



TRAFFIC SAFETY ASSESSMENT

**Proposed Eco-tourism Camping
Facility
at
43 Synotts Lane, Ocean Shores
Lot 3, DP 710680**

For: Phil Johnson
Report no: 21070-TSA-A
Date: 23-Nov-20



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Document Information

Project name Proposed Eco-tourism
Camping Facility

Reference 21070-TSA-A

Revision Rev A 23-Nov-20
Summary

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1. Introduction

1.1 Development Summary

Greg Alderson and Associates have been engaged by Phil Johnson on behalf of Bruns River Camp to prepare a Traffic Safety Assessment (TSA) for a proposed eco-tourism camping facility at Lot 3 DP 710680, 43 Synotts Lane, Ocean Shores. The proposed development comprises construction of 10 designated primitive camping areas and associated infrastructure. A proposed site layout can be found in Appendix A.

A locality plan of the proposed development can be seen below in Figure 1.

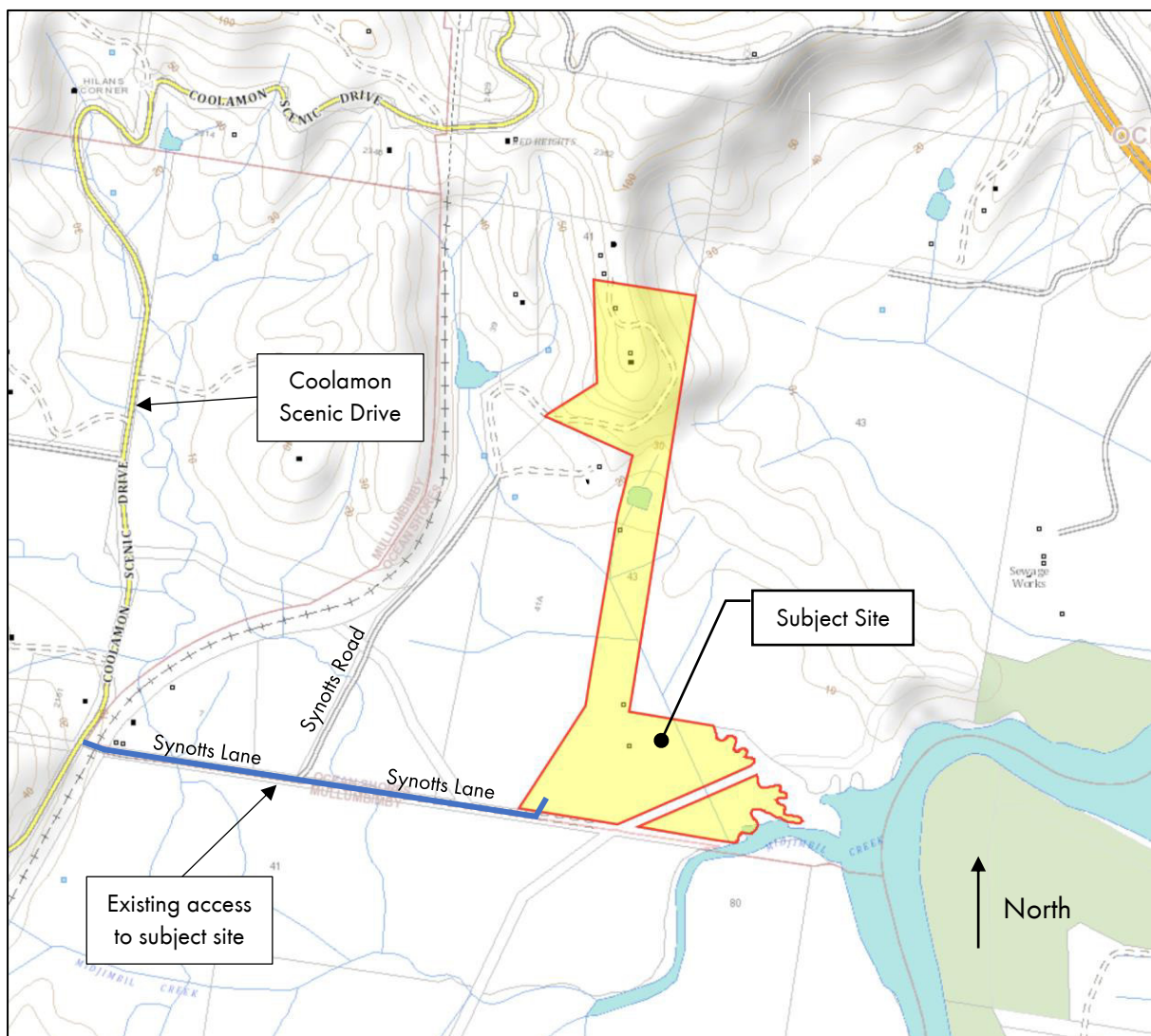


Figure 1 – Site Locality (SIX Maps)

1.2 Scope

This report is scoped as a Traffic Safety Assessment (TSA) in accordance with chapter B4 of the 2014 Byron Shire DCP. As such, it addresses the following:

- Assessment of the access driveway position
- Assessment of vehicle access sight distances and sight lines to pedestrians
- Assessment of parking demand and supply of the development

The element will be assessed with reference to the requirements of the following policies and guidelines:

- Chapter B4 of the 2014 Byron Shire DCP
- RTA Guide to Traffic Generating Developments (GTGD)
- QLD TMR Road Planning and Design Manual (RPDM)
- AS/NZS 2890.1: 2004, Parking facilities – Off-street car parking
- RFS Planning for Bush Fire Protection 2019

2. Existing Road Description

2.1 Synotts Lane

Synotts Lane is a local access road providing access to properties located on the road. It extends from Coolamon Scenic Drive to a dead-end coinciding with the site access.

Synotts Lane does not have a posted speed limit, however, due to the road geometry and unsealed nature of the road surface, it is estimated that a typical safe driving speed on the road is 40km/hr.

No parking restrictions exist on Synotts Lane in the vicinity of the site. The portion of Synotts Lane from Coolamon Scenic Drive to the Synotts Road turnoff is in good condition. The section of road from the Synotts Road turnoff to the dead-end of Synotts Lane is in a poor condition with multiple large potholes.

