PROPOSED RESIDENTIAL SUBDIVISIONS

RIVERBANK DRIVE, THE PONDS

PLANNING PROPOSAL

Traffic Impact Assessment

May 2017
(Rev F)

Reference 96/2016

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TABLE OF CONTENTS

1. INTRODUCTION 1

2. PROPOSED DEVELOPMENT SCHEME 2

2.1 Site , Context and Existing Use 2
2.2 Precinct Planning 2
2.3 Planning Proposal 2

3. EXISTING ROAD NETWORK AND TRAFFIC CONDITIONS 4

3.1 Road Network 4
3.2 Traffic Controls 4
3.3 Traffic Conditions 5
3.4 Future Road Circumstances 5

4. TRANSPORT SERVICES 6

5. SUBDIVISION ROADS 7

6. TRAFFIC 8

7. CONCLUSION 9

APPENDIX A SUBDIVISION PLANS
APPENDIX B EXTRACT FROM TTPA STUDY

LIST OF ILLUSTRATIONS

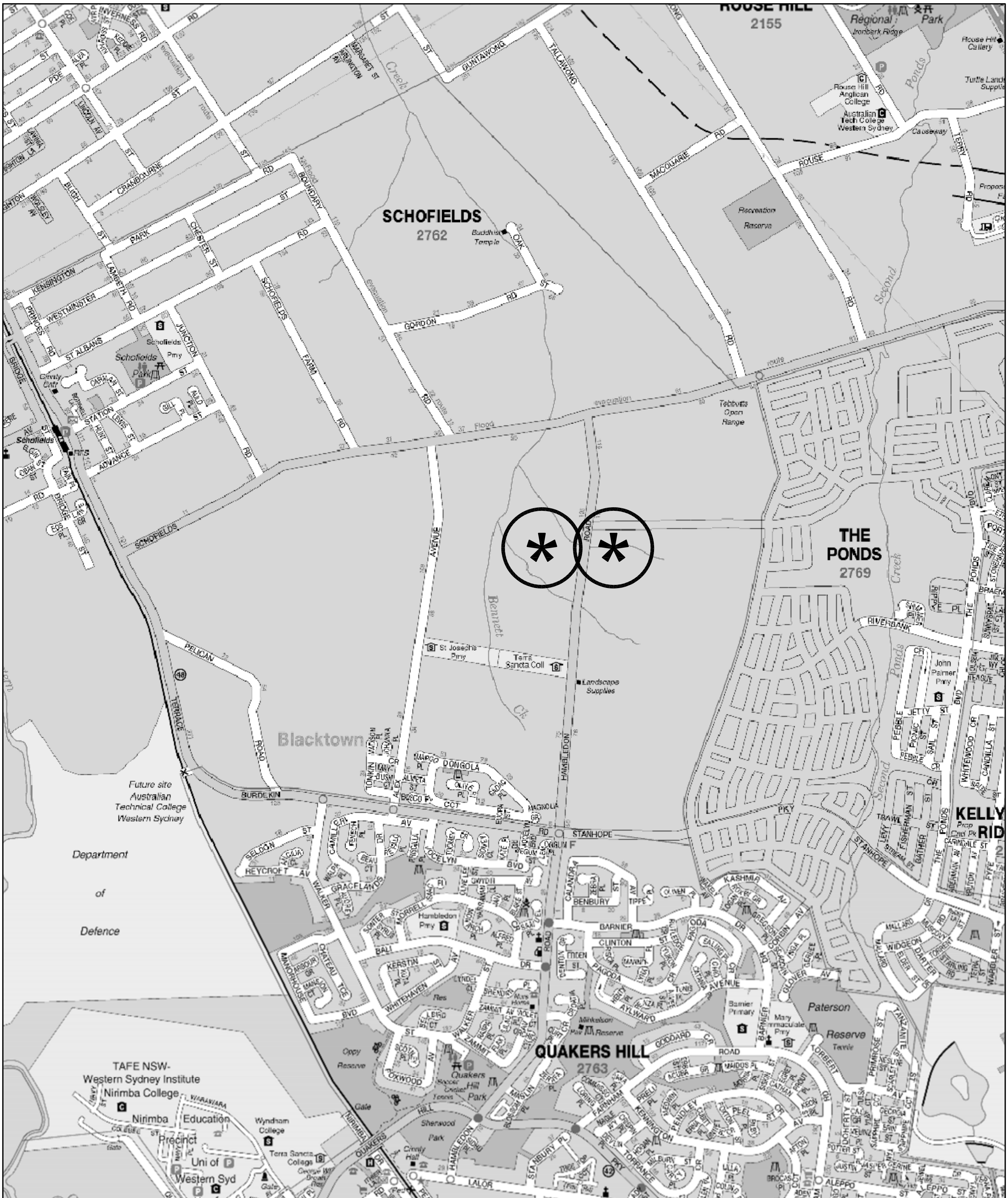
FIGURE 1 LOCATION
FIGURE 2 SITE
FIGURE 3 ROAD NETWORK
FIGURE 4 TRAFFIC CONTROLS

1. INTRODUCTION

This report has been prepared to accompany a Planning Proposal to Blacktown City Council to change the zoning of some SP2 – Drainage land to R2 – Residential to enhance the residential subdivision outcome for 2 sites on Riverbank Drive at The Ponds (Figure 1).

The proposal involves two separate landholdings located within the Alex Avenue Precinct of the North West Growth Centre which is undergoing rapid urban development. The proposed rezoning of parts of the two landholdings will enable the total subdivision yield to be increased from some 37 lots to some 63 lots.

The purpose of this report is to provide an assessment of the envisaged subdivision access road system and the potential traffic implications of the increased total yield of some 26 lots.



LEGEND

LOCATION

FIG 1

2. PROPOSED DEVELOPMENT SCHEME

2.1 SITE , CONTEXT AND EXISTING USE

The sites (Figure 2) are Lot 72 in DP28833, Lot 30 in DP1209414 and Lot 2 in DP1193235 which occupies a total area of some 3.248ha. Site 1 is occupied by a rural residential dwelling with out-buildings while Site 2 is vacant grass land. The surrounding uses comprise:

- The Ponds High School which extends along the northern side of Riverbank Drive
- the other rural-residential properties adjoining Site 1
- the St John Paul 2nd Catholic College immediately to the south
- the new The Ponds residential estate extending to the east and south-east

2.2 PRECINCT PLANNING

The site is located within the Alex Avenue Precinct of the Northwest Growth Centre and the detail planning is shown on the Alex Avenue Precinct Indicative Layout Plan which is reproduced overleaf. The sites currently have sections of Residential R2 and SP2 Drainage while the constructed alignment of Riverbank Drive varies from the ILP alignment as indicated on the diagram overleaf.

2.3 PLANNING PROPOSAL

The proposal is to change the sections of SP2 – Drainage burdening the sites to R2 – Residential having regard for the changed circumstances with the constructed alignment of Riverbank Drive.

LEGEND

LOCATION

FIG 2

North West Growth Centre Overview

North West Growth Centre Precinct Planning: May 2012 Source: Dept of Planning & Infrastructure

