

“AUSTRAL TOBRUK”
PROPOSED ILU DEVELOPMENT
120 TENTH AVENUE, AUSTRAL
Assessment of Traffic and
Parking Implications

May 2019
(Rev D)

Reference 15286

TRANSPORT AND TRAFFIC PLANNING ASSOCIATES
Transportation, Traffic and Design Consultants
Suite 502, Level 5
282 Victoria Avenue
CHATSWOOD 2067
Telephone (02) 9411 5660
Facsimile (02) 9904 6622
Email: info@ttpa.com.au

TABLE OF CONTENTS

1.	INTRODUCTION	1
2.	PROPOSED DEVELOPMENT SCHEME.....	2
2.1	Site, Context and Existing Use	2
2.2	Precinct Planning	3
2.3	Approved Development	3
2.4	Proposed Development.....	4
3.	EXISTING ROAD NETWORK AND TRAFFIC CONDITIONS	5
3.1	Road Network.....	5
3.2	Traffic Controls	5
3.3	Traffic Conditions	6
3.4	Transport Services	7
4.	FUTURE ROAD NETWORK, TRAFFIC AND TRANSPORT CIRCUMSTANCES	8
5.	ACCESS AND TRAFFIC	10
6.	PARKING	12
7.	INTERNAL CIRCULATION, SERVICING AND BUS STOP	13
8.	CONCLUSION	14

APPENDIX A

APPROVED PLANS

APPENDIX B

DEVELOPMENT PLANS

APPENDIX C

TURNING PATH ASSESSMENT

LIST OF ILLUSTRATIONS

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

1. INTRODUCTION

This report has been prepared for RSL Life Care to accompany revised plans for a Development Application to Liverpool City Council for a proposed Independent Living Unit development on the “Austral Tobruk” site on 120 Tenth Avenue at Austral (Figure 1).

The Austral and Leppington North area is a large new urban precinct which will benefit from good transport services (focused on the new Leppington Railway Station) as well as large open space areas, retail and educational facilities. The precinct will also have ready access to the arterial road system and the major regional facilities available in Liverpool CBD.

The Austral Tobruk site is located in the central part of the precinct, just to the north of Bringelly Road and the Railway Station, with frontages to the southern side of Tenth Avenue and the western side of Edmondson Avenue. There are existing RACF and ILU buildings with community facilities on the site and a previous consent was granted for residential apartment (Senior Housing) development on the southern part.

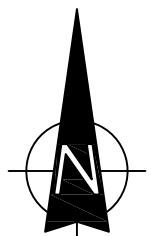
The proposed new ILU development involves 8 buildings with 145 apartments and basement car parking with landscaped surrounds and a pedestrian/vehicle access network.

The purpose of this report is to:

- * describe the site and the proposed development
- * describe the existing and future road network and traffic circumstances
- * assess the adequacy of the proposed parking provision
- * assess the potential traffic implications of development
- * assess the appropriateness of the proposed access, internal circulation and servicing arrangements



LEGEND



LOCATION

FIG 1

2. PROPOSED DEVELOPMENT SCHEME

2.1 SITE, CONTEXT AND EXISTING USE

The total Austral Tobruk site (Figure 2) is a consolidation of Lots 1 & 2 in DP 1146302 located to the north of Bringelly Road. The proposed development will occupy the largely vacant southern part of the site while the central and western part was partly excavated for the previously approved development. The existing development on the northern part comprises:

- RACF building on the western part
- ILU apartment buildings on the eastern part with community facilities
- Vehicle accesses on the Tenth Avenue frontage

The surrounding development comprises:

- the Primary School on the eastern side of Edmondson Avenue opposite the site
- the Austral Neighbourhood Centre including an IGA Supermarket on the northern side of Tenth Avenue
- the adjoining Church which has frontages to Edmondson Avenue and Tenth Avenue
- the rural residential properties which adjoin to the west and south



LOCATION

FIG 2

LEGEND

2.2 PRECINCT PLANNING

The Austral and Leppington North Precinct has been master planned to:

- create a primarily residential neighbourhood providing for some 17,500 homes
- reduce environmental impact and facilitate greater social interaction
- provide a mix of housing types and active streets
- provide open space amenity with 135.4ha of parkland
- focus on Leppington major centre, Austral local centre and 3 neighbourhood centres
- provide 2 high schools and 5 primary schools
- ensure to full advantage is made of the proposed rail and bus services as well as cyclist and pedestrian networks

The Indicative Layout Plan for Austral and Leppington North which is reproduced in Section 4 illustrates the envisaged broad development outcome along with the land uses, density ramps, open space, transport linkages and location of community facilities and schools.

2.3 APPROVED DEVELOPMENT

Consent was previously granted for a development scheme on the site comprising a total of 127 residential apartments (81 x 2 Bed and 46 x 3 Bed). Work was substantially Senior Housing Units on this project with excavation for basement carparking however work was suspended.

Details of the approved development are provided on the plans reproduced in Appendix A.

2.4 PROPOSED DEVELOPMENT

It is proposed to extend the existing excavated basement areas and construct 8 new buildings comprising:

- 145 x two bed apartments
- Shared pedestrian/vehicle access corridor
- Basement and at-grade parking for residents, visitors and service vehicles
- Vehicle access connecting to Edmondson Avenue and the existing access road connecting to Tenth Avenue

The development will provide for the proposed widening of Edmondson Avenue, and the central median island to be provided in conjunction with that widening will restrict vehicle access on Edmondson Avenue to left turn IN/OUT. It is understood that Council has received funding for the design and construction of the proposed roadworks along Edmondson Avenue.

Details of the proposed development are provided on the revised plans prepared by AJ+C which accompany the Development Application and are reproduced in part in Appendix B.

3. EXISTING ROAD NETWORK AND TRAFFIC CONDITIONS

3.1 ROAD NETWORK

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

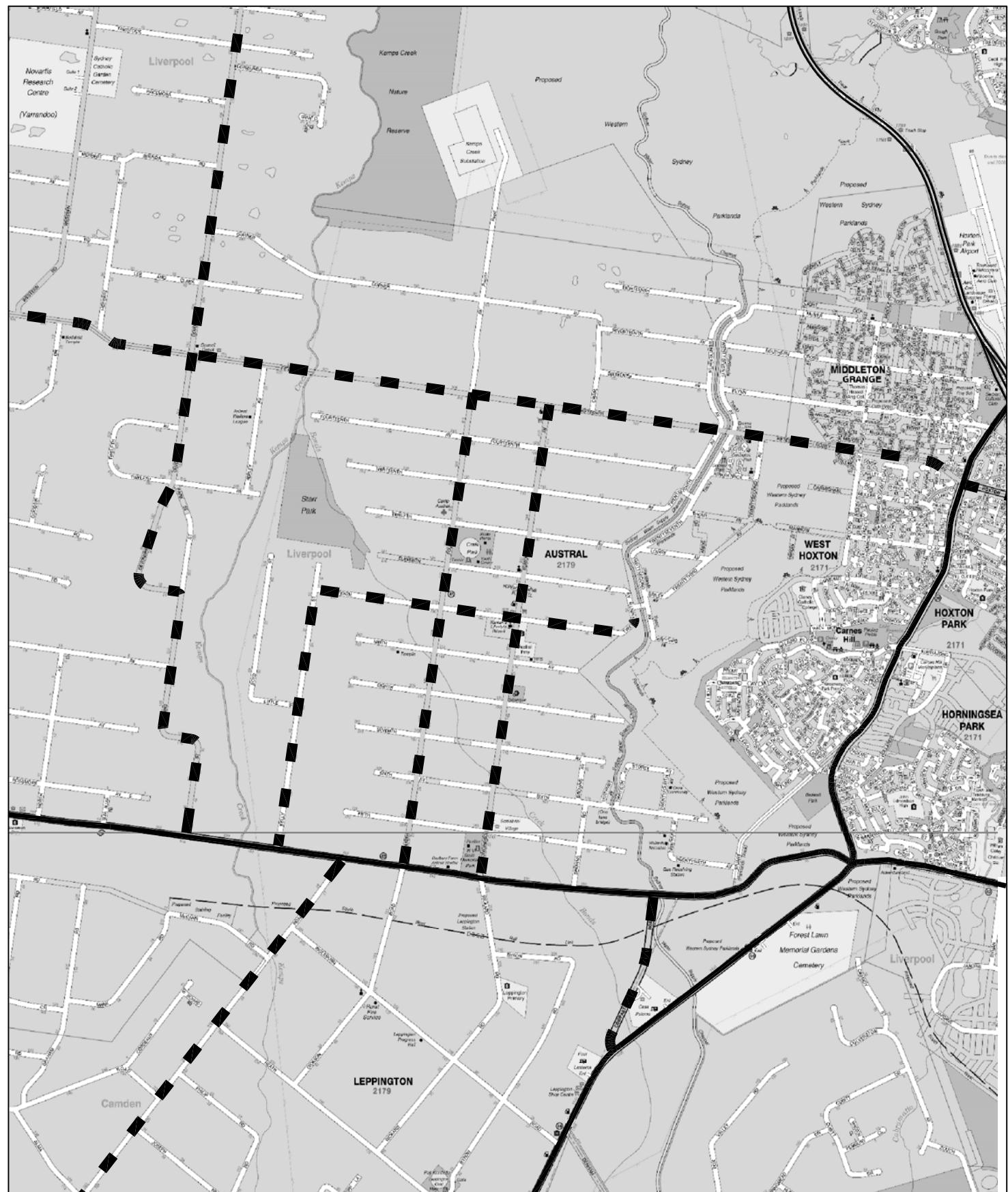
- * *Camden Valley Way* – a State Road and arterial route which connects between the Hume Highway at Casula and Camden
- * *Cowpasture Road* – a State Road and arterial route which connects between the Horsley Drive at Bossley Park and Camden Valley Way at Horningsea Park
- * *Bringelly Road* – a State Road and subarterial route which connects between Cowpasture Road/Camden Valley Way at Horningsea Park and The Northern Road at Bringelly
- * *Cowpasture Road (South)* – a State Road and collector route which connects between Camden Valley Way and Bringelly Road
- * *Edmondson Avenue* – a collector road connecting between Bringelly Road and Fifteenth Avenue
- * *Tenth Avenue* – a minor collector road connecting across Edmondson Road between Kelly Street and Twentyninth Avenue

Edmondson Road is some 12.8m wide with one travel lane and one parking lane in each direction while Tenth Avenue has a 2 lane rural pavement largely without kerb and gutter or footways.