This section of road consists of an unsealed gravel formation with a width ranging from 2.45 – 3.20m. The road has table drains occurring intermittently at the edges of the formation. The roadside verge is relatively flat and would be suitable to allow passing for a low level of traffic at low speeds.

2.2 Existing Access

The site contains one existing access driveway servicing the existing dwelling on the site. This access driveway is proposed to be utilised by the proposed development.

The site is located at the dead-end of Synotts Lane with an informal vehicle track continuing past the existing access to the site.

The proposed site layout and access driveway location are shown in Appendix A.

3. Site Traffic Generation

Existing Use

The potential development related traffic generation from the development has been determined using the traffic generation rates provided in RMS GTGD and QLD TMR RPDM.

There is a single dwelling on site. In accordance with RMS GTGD, the single dwelling generates 9.0 daily vehicle trips and 0.85 peak hour vehicle trips.

Development

No trip generation data is given for campsites in RMS GTGD; therefore, the trip generation rates for caravan parks were taken from QLD TMR RPDM and adopted as the campsite trip generation rates for the proposed development.

The QLD TMR RPDM gives the following trip generation rates for the proposed development:

- Peak hour traffic: 0.8 peak hour vehicle trips per site
- ADT: 8 daily vehicle trips per site

Thus, the proposed 10 primitive camping sites would generate an increase of 8 peak hour vehicle trips and 80 daily vehicle trips.

The above rates are based on 100% occupancy. The RMS GTGD indicates that adopting an 85% occupancy may be more appropriate for traffic generation predictions in the case of casual accommodation. It is acknowledged, however, that at certain times of the year, the site may have 100% occupancy for short periods of time.

Based on the RMS recommended 85% occupancy, the predicted traffic generation for the proposed development is estimated to be:

- Peak hour traffic: $0.85 \times 8 = 6.8$ veh/hr
- ADT: $0.85 \times 80 = 68$ veh/day

The total traffic from the site is therefore estimated to be:

- Peak hour traffic: $0.85 + 6.8 = 7.65$ veh/hr
- ADT: $9 + 68 = 77$ veh/day

The development is therefore classed as a low impact development, requiring a traffic safety assessment only in accordance with Chapter B4 of the Byron Shire Council DCP.