NSW GOVERNMENT Planning

RIVERSTONE

SCHOFIELDS FARM ROAD

GORDON ROAD

BOUNDARY ROAD

TALLAWONG ROAD

SCHOFIELDS ROAD

ADVANCE STREET

JUNCTION ROAD

SECOND PONDS CREEK

RAILWAY STATION

ALEX AVENUE

HAMBLEDON ROAD

RIDGE ROAD

RAILWAY TERRACE

PELICAN ROAD

STANHOPE PARKWAY

BURDEKIN ROAD

WALKER STREET

QUAKERS HILL

BLACKTOWN / RICHMOND RAIL LINE

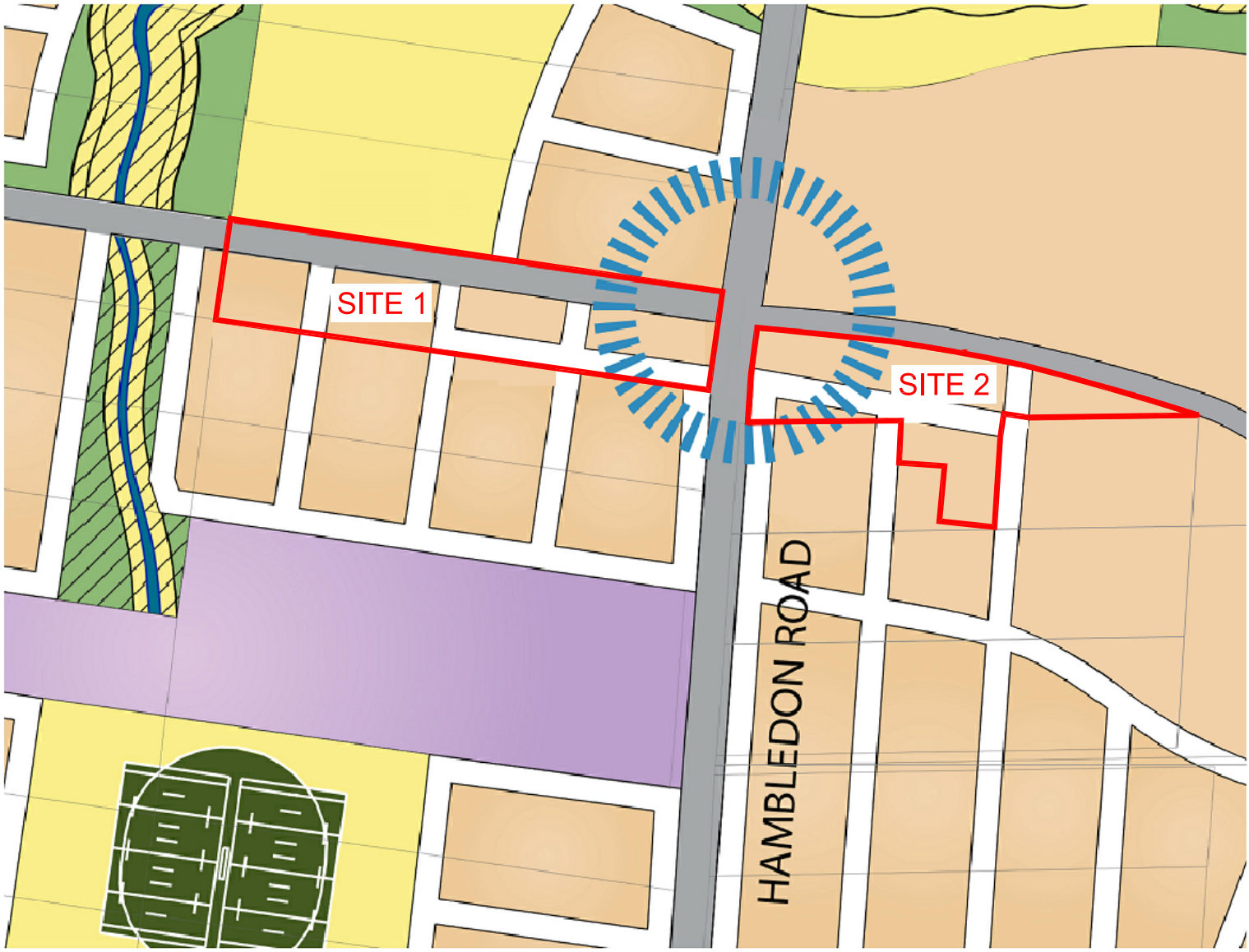
ALEX AVENUE PRECINCT

April 2010
INDICATIVE LAYOUT PLAN

- Precinct Boundary
- Land to which Precinct Plan applies
- Retail/ Commercial
- Preferred Location for Neighbourhood Shops
- Mixed Use
- Medium to High Density Residential
- Medium Density Residential
- Low Density Residential
- Electricity Substation
- Parks
- Sporting Fields
- Environmental Protection Overlay
- Drainage
- School
- Major Road
- Local Road
- Creek

0 50m 100m 200m 300m

Scale 1:10,000@A3



PROPOSED INDICATIVE LAYOUT PLAN

LEGEND

SP2 (DRAINAGE)

LOW DENSITY RESIDENTIAL

SITE 1	93 HAMBLEDON ROAD & LOT 72 D.P. 28833
SITE 2	LOT 2 D.P. 1193235

The proposal will enable the sites to be subdivided to provide some 63 lots.

Without the proposed rezoning, it is assessed that only some 37 lots could have been achieved rather than the total proposed of some 63 lots.

The proposed subdivision access roads will adopt the characteristics of the adjoining roads as prescribed in the ILP.

Details of the proposed subdivisions are provided on the plans which accompany the Planning Proposal application and are reproduced in part in Appendix A.

3. EXISTING ROAD NETWORK AND TRAFFIC CONDITIONS

3.1 ROAD NETWORK

The road network serving the site (Figure 3) comprises:

- *Schofields Road* – a State Road and sub-arterial route which connects between Windsor Road and Railway Terrance
- *Railway Terrace* / *Burdekin Road* / *Stanhope Parkway* – a Regional Road and sub-arterial/collector route connecting alongside the railway line between Quakers Hill and Vineyard thence to Sunnyholt Road
- *Hambleton Road and Alex Avenue* – collector roads providing north-south links through the area
- *Riverbank Drive* – a collector road which now terminates at Hambledon Road but will be extended to the west

3.2 TRAFFIC CONTROLS

The existing traffic controls on the roads in the vicinity of the site (Figure 4) comprise:

- the traffic signals at the Schofields Road and Hambledon Road intersection
- the traffic signals at the Schofields Road and Alex Avenue intersection
- the 60kmph speed limit on Schofields Road and Railway Terrace and 50kmph on the local and collector road system and 40 kmph School Zones
- the roundabout at the Riverbank Drive and Ridgeline Drive intersection
- the roundabout at Alex Avenue and Jacqui Avenue intersection
- the 'Wombat' marked footcrossing on Riverbank Drive at The Ponds High School frontage

