for a BFSA**

The following provides a summary of the submission requirements for a BFSA in relation to SFPP development, as detailed in sections A2.1 of PBP.

#### **4.1.1 The extent to which the development is to provide for setbacks, including Asset Protection Zones**

The maximum slope of land under grassland vegetation within the site is >5-10° downslope to the south/south-west.

Based on this effective slope, the minimum APZ distances (10kW/m<sup>2</sup>) for SFPP development (as per Table A1.12.1 of PBP) is 45 metres.

The proposal is consistent with the relevant provisions of PBP. A 50 metre radius Asset Protection Zone (APZ) is to be provided around each of the existing and proposed buildings.

#### **4.1.2 The siting and adequacy of water supplies for fire fighting**

The siting and adequacy of water supplies is considered in relation to the performance criteria of PBP in Table 4.3 to this assessment.

#### **4.1.3 The capacity of nearby public roads to handle increased volumes of traffic when a bushfire emergency occurs**

The capacity of public roads is considered in relation to the performance criteria of PBP in Table 4.2 to this assessment.

#### **4.1.4 Whether or not nearby public roads that link with the fire trail network have two-way access**

There is no existing fire trail network adjacent to, or serving, the site.

4.1.5 The adequacy of arrangements for access to and egress from the development site for the purposes of an emergency response

The adequacy of arrangements for access to and egress from the development is considered in Table 4.2 to this assessment.

The area of the site is not directly adjacent to any significant areas of potential bushfire hazard vegetation.

The land within the site is clear of any woody vegetation. Any access/egress roads will be through grassed areas of the site, with vegetation to be maintained as relatively short grasses to either side of the access/egress road.

It is unlikely that Gooda Creek Road would be completely blocked/closed in the event of a fire.

Recommendations are made in relation to design and construction of the access road, except that no recommendations are made for any secondary and/or alternate access/egress road from Gooda Creek Road. While this is the case, consideration should be given to provision of an emergency link between the proposed new dwelling and the accommodation buildings to facilitate direct access between those areas (without the need for vehicles to turn around at the easternmost accommodation building and travel back to the proposed dwelling if the need arises).

4.1.6 The adequacy of bushfire maintenance plans and fire emergency procedures for the development site

Given that the proposal involves tourist accommodation, a Bush Fire Emergency Management and Evacuation Plan is to be prepared consistent with the NSW RFS document: *Guide to Developing a Bush Fire Emergency Management and Evacuation Plan*.

4.1.7 The construction standards to be used for building elements in the development

A 50 metre radius Asset Protection Zone (APZ) is to be provided around each of the existing and proposed buildings on the site.

The assessed Bushfire Attack Level (BAL) for any new buildings proposed via the development is BAL-LOW. While this is the case, to adopt a conservative margin of safety, consideration



should be given to construction of buildings to the requirements for BAL-12.5 to provide some increased resilience to buildings (from, for example, ember attack).

In relation to the existing dwelling, consideration should also be given to upgrading of that building to improve ember protection (if the building does not already incorporate that level of protection).

4.1.8 *The adequacy of sprinkler systems and other fire protection measures to be incorporated into the development*

No sprinkler systems or other fire protection measures are proposed to be incorporated in the development. In the context of the development, the applicable bushfire protection measures include the management of APZs, water supplies and access.

4.1.10 *Registered fire trails on the property*

No registered fire trails exist on the property.

4.1.9 *An assessment of the extent to which the proposed development conforms with or deviates from Planning or Bush Fire Protection*

Section 4.2 of this assessment provides an analysis of the development in relation to the performance criteria and acceptable solutions in Chapter 6 (Special Fire Protection Purpose Developments) of PBP.

## 4.2 Bushfire Protection Measures & Performance Criteria

The proposal is subject to the specific considerations in Chapter 6 (Special Fire Protection Purpose Developments) of PBP.

The relevant performance criteria are considered in Table 4.1 to Table 4.4.

The bushfire protection measures are illustrated in Figure 4.1.

