



TRAFFIC IMPACT ASSESSMENT (TIA)

Planning Proposal
167 Riverstone Road, Riverstone

Reference: 21.036r01v03
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1. INTRODUCTION

TRAFFIX has been commissioned by Santilli Pty Ltd to undertake a traffic impact assessment (TIA) in support of a Planning Proposal for a residential subdivision at 167 Riverstone Road, Riverstone. The Planning Proposal application seeks to rezone the subject site from *SP2-Educational Establishment* to *R2 Low Density Residential* under the State Environmental Planning Policy (SEPP)(Sydney Region Growth Centres) 2006 – Appendix 4: Alex Avenue and Riverstone Precinct Plan 2010. The site is located within the Blacktown City Council Local Government Area (LGA) and has been assessed under that Council's controls.

A concept scheme has been developed by Calibre Group, comprising 17 residential lots or 17-19 residential dwellings. This report assesses the traffic impacts arising from this scheme, which is considered to be representative of the site being developed to its full potential when incorporating the proposed planning controls. The final subdivision layout will be subject to a separate Development Application to be assessed by Council.

This report documents the findings of our investigations and should be read in the context of the Planning Proposal prepared separately. The development is a minor development and does not require referral to the Transport for NSW (former Roads and Maritime Services) under the provisions of the State Environmental Planning Policy (Infrastructure) 2007.

The report is structured as follows:

- Section 2: Describes the site and its location
- Section 3: Documents existing traffic conditions
- Section 4: Describes the planning proposal
- Section 5: Assesses the parking requirements
- Section 6: Assesses traffic impacts
- Section 7: Discusses access and internal design aspects
- Section 8: Presents the overall study conclusions



2. LOCATION AND SITE

The subject site is located at 167 Riverstone Road, Riverstone and is legally identified as Lot B of DP362093. In a regional context, the site is located approximately 37.1 kilometres northeast of Sydney Central Business District (CBD), 1.7 kilometres east of Riverstone Railway Station and Town Centre and 4.5 kilometres northwest from Rouse Hill Railway Station and Town Centre.

The overall site (167 Riverstone Road) comprises two (2) land zonings. The eastern portion comprises *R2 Low Density Residential* zoning and the western portion (subject to the proposed planning proposal) comprises *SP2-Educational Establishment* zoning. The subject *SP2-Educational Establishment* land (the site) has an area of 6,778m² and currently accommodates residential dwellings and greenhouse structures associated with small-scale agricultural purposes.

The site has northern and southern boundaries measuring approximately 42.3 metres. The eastern and western boundaries measure approximately 161 metres. A future 16 metre wide road reserve runs along the eastern and northern boundaries.

A Location Plan is presented in **Figure 1**, with a Site Plan presented in **Figure 2**. Reference should also be made to the Photographic Record presented in **Appendix A** which provides an appreciation of the general character of roads and other key attributes in proximity to the site.



Figure 1: Location Plan



Figure 2: Site Plan



3. EXISTING TRAFFIC CONDITIONS

3.1 Road Network

The road hierarchy in the vicinity of the site is shown in **Figure 3** with the following roads of particular interest:

- **Garfield Road East:** an RMS Main Road (MR 546) that traverses northeast-southwest between Windsor Road in the northeast and Garfield Road West in the southwest. Within the vicinity of the site, Garfield Road East accommodates a single lane of traffic in each direction, and it is subject to a 60km/h speed zoning. A 40km/h school zone operates within the vicinity of Casuarina School.
- **Riverstone Road:** a local road that traverses northeast-southwest between 259 Riverstone Road in the northeast and Railway Terrace in the southwest. Within the vicinity of the site, Riverstone Road accommodates a single lane of traffic in each direction, and it is subject to a 50km/h speed zoning. Kerbside parking is permitted along both sides of Riverstone Road.
- **McCulloch Street:** a local road that traverses north-south between Garfield Road East in the north and Kensington Park Road in the south. Within the vicinity of the site, McCulloch Street accommodates a single lane of traffic in each direction, and it is subject to a 50km/h speed zoning. A 40km/h school zone operates within the vicinity of nearby primary and secondary schools. Kerbside parking is permitted along both sides of McCulloch Street.
- **Railway Terrace:** a collector road that traverses north-south between Garfield Road West in the north and Burdekin Road in the south. Within the vicinity of the site, Railway Terrace accommodates a single lane of traffic in each direction, and it is subject to a 50km/h speed zoning. Kerbside parking is permitted along both sides of Railway Terrace.