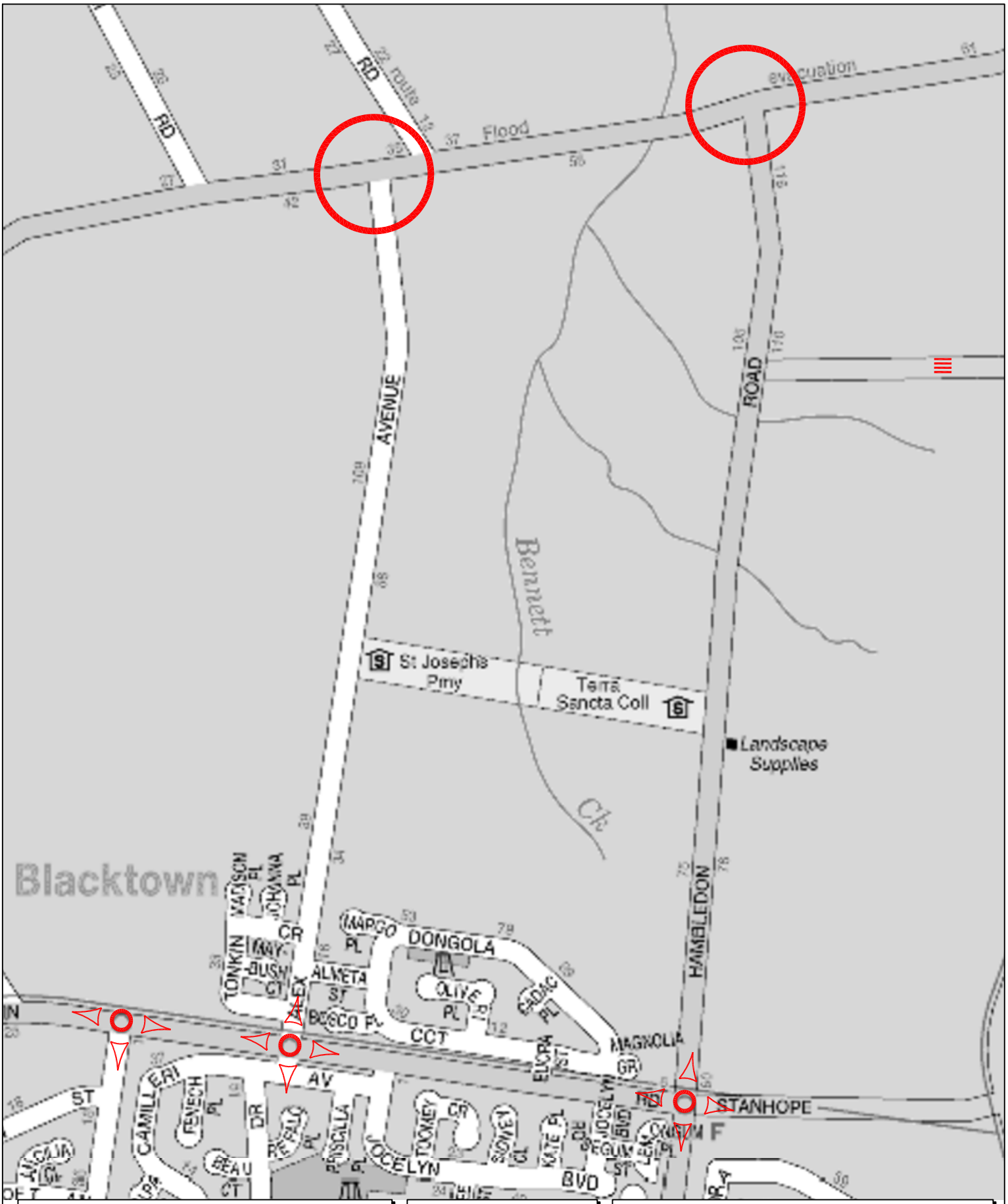
LEGEND

- ARTERIAL
- SUB-ARTERIAL
- COLLECTOR

N

ROAD NETWORK

FIG 3



LEGEND

- TRAFFIC SIGNAL CONTROL
- ROUNDABOUT
- RESTRICTED TURNING MOVEMENT
- MARKED FOOT CROSSING

N

TRAFFIC CONTROLS

FIG 4

3.3 TRAFFIC CONDITIONS

The traffic movements along Hambledon Road are some 500 to 600 vph (2 ways) in the morning and afternoon peak periods while the movements along Riverbank Drive are some 300 to 400vph.

The traffic conditions in the area are relatively satisfactory despite the current major road work activity.

3.4 FUTURE ROAD CIRCUMSTANCES

Details of the road planning and roadworks in the vicinity of the site are provided on the Precinct Road Hierarchy plan Precinct Facilities which are reproduced overleaf and the proposed works include Hambledon Road becoming a sub-arterial road and Riverbank Drive becoming an important collector route.

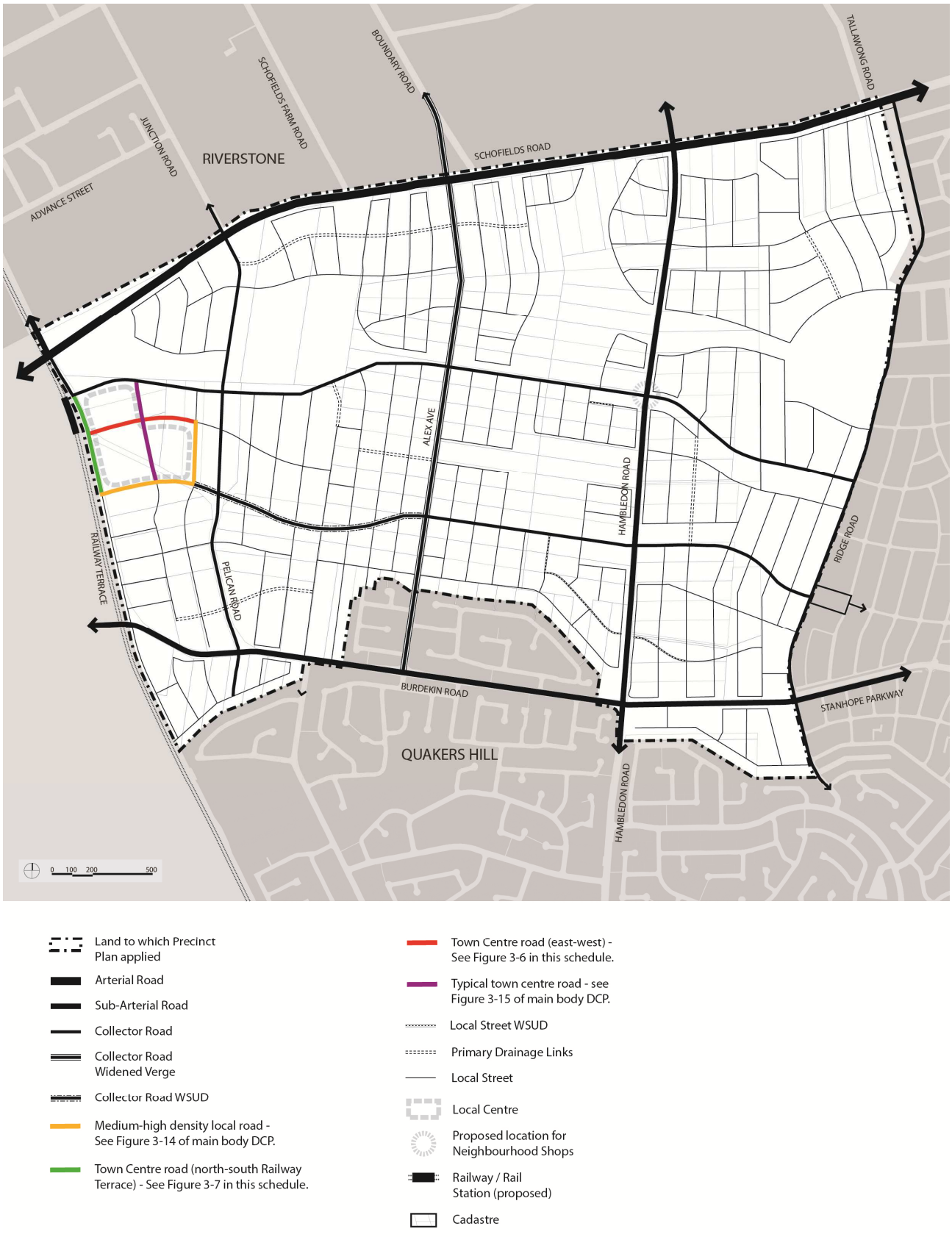
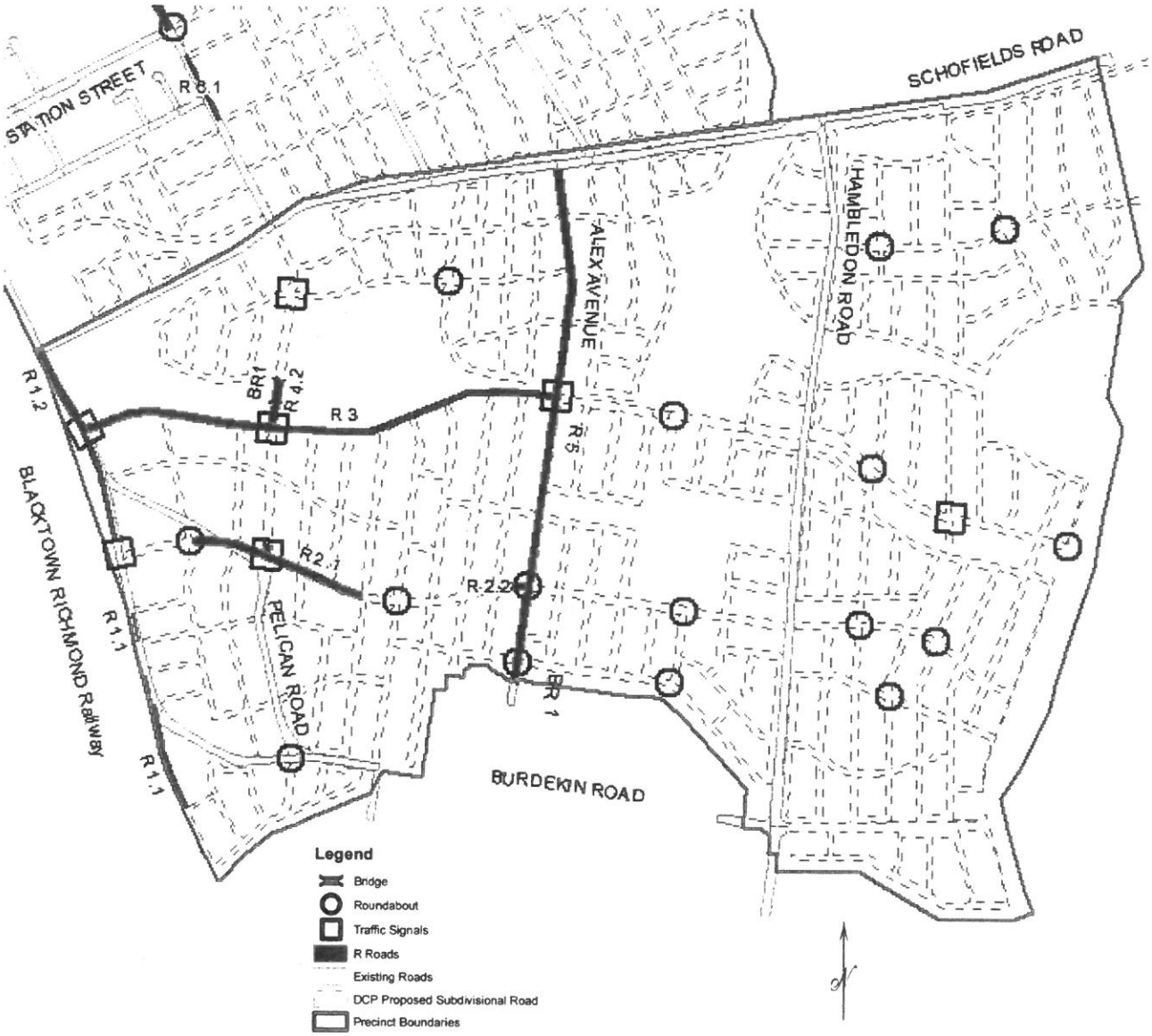


