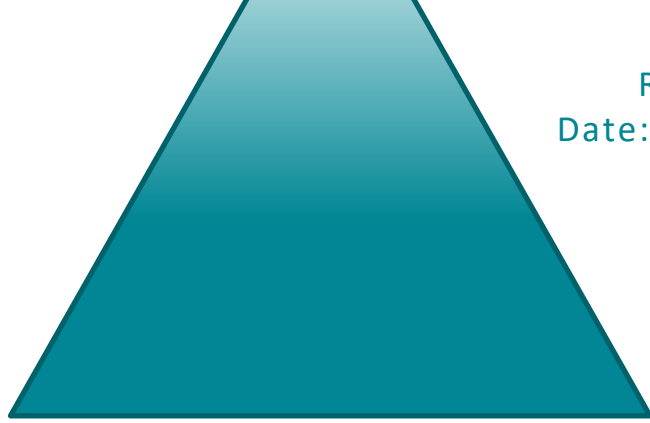




Proposed Childcare Centre
Development
4-10 Inman Road, Cromer

Traffic & Parking Assessment



Transport and Traffic Planning Associates

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Table of Contents

1.0	Introduction	2
2.0	Proposed Development	3
2.1	Site, Context & Existing Circumstances.....	3
2.2	Proposed Development	4
3.0	Existing Road Network and Traffic Conditions	5
3.1	Road Network	5
3.2	Traffic Controls.....	6
3.3	Traffic Conditions	8
3.4	Transport Services.....	8
3.5	Walking Facilities.....	8
3.6	Cycling Facilities	8
4.0	Parking & Traffic.....	10
4.1	Parking.....	10
4.2	Traffic	11
5.0	Access, Internal Circulation & Servicing	12
5.1	Access.....	12
5.2	Internal Circulation.....	12
5.3	Servicing	12
6.0	Conclusion	13

Table of Figures

Figure 1 - Site Location..... 2

Figure 2 - Site Boundary..... 4

Figure 3 - Road Network 6

Figure 4 - Traffic Controls..... 7

Figure 5 – Cycling Map 9

Table of Appendices

Appendix A Proposed Plans

Appendix B Public Transport Maps

Appendix C Swept Path Assessment

1.0 Introduction

This report has been prepared to accompany a Development Application to the Northern Beaches Council for internal and external alterations to Office C, within the approved development at 4-10 Inman Road, Cromer (Figure 1), and for the use of the premises, in conjunction with adjacent external areas, as a centre-based child care facility.

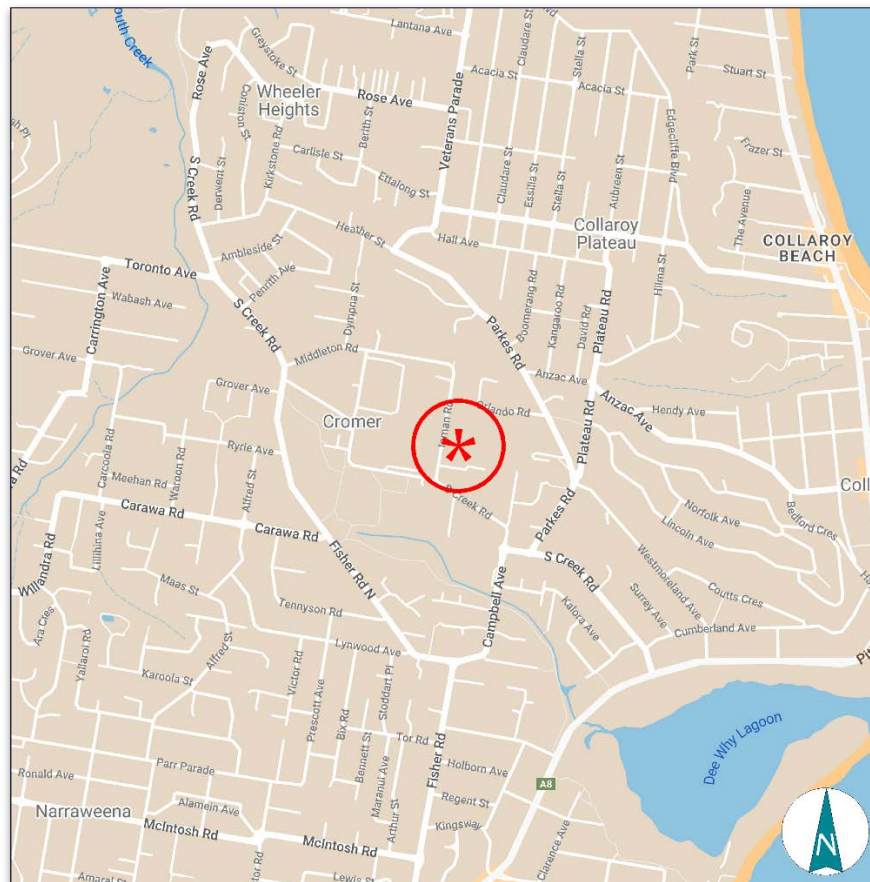


Figure 1 - Site Location

The purpose of this report is to:

- Describe the site, its context and the proposed development scheme.
- Describe the road network serving the site and the prevailing traffic conditions.
- Assess the suitability of the vehicle access, internal circulation and servicing arrangements.
- Assess the potential traffic implications.

2.0 Proposed Development

2.1 Site, Context & Existing Circumstances

The site (Figure 2) is part of Lot 1 in DP 1220196, which occupies an irregularly shaped area of 7.49ha, with frontages of 190m to the eastern side of Inman Road and 210m to the northern side of Southern Creek Road and is zoned as E4 General Industrial.

There has been ongoing construction on the subject lot since 2021 to provide for new buildings with light industrial, commercial and retail uses. The proposed childcare centre will be situated within a building on the site's western boundary that has been retained.

The current surrounding land uses comprise:

- Pittwater House Schools to the southeast
- Northern Beaches Secondary College Cromer Campus to the west
- Cromer Park to the southwest
- the residential properties to the east
- the industrial developments to the north and south



Figure 2 - Site Boundary

2.2 Proposed Development

It is proposed to conduct minor demolition works to provide for the upgrade of the premises, comprising:

- 4 activity rooms
- 2 sleep rooms
- Staff room
- Common area and amenities
- Outdoor play and landscape areas

The proposal provides 20 parking spaces of the under-construction parking facility to the east of the site, permanently allocated to the childcare facility, with an additional 20 drop-down pick-up shared parking spaces for visitors.

Details of the proposed development are provided on the plans prepared by ID FITOUTS, which accompany the Development Application and are reproduced in part in Appendix A.

3.0 Existing Road Network and Traffic Conditions

3.1 Road Network

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

- Pittwater Road – a major arterial road generally aligned in a north-south direction to the east of the site. Pittwater Road provides connections between Mona Vale to the north and Manly to the south, with 3 lanes of traffic in each direction.
- South Creek Road – a local road generally aligned in a southeast-northwest direction in the vicinity of the site, becoming a sub-arterial road when intersecting Campbell Avenue.
- Campbell Avenue – a local road generally aligned in a north-south direction in the vicinity of the site, becoming a sub-arterial road when intersecting South Creek Road.
- Inman Road – a minor local road generally running in the north-south direction providing connections between South Creek Road and Middleton Road. In between the traffic lanes and kerbside parking, Inman Road provides dedicated on-road bicycle shoulder lanes.
- Orlando Road – a minor local road generally running in the east-west direction providing connections between Inman Road and Parkes Road. Orlando Road provides dedicated on-road bicycle shoulder lanes between the traffic lanes and kerbside parking.

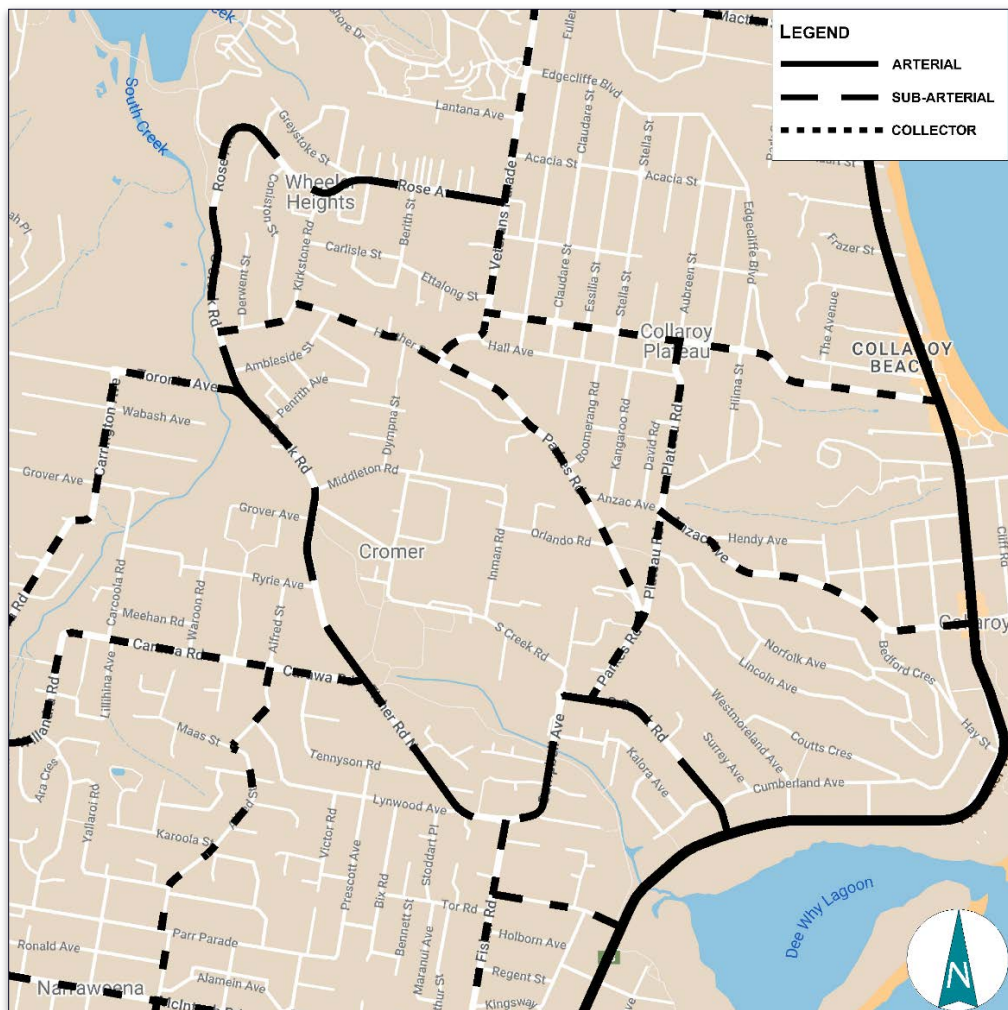


Figure 3 - Road Network

3.2 Traffic Controls

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

- the traffic control signal along Pittwater Road intersecting South Creek Road
- the roundabout along South Creek Road intersecting Campbell Avenue and Parkes Road
- the pedestrian refuge zebra crossing 230m west of the site along South Creek Road
- the unrestricted and 8P kerbside parking between 8 am – 6 pm (every day) in the vicinity of the site on South Creek Road, Inman Road, Orlando Road and Campbell Avenue
- the peak hour bus lanes southbound in the morning peak and northbound in the afternoon peak along Pittwater Road

- the 60kmph speed restriction on Pittwater Road
- the 50kmph speed restriction on South Creek Road, Inman Road, Orlando Road and Campbell Avenue
- the 40kmph School speed zone restriction along South Creek Road between Inman Road and Thew Parade and 270m eastbound from Parkes Road

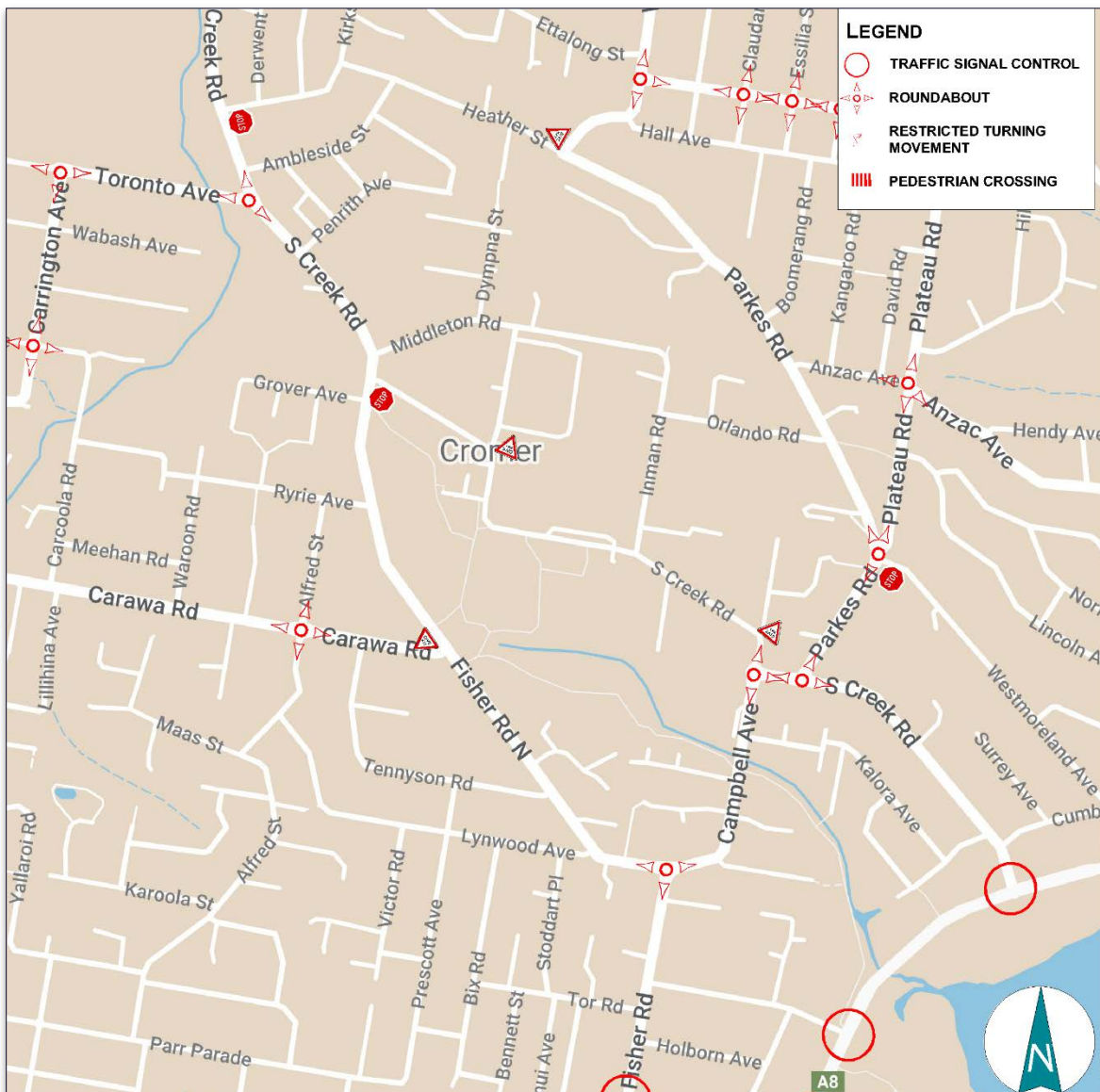


Figure 4 - Traffic Controls

3.3 Traffic Conditions

An indication of the prevailing traffic conditions on the road system in the vicinity of the site is provided by data published by TfNSW. The TfNSW data is presented in terms of Annual Average Daily Traffic (AADT) and the most recent available data reveals the following volumes:

	AADT
Pittwater Road Southbound 50m north of Lismore Avenue	15,476

The operational performance of the South Creek Road/Inman Road intersection is quite satisfactory.

3.4 Transport Services

The site is within 350 metres (a 5-minute walk) of the nearby bus stops along South Creek Road, Campbell Avenue and Parkes Road. These stops are currently serviced by routes 180 and 180X, providing services to Warringah Mall, Collaroy Plateau and express services to the City. Services vary in frequency, typically in the order of every 10-20 minutes during the weekdays. Details of the existing transport services are provided in Appendix B.

3.5 Walking Facilities

Pedestrians in the vicinity of the site are afforded excellent provisions with wide footpaths on the western side of Inman Road and the southern side of South Creek Road. There is good pedestrian connectivity throughout the remainder of the surroundings.

3.6 Cycling Facilities

Council provides a number of on- and off-street bike paths, which connect to the regional cycling network. There is currently on-road cycling infrastructure on Inman Road, as shown in the following figure.

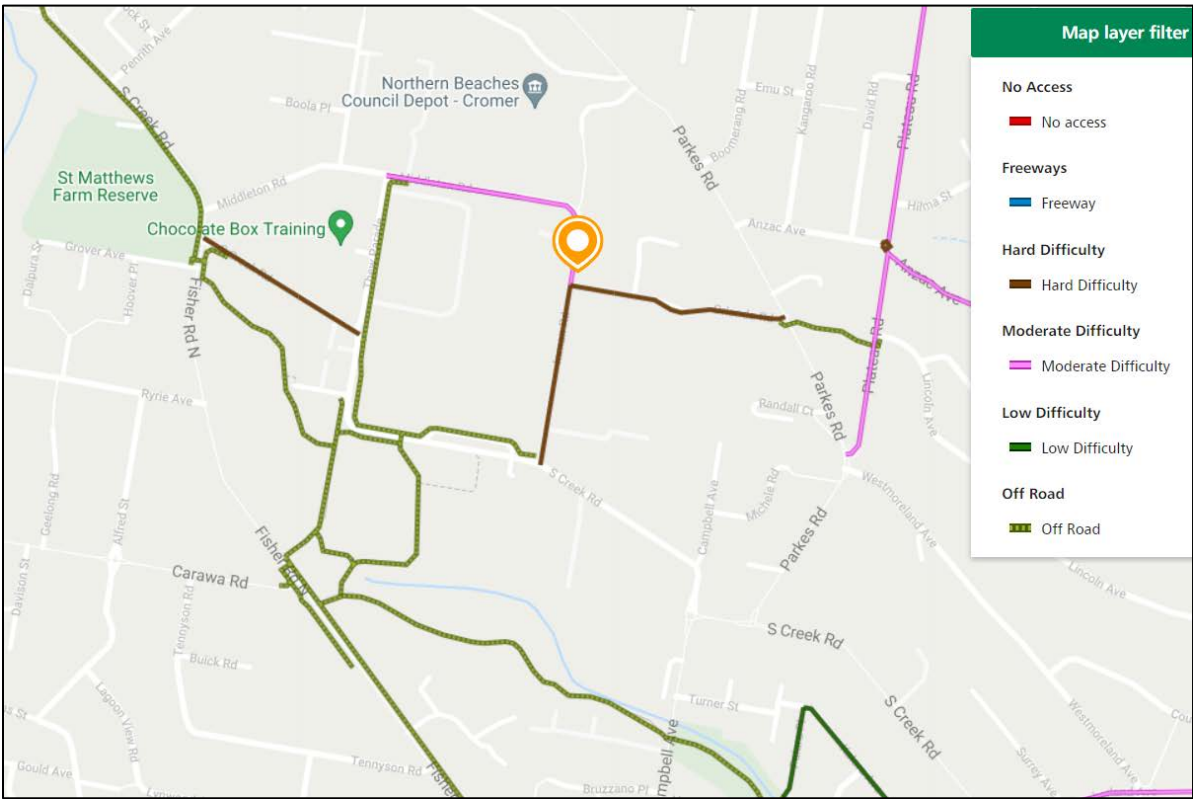


Figure 5 – Cycling Map

4.0 Parking & Traffic

4.1 Parking

The Council's Development Control Plan (DCP) specifies the required parking facilities for Child Care Centres as follows:

Type of Building	Minimum number of parking spaces required
Child Care Centre	1 space for every 4 children, having regard to the maximum number of children authorised to be cared for at any particular time.

Application of the criteria to the proposed development would indicate the following requirements:

Type of Building	Number of Children	Car Parking Rate
Child Care Centre	120	30

The Council's rates are consistent with the RTA Guideline rate of 1 space per 4 children, including parking for staff. This criteria was, in fact, derived from a study in 1992 which had some flaws in this assessment, namely:

- It aggregated the different types of centres together (Preschool, Long Day Care and Before and After School Care)
- It had some parking areas with shared uses.

The recent study for RMS has assessments where the different types of centres were not aggregated. This study was not completed until August 2015, and these results were therefore not included in the RMS update Circular TDT 2013/04. Nonetheless, the study makes very clear recommendations from the statistical analysis of the results of surveys, indicating a peak parking demand for a centre for 120 children of some 24 cars.

It is proposed to provide 20 permanent parking spaces, which is more than sufficient for staff parking, with an additional 20 set-down and pick-up parking spaces provided in the shared parking area. The site has the luxury of an additional 42 shared parking spaces for visitors in the unlikely overflow circumstance. It is apparent that the site is in full satisfaction of the Council's DCP requirements for parking, with an additional 10 in excess of the requirement.

4.2 Traffic

An indication of the potential traffic generation of the proposed development can be established with reference to the RTA study (Child Care Centres TEF Consulting 2015), which supersedes the earlier 2002 Guideline criteria, which was based on a study undertaken in the 1990s which aggregated the results for different types of centres including "before and after school".

The 2015 RTA study identifies a traffic generation rate for "Long Day Care Centres" (see details overleaf) of:

	Peak Hour Vehicle Trips/Child	
	AM	PM
Preschool	0.30	0.22

Application of an hourly rate to the proposed 120 child places indicates a peak hourly vehicle trip generation of 36 movements during the AM peak and 24 movements during the PM peak.

If the trips are assumed to be relatively evenly distributed between arrivals and departures, then the following characteristics of traffic generation are projected.

AM		PM	
IN	OUT	IN	OUT
18	18	12	12

This relatively minor level of activity for AM and PM peak traffic flows past the site will not result in any adverse environmental, capacity or traffic-related consequences on the surrounding road network. The existing regular lengthy gaps in the traffic movements along Inman Road will enable vehicles to ingress and egress the site without any difficulty or delay.

5.0 Access, Internal Circulation & Servicing

5.1 Access

The proposed vehicle access arrangements will be located on the southwestern boundary of the site with good sight distances available and complying with the design requirements of AS 2890.2 and will accommodate all vehicles requiring access to the site as indicated in the Appendix C turning path assessment.

5.2 Internal Circulation

The design of the car park, including access driveways, aisles, bays and grades etc., will continue to comply with the requirements of AS2890.1,2 and 6, with quite generous manoeuvring space available. Details of the turning path assessment are provided in Appendix C.

5.3 Servicing

Refuse will be removed by privately operated garbage collection, with small service vehicles, which will be able to access and utilise the available parking spaces, as is normal for Child Care Centre developments of this nature. The arrivals and departures of these vehicles will occur outside of peak periods to avoid any queuing.

6.0 Conclusion

Assessment of the envisaged traffic circumstances at 4-10 Inman Road, Cromer has concluded that:

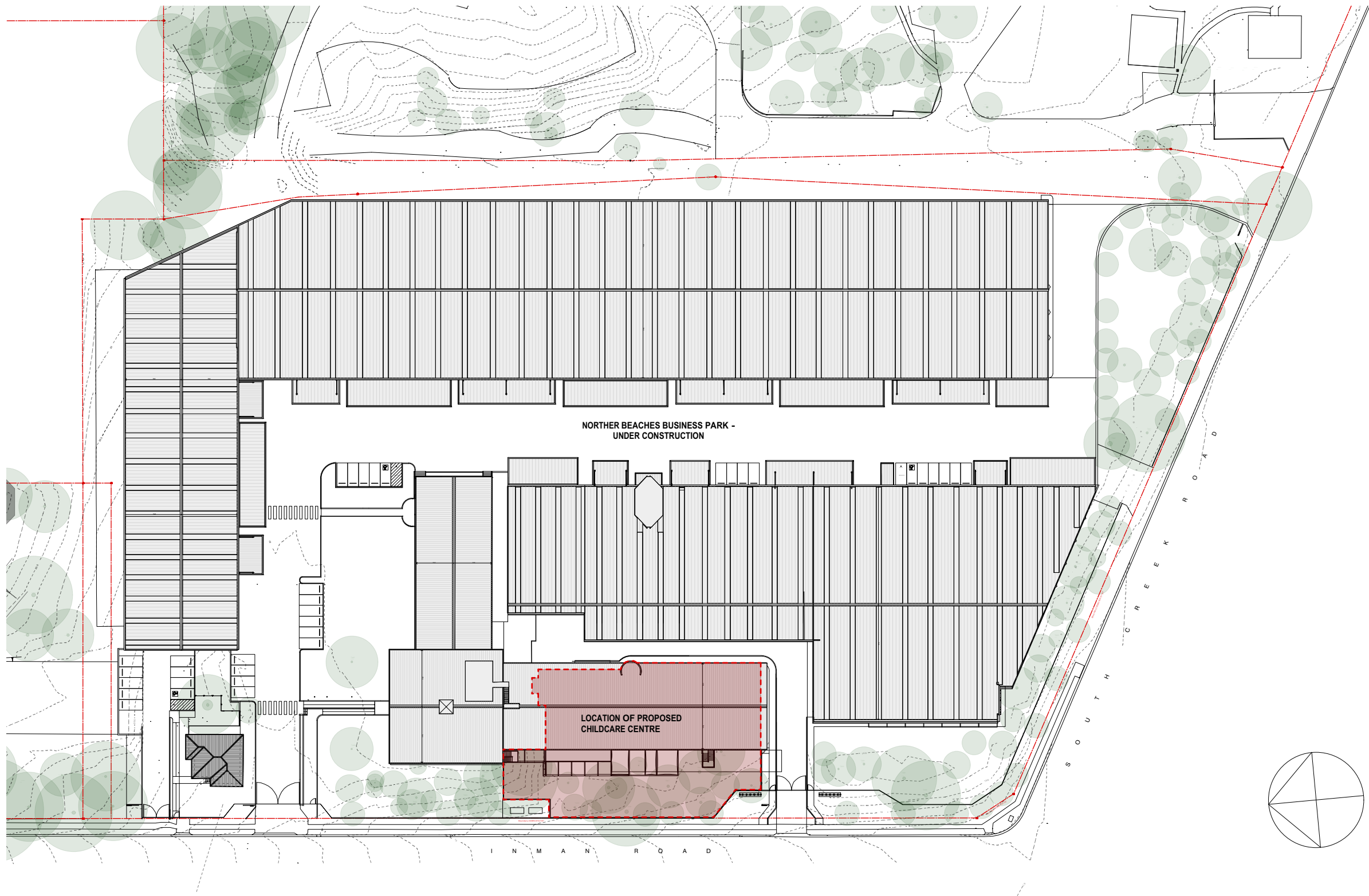
- there will not be any adverse traffic implications
- the proposed car parking provision will be adequate and appropriate
- the vehicle access and internal circulation arrangements will be quite suitable and appropriate in compliance with AS2890.1, 2 & 6

Appendix A

Proposed Plans

KEY:

- SITE BOUNDARY
- SITE CONTOUR
- EXISTING TREES & MAIN VEGETATION
- LOCATION OF PROPOSED DEVELOPMENT SITE AREA



GENERAL NOTES:

1. ALL DIMENSIONS, FFL AND FCL SHOULD BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. DESIGNER/PROJECT MANAGER TO BE MADE AWARE OF ANY DISCREPANCIES FOR RESOLUTION.
2. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH MECHANICAL, HYDRAULIC, ELECTRICAL SERVICES ENGINEERS AND CONSULTANT DETAILS DRAWINGS AND SPECIFICATIONS.
3. ALL WORKS TO BE IN LINE WITH NCC AND AUSTRALIAN STANDARDS & SPECIFICATIONS.
4. ALL EXISTING STATUTORY SIGNAGE TO REMAIN UNLESS NOTED OTHERWISE. ANY NEW REQUIRED STATUTORY SIGNAGE TO COMPLY WITH GOVERNING BODY REQUIREMENTS.
5. REFER TO ENGINEERING SERVICES DRAWINGS FOR ANY RE-USE AND RE-LOCATION OF EXISTING SERVICES.
6. DESIGN DOCUMENTATION TO BE READ IN CONJUNCTION WITH ENGINEERING SERVICES DESIGN PACKAGE & DA CONSENT CONDITIONS.
7. ALLOW TO REPAIR ANY DAMAGE TO BASE BUILDING CORE, COLUMNS & EXISTING IT WALLS, NEW FINISH TO MATCH EXISTING OR AS SPECIFIED.

COMPLIANCE NOTES:

1. ALL SAFETY GLAZING IN BUILDINGS WILL COMPLY WITH AS2208. PRACTITIONER TO ALLOW FOR COMPLYING THICKNESS OR UPGRADE SOLUTION.
2. WHERE REQUIRED, ALL PROPOSED GLAZING WILL COMPLY WITH AS1288.
3. ALL TRADES, WHERE APPLICABLE, MUST COMPLY TO CURRENT NCC, AS1428-PART1-2009, LOCAL GOVERNING BODY REQUIREMENTS AND AUSTRALIAN STANDARDS.
4. ALL DOCUMENTATION IS PRELIMINARY AND TO BE REVIEWED BY CERTIFIED PCA / AND CONSULTANT TEAM PRIOR TO FINAL UPDATE / COORDINATION.

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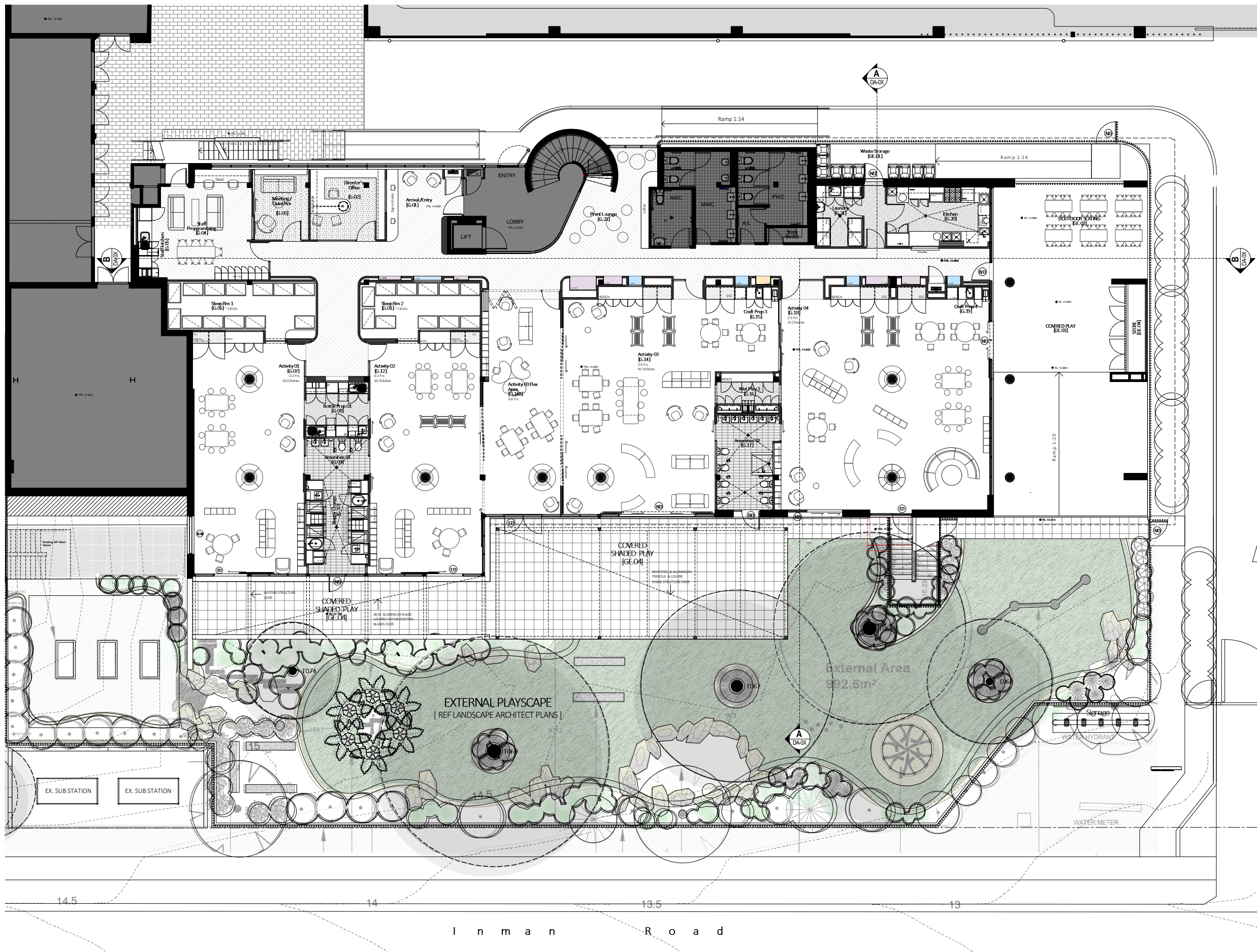
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Project: Learn & Play Childcare

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Cromer NSW 2099Drawing Number:
DA-04Date:
25.05.23Scale:
1:100 @ A1

A











PROPOSED GENERAL ARRANGEMENT PLAN

D

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NORTH STONEY NSW 2060
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VERIFIED ON SITE. DO NOT SCALE FROM DRAWINGS. THIS
DRAWING IS TO COMPLY WITH ALL RELEVANT LOCAL
AUTHORITY REGULATIONS.

KEY:

	STAFF / COMMON AREA UTILITY AMENITIES
	FOH COMMON AREA / PUBLIC ACCESS CORRIDOR
	SLEEP / BABY COTT ROOMS
	ACTIVITY 1&2 : 0-2 Yrs OLD
	ACTIVITY 3 : 3-6 Yrs OLD
	ACTIVITY 4 : 2-3 Yrs OLD
	OUTDOOR COVERED PLAYSAPCE / HARDCAPE
	OUTDOOR PLASCAPE / LANDSCAPE AREA

GENERAL NOTES:

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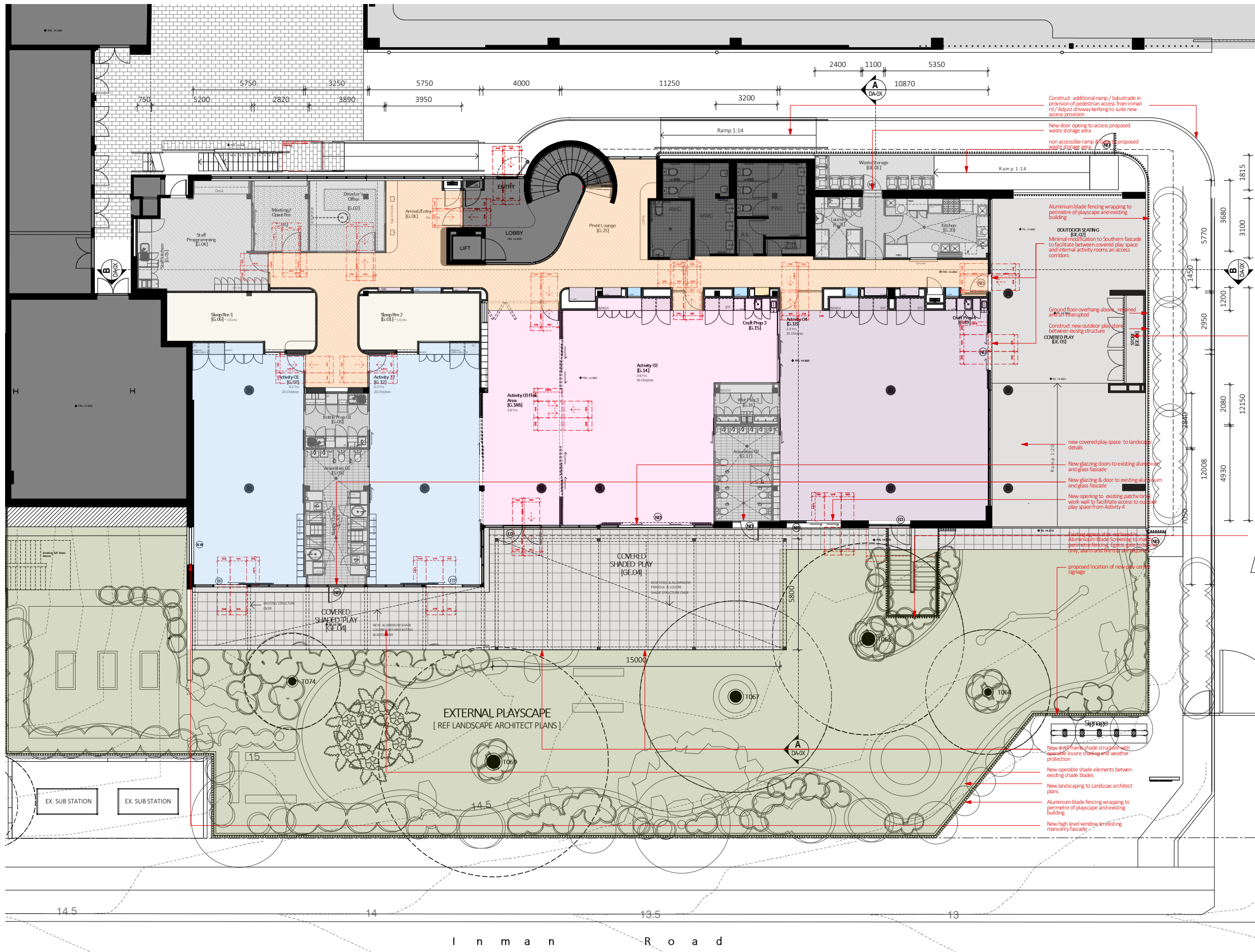
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Project: Learn & Play Childcare

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Cromer NSW 2099Drawing Number:
DA-05Date: 25.05.23
Scale: 1:100 @ A1

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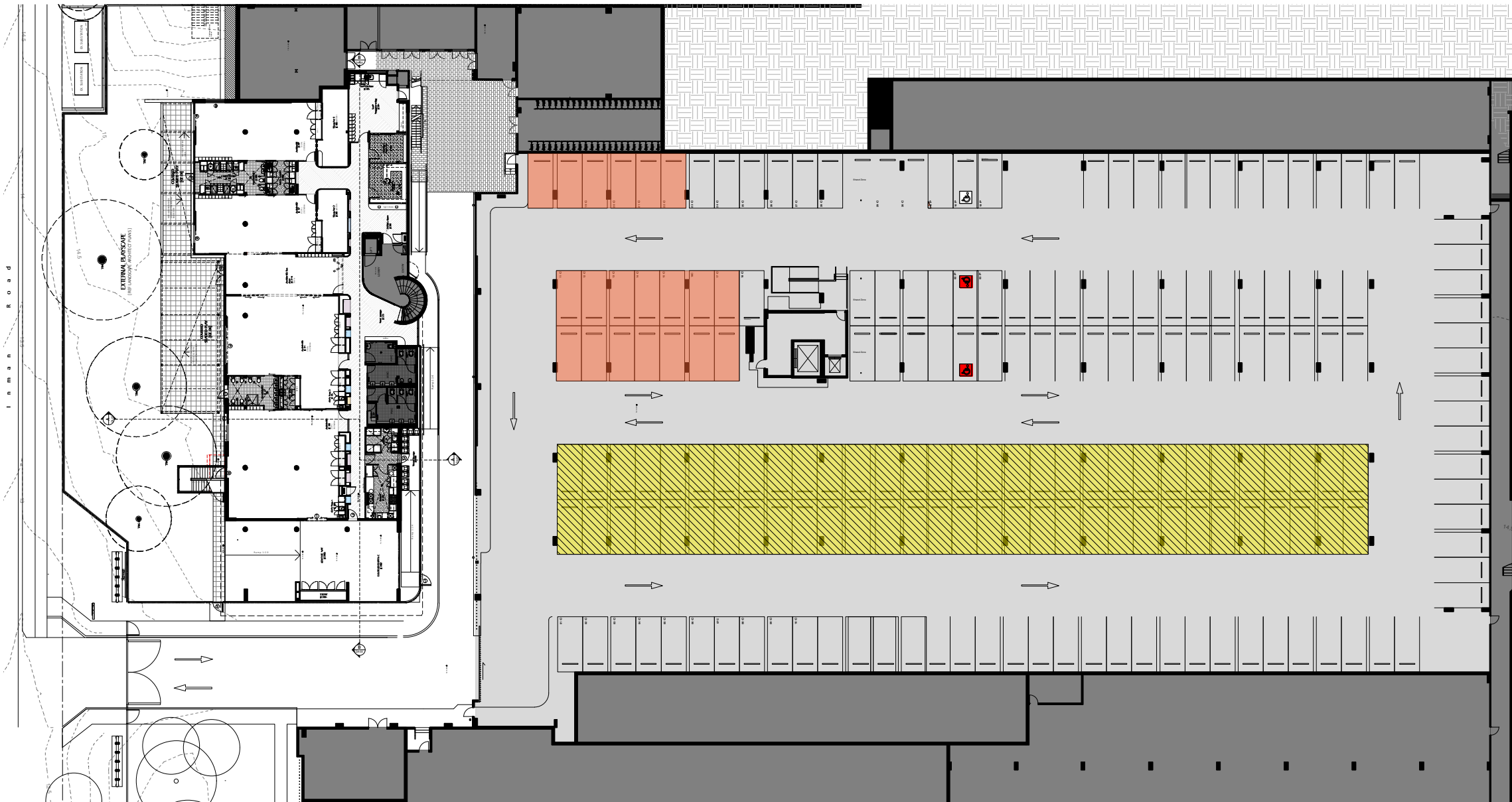
SETOUT / AREA ZONE PLAN

KEY:

ALLOCATED PERMANENT PARKING SPACES :20

ALLOCATED SHARED PARKING SPACES FOR VISITORS
& DROPP OFF :X

PROPOSED CHILDCARE CENTRE



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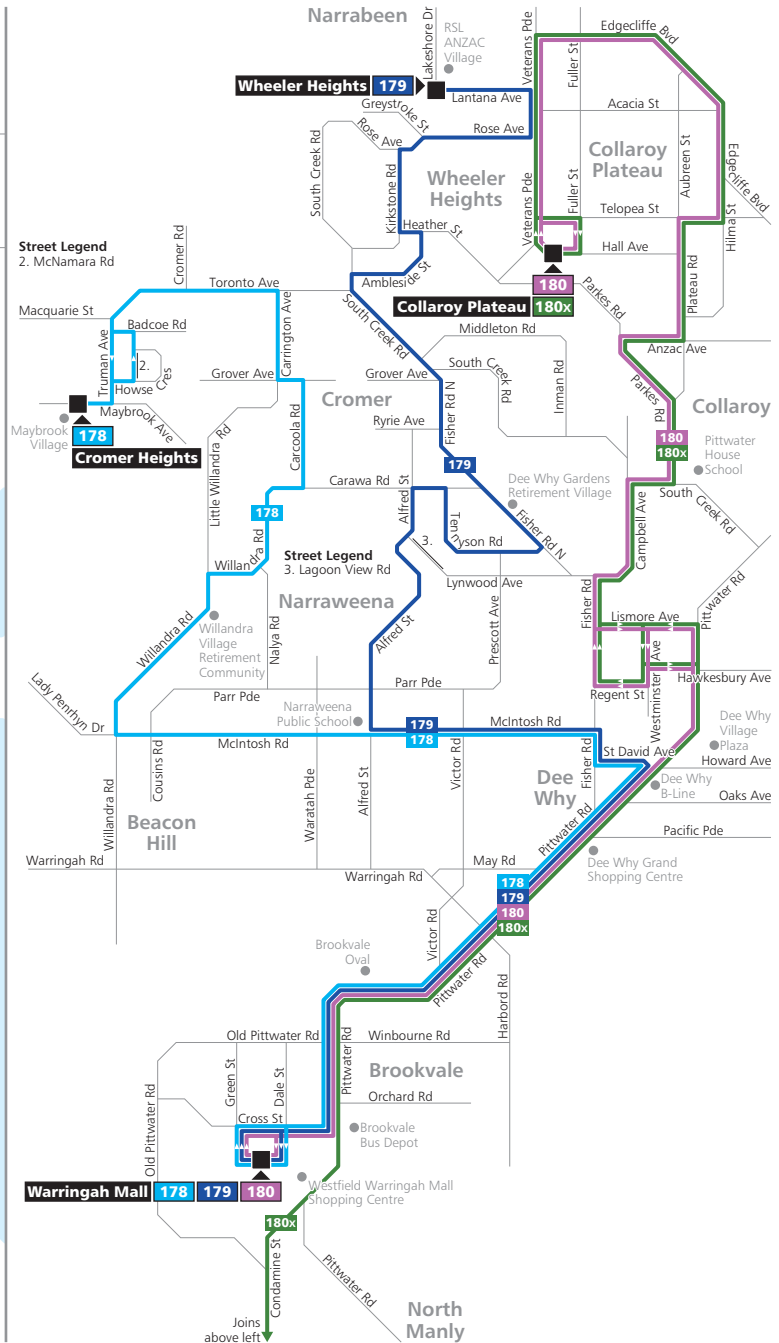
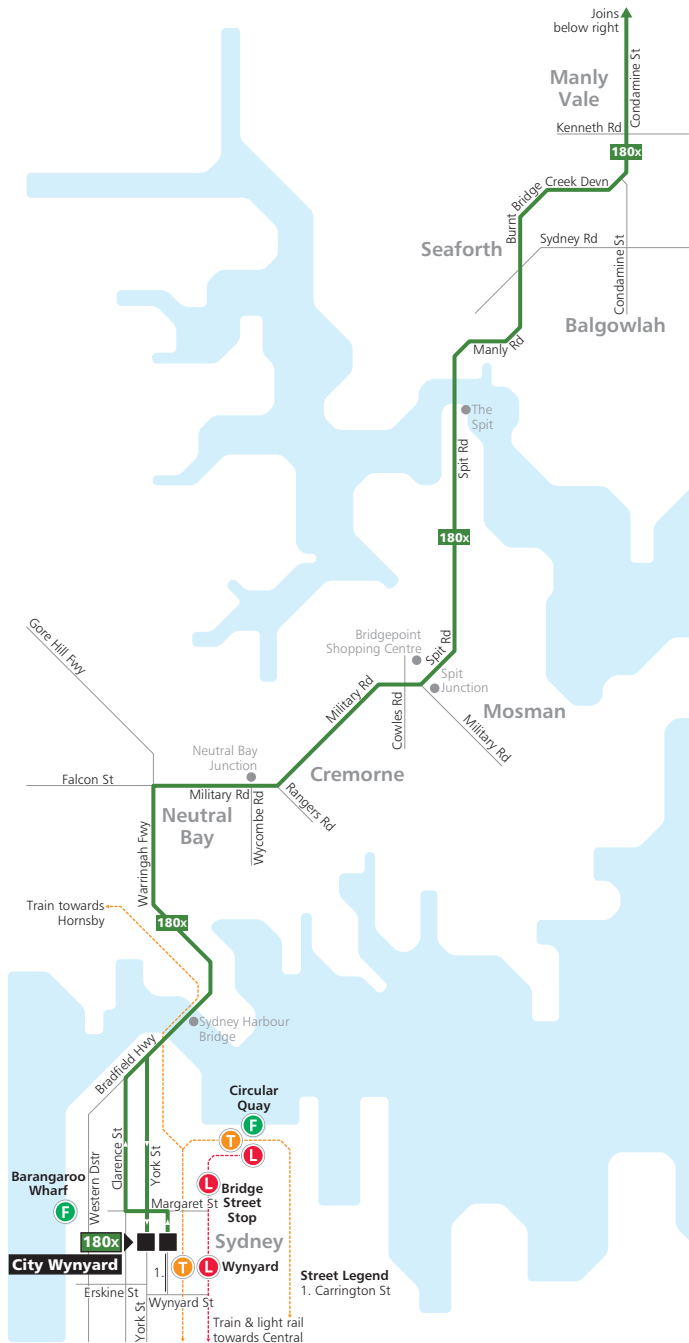
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Appendix B

Public Transport Maps

Routes 178, 179, 180, 180x

B



Legend

- Bus route
- 178 Bus route number
- Bus route start/finish
- T Train line/station
- F Ferry wharf
- L Light rail line/stop

Diagrammatic Map
Not to Scale

Route 180x to City Wynyard

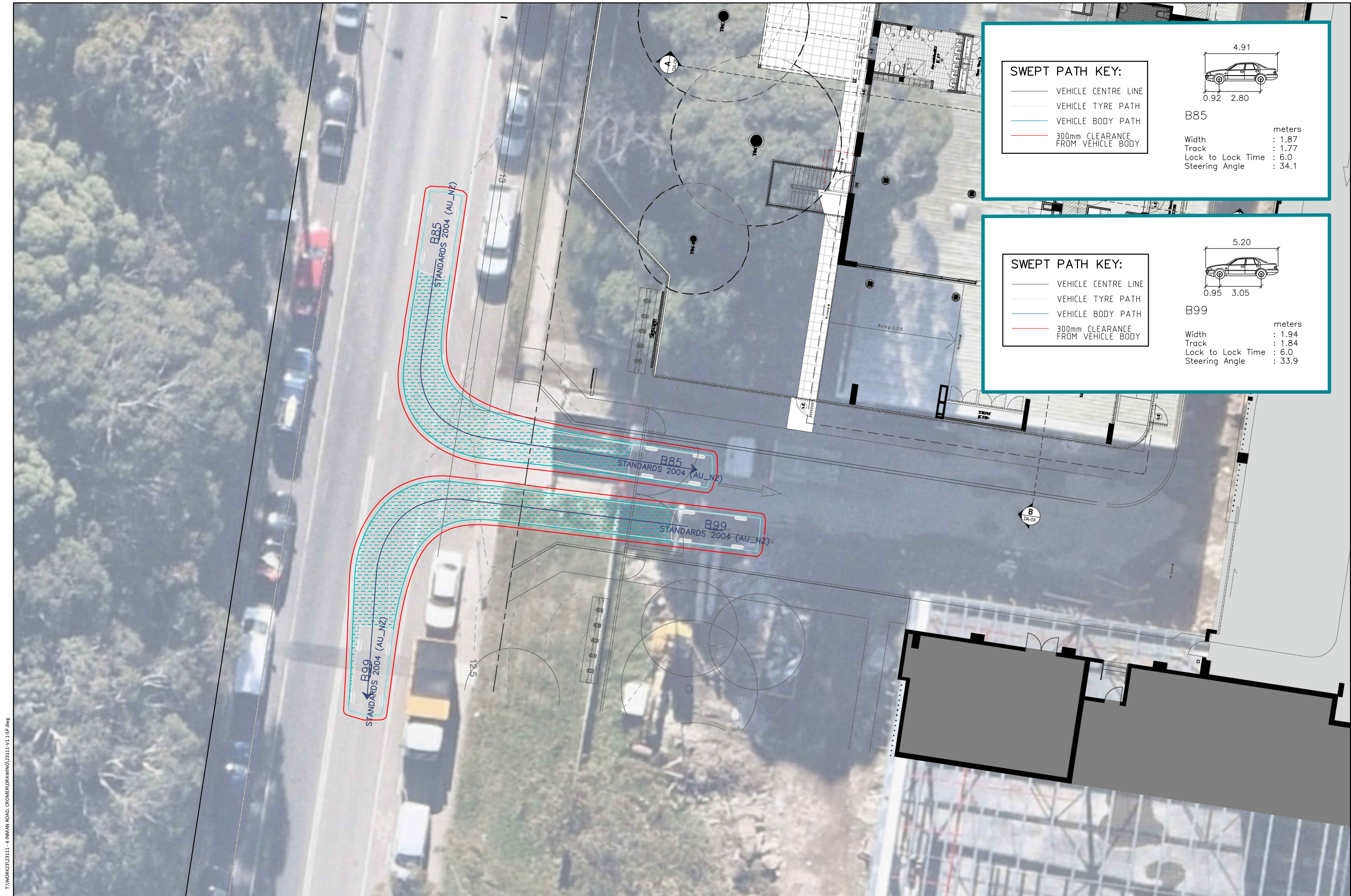
Picks up and sets down passengers at all stops to Dee Why B-Line, then Warringah Mall, Kenneth Road Manly Vale, Spit Junction, Neutral Bay Junction, and Wynyard.

Route 180x to Collaroy Plateau

Picks up passengers only at Wynyard, then picks up and sets down passengers at Neutral Bay Junction, Spit Junction, Kenneth Road Manly Vale, Warringah Mall, Dee Why B-Line, then all stops.

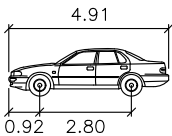
Appendix C

Swept Path Assessment



SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY

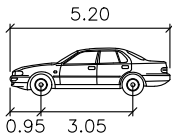


B85

	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY



B99

	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

4-10 INMAN RD, CROMER NSW 2099
SIMULTANEOUS PASSING OF 85th AND 99th PERCENTILE VEHICLES
SWEPT PATH ASSESSMENT

DRAWING REF NO. 23111-V1.1-SP

SHEET NO. 01 OF 06

ISSUE DATE 18 July 2023

DESIGNED BY A.LAFKAS

SCALE A3 0 20 40 1:200



DISCLAIMER

This drawing has been prepared using vehicle modelling computer software AutoTurn Pro V11.0 in conjunction with AutoCAD 2018. 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.

ttpa TRANSPORT AND TRAFFIC PLANNING ASSOCIATES
Established 1994

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P: (02) 9411 5660 E: info@tpa.com.au W: www.tpa.com.au





4-10 INMAN RD, CROMER NSW 2099
ENTRY AND EXIT OF AN 85th PERCENTILE VEHICLE
SWEPT PATH ASSESSMENT

DRAWING REF NO. 23111-V1.1-SP

SHEET NO. 03 OF 06

ISSUE DATE 18 July 2023

DESIGNED BY A.LAFKAS

SCALE A3 0 20 40 1:200



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4-10 INMAN RD, CROMER NSW 2099
ENTRY AND EXIT OF AN 85th PERCENTILE VEHICLE
SWEPT PATH ASSESSMENT
DRAWING REF NO. 23111-V1.1-SP

SHEET NO. 04 OF 06

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4-10 INMAN RD, CROMER NSW 2099
ENTRY AND EXIT OF AN 85th PERCENTILE VEHICLE
SWEPT PATH ASSESSMENT

DRAWING REF NO. 23111-V1.1-SP

SHEET NO. 05 OF 06

ISSUE DATE 18 July 2023

DESIGNED BY A.LAFKAS

SCALE A3 0 2.0 4.0 1:200



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