3.2 TRAFFIC CONTROLS

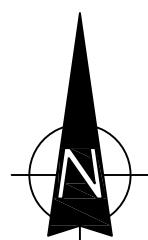
The limited existing traffic controls on the road network (Figure 4) comprise:

- * the 60 kmph speed limit on Edmondson Avenue at Tenth Avenue with a 40 kmph school speed limit in the vicinity of the Primary School (opposite the site)



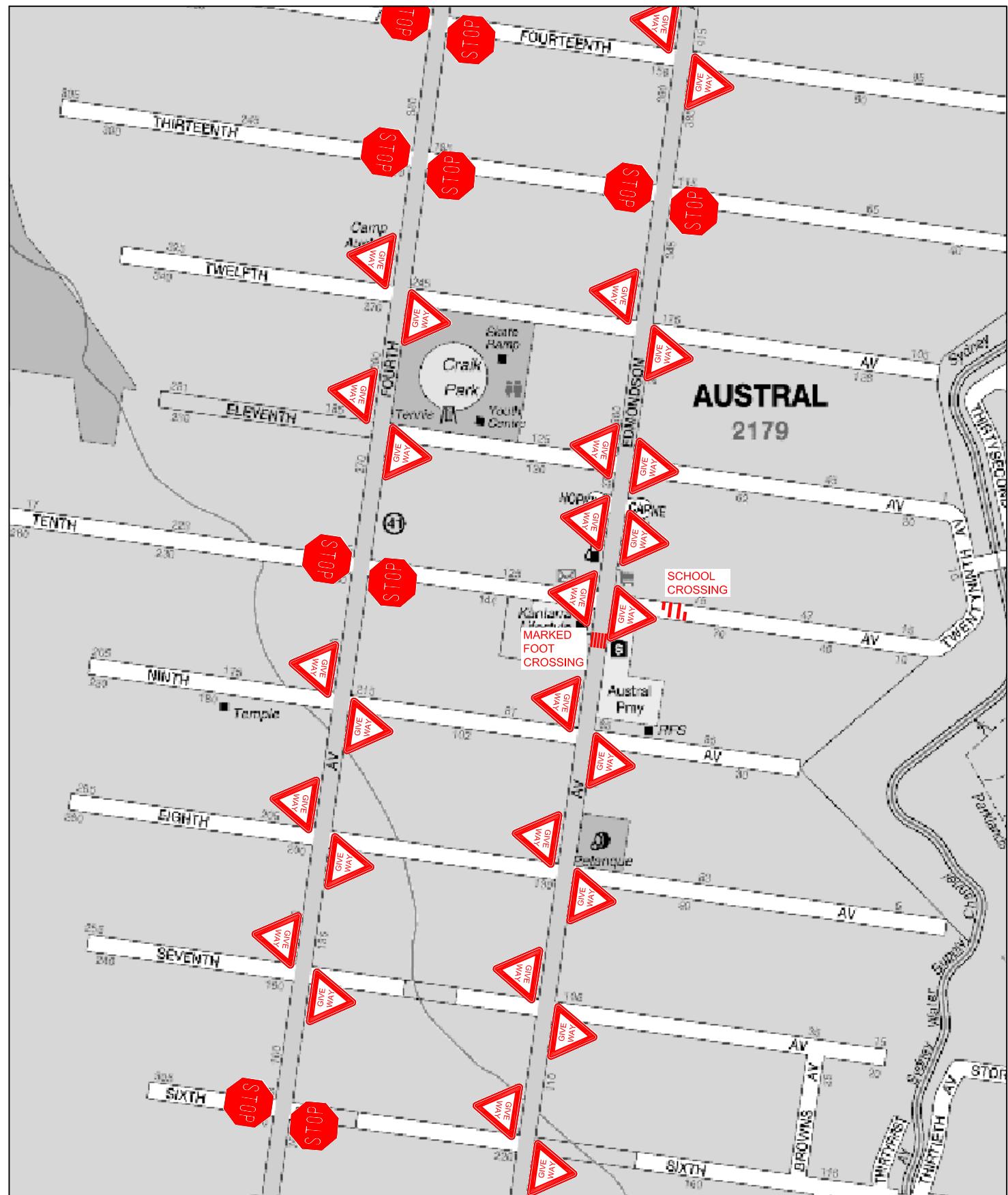
LEGEND

- ARTERIAL:** Solid black line
- SUB-ARTERIAL:** Dashed black line
- COLLECTOR:** Dotted black line



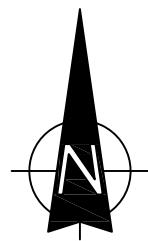
ROAD NETWORK

FIG 3



LEGEND

-  TRAFFIC SIGNAL CONTROL
-  ROUNDABOUT
-  RESTRICTED TURNING MOVEMENT
-  STOP SIGN
-  GIVE WAY SIGN



TRAFFIC CONTROLS

FIG 4

- * the “Wombat” style marked footcrossing in Edmondson Avenue at the School frontage and “school crossing” on the Tenth Avenue frontage
- * the 70 kmph speed restriction on Bringelly Road east of Cowpasture Road (South) and 80 kmph to the west
- * the part time BUS ZONE and NO PARKING school start/finish times on Edmondson Avenue
- * the GIVE WAY and STOP sign controls on the ‘side streets’ of intersections along Edmondson Avenue and Fourth Avenue
- * the small central median islands and adjacent kerbside lane islands in Edmondson Avenue at Tenth Avenue and the southern side of the school frontage

3.3 TRAFFIC CONDITIONS

The existing traffic volumes on Bringelly Road to the west of Camden Valley Way are as follows:

AADT	AM Peak	PM Peak
9,090	700	800

The existing traffic flows on Edmondson Avenue and Tenth Avenue during the morning and afternoon peak periods are as follows:

	AM	PM
Edmondson Avenue		
Northbound	285	185
Southbound	170	250
Tenth Avenue		
Eastbound	110	70
Westbound	65	125

The operational performance of intersections in the vicinity of the site during the morning and afternoon peak periods is quite satisfactory at the present time without any undue queuing or congestion. There is some heightened localised activity in the vicinity of the Primary School during 'set-down/pick-up' times just before and after school hours.

3.4 TRANSPORT SERVICES

Bus services are provided by Interline Route 855 which runs along Edmondson Avenue connecting between Liverpool and Leppington Railway Stations where access is provided to the Metropolitan Transport Network (see details overleaf).

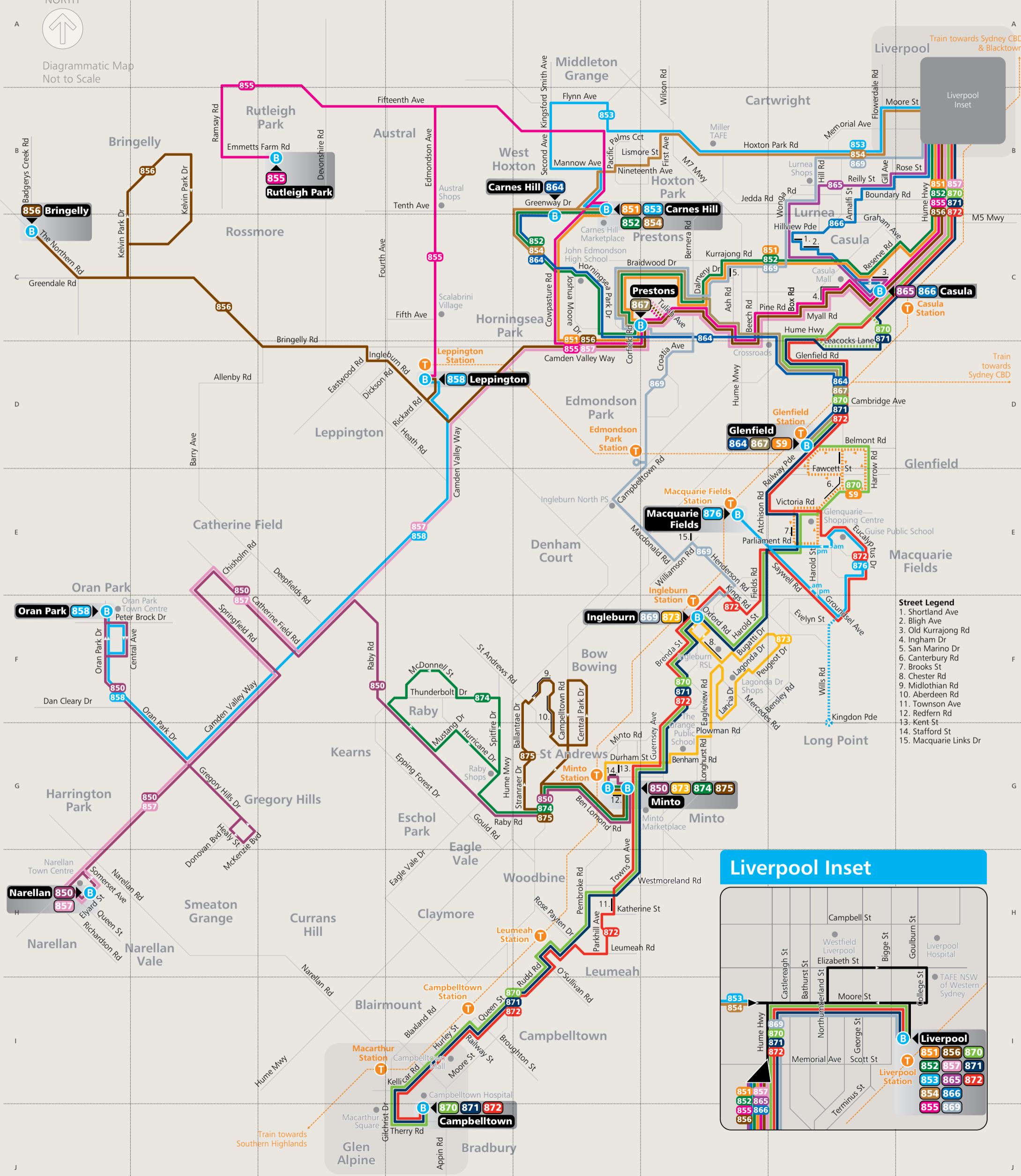
1

2

3



Diagrammatic Map Not to Scale



Key

- Bus route
- Occasional journey
- T— Train line/station
- 853** Bus route number
- B** Bus terminus

It's easy to plan your trip



On the web
transportnsw.info

Questions and feedback

Phone 131 500

TTY 1800 637 500

• 111 1800 637 500

4. FUTURE ROAD NETWORK, TRAFFIC AND TRANSPORT CIRCUMSTANCES

ROAD NETWORK

Details of the planned road system for the Austral-Leppington North Precinct are provided on the diagrams overleaf together with details of the planned street types.