Figure 2-8: Precinct road hierarchy

APPENDIX B 3 of 6

RIVERSTONE & ALEX AVENUE
TRAFFIC AND TRANSPORT MANAGEMENT FACILITIES



Catchment Areas indicative only

Map information is not necessarily up-to-date or correct and Blacktown City Council accepts no responsibility in that regard. As such no reliance on these maps should be made without reference to Council's GIS mapping of catchment zones.

CONTRIBUTION ITEM	CATCHMENT AREA
Traffic & Transport Management	**Riverstone & Alex Avenue Precincts** **Sheet 3 of 3**

4. TRANSPORT SERVICES

EXISTING SERVICES

The existing public transport services in the vicinity of the sites (identified overleaf) comprise:

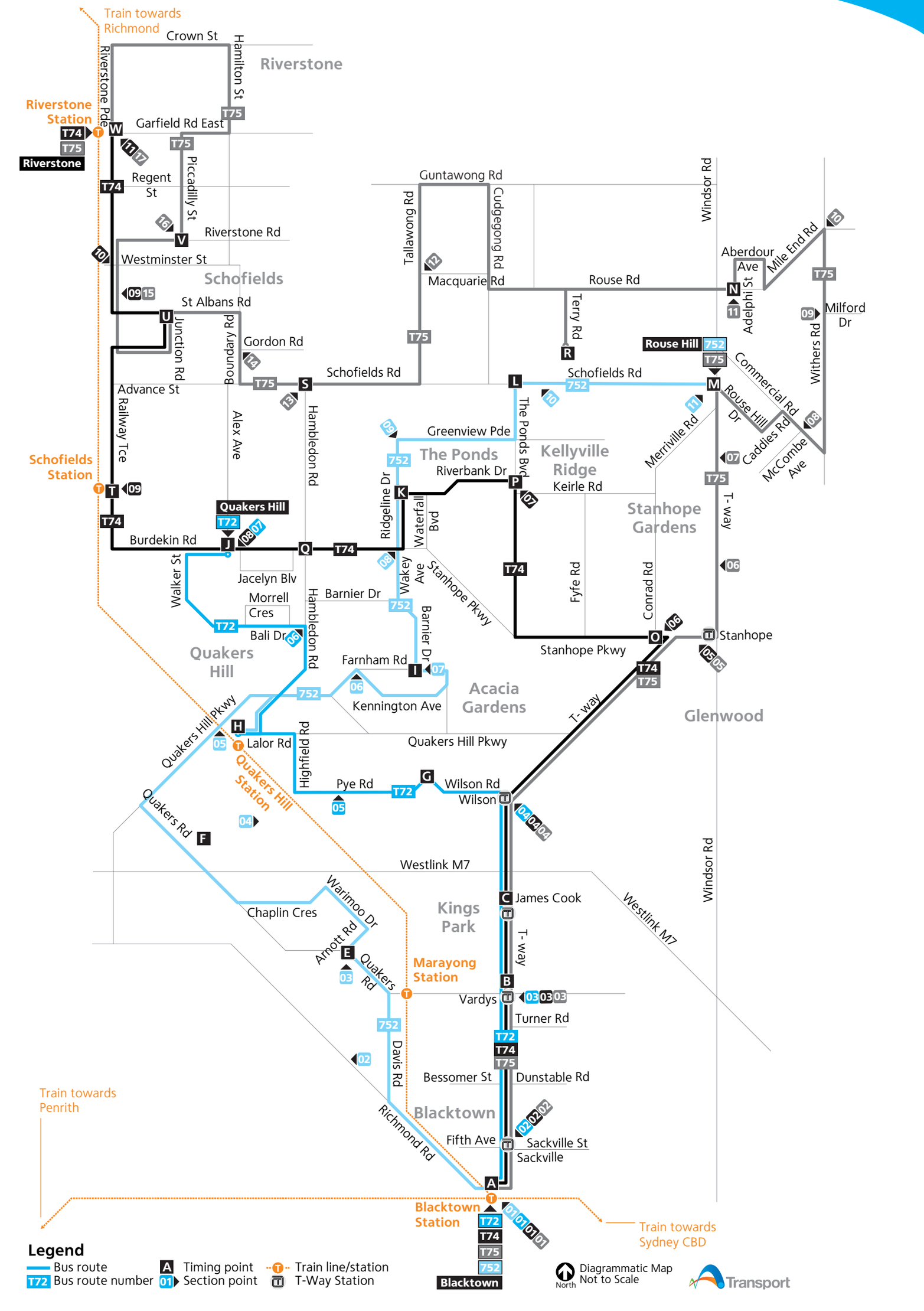
* the adjacent Schofields Railway Station
* the T75 bus service along Schofields Road and Boundary Road
* the T74 bus service along Railway Terrace and T71 along Burdekin Road

FUTURE SERVICES

The major elements of future public transport servicing for the area will be the envisaged local and regional bus services which will access the railway station and circulate through the town centre.

Bus route map

T72, T74, T75, 752



5. SUBDIVISION ROADS

The proposed subdivision roads will adopt “collector road” and “local street” formats as specified in the GCP-DCP as indicated on the extracts overleaf. The cross section of the local roads comprise:

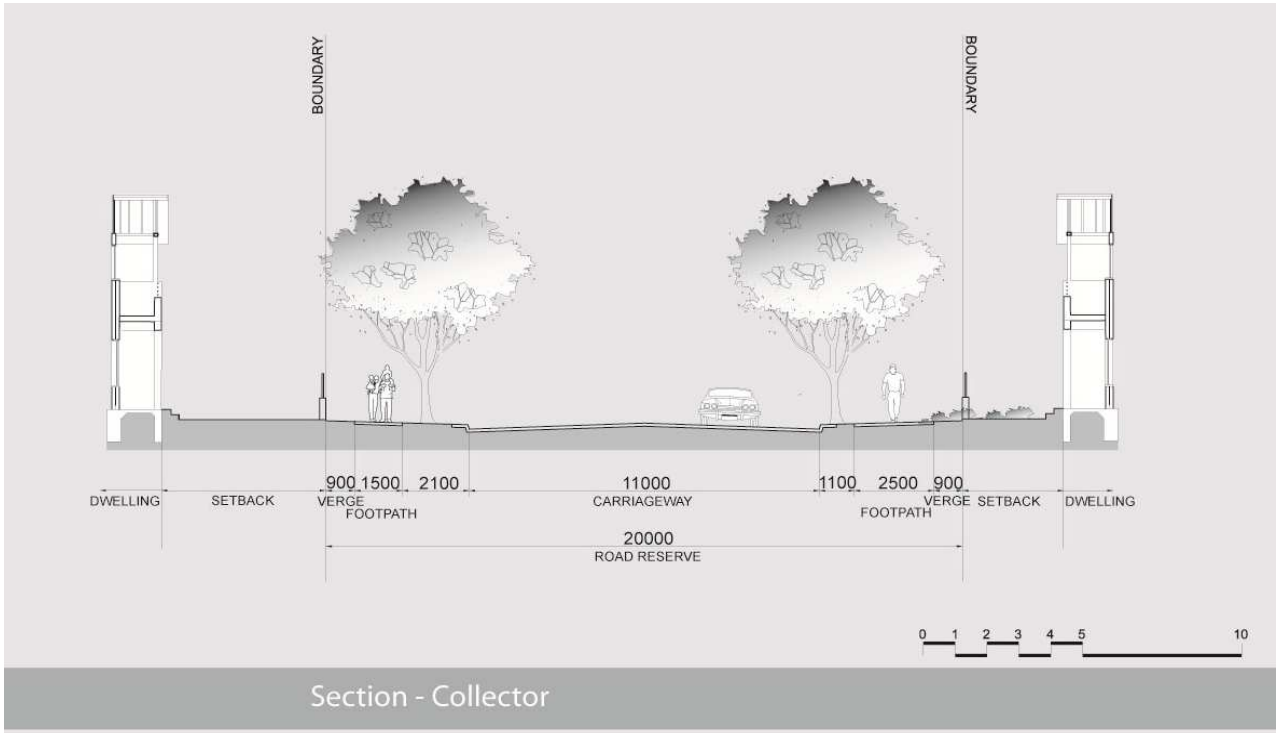
- 9m carriageway
- 3.5m verges with 1.6m wide footways

The cross section of the section of collector road (Riverbank Drive) through Site 1 comprise:

- 11m carriageway
- 4.5m verges with 1.5m wide footway on one side and 2.5m wide shared path on the other side

In Site 1 Road No. 3 is proposed to be extended through to connect to Riverbank Drive while in Site 2 Brookfield Street is realigned to correspond with the realignment of Riverbank Drive and Road No. 7 (Beauchamp Road) is realigned to extend directly to connect with Riverbank Drive.

It is apparent that the envisaged subdivision roads will provide a suitable and appropriate arrangement for access and circulation reflecting the nature of the ILP network. It is also apparent that the envisaged outcome will not require any traffic control facilities and the requirements for service vehicle access will be suitably accommodated.



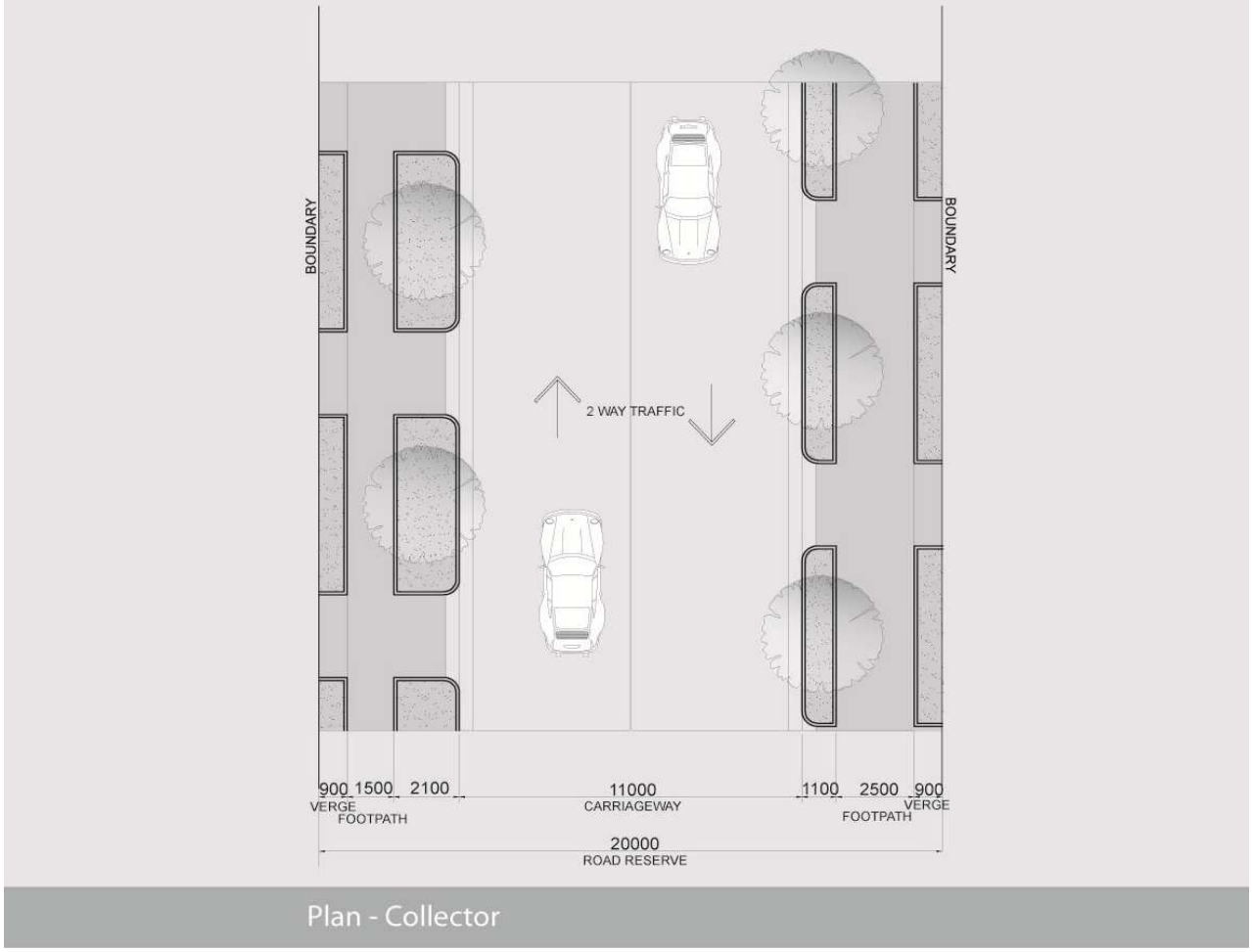
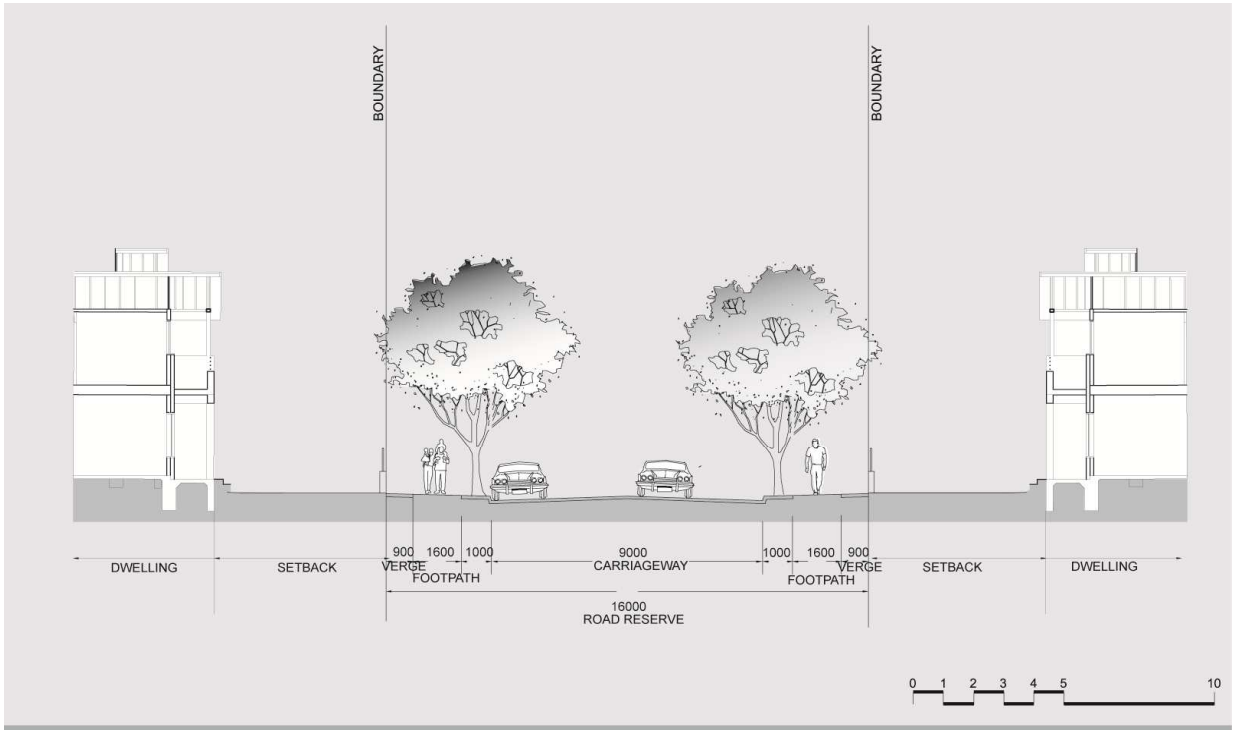


