



STANBURY
TRAFFIC PLANNING

TRAFFIC, PARKING & TRANSPORT CONSULTANTS

TRAFFIC & PARKING IMPACT ASSESSMENT

**PROPOSED RESIDENTIAL DEVELOPMENT
44 CADAGA ROAD
GATESHEAD**

**PREPARED FOR ZMP ARCHITECTS & HERITAGE CONSULTANTS
OUR REF: 22-160**



APRIL 2023

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1. INTRODUCTION

1.1 Scope of Assessment

Stanbury Traffic Planning has been commissioned by ZMP Architects & Heritage Consultants to prepare a Parking & Traffic Impact Assessment with respect to a proposal for the construction of an attached dual occupancy residential development at 44 Cadaga Road, Gateshead (hereafter referred to as the 'subject site').

The aim of this assessment is to investigate and report upon the potential traffic and parking consequences of the development application and to recommend appropriate ameliorative measures where required. This report provides the following scope of assessment:

- Section 1 provides a summary of the site location, details, existing and surrounding land-uses;
- Section 2 describes the proposed development;
- Section 3 assesses the adequacy of the proposed site access arrangements, parking provision, internal circulation and servicing arrangements with reference to relevant Transport for NSW (TfNSW) and Australian Standard specifications;
- Section 4 assesses the existing traffic, parking and transport conditions surrounding and servicing the subject development site including a description of the surrounding road network, traffic demands, operational performance and available public transport infrastructure; and
- Section 5 estimates the projected traffic generating ability of the proposed development and assesses the ability or otherwise of the surrounding road network to be capable of accommodating the altered demand in a safe and efficient manner.

The report has been prepared pursuant to State Environmental Planning Policy (Transport & Infrastructure) 2021.

1.2 Reference Documents

Reference is made to the following documents throughout this report:

- Transport for NSW's *Guide to Traffic Generating Developments*;
- Australian Standard for *Parking Facilities Part 1: Off-Street Car Parking* (AS2890.1:2004); and
- NSW Government's *State Environmental Planning Policy (Housing) 2021*.

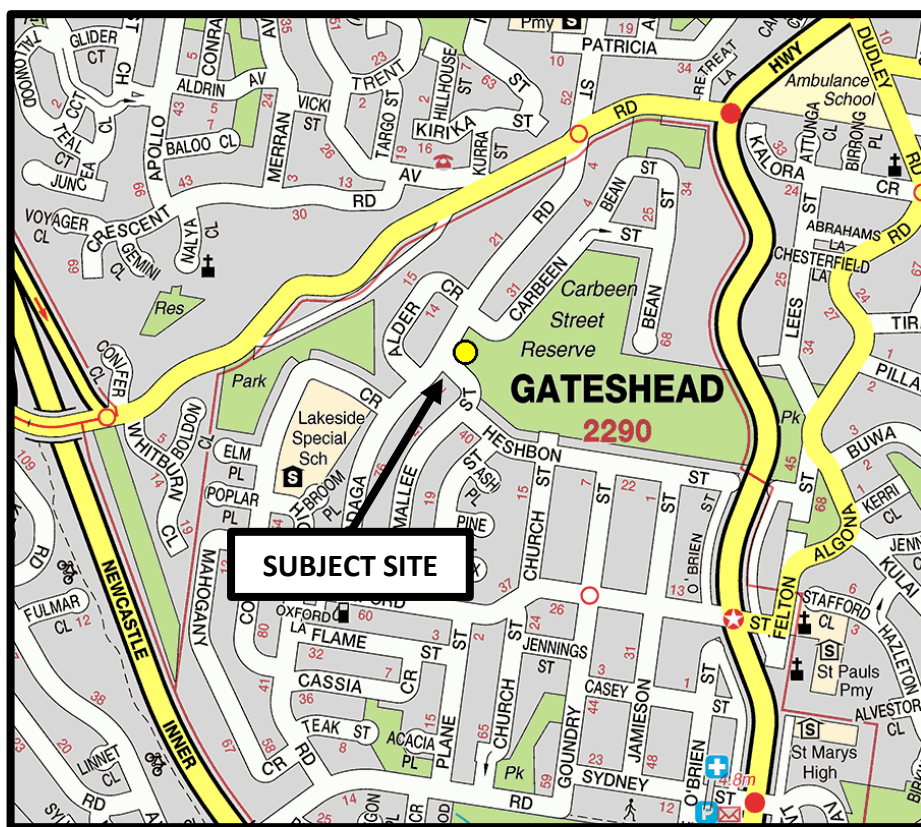
Architectural plans have been prepared by ZMP Architects & Heritage Consultants and should be read in conjunction with this report, reduced copies of a selection of which are included as **Appendix 1** for reference.

1.3 Site Details

1.3.1 Site Location

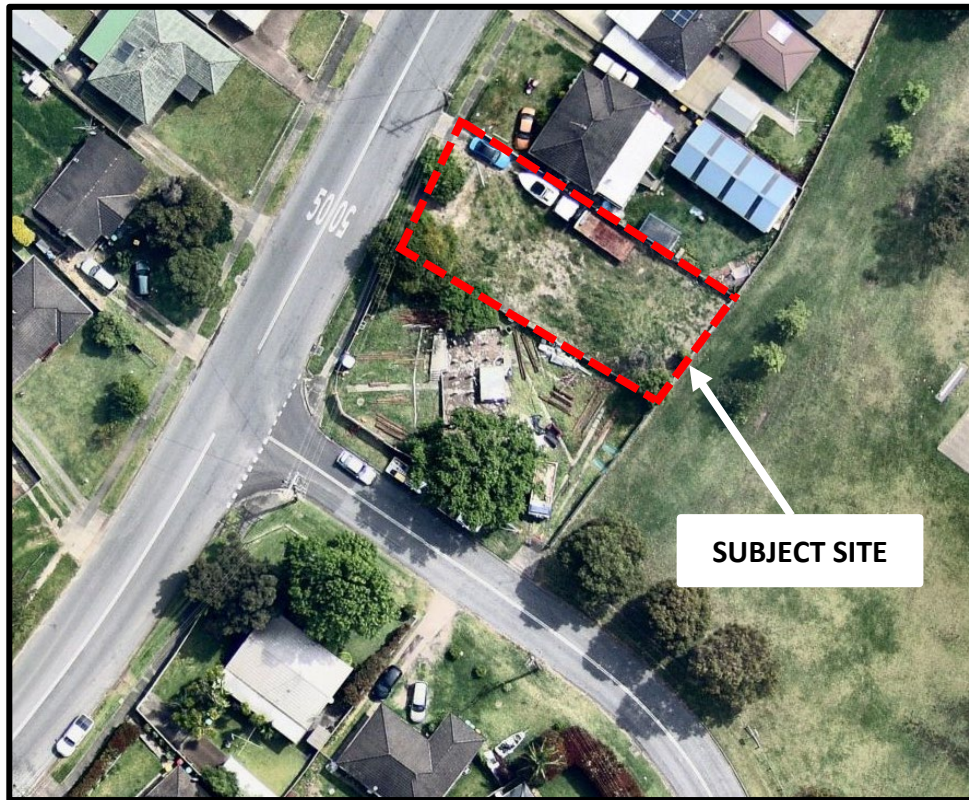
The subject site is situated on the eastern side of Cadaga Road, approximately 24m to the north of Mallee Street, Gateshead. The site location is illustrated overleaf within a local and aerial context by **Figure 1** and **Figure 2**, respectively.

FIGURE 1
SITE LOCATION WITHIN A LOCAL CONTEXT



Source: UBD's Australian City Streets – Version 8

FIGURE 2
SITE LOCATION WITHIN AN AERIAL CONTEXT



Source: Nearmap (image date: 26/10/2022)

1.3.2 Site Description

The subject site provides a real property description of Lot 499 within DP 224374 and a street address of 44 Cadaga Road, Gateshead.

The site forms a primarily rectangular shaped parcel of land, providing an approximate frontage of 16m to Cadaga Road and a total area of approximately 565m².

1.3.3 Existing Site Use

The subject site is currently vacant with an existing vehicular driveway / gutter crossing connecting with Cadaga Road in the north-western corner of the subject site.

1.3.4 Surrounding Uses

The site is surrounded by detached residential dwellings to the north, south and west.

The Carbeen Street Reserve is situated directly to the east of the site.

2. PROPOSED DEVELOPMENT

2.1 Built Form

The subject application seeks approval for the construction of an attached dual occupancy residential development to be owned by Land & Housing Corporation in accordance with the Housing SEPP.

The two dwellings are proposed to comprise two storeys, and each are to contain a total of four bedrooms.

Each dwelling is proposed to be serviced by a single vehicle garage as well as a second hardstand tandem parking space adjacent to the garage. Vehicular access to the off-street vehicle parking is proposed via two separate ingress / egress driveways connecting with Cadaga Road in the south-western and north-western corners of the site.

Pedestrian connectivity between the dwellings and the eastern Cadaga Road footpath is proposed via pedestrian pathways provided separately to the abovementioned vehicular access driveways.

3. SITE ACCESS & INTERNAL CIRCULATION

3.1 Passenger Vehicular Access

3.1.1 Vehicular Access

Vehicular access between the proposed dwellings and Cadaga Road is proposed to be provided via two combined ingress / egress driveways provided within the south-western and north-western corners of the site. Each proposed access driveway is to provide a width of 3.0m.

AS2890.1:2004 provides driveway design specifications based on the proposed primary land use, the functional order of the access road and the number of spaces the driveway is to serve. Tables 3.1 and 3.2 of AS2890.1:2004 specify that a Category 1 type driveway is required, providing a combined ingress / egress driveway width of between 3m and 5.5m based on the residential land-use, the local (non-arterial) nature of Cadaga Road and the on-site passenger vehicle parking provision of four spaces. The proposed two 3.0m wide combined ingress / egress driveways therefore comply with minimum AS2890.1:2004 specifications.

Swept path plans have been prepared in order to demonstrate the ability of passenger vehicles to enter and exit the site, copies of which are included as **Appendix 2**.

The safety and efficiency of vehicular site access / egress movements are also proposed to be assisted by the consistent vertical and horizontal alignment of Cadaga Road in the immediate vicinity of the subject site, resulting in an extent of sight distance between the driveway and the frontage roadway exceeding the minimum requirements of Clause 3.24(a) of AS2890.1:2004 with respect to the 50km/h speed limit.

Areas abutting both sides of the driveways on approach to the boundary are clear of any obstruction to visibility whereby practicable, in accordance with the intent of Clause 3.2.4(b) of AS2890.1:2004, with the exception of an existing low height fence defining the northern boundary of the site. It is accordingly recommended that the portion of the existing northern boundary fence that encroaches on the sight distance triangle be replaced with a palisade fence, similar to that currently provided along the street frontage of No. 42 Cadaga Road, in order to provide visibility through the fence. Alternatively, it is recommended that the existing fence be cut back in order to facilitate the sight distance triangle.

3.1.2 Pedestrian Access

Pedestrian connectivity between the dwellings and the eastern Cadaga Road footpath is proposed via pedestrian pathways provided separately to abovementioned vehicular access driveways.

3.2 Parking Provision

The development is proposed to be serviced by a total of four off-street passenger vehicle parking spaces comprising two single vehicle garages and two adjacent hardstand tandem parking spaces.

The following off-street parking rate provided within Part 2 Division 6 of the *State Environmental Planning Policy (Housing) 2021* is applicable to the subject development:

- (d) *for development on land in an accessible area – the development will result in at least the following parking spaces –*
 - (i) *for each dwelling containing 1 bedroom – 0.4 parking spaces,*
 - (ii) *for each dwelling containing 2 bedrooms – 0.5 parking spaces,*
 - (iii) *for each dwelling containing at least 3 bedrooms – 1 parking space*

The dictionary within the Housing SEPP defines ‘accessible area’ as “*land within:*

“(a) *800m walking distance of a public entrance to—*

- (i) *a railway station, or*
- (ii) *a wharf from which a Sydney Ferries ferry service operates, or*

(b) *400m walking distance of—*

- (i) *a public entrance to a light rail station, or*
- (ii) *for a light rail station with no entrance—a platform of the light rail station, or*

(c) *400m walking distance of a bus stop used by a regular bus service, within the meaning of the [Passenger Transport Act 1990](#), that has at least 1 bus per hour servicing the bus stop between—*

- (i) *6am and 9pm each day from Monday to Friday, both days inclusive, and*
- (ii) *8am and 6pm on each Saturday and Sunday.”*

Application of the Housing SEPP definition classifies the site as being situated within an ‘accessible area’ (see **Section 4.4** of this report).