Table 4.1: APZs and building construction (Re: Table 6.8a PBP)

PERFORMANCE CRITERIA	RELATIONSHIP OF PROPOSAL TO PERFORMANCE CRITERIA
The intent may be achieved where:	
ASSET PROTECTION ZONES	<p>The maximum slope of land under grassland vegetation within the site is &gt;5-10° downslope to the south/south-west. Based on this effective slope, the minimum APZ distance (to achieve radiant heat levels &lt;10kW/m<sup>2</sup>) for SFPP development (as per Table A1.12.1 of PBP) is 45 metres.</p> <p>The proposal is consistent with the relevant provisions of PBP. A 50 metre radius Asset Protection Zone (APZ) is to be provided around each of the existing and proposed buildings.</p>
	<p>APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimised.</p> <p>The maximum slope of land under grassland vegetation within the site is &gt;5-10° downslope to the south/south-west. There are no issues with soil stability. APZ maintenance is practical given the moderately sloping land within the site. The predominant vegetation formation is grassland and there is no potential for crown fires.</p>
	<p>APZs are managed and maintained to prevent the spread of fire towards the building.</p> <p>Land within the site is to be maintained to the standard of an Inner Protection Area (IPA) for a radius of not less than 50 metres from any of the existing or proposed buildings within the site.</p>
	<p>The APZ is provided in perpetuity.</p> <p>Land within the site is to be maintained as above in perpetuity.</p>
LANDSCAPING	<p>Landscaping is designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions.</p> <p>Land within the site is to be maintained to the standard of an Inner Protection Area (IPA) for a radius of not less than 50 metres from any of the existing or proposed buildings within the site.</p> <p>Any fencing (if proposed) is to be constructed in accordance with Section 7.6 of PBP 2019.</p>



Table 4.1: APZs and building construction (Re: Table 6.8a PBP)	
PERFORMANCE CRITERIA	RELATIONSHIP OF PROPOSAL TO PERFORMANCE CRITERIA
The intent may be achieved where:	
<p><b>CONSTRUCTION STANDARDS</b></p> <p><i>The proposed building can withstand bush fire attack in the form of wind, embers, radiant heat and flame contact.</i></p>	<p>Based on the establishment and maintenance of the APZ/IPA as above, any existing or proposed buildings will be subject to BAL-LOW.</p> <p>While this is the case, to adopt a conservative margin of safety, consideration should be given to construction of buildings to the requirements for BAL-12.5 to provide some increased resilience to buildings (from, for example, ember attack).</p> <p>In relation to the existing dwelling, consideration should also be given to upgrading of that building to improve ember protection (if the building does not already incorporate that level of protection).</p>

Table 4.2: Access (Re: Table 6.8b PBP)		
PERFORMANCE CRITERIA		RELATIONSHIP OF PROPOSAL TO PERFORMANCE CRITERIA
The intent may be achieved where:		
ACCESS	<i>Firefighting vehicles are provided with safe, all-weather access to structures and hazard vegetation.</i>	<p>The public road in Gooda Creek Road, which intersects with the Barton Highway at its western end, appears to have capacity to handle increased volumes of traffic if a bushfire emergency occurs.</p> <p>All access roads to and within the proposed development will be two-wheel drive, all-weather roads.</p> <p>Access to/from the site to the public road (Gooda Creek Road) is to be via the existing internal property access road, with construction to be extended to provide access to the southernmost buildings within the proposed development. Recommendations are made for the construction/upgrading of the access road.</p> <p>Internal roads traverse areas of the site that are vegetated only by grasses.</p>
	<i>The capacity of access roads is adequate for firefighting vehicles.</i>	The property access road is to be upgraded (where necessary for existing parts) and constructed (for new parts) to provide an all-weather two-wheel drive standard throughout and ensure adequate capacity to carry fire fighting vehicles.
	<i>There is appropriate access to water supply.</i>	<p>Reticulated water is not available to the site.</p> <p>Provision is to be made for firefighting vehicles to access the static water supply tank(s) from parts of the property access road. Where this is not possible, a hard stand area is to be extended from the property access road to within 4 metres of the nearest static water supply tank(s).</p>
PERIMETER ROADS	<i>Perimeter access roads are designed to allow safe access and egress for firefighting vehicles while occupants are evacuating as well as providing a safe operational environment for emergency service personnel during firefighting and emergency management on the interface.</i>	N/A. There is no requirement for a perimeter road and none is proposed.