Figure 3-11: Typical collector road



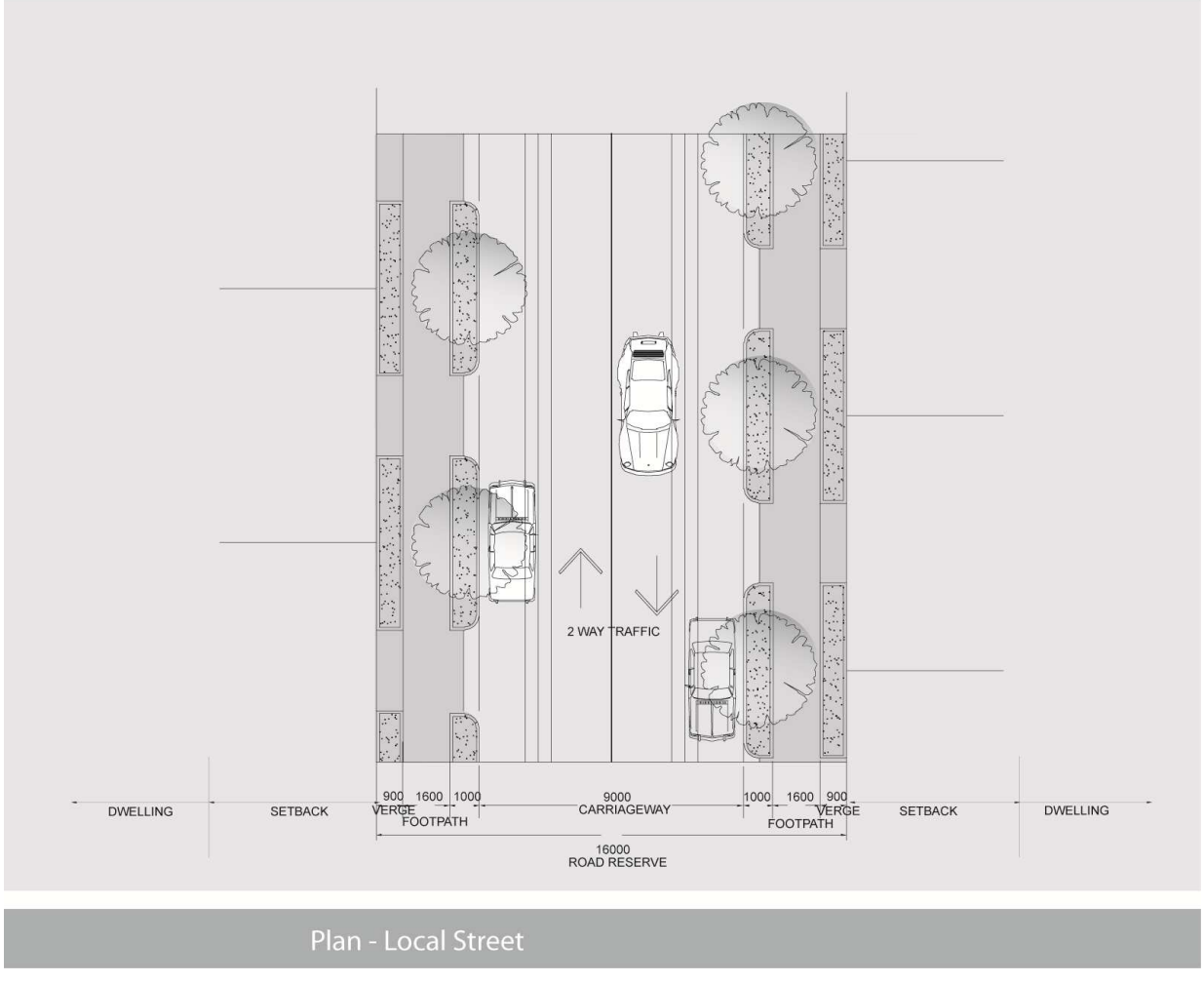


Figure 3-12: Typical local street

6. TRAFFIC

The RMS Development Guidelines specify a peak traffic generation rate of 0.85 vtph per dwelling for new residential suburbs noting that up to 25% of trips may not be on the external road network (ie to/from local schools and shops etc). However there is no survey assessment basis to this criteria and the more recent RMS Circular adds confusion to the situation as the surveyed precincts include school, retail, hospital and medical centre facilities and present a variation in excess of 100%.

TTPA undertook a very extensive survey of the traffic generation of Glenmore Park Stage 1 (Appendix B) which comprised some 5,447 dwellings and established an "external" generation rate of 0.65vtph per dwelling in the peak periods. It is understood that this is very similar to the generation rate used by the Growth Centres in its modeling for new release areas.

None the less, if the RMS criteria is applied to the additional 26 dwellings which the proposed rezoning will provide for the resultant peak period generation (@ 85vtph) is as follows:

AM		**PM**	
IN	**OUT**	**IN**	**OUT**
5	17	17	5

The potential traffic generation outcome will essentially be imperceptible in the context of the traffic circumstances for development of the Alex Avenue Precinct (in fact the outcome will be somewhat better due to the likely lower traffic generation outcome).