It can be seen from **Figure 3** that the site is conveniently located with respect to the collector roads serving the region, being Railway Terrace and Garfield Road East. As such, traffic is effectively able to be distributed onto the wider road network, minimising traffic impacts.

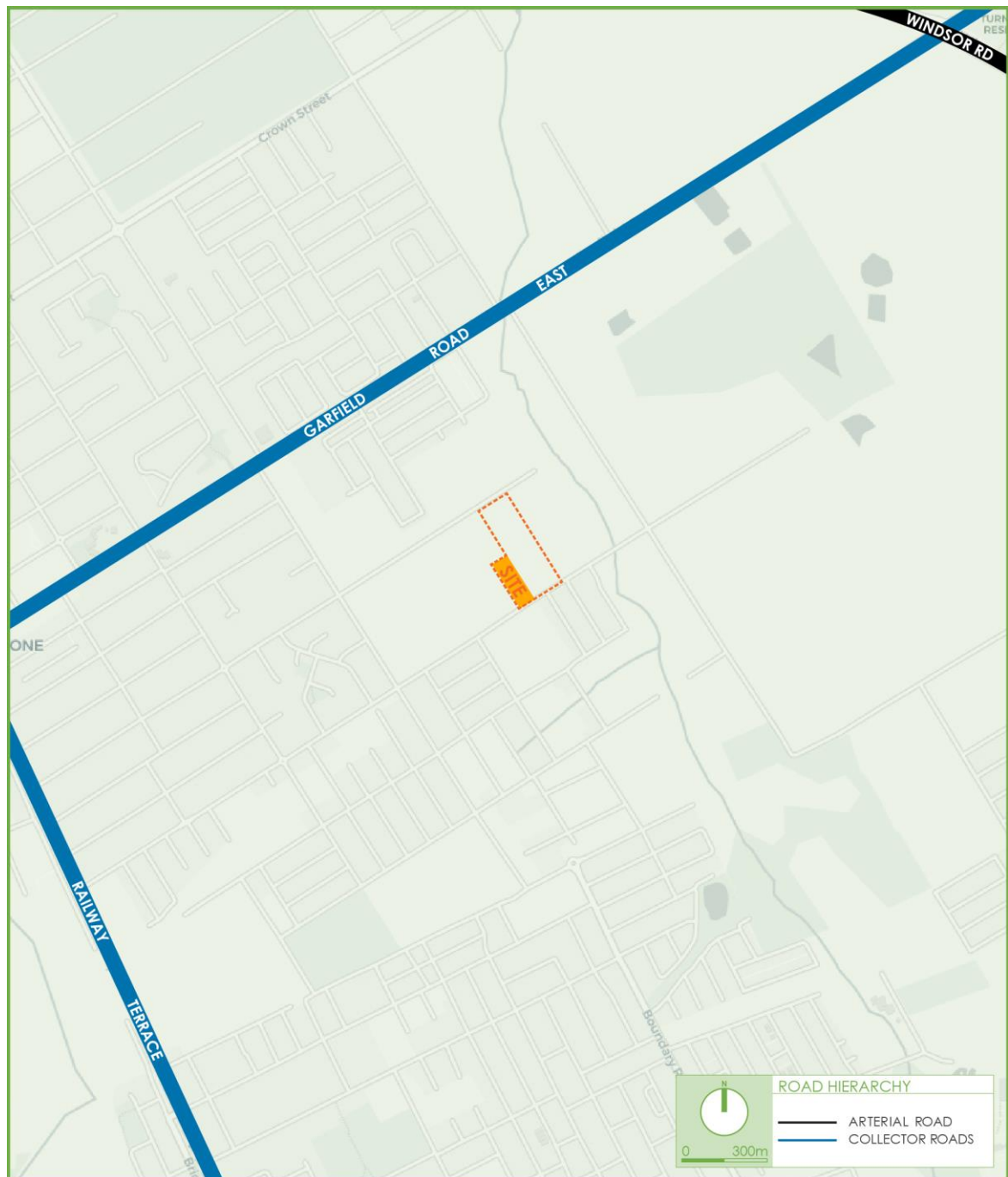


Figure 3: Road Hierarchy



3.2 Public Transport

The subject site is within optimal walking distance (800 metres) of several bus services operating in the locality. These bus services are presented in **Figure 4** and are summarised as follows:

- 742 – Marsden Park to Rouse Hill
- 747 – Marsden Park to Rouse Hill via Riverstone

The bus service frequencies are shown in **Table 1** below:

Table 1: Bus Frequencies

Bus No.	Mondays to Fridays	Saturday	Sunday and Public Holidays
742	Every 1 hour	Every 2 hours	-
747	Every 40 minutes to 1 hour	Every 1 hour	Every 1 hour

These bus services provide a frequent and reliable connection to Rouse Hill and Riverstone Railway Stations as well as the Tallawong Metro Station. Residents of the future subdivision can take advantage of the bus services to access the wider railway/metro network.

More information concerning all bus service frequencies is available on the Transport for NSW website: <https://transportnsw.info/>. Some changes and restrictions to the timetable are still being made in response to the COVID-19 pandemic.

