

16 Bangaroo Street, North Balgowlah

**Proposed Conversion of an Existing Dwelling & Change of
Use to a 12-Place Childcare Centre**

Traffic and Parking Impact Assessment

Ref: 20035

Date: December 2021

Issue: A

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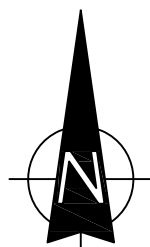
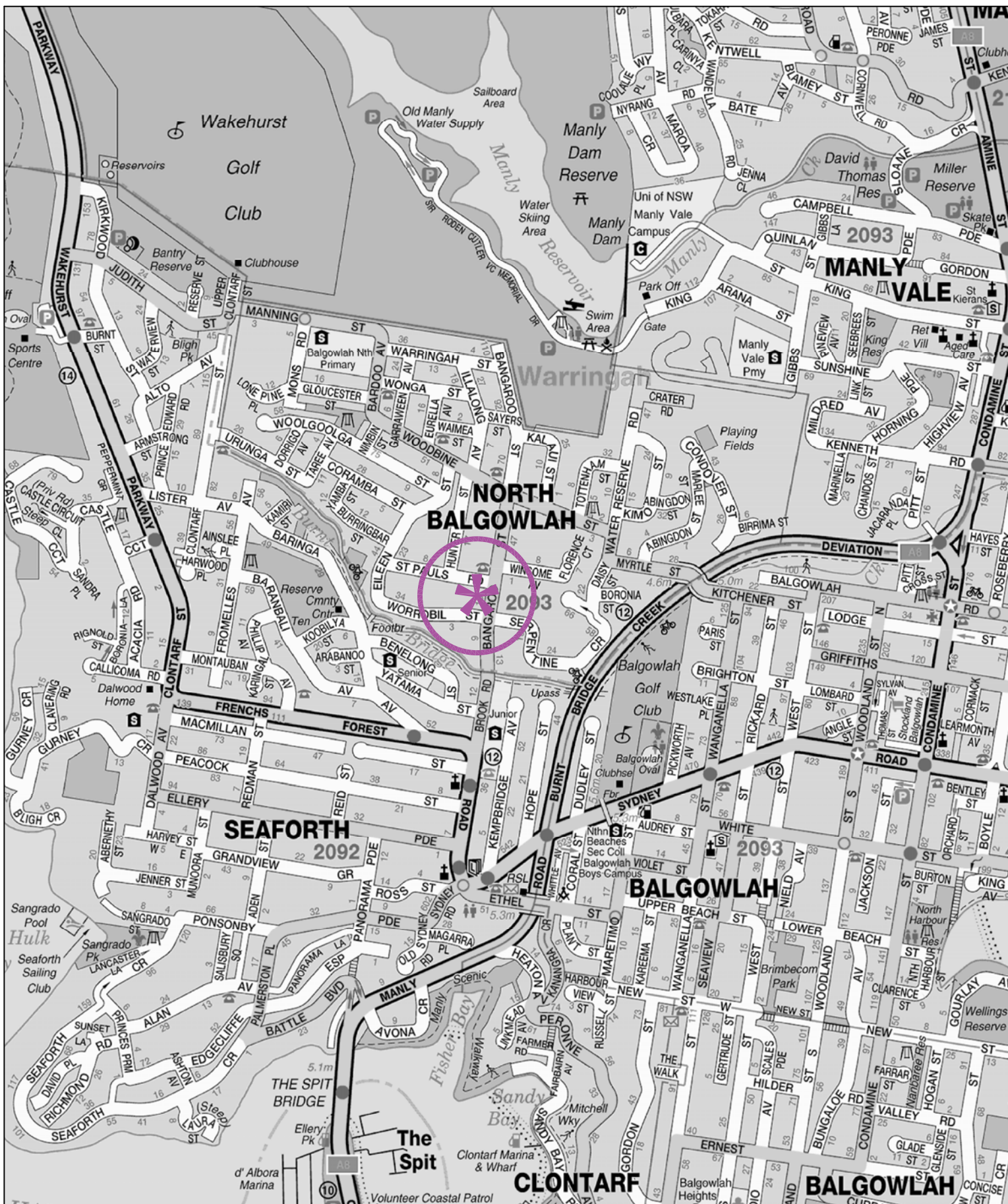
1.0 Introduction

A Development Application (DA2021/0680) has been submitted in June 2021 to Northern Beaches Council for a proposed conversion of an existing dwelling and change of use to a 20-place Child Care Centre (Centre). The site at 16 Bangaroo Street in North Balgowlah (Figure 1), is located 350m to the north of Seaforth Public School. The DA was refused by the Northern Beaches Local Planning Panel on 17/11/2021.

The applicant now seeks to accommodate a reduced number of pre-school children (3 - 6-year-olds) from 20 to 10 and employs a maximum of 2 staff (instead of 3 as required in the original DA).

The purpose of this report is to:

- * describe the site, its context and the development proposal
- * describe the existing road network and traffic conditions in the area
- * assess the travel mode distribution of an existing similar site
- * assess the adequacy of the proposed parking arrangement
- * assess the potential traffic implications due to the proposed development
- * assess the adequacy of the existing vehicle access and servicing arrangements



LOCATION

FIG 1

2.0 Proposed Development

2.1 Site, Context and Existing Use

The development site (Figure 2) is Lot 111 in DP 1030311 occupying a rectangular-shaped area of some 551m². The site, which has a frontage of some 12m frontage to the western side of Bangaroo Street, is currently occupied by a 2-storey single residential dwelling with a tandem (two) car space and vehicle access via Bangaroo Street near the south-eastern boundary.

The site is surrounded by a mixture of single dwellings and medium density apartments.