Table 4.2: Access (Re: Table 6.8b PBP)	
PERFORMANCE CRITERIA	RELATIONSHIP OF PROPOSAL TO PERFORMANCE CRITERIA
The intent may be achieved where:	
<p><b>NON-PERIMETER ROADS</b></p> <p><i>Non-perimeter access roads are designed to allow safe access and egress for firefighting vehicles while occupants are evacuating.</i></p>	<p>The area of the site is not directly adjacent to any significant areas of potential bushfire hazard vegetation.</p> <p>The land within the site is clear of any woody vegetation. Any access/egress roads will be through grassed areas of the site, with vegetation to be maintained as relatively short grasses to either side of the access/egress road.</p> <p>It is unlikely that Gooda Creek Road would be completely blocked/closed in the event of a fire. Recommendations are made in relation to design and construction of the access road, except that no recommendations are made for any secondary and/or alternate access/egress road from Gooda Creek Road. While this is the case, consideration should be given to provision of an emergency link between the proposed new dwelling and the accommodation buildings to facilitate direct access between those areas (without the need for vehicles to turn around at the easternmost accommodation building and travel back to the proposed dwelling if the need arises).</p>



Table 4.3: Services (Re: Table 6.8c PBP)		
PERFORMANCE CRITERIA		RELATIONSHIP OF PROPOSAL TO PERFORMANCE CRITERIA
The intent may be achieved where:		
WATER SUPPLIES	<i>An adequate water supply for firefighting purposes is installed and maintained.</i>	Reticulated water is not available to the site.
	<i>Water supplies are located at regular intervals; and The water supply is accessible and reliable for firefighting operations.</i>	A 20,000 litre minimum static water supply is to be provided for the proposed new dwelling. A 10,000 litre minimum static water supply is to be provided for each occupied accommodation building. Any tank(s) containing the static water supply is to be fitted with a 65mm Storz fitting.
	<i>Flows and pressure are appropriate.</i>	N/A
	<i>The integrity of the water supply is maintained.</i>	Any water supply tank(s) are to be of metal or concrete manufacture to ensure integrity of the static water supply storage. Recommendations of this assessment include specifications for supply pipes and fittings to the tank to be metal.
	<i>Water supplies are adequate in areas where reticulated water is not available.</i>	A 20,000 litre minimum static water supply is to be provided for the proposed new dwelling. A 10,000 litre minimum static water supply is to be provided for each occupied accommodation building, that is, a total of 50,000 litres static water supply for that component of the development. The static water supply can be provided in a single tank as an aggregate or in a number of tanks to make up the total volume required.
ELECTRICITY SERVICES	<i>Location of electricity services limits the possibility of ignition of surrounding bush land or fabric of buildings.</i>	Electricity supply to the proposed development is to be underground from existing public infrastructure where possible.
GAS	<i>Location and design of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.</i>	Any gas installation(s) is to be consistent with the relevant acceptable solutions of PBP.

**Table 4.4: Emergency management planning (Re: Table 6.8d PBP)**

PERFORMANCE CRITERIA	RELATIONSHIP OF PROPOSAL TO PERFORMANCE CRITERIA
The intent may be achieved where:	
EMERGENCY MANAGEMENT	A <i>Bush Fire Emergency Management and Evacuation Plan</i> is prepared
	<p>Appropriate and adequate management arrangements are established for consultation and implementation of the <i>Bush Fire Emergency Management and Evacuation Plan</i>.</p>