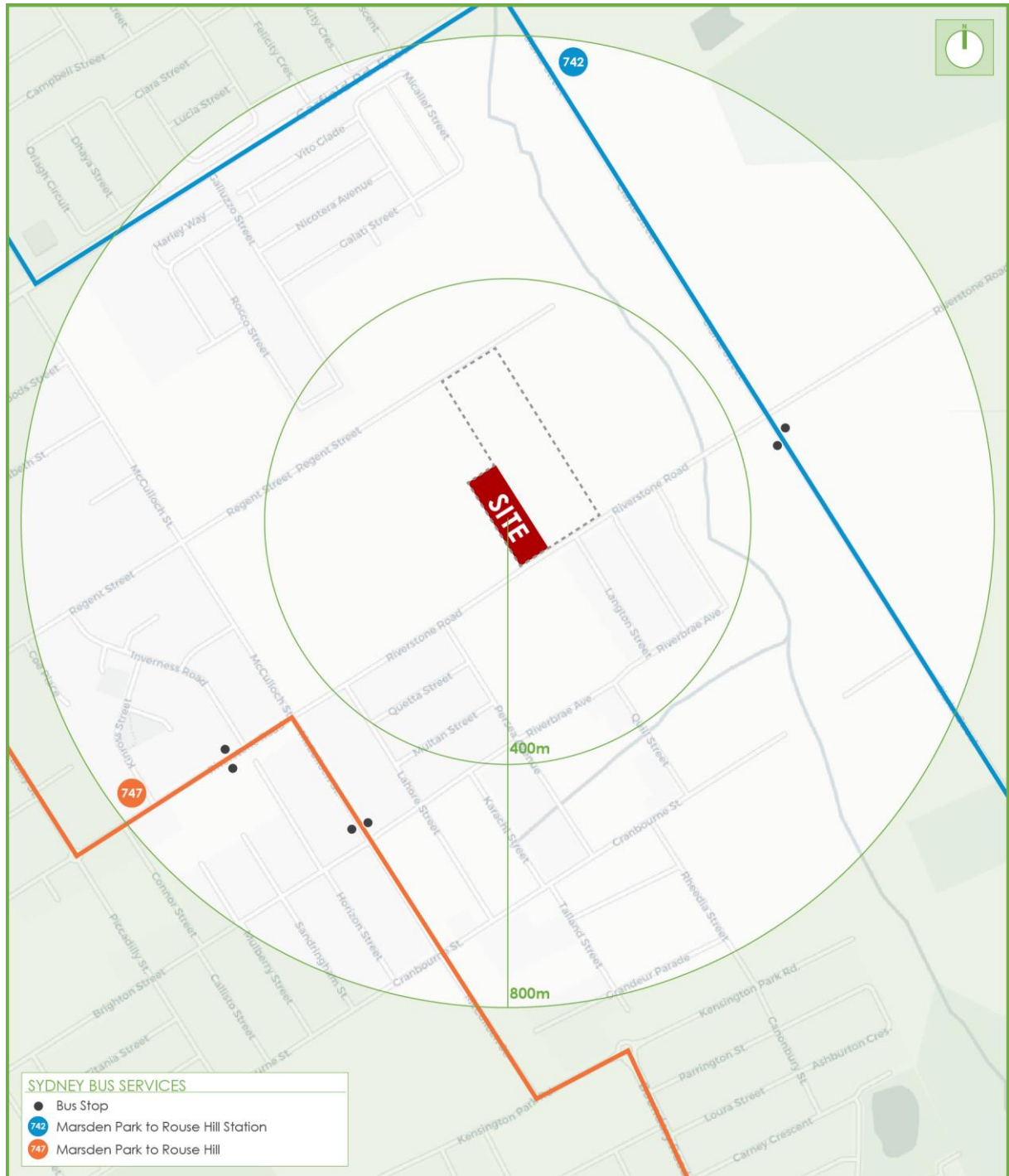


Figure 4: Public Transport



4. DESCRIPTION OF PLANNING PROPOSAL

A detailed description of the planning proposal is provided in the Planning Proposal Application prepared separately. In summary, the Planning Proposal seeks approval for the following:

- Rezoning the subject site from *SP2 – Educational Establishment* to *R2 Low Density Residential*.

It is noted that a concept subdivision plan has been prepared by Calibre Group, comprising 17 residential lots or 17-19 residential dwellings. This report assesses the traffic impacts arising from this scheme, which is considered to be representative of the site being developed to its full potential under the proposed planning controls. The final subdivision layout will be subject to a separate Development Application to be assessed by Council.

The parking and traffic impacts arising from the concept scheme are discussed in **Section 5** and **Section 6**. Reference should be made to the concept subdivision plans submitted separately to Council which are presented at reduced scale in **Appendix B**.



5. PARKING REQUIREMENTS

5.1 Car Parking

All car parking will be provided in accordance with the Blacktown City Council Growth Centre Precincts Development Control Plan (DCP) 2010 (amended October 2020), Part 4. Developments in Residential Zones. The proposed car parking requirements for future residential dwellings will be provided in accordance with Table 4.4 of the DCP, and the key planning controls are outlined below:

- Where front accessed, single width garages only.
- Rear laneway or side street accessed; double garages permitted.
- Max. car port and garage door with no to exceed 3m (single) or 6m (double).
- 1–2-bedroom dwellings will provide at least 1 car space.
- 3-bedroom or more dwellings will provide at least 2 car spaces.

The future parking provisions of individual lots are expected to be consistent with the above requirements. It is noted that any departure from these rates (if required) will be subject to review by Council during the Development Application process.



6. TRAFFIC AND TRANSPORT IMPACTS

The Planning Proposal seeks to rezone the subject sites (Lot B of DP362093) from *SP2 – Educational Establishment* to *R2 Low Density Residential*. The concept subdivision layout comprises 17 residential lots or 17-19 residential dwellings.

The *RMS Technical Direction TDT2013/04a* provides updated traffic generation rates for a number of land uses, including low density residential dwellings. The technical direction recommends the following traffic generation rates for developments within Sydney:

- 0.95 vehicle trips per dwelling in the AM peak hour period
- 0.99 vehicle trips per dwelling in the PM peak hour period.