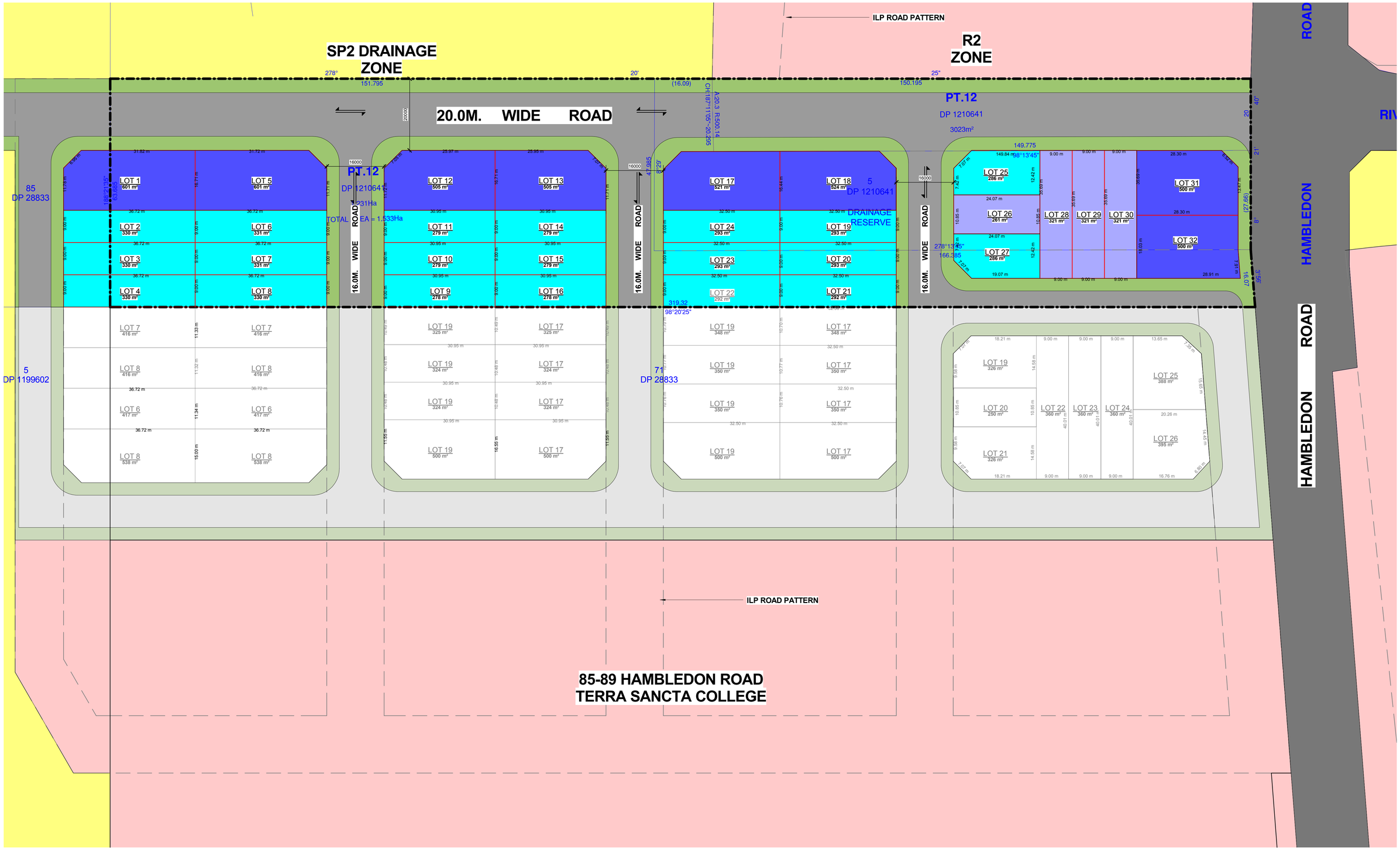
7. CONCLUSION

The envisaged subdivision outcome (subject to the Planning Proposal) in Riverbank Drive at The Ponds will provide for the development of some 26 additional dwellings to that which would be achieved with the existing zoning constraints. Assessment of the proposal has concluded that:

* the proposed road system will be appropriate and compliant with the DCP specifications
* the provisions for vehicle access and servicing will be satisfactory
* there will be no adverse traffic implications

APPENDIX A

SUBDIVISION PLANS



1 SK02/02

SUBDIVISION PLAN

1 : 500

DO NOT SCALE

USE FIGURED DIMENSIONS AT ALL TIMES. IF IN DOUBT CHECK WITH THE BUILDER. CONTRACTORS TO CHECK AND VERIFY ALL LEVELS, DATUMS AND DIMENSIONS ON SITE AND SHALL REPORT ANY DISCREPANCIES OR OMMISSIONS TO THE BUILDER PRIOR TO COMMENCEMENT OF WORK AND DURING THE CONSTRUCTION PHASE.

20 10 0 10 20 30 40 50 70mm

SKETCH ISSUE

ISSUE	DATE	REVISION	BY
1	05/07/2016	ISSUED FOR DEVELOPMENT APPLICATION	

GENERAL NOTES:

NORTH:

The Bathla Group
137 Gilba Road, Girraween Sydney NSW - 2145
PO Box 270,Wentworthville NSW 2145
T: 02 9636 2465 | F: 02 9688 4762
info@bathla.com.au | www.bathla.com.au

PROJECT:
93 HAMBLEDON ROAD AND LOT72 D.P. 28833

LOT NUMBER:

DRAWING TITLE:
SUBDIVISION PLAN

PROJECT No.	DATE:	DRAWING No:	REV:
DA	JULY 2016	SK02/02	1
DRAWN BY: JP	SCALE: 1 : 500		

Z:\Projects- Current\Hambledon road 93,schofields\02 SKETCH\OPTION 1 - M.rvt

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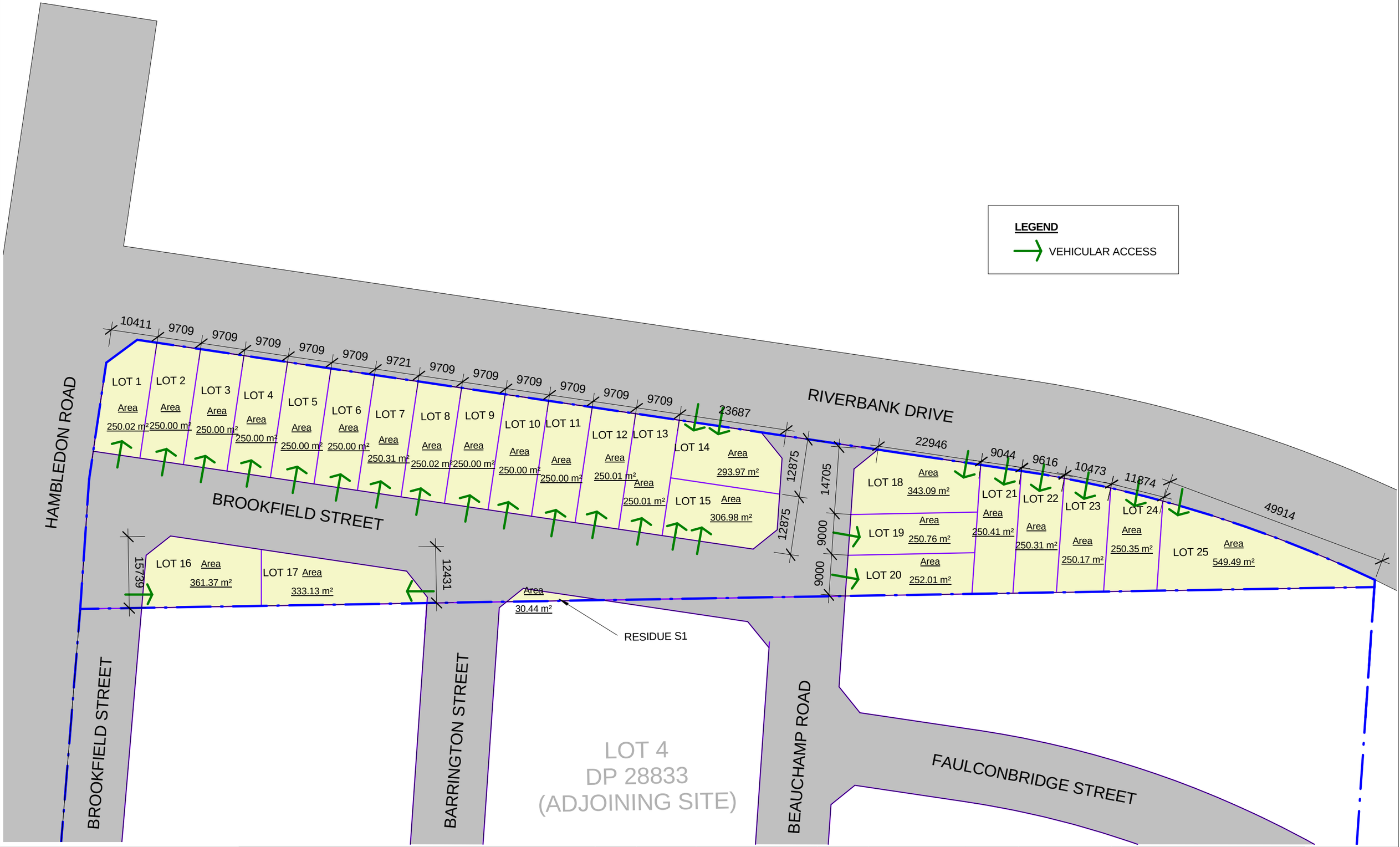


Signature PROPERTY DEVELOPERS PTY LTD

DESIGN CONSTRUCTION DEVELOPMENT

6D/7 MERIDIAN PLACE, BELLA VISTA, NSW 2153

AMENDMENTS

Issue	Date	Description	Author	Checked By
A	9.12.15	Sketch Design	AnK	AtK
B	26.3.16	Sketch Design	AnK	AtK
C	3.4.16	Sketch Design	AnK	AtK
D	3.4.16	Sketch Design	AnK	AtK
E	23.5.16	Sketch Design	AnK	AtK
F	24.5.16	Sketch Design	AnK	AtK
G	29.5.16	Sketch Design	AnK	AtK
H	1.6.16	Sketch Design	AnK	AtK
I	21.6.16	Sketch Design	AnK	AtK