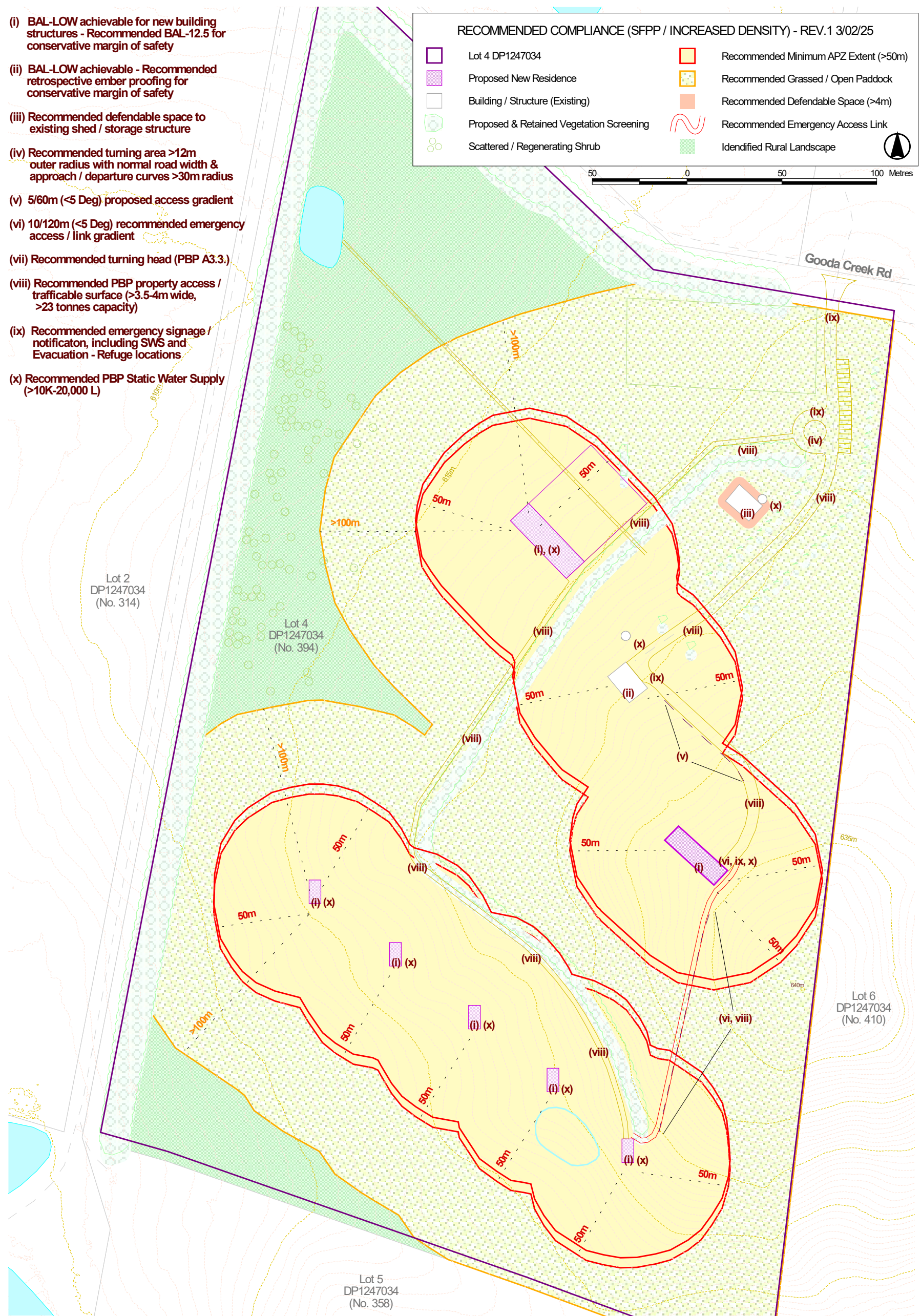


Figure 4.1: Summary of bushfire protection measures.



## 5. RECOMMENDATIONS

This Bushfire Assessment has been prepared in relation to a proposed development on land at Lot 4 DP 1247034, 394 Gooda Creek Road, Murrumbateman, comprising:

- a second dwelling;
- a wedding ceremony and reception centre; and
- serviced apartment accommodation (five accommodation buildings).

In relation to the proposed development, the following is recommended:

- A. Land within a radius of not less than 50 metres around the proposed new buildings and the existing dwelling is to be maintained as an Asset Protection Zone (APZ).
- B. APZs are to be maintained in accordance with the requirements of an Inner Protection Area (IPA) as described in Appendix 4, Section A4.1.1 of *Planning for Bush Fire Protection 2019* (PBP) with a clear area of low-cut lawn or pavement to be maintained immediately around each building.
- C. To provide increased resilience and ember protection to the proposed dwelling and the proposed serviced apartment/accommodation buildings, consideration should be given to construction of those buildings to comply with the requirements for BAL-12.5 as per AS 3959-2018 (Construction of buildings in bushfire-prone areas) and the additional requirements in Section 7.5 of PBP.
- D. Where required, the existing dwelling on the land is to be upgraded to improve ember protection as follows:
  - i. Enclosing or covering 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.
  - ii. (if not already installed) Weather strips, draught excluders or draught seals shall be installed at the base of side-hung external doors as per AS 3959.
- E. Any new sections of the property access road from Gooda Creek Road are to be constructed to achieve the performance criteria of Table 6.8b and Section A3.9.3 of *Planning for Bush Fire Protection 2019*.