Application of the above rates to the 19 dwelling houses described in the concept scheme will result in the following traffic generation, with an 80/20 split:

- 18 vehicles per hour during the AM peak period (4 in, 14 out).
- 19 vehicles per hour during the PM peak period (15 in, 4 out).

The above traffic generation results in a vehicle trip every three (3) minutes during the AM and PM peak periods and these trips would be distributed across the future road network. It is highly noteworthy that the subject Planning Proposal seeks to change the land zoning from *SP2 – Educational Establishment* to *R2 Low Density Residential*. The current land zoning could theoretically accommodate a development (or part of) for education (including teaching) being a school, university, or TAFE. These land uses are significant traffic generators, particularly primary schools, and would likely generate traffic volumes well in excess of a vehicle trip every three (3) minutes during the AM peak period. In addition, educational establishments often require significant traffic mitigation measures to be implemented to assist in managing localised traffic impacts.

Noting the above, the proposed residential land use is considered supportable from a traffic planning perspective with no external improvements to the network required.



7. CONCLUSIONS

The following is noteworthy:

- The subject Planning Proposal seeks to rezone a portion of site at 167 Riverstone Road, Riverstone from *SP2 – Educational Establishment* to *R2 Low Density Residential*. The subject rezoning site has an area of 6,778m² and a concept subdivision layout provides potential for 17 residential lots or 17-19 residential dwellings.
- The subject site has good connectivity to the public transport network with reliable access to bus and rail services. Bus services along Riverstone Road and Clarke Street provide connections to Rouse Hill and Riverstone Railway Stations as well as connections to the Tallawong Metro Station. Riverstone Railway Station provides services along the T1 and T5 Richmond Lines with connections to numerous stops such as Parramatta, the City and Richmond. The Tallawong Metro Station provides connection to major centres such as Epping and Chatswood.
- Future residential developments (subject to separate DAs) are expected to provide car parking in accordance with Blacktown Growth Centre Precincts Development Control Plan 2010. Any departure from the DCP rates will be subject to review by Council during the Development Application process.
- The traffic generation arising from the concept subdivision layout results in 18 vehicles trips during the AM peak period and 19 vehicles trips during the PM peak period. These volumes are significantly less than a potential education establishment and, in this regard, the proposed land zone change is supportable from a traffic planning perspective. As such, no external improvements are required to facilitate the concept subdivision.

This traffic impact assessment therefore demonstrates that the subject Planning Proposal is supportable on traffic planning grounds. TRAFFIX anticipates an ongoing involvement during the approval process.