PROJECT ADDRESS

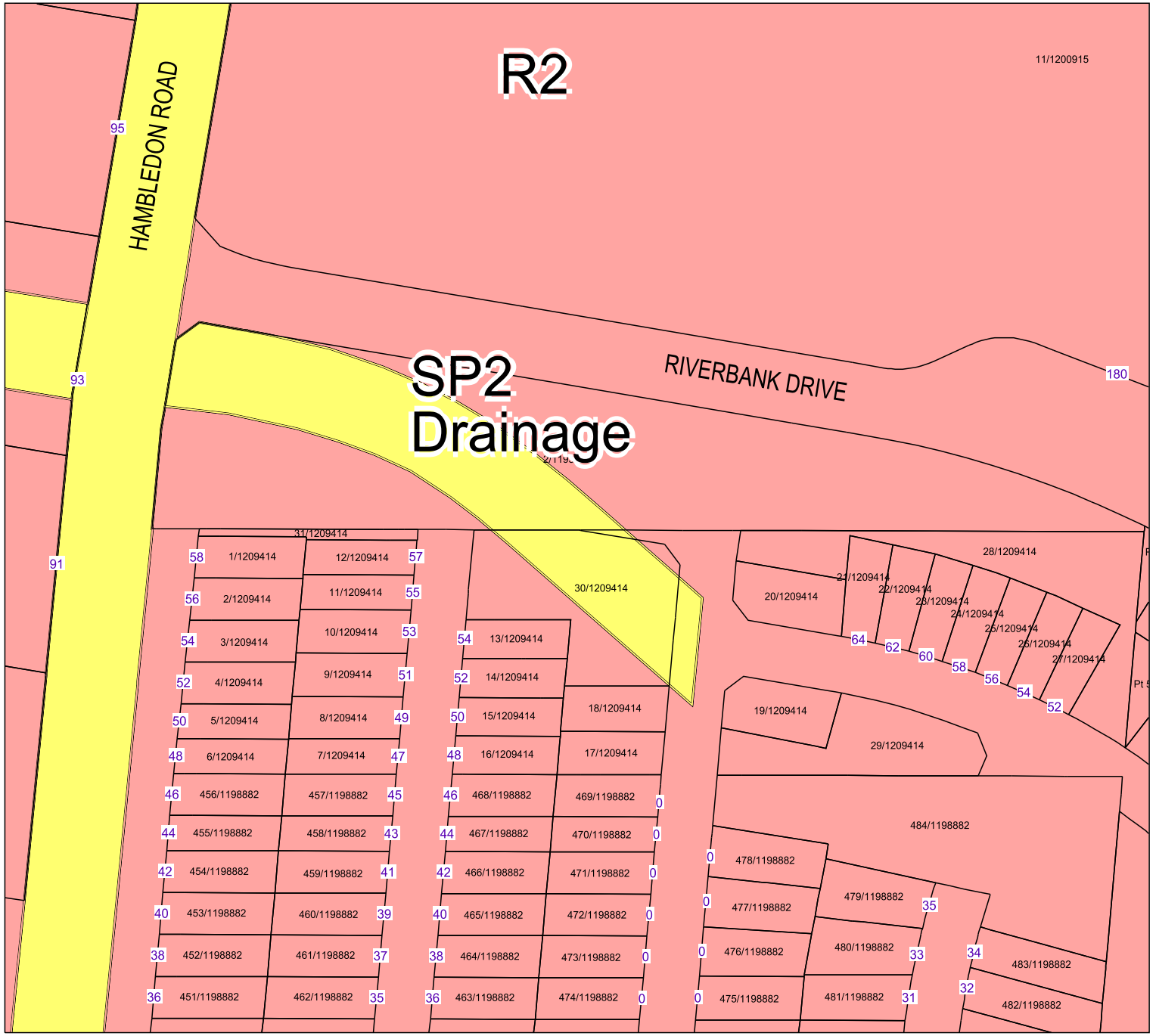
LOT 2, DP 1193235
CNR OF HAMBLEDON RD
& RIVERBANK DRIVE,
THE PONDS, NSW 2769

NORTH

DRAWING TITLE

SUBDIVISION PLAN

job no.	scale	drwg no.	issue
2015 - 03	1:750 @ A3	SK - 01	I



Plot Date: 17/03/2017

LEGEND

- Parcel Extent.Torrens Title Extent
- Local Government Area.Gazetted Boundary
- EP-LZN Land Zoning.SP2 LEP Extent
- EP-LZN Land Zoning.R2 SEPP Extent
- EP-LZN Land Zoning.SP2 SEPP Extent
- EP-LZN Land Zoning.R2 SEPP Boundary
- EP-LZN Land Zoning.SP2 SEPP Boundary

0m 20m 40m 60m 80m 100m 120m

Information provided is indicative only and should not be relied on without further certification by Blacktown City Council.

Blacktown City Council

Plotted by: admingis

NOTE: Do not scale from this map. Use D.P. information for accurate dimensions.

Please contact Council to purchase Aerial Photo map.

APPENDIX B

EXTRACT FROM TTPA STUDY

PROPOSED GLENMORE PARK STAGE 2

Transport Management and Accessibility Plan

October 2005

Reference 0338

TRANSPORT AND TRAFFIC PLANNING ASSOCIATES
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5.2 EXISTING GLENMORE PARK

The 2001 Census established that there were some 5,447 occupied dwellings in the existing Glenmore Park development at the time of the survey.

Access to and from the surrounding Arterial Road network (ie The Northern Road and Mulgoa Road) from the existing development is restricted to the Glenmore Parkway and Garswood Road intersection. This circumstance and the circuitous internal road layout provides the relatively unique situation where it is possible to establish the vehicle trip generation rate of the estate without the complication of non-related external through movements. An assessment of the AM and PM peak hour movements at the 3 'access' intersections from the 'June' survey indicate the following IN/OUT movements from the Glenmore Park Estate.

	Total Movements	**IN**	**OUT**
AM Peak	3283	915	2368
PM Peak	3706	2666	1040

(NB The earlier survey provided similar results to the June survey being within ± 2% of the total movements)

On the conservative estimate that there were some 200 dwellings built and occupied between the undertaking of the 2001 Census (ie 5,647 dwellings), and the traffic surveys (and that a 6% vacancy rate), the traffic movements indicated above translate to the following external trip generation rates and peak period IN vs OUT ratios for the estate.

	Total (vtph)	**IN (%)**	**OUT (%)**
AM Peak	0.62	27	73
PM Peak	0.70	72	28

5.3 ORIOLE STREET CATCHMENT

The street layout within the existing Glenmore Park development provided an opportunity to undertake a 'sensitivity test' of the published RTA generation rate and the rates established in Section 5.2. To ascertain the traffic generation rate of residential only development, a survey was carried out of the vehicle movements in the AM (7.00 –9.00am) and PM (4.00 - 6.30pm) peak period travelling to/from Oriole Street at its intersection with Woodlands Drive. This intersection is the only means of vehicular access to some 340 residences and is an area of the estate which was fully developed and at the time of the survey had no new residential construction activity taking place.

The results of the survey indicate the following movements to/from Oriole Street.

LOCATION: ORIOLE STREET/WOODLANDS DRIVE
VEHICLE MOVEMENTS

		AM Peak (7.45 – 8.45am)	PM Peak (5.15 – 6.15pm)
Oriole Street (OUT)	Left Right	38 128	11 51
Woodlands Drive (IN)	Left Right	8 34	35 132
Total		**206**	**229**

On the assumption that of the 340 residences within the surveyed area, approximately 6% (20 residences) were unoccupied, the traffic movements represent an AM and PM peak generation of 0.64 vehicle trips per hour per residence and 0.72 vehicle trips per hour per residence respectively.

5.4 ASSESSMENT

From the assessment it is apparent that the RTA published trip generation rate for residential development of 0.85 vtph is not a true reflection of the circumstances which prevail at Glenmore Park. On the basis that the trip generation rate attained from the Oriole Street assessment also includes a component of 'internal' trips (say 6%), the data from this analysis and that of the 'whole' of Glenmore Park would suggest that an external trip generation rate of 0.65 vtph per dwelling in the peak periods is more reflective of the existing traffic activity generated by the Glenmore Park Estate.

Application of this rate (0.65 vtph) to the detached dwelling component and a 0.5 vtph rate to the medium density element, indicates the following likely AM and PM peak vehicle movements for the various phases of construction activity: