

**CONSTRUCTION WORKER
TRANSPORTATION STRATEGY**

FOR

**SCIENTIA PROJECT - MONTE SANT'
ANGELO MERCY COLLEGE**

AT

128 MILLER STREET, NORTH SYDNEY

Prepared For:

RICHARD CROOKES



CONSTRUCTIONS

Assessed and Approved by:



www.mclarentraffic.com.au

1 Introduction

M^CLaren Traffic Engineering (MTE) was commissioned by Richard Crookes Constructions to provide a Construction Worker Transportation Strategy (CWTS) for the Scientia Project - Monte Sant' Angelo Mercy College at 128 Miller Street, North Sydney. This CWTS has been prepared to satisfy consent condition C24 of the Development Consent document. The relevant condition is reproduced below.

Construction Worker Transportation Strategy

Prior to the commencement of a relevant construction stage, the Applicant must submit a Construction Worker Transportation Strategy to the satisfaction of the Certifier. The Strategy must detail the provision of sufficient parking facilities or other travel arrangements for construction workers in order to minimise demand for parking in nearby public and residential streets or public parking facilities. A copy of the strategy must be submitted to the Planning Secretary and Council for information.

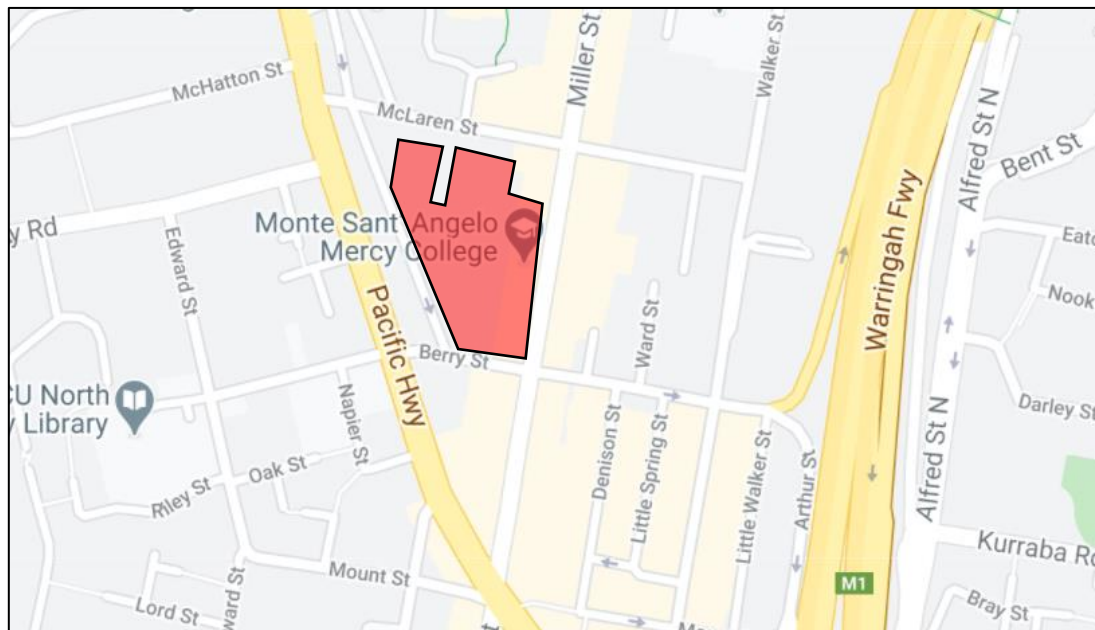
1.1 Development Characteristics and Approvals

The Scientia Project for Monte Sant' Angelo Mercy College includes construction of a new building including parking, indoor sport courts, and science labs. The site is shown on aerial imagery and a street map in **Figure 1** and **Figure 2**, respectively.



 Site Location

FIGURE 1: SITE LOCATION – AERIAL IMAGE



 Site Location

FIGURE 2: SITE LOCATION -STREET MAP

1.2 References

A number of sources have been consulted to inform the preparation of this report including:

- NSW State Government Long Term Transport Master Plan;
- ABS Census Data;
- NSW Bureau of Transport Statistics Journey to Work Data;
- Public Transport or Private Vehicle: Factors That Impact on Mode Choice, Grace Corpuz (Transport Data Centre, New South Wales Ministry of Transport).

2 Objectives

Alternative modes of transport including walking, cycling and public transport quantifiably promote positive transport and health outcomes. The NSW State Government *Long Term Transport Master Plan* emphasises the importance of alternative transport options in the growth of Greater Metropolitan Sydney. Locally, North Sydney Council outlines the following transport objectives within the *North Sydney Development Control Plan 2013*:

O1 To facilitate an increase in the use of public and alternative transport modes including walking and cycling;

O2 To minimise the reliance on private car usage;

O5 Public transport, including walking and cycling, is the main form of travel mode;

O7 Parking is limited to minimise impact on surrounding areas.

This Construction Worker Transport Strategy Plan has been constructed to advise construction staff of sustainable and alternative transport options, with the overall objective to shift travel from private cars to active or public transport options, with the following positive implications:

- Reduced parking demand and occupancy;
- Reduced traffic congestion and trip duration;
- High benefit to cost (BCR) ratio;
- Positive health outcomes from walking and cycling;
- Improved air quality and reduced per-capita emissions.

3 Implementation

3.1 Management and Authority

The distribution of and implementation of the measures detailed in this Construction Worker Transport Strategy is the responsibility of Richard Crookes Constructions. It is the responsibility of Richard Crookes Constructions management (specifically the Site Manager) to include alternative transport methods and initiatives within the construction site.

3.2 Distribution

Richard Crookes Constructions management will be responsible for submitting this plan to the Certifier for approval, and the Planning Secretary and North Sydney Council for information.

4 Alternative Transport Strategy

4.1 Timeframe

The Construction Worker Transport Strategy will apply from the commencement of works for any works performed under this development application.

4.2 Existing Transport Use in Surrounding Area

To assist in setting the targets and milestones for transport use, the NSW Bureau of Transport Statistics Journey to Work data has been consulted for the suburb of North Sydney. The data show that on average 63.2% of workers in these areas drive to and from work, with the detailed travel mode split illustrated in **Figure 3**.

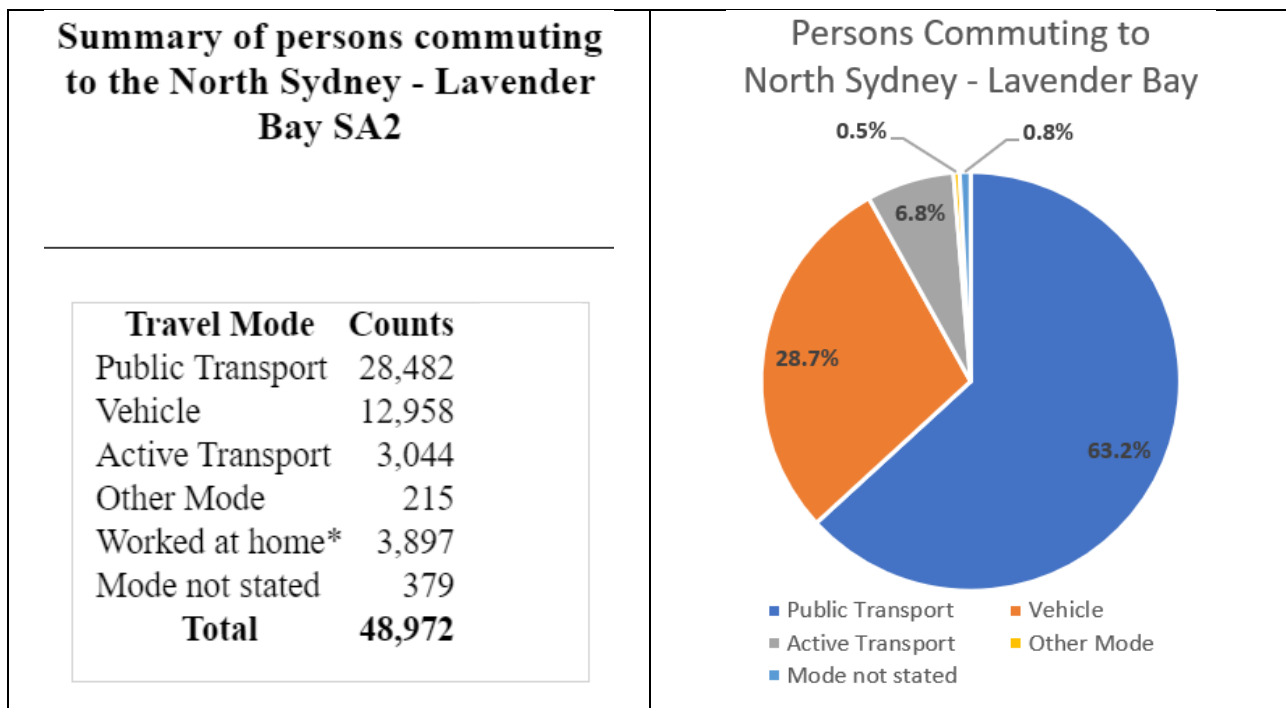


FIGURE 3: JTW WORK DATA FOR NORTH SYDNEY – LAVENDER BAY SA2

5 Public Transportation Infrastructure

The site is located within 600m walking distance (5-6 minutes) to the North Sydney Bus Interchange and North Sydney Train Station. Both of these are major public transportation hubs for Sydney and therefore, the site is very well serviced by public transportation. Trains and buses depart at least every 3 minutes during the day from North Sydney Interchange. A photo excerpt of the North Sydney bus and train networks are provided in **Figure 4** and **Figure 5** below, with the document as a whole reproduced in **Annexure A**.

As shown, the bus infrastructure from the North Sydney Interchange services a vast variety of suburbs within Sydney, including the North Shore, Northern Beaches, The Hills Shire, City of Sydney Council, Eastern Suburbs and Western Suburbs. The Train Station services the T1 City to Berowra line, the T9 North Shore to Hornsby line and the CCN Central to Newcastle line.

Public parking is limited in the area, such that the walking distance between the site and the North Sydney Train Station and North Sydney Bus Interchange would very likely be much less than the walking distance between public all-day parking and the site. Therefore, the public transportation network is likely more convenient for construction workers than a private vehicle.

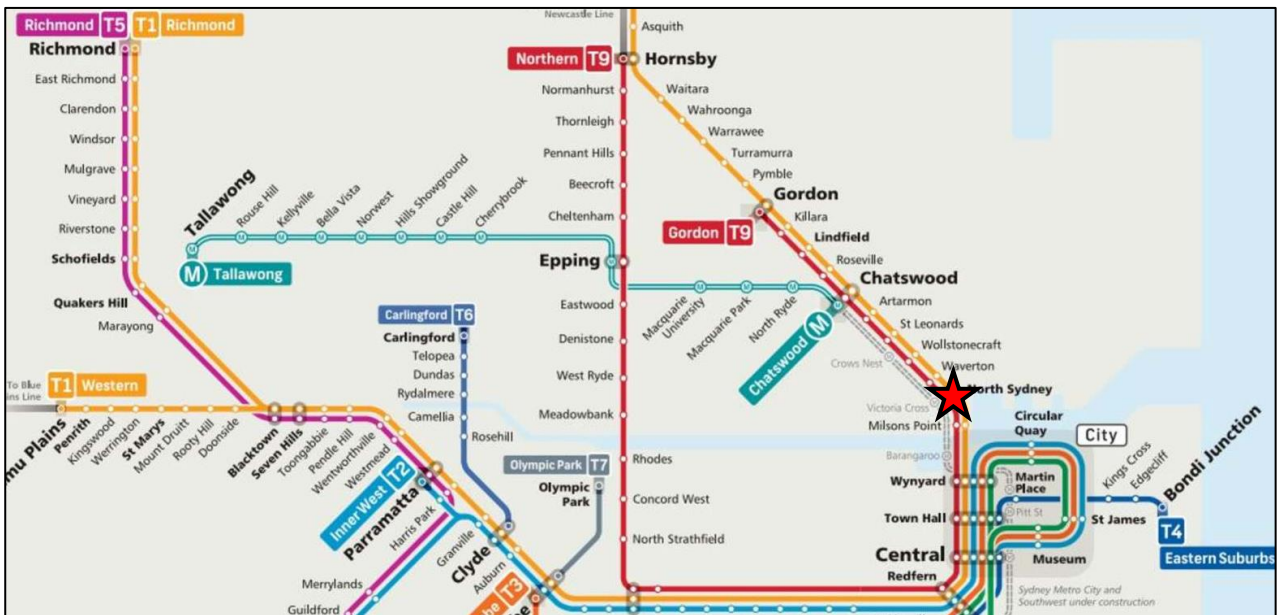


FIGURE 4: SYDNEY TRAINS NETWORK MAP

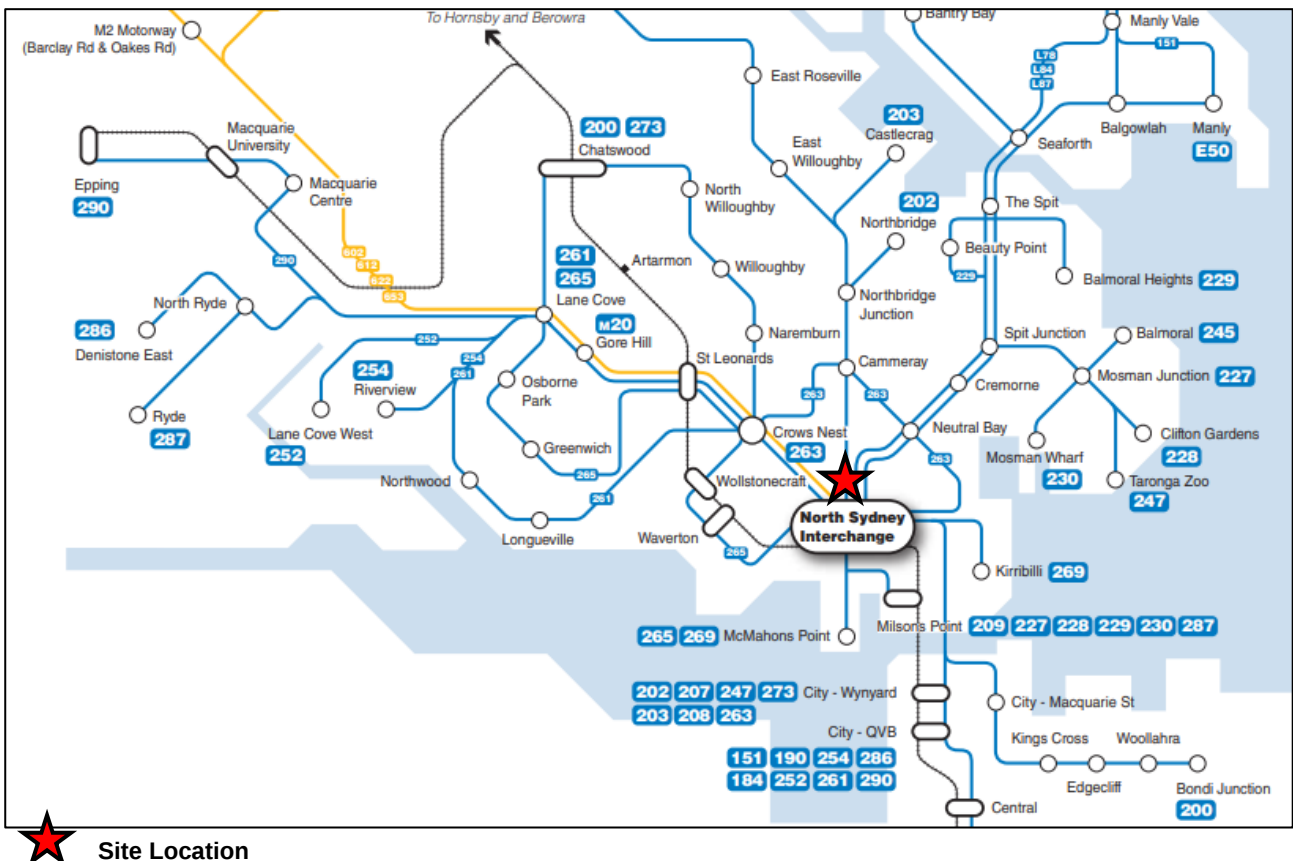


FIGURE 5: NORTH SYDNEY BUS NETWORK MAP

6 Projects and Programs

The following actions form the basis for the implementation of the Construction Worker Transportation Strategy. It should be noted that these actions are not necessarily a compulsory task but rather potential options that should be investigated and implemented as appropriate.

6.1 Initiatives to Specifically Reduce Private Car Use

The following initiatives are suggested to lower private car usage by providing for facilities or programs with the aim to allow for greater flexibility in the choice of travel mode to and from the site. The strategies that can be implemented with this goal in mind are not limited to the following actions as shown in **Table 1**, but these are the basis for further reduction in private car reliance.

TABLE 1: POSSIBLE INITIATIVES TO REDUCE PRIVATE CAR USAGE

Action	Cost
Provide bike racks or storage areas for the storing of bikes	Low
Promote digital document databases that reduce the reliance on plan sets and other resources that must be transported.	Moderate
Subsidise public transport travel for workers	Moderate
Provide on-site storage for tools and other bulky items which are usually transported by vehicle	Low
Encourage staff to plan ahead and to transport heavy/bulky items once or twice per week only.	Minimal

6.2 Public Transport Initiatives

The following actions are focused on encouraging staff to partake in public transport when travelling to and from the site. The strategies to be implemented are not limited to the following actions as shown in **Table 2**, but these are the basis for further development of public transport options.

TABLE 2: POSSIBLE PUBLIC TRANSPORT INITIATIVES

Action	Cost	Target Group	Date
Develop a map showing public transport routes to the site	Minimal	Staff	Ongoing
Put up a notice board with leaflets and maps showing the main public transport routes to and from the site	Minimal	Staff	From date of implementation
Prepare a Transport Access Guide (TAG) for the site	Minimal	Staff	From date of implementation

6.3 Walking and Cycling Initiatives

6.3.1 Walking

The following actions are focused on encouraging staff to partake in walking when travelling to and from the site. The strategies to be implemented are not limited to the following actions as shown in **Table 3**, but these are the basis for further development of active transport options.

TABLE 3: POSSIBLE WALKING INITIATIVES

Action	Cost	Target Group	Date
Produce a map showing safe walking routes to and from your site with times, not distances, to local facilities, such as shops and public transport	Minimal	Staff	From date of implementation
Hire showers, lockers and changing room facilities when school is not in session	Nil	Staff	From date of implementation during school holidays
Implement incentive schemes to encourage employees to walk to work.	Minimal	Staff	From date of implementation
Take part in 'National Walk to Work Day'	Nil	Staff	Annually
Have some 'TravelSmart Get to Work' days encouraging staff to commute by alternative transport modes	Nil	Staff	Annually
Encourage staff to walk as a method of exercise	Nil	Staff	Ongoing

6.3.2 Cycling

The following actions are focused on encouraging staff to partake in cycling when travelling to and from the site. The strategies to be implemented are not limited to the actions as shown in **Table 4**, but these are the basis for further development of active transport options.

TABLE 4: POSSIBLE CYCLING INITIATIVES

Action	Cost	Target Group	Date
Provide sufficient bicycle parking to meet peak needs	As per construction	Staff	From date of implementation
Have good, secure parking in an easily accessible location	As per construction	Staff	From date of implementation
Ensure bicycle parking is clearly visible or provide signage to direct people to cycle bays	As per construction	Staff	From date of implementation
Hire showers, changing rooms and lockers during school holidays for construction workers.	Minimal	Staff	From date of implementation during school holidays
Circulate maps of cycle paths in the vicinity	Nil	Staff	Ongoing
Participate in annual events such as 'Ride to Work Day'	Nil	Staff	Annually
Arrange information sessions outlining cycling safety and health benefits.	Minimal	Staff	As needed

6.4 Sustainable Transport Initiatives

6.4.1 Carpooling

The following actions are focused on encouraging staff to partake in carpooling and limiting the number of cars used to travel when travelling to and from the site. The strategies to be implemented are not limited to the following actions as shown in **Table 5**, but these are the basis for further development of alternative transport.

TABLE 5: POSSIBLE CARPOOLING INITIATIVES

Action	Cost	Target Group	Date
Set up carpooling databases for staff	Nil	Staff	From date of implementation
Encourage use of carpooling apps and/or subsidise costs of car pooling trips	Nil	Staff	From date of implementation
Reserve on-site parking spaces for carpool trips	Nil	Staff	From date of implementation

6.4.2 Car Parking

The following actions are focused on encouraging staff to partake in alternative options when travelling to and from the site. The strategies to be implemented are not limited to the following actions as shown in **Table 6**, but these are the basis for further development of alternative transport.

TABLE 6: POSSIBLE CAR PARKING INITIATIVES

Action	Cost	Target Group	Date
Identify priority users of car park e.g. people with disabilities, carpoolers	Nil	Staff	From date of occupation
Re-allocate car parking areas for bicycle and motorbike spaces	As per construction	Staff	From date of occupation

6.5 Use of Incentives

Many of the alternative transport initiatives described above require the willing participation of tradespeople and site managers and would not otherwise be effective. The incentivisation of alternative transport options could increase the number of employees using alternative transport options.

A review of the NSW Household Travel Survey by Grace Corpuz identified a number of factors that affected the use of alternative travel options, identifying the following factors as most influential on alternative transport use (in order of importance):

- Parking capacity and arrangements (destination factor);
- Where a vehicle is not available or accessible (origin factor);
- Where it is cheaper (origin & destination factor);
- Travel time (origin & destination factor);

- Convenience (origin & destination factor);
- Accessibility (origin & destination factor).

Future development of this Construction Worker Transportation Strategy should take into consideration the factors listed above.

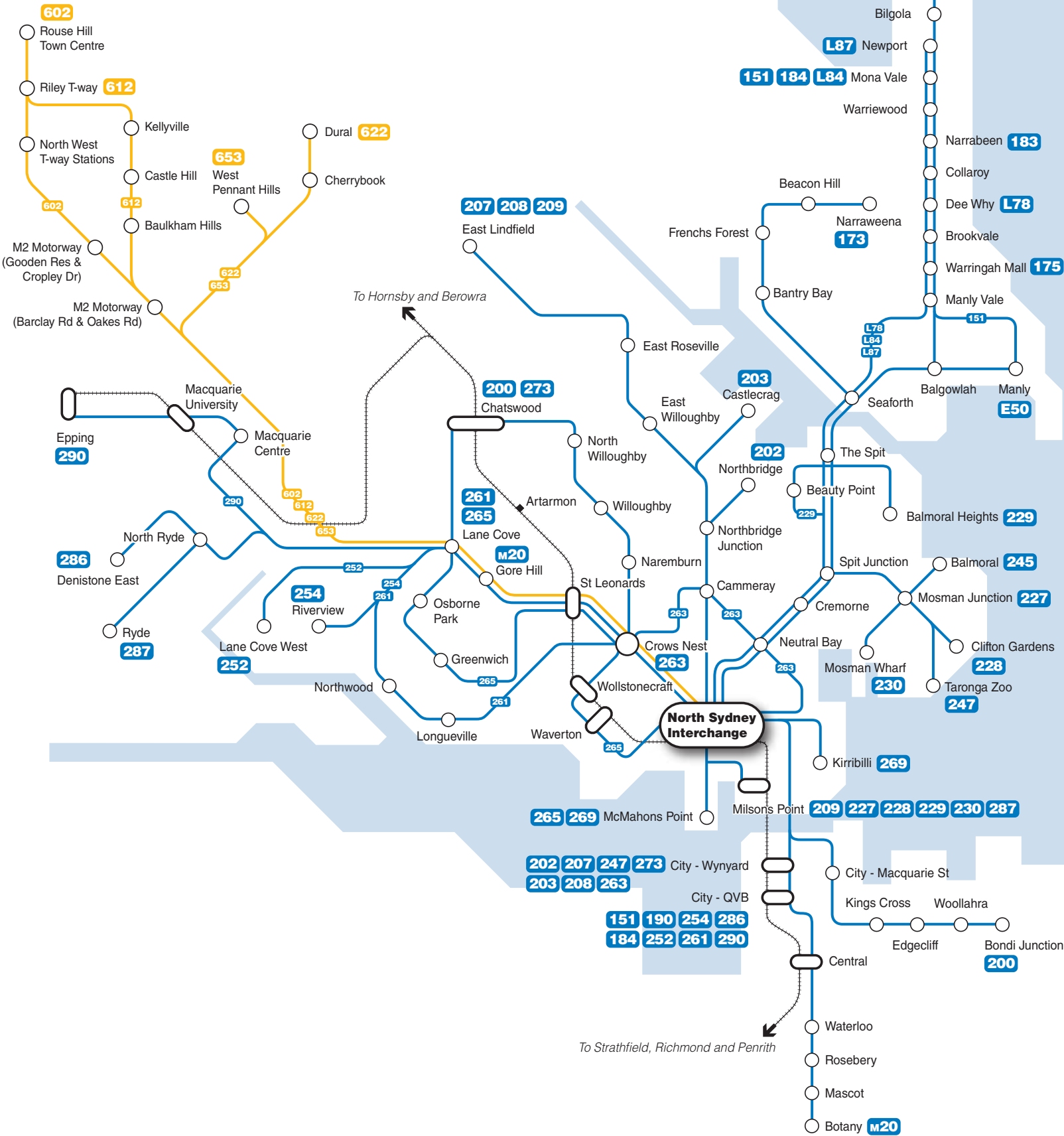


**ANNEXURE A: NORTH SYDNEY INTERCHANGE
TRANSPORTATION INFORMATION
(4 SHEETS)**

North Sydney bus network map



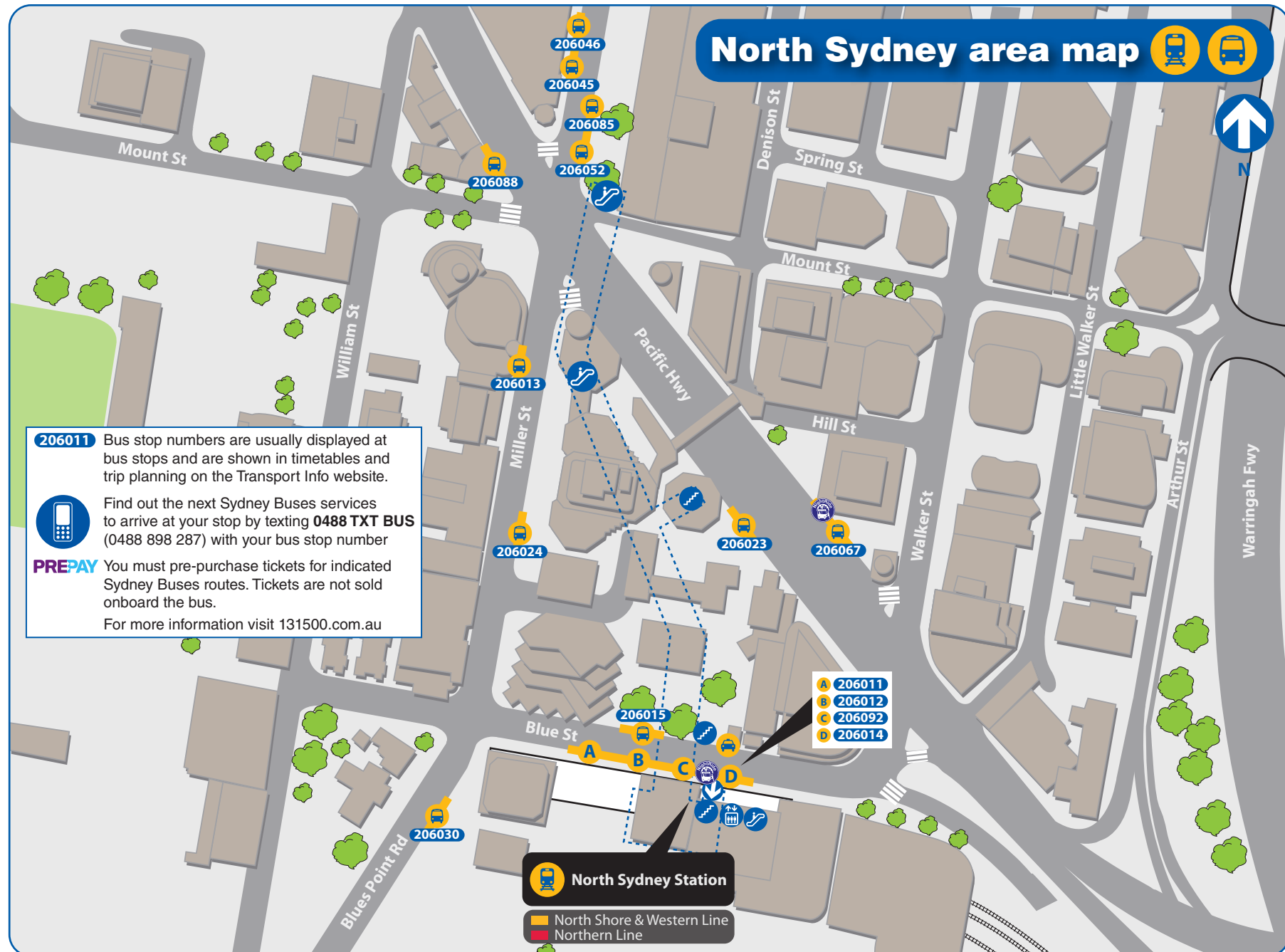
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Legend

- Hillsbus routes
- Sydney Buses routes
- Rail line
- Railway station
- Bus route/suburb
- Bus/Rail interchange

Diagrammatic Map - Not to Scale



Bus services at North Sydney

Bus departure information

Please use this listing to find your bus number, route destination and bus stand.
Refer to the Interchange Map to find the bus stand location.



Bus Stand & Number	Route Number	Bus Route Destination
A 206011	261	Lane Cove via Northwood & Longueville
Miller St 206013	273	Chatswood via Crows Nest & Willoughby
A 206011	263	Crows Nest via Neutral Bay & Cammeray
Pacific Hwy 206067		
B 206012	m20 ●	Metrobus to Gore Hill via Pacific Hwy (PrePay-only)
Miller St 206013	252	Lane Cove West via Pacific Hwy
	254	Riverview via Pacific Hwy
	286	Denistone East via Pacific Hwy & North Ryde
	287	Ryde via Pacific Hwy & North Ryde
	290	Epping via Pacific Hwy & Epping Rd
	602	Rouse Hill via M2 Motorway & North West T-way
	612	Kellyville via M2 Motorway, Baulkham Hills & Castle Hill
	622	Dural via M2 Motorway, West Pennant Hills & Cherrybrook
	653	West Pennant Hills via M2 Motorway
C 206092	202	Northbridge via Miller St
Miller St 206045	203	Castlecrag via Miller St & Northbridge
	207	East Lindfield via Miller St & Northbridge
	208	East Lindfield via Miller St & Northbridge
	209	East Lindfield via Miller St & Northbridge
	N90	Hornsby via Chatswood (from Stand C 206092 only)
D 206014	E50	Manly (Express)
Miller St 206046	151	Mona Vale via Manly, Dee Why & Narrabeen
	173	Narrabeena via Seaforth
	175	Warringah Mall via Balgowlah
	L78	Dee Why (Limited Stops)
	183	Narrabeen via Balgowlah & Warringah Mall
	184	Mona Vale via Balgowlah & Warringah Mall
	L84	Mona Vale (Limited Stops)
	L87	Newport (Limited Stops)
	188	Avalon via Balgowlah, Warringah Mall & Mona Vale
	190	Palm Beach via Mona Vale, Newport & Avalon
	227	Mosman Junction via Military Rd
	228	Clifton Gardens via Military Rd & Mosman Junction
	229	Balmoral Heights via Military Rd & Beauty Point
	230	Mosman Wharf via Military Rd & Mosman Junction
	245	Balmoral via Military Rd & Mosman Junction
	247	Taronga Zoo via Military Rd & Mosman Junction

Bus Operator Legend

	Hillsbus
	Sydney Buses
	Sydney Buses PREPAY
	NightRide

206011 Bus stop numbers are usually displayed at bus stops and are shown in timetables and trip planning on the Transport Info website.



Find out the next Sydney Buses services to arrive at your stop by texting **0488 TXT BUS** (0488 898 287) with your bus stop number



You must pre-purchase tickets for indicated Sydney Buses routes. Tickets are not sold onboard the bus.

For more information visit 131500.com.au

Bus services at North Sydney

Bus departure information

Please use this listing to find your bus number, route destination and bus stand.
Refer to the Interchange Map to find the bus stand location.



Bus Stand & Number	Route Number	Bus Route Destination
Blue St (North) 206015	265	McMahons Point
	265	Lane Cove via Waverton, Wollstonecraft & Greenwich
	269	McMahons Point
	269	Kirribilli & Milsons Point
Miller St 206052	N90	City - Town Hall
Pacific Hwy 206067	m20 ●	Metrobus to Botany via City, Redfern, Waterloo & Mascot (PrePay-only)
	151	City - QVB
	184	City - QVB
	190	City - QVB
	200	Bondi Junction via City, Kings Cross & Edgecliff (Limited Stops)
	202	City - Wynyard
	203	City - Wynyard
	207	City - Wynyard
	208	City - Wynyard
	247	City - Wynyard
	252	City - QVB
	254	City - QVB
	261	City - QVB
	273	City - Wynyard
	286	City - QVB
	290	City - QVB
Miller St 206085 206024 206030	E50	Milsons Point
	168	Milsons Point
	173	Milsons Point
	L78	Milsons Point
	183	Milsons Point
	184	Milsons Point
	L84	Milsons Point
	187	Milsons Point
	L87	Milsons Point
	209	Milsons Point
	227	Milsons Point
	228	Milsons Point
	229	Milsons Point
	230	Milsons Point
Pacific Hwy 206023 206088	287	Milsons Point
	200	Chatswood (Limited Stops)

Bus Operator Legend

	Sydney Buses
	Sydney Buses PREPAY
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