APPENDIX A

Photographic Record



View looking north at the subject site's access driveway



View looking north at the subject site's frontage



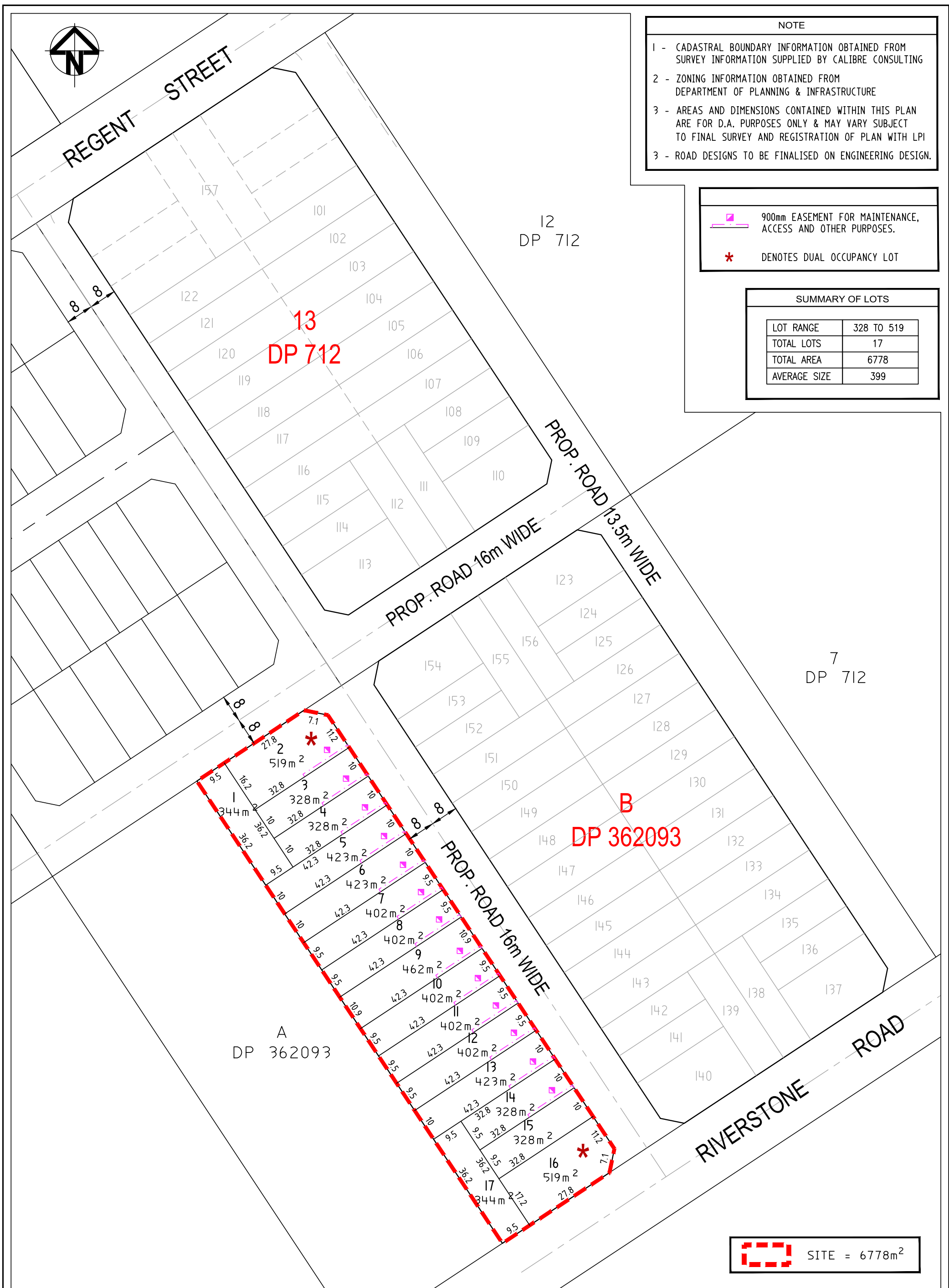
View looking west along Riverstone Road from the subject site's access driveway



View looking east along Riverstone Road from the subject site's access driveway

APPENDIX B

Reduced Plans



- 1 - CADASTRAL BOUNDARY INFORMATION OBTAINED FROM SURVEY INFORMATION SUPPLIED BY CALIBRE CONSULTING
- 2 - ZONING INFORMATION OBTAINED FROM DEPARTMENT OF PLANNING & INFRASTRUCTURE
- 3 - AREAS AND DIMENSIONS CONTAINED WITHIN THIS PLAN ARE FOR D.A. PURPOSES ONLY & MAY VARY SUBJECT TO FINAL SURVEY AND REGISTRATION OF PLAN WITH LPI
- 3 - ROAD DESIGNS TO BE FINALISED ON ENGINEERING DESIGN.

* DENOTES DUAL OCCUPANCY LOT

LOT RANGE	328 TO 519
TOTAL LOTS	17
TOTAL AREA	6778
AVERAGE SIZE	399

B
DP 362093

A
DP 362093

 SITE = 6778m²

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	CLIENT:		PROJECT	REGENT STREET RIVERSTONE	
	PL	AC	PL		17/03/2021					
A M E N D M E N T S						AUTHORISED FOR ISSUE: BY: PETER LEE SIGN: Business Unit Manager - Planning DATE:		DRAWING TITLE	PROPOSED FEASIBILITY OVER Pt LOT B IN DP 362093	PROJECT No. DRAWING No. STAGE REVISION 20-000351-F-1 1 of 1 0