Based on the proposed development yield of two residential dwellings each containing four bedrooms, the development is required to provide at least two off-street parking spaces in accordance with the *State Environmental Planning Policy (Housing) 2021*.

The proposed development, providing four total off-street parking spaces, comprising one single vehicle garage and one adjacent tandem space per dwelling, therefore complies with the relevant requirements of the *State Environmental Planning Policy (Housing) 2021*.

3.3 Internal Circulation and Manoeuvrability

3.3.1 Parking Design

The proposed off-street parking areas comprise one single vehicle garage and one adjacent hardstand parking space for each dwelling, being provided in a 90-degree angled tandem arrangement.

The passenger vehicle parking areas have been designed with the following minimum dimensions in accordance with the requirements of AS2890.1:2004.

- Internal garage width = 3m;
- Garage door opening = 2.4m;
- Internal garage and hardstand parking space length = 5.4m;
- Minimum internal garage headroom = 2.2m;
- Hardstand parking space width = 3m;
- Maximum grade within car parking spaces = 1:20;
- Maximum grade of driveways = 1:5.7; and
- Maximum change in grade = 1:8.

In order to demonstrate the internal passenger vehicle manoeuvrability throughout the parking areas, this Practice has prepared a number of swept path plans which are included as **Appendix 2**. The turning paths provided on the plans have been generated using Autoturn software and derived from B99 vehicle specifications provided within AS2890.1:2004.

Section B4.4 of AS2890.1-2004 states the following with regard to the use of templates to assess vehicle manoeuvring:

‘Constant radius swept turning paths, based on the design vehicle’s minimum turning circle are not suitable for determining the aisle width needed for manoeuvring into and out of parking spaces. Drivers can manoeuvre vehicles within smaller spaces than swept turning paths would suggest.’

It would therefore appear that whilst the turning paths provided within AS2890.1:2004 can be utilised to provide a ‘general indication’ of the suitability or otherwise of internal parking and manoeuvring areas, vehicles can generally manoeuvre more efficiently than the paths indicate.

The swept path plans illustrate that passenger vehicles are capable of entering and exiting the on-site parking area via reverse and forward manoeuvres, respectively, without unreasonable encroachment on potential kerb-side parking areas, footway areas adjacent to the driveway and / or internal development structures.

The positioning of the proposed off-street car accommodation area to the boundary is such that vehicles will be required to access or egress the driveway via a reverse manoeuvre to / from Cadaga Road. Whilst it is acknowledged that it is generally desirable for vehicles to undertake private site access and egress movements in a forward direction, the requirement for vehicles to undertake a reverse access movement from a public road is a common situation for domestic dwellings within residential areas. Indeed, a significant majority of the existing dwellings providing off-street vehicle accommodation and accessed via Cadaga Road are required to either enter or exit existing property driveways via a reverse movement. In consideration of this and the above, motorists within Cadaga Road, and indeed, the surrounding Gateshead precinct are anticipated to be aware of the potential for vehicles to be required to enter or exit public road travel lanes via a reverse movement. The proposed site access and internal manoeuvring is accordingly considered to be satisfactory.

3.3.2 Site Servicing

It is expected that the subject development will generate the requirement for weekly refuse collection. Refuse is proposed to be collected in bins and stored within the bin storage area adjacent to each dwelling, which are to be wheeled to the Cadaga Road frontage for collection in a similar manner to adjoining residential development.

4. EXISTING TRAFFIC CONDITIONS

4.1 Surrounding Road Network

The following provides a description of the road network surrounding the subject site:

- **Cadaga Road** performs a minor collector road function under the care and control of Lake Macquarie Council. Cadaga Road primarily provides a north-south alignment between Warners Bay Road and Gari Street in the north and Oxford Street in the south.

Cadaga Road predominantly provides an 11m wide pavement, facilitating the provision of one through lane of traffic in each direction in conjunction with parallel parking permitted along both kerb alignments. Traffic flow within Cadaga Road is generally governed by a speed limit of 50km/h.

At its northern extremity, Cadaga Road forms an intersection with Gari Street and Warners Bay Road operating under two-lane circulating roundabout control.

To the north of the site, Cadaga Road forms a series of T-junctions with Alder Crescent and Carbeen Street both operating under major / minor priority control with Cadaga Road forming the major route in both instances.

To the south of the site Cadaga Road forms a T-junction with Mallee Street operating under 'Give Way' signage control with Cadaga Road forming the major route.

- **Mallee Street** performs a local road function providing a primarily north-south alignment between Cadaga Road in the north and Oxford Street in the south.

Mallee Street predominantly provides a 7m wide pavement, facilitating the provision of one through lane of traffic in each direction being separated by a BB-line in the northern section of Mallee Street thereby prohibiting kerb-side parallel parking. However, kerb-side parking is permitted to just to the south of Heshbon Street as the BB-line ends. Traffic flow within Mallee Street is governed by a speed limit of 50km/h, consistent with State Government policy for local residential roads.

To the south of the site, Mallee Street forms a T-junction with Heshbon Street operating under major / minor priority control with Mallee Street forming the major route.

- **Carbeen Street** performs a local road function in a primarily east-west arrangement between Bean Street in the east and Cadaga Road in the west.

Carbeen Street predominantly provides a 7m wide pavement providing one through lane of traffic in each direction in conjunction with parallel parking generally permitted along both kerb alignments; however, 'No Parking'

restrictions apply along the southern kerb alignment during weekends and the 'No Stopping' restrictions prevail along the norther kerb alignment for approximately the first 100m (starting from Carbeen Street's western extremity). Traffic flow within Carbeen Street is governed by a sign posted speed limit of 50km/h, consistent with State Government policy for local residential roads.

4.2 Existing Traffic Volumes

Staff of this Practice have undertaken peak hour traffic surveys of the junction of Cadaga Road and Mallee Street to the south of the site in order to accurately ascertain existing traffic demands within the immediate precinct.

Surveys were undertaken between 7:00am – 9:00am and 4:00pm – 6:00pm on Thursday and Wednesday the 27th and 26th of October 2022, respectively.

Figure 3 below provides a summary of the surveyed peak hour intervals of traffic flows at the subject intersection including a morning peak hour which has been identified as 8:00am — 9:00am (AM Peak) and 4:15pm – 5:15pm (PM Peak), whilst full details are contained within **Appendix 3**.

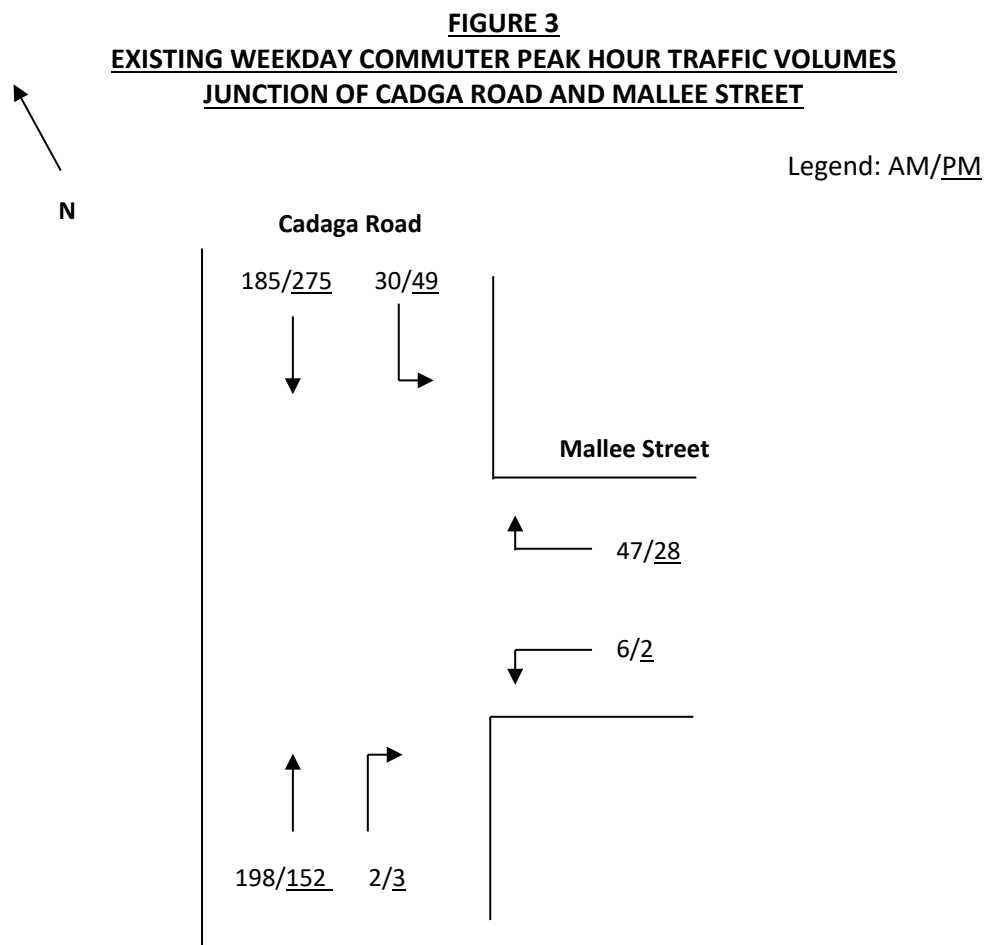


Figure 3 indicates the following:

- Cadaga Road accommodates tidal traffic demands comprising predominate northbound demands during the morning peak hour and predominate southbound demands during the afternoon peak hour;
- Cadaga Road accommodates directional traffic demands of approximately 200 – 350 vehicles during weekday peak hours; and
- Mallee Street accommodates directional traffic demands of less than 100 vehicles per hour during weekday peak hours.

4.3 Existing Road Network Operation

4.3.1 Intersection Performance

The surveyed junction of Cadaga Road and Mallee Street has been analysed utilising the SIDRA computer network analysis program in order to objectively assess the operation of the nearby public road network.

SIDRA is a computerised traffic arrangement program which, when volume and geometrical configurations of an intersection are imputed, provides an objective assessment of the operation efficiency under varying types of control (i.e. signs, signal and roundabouts). Key indicators of SIDRA include level of service where results are placed on a continuum from A to F, with A providing the greatest intersection efficiency and therefore being the most desirable by TfNSW.

SIDRA uses detailed analytical traffic models coupled with an iterative approximation method to provide estimates of the abovementioned key indicators of capacity and performance statistics. Other key indicators provided by SIDRA are average vehicle delay, the number of stops per hour and the degree of saturation. Degree of saturation is the ratio of the arrival rate of vehicles to the capacity of the approach. Degree of saturation is a useful and professionally accepted measure of intersection performance.

The NSW modelling guidelines 2013 sets out the method which should be followed for Sidra modelling. The relevant criteria are listed in **Table 1** and the calibration procedures undertaken by this Practice.

TABLE 1 GETTING STARTED SIDRA ANALYSIS	
Detail	Adopted Modelling Parameters and Assumptions
Getting Started	<ul style="list-style-type: none"> The latest version of Sidra Intersection 9 (version 9.0.3.9771) was used.
Input	<ul style="list-style-type: none"> Data was input for a 60-minute period with a maximum peak flow period of 30 minutes
Geometry	<ul style="list-style-type: none"> All intersection geometry was based on measurements taken on-site and measured through aerial photography from Nearmap.
Saturation Flow	<ul style="list-style-type: none"> The default saturation flow was adopted for all lanes.
Volumes	<ul style="list-style-type: none"> The volume of heavy vehicles was assumed to be 5% of the total volume for all roads that do not have applicable load limits. The default 95% peak flow factor was adopted for all movements.
Movement Data	<ul style="list-style-type: none"> Approach and exit speed data were updated as per the posted speed limits or where no signage exists, a 50km/h default speed was adopted.
Priorities	<ul style="list-style-type: none"> Default priorities modelled.
Pedestrians	<ul style="list-style-type: none"> No pedestrian crossing were modelled at the junctions.
Phasing and Timing	<ul style="list-style-type: none"> Not applicable
Phasing	<ul style="list-style-type: none"> Not applicable
Model Settings	<ul style="list-style-type: none"> Default settings adopted.