2.2 Proposed Development

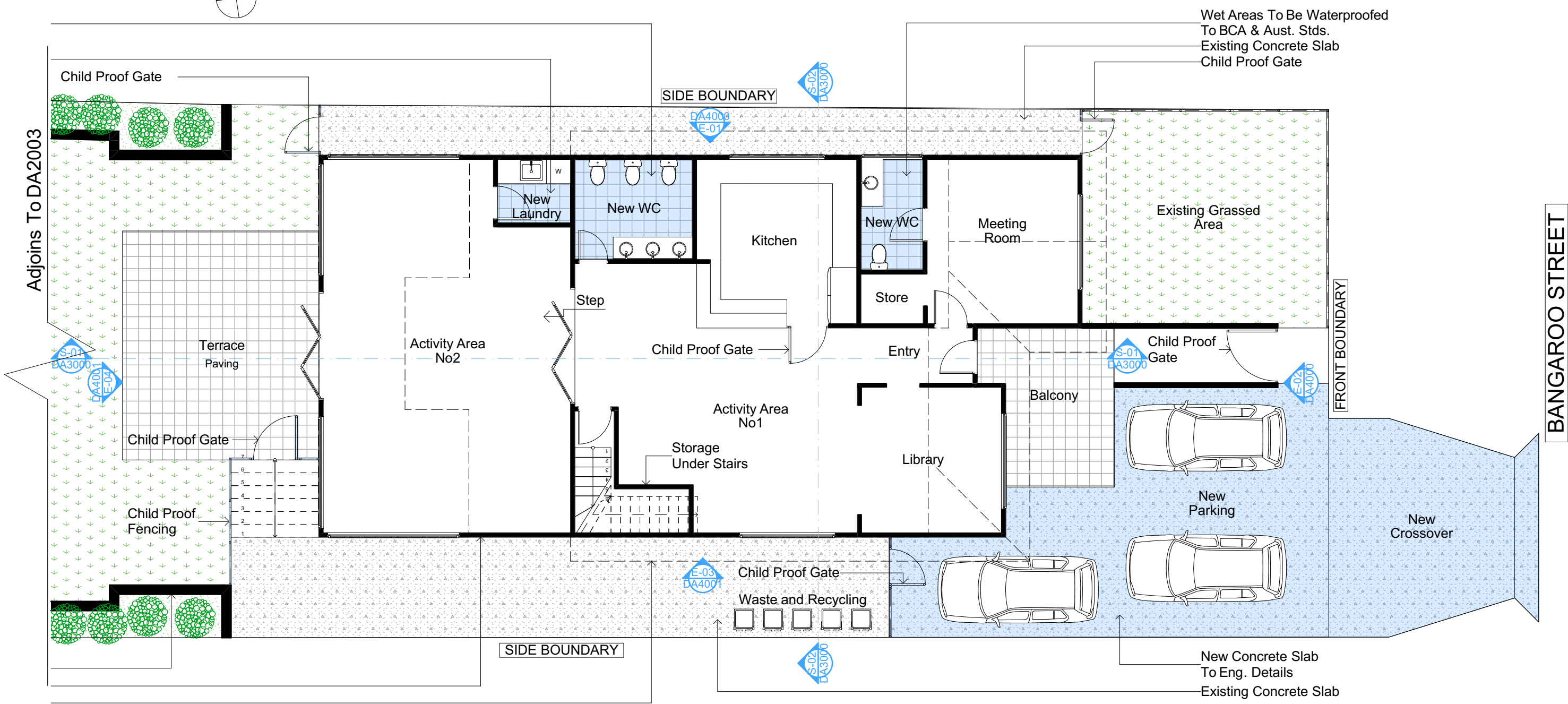
The Applicant proposes to undertake minor alterations and additions to the existing building on the site, to provide for a childcare centre capable of accommodating up to 10 children and 2 staff members.

It is proposed to widen the existing vehicle access for accesses to 3 on-site parking spaces.

Dedicated pedestrian access will be provided on Bangaroo Street at the eastern site boundary. The proposed hours of operation are from 8.30 am to 4.00 pm Mondays to Fridays.

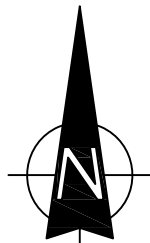
Details of the proposed development are provided on the architectural drawings prepared by Rapid Plans, which accompany the Development Application and are reproduced overleaf.