4. Access Driveway Compliance

4.1 AS2890 Compliance

4.1.1 Access Driveway Position

The proposed site layout can be found in Appendix A. It is proposed to utilise the existing access for the development.

All proposed access points are outside of the prohibited 6m zone either side of the tangent point of an intersection, as shown in Figure 2 below. Therefore, the proposed access locations comply with the requirements of Section 3.2.3 of AS2890.1.

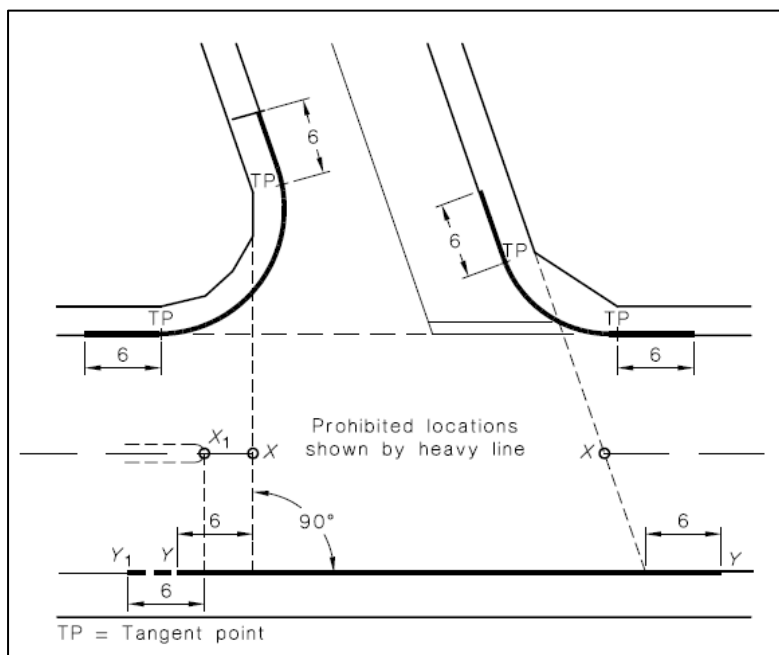


Figure 2 – Prohibited locations of access driveways (AS2890.1 Figure 3.1)

4.1.2 Access Width

The development's access width requirements from AS2890.1 are summarised as follows:

- The access driveway has a User Class of 2 (AS2890.1 Table 1.1).
- As Synotts Lane is a local road and the number of proposed parking spaces is less than 25 spaces, the development is classified as a Category 1 facility (AS2890.1 Table 3.1).
- The entry and exit for the access can be combined and is to have a width between 3–5.5m (AS2890.1 Table 3.2).

4.1.3 Access Sight Distance

The sight distance required along the Synotts Lane frontage from the access point is shown in Figure 3.2 from AS2890.1 (see Figure 3 below). Available sight distances for the development have been assessed on site with respect to their compliance with this standard.

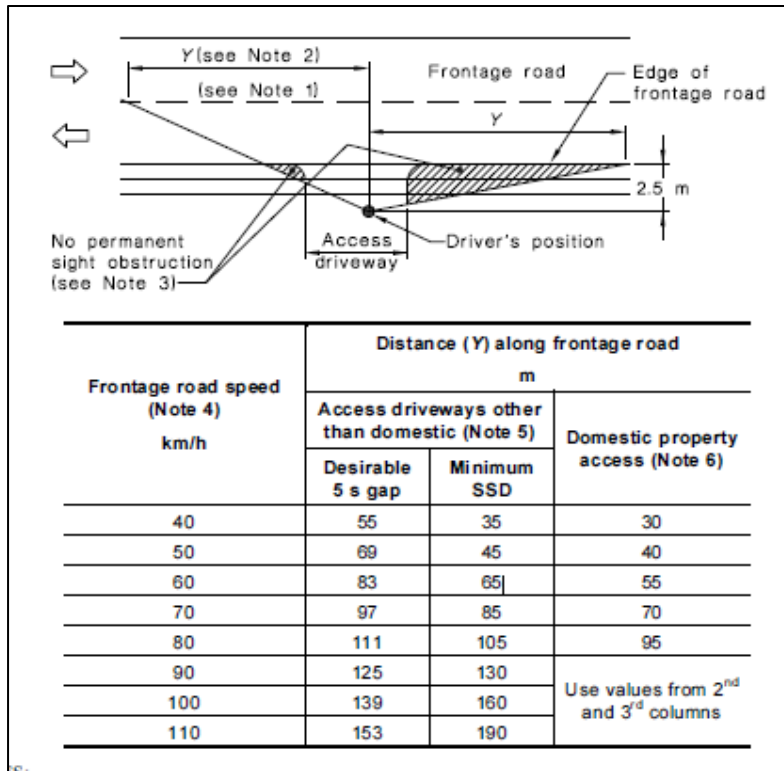


Figure 3 – Stopping Sight Distance (AS2890.1 Figure 3.2)

Synotts Lane does not have a posted speed limit, however, due to the road geometry and unsealed nature of the road surface, it is estimated that a typical safe driving speed on the road is 40km/hr. This speed requires a minimum stopping sight distance (SSD) of 35m.

The existing access was inspected and sight distance measured in accordance with AS2890. The available and required SSD from the existing access has been summarised in Table 1 below.

Table 1 – SSD Summary using AS2890.1

Direction	Required (m)	Available (m)
Eastbound	35	40
Westbound	N/A	N/A

As seen above, the sight distance from the existing access driveway complies with the required minimum SSD. It should be noted that the SSD from the existing access along Synotts Lane can be increased by trimming/removing vegetation if required in the future. Given that the current arrangement is compliant with AS2890, no trimming/removing of vegetation is recommended at this stage.

As the proposed access is located at the dead-end of Synotts Lane, eastbound traffic will consist only of vehicles turning left into the development and vehicles using the informal track to the east of the access (expected to be < 0.5 vehicles per week). Additionally, vehicles travelling eastbound along Synotts Lane will slow down as they approach the dead-end. Therefore, it is considered that the SSD assessment for eastbound traffic approaching the access driveway is conservative and the risk of conflict for vehicles exiting the site is very low.

Westbound approaching traffic from the informal track is negligible (< 0.5 vehicles per week) and the sight distance requirements are considered non-applicable.

4.1.4 Pedestrian Sight Lines

Given the site's rural nature and the location of the existing access driveway at the dead-end of Synotts Lane, it is believed there will be negligible likelihood of pedestrians crossing the access. Thus, pedestrian sight lines have not been assessed.

4.2 Bushfire Access Compliance

As part of the development proposal, Synotts Lane is required to be widened to a minimum width of 4m and have passing bays every 200m that are 20m long by 2m wide, creating a minimum trafficable width of 6m at the passing bay. This requirement is in accordance with the requirements of *RFS Planning for Bush Fire Protection 2019*. In addition to the road widening, Synotts Lane will also need to undergo regrading to fill in the potholes that have developed over time and ensure that the property access road is a two-wheel drive, all-weather road.

5. Conclusion

This TSA has been prepared in accordance with the requirements of the *Byron Shire Council Development Control Plan 2014*, *RTA Guide to Traffic Generating Developments*, *TMR Road Planning and Design Manual*, *RFS Planning for Bush Fire Protection 2019* and *Australian Standard AS2890 Parking Facilities*.

The proposed 10 primitive camping areas will be accessed via the existing access driveway at the dead-end of Synotts Lane. The combined predicted traffic generation for the site is 6.8 peak hour vehicle trips and 68 daily vehicle trips.




The access driveway can have a combined entry and exit and is to be between 3–5.5m wide.

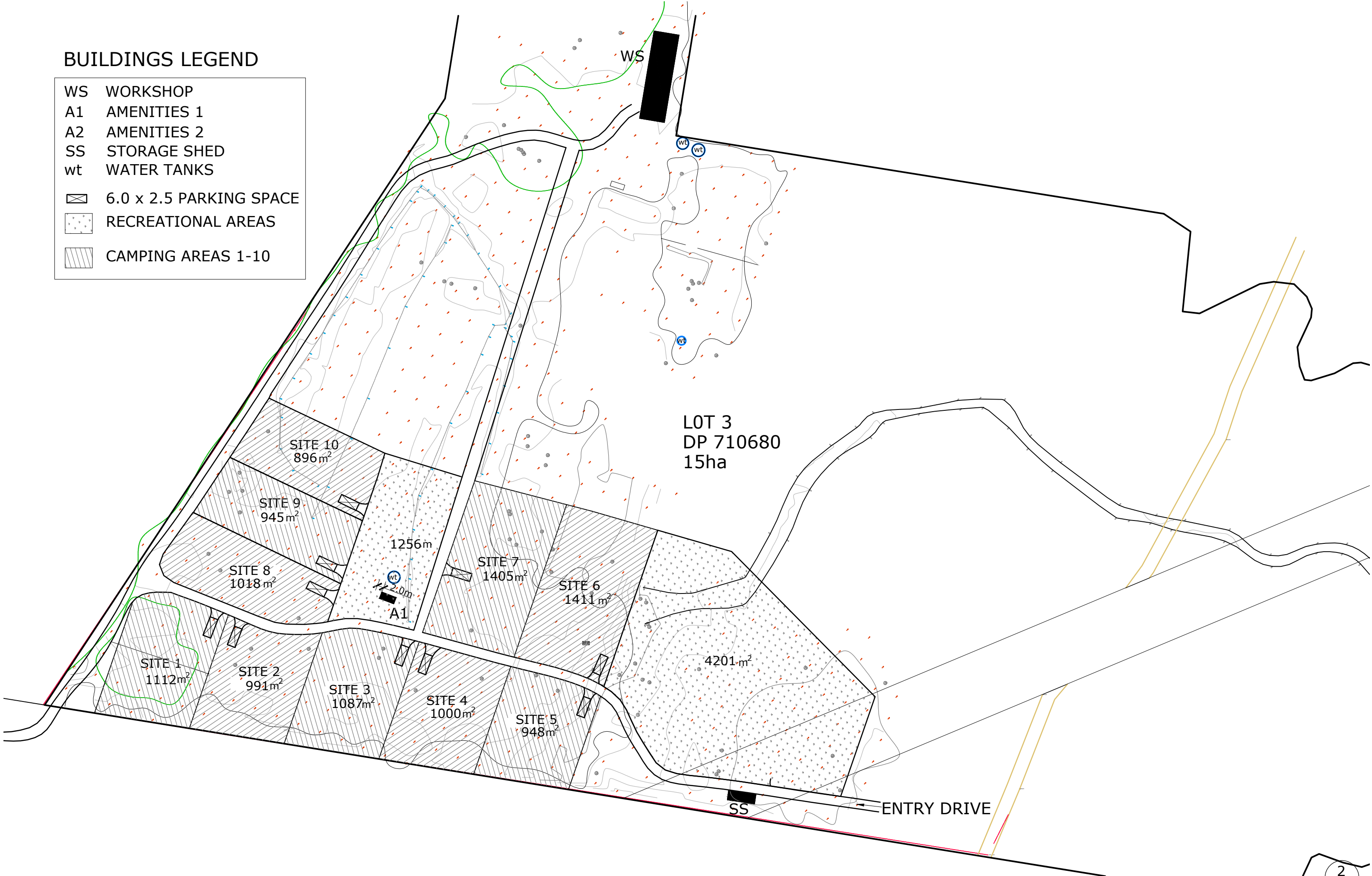
As part of the proposed development, Synotts Lane is required to be widened to a minimum of 4m with additional passing bays every 200m that are 20m long by 2m wide, in accordance with the *RFS Planning for Bush Fire Protection 2019*.

The access driveway is shown to comply with the requirements of AS2890.1.

Appendix A — Proposed Site Layout

BUILDINGS LEGEND

WS	WORKSHOP
A1	AMENITIES 1
A2	AMENITIES 2
SS	STORAGE SHED
wt	WATER TANKS
	6.0 x 2.5 PARKING SPACE
	RECREATIONAL AREAS
	CAMPING AREAS 1-10





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