Particular features of this planning are:

- the principal arterial routes of Camden Valley Way and Bringelly Road
- the Transit Boulevards on Fifteenth Avenue and Edmondson Avenue
- the Collector Roads including Fourth Avenue and Tenth Avenue

The design provisions for Edmondson Avenue at the site frontage require road widening to provide for BUS LANE, bus stop bays and a central median island.

TRAFFIC CONTROLS

The provision of traffic signals is proposed at:

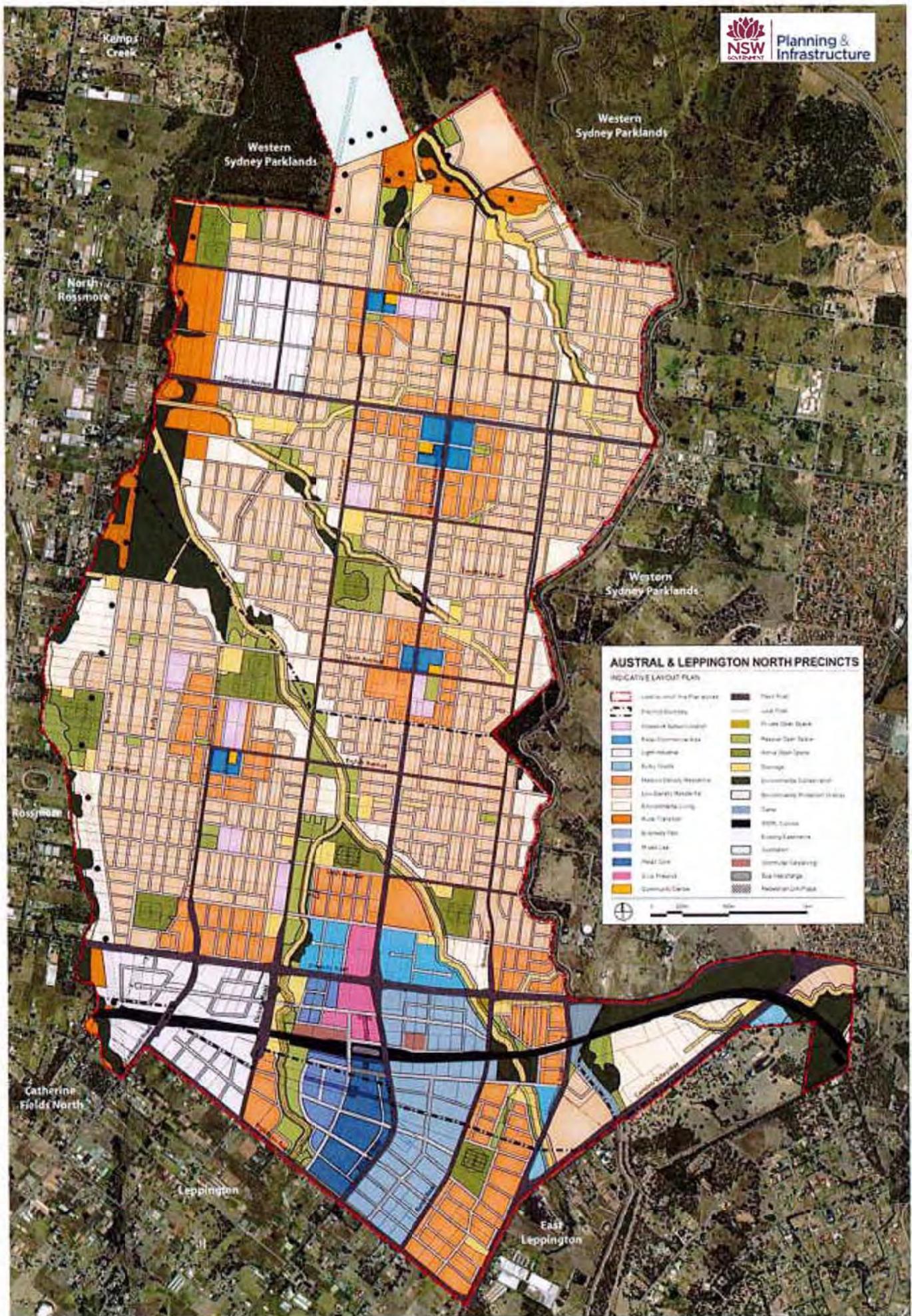
- the intersection of Edmondson Avenue and Tenth Avenue
- the intersections Bringelly Road and Fifteenth Avenue with Edmondson Avenue

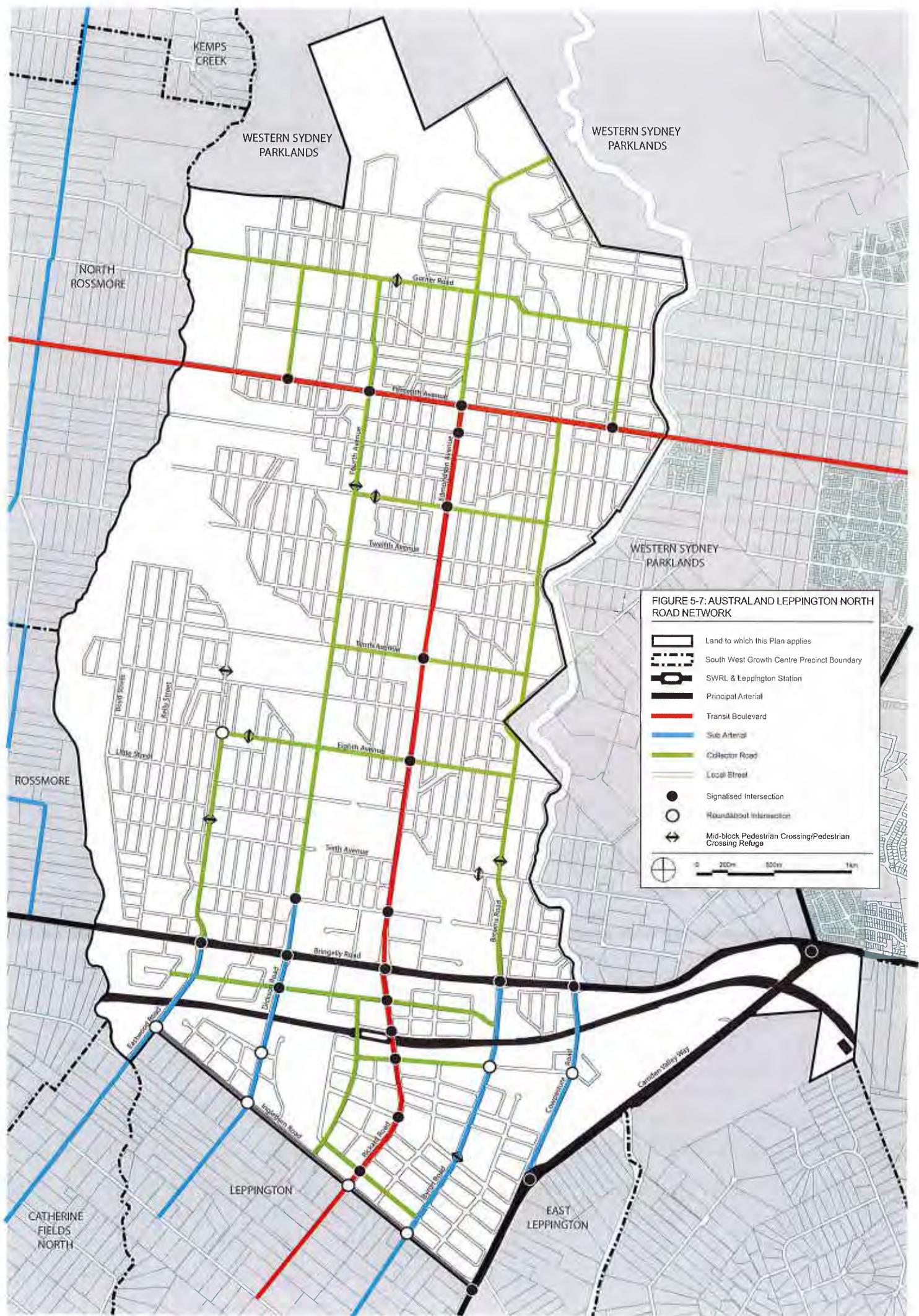
It is presumed that these pedestrian facilities which exist on Edmondson Avenue and Tenth Avenue will be replaced by the new intersection traffic signals.

TRANSPORT SERVICES

Details of the planned bus services are provided on the diagram overleaf with the principal features being:

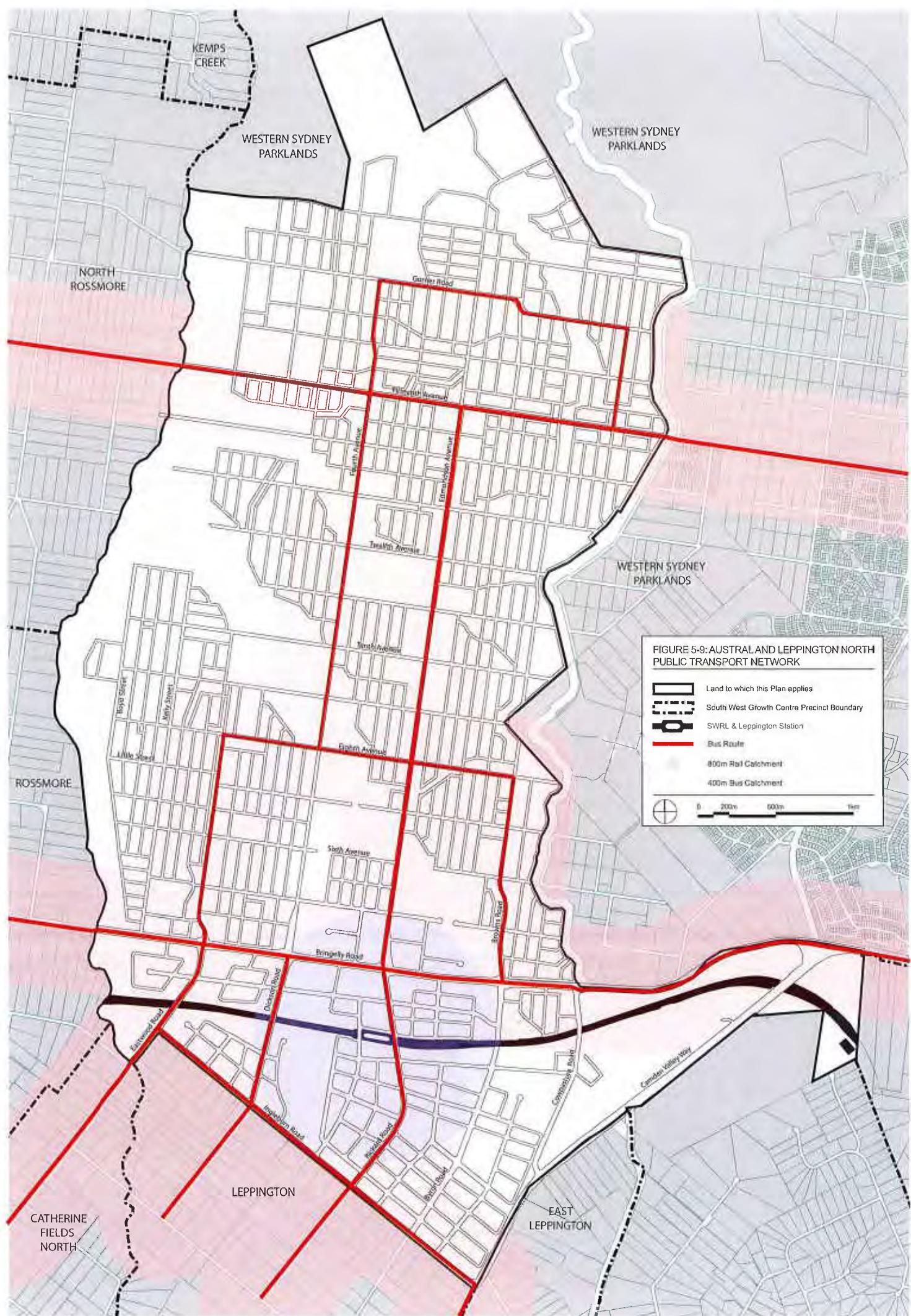
- the bus priority corridor along Edmondson Avenue
- the bus routes connecting along Fourth Avenue and Eighth Avenue

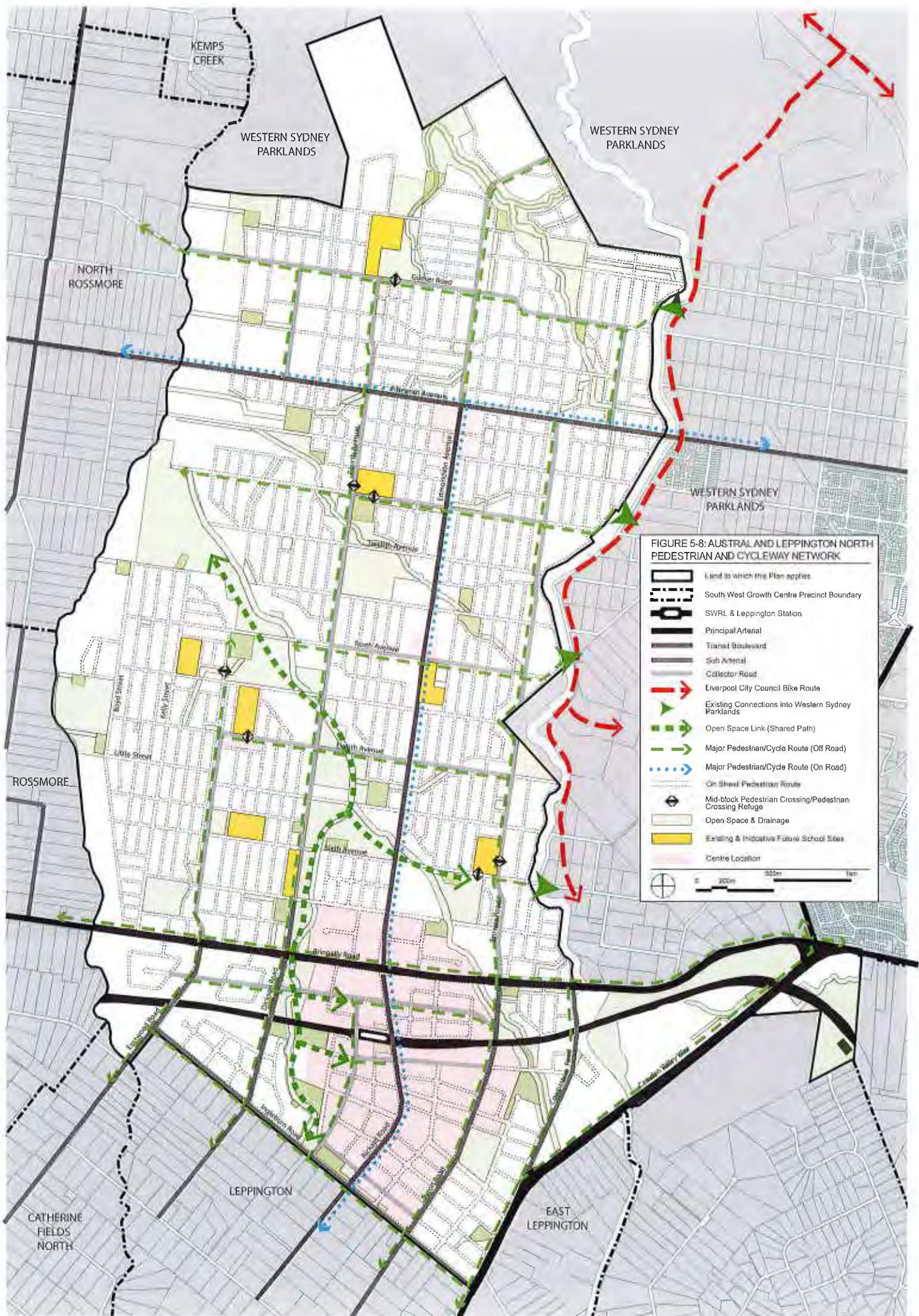




BICYCLE AND PEDESTRIAN NETWORK

Details of the planned bicycle and pedestrian network are provided on the diagram overleaf. There will be dedicated on-street bicycle lanes along Edmondson Avenue and a shared off-street path along the Tenth Avenue east-west route.





5. ACCESS AND TRAFFIC

ACCESS

It is highly desirable to have both pedestrian and vehicle access to Edmondson Avenue due to the flexibility that this will provide and to avoid a concentration of vehicle movements onto the existing access on Tenth Avenue.

The proposed provision of traffic signals at the Tenth Avenue intersection will replace the existing pedestrian crossing and will also result in some change to the kerbside parking arrangements as it would seem to be undesirable to retain school set-down/pick-up provisions on the western side of the road (as exist) with these future changed circumstances.

The proposed access connection on Edmondson Road will:

- be located on a straight and level section of road and will have appropriate sight distances
- be well removed from the Tenth Avenue intersection
- be restricted to left turn IN/OUT by the proposed central median island

TRAFFIC

The RMS Technical Direction TDT 2013-4b indicates a weekday peak generation for Housing for Seniors of 0.40vtph, however this is for the “site peak” and not the AM or PM road network peaks. It is also an average of numerous types of aged care accommodation (some being high care with significant staffing) and an average of Metropolitan and Non Metropolitan sites.

In reality the RMS data is not entirely relevant to the proposed development, however if the details are extracted for the Network Peak for the Metropolitan Area sites the average traffic generation is 0.26 vtph per dwelling. Application of this to the proposed 145 ILU's indicates a generation of some 40vtph with the assessed distribution as follows:

AM		PM	
IN	OUT	IN	OUT
15	25	25	15

It is apparent that a minor proportion of these movements could choose to access via the Tenth Avenue driveway while the others will be spread to the north and south on Edmondson Avenue although the majority will be to/from the north.

Access movements on Edmondson Avenue will be limited to left turn IN/OUT while the provision of traffic signals at the Edmondson Avenue and Tenth Avenue intersection will assist the access movements occurring at that intersection.

It is apparent that the traffic generation of the proposed development will be of a “low order” and will not result in any adverse traffic implications.

6. PARKING

The SEPP (Housing for Seniors or People with a Disability) 2004 specifies the following minimum parking provision for “Self Contained Dwellings (ILU’s)”:

1.0 space for each 5 dwellings for development by a Social Housing Provider

It is proposed to provide 145 parking spaces in the basements for residents (i.e. 1 space for each apartment) as well as 30 spaces for visitors (i.e. 1 space per 5 apartments). It is also proposed to provide 26 bicycle spaces. It is apparent that the proposed parking provision will be quite adequate and appropriate and there will be an appropriate quantum of accessible spaces for residents and visitors.

7. INTERNAL CIRCULATION, SERVICING AND BUS STOP

INTERNAL CIRCULATION

The design of the access, circulation and car parking areas will comply with the requirements of AS2890.1 and 6 particularly in terms of bays, grades, aisles, headroom and manoeuvring area. It is noted that there will be downward grades towards the frontage footways and this will obviate any issue in relation to sighting of pedestrians.

SERVICING

Refuse will be collected by a small contract truck, however a turning path assessment for a 11.0m truck turning as required along the driveway is provided in Appendix C. Small service vehicles (e.g. service personnel) will be able to park in the visitor spaces while any occasional delivery truck requirements will be satisfied by use of the loading bays or temporary standing on the access road system.

Bus STOP

Provision has been made for a bus stop with shelter to be provided on the Edmondson Avenue site frontage just to the south of the proposed access driveway. The proposed bus stop will be suitably located and will provide for suitable sight distances as well as pedestrian access.

8. CONCLUSION

The proposed Austral Tobruk Independent Living development at Austral will provide much needed accommodation in a peaceful environment. Assessment of the proposal has concluded that:

- * the provisions for vehicle access and servicing will be satisfactory and appropriate
- * there will be no adverse traffic implications
- * the proposed parking provision will be quite adequate and will comply with the SEPP criteria

APPENDIX A

APPROVED PLANS



TENTH AVENUE

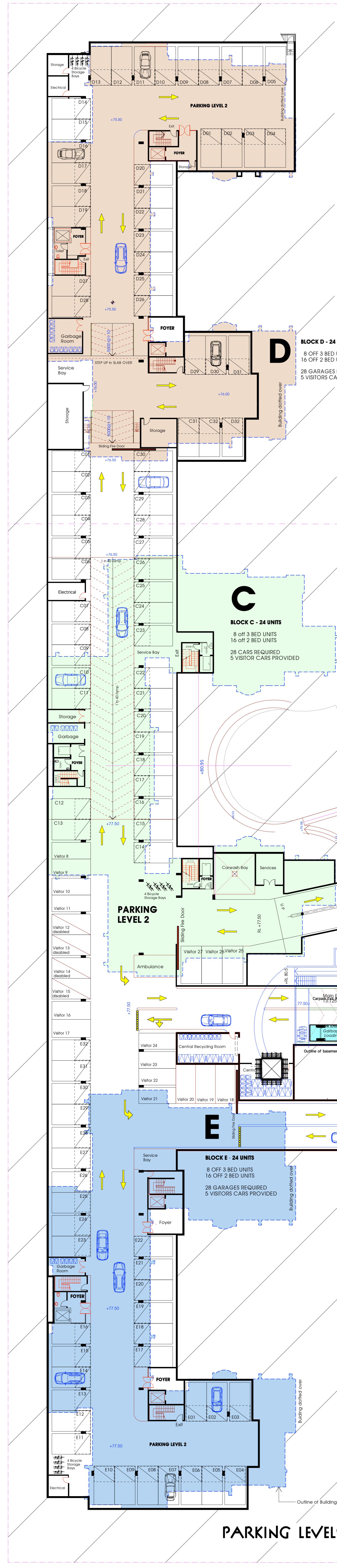
EDMONDSON AVENUE

ARCHITECTS
 Studio 3, Level 3,
 25 Buckingham Street
 SURRY HILLS NSW 2010
 p: 02 9310 4211
 f: 02 9310 4203
 e: info@CLArchitects.com.au
 w: www.CLArchitects.com.au
 ABN 65 141 119 413

© The concepts and information contained in this document are the copyright of Campbell Luscombe Architects Pty Ltd. Using or copying this document (or any part of it) without the written permission of Campbell Luscombe Architects Pty Ltd would constitute an infringement of that copyright. Use of the drawings is governed by the terms & conditions of the Client/Architect agreement.

Additionally, use by any third parties for any purpose whatsoever is on the proviso that these terms and conditions have been met. Drawings shall not be used for construction purposes until issued by the Architect for construction.

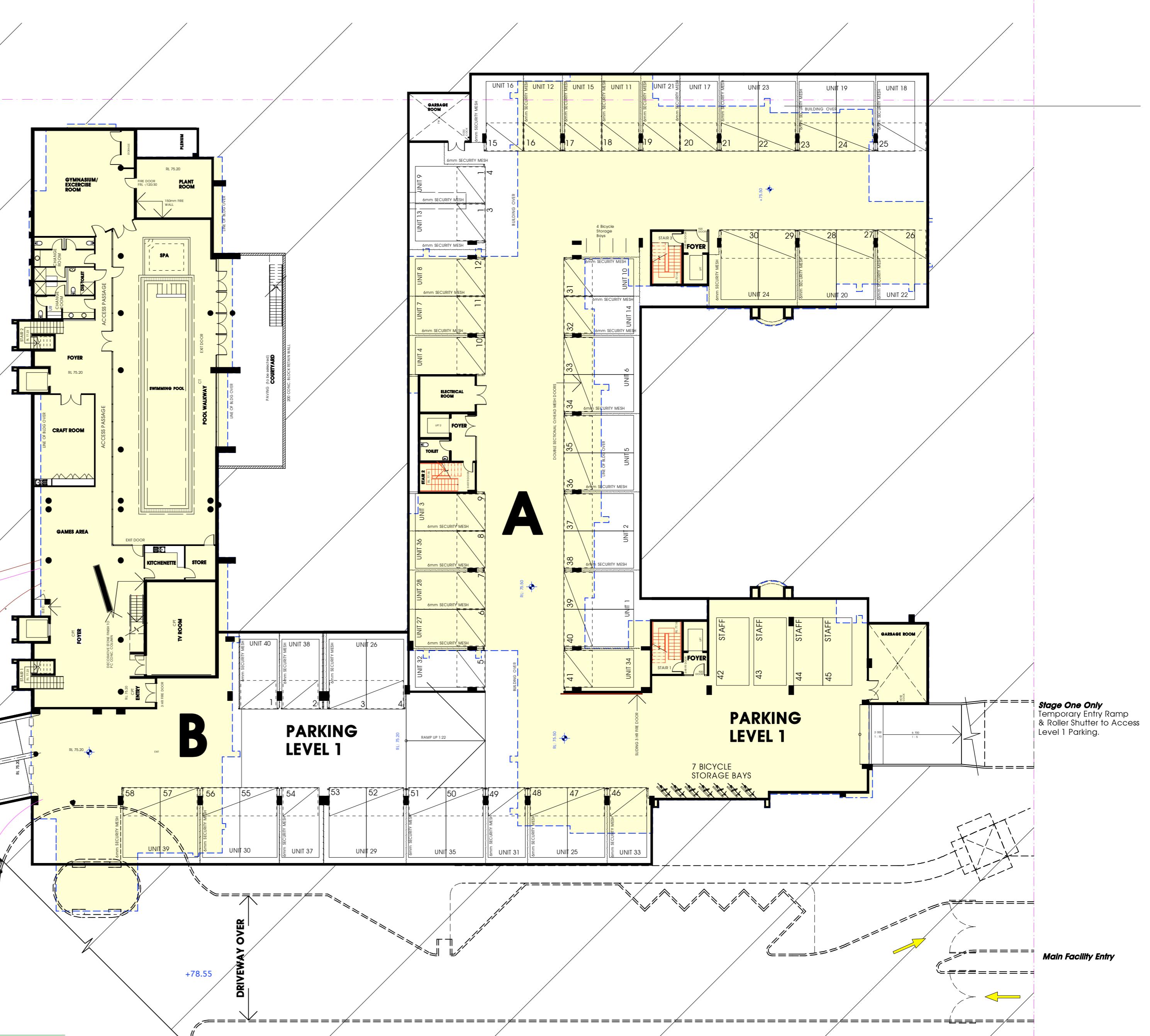
ISSUE DATE REVISION
 RSL LifeCare
 TSA MANAGEMENT
 Project
AUSTRAL TOBRUK
 Project Address
 120 TENTH AVENUE,
 AUSTRAL NSW 2171
 Drawing
**STAGE 2
SITE FEASIBILITY**
 PROJECT # CLA2015-0136 REV
 DATE May 2015
 SCALE @ A1 NTS
 DRAWN MT
 FS01



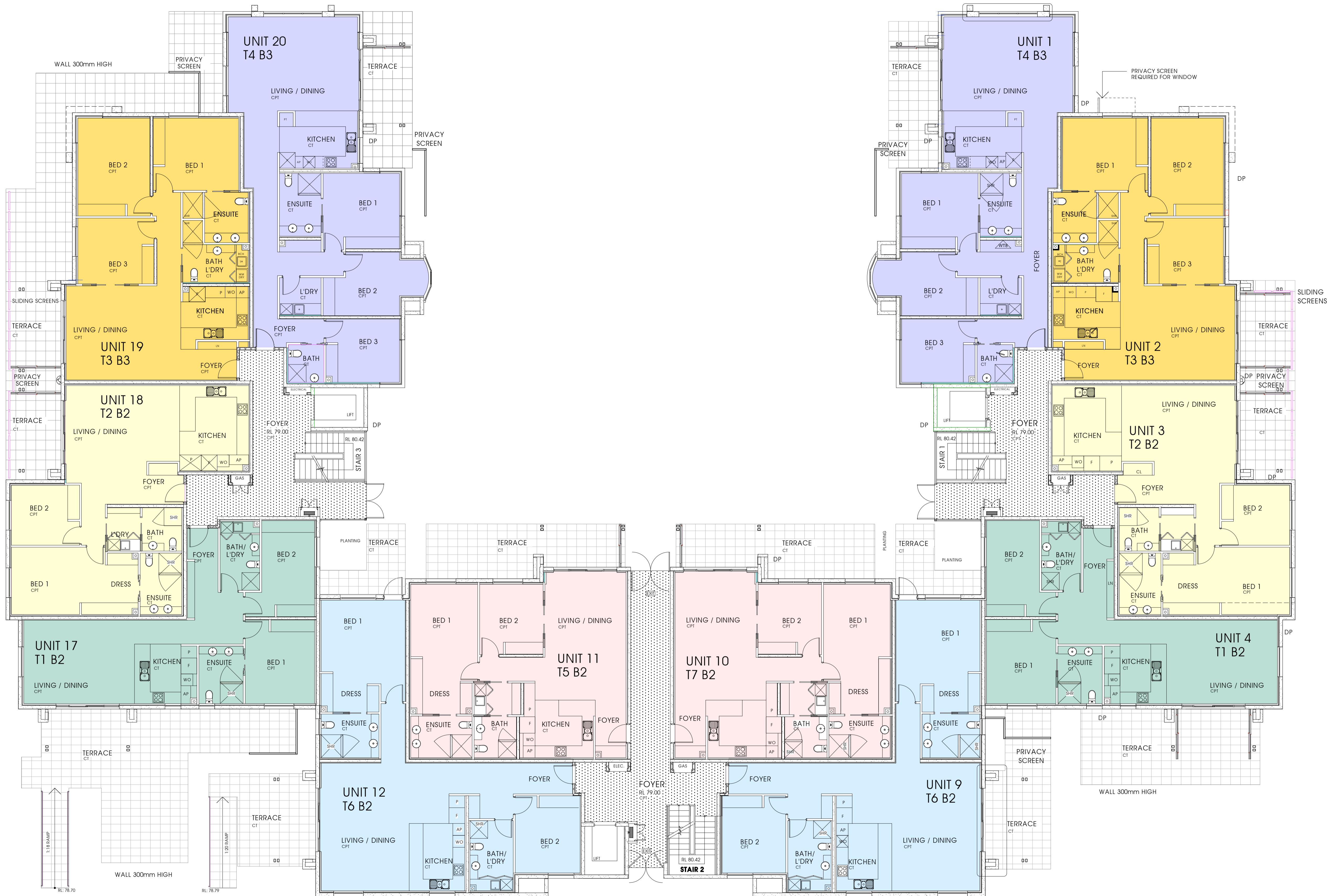
35 Buckingham Street
SURRY HILLS NSW 2010
p: 02 9310 4211
f: 02 9310 4203
e: info@CLArchitects.com.au
w: www.CLArchitects.com.au
ABN 65 141 119 413

© The concepts and information contained in this document are the copyright of Campbell Luscombe Architects Pty Ltd. Using or copying this document (or any part of it) without the written permission of Campbell Luscombe Architects Pty Ltd would constitute an infringement of that copyright. Use of the drawings is governed by terms & conditions of the Client/Architect agreement.

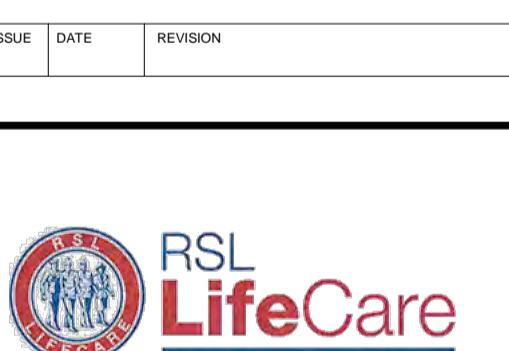
Additionally, use by any third parties for any purpose whatsoever is on the proviso that these terms and conditions have been met. Drawings shall not be used for construction purposes until issued by the Architect for construction.



ISSUE	DATE	REVISION
CLIENT		
PROJECT		
A U S T R A L T O B R U K		
PROJECT ADDRESS		
120 TENTH AVENUE		
A U S T R A L N S W 2171		
DRAWING		
PARKING LEVELS		
For All Buildings		
PROJECT #	CLA2015-0136	DWG #
DATE	13 May 2015	REV
SCALE @ A1	1:100	
DRAWN	FS 06	BG



GROUND FLOOR PLAN
 LEVEL 2 BUILDING C & D



PROJECT

A U S T R A L T O B R U K

PROJECT ADDRESS
 120 TENTH AVENUE
 AUSTRAL NSW 2171

DRAWING

GROUND FLOOR - Level 2
 Building A

PROJECT # CLA2015-0136 DWG # REV

DATE 13 May 2015

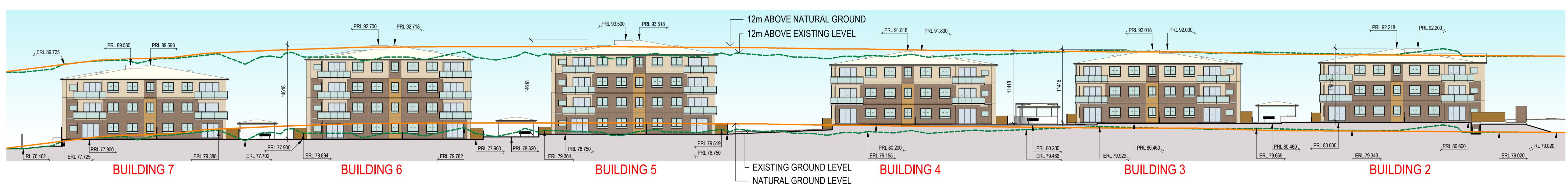
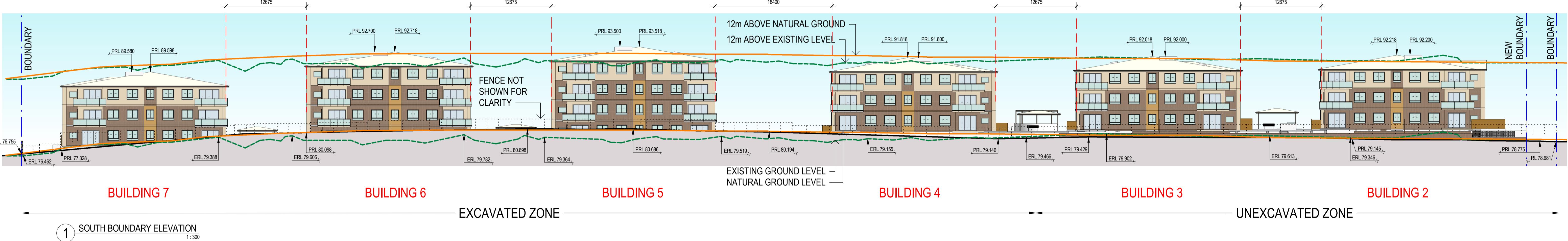
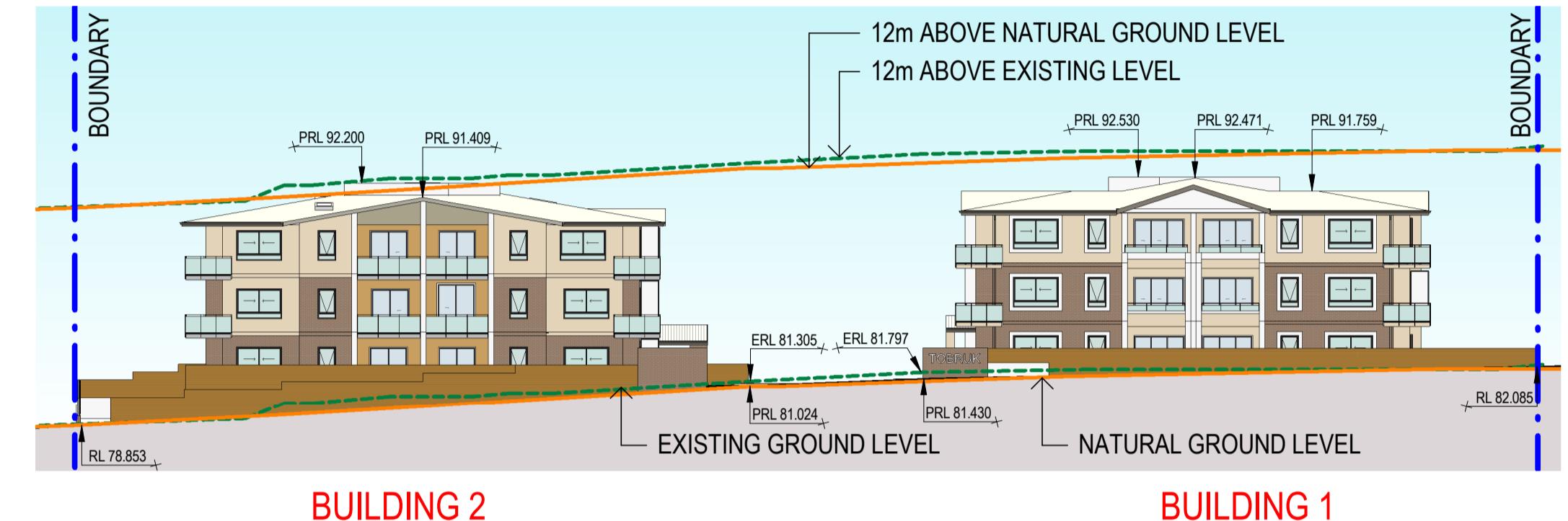
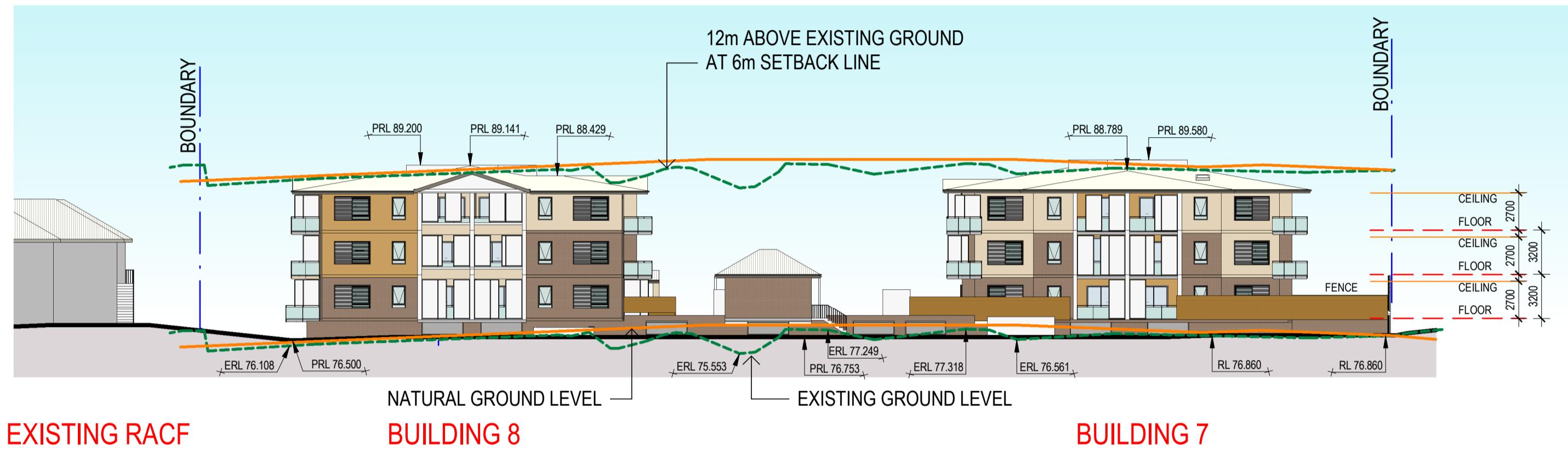
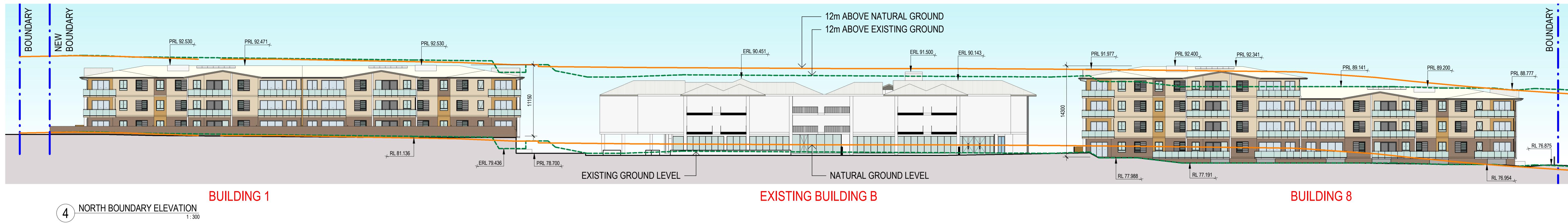
SCALE @ A1 1:100

DRAWN bg

FS 02

APPENDIX B

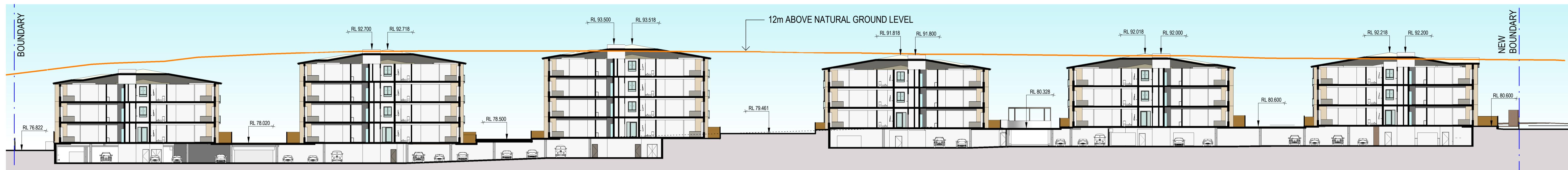
DEVELOPMENT PLANS



LEVELS
RL - COMBINED EXISTING AND PROPOSED LEVEL
ERL - EXISTING LEVEL
PRL - PROPOSED LEVEL

NATURAL GROUND LINE PRIOR TO CONSTRUCTION OF EXISTING BUILDINGS.
EXISTING GROUND LINE AFTER PREVIOUS EXCAVATIONS.

THE LINES INDICATING THE 12m MAXIMUM ALLOWABLE BUILDING HEIGHTS ARE SHOWN AT THE MAIN FAÇADE, USUALLY THE 6m SETBACK LINE, AND DO NOT TAKE INTO CONSIDERATION THAT THE GROUND MAY RISE HIGHER TOWARDS THE RIDGE LINE.



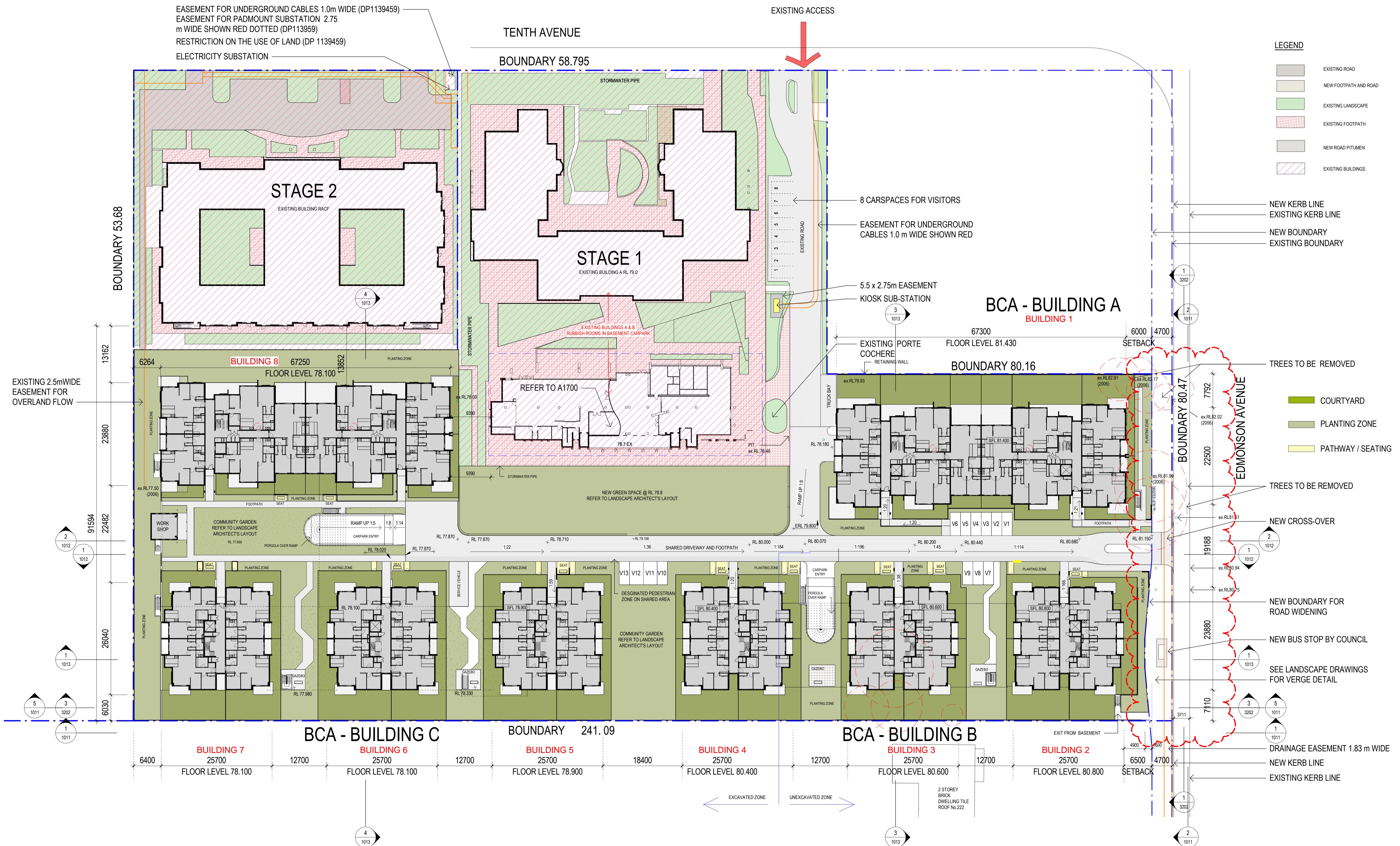
1 SECTION THROUGH BUILDING 2-7
1:300



3 SECTION THROUGH BUILDING 1 AND 3
1:300



4 SECTION THROUGH BUILDING 8 AND 6
1:300



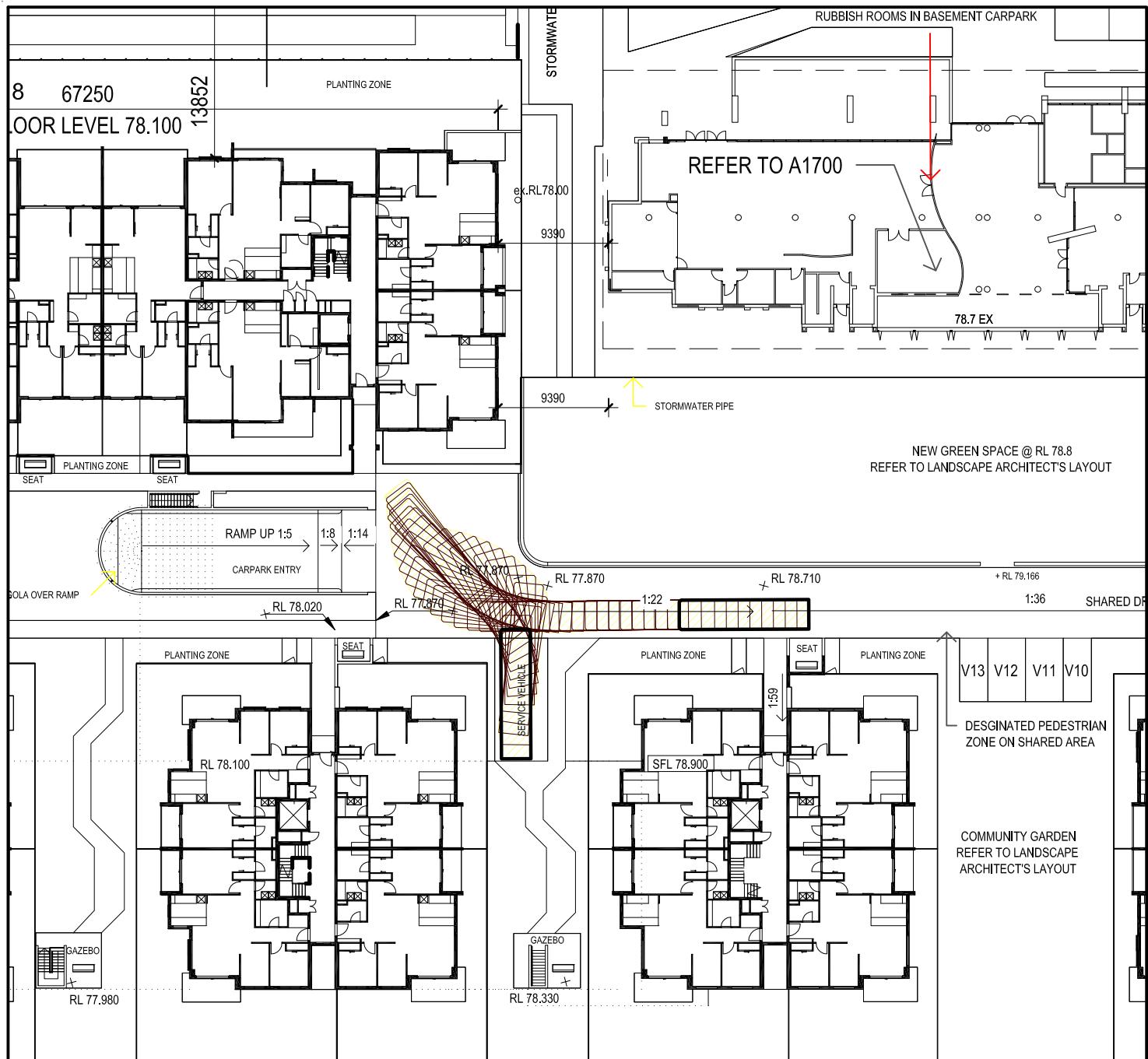
TENTH AVENUE

EDMONDSON AVENUE



APPENDIX C

TURNING PATH ASSESSMENT

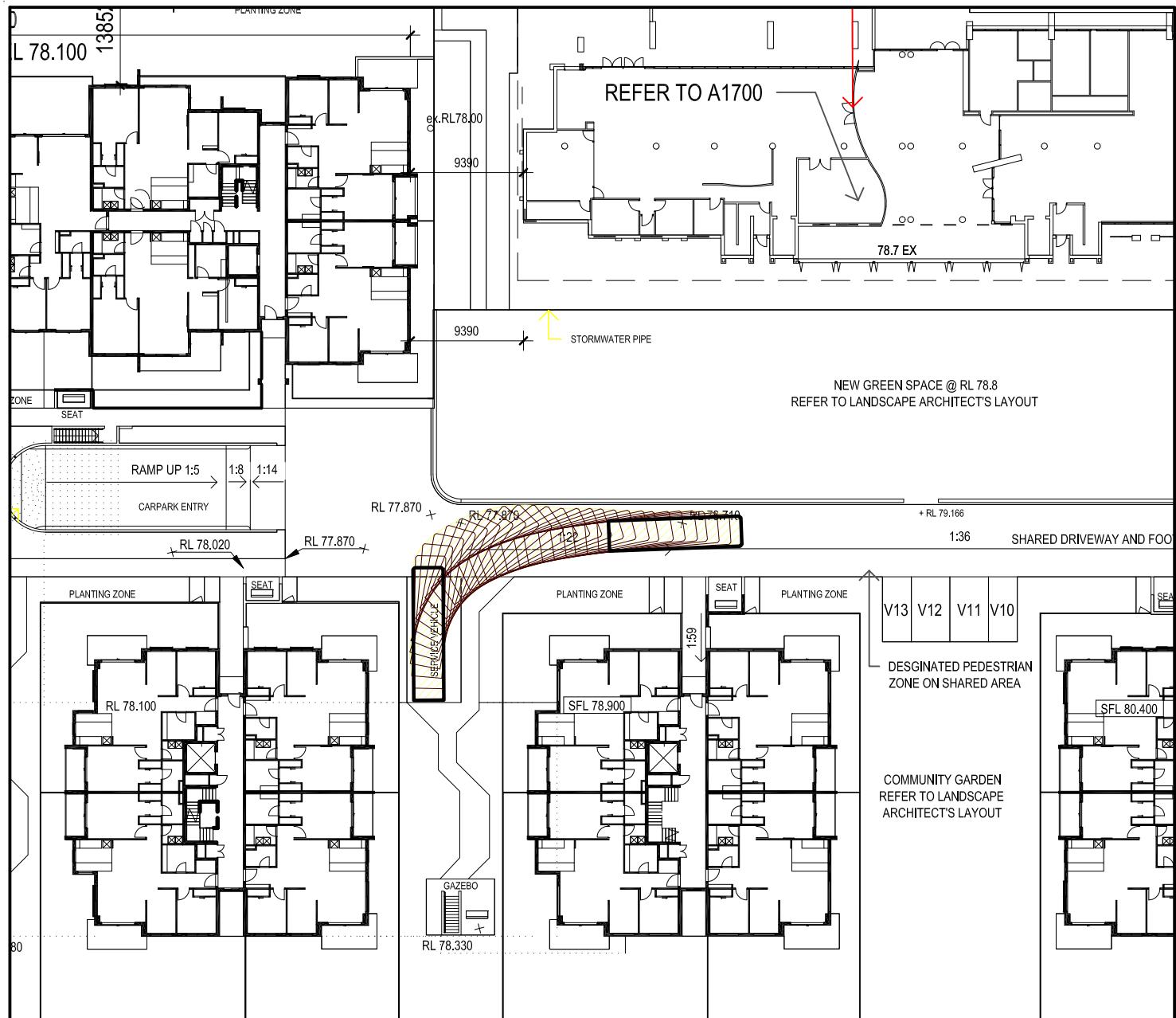


LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTrack V9.21 in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



**SWEPT PATH ANALYSIS
OF AN 11m RIGID
VEHICLE ENTERING THE SITE**



BCA - BUILDING C

BOUNDARY 241.09

BUILDING 6

25700

FLOOR LEVEL 78.100

BUILDING 5

25700

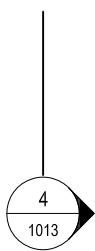
FLOOR LEVEL 78.900

BUILD

257

18400

FLOOR LEV

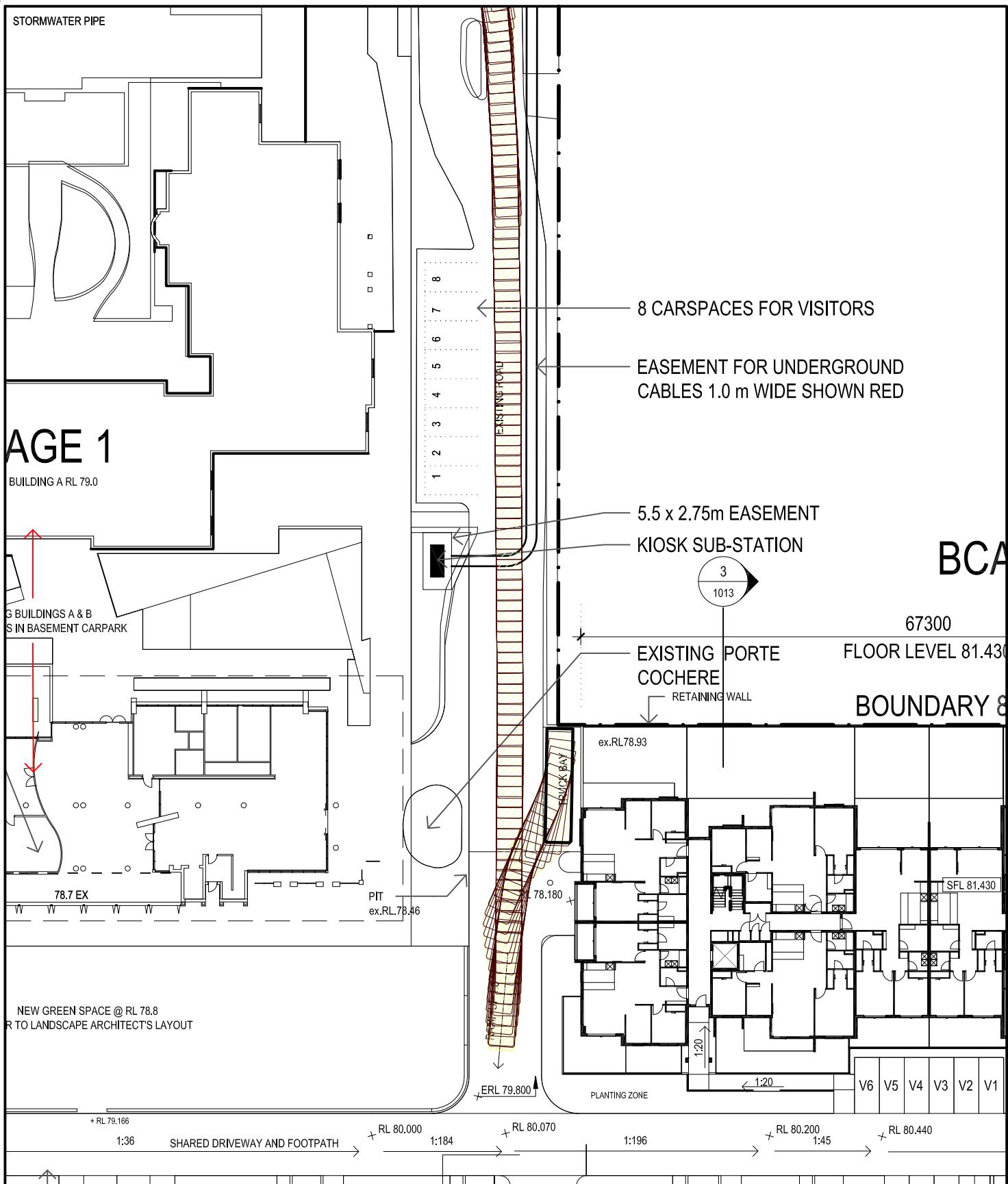


LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTrack V9.21 in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



**SWEPT PATH ANALYSIS
OF AN 11m RIGID
VEHICLE EXITING THE SITE**

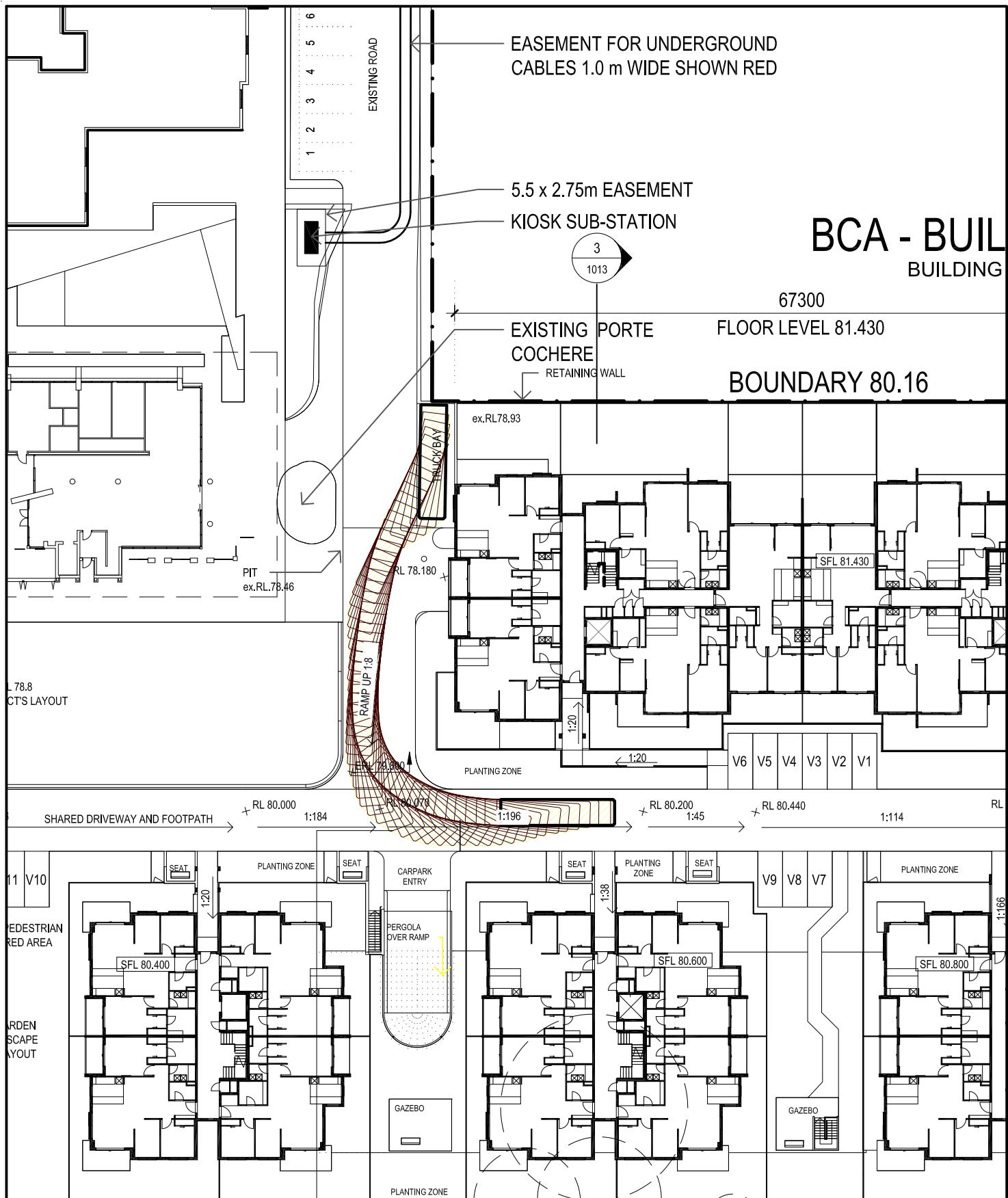


LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTrack V9.21 in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



**SWEPT PATH ANALYSIS
OF AN 11m RIGID VEHICLE
ENTERING THE SITE**



LEGEND

This drawing has been prepared using vehicle modelling computer software AutoTrack V9.21 in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



SWEPT PATH ANALYSIS OF AN 11m RIGID VEHICLE EXITING THE SITE