Denotes New Works



2 GROUND FLOOR
1:100

**DA APPLICATION
ONLY
NOT FOR CONSTRUCTION**



SITE

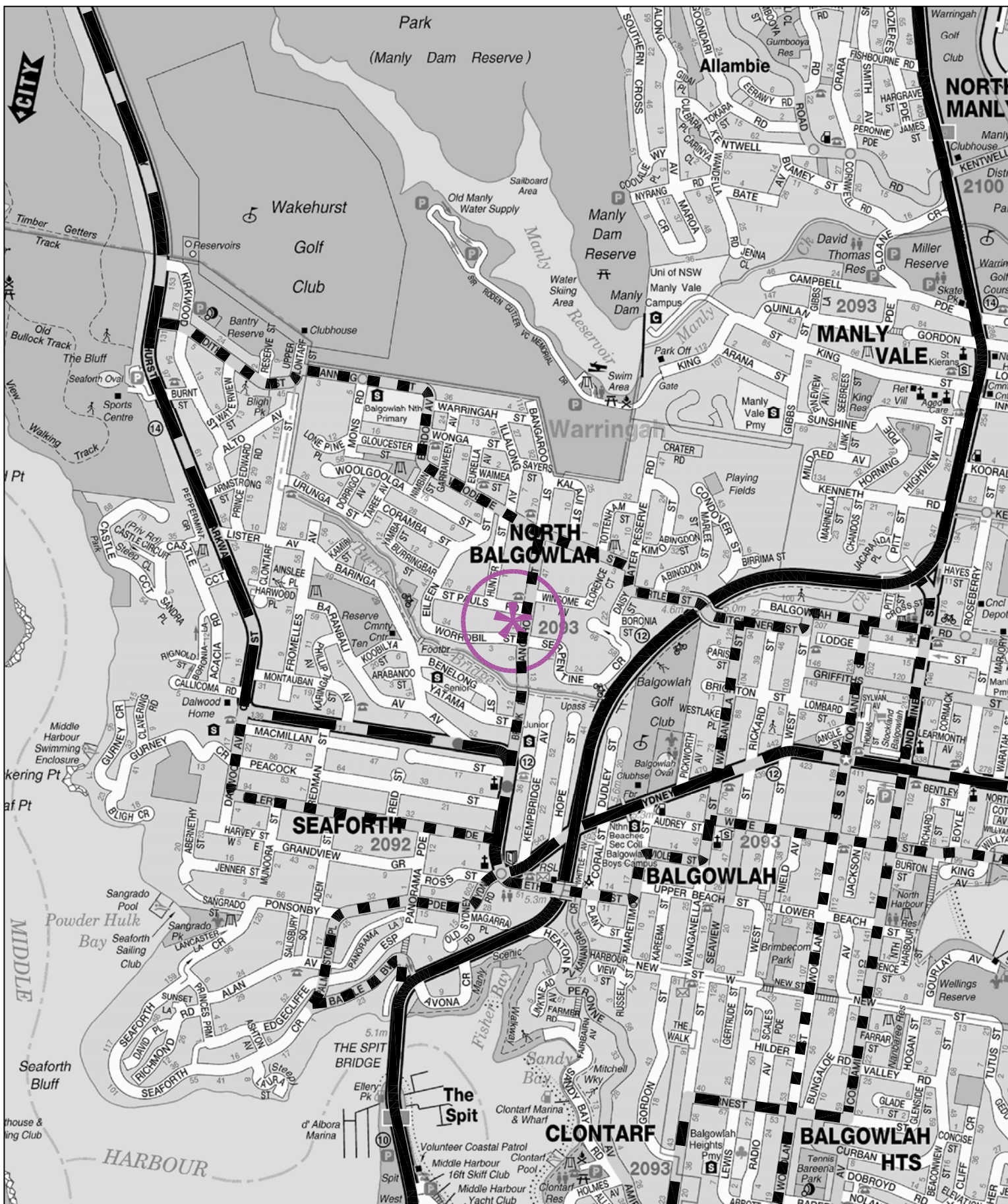
FIG 2

3.0 Existing Road Network and Traffic Conditions

3.1 Road Network

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

- * *Manly Road / Burnt Bridge Creek Deviation* – a State Road and arterial route (A8) linking between North Sydney and Mona Vale. The route runs for 23 kilometres from Warringah Freeway (M1) at North Sydney to the intersection of Pittwater Road and with Mona Vale Road (A3), at Mona Vale. The majority of the route has three lanes in each direction.
- * *Sydney Road (between Manly Road and Ethel Street)* – a State Road and east/west sub-arterial route (MR164) linking Manly with Seaforth. This route runs east-west and serves as a local collector road and provides access to A8.
- * *Sydney Road (between Belgrave Street and Ponsonby Parade)* – a local collector road which is primarily used to provide vehicular and pedestrian access to frontage of residential, commercial and parkland land uses within. The majority of the route has two lanes in each direction with permitted kerbside parking on both sides of the road.
- * *Ethel Street/Frenchs Forest Road* – a minor ‘collector’ road which provides access to Seaforth shopping centre and the arterial road network for residents in Balgowlah Heights and Clontarf. Ethel Street runs east-west while Frenchs Forest Road runs north-south between Ethel Street and Bangaroo Street and east-west between Bangaroo Street and Clontarf Street. These routes are utilised as a local road and provide access to Sydney Road. The routes are primarily used to provide vehicular and pedestrian access to the frontage of residential and commercial land use within. They carry two traffic lanes in each direction, with unrestricted kerbside parking permitted on both sides of the road within the residential section of the road.



- * *Brook Road/Bangaroo Street* – a local road which is primarily used to provide vehicular and pedestrian access to frontage properties. Unrestricted kerbside parking is generally permitted on both sides of the road.
- * *Worrobil Street/St Pauls Road/ Winsome Avenue* – a local, unclassified road which is primarily used to provide vehicular and pedestrian access to frontage properties.

3.2 Traffic Controls

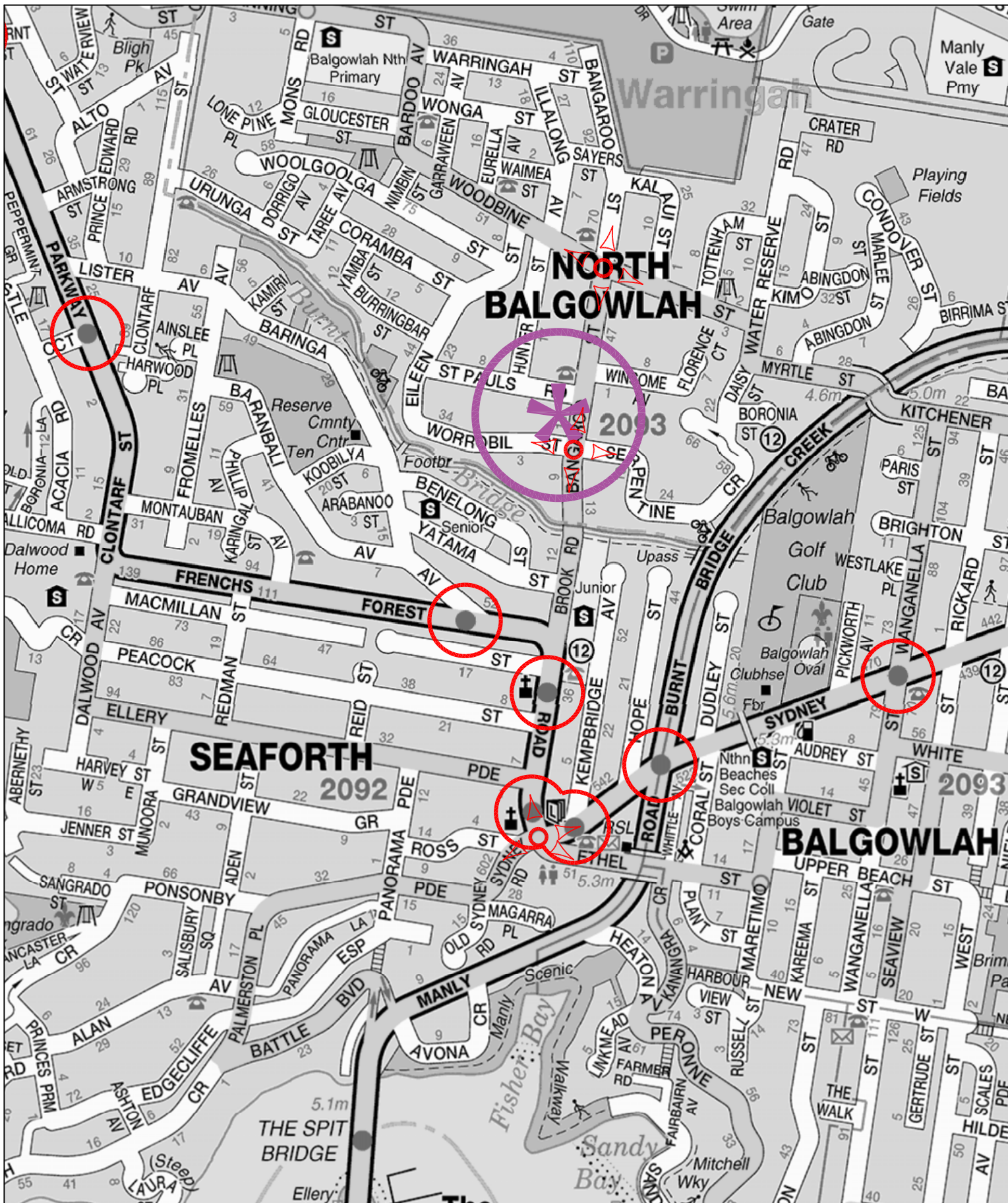
The traffic and parking controls, which have been applied to the road system in the vicinity of the site (Figure 4) comprise:

- * the priority-control intersections along Bangaroo Street at St Pauls Road and Winsome Avenue
- * the roundabout at the intersections of Bangaroo Street/Worrobil Street and Bangaroo Street/Woodbine Street
- * the pedestrian crossings on Brook Road north of Frenchs Forest Road and on Woodbine Street east of Illalong Avenue
- * the unrestricted on-street parking on both sides of Bangaroo Street, Worrobil Street, St Pauls Road and Winsome Avenue
- * the 50 km/h speed limit which applies to Bangaroo Street and all other local roads in the area
- * the 40km/h School Zones on the southbound lane of Bangaroo Street south of Worrobil Street

3.3 Traffic Conditions

An indication of traffic conditions on the road system serving the site is provided by data published by Roads and Maritime Services and surveys undertaken as part of this study. The data¹ published by RMS is expressed in terms of average annual daily traffic (AADT)

¹ *Traffic Volume Data for Sydney Region*
Roads and Maritime Services



and details are provided in the following:

Location	AADT
Burnt Bridge Creek Deviation, East of Brook Road, Balgowlah	30,985

Observations of traffic activity in the vicinity of the development site during morning and afternoon peak periods reveal some queuing occurs at times along Bangaroo Street south of Serpentine Crescent – Worrobyl Street as a consequence of the intersection of Brook Road/Frenchs Forest Road and the set-down and pick-up activities associated with Seaforth Public School. It was also observed minor queuing on the northbound lane of Bangaroo Street near the intersection with Woodbine Street.

South of the intersection of Winsome Avenue/Bangaroo Street flows along Bangaroo Street are generally free-flowing and access/circulation on the road system is facilitated by the various priority-controlled and roundabout facilities.

Regular lengthy gaps are available in the Bangaroo Street traffic flow for vehicles to ingress and egress the site.

3.4 Transport Services

The site is well located to take advantage of the high frequency and capacity bus services which operate along Bangaroo Street with bus stops located within a short walking distance of 15m from the site. There are currently 2 bus routes serving the bus stops on Bangaroo Street, with peak hour frequencies of 14

- * 141 - Austlink to Manly via Frenchs Forest & Seaforth
- * 172X - Warringah Mall to City Wynyard via North Balgowlah (Express Service)

The site is therefore considered to be very well served by public transport services and is ideally suited to the needs of the Centre's staff travelling to/from work and parents/carers travelling to/from the Centre by public transport.

The existing public transport services available in the vicinity of the site are shown on the diagrams in Appendix A.

3.5 Pedestrian Connectivity

Established footpaths are available on the western side of Bangaroo Street north of Serpentine Crescent-Worrobil Street and both sides of Bangaroo Street south of Serpentine Crescent-Worrobil Street. The footpaths provide convenient and direct connections between the Centre and the surrounding local roads serving the surrounding residences.

4.0 Parking

Northern Beaches Council's (Warringah) DCP specifies the following parking provision in relation to the proposed development scheme:

- | | |
|-------------------|--|
| Child Care Centre | - 1 space for every 4 children, having regard to the maximum number of children authorized to be cared for at any particular time. |
|-------------------|--|

Application of the above to 10 children would indicate a total parking requirement of 3 spaces.

Based on the above, it is proposed to provide 1 on-site (front tandem) space for staff. This indicate a car parking provision rate of 0.33 spaces per staff which is consistent with the staff car parking demand for a similar site at 1 Grandview Grove, Seaforth.

It is noted that the applicant and/or her family member will manage the centre and it is intended that the 1 car space is reserved for their use.

The development proposes 3 on-site parking spaces (1 for staff and 2 for SD/PU activities), in accordance to Council's DCP requirements.

5.0 Traffic Impact

An indication of the likely traffic generation of the proposed development can be established with reference to the RMS Guide to Traffic Generating Developments. For child care centres, the Guideline indicates the following peak traffic generation rates:

AM Peak	0.8 peak vehicle trips/licensed place
PM Peak	0.7 peak vehicle trips/licensed place

However, it should be noted that the PM peak hour traffic generation rate for the proposed development is significantly less than the RMS rate, as the Centre will close at 4:00 pm prior to the start of the PM peak period. It has been conservatively assumed that the PM peak hour traffic generation rate associated with the staff only traffic will be 0.5 vtpm per staff.

Application of the above to the proposal of 10 licensed places would indicate a total post-development traffic generation outcome of 8 vph in the morning peak and 7 vph in the afternoon peak.

With the trips relatively evenly distributed between arrivals and departures, the following traffic generation characteristics are projected:

The development of traffic will be distributed as follows:

Peak Hour Vehicle Movements			
AM		PM	
IN	OUT	IN	OUT
4	4	3	4

This represents an additional average flow of 1 vehicle movement every 7 to 8 minutes, considering that, unlike a school, parents/carers are able to set-down or pick-up children at times that suit them rather than dictated by a teaching timetable.

This level of activity will not result in any adverse environmental, capacity, or traffic-related consequences on the surrounding road network. The existing regular gaps provided in the traffic flow along Bangaroo Street by the operation of the roundabout will continue to allow vehicles to ingress and egress the site without any undue difficulty and delay.

It is relevant that this level of traffic activity represents a worst-case circumstance as it assumes that all trips associated with the child care centre are new and does not take into account existing movements past the site generated by parents/carers who, irrespective of whether or not they had a child attending the centre would normally travel through the area when commuting to/from work. This circumstance is further advantaged by the 3 schools (Seaforth Public School, Balgowlah North Public School and Seaforth Public School) within 1 km of the site, which provides further dual-purpose trip opportunities for families with siblings.

If it is conservatively estimated that these 'dual-purpose' trips could account for 20% of the total trips generated by the child care centre the new or additional trips on Bangaroo Street would be reduced accordingly.

6.0 Access, Parking and Servicing

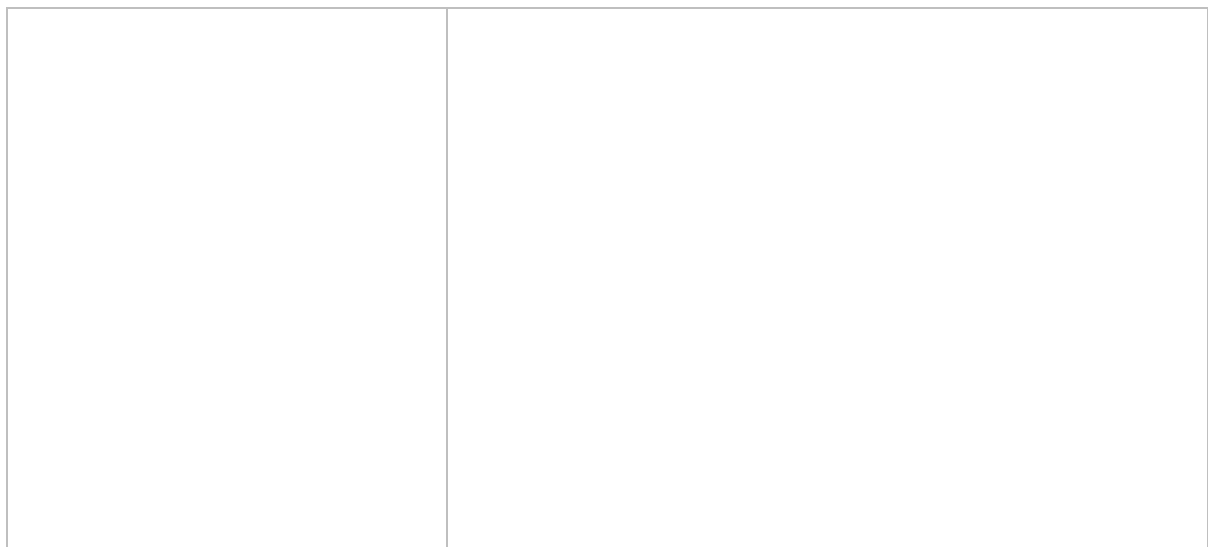
6.1 Access

It is proposed to widen the existing 2.6m wide vehicle access at the south-eastern boundary to 3.5m at Bangaroo Street, widened to 5.5m at the property boundary for access to the on-site parking spaces.

The existing driveway has been operating satisfactorily in providing vehicle access to/from the site. The nature and location of the existing driveway ensure adequate sight distances are available at these access points. The proposed car parking manoeuvring arrangements will be satisfactory as confirmed by the turning path assessment for small and B85 cars manoeuvring in and out of the site as provided in Appendix B.

6.2 Parking

The existing parking arrangement has been designed to accommodate 2 cars, as shown in the following figures:



The proposed additional on-site space has been designed in accordance with Australian Standards AS2890.1 at 2.4 x 5.4 metres for standard car spaces.

