

**PROPOSED MIXED USE DEVELOPMENT
BLOCKS A & B**

PITT STREET, MERRYLANDS

Planning Proposal

***Assessment of Traffic and
Parking Implications***

December 2017
(Rev E)

Reference 16257

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1. INTRODUCTION

This report has been prepared to accompany a Planning Proposal to Cumberland Council seeking modifications to the planning provisions for residential apartment development on Block A and B of the former Rositano Furniture site on the corner of Pitt Street and Terminal Place at Merrylands (Figure 1)

Numerous established centres in the Metropolitan Area with good transport services are undergoing significant revitalisation with outmoded/under-utilised sites being redeveloped for residential apartments above ground level retail uses.

The Merrylands Centre reflects these evolving circumstances and the subject development site is located with convenient access to the rail and bus services as well as retail, entertainment facilities. The site comprises 4 stages and the current development circumstances are as follows:

- Block A & B – Stage 1 DA approved and Stage 2 plans prepared
- Block C – DA approved
- Block D – DA assessment
- Block E – Pending

Detail planning and architectural design for a Stage 2 DA for Blocks A & B established that the existing LEP and proposed Neil Street Precinct provisions for the site would enable development comprising:

LEP	Neil Street Precinct
525 Apartments	647 Apartments
530m ² Retail floorspace	530m ² Retail floorspace

The Planning Proposal for development of Blocks A & B would provide for an outcome comprising:

- 758 Residential Apartments
- 564m² Retail floorspace
- 2,529m² Commercial floorspace

The purpose of this report is to:

- * describe the site, the development processes to date and the envisaged development with the Planning Proposal
- * describe the existing road network and traffic conditions in the area
- * describe the proposed future road network
- * assess the potential traffic implications
- * assess the adequacy of the envisaged parking provision
- * assess the envisaged vehicle access, internal circulation and servicing arrangements



LEGEND



LOCATION

FIG 1

2. PLANNING PROPOSAL

2.1 SITE, CONTEXT AND EXISTING USE

The site (Figure 2) is part of a large landholding being an irregular shaped area of some 16,000m² bounded by Pitt Street, Terminal Place and Gladstone Street on the eastern edge of the Merrylands Centre. The site contained the former Rositano bulky goods building comprising:

Rositano Furniture	4,000 m ²
Bing Lee	1,950 m ²
Total:	5,950 m²

There was an existing parking area of some 190 spaces with access on Gladstone Street.

The site, which is zoned part B4 – Mixed Use and part R4 – High Density Residential, is largely surrounded by retail/commercial uses with the large Stockland Centre being on the opposite side of Pitt Street. Merrylands Railway Station is located just to the south and there is a residential area extending to the east of the railway line.

2.2 PRECINCT PLANNING

The planning provisions for the future development of the Merrylands Centre are contained in Part M of Holroyd DCP 2013. The stated objectives of the Merrylands Centre Controls include:

- renew and revitalise the centre
- provide an active vibrant centre
- promote public transport use, cycling, walking and reduce reliance on private car travel
- improve pedestrian and vehicle traffic movement within the centre



SITE

LEGEND



SITE

FIG 2

Details of the current planning provisions are contained in the LEP 2013 and DCP extracts reproduced in Appendix A. These provisions specify the building height and FSR allowances which in turn direct the floorspace and density for each site. Council commissioned a microsimulation road network traffic model which incorporated the projected future development yield outcomes and the upgraded road system. This analysis confirmed a satisfactory operational performance for the road network outcome with development under the prescribed planning provisions.

2.3 OTHER DEVELOPMENT

The status of the other stages in the precinct is as follows:

	Block C (DA Approved)	Block D (DA Submitted)	Block E (Pending)
Apartments	358	147	
Retail / Commercial	2,300m ²	130m ²	

The overall precinct development includes modification of the existing Gladstone Street roadway and construction of New Street connecting between Neil Street and Terminal Place as well as a new access road for Blocks A and B.

2.4 POTENTIAL DEVELOPMENT

Extensive planning and design have been completed for a proposed Stage 2 development scheme for Blocks A & B within the context of the proposed Neil Street Precinct planning provisions (FSR etc.).

This development scheme comprises:

	Block A	Block B
<u>Residential</u>	60 x one-bed apartments	126 x one-bed apartments
	180 x two-bed apartments	241 x two-bed apartments
	26 x three-bed apartments	14 x three-bed apartments
Total:	266 apartments	381 apartments
Grand Total:	647 apartments	
<u>Retail</u>	530m ² GFA	
<u>Car parking</u>	1,063 spaces	

This development density complies entirely with that prescribed in the proposed planning provisions and it would be proposed to construct a new access road system together with large landscape and patio areas.

Details of the potential development scheme are provided on the architectural drawings prepared by Plus Architecture which are reproduced in part in Appendix B.

2.5 PLANNING PROPOSAL

The Planning Proposal is to amend the proposed Neil Street Precinct planning provisions increasing the permitted FSR and height allowances to enable the construction of a 25-level tower building.

The envisaged development outcome under this proposal comprises:

- 151 x one-bed apartments
- 531 x two-bed apartments
- 76 x three-bed apartments
- Total 758 apartments**
- 564m² retail floorspace
- 2,529m² commercial floorspace

It is envisaged that a total of 1,177 parking spaces would be provided in 5 basement levels with vehicle access (reflecting the Stage 2 DA design) comprising:

- 2 combined ingress / egress driveways for the 2 separate basement car park areas located on the new access road
- 2 loading dock driveways on the new access road.

Details of the envisaged development accompany the Planning Proposal are provided on the plans prepared by Plus Architecture.

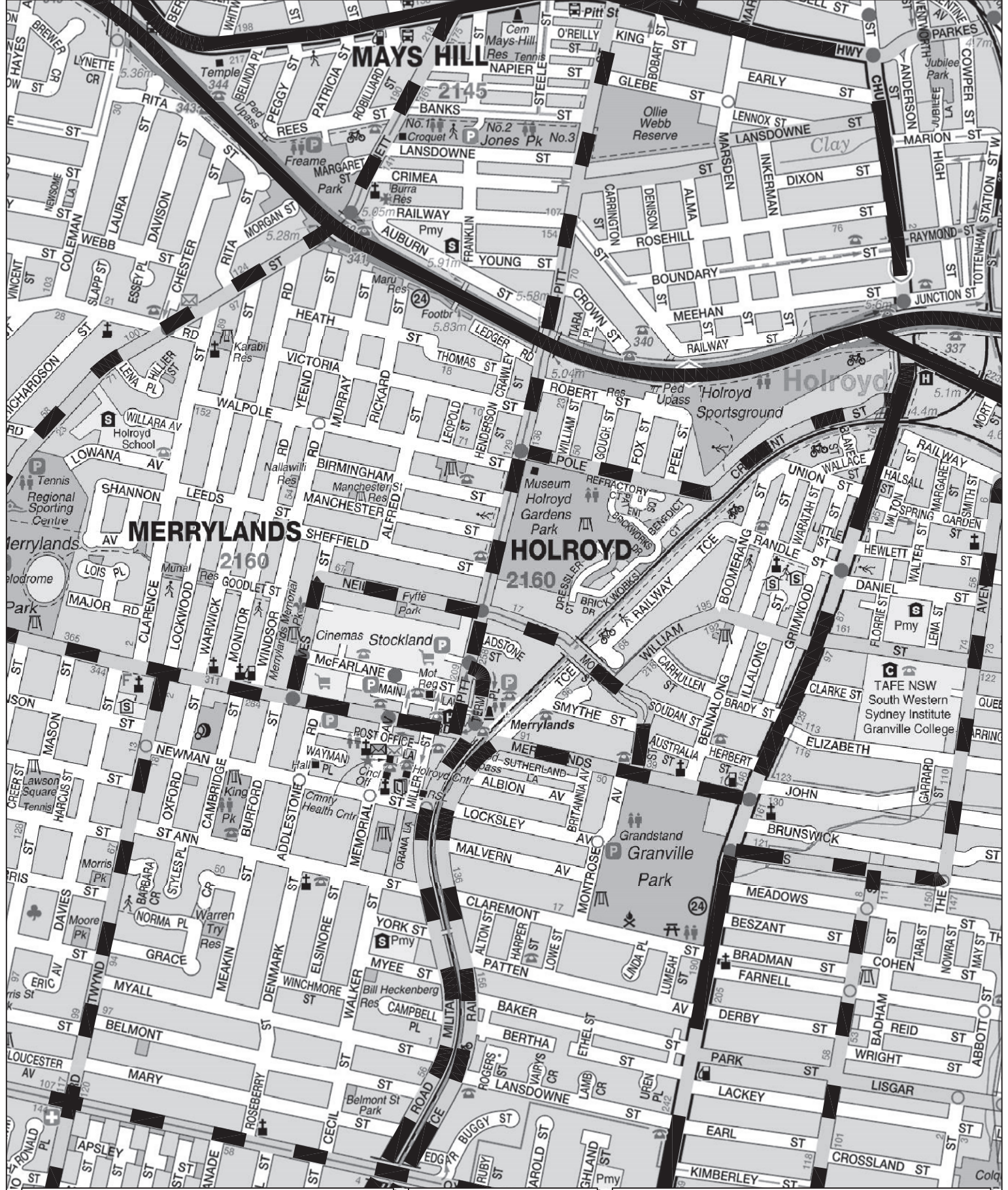
3. ROAD NETWORK AND TRAFFIC CONDITIONS

3.1 ROAD NETWORK




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

- * *M4 Motorway* – a State Road and arterial route connecting between Strathfield and the Blue Mountains crossing
- * *Great Western Highway* – a State Road and arterial route which connects between Sydney, Parramatta and Penrith
- * *Woodville Road* – a State Road and arterial route which connects between the Hume Highway and Great Western Highway/M4
- * *Merrylands Road* – a Regional Road and collector route extending the west from Merrylands to Greystanes
- * *Pitt Street* – a Regional Road and ‘collector’ route linking between Merrylands and Parramatta which in the southern most part forms a one-way pair with Terminal Place
- * *Neil Street* – part of a Regional Road and ‘collector’ route linking over the railway line between Merrylands Road and Woodville Road
- * *Gladstone Street* – a short local access cul-de-sac

Pitt Street and Gladstone Street are relatively straight and level with a 12.8 metre wide roadways while Neil Street in the vicinity of the site is also 12.8m wide rising and narrowing to the east where it crosses over the railway line with supplementary right turn lanes at the Pitt Street intersection.



LEGEND

-  ARTERIAL
-  SUB-ARTERIAL
-  COLLECTOR



ROAD NETWORK

FIG 3

3.2 TRAFFIC CONTROLS

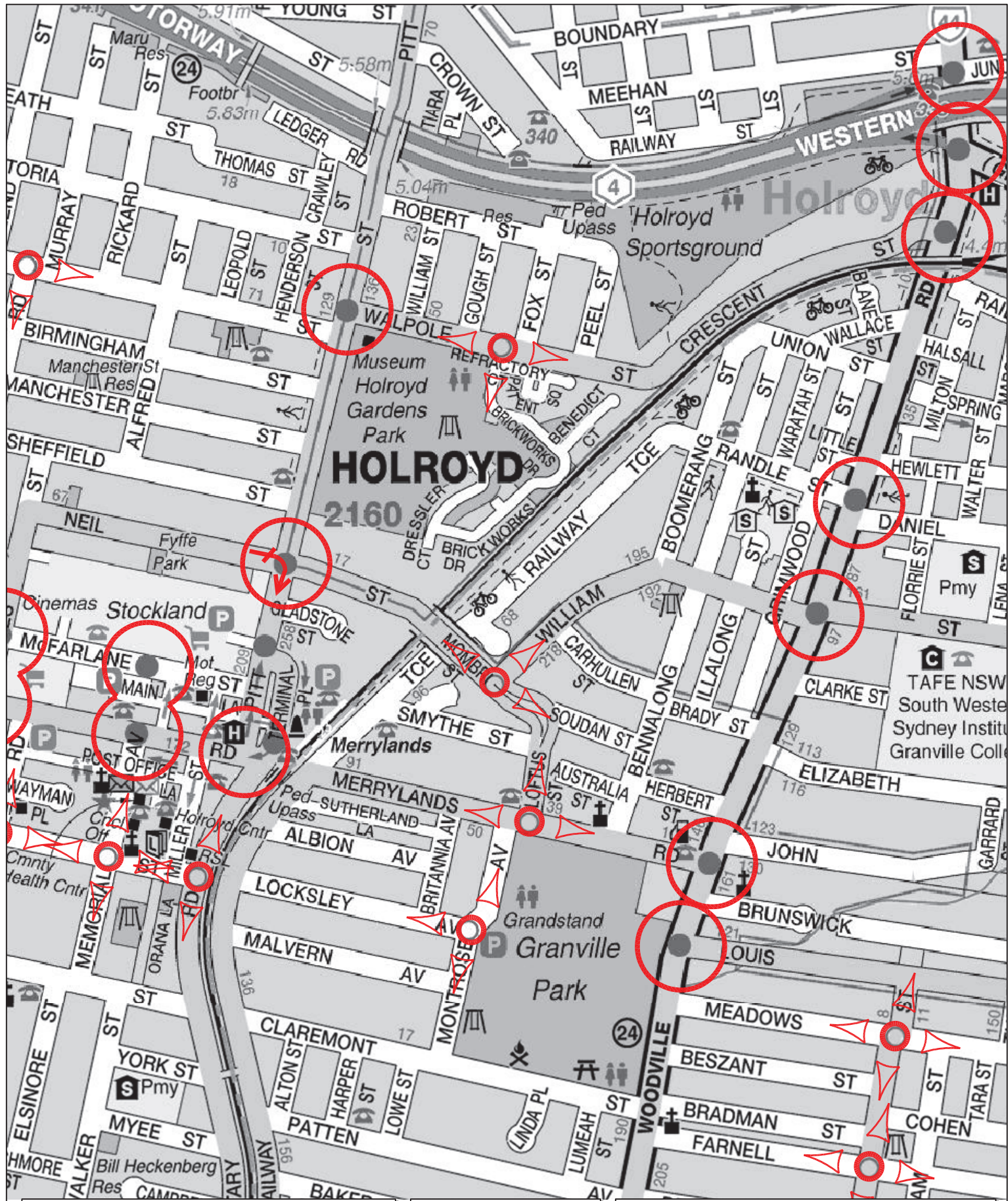
The traffic controls applied to the road system in the vicinity of the site (Figure 4) include:

- * the traffic signals at intersections along the Pitt Street route including the Merrylands Road and Neil Street intersection as well as pedestrian signals just to the north of Terminal Place
- * the 50 kmph urban speed zone on the street system near the site
- * the CLEARWAY restrictions (AM and PM) along Pitt Street and Neil Street
- * the former ONE-WAY north traffic restriction in the southern section of Pitt Street has recently been altered to two-way while a one-way south traffic restriction remains in Terminal Place
- * the sections of full time NO STOPPING restrictions on Pitt Street, Neil Street and Terminal Place




3.3 TRAFFIC CONDITIONS

An indication of the traffic conditions on the road system in the area is provided by data published by RMS and surveys undertaken as part of this study. The RMS data is published in terms of AADT for the following:

	AADT
Neil Street at Railway Bridge	31,520
Pitt Street at M4	19,512



LEGEND

-  TRAFFIC SIGNAL CONTROL
-  ROUNDABOUT
-  RESTRICTED TURNING MOVEMENT



TRAFFIC CONTROLS

FIG 4

Surveys undertaken at the Pitt Street and Neil Street intersection during the morning and afternoon peak periods reveal the following:

		AM	PM
Pitt Street	Northbound	201	579
	Right-turn	359	591
	Left-turn	34	51
	Southbound	595	229
	Right-turn	99	85
	Left-turn	358	184
Neil Street	Eastbound	349	351
	Left-turn	135	68
	Westbound	349	351
	Right-turn	310	420
	Left-turn	308	303

The operational performance of the intersection has been assessed using the SIDRA model and the results of that assessment are summarised in the following indicating that the intersection is subject to some congestion during the peak periods. The criteria for interpreting the model output is reproduced overleaf.

	AM	PM
Level of Service	D	E
Degree of Saturation	0.86	0.90
Av Vehicle Delay	48	66.5

3.4 TRANSPORT SERVICES

Merrylands Railway Station on the Main Western Line is located immediately to the south of the site. Bus services focussing on the railway station include Routes 802, 804, 806 which operate along Pitt Street as well Routes 810, 811, 820-822. It is apparent that the site is located with very convenient access to public transport services connecting to the Metropolitan transport network. See Appendix C details.

Criteria for Interpreting Results of SIDRA Analysis

1. Level of Service (LOS)

LOS	Traffic Signals and Roundabouts	Give Way and Stop Signs
'A'	Good	Good
'B'	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
'C'	Satisfactory	Satisfactory but accident study required
'D'	Operating near capacity	Near capacity and Accident Study required
'E'	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode	At capacity and requires other control mode
'F'	Unsatisfactory and requires additional capacity	Unsatisfactory and requires other control mode

2. Average Vehicle Delay (AVD)

The AVD provides a measure of the operational performance of an intersection as indicated on the table below, which relates AVD to LOS. The AVD's listed in the table should be taken as a guide only as longer delays could be tolerated in some locations (ie inner city conditions) and on some roads (ie minor side street intersecting with a major arterial route).

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabouts	Give Way and Stop Signs
A	Less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory but accident study required
D	43 to 56	Operating near capacity	Near capacity and accident study required
E	57 to 70	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode	At capacity and requires other control mode

3. Degree of Saturation (DS)

The DS is another measure of the operational performance of individual intersections.

For intersections controlled by **traffic signals**¹ both queue length and delay increase rapidly as DS approaches 1, and it is usual to attempt to keep DS to less than 0.9. Values of DS in the order of 0.7 generally represent satisfactory intersection operation. When DS exceeds 0.9 queues can be anticipated.

For intersections controlled by a **roundabout or GIVE WAY or STOP signs**, satisfactory intersection operation is indicated by a DS of 0.8 or less.

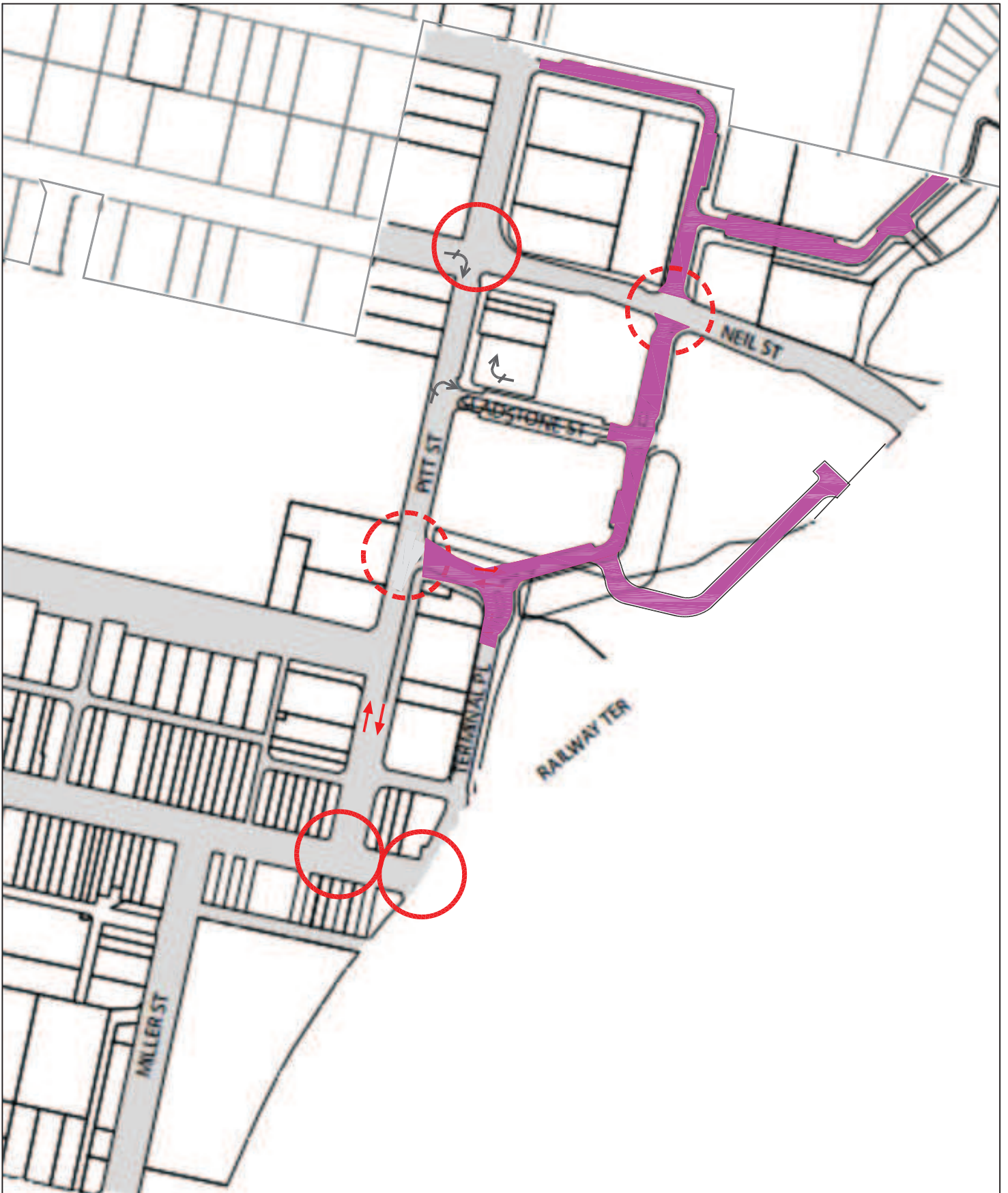
¹ the values of DS for intersections under traffic signal control are only valid for cycle length of 120 secs

3.5 FUTURE CIRCUMSTANCES

Future planning for the road system serving the Merrylands Centre includes:

- * widening of Pitt Street along the eastern side at Neil Street, widening of Neil Street easterly from Pitt Street and provision of a left-turn slip lane from Neil Street westerly to Pitt Street
- * provision of new roadway connecting from Terminal Place, linking with Gladstone Street and extending across Neil Street
- * future traffic signals at the Neil Street / New Road intersection
- * realignment of Walpole Street at Pitt Street to create a 4-way signal controlled intersection
- * provision of traffic signals at the Pitt Street and Terminal Place intersection

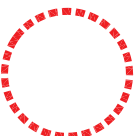
Details of the proposed changed road network and traffic controls are still subject to ongoing assessment; however, the current proposals are shown on Figure 5 and the SMEC diagram overleaf.



LEGEND



NEW ROADS

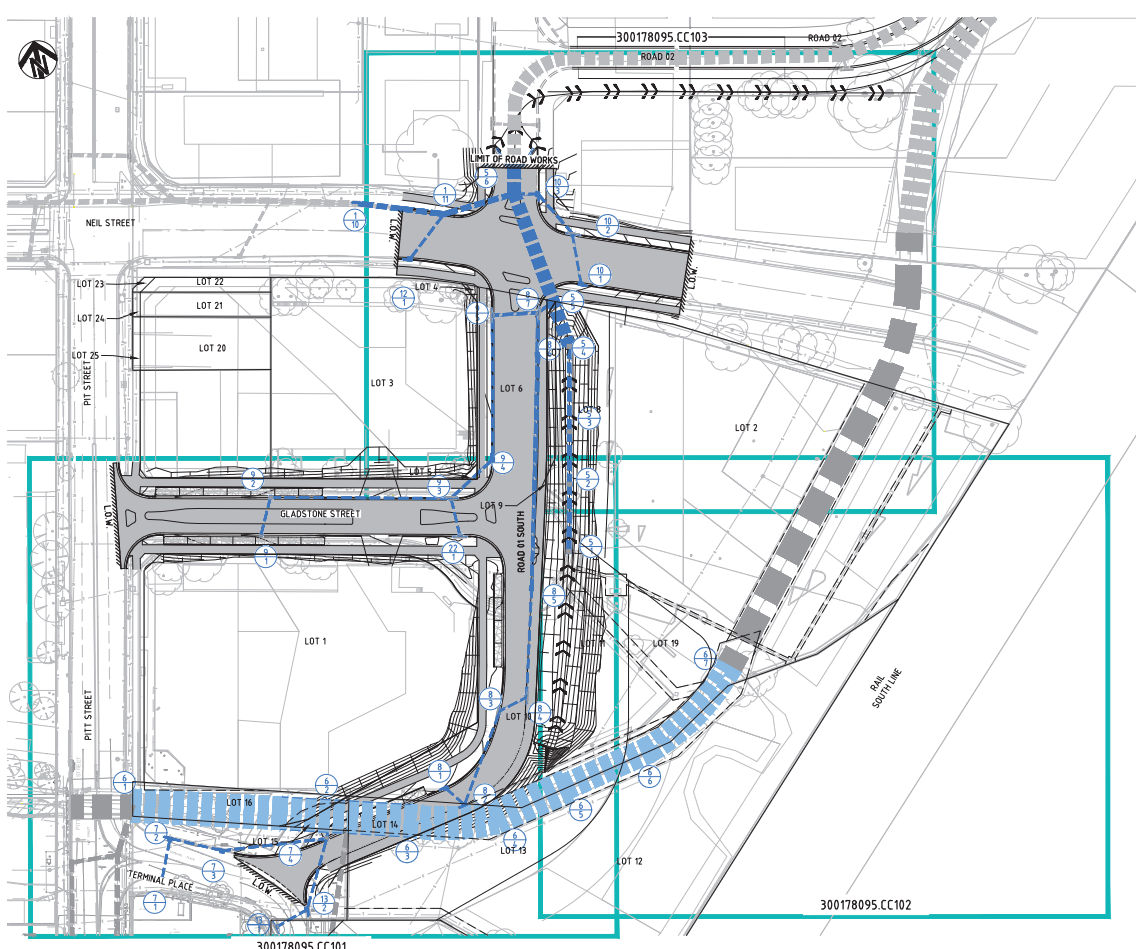


NEW TRAFFIC SIGNALS



PROPOSED ROAD SYSTEM

FIG 5



- LEGEND**
- EXISTING CADASTRAL BOUNDARY
 - ROAD RESERVE BOUNDARY
 - KERB AND GUTTER
 - DRAINAGE PIPE & PIT
 - EXISTING DRAINAGE PIPE
 - SHEET FRAME
 - ⊕ PIT LABEL



N°	DATE	DESCRIPTION	AMENDMENTS
02	31.03.2017	100% DESIGN	
01	15.12.2016	85% DESIGN	

CLIENT:

CUMBERLAND COUNCIL
P.O. BOX 42, 16 MEMORIAL AVE
MERRYLANDS NSW 2160

DESIGN CONSULTANT:

SMEC
INT'L PTY. LTD.
LEVEL 20, BERRY STREET
NORTH SYDNEY, NSW, 2060

PROJECT: CUMBERLAND COUNCIL
MERRYLAND FLOOD MITIGATION
AND ROAD DESIGN

Drawn: B. SAYASANE Checked: G. FLEMING File Name: 300178095.1E.CC031.dwg
Designed: L. RYAN Approved: C. KATSOULAS Date: JULY 2016

TITLE: AREA C - SEPARABLE PORTION E
GENERAL ARRANGEMENT
PLAN

Scale 1: 500 @ A1 Drawing N°
Sheet 3 of 42 300178095.1E.CC031

4. TRAFFIC

An indication of the traffic generation of the former bulky goods uses on the site is provided by the RMS Guidelines which specify a generation rate for “Bulky Goods” use during the weekday afternoon peak of 2.7vtp per 100m². This equates to some 160vtp for the total floorspace of 5,950m² and while there is no rate specified for the morning peak this would have been some 40vtp for staff arrival and deliveries etc.

An indication of the potential traffic generation of residential apartments is provided by the RMS Development Guidelines (TDT 2013-4b) which specifies rates of 0.19 and 0.15 vtp per apartment for the morning and afternoon peak periods respectively for sites which have convenient access to rail services.

The RMS Development Guideline traffic generation criteria for ‘retail’ is for large shopping centres and is not applicable to the proposed specialty shops etc. There will only be a small number of parking spaces provided for retail/restaurant tenants and customers.

The RMS Development Guidelines provide an indication of the traffic generation rate of “specialty shops” as follows:

Thursday PM

$$V(P) = 46 A (ss)$$

$$A = 1,000m^2 \text{ of ss floorspace}$$

The RMS Development Guideline traffic generation rate for commercial floorspace is:

AM 1.6 vtp per 100m² GFA

PM 1.2 vtp per 100m² GFA

Accordingly, on this basis, the additional projected traffic generation of the envisaged development is compared to that of the Stage 2 scheme compliant with the proposed Neil Street Precinct Planning provisions in the following:

	AM	PM
Residential Apartments (+1111)	21 vtp	17 vtp
Retail (+ nil)		
Commercial 2,529m²	41 vtp	31 vtp
Total:	62 vtp	48 vtp

The projected distribution of these additional trips will be:

	AM		PM	
	IN	OUT	IN	OUT
Residents	5	16	13	4
Commercial	37	4	4	37
Total:	42	20	17	41

The projected directional distribution of these vehicle movements with completion of the proposed road network is as follows:

	New Road (N)		New Road (S)	
	IN	OUT	IN	OUT
AM	38	15	4	5
PM	13	30	4	11

The assessed traffic generation of the former use on the site is 40 vtp in the morning peak and 160 vtp in afternoon peak and all of these movements were focused on the Pitt Street and Gladstone Street intersection.

The traffic generation of the envisaged Blocks A and B development will be somewhat more in the morning peak but similar in the afternoon peak. However:

- * the access movements with the proposed development and changed road system will be spread over a number of approach and departure routes (e.g. New Road, Terminal Place, Pitt Street and Gladstone Street)

- * the Arup Traffic Study undertaken for Council to assess the traffic outcome for the Merrylands Town Centre development adopted what is now RMS superseded traffic generation criteria. A comparison of the projected traffic generation of the development scheme complying with the Neil Street Precinct planning provisions using the Arup traffic generation rates and the envisaged development scheme using the new RMS rates is provided in the following:

Complying Development

647 apartments @0.29	-	188 vtpm AM & PM
Retail	-	26 vtpm AM & PM
Total	-	214 vtpm

Envisaged Development

758 apartments @ 0.19	-	144 vtpm AM
@ 0.15	-	114 vtpm PM
Retail	-	26 vtpm AM & PM
Commercial 2,529m ²		
@ 0.16 vtpm per 100m ²	-	41 vtpm AM
@ 0.12 vtpm per 100m ²	-	31 vtpm PM
Total	-	211 vtpm AM
	-	171 vtpm PM

This comparison indicates that the traffic generation outcome for the envisaged development (subject of the Planning Proposal) will be slightly more than the Arup based assessment for the morning peak and significantly less for the afternoon peak. It is apparent that the envisaged development will not result in any unsatisfactory traffic circumstances and it is understood that the implementation of the proposed upgraded road system will be facilitated by the development.

5. PARKING

Holroyd City Council's DCP 2013 specifies parking provision criteria in relation to the proposed development as follows:

	Minimum	Maximum
Residential		
One Bedroom	0.8 spaces	1.0 space
Two Bedroom	1.0 space	1.5 spaces
Three Bedroom	1.2 space	2.0 spaces
Visitor (per apartment)	0.2 space	0.5 space
Retail		
1 space per:	50m ² GFA	15m ² GFA
Commercial (Level 1)	40m ² GFA	15m ² GFA

Application of this criteria to the envisaged development would indicate:

	Minimum	Maximum
151 x One Bed apartments	121 spaces	151 spaces
531 x Two Bed apartments	531 spaces	797 spaces
76 x Three Bed apartments	92 spaces	152 spaces
Total:	744 spaces	1,100 spaces
Visitors (758 apartments)	152 spaces	379 spaces
Retail 564m ²	11 spaces	38 spaces
Commercial 2,529m ²	64 spaces	169 spaces
Total:	227 spaces	586 spaces
Grand Total:	971 spaces	1,686 spaces

It is envisaged that a total of some 1,177 spaces will be provided in compliance with the DCP minimum requirements.

In relation to the provision of bicycle parking DCP 2013 specifies the following:

Residential Apartments	-	0.5 spaces per apartment for residents 0.1 space per apartment for visitors
Retail (G.L)	-	1 space per 300m ² for staff 1 space per 2,500m ² for visitors
Commercial (Level 1)	-	1 space per 200m ² for staff 1 space per 750m ² for visitors

Application of these requirements would indicate the following provision of bicycle spaces:

Residents	379 spaces
Visitors	76 spaces
Retail	2 spaces for staff 1 space for visitors
Commercial	13 spaces for staff 4 spaces for visitors

Bicycle spaces would be provided to comply with the DCP requirements.

6. ACCESS, INTERNAL CIRCULATION AND SERVICING

ACCESS

The envisaged vehicle access arrangements will comprise:

- a new internal access road connecting to New Street
- a combined 5.5m wide ingress/egress driveway for the Block A carpark on the new access road at the northern site boundary
- a combined 5.5m wide ingress/egress driveway for the Block B carpark on the new access road towards the southern boundary
- 6.0m wide driveways for the two loading docks on the new access road

The design of the proposed access road and driveways would accord with the design requirements of AS2890.1 and 2 and there would be satisfactory sight distances available for drivers and pedestrians. There would be a suitable separation between the driveways and intersections/bends and it is apparent that there will not be any access difficulties.

The envisaged new access roadway will be 6.0m wide with a turnaround loop in the northern part. There would be paved footways along each side of this roadway while the principal pedestrian crossing points would be identified with a contrasting flush pavement treatment. The roadway would be signposted as NO PARKING and this will permit “set down and pick up” activity to occur.

INTERNAL CIRCULATION

Simple two-way internal circulation arrangements would be provided through the basement levels with design criteria compliant with AS2890.1 and 6. The residential carparking would be secured and segregated from retail/visitor parking and quite generous manoeuvring and ‘turnaround’ provisions are a feature of the design.

SERVICING

Separate loading docks would be provided in each building suitable for garbage trucks and furniture vans. Vans typically associated with the retail units and other small service vehicles (e.g. service personnel, couriers, etc.) would also be able to use these loading docks or the visitor spaces in the basement level.

7. CONCLUSION

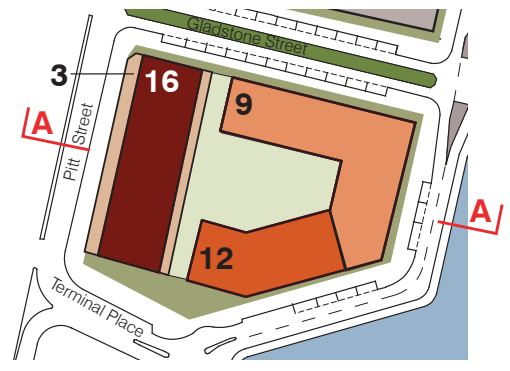
Assessment of the envisaged Blocks A & B Planning Proposal scheme has concluded that:

- * the envisaged parking provision will be adequate and appropriate given the circumstances of Councils DCP criteria and the very convenient public transport services
- * the envisaged vehicle access, internal circulation and servicing arrangements will be suitable
- * the projected traffic outcome will be entirely consistent with Council's traffic assessments which underlie the planning for the Merrylands Town Centre development
- * there would be no unsatisfactory traffic or traffic related environmental implications

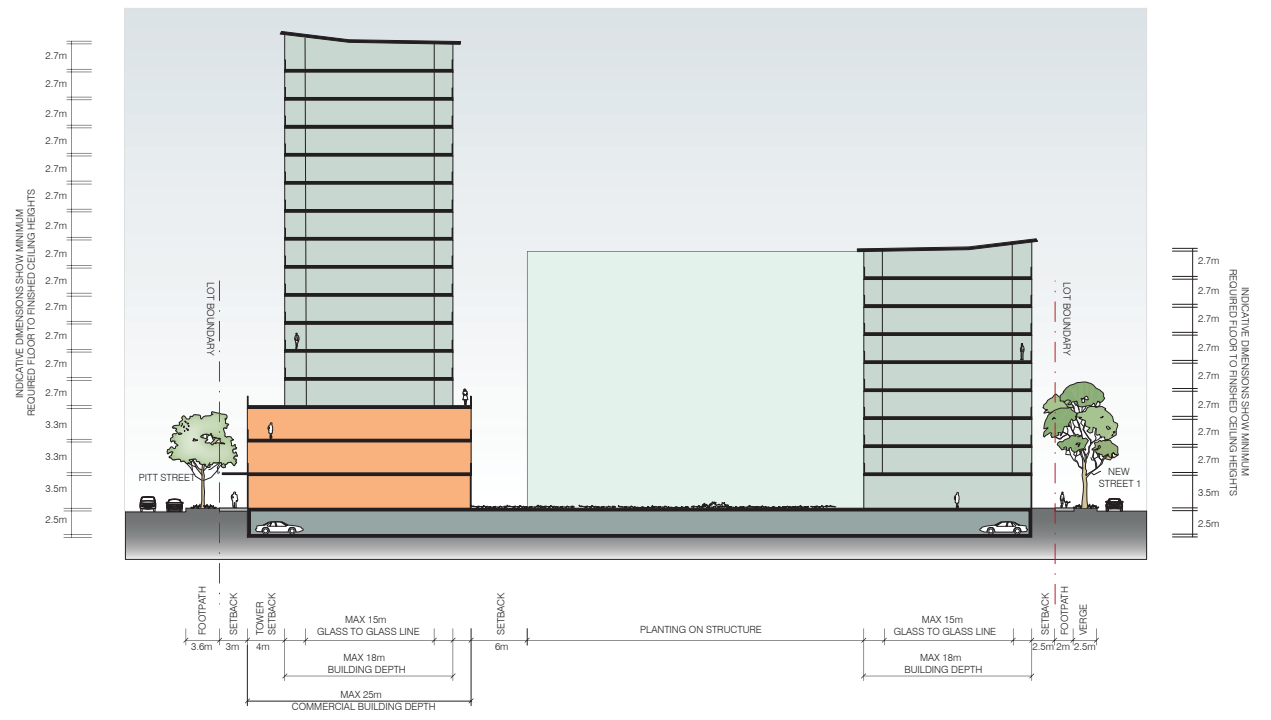
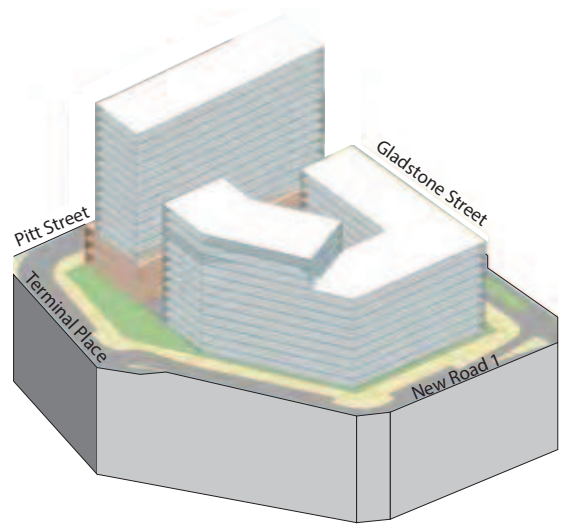
APPENDIX A

EXTRACTS FROM LEP & DCP

Merrylands Centre



- 1 storey
- 2 storeys
- 3 storeys
- 4 storeys
- 5 storeys
- 6 storeys
- 7 storeys
- 8 storeys
- 9 storeys
- 12 storeys
- 16 storeys
- envelope if amalgamation/land swap occurs
- possible location of break in building
- can be built over after 2 levels
- residential
- retail/commercial
- parking
- swale
- public open space
- deep soil zone
- planting on structure



Merrylands Centre

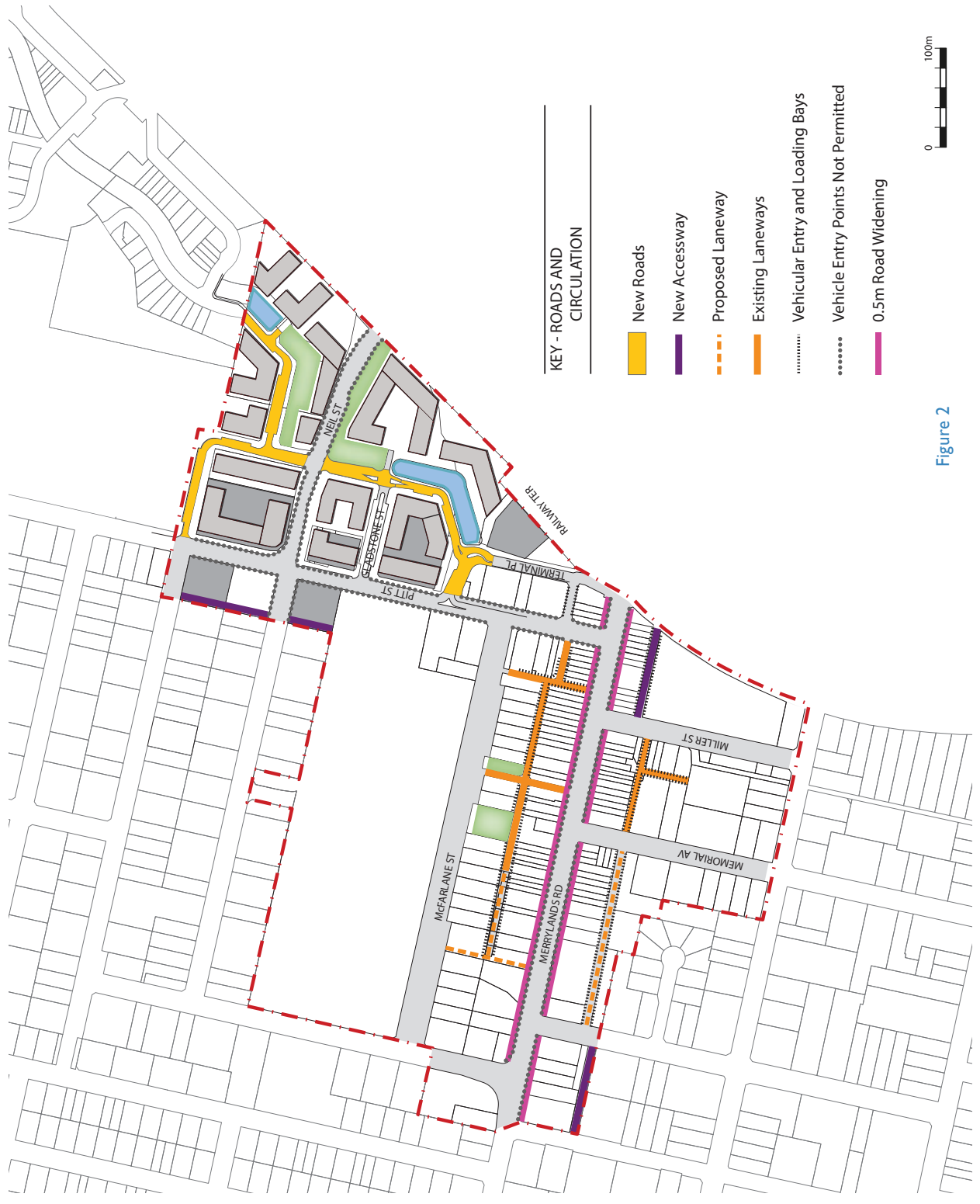
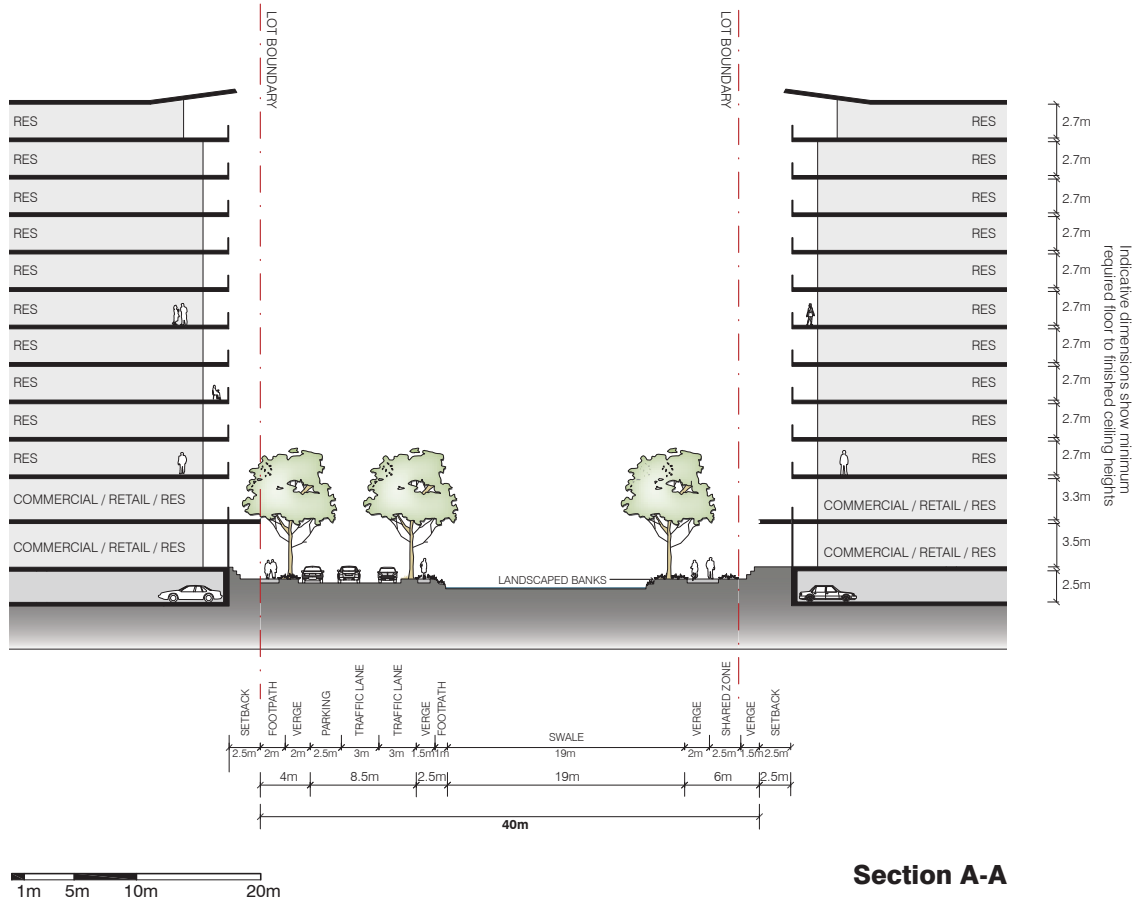
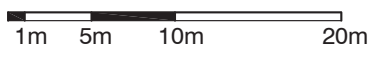
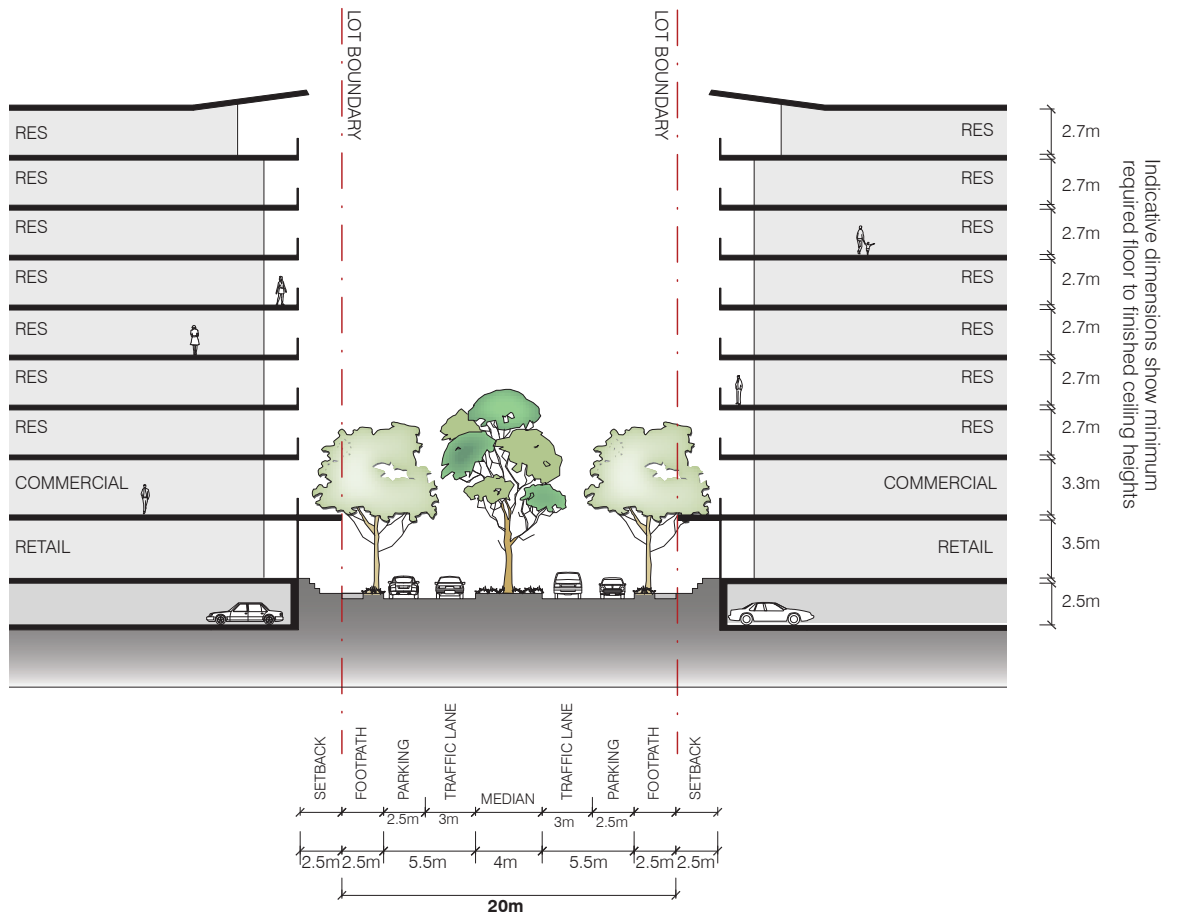


Figure 2

Merrylands Centre



Merrylands Centre



Section I-I

Merrylands Centre

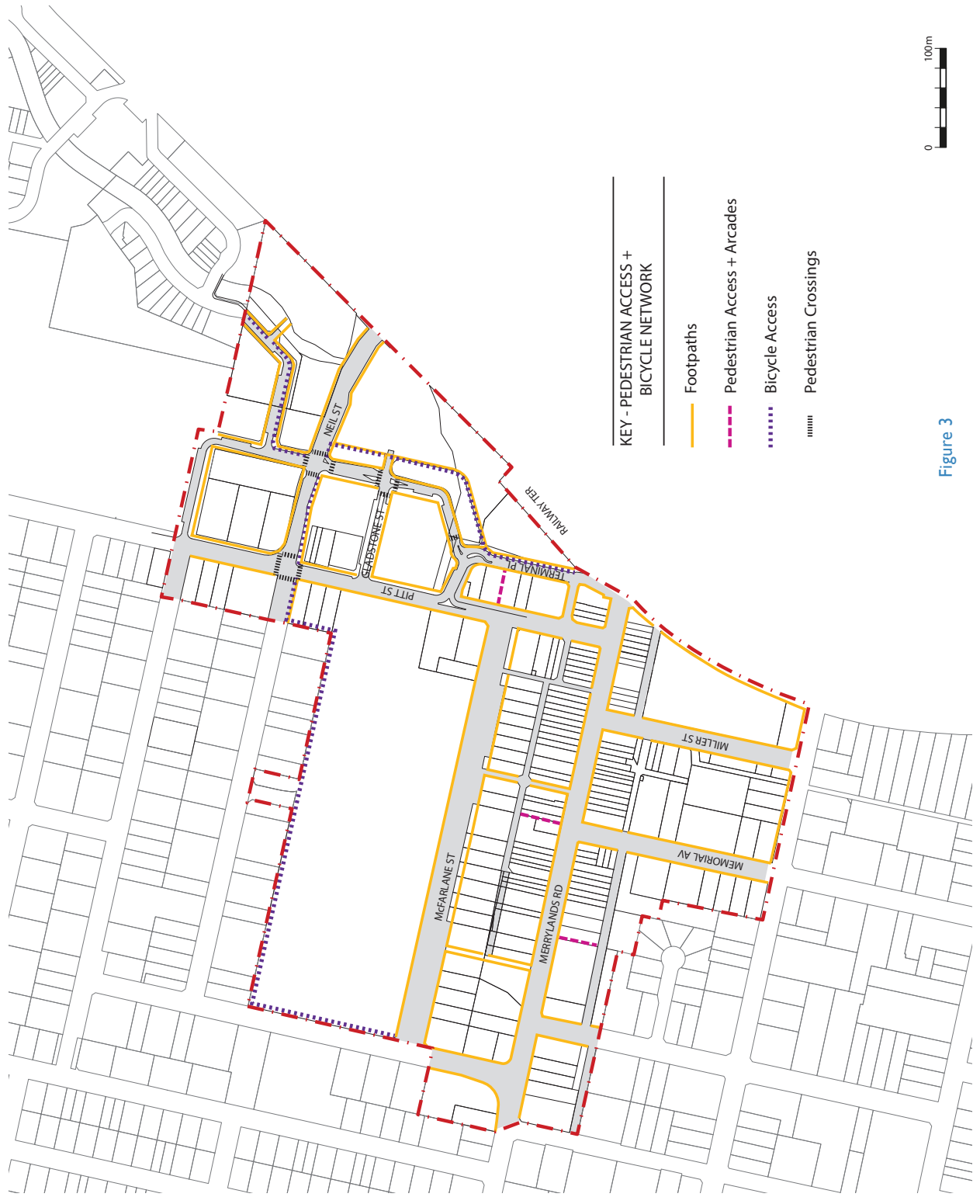


Figure 3

APPENDIX B

POTENTIAL DEVELOPMENT PLANS



DATE	REVISION	BY	CHK	NO.	DATE	REVISION	BY	CHK	NO.

CONSULTANTS	
PROFESSIONAL REVIEW	COMPANY NAME T DATE FLOOR
DESIGNER	COMPANY NAME T DATE FLOOR
DESIGNER	COMPANY NAME T DATE FLOOR
DESIGNER	COMPANY NAME T DATE FLOOR
DESIGNER	COMPANY NAME T DATE FLOOR

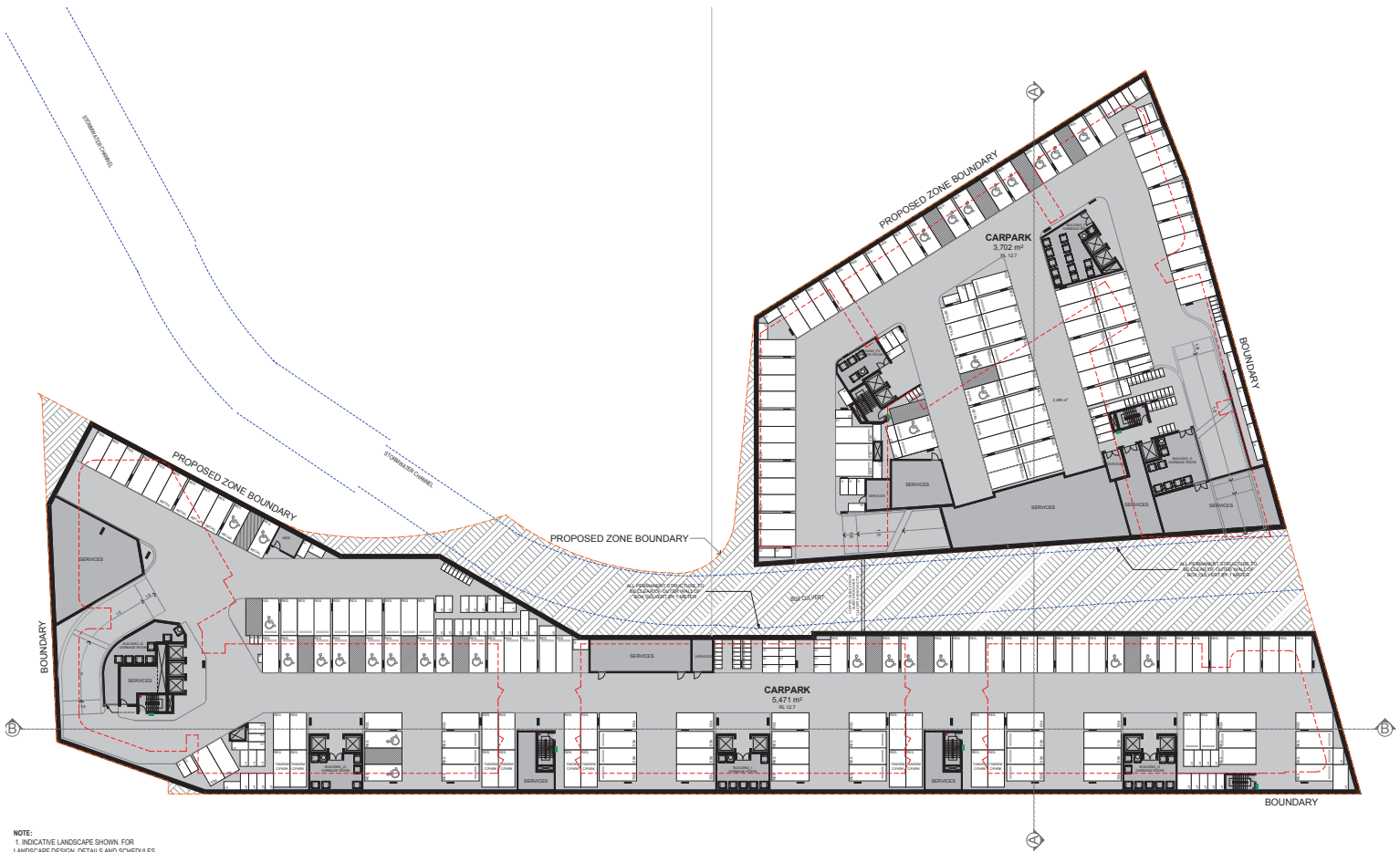
SF COMMERCIAL HOLDING PTY LTD



+ plus
 Melbourne
 Sydney
 Brisbane
 Perth
 Adelaide
 Canberra
 Hobart
 Auckland
 Christchurch
 Dunedin
 Wellington
 Auckland
 Christchurch
 Dunedin
 Wellington

PROJECT	224-246 PITT STREET MERRYLANDS, SITE A & B
DATE	201406
DATE	201407
DATE	201407
DATE	201407
DATE	201407

DA ISSUE			
FORM	DATE	DATE	DATE
DATE	DATE	DATE	DATE
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DATE	DATE	DATE	DATE
DATE	DATE	DATE	DATE



NOTE:
 1. INDICATIVE LANDSCAPE SHOWN FOR LANDSCAPE DESIGN, DETAILS AND SCHEDULES REFER TO LANDSCAPE DRAWINGS.
 2. FOR CIVIL AND STORMWATER DESIGN AND DETAILS REFER TO CIVIL AND STORMWATER DRAWINGS.

DATE	REVISION	BY	CHK	NO.	DATE	REVISION	BY	CHK	NO.

CONSULTANTS	FUNCTIONAL REVIEW	DESIGNER	DATE

SF COMMERCIAL HOLDING PTY LTD



PROJECT: 224-246 PITT STREET MERRYLANDS, SITE A & B

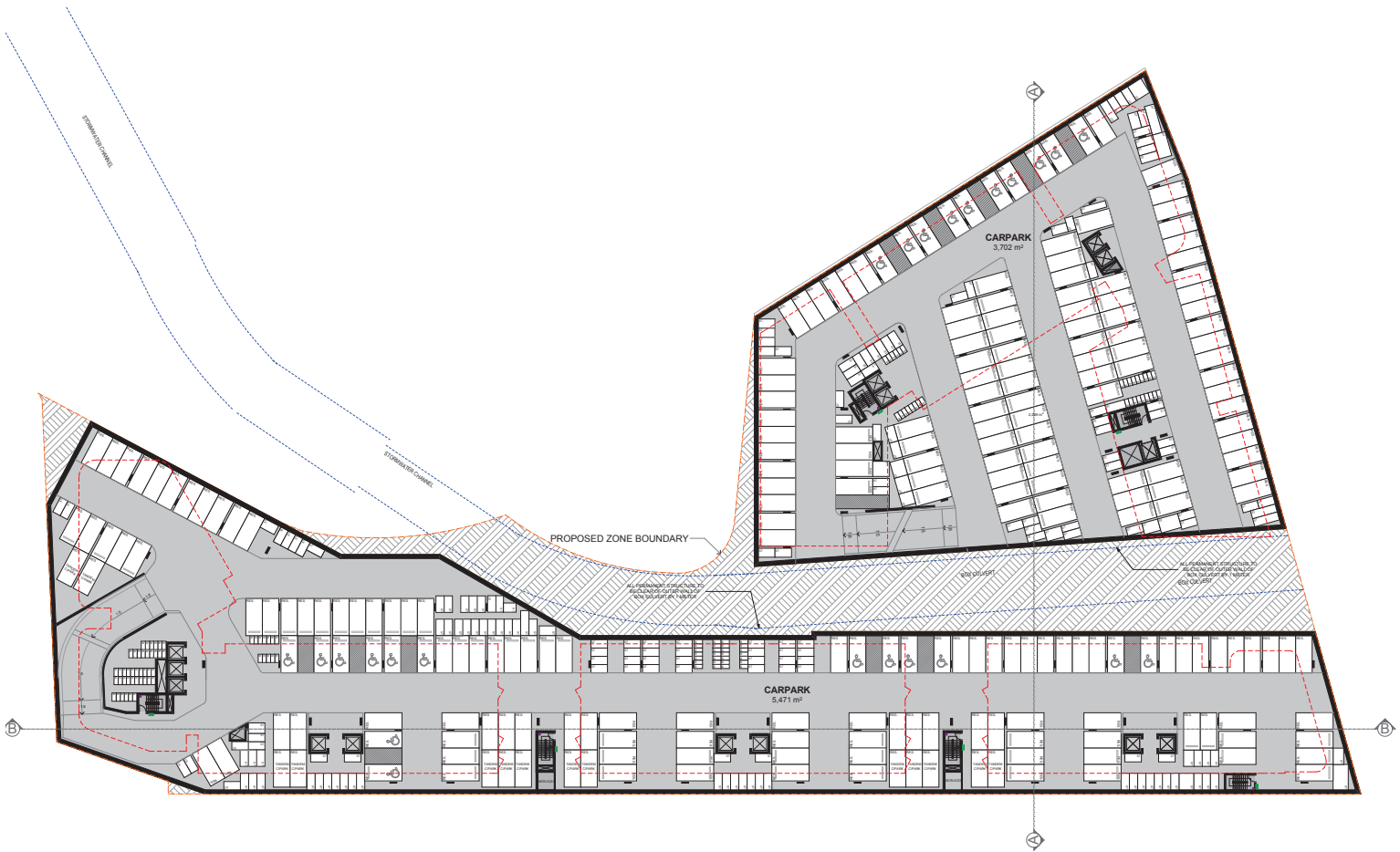
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DA ISSUE



JOB NO: 20146
 DRAWING NO: A0099
 REVISION: A



DATE	REVISION	BY	CHK	NO.	DATE	REVISION	BY	CHK	NO.

CONSULTANTS			
STRUCTURAL ENGINEER	PCORRELL/TAYLOR COMPANY NAME	T	CONS 1 PHONE
MECHANICAL ENGINEER	PCORRELL/TAYLOR COMPANY NAME	T	CONS 2 PHONE
ELECTRICAL ENGINEER	PCORRELL/TAYLOR COMPANY NAME	T	CONS 3 PHONE
PLUMBING ENGINEER	PCORRELL/TAYLOR COMPANY NAME	T	CONS 4 PHONE
FIRE ENGINEER	PCORRELL/TAYLOR COMPANY NAME	T	CONS 5 PHONE
AS	PCORRELL/TAYLOR COMPANY NAME	T	CONS 6 PHONE

SF COMMERCIAL HOLDING PTY LTD

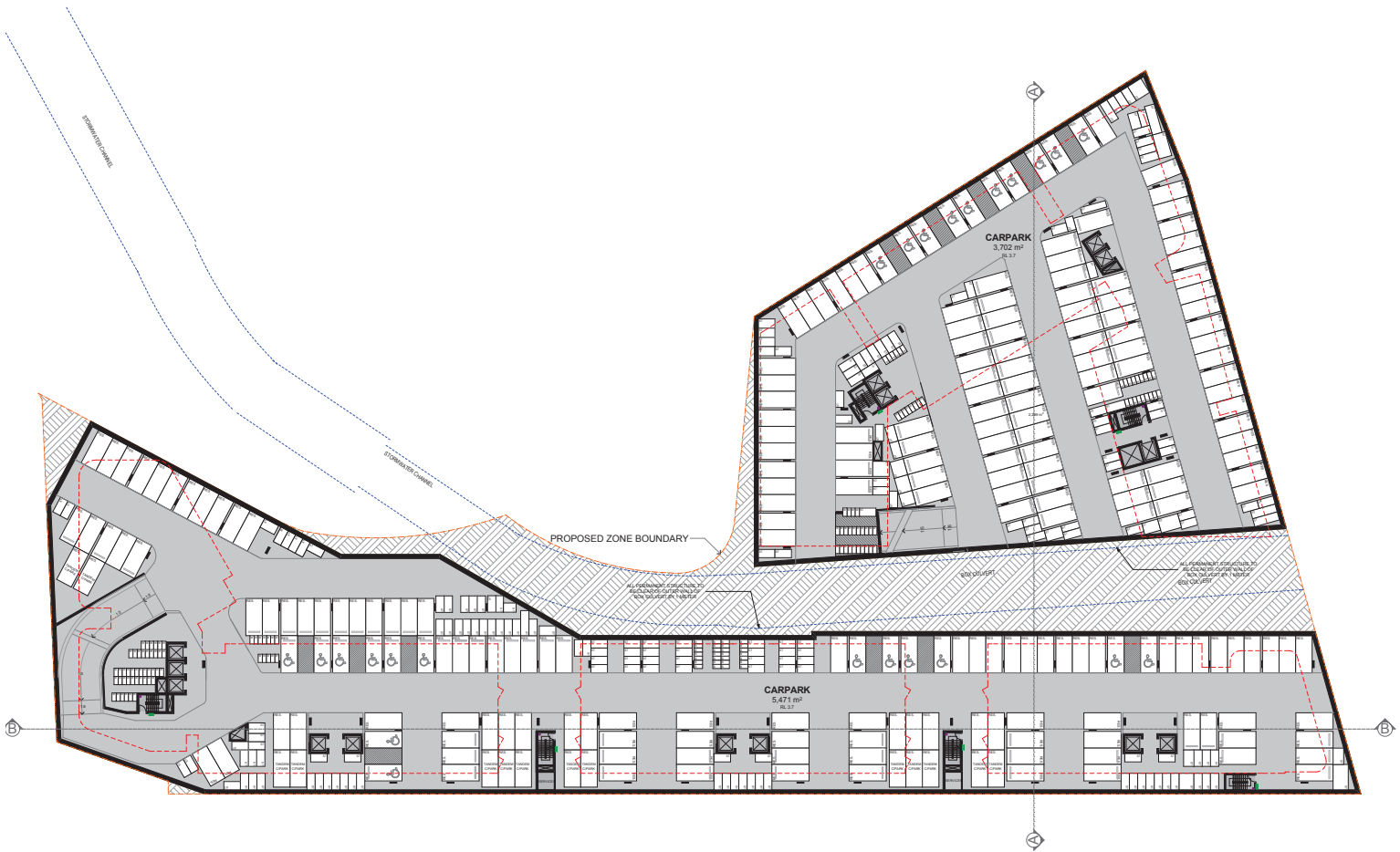



plus
Melbourne
Sydney
Perth
Auckland
Wellington
Christchurch
Dunedin
Invercargill

PROJECT	DRAWING NO.
224-246 PITT STREET MERRYLANDS, SITE A & B	BASEMENT 02-03

SCALE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
1:50	2014/06/11	2014/06/11	2014/06/11	2014/06/11	2014/06/11	2014/06/11	2014/06/11	2014/06/11
JOB NO.	DRAWING NO.	REVISION						
20146	A0098	A						

DA ISSUE



DATE	REVISION	BY	CHK	NO.	DATE	REVISION	BY	CHK	NO.

CONSULTANTS	
STRUCTURAL ENGINEER	<input type="checkbox"/> CONSULTANT 1 COMPANY NAME T CODE 1 PHONE
MECHANICAL ENGINEER	<input type="checkbox"/> CONSULTANT 2 COMPANY NAME T CODE 2 PHONE
ELECTRICAL ENGINEER	<input type="checkbox"/> CONSULTANT 3 COMPANY NAME T CODE 3 PHONE
PLUMBING ENGINEER	<input type="checkbox"/> CONSULTANT 4 COMPANY NAME T CODE 4 PHONE
ENVIRONMENTAL ENGINEER	<input type="checkbox"/> CONSULTANT 5 COMPANY NAME T CODE 5 PHONE

SF COMMERCIAL HOLDING PTY LTD



+ **plus**

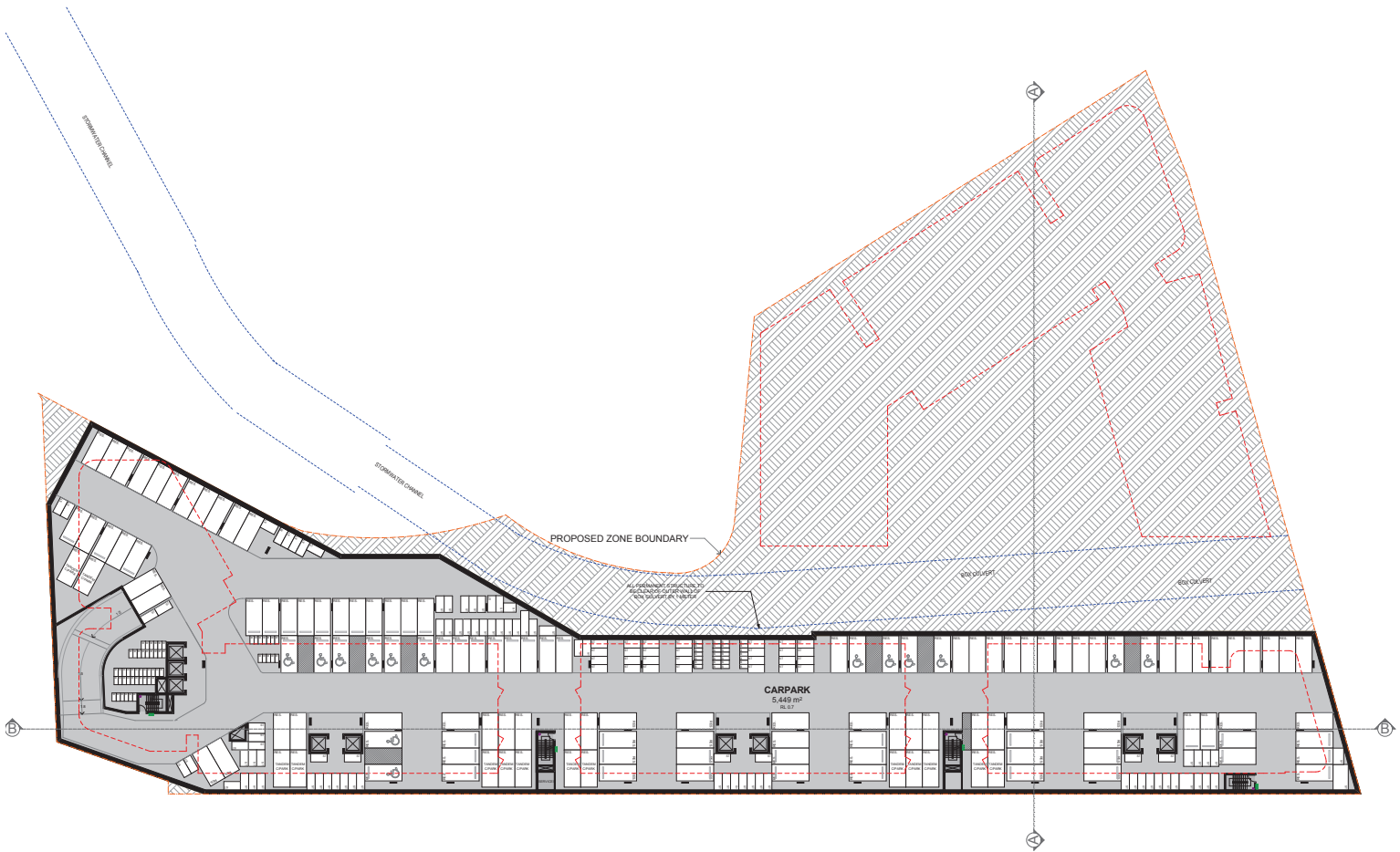
Wellness
Retail
New Zealand

Level 3, 148-150 Gile Road
Merrylands VIC 3088 Australia
Ph: 03 9493 2000
Email: info@plusnz.co.nz
www.plusnz.co.nz

PROJECT	224-246 PITT STREET MERRYLANDS, SITE A & B	DRAWING TITLE	BASEMENT 04
SCALE	AS SHOWN	DATE	20140727
DATE	20140727	PLOTT DATE	20140807
DRAWN	SP	CHECKED	SP
JOB NO.	20146	DRAWING NO.	A0097
		REVISION	A

DA ISSUE





DATE	REVISION	BY	CHK	NO.	DATE	REVISION	BY	CHK	NO.

CONSULTANTS	
ARCHITECTURAL SERVICES	
ENGINEERING SERVICES	
STRUCTURAL SERVICES	
MECHANICAL SERVICES	
ELECTRICAL SERVICES	
PLUMBING SERVICES	
LANDSCAPE ARCHITECTURE	
ENVIRONMENTAL SERVICES	
TRAVEL SERVICES	
CONSTRUCTION SERVICES	

SF COMMERCIAL HOLDING PTY LTD



PROJECT: 224-246 PITT STREET MERRYLANDS, SITE A & B

DRAWING TITLE: BASEMENT 05

SCALE	DATE	BY	CHK	NO.
1:100				

DA ISSUE



JOB NO.	DRAWING NO.	REVISION
20146	A0096	A

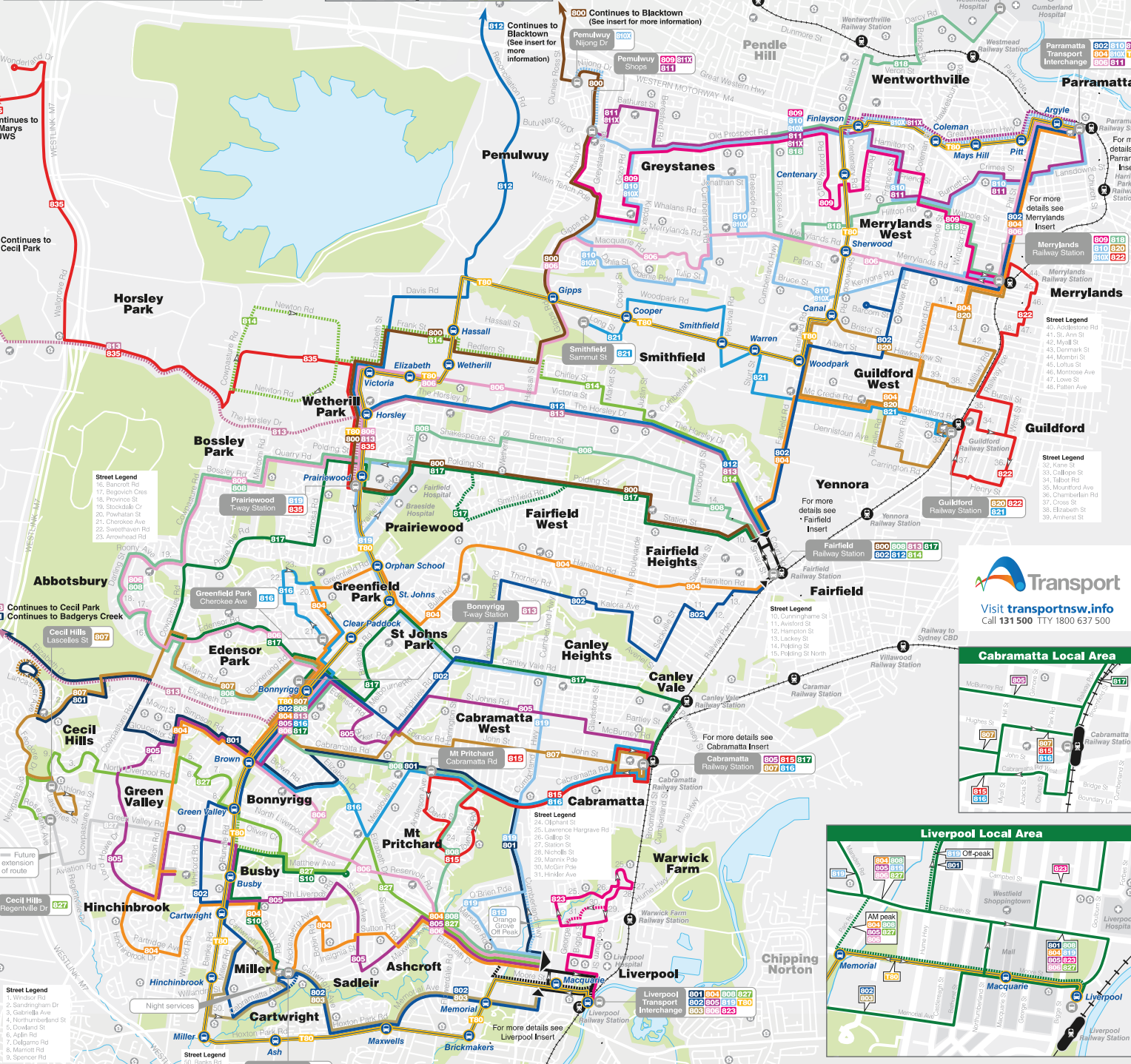
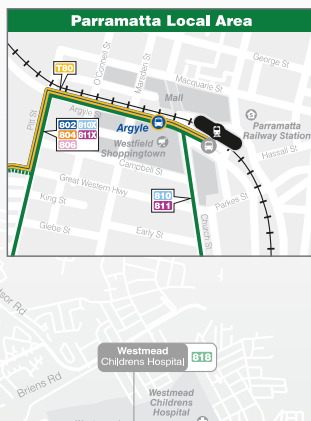
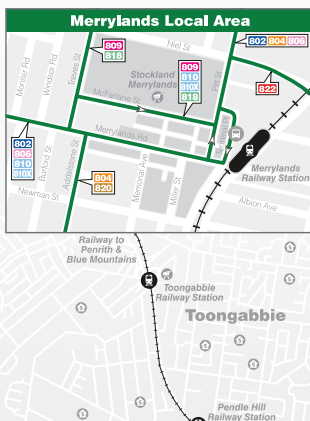
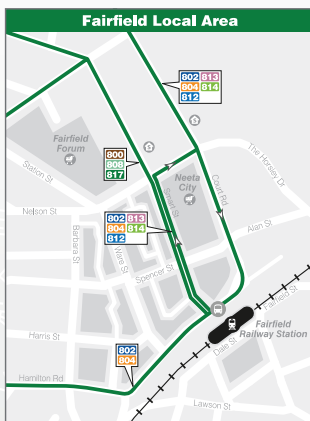
APPENDIX C

BUS SERVICES

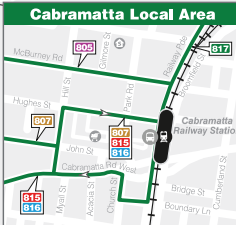


Transit Systems Western Sydney Bus Network

Effective from:
22 September 2014



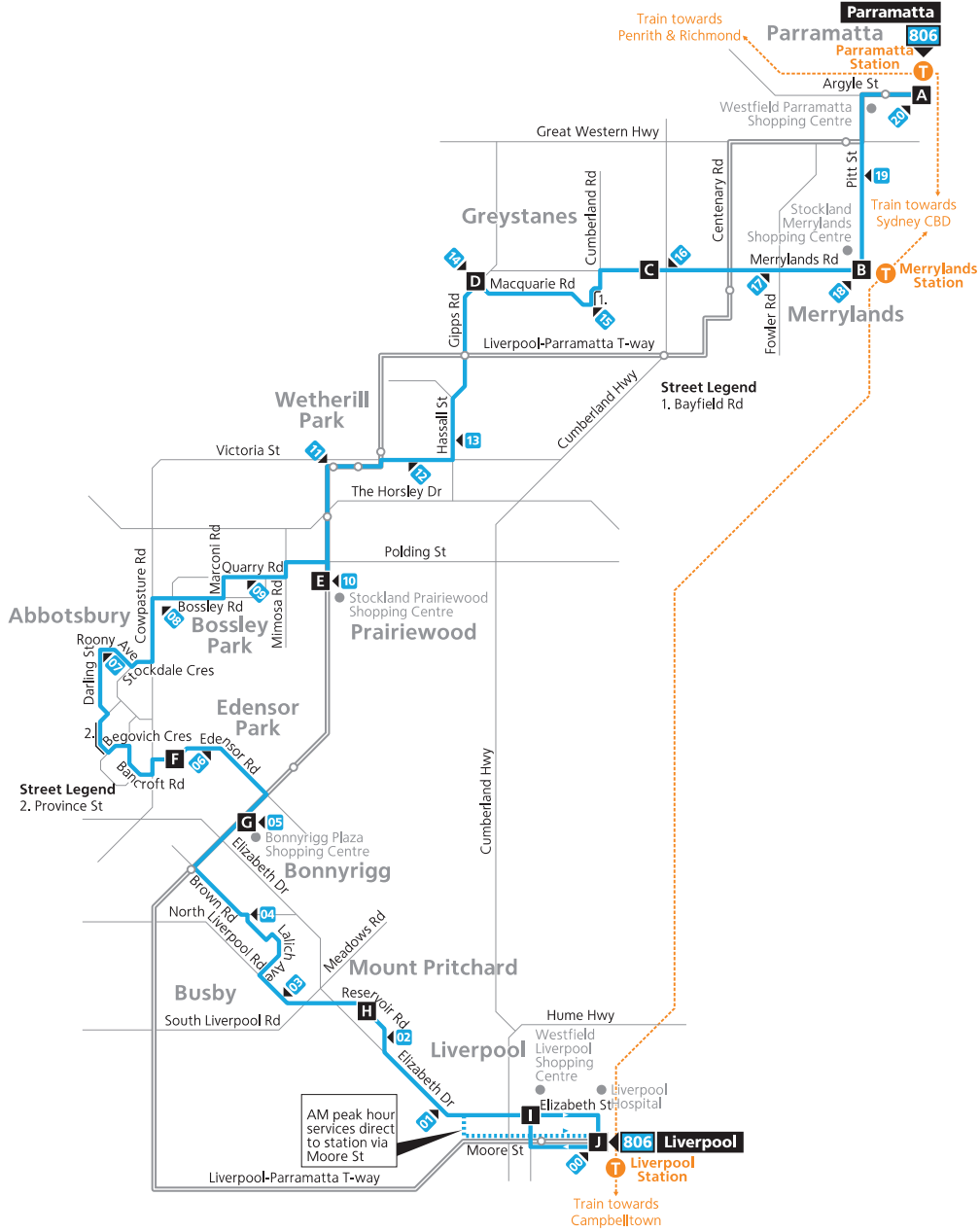
Transport
Visit transportnsw.info
Call 131 500 TTY 1800 637 500



Map Legend

- Train station
- Train line
- Liverpool-Parramatta T-way stop
- Bus terminus
- School
- Shopping centre
- Hospital
- Occasional journey
- Bus route number
- University/TAFE

0m 500m 1km N



Legend

- Bus route
- 806 Bus route number
- A Timing point
- 04 Section point
- T Train line/station

Diagrammatic Map
Not to Scale
North



Getting around by public transport

All over NSW, modes and services have come together as an integrated system to help you get around more easily by public transport.



Sydney Trains

The train services that get you around the city and suburbs of Sydney.



NSW TrainLink

Intercity and Regional services that take you to the Blue Mountains, Central Coast, Newcastle, the Southern Highlands, the South Coast and beyond.



Buses

Hundreds of bus routes in cities, suburbs and beyond connect you with shopping centres, schools, hospitals and more.



Ferries

The Sydney and Newcastle harbours and waterways are navigated by ferry services.

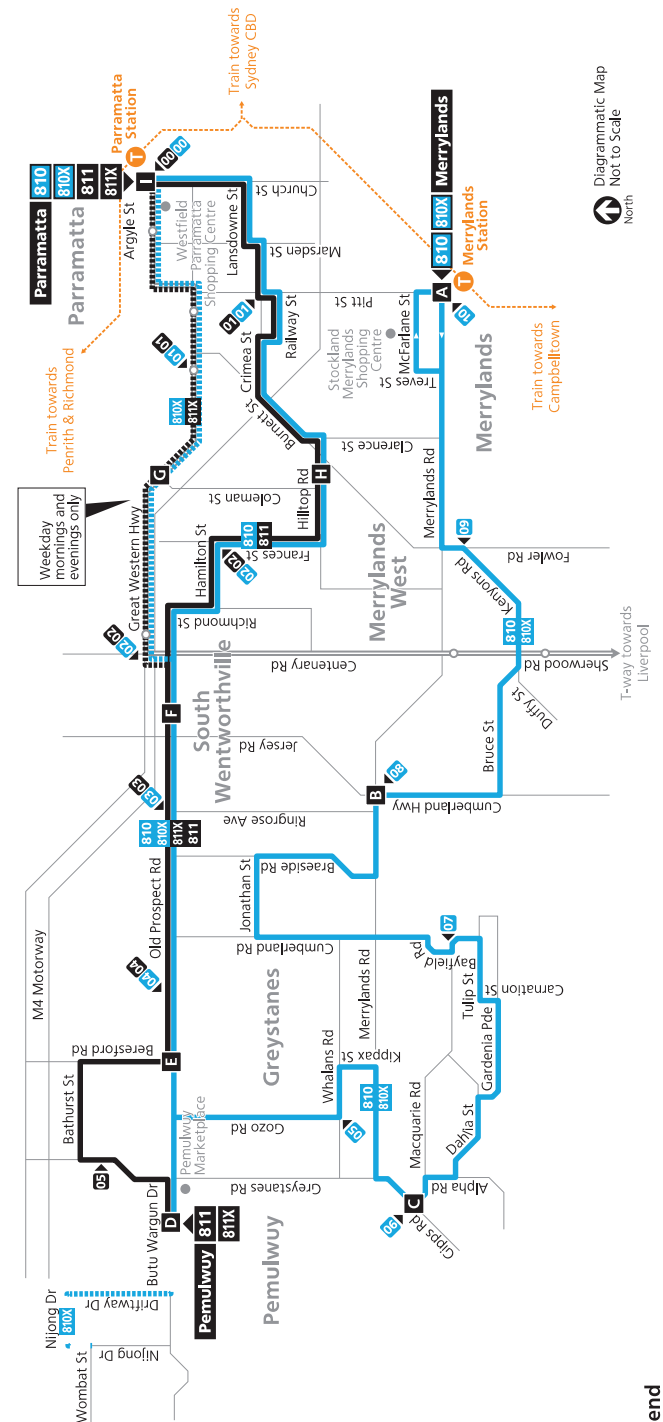


Light Rail

From Central Station to Sydney's Inner West, including Paddy's Markets, Darling Harbour, The Star and the Sydney Fish Market.

Bus route map

810, 811



Diagrammatic Map
Not to Scale

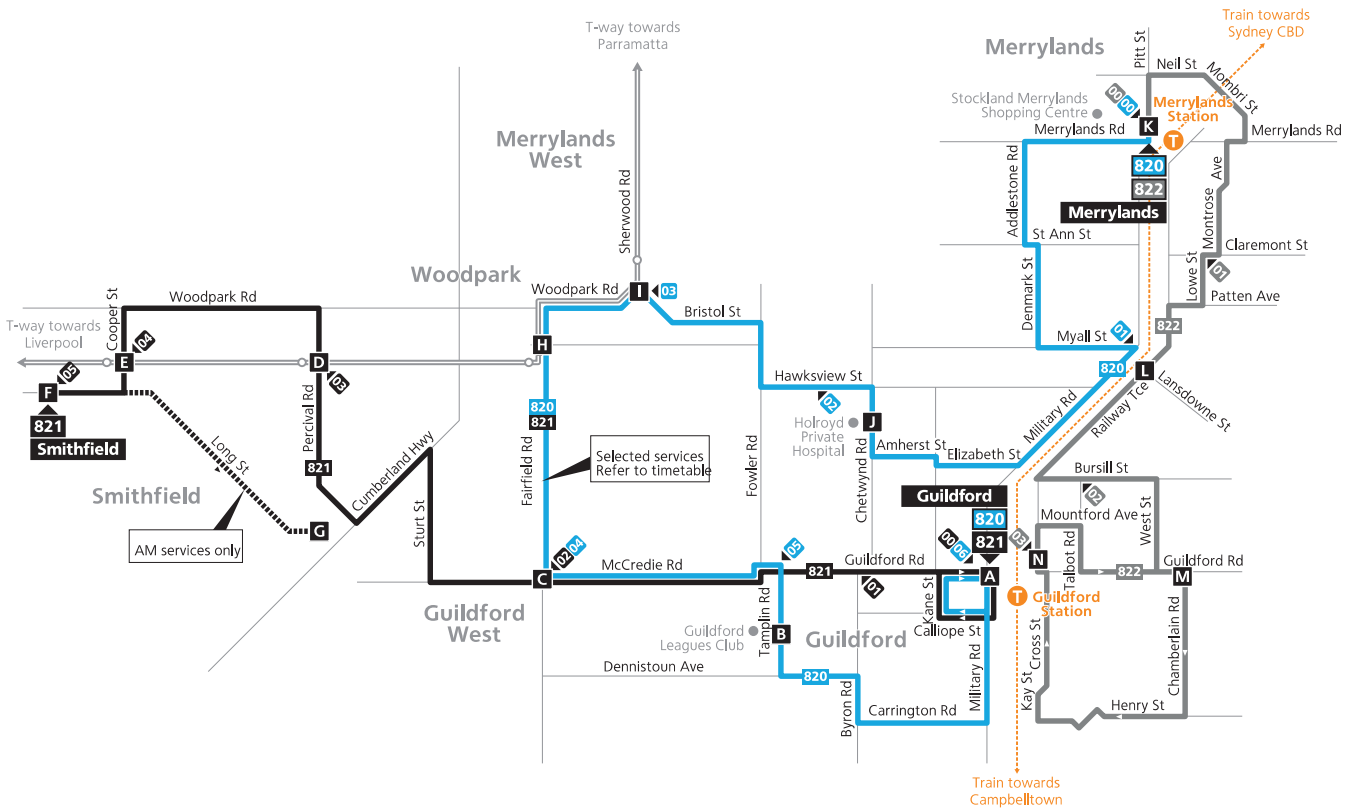


TFNSW M369_3_2 0813

Visit transportnsw.info
Call 131 500 TTY 1800 637 500



- Bus route
- 810 Bus route number
- 04 Section point
- A Timing point
- T Train line/station



Diagrammatic Map
North
Not to Scale