SIDRA provides analysis of the operating conditions that can be compared to the performance criteria set out in **Table 2** below (being TfNSW method calculation of Level of Service).

TABLE 2 LEVEL OF SERVICE CRITERIA FOR INTERSECTIONS PRIORITY CONTROLLED INTERSECTIONS		
Level of Service	Average Delay per Vehicle (secs/veh)	Expected Delay
A	Less than 14	Good
B	15 to 28	Acceptable delays and spare capacity
C	29 to 42	Satisfactory
D	43 to 56	Near capacity
E	57 to 70	At capacity and requires other control mode
F	> 70	Unsatisfactory and requires other control mode

The existing conditions have been modelled utilising the peak hour traffic volumes presented within **Figure 3**.

Table 3 below provides a summary of the SIDRA output data whilst more detailed summaries are included as **Appendix 4**.

TABLE 3		
SIDRA OUTPUT – EXISTING WEEKDAY PEAK HOUR PERFORMANCE		
	AM PEAK (8:00AM-9:00AM)	PM PEAK (4:15PM-5:15PM)
Mallee Street Approach		
Delay (seconds / vehicle)	6.5	6.8
Degree of Saturation	0.06	0.04
Level of Service	A	A
Cadga Road North Approach		
Delay (seconds / vehicle)	4.6	4.7
Degree of Saturation	0.12	0.18
Level of Service	A	A
Cadga Road South Approach		
Delay (seconds / vehicle)	5.5	6.0
Degree of Saturation	0.11	0.09
Level of Service	A	A
Total Intersection		
Delay (seconds / vehicle)	6.5	6.8
Degree of Saturation	0.12	0.18
Level of Service	A	A

Table 3, in conjunction with more detailed output contained within **Appendix 4**, indicates that the junction of Cadaga Road and Mallee Street currently provide all movements with a level of service 'A' during peak periods, representing good operation.

4.3.2 Route Level of Service

Reference is made to TfNSW's *Guide to Traffic Generating Developments* to undertake an assessment of the operational performance of Cadaga Road adjacent to the subject site. **Table 4** below provides the level of service assigned to peak hour directional traffic flow within Cadaga Road (adjacent to the site) based on the abovementioned traffic surveys and criteria specified within the *Guide to Traffic Generating Developments*.

TABLE 4		
CADAGA ROAD DIRECTIONAL TRAFFIC FLOW (ADJACENT TO THE SITE)		
	LEVEL OF SERVICE	
	AM PEAK (8:00AM-9:00AM)	PM PEAK (4:15PM-5:15PM)
Northbound Traffic Flow		
Volume	245	180
Level of Service	B	A
Southbound Traffic Flow		
Volume	215	324
Level of Service	B	B

TfNSW provides the following definitions for the levels of service presented within **Table 4**:

Level of Service A

This, the top level is a condition of free flow in which individual drivers are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to manoeuvre within the traffic stream is extremely high, and the general level of comfort and convenience provided is excellent.

Level of Service B

This level is in the zone of stable flow and drivers still have reasonable freedom to select their desired speed and to manoeuvre within the traffic stream, although the general level of comfort and convenience is little less than that of the level of Service A.

Table 4 indicates that the northbound and southbound traffic flow within Cadaga Road is provided with a level of service A / B during weekday commuter peak periods, representing stable flow where motorists generally have freedom to select their desired speed and to manoeuvre within the traffic stream primarily unaffected.

4.3.3 Site Access Assessment

The prevailing pavement width of Cadaga Road allows through traffic movements to occur independently of kerb-side parking. This, combined with the reasonably consistent vertical and horizontal alignment of the public road, results in vehicles being able to manoeuvre to and from the abutting development sites and intersecting roads with a good level of efficiency.

The proliferation of driveways servicing abutting development sites in the immediate vicinity result in trailing through traffic movements within Cadaga Road being aware of the potential for vehicles to decelerate to access private properties.

4.4 Public Transport

4.4.1 Buses

The following bus services in the vicinity of the site, with the closest bus stop being situated approximately 40m walking distance to the north of the site on the eastern kerb alignment of Cadaga Road:

- Route 25 – Charlestown to Broadmeadow via Kotara, providing a minimum hourly service between 5:30am and 10:30pm on weekdays and between 7:30am and 9:30pm on Saturdays, Sundays and Public Holidays;
- Route 28 – Newcastle West to Mount Hutton via Newcastle Interchange & Broadmeadow, providing a minimum hourly service between 5:00am and 9:30pm on weekdays and between 7:00am and 6:30pm on Saturdays, Sundays and Public Holidays;

- Route 41 – Belmont to Charlestown via Croudace Bay & Mount Hutton, providing a minimum hourly service between 6:30am and 6:30pm on weekdays and a minimum two hourly service between 8:30am and 5:30pm on Saturdays, Sundays and Public Holidays;
- Route 43 – Charlestown to Belmont via Mount Hutton & Floraville, providing a minimum hourly service between 6:30am and 6:30pm on weekdays and between 8:30am and 6:30pm on Saturdays, Sundays and Public Holidays; and
- Route 48 – Belmont to Warners Bay via Redhead & Charlestown, providing a minimum hourly service between 6:30am and 6:30pm on weekdays and a minimum two hourly service between 8:30am and 5:30pm on Saturdays, Sundays and Public Holidays.

The above bus routes provide a collective service frequency of every 25 minutes during weekday peak hours and every 60 minutes outside of weekday peak hours and operate along Cadaga Road, Warners Bay Road and Oxford Street.

The full listing of buses servicing at the above bus stop is provided within **Appendix 5**.

4.4.2 Pedestrians

Pedestrians are provided with the following access and mobility infrastructure within the immediate vicinity of the subject site:

- Footpaths are provided along both sides of Cadaga Road and Oxford Street;
- A pedestrian refuge is provided across the southern approach of the roundabout controlled intersection of Cadaga Road, Warners Bay Road and Gari Street;
- A pedestrian refuge is provided across Oxford Street to the east of Hickory Road;
- A pedestrian link is provided between Cadaga Road and Mallee Street to the south of the site via an east-west aligned pedestrian path; and
- A pedestrian link is provided between Alder Crescent and Warners Bay Road to the north of the site via a north-south aligned pedestrian path.

5. PROJECTED TRAFFIC CONDITIONS

5.1 Traffic Generation

Traffic generation rates for various land-uses have been established through extensive surveys undertaken throughout NSW and published within TfNSW's *Guide to Traffic Generating Developments*.

TfNSW's *Guide to Traffic Generating Developments* defines a medium density residential development as a building containing at least two but less than 20 dwellings, including dual occupancy dwellings, villas, townhouses and apartment buildings.

The abovementioned *Guide to Traffic Generating Developments* specifies that larger (three or more bedrooms) medium density dwellings generate an average of between 0.5 – 0.65 peak hour vehicle trips per dwelling. No updated traffic generation rates for medium density dwellings are provided within *Technical Direction TDT 203/04a*.

For the purposes of this assessment, a traffic generation rate of 0.65 peak hour vehicle trips per dwelling has been applied to the proposed development. Application of such a traffic generate rate to the development therefore results in the site generating approximately 1.3 (adopt 2) peak hour vehicle trips to and from the site.

5.2 Trip Distribution

The development has been projected to generate up to two vehicle movements to and from the subject site during peak hours. These vehicle movements are primarily likely to comprise egress movements during the morning peak period and ingress movements during the evening peak period, associated with normal journey to and from work patterns of residential development.

5.3 Traffic Impacts

The proposed development has been projected to generate two vehicle movements during peak hours. This equates to one vehicle movement every 30 minutes during commuter peaks. Such a level of traffic is not projected to, in itself, result in any unreasonable impacts on the existing operational performance of the surrounding local road network. The previous assessment contained within this report has revealed that traffic demands within the surrounding local road network are reasonably low and the nearby public road junction of Cadaga Road and Mallee Street operates with a level of service 'A', accordingly motorists are provided with a good level of service with spare capacity.

In consideration of the above, the impact of the development is most likely to be a result of the safety and efficiency with which motorists are capable of entering and exiting the development. The reasonably low traffic demands within Cadaga Road, combined with the good sight distance provisions, is such that it is

envisaged that motorists will be capable of entering and exiting the site in a safe and efficient manner.

5.4 Transport Impacts

The subject site is located within the immediate vicinity of multiple bus services operating along Cadaga Road, Warners Bay Road and Oxford Street. It is accordingly expected that a proportion of the future residents within the subject development will utilise the surrounding public transport infrastructure to access destinations throughout the Sydney metropolitan area. The capacity of the existing public transport system is however not envisaged to be measurably affected by any additional demand associated with the development, given its limited scale.

6. CONCLUSION

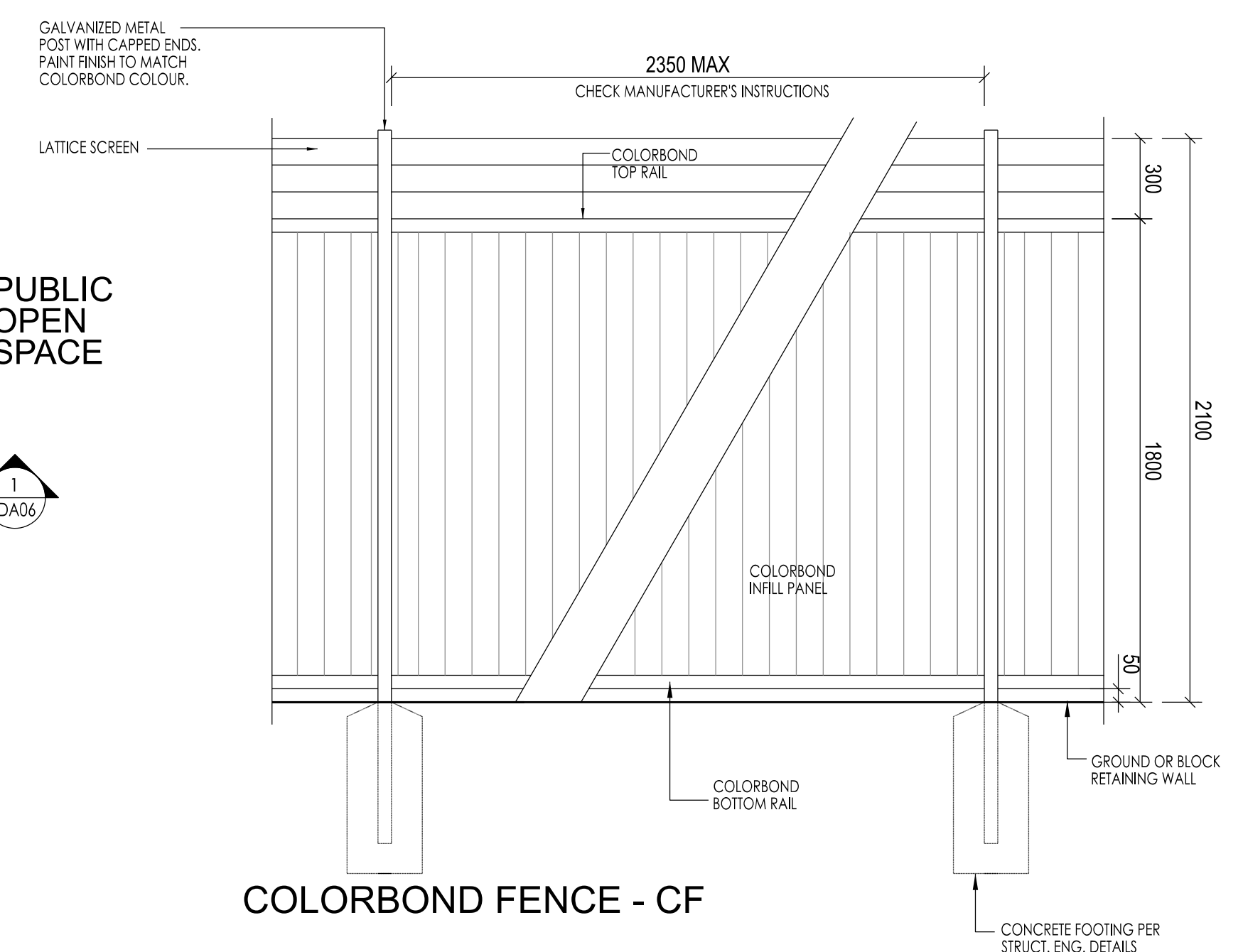
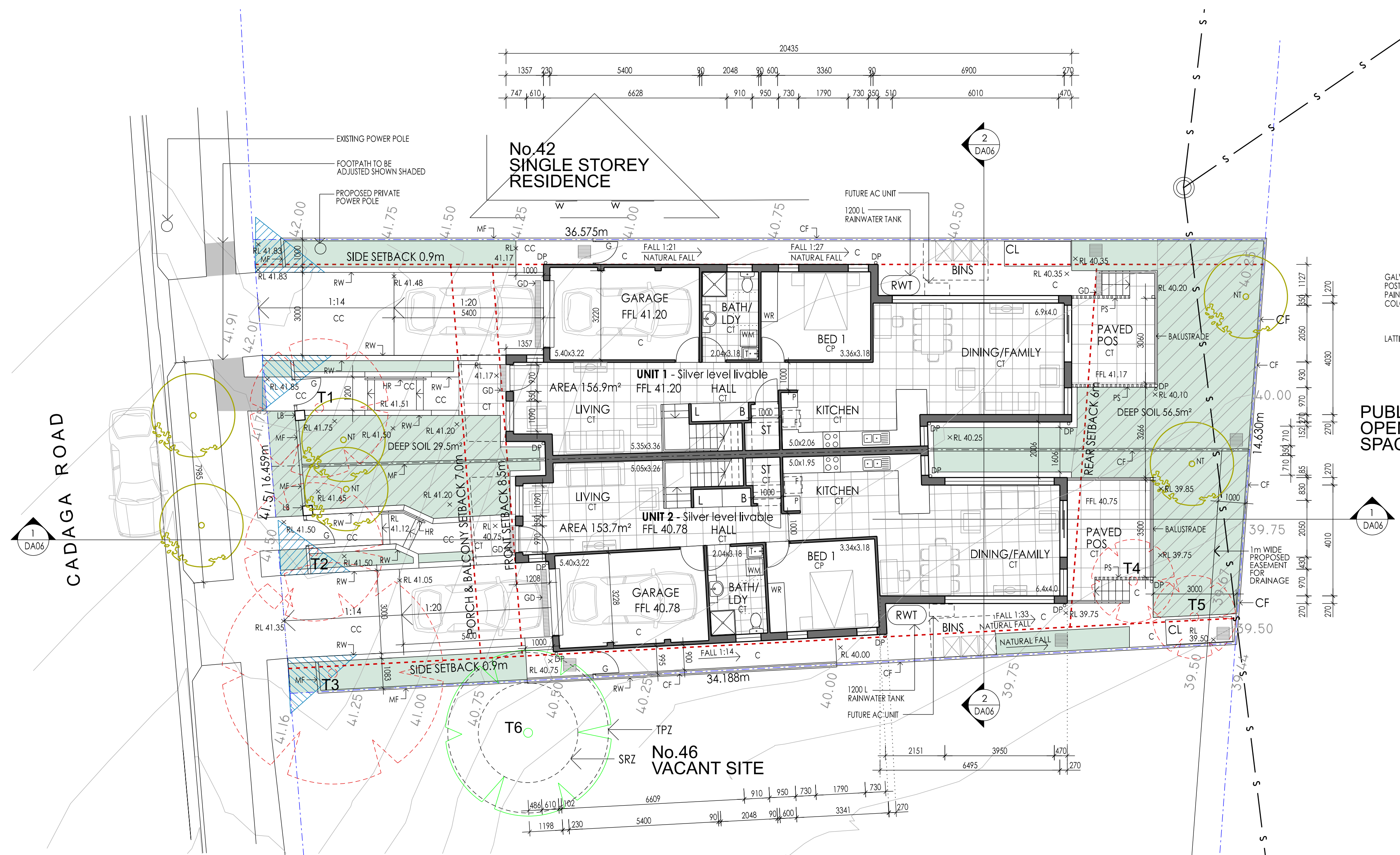
This report assesses the potential traffic and parking implications associated with an attached dual occupancy residential development at 44 Cadaga Road, Gateshead. Based on this assessment, the following conclusions are now made:

- The proposed site access arrangements are projected to result in motorists being capable of entering and exiting the subject site in a safe and efficient manner;
- The proposed development complies with the relevant off-street parking requirements of *State Environmental Planning Policy (Housing) 2021*;
- The internal passenger vehicle circulation arrangements are capable of providing for safe and efficient internal manoeuvring;
- The surrounding road network operates with a good level of service during peak periods;
- The subject development has been projected to generate up to two peak hour vehicle trips to or from the subject site; and
- It is considered that the adjoining road network is capable of accommodating the traffic projected to be generated by the subject development.













Notwithstanding the above findings, it is recommended that that the portion of the existing northern boundary fence that encroaches on the sight distance triangle be removed or replaced in order to provide visibility in accordance with Clause 3.2.4(b) of AS2890.1:2004 to assist in the accommodation of the subject development in a safe and efficient manner.

It is considered, based on the contents of this report and the conclusions contained herein, there are no traffic or parking related issues that should prevent approval of the subject application.

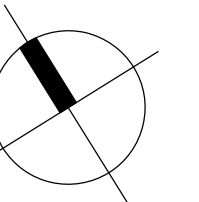
APPENDIX 1



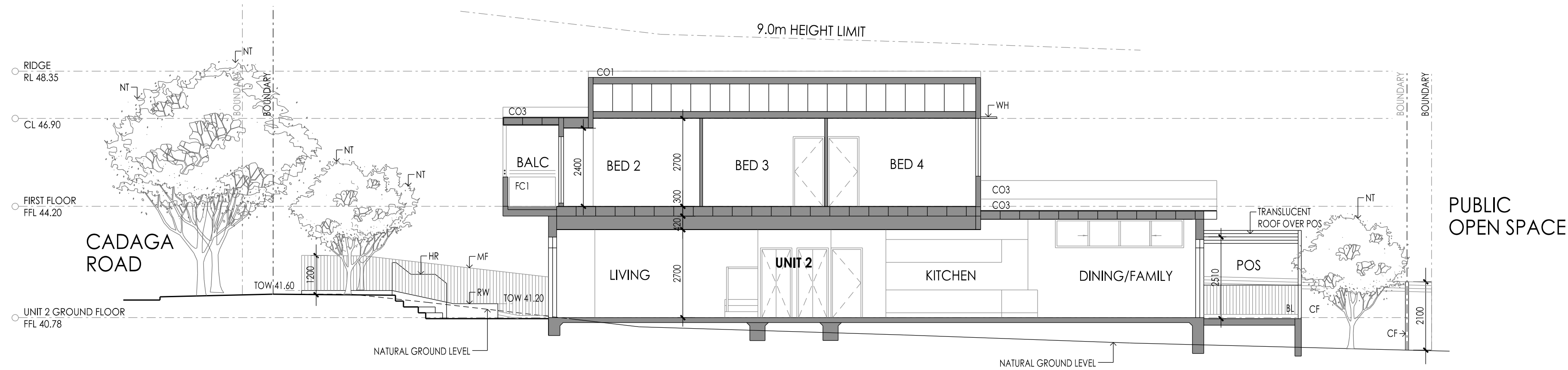
- BASIX COMMITMENTS**
- PER BASIX CERTIFICATE No. 1381125M and NatHERS Certificate No. 0008544120
1. External wall
 - a. cavity brick with 20mm XPS polystyrene insulation to ground floor,
 - b. fibre cement cladding with R2.5 insulation to first floor
 2. Windows
 - a. Awning windows aluminium framed single high solar gain low e glazing: U=5.4, SHGC=0.49
 - b. Sliding windows and doors and fixed windows aluminium framed single high solar gain low e glazing: U=5.4, SHGC=0.58
 3. Internal walls
 - a. plasterboard on studs,
 - b. cavity brick to party wall
 4. Floor
 - a. concrete slab-on-ground to ground floor,
 - b. framed floor to first floor
 5. Ceiling plasterboard with R4.0 insulation where adjacent to roof or roof space
 6. Roof metal roof with R1.0 foil backed insulation blanket,
 - a. dark colour to ground floor,
 - b. medium colour to first floor
 7. 4 star rated taps and toilets suites throughout
 8. 1200L rainwater tank to each unit, collecting at least 65m³ of roof area
 9. Rainwater used for garden irrigation and flushing of all toilets
 10. 5 star instantaneous gas HWS
 11. Ceiling fans to living and bedroom areas
 12. Provide energy efficient lighting (fluoros, compact fluoros & LEDs) throughout
 13. Electric cooktop & electric oven
 14. Provide a fixed outdoor clothes line (receives minimum 2hrs sunshine in winter)

- LEGEND:**
- | | |
|-----|-------------------------------|
| B | : BROOM CUPBOARD |
| C | : CONCRETE |
| CC | : COLOURED CONCRETE |
| CF | : COLORBOND FENCE 2100mm HIGH |
| CL | : CLOTHES LINE |
| CO | : COLORBOND ROOF |
| CS | : CONCRETE SLAB |
| CT | : CERAMIC TILES |
| DP | : DOWNPIPES |
| F | : FRIDGE |
| FFL | : FINISHED FLOOR LEVEL |
| G | : GATE TO MATCH FENCE |
| GR | : GRATED DRAIN |
| HR | : HANDRAIL |
| L | : LINEN CUPBOARD |
| LB | : LETTER BOX |
| MF | : METAL FENCE 1200mm HIGH |
| P | : PANTRY |
| POS | : PRIVATE OPEN SPACE |
| PS | : PRIVACY SCREEN |
| RW | : RETAINING WALL - BRICK |
| RWT | : RAIN WATER TANK |
| SK | : SKY TUBE |
| ST | : STORAGE |
| T | : LAUNDRY TUB |
| WM | : WARDROBE |
| WR | : WASHING MACHINE BY TENANT |
-
- | | |
|---|----------------------------------|
|  | : GARBAGE BIN 240L
600x 730mm |
|  | : STORMWATER PIT |
|  | : DEEP SOIL AREA |
|  | : LANDSCAPE AREA |
-
- | | |
|------------|--------------------------------------|
| T# | : TREE NUMBER
PER ARBORIST REPORT |
| TPZ | : TREE PROTECTION ZONE |
| SRZ | : STRUCTURAL ROOT ZONE |
-
- | | |
|---|--|
|  | : EXISTING TREE TO BE RETAINED |
|  | : EXISTING TREE TO BE REMOVED |
|  | : PROPOSED NEW TREE
PER LANDSCAPE PLANS |
-
- | | |
|---|---------------------------------|
|  | : BOUNDARY LINE |
|  | : SEWER LINE |
|  | : 2.5 x 2m VISIBILITY TRIANGLES |
-
- | | |
|---|------------------------|
|  | : EXISTING SPOT LEVELS |
|  | : PROPOSED LEVELS |

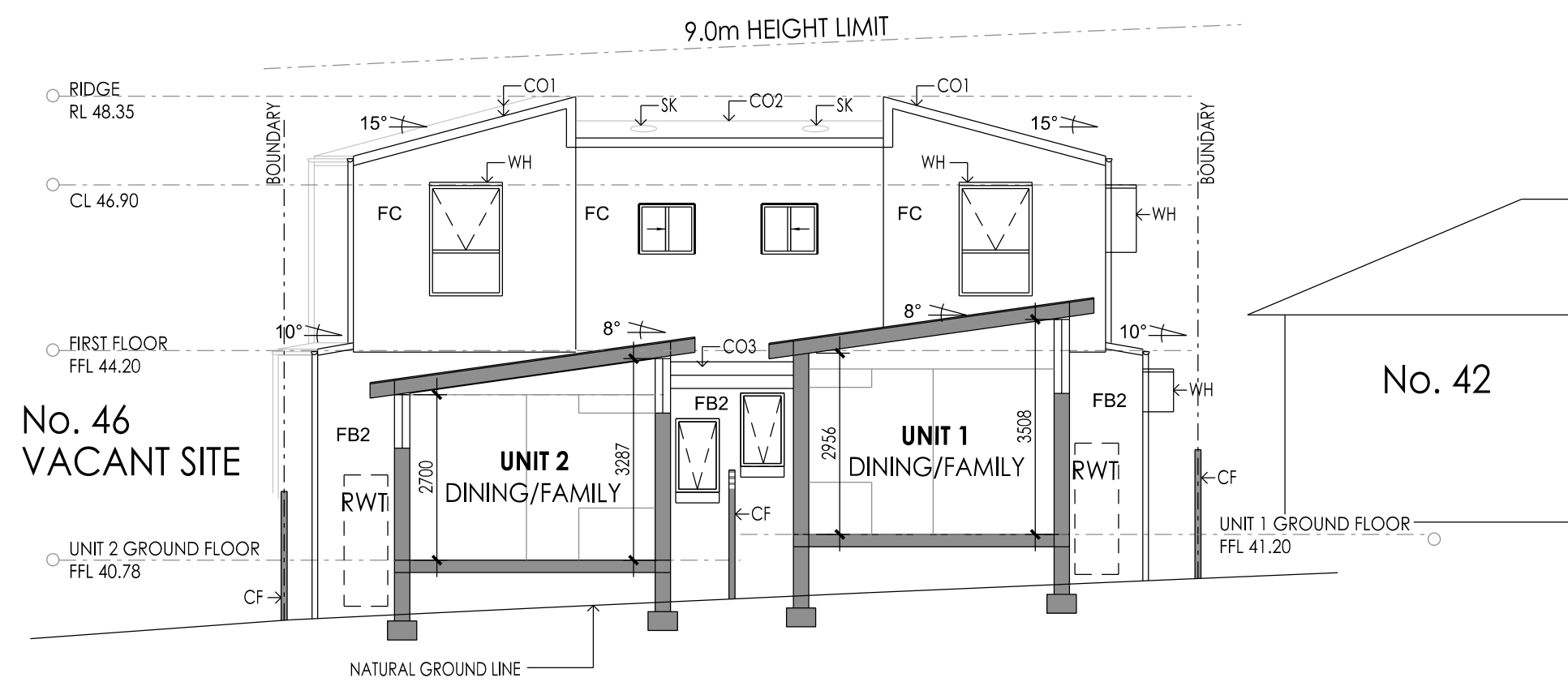
B	: BROOM CUPBOARD
C	: CONCRETE
CC	: COLOURED CONCRETE
CL	: COLORBOND FENCE 2100mm HIGH
CF	: CLOTHES LINE
CO	: COLOMBOND ROOF
CP	: CARPET
CS	: CONCRETE SLAB
CT	: CERAMIC TILES
DP	: DOWNPIPES
F	: Fridge
FFL	: FINISHED FLOOR LEVEL
G	: GATE
GD	: GRATED DRAIN
HR	: HANDRAIL
L	: LINEN CUPBOARD
LB	: LETTER BOX
MF	: METAL FENCE 1200mm HIGH
P	: PRIVACY
POS	: PRIVATE OPEN SPACE
PS	: PRIVACY SCREEN
RW	: RETAINING WALL - BRICK
RWT	: RAIN WATER TANK
SK	: SKY TUBE
ST	: STORAGE
T	: LAUNDRY TUB
W	: WARDROBE
WM	: WASHING MACHINE BY TENANT







1 SECTION 1
SCALE 1:100 @A1

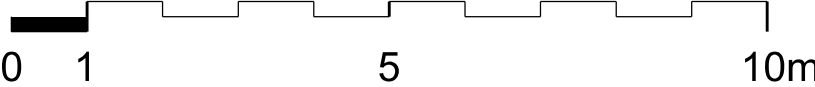


2 SECTION 2
SCALE 1:100 @A1

LEGEND:

- BW : BLOCK WALL
- CL : CEILING LEVEL
- CO : COLORBOND ROOF
- CF : COLORBOND FENCE 2100mm HIGH
- FB : FACE BRICK
- FC : FIBRE CEMENT CLADDING
- FFL : FINISHED FLOOR LEVEL
- MF : METAL FENCE 1200mm HIGH
- NT : NEW TREE
- P : PAINT FINISH
- POS : PRIVATE OPEN SPACE
- PS : PRIVACY SCREEN
- RD : ROLLER DOOR
- RWT : RAIN WATER TANK
- SK : SKY TUBE
- T# : TREE NUMBER PER ARBORIST REPORT
- TOW : TOP OF RETAINING WALL
- WH : WINDOW HOOD

SCALE BAR



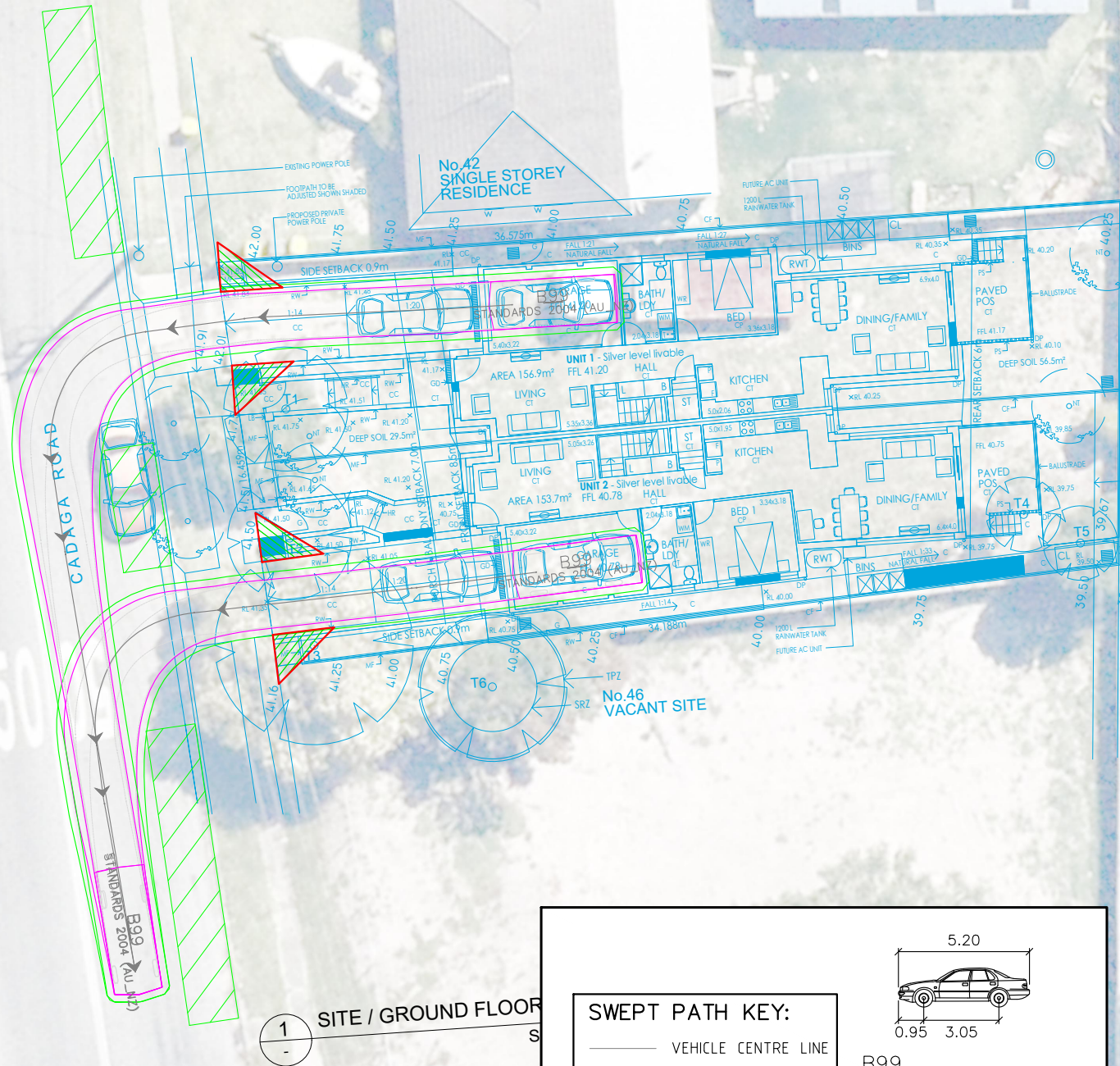
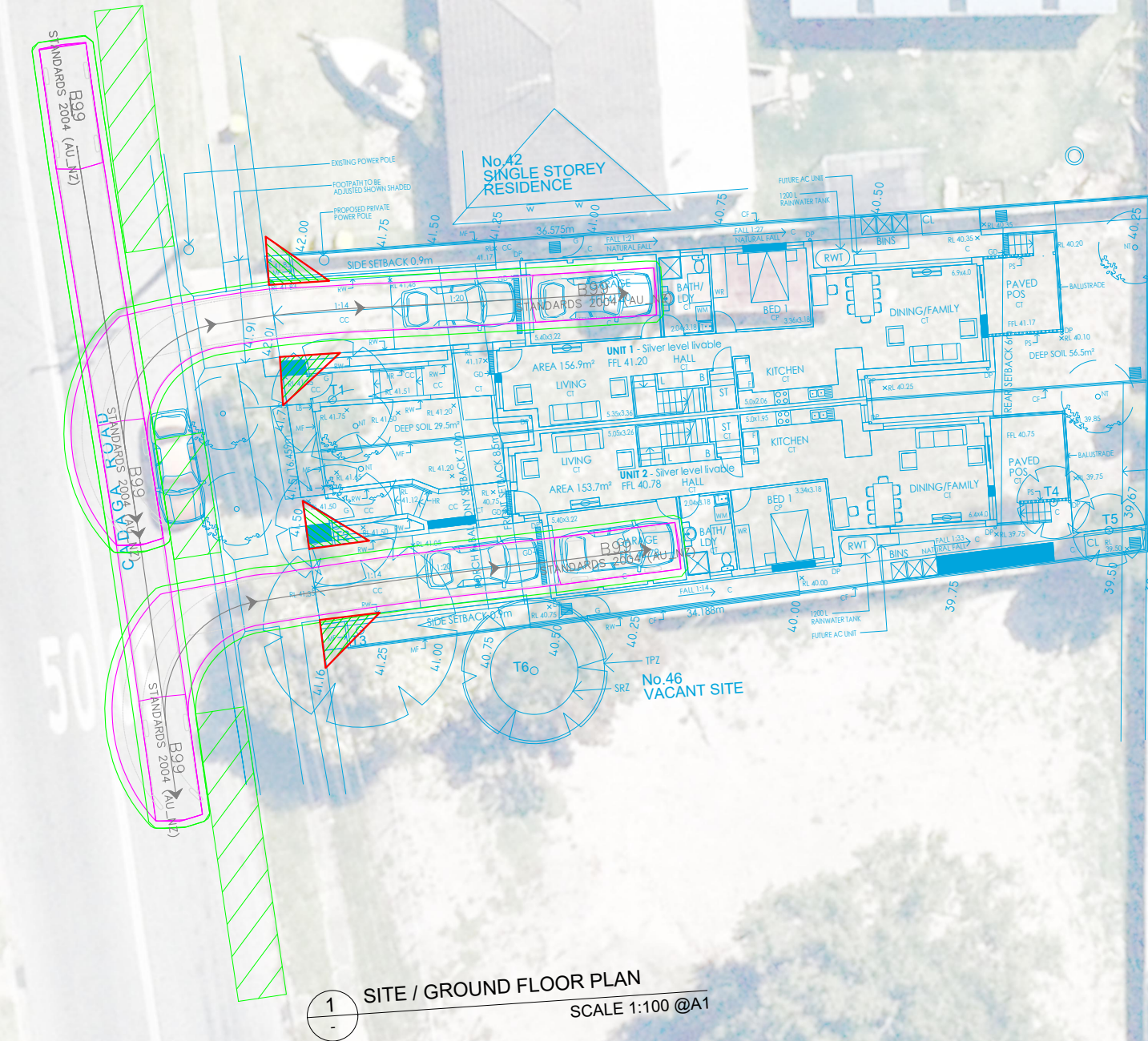
APPENDIX 2

- NOTES:
1. THIS PLAN IS BASED ON THE ARCHITECTURAL PLANS PREPARED BY OTHERS AND AERIAL IMAGERY SOURCED FROM NEARMAP (IMAGE DATE 15/01/2023)
 2. THE SWEEP PATHS PROVIDED ON THIS PLAN HAVE BEEN GENERATED UTILISING AUTOTURN PRO VERSION 11 IN CONJUNCTION WITH VEHICLE MANOEUVRING SPECIFICATIONS IN ACCORDANCE WITH THE AUSTRALIAN STANDARD AS2890.1:2004

LEGEND:

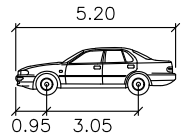
INDICATIVE ON-STREET PARKING

0 5 10 20 40MM
SCALE FOR PRINTING
PURPOSE ONLY



SWEPT PATH KEY:

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



B99

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



ADDRESS: 401/380 HARRIS ST, PYRMONT
PH: (02) 8971 8314
EMAIL: info@stanburytraffic.com.au
WEBSITE: www.stanburytraffic.com.au

STANBURY TRAFFIC PLANNING

44 CADAGA ROAD, GATESHEAD
CAR PARK COMPLIANCE REVIEW
SWEPT PATH ASSESSMENT
GROUND

SCALE 0 2.5 5.0 1:250@A3

DRAWING NO. 22-160-01-V2

DATE 6 April 2023

CREATED BY Y.H

APPROVED BY M.S

SHEET 01 / 01

APPENDIX 3



STANBURY TRAFFIC PLANNING

TRAFFIC, PARKING & TRANSPORT CONSULTANTS

TRAFFIC COUNTS AT:

DATE:

TIME:

WEATHER:

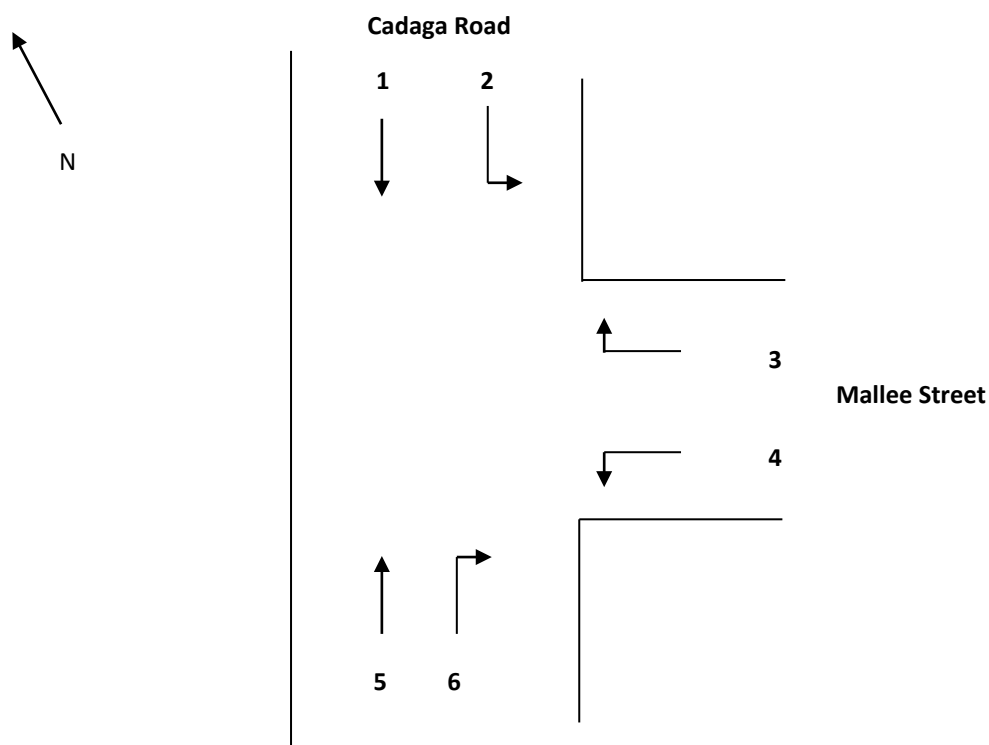
Intersection of Cadaga Road and Mallee Street

26th (and 27th) of October 2022

7:00am to 9:00am and 4:00pm to 6:00pm

Fine

	Direction of Vehicular Traffic						
Time	1	2	3	4	5	6	Total
Afternoon Period							
4.00 – 4.15pm	41	7	7	0	36	3	94
4.15 – 4.30pm	68	17	7	2	41	1	136
4.30 – 4.45pm	66	5	6	0	36	0	113
4.45 – 5.00pm	57	8	6	0	43	2	116
5.00 – 5.15pm	84	19	9	0	32	0	144
5.15 – 5.30pm	73	14	4	1	34	1	127
5.30 – 5.45pm	61	15	6	1	32	0	115
5.45 – 6.00pm	57	8	9	1	31	1	107
Morning Period							
7.00 – 7.15am	25	2	11	0	19	3	60
7.15 – 7.30am	19	5	8	1	22	2	57
7.30 – 7.45am	18	7	5	0	41	3	74
7.45 – 8.00am	39	5	10	0	44	0	98
8.00 – 8.15am	39	8	18	3	43	1	112
8.15 – 8.30am	50	3	10	1	39	0	103
8.30 – 8.45am	52	8	9	1	59	1	130
8.45 – 9.00am	44	11	10	1	57	0	123



APPENDIX 4

MOVEMENT SUMMARY

Site: 101 [Cadaga Rd & Mallee St - AM (Site Folder: General)]

AM Peak Existing
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %	v/c	sec		[Veh. veh	Dist] m				km/h
South: Cadaga Road - South Leg														
2	T1	198	5.0	208	5.0	0.111	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	49.9
3	R2	2	5.0	2	5.0	0.111	5.5	LOS A	0.0	0.1	0.01	0.01	0.01	49.2
Approach		200	5.0	211	5.0	0.111	0.1	NA	0.0	0.1	0.01	0.01	0.01	49.9
East: Mallee Street														
4	L2	6	5.0	6	5.0	0.005	5.2	LOS A	0.0	0.1	0.28	0.50	0.28	46.1
6	R2	47	5.0	49	5.0	0.059	6.5	LOS A	0.2	1.4	0.41	0.65	0.41	45.3
Approach		53	5.0	56	5.0	0.059	6.3	LOS A	0.2	1.4	0.39	0.63	0.39	45.4
North: Cadaga Road - North Leg														
7	L2	30	5.0	32	5.0	0.120	4.6	LOS A	0.0	0.0	0.00	0.08	0.00	49.0
8	T1	185	5.0	195	5.0	0.120	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	49.5
Approach		215	5.0	226	5.0	0.120	0.7	NA	0.0	0.0	0.00	0.08	0.00	49.5
All Vehicles		468	5.0	493	5.0	0.120	1.1	NA	0.2	1.4	0.05	0.11	0.05	49.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: \\qnap\STP\SIDRA\2022\22-160.sip9

MOVEMENT SUMMARY

Site: 101 [Cadaga Rd & Mallee St - PM (Site Folder: Existing)]

PM Peak Existing
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Cadaga Road - South Leg														
2	T1	152	5.0	160	5.0	0.087	0.0	LOS A	0.0	0.2	0.02	0.01	0.02	49.9
3	R2	3	5.0	3	5.0	0.087	6.0	LOS A	0.0	0.2	0.02	0.01	0.02	49.1
Approach		155	5.0	163	5.0	0.087	0.2	NA	0.0	0.2	0.02	0.01	0.02	49.9
East: Mallee Street														
4	L2	2	5.0	2	5.0	0.002	5.5	LOS A	0.0	0.0	0.35	0.50	0.35	45.9
6	R2	28	5.0	29	5.0	0.038	6.8	LOS A	0.1	0.9	0.43	0.66	0.43	45.1
Approach		30	5.0	32	5.0	0.038	6.7	LOS A	0.1	0.9	0.43	0.65	0.43	45.2
North: Cadaga Road - North Leg														
7	L2	49	5.0	52	5.0	0.181	4.7	LOS A	0.0	0.0	0.00	0.08	0.00	49.0
8	T1	275	5.0	289	5.0	0.181	0.1	LOS A	0.0	0.0	0.00	0.08	0.00	49.5
Approach		324	5.0	341	5.0	0.181	0.8	NA	0.0	0.0	0.00	0.08	0.00	49.4
All Vehicles		509	5.0	536	5.0	0.181	0.9	NA	0.1	0.9	0.03	0.09	0.03	49.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: \\qnap\STP\SIDRA\2022\22-160.sip9

APPENDIX 5

How to use this timetable

This timetable provides a snapshot of service information in 24-hour time (e.g. 5am = 05:00, 5pm = 17:00). Information contained in this timetable is subject to change without notice. Please note that timetables do not include minor stops, additional trips for special events, short term changes, holiday timetable changes, real-time information or any disruption alerts.

For the most up-to-date times, use the Trip Planner or Departures at transportnsw.info

Real-time planning


You can plan your trip with real-time information using the Trip Planner or Departures at transportnsw.info or by downloading travel apps on your smartphone or tablet.

The Trip Planner, Departures and travel apps offer various features:

- favourite your regular trips
- see where your service is on the route
- get estimated pick-up and arrival times
- receive service updates
- find nearby stations, stops, wharves and routes
- check accessibility information.

Find the latest apps at transportnsw.info/apps

Accessible services

All new buses are wheelchair-accessible with low-level floors and space for wheelchairs, prams or strollers. Look for the  symbol in this timetable. Some older buses may not have all the features you need. There will be more accessible services as older buses are replaced.

Who is providing my bus services?

The bus services shown in this timetable are run by Newcastle Transport.

Fares

In Sydney and surrounding regions, fares are based on:

- the distance you travel from tap on to tap off
- the mode of transport you choose
- whether you're eligible for a concession fare or free travel
- any Opal benefits such as discounts and capped fares that apply.

You can use an Opal card or a contactless payment to pay for your travel.

Opal cards

An Opal card is a smartcard you keep and reuse. Add value before you travel, and tap on and tap off to pay your fares throughout Sydney, the Blue Mountains, the Central Coast, the Hunter and the Illawarra.

Which Opal card is right for you?

Adult – Customers 16 years or older who are not entitled to any concessions and normally pay full fare.

Child/Youth – For customers aged 4-15 (inclusive), or customers 16 years or older who hold a NSW/ACT Senior Secondary Student Concession Card.

Gold Senior/Pensioner – For eligible NSW and interstate seniors, pensioners, war widows/ers and asylum seekers.

Concession – For eligible tertiary students, job seekers, apprentices and trainees.

How to get an Opal card

You can get an Adult or Child/Youth Opal card over the counter at Opal retailers that display the Opal sign . To find your nearest retailer visit transportnsw.info/opal.

If you are eligible to travel with concession fares, you can apply for a Gold Senior/Pensioner or Concession Opal card online. Visit transportnsw.info/opal for more information.

Contactless payments

If you have an American Express, Mastercard, Visa card or linked device, you can use it to pay for all public transport on the Opal network. Just make sure to tap on and tap off at Opal readers at the beginning and end of your trip.

Always separate your cards when you tap on and tap off so your preferred card is charged.

You will receive the same travel benefits of an Adult Opal card when you tap on and tap off consistently with the same credit card, debit card or linked device. This includes daily, weekly and weekend travel caps, and a \$2 transfer discount when you change between metro/train, ferry, bus and light rail services within 60 minutes. Adult Opal fare pricing applies.

Find out more at transportnsw.info/contactless

Explanation of definitions and symbols



Wheelchair Accessible

25

Broadmeadow to Charlestown via Kotara

B

Valid from: 27 Jan 2023

Creation date: 20 Feb 2023

NOTE: Information is correct on date of download.

Monday to Friday									
Broadmeadow Station	05:50	06:50	07:50	08:15	08:40	09:05	10:00	10:55	11:55
Queens Rd at Orchardtown Rd, New Lambton	05:57	06:58	07:59	08:26	08:51	09:14	10:09	11:04	12:04
Westfield Kotara, Park Ave, Kotara	06:01	07:03	08:05	08:32	08:57	09:20	10:15	11:10	12:10
Stuart St near Charlestown Rd, Kotara South	06:08	07:10	08:12	08:39	09:04	09:27	10:22	11:17	12:17
Warners Bay Rd after E K Ave, Charlestown	06:14	07:17	08:19	08:46	09:11	09:34	10:29	11:24	12:24
Charlestown Square, Pearson St, Stand A, Charlestown	06:18	07:21	08:24	08:51	09:16	09:39	10:34	11:29	12:29




Monday to Friday									
Broadmeadow Station	12:55	13:55	14:55	16:05	16:45	17:10	17:50	18:20	19:00
Queens Rd at Orchardtown Rd, New Lambton	13:04	14:04	15:04	16:14	16:56	17:21	17:59	18:28	19:07
Westfield Kotara, Park Ave, Kotara	13:10	14:10	15:10	16:20	17:02	17:27	18:05	18:33	19:11
Stuart St near Charlestown Rd, Kotara South	13:17	14:17	15:17	16:27	17:09	17:34	18:12	18:40	19:18
Warners Bay Rd after E K Ave, Charlestown	13:24	14:24	15:24	16:34	17:16	17:41	18:19	18:47	19:24
Charlestown Square, Pearson St, Stand A, Charlestown	13:29	14:29	15:29	16:39	17:21	17:46	18:24	18:51	19:28

Monday to Friday			
Broadmeadow Station	20:00	21:00	22:05
Queens Rd at Orchardtown Rd, New Lambton	20:07	21:07	22:12
Westfield Kotara, Park Ave, Kotara	20:11	21:11	22:16
Stuart St near Charlestown Rd, Kotara South	20:18	21:18	22:23
Warners Bay Rd after E K Ave, Charlestown	20:24	21:24	22:29
Charlestown Square, Pearson St, Stand A, Charlestown	20:28	21:28	22:33

Saturday									
Broadmeadow Station	07:50	08:50	09:55	11:05	12:00	13:05	14:00	15:05	16:00
Queens Rd at Orchardtown Rd, New Lambton	07:59	08:59	10:04	11:15	12:09	13:14	14:09	15:14	16:09
Westfield Kotara, Park Ave, Kotara	08:03	09:03	10:08	11:20	12:13	13:18	14:13	15:18	16:13
Stuart St near Charlestown Rd, Kotara South	08:10	09:12	10:17	11:27	12:22	13:27	14:22	15:27	16:22
Warners Bay Rd after E K Ave, Charlestown	08:16	09:18	10:23	11:33	12:28	13:33	14:28	15:33	16:28
Charlestown Square, Pearson St, Stand A, Charlestown	08:20	09:22	10:27	11:37	12:32	13:37	14:32	15:37	16:32

Saturday					
Broadmeadow Station	17:05	18:00	19:05	20:00	21:05
Queens Rd at Orchardtown Rd, New Lambton	17:14	18:07	19:12	20:07	21:12
Westfield Kotara, Park Ave, Kotara	17:18	18:11	19:16	20:11	21:16
Stuart St near Charlestown Rd, Kotara South	17:27	18:18	19:23	20:18	21:23
Warners Bay Rd after E K Ave, Charlestown	17:33	18:24	19:29	20:24	21:29
Charlestown Square, Pearson St, Stand A, Charlestown	17:37	18:28	19:33	20:28	21:33

Sunday & Public Holidays									
Broadmeadow Station	07:50	08:50	09:55	11:05	12:00	13:05	14:00	15:05	16:00
Queens Rd at Orchardtown Rd, New Lambton	07:58	08:59	10:04	11:14	12:09	13:14	14:09	15:14	16:09
Westfield Kotara, Park Ave, Kotara	08:02	09:03	10:08	11:18	12:13	13:18	14:13	15:18	16:13
Stuart St near Charlestown Rd, Kotara South	08:09	09:11	10:16	11:26	12:21	13:26	14:21	15:26	16:21
Warners Bay Rd after E K Ave, Charlestown	08:14	09:16	10:21	11:31	12:26	13:31	14:26	15:31	16:26
Charlestown Square, Pearson St, Stand A, Charlestown	08:18	09:20	10:25	11:35	12:30	13:35	14:30	15:35	16:30

Sunday & Public Holidays			
Broadmeadow Station	17:05	18:00	19:05
Queens Rd at Orchardtown Rd, New Lambton	17:14	18:07	19:12
Westfield Kotara, Park Ave, Kotara	17:18	18:11	19:16
Stuart St near Charlestown Rd, Kotara South	17:26	18:18	19:23
Warners Bay Rd after E K Ave, Charlestown	17:31	18:24	19:29
Charlestown Square, Pearson St, Stand A, Charlestown	17:35	18:28	19:33

25

Charlestown to Broadmeadow via Kotara

B

Monday to Friday										
Charlestown Square, Pearson St, Stand B, Charlestown	05:22	06:12	06:51	07:21	07:44	08:18	08:50	09:50	10:50	
Warners Bay Rd after Gadaga Rd, Charlestown	05:26	06:16	06:55	07:25	07:48	08:22	08:54	09:54	10:54	
Charlestown Rd opp 177, Charlestown	05:31	06:21	07:01	07:30	07:55	08:27	08:59	09:59	10:59	
Park Ave opp Westfield Kotara, Kotara	05:38	06:28	07:08	07:37	08:04	08:35	09:07	10:06	11:06	
Lambton Rd opp Cameron St, Broadmeadow	05:47	06:37	07:19	07:51	08:19	08:49	09:19	10:19	11:19	
Broadmeadow Station	05:50	06:40	07:22	07:54	08:22	08:52	09:22	10:22	11:22	

Monday to Friday										
Charlestown Square, Pearson St, Stand B, Charlestown	11:50	12:50	13:45	14:37	15:45	16:15	16:45	17:15	17:45	
Warners Bay Rd after Gadaga Rd, Charlestown	11:54	12:54	13:49	14:41	15:50	16:20	16:50	17:20	17:49	
Charlestown Rd opp 177, Charlestown	11:59	12:59	13:54	14:48	15:56	16:26	16:56	17:26	17:55	
Park Ave opp Westfield Kotara, Kotara	12:06	13:06	14:01	14:56	16:03	16:33	17:03	17:33	18:02	
Lambton Rd opp Cameron St, Broadmeadow	12:19	13:19	14:14	15:11	16:16	16:46	17:16	17:46	18:15	
Broadmeadow Station	12:22	13:22	14:17	15:14	16:19	16:49	17:19	17:49	18:18	

Monday to Friday				
Charlestown Square, Pearson St, Stand B, Charlestown	18:50	20:12	21:12	22:02
Warners Bay Rd after Gadaga Rd, Charlestown	18:54	20:16	21:16	22:06
Charlestown Rd opp 177, Charlestown	19:00	20:21	21:21	22:11
Park Ave opp Westfield Kotara, Kotara	19:06	20:27	21:27	22:17
Lambton Rd opp Cameron St, Broadmeadow	19:18	20:37	21:37	22:27
Broadmeadow Station	19:21	20:40	21:40	22:30

Saturday										
Charlestown Square, Pearson St, Stand B, Charlestown	07:11	08:11	09:11	10:11	11:11	12:11	13:11	14:11	15:11	
Warners Bay Rd after Gadaga Rd, Charlestown	07:15	08:15	09:16	10:16	11:16	12:16	13:16	14:16	15:16	
Charlestown Rd opp 177, Charlestown	07:20	08:20	09:21	10:21	11:21	12:21	13:21	14:21	15:21	
Park Ave opp Westfield Kotara, Kotara	07:27	08:28	09:29	10:29	11:29	12:29	13:29	14:29	15:29	
Lambton Rd opp Cameron St, Broadmeadow	07:36	08:37	09:39	10:39	11:39	12:39	13:39	14:39	15:39	
Broadmeadow Station	07:39	08:41	09:43	10:43	11:43	12:43	13:43	14:43	15:43	

Saturday					
Charlestown Square, Pearson St, Stand B, Charlestown	16:11	17:20	18:20	19:00	20:00
Warners Bay Rd after Gadaga Rd, Charlestown	16:16	17:25	18:24	19:04	20:04
Charlestown Rd opp 177, Charlestown	16:21	17:30	18:29	19:09	20:09
Park Ave opp Westfield Kotara, Kotara	16:29	17:38	18:36	19:16	20:16
Lambton Rd opp Cameron St, Broadmeadow	16:39	17:48	18:45	19:25	20:25
Broadmeadow Station	16:43	17:52	18:48	19:28	20:28

Sunday & Public Holidays										
Charlestown Square, Pearson St, Stand B, Charlestown	07:11	08:11	09:11	10:11	11:11	12:11	13:11	14:11	15:11	
Warners Bay Rd after Gadaga Rd, Charlestown	07:15	08:16	09:16	10:16	11:16	12:16	13:16	14:16	15:16	
Charlestown Rd opp 177, Charlestown	07:20	08:21	09:21	10:21	11:21	12:21	13:21	14:21	15:21	
Park Ave opp Westfield Kotara, Kotara	07:27	08:28	09:28	10:28	11:29	12:29	13:29	14:29	15:29	
Lambton Rd opp Cameron St, Broadmeadow	07:36	08:37	09:37	10:37	11:39	12:39	13:39	14:39	15:39	
Broadmeadow Station	07:39	08:41	09:41	10:41	11:43	12:43	13:43	14:43	15:43	

Sunday & Public Holidays			
Charlestown Square, Pearson St, Stand B, Charlestown	16:11	17:20	18:20
Warners Bay Rd after Gadaga Rd, Charlestown	16:16	17:25	18:24
Charlestown Rd opp 177, Charlestown	16:21	17:30	18:29
Park Ave opp Westfield Kotara, Kotara	16:29	17:37	18:36
Lambton Rd opp Cameron St, Broadmeadow	16:39	17:46	18:45
Broadmeadow Station	16:43	17:50	18:48



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For the most up-to-date times, use the Trip Planner or Departures at transportnsw.info

Real-time planning


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The Trip Planner, Departures and travel apps offer various features:

- favourite your regular trips
- see where your service is on the route
- get estimated pick-up and arrival times
- receive service updates
- find nearby stations, stops, wharves and routes
- check accessibility information.

Find the latest apps at transportnsw.info/apps

Accessible services

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In Sydney and surrounding regions, fares are based on:

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- the mode of transport you choose
- whether you're eligible for a concession fare or free travel
- any Opal benefits such as discounts and capped fares that apply.

You can use an Opal card or a contactless payment to pay for your travel.

Opal cards

An Opal card is a smartcard you keep and reuse. Add value before you travel, and tap on and tap off to pay your fares throughout Sydney, the Blue Mountains, the Central Coast, the Hunter and the Illawarra.

Which Opal card is right for you?

Adult – Customers 16 years or older who are not entitled to any concessions and normally pay full fare.

Child/Youth – For customers aged 4-15 (inclusive), or customers 16 years or older who hold a NSW/ACT Senior Secondary Student Concession Card.

Gold Senior/Pensioner – For eligible NSW and interstate seniors, pensioners, war widows/ers and asylum seekers.

Concession – For eligible tertiary students, job seekers, apprentices and trainees.

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Contactless payments

If you have an American Express, Mastercard, Visa card or linked device, you can use it to pay for all public transport on the Opal network. Just make sure to tap on and tap off at Opal readers at the beginning and end of your trip.

Always separate your cards when you tap on and tap off so your preferred card is charged.

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Find out more at transportnsw.info/contactless

Explanation of definitions and symbols



Wheelchair Accessible

2169

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28

Newcastle West to Mount Hutton via Newcastle Interchange & Broadmeadow

B

Valid from: 27 Jan 2023

Creation date: 20 Feb 2023

NOTE: Information is correct on date of download.