6.3 Servicing

Refuse removal will continue to be undertaken with the Council's refuse vehicle on the Bangaroo Street frontage as per the existing arrangement. Occasional needs for other service vehicles, including small furniture movements, can also be satisfied using the ample kerbside parking along the road as is normal for small neighbourhood Child Care facility of this nature.

7.0 Conclusion

The proposed Child Care Centre development at 16 Bangaroo Street in North Balgowlah will present as a suitable outcome for the local area. The assessment of the potential traffic, transport and parking implications have concluded that the development will:

- * the site is located in close proximity to high-frequency public transport services which link to the Metropolitan transport system
- * not present any unsatisfactory traffic capacity or safety-related implications
- * the on-site parking provision is in accordance with Council's DCP requirements.
- * the proposed widening of an existing access is adequate and safe for the proposed development.
- * the parking arrangement will be in accordance with AS2890.1.
- * the existing servicing arrangement will be retained and remain suitable for the proposed development.

Appendix A

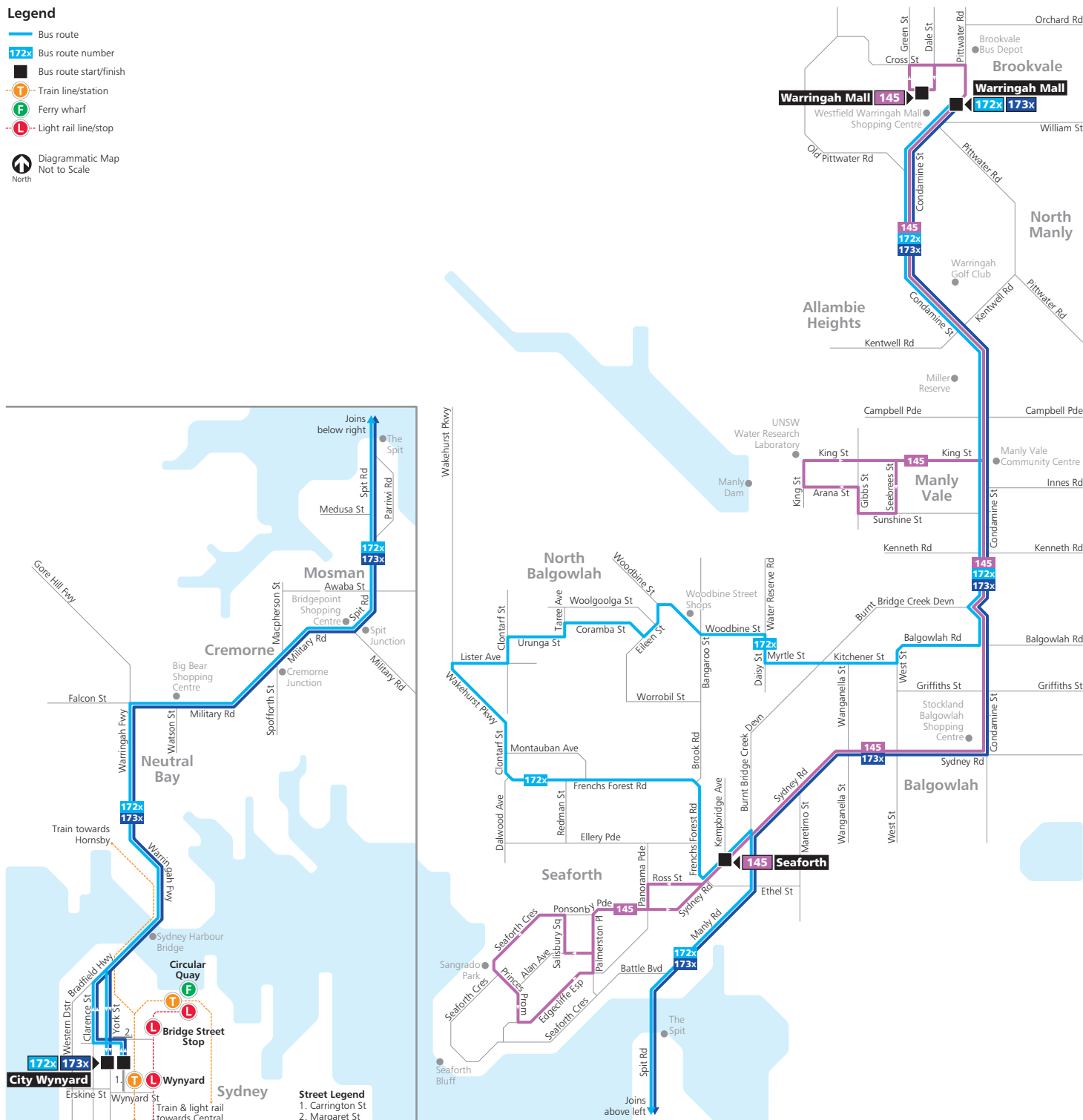
Public Transport Services

Routes 145, 172x, 173x



Legend

- Bus route
- 172x Bus route number
- Bus route start/finish
- Train line/station
- Ferry wharf
- Light rail line/stop
- Diagrammatic Map Not to Scale