- F.** The existing sections of the property access road from Gooda Creek Road are to be upgraded to achieve the performance criteria of Table 6.8b and Section A3.9.3 of *Planning for Bush Fire Protection 2019*. The following specific measures are relevant:
- i. Upgrade/widen any parts of the existing property access road/route which have a trafficable width less than 4 metres (except for constrictions <30 metres long where the width can reduce to 3.5 metres); and
  - ii. Ensure that road surfaces along the property access road/route have capacity to carry a fully loaded firefighting tanker.
- G.** An unobstructed turning area (in accordance with Appendix 3 of PBP) is to be provided within 20 metres of the:
- proposed new dwelling; and
  - easternmost accommodation buildings.
- H.** A static water supply of 20,000 litres is to be provided and available at all times for firefighting purposes for the proposed new dwelling.
- I.** A static water supply of 50,000 litres (equating to not less than 10,000 litres per occupied accommodation building) is to be provided and available at all times for firefighting purposes. The static water supply can be provided in a single tank as an aggregate or in several tanks to make up the total volume required. Access to the static water supply tank(s) should be clearly identified with an SWS marker (or markers) supplied by or approved by the RFS.
- J.** For the purposes of (H) and (I):
- i. Tank(s) are to be of metal (or concrete) construction; and
  - ii. A 65mm Storz fitting/outlet with a ball valve is to be fitted to the tank(s) for access to the water supply for firefighting purposes; and
  - iii. The ball valve, pipes and all tank penetrations are to be adequate for a full 50mm inner diameter water flow through the Storz fitting and constructed of metal; and
  - iv. All above-ground pipes are to be metal; and

- v. Any pump(s) provided for firefighting purposes are to be a minimum 5hp petrol or diesel-powered pump, shielded against bushfire attack. Any hose for firefighting connected to the pump should be a minimum 19mm internal diameter.
- vi. A hardened ground surface for Category 1 firefighting truck access is to be constructed/available to within 4 metres of the tank(s) and Storz fitting.

**Note:** Where the Storz fitting is more than 4 metres from the property access road, a hardened ground surface is to be constructed/extended from the property access road to within 4 metres of the Storz fitting. To avoid the need for vehicles to reverse, a turning area may need to be provided to enable vehicles to access the connection, and leave, in a forward direction.

- K. Clear directional signage should be installed within the site and access roads to and from the site to aid in the evacuation of people in an emergency.
- L. Clear signage should be installed identifying the name and address of the property to assist emergency services.
- M. Any new electricity supply lines, if proposed, are to be underground.
- N. Prior to occupation and use of the proposed development, a Bush Fire Emergency Management and Evacuation Plan is to be prepared consistent with the NSW RFS document: *Guide to Developing a Bush Fire Emergency Management and Evacuation Plan*.

#### NOTE & DISCLAIMER:

- 1. *This assessment relates only to the development described in Section 2 of this assessment.*
- 2. *This assessment has been based on bushfire protection guidelines as outlined Planning for Bush Fire Protection 2019 (PBP).*
- 3. *Notwithstanding the precautions recommended, it should always be remembered that bushfires burn under a range of conditions and an element of risk, no matter how small, always remains.*
- 4. *This assessment does not imply or infer any approval for the removal and/or thinning of vegetation for Asset Protection or other purposes. It is the responsibility of the client/landowner to obtain all necessary approvals in this regard.*

#### REFERENCES

NSW Rural Fire Service (2019)

*Planning for Bush Fire Protection 2019*

Standards Australia (2018)

*AS 3959-2018 Construction of buildings in bushfire-prone areas*