Routes 172x and 173x to City Wynyard

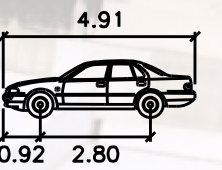
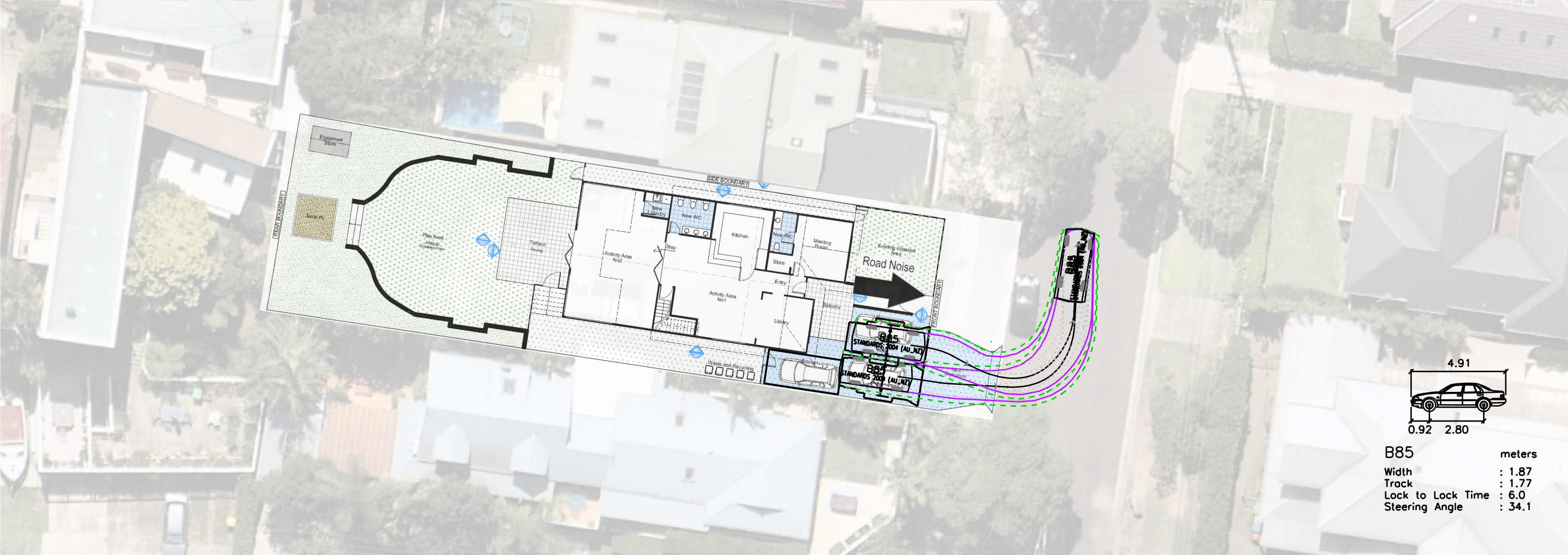
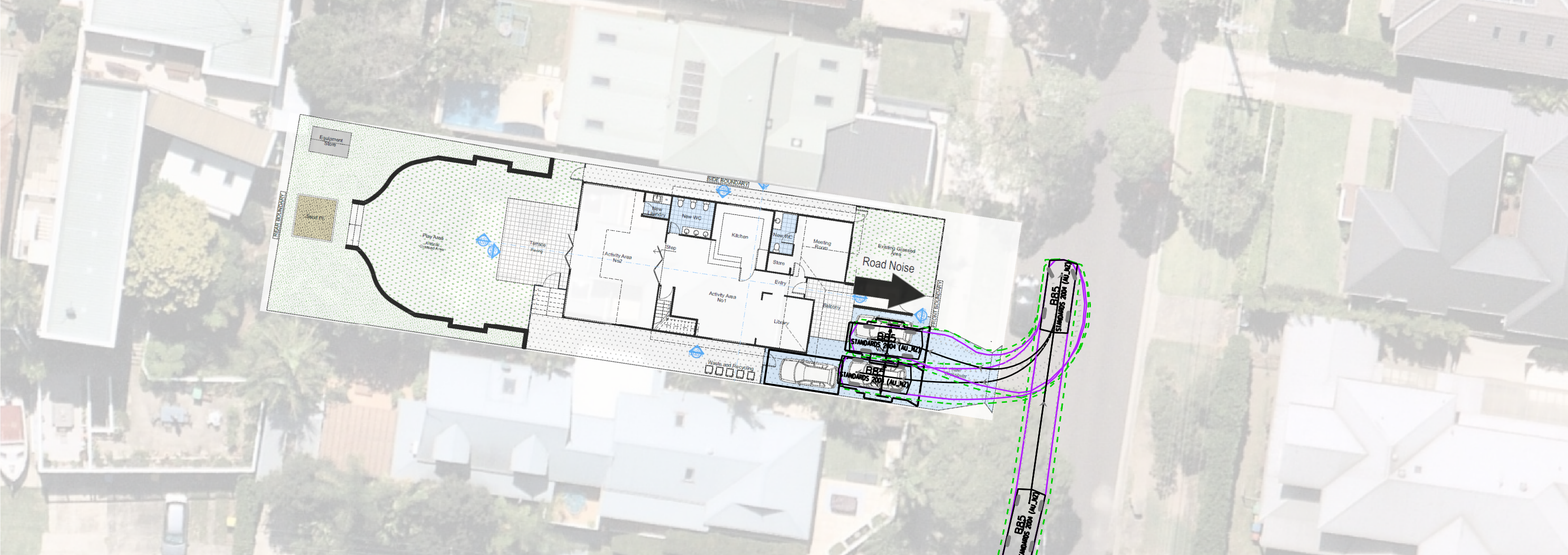
Picks up and sets down passengers at all stops to Spit Junction, then Cremorne Junction, Watson Street (Neutral Bay), and Wynyard.

Routes 172x and 173x to Warringah Mall

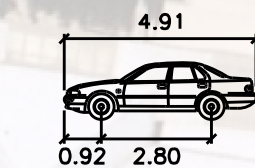
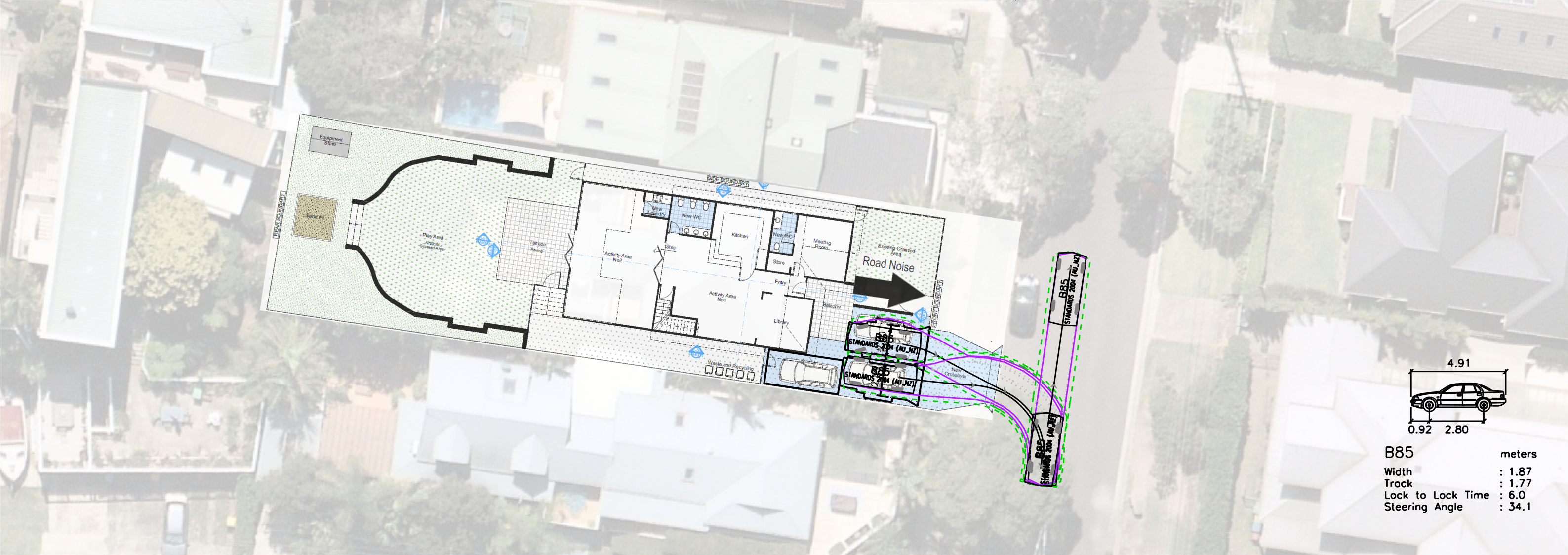
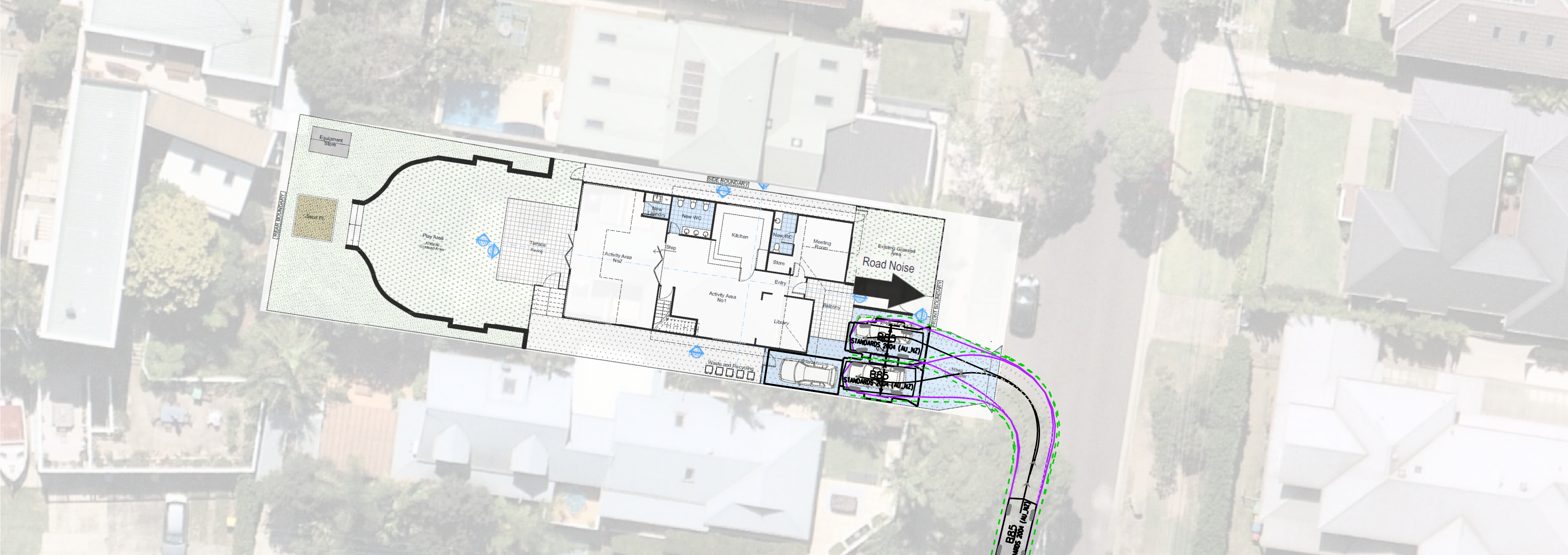
Picks up passengers only at Wynyard, then picks up and sets down passengers at Big Bear (Neutral Bay), Cremorne Junction, Spit Junction, then all stops from Awaba Street Mosman.

Appendix B

Turning Path Assessments



B85	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1



B85	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

Transport and Traffic Planning Associates