Monday to Friday	♿	♿	♿	♿	♿	♿	♿	♿	♿
King St at National Park St, Newcastle West	05:35	06:30	07:30	07:45	08:15	08:55	09:50	10:45	11:45
Broadmeadow Station	05:44	06:39	07:39	07:54	08:24	09:04	09:59	10:54	11:54
Brunker Rd after Glebe Rd, Adamstown	05:49	06:44	07:45	08:01	08:32	09:11	10:06	11:01	12:01
Brunker Rd opp Yarrum St, Adamstown Heights	05:54	06:49	07:51	08:07	08:38	09:17	10:12	11:07	12:07
Charlestown Square, Pearson St, Stand B, Charlestown	06:02	06:57	07:59	08:16	08:48	09:26	10:21	11:16	12:16
Hickory Rd at Cassia Cres, Gateshead	06:07	07:02	08:04	08:22	08:55	09:32	10:27	11:22	12:22
Wilsons Rd opp Lake Macquarie Fair, Mount Hutton	06:12	07:07	08:10	08:28	09:01	09:38	10:33	11:28	12:28

Monday to Friday	♿	♿	♿	♿	♿	♿	♿	♿	♿
King St at National Park St, Newcastle West	12:45	13:45	14:45	15:55	16:34	17:04	17:40	18:10	18:47
Broadmeadow Station	12:54	13:54	14:54	16:05	16:44	17:14	17:50	18:19	18:56
Brunker Rd after Glebe Rd, Adamstown	13:01	14:01	15:01	16:12	16:51	17:21	17:57	18:25	19:01
Brunker Rd opp Yarrum St, Adamstown Heights	13:07	14:07	15:07	16:18	16:57	17:27	18:03	18:30	19:06
Charlestown Square, Pearson St, Stand B, Charlestown	13:16	14:16	15:16	16:27	17:06	17:36	18:11	18:38	19:13
Hickory Rd at Cassia Cres, Gateshead	13:22	14:22	15:22	16:33	17:12	17:42	18:16	18:43	19:19
Wilsons Rd opp Lake Macquarie Fair, Mount Hutton	13:28	14:28	15:28	16:39	17:18	17:48	18:22	18:48	19:24

Monday to Friday	♿	♿	♿
King St at National Park St, Newcastle West	19:29	20:20	21:05
Broadmeadow Station	19:38	20:29	21:14
Brunker Rd after Glebe Rd, Adamstown	19:43	20:34	21:19
Brunker Rd opp Yarrum St, Adamstown Heights	19:48	20:39	21:24
Charlestown Square, Pearson St, Stand B, Charlestown	19:55	20:46	21:31
Hickory Rd at Cassia Cres, Gateshead	20:01	20:52	21:37
Wilsons Rd opp Lake Macquarie Fair, Mount Hutton	20:06	20:57	21:42

Saturday	♿	♿	♿	♿	♿	♿	♿	♿	♿
King St at National Park St, Newcastle West	06:57	07:57	08:57	09:57	11:02	12:02	13:02	14:02	15:02
Broadmeadow Station	07:06	08:06	09:06	10:06	11:11	12:11	13:11	14:11	15:11
Brunker Rd after Glebe Rd, Adamstown	07:12	08:12	09:12	10:12	11:17	12:17	13:17	14:17	15:17
Brunker Rd opp Yarrum St, Adamstown Heights	07:17	08:18	09:18	10:18	11:23	12:23	13:23	14:23	15:23
Charlestown Square, Pearson St, Stand B, Charlestown	07:22	08:24	09:24	10:24	11:29	12:29	13:29	14:29	15:29
Hickory Rd at Cassia Cres, Gateshead	07:29	08:31	09:31	10:32	11:37	12:37	13:37	14:37	15:37
Wilsons Rd opp Lake Macquarie Fair, Mount Hutton	07:34	08:37	09:37	10:38	11:43	12:43	13:43	14:43	15:43

Saturday	♿	♿	♿	♿	♿
King St at National Park St, Newcastle West	16:02	17:02	18:02	19:02	20:02
Broadmeadow Station	16:11	17:11	18:11	19:11	20:11
Brunker Rd after Glebe Rd, Adamstown	16:17	17:17	18:16	19:16	20:16
Brunker Rd opp Yarrum St, Adamstown Heights	16:23	17:23	18:21	19:21	20:21
Charlestown Square, Pearson St, Stand B, Charlestown	16:29	17:29	18:28	19:27	20:27
Hickory Rd at Cassia Cres, Gateshead	16:37	17:36	18:34	19:34	20:34
Wilsons Rd opp Lake Macquarie Fair, Mount Hutton	16:43	17:42	18:39	19:39	20:39

28

Newcastle West to Mount Hutton via Newcastle Interchange & Broadmeadow

B

Sunday & Public Holidays

King St at National Park St, Newcastle West	06:57	07:57	08:57	09:57	11:02	12:02	13:02	14:02	15:02	
Broadmeadow Station	07:06	08:06	09:06	10:06	11:11	12:11	13:11	14:11	15:11	
Brunker Rd after Glebe Rd, Adamstown	07:12	08:12	09:12	10:12	11:17	12:17	13:17	14:17	15:17	
Brunker Rd opp Yarrum St, Adamstown Heights	07:17	08:18	09:18	10:18	11:23	12:23	13:23	14:23	15:23	
Charlestown Square, Pearson St, Stand B, Charlestown	07:22	08:24	09:24	10:24	11:29	12:29	13:29	14:29	15:29	
Hickory Rd at Cassia Cres, Gateshead	07:29	08:31	09:31	10:32	11:37	12:37	13:37	14:37	15:37	
Wilsons Rd opp Lake Macquarie Fair, Mount Hutton	07:34	08:37	09:37	10:38	11:43	12:43	13:43	14:43	15:43	

Sunday & Public Holidays

King St at National Park St, Newcastle West	16:02	17:02	18:02
Broadmeadow Station	16:11	17:11	18:11
Brunker Rd after Glebe Rd, Adamstown	16:17	17:16	18:16
Brunker Rd opp Yarrum St, Adamstown Heights	16:23	17:21	18:21
Charlestown Square, Pearson St, Stand B, Charlestown	16:29	17:28	18:28
Hickory Rd at Cassia Cres, Gateshead	16:37	17:34	18:34
Wilsons Rd opp Lake Macquarie Fair, Mount Hutton	16:43	17:39	18:39

28

Mount Hutton to Newcastle West via Broadmeadow & Newcastle Interchange

B

Monday to Friday

Lake Macquarie Fair, Wilsons Rd, Mount Hutton	04:48	05:48	06:10	06:50	07:17	07:45	08:20	08:45	09:45	
Charlestown Square, Pearson St, Stand A, Charlestown	04:59	05:59	06:22	07:03	07:30	07:58	08:33	08:58	09:58	
Pacific Hwy opp Kahibah Rd, Highfields	05:03	06:03	06:27	07:08	07:36	08:05	08:41	09:04	10:04	
Brunker Rd before Glebe Rd, Adamstown	05:10	06:10	06:34	07:16	07:45	08:16	08:53	09:14	10:11	
Broadmeadow Station	05:16	06:16	06:41	07:23	07:52	08:24	09:01	09:21	10:18	
Tudor St after Elcho St, Hamilton	05:20	06:20	06:45	07:28	07:57	08:29	09:06	09:26	10:23	
King St at National Park St, Newcastle West	05:25	06:25	06:50	07:34	08:03	08:36	09:13	09:32	10:29	

Monday to Friday

Lake Macquarie Fair, Wilsons Rd, Mount Hutton	10:45	11:45	12:45	13:45	14:40	15:45	16:27	16:50	17:20	
Charlestown Square, Pearson St, Stand A, Charlestown	10:58	11:58	12:58	13:58	14:53	15:58	16:40	17:03	17:33	
Pacific Hwy opp Kahibah Rd, Highfields	11:04	12:04	13:04	14:04	14:59	16:04	16:46	17:08	17:38	
Brunker Rd before Glebe Rd, Adamstown	11:11	12:11	13:11	14:11	15:06	16:12	16:53	17:16	17:46	
Broadmeadow Station	11:18	12:18	13:18	14:18	15:13	16:20	17:00	17:22	17:52	
Tudor St after Elcho St, Hamilton	11:23	12:23	13:23	14:23	15:19	16:26	17:06	17:27	17:57	
King St at National Park St, Newcastle West	11:29	12:29	13:29	14:29	15:25	16:32	17:12	17:33	18:03	

Monday to Friday

Lake Macquarie Fair, Wilsons Rd, Mount Hutton	17:50	18:50	20:00	21:00
Charlestown Square, Pearson St, Stand A, Charlestown	18:02	19:02	20:12	21:12
Pacific Hwy opp Kahibah Rd, Highfields	18:06	19:06	20:16	21:16
Brunker Rd before Glebe Rd, Adamstown	18:13	19:13	20:23	21:23
Broadmeadow Station	18:19	19:19	20:29	21:29
Tudor St after Elcho St, Hamilton	18:23	19:23	20:33	21:33
King St at National Park St, Newcastle West	18:28	19:28	20:38	21:38

Saturday

Lake Macquarie Fair, Wilsons Rd, Mount Hutton	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	
Charlestown Square, Pearson St, Stand A, Charlestown	07:12	08:12	09:12	10:12	11:12	12:12	13:12	14:12	15:12	
Pacific Hwy opp Kahibah Rd, Highfields	07:16	08:17	09:17	10:17	11:17	12:17	13:17	14:17	15:17	
Brunker Rd before Glebe Rd, Adamstown	07:23	08:25	09:25	10:25	11:25	12:25	13:25	14:25	15:25	
Broadmeadow Station	07:29	08:32	09:32	10:32	11:32	12:32	13:32	14:32	15:32	
Tudor St after Elcho St, Hamilton	07:33	08:36	09:36	10:37	11:37	12:37	13:37	14:37	15:37	
King St at National Park St, Newcastle West	07:38	08:41	09:41	10:42	11:42	12:42	13:42	14:42	15:42	

Saturday

Lake Macquarie Fair, Wilsons Rd, Mount Hutton	16:00	17:05	18:05	18:50	19:50	21:10
Charlestown Square, Pearson St, Stand A, Charlestown	16:12	17:17	18:17	19:02	20:02	21:22
Pacific Hwy opp Kahibah Rd, Highfields	16:17	17:22	18:21	19:06	20:06	21:26
Brunker Rd before Glebe Rd, Adamstown	16:25	17:30	18:28	19:13	20:13	21:33
Broadmeadow Station	16:32	17:37	18:34	19:19	20:19	21:39
Tudor St after Elcho St, Hamilton	16:36	17:41	18:38	19:23	20:23	21:43
King St at National Park St, Newcastle West	16:41	17:46	18:43	19:28	20:28	21:48

Sunday & Public Holidays

Lake Macquarie Fair, Wilsons Rd, Mount Hutton	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	
Charlestown Square, Pearson St, Stand A, Charlestown	07:12	08:12	09:12	10:12	11:12	12:12	13:12	14:12	15:12	
Pacific Hwy opp Kahibah Rd, Highfields	07:16	08:17	09:17	10:17	11:17	12:17	13:17	14:17	15:17	
Brunker Rd before Glebe Rd, Adamstown	07:23	08:25	09:25	10:25	11:25	12:25	13:25	14:25	15:25	
Broadmeadow Station	07:29	08:31	09:31	10:32	11:32	12:32	13:32	14:32	15:32	
Tudor St after Elcho St, Hamilton	07:33	08:35	09:35	10:36	11:36	12:36	13:36	14:36	15:36	
King St at National Park St, Newcastle West	07:38	08:40	09:40	10:41	11:41	12:41	13:41	14:41	15:41	

28

Mount Hutton to Newcastle West via Broadmeadow & Newcastle Interchange

B

Sunday & Public Holidays

			
Lake Macquarie Fair, Wilsons Rd, Mount Hutton	16:00	17:05	18:05
Charlestown Square, Pearson St, Stand A, Charlestown	16:12	17:17	18:17
Pacific Hwy opp Kahibah Rd, Highfields	16:17	17:22	18:21
Brunker Rd before Glebe Rd, Adamstown	16:25	17:30	18:28
Broadmeadow Station	16:31	17:36	18:34
Tudor St after Elcho St, Hamilton	16:35	17:40	18:38
King St at National Park St, Newcastle West	16:40	17:45	18:43

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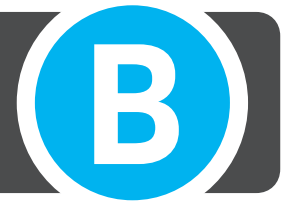
Explanation of definitions and symbols



Wheelchair Accessible



Operates via Belmont High School on school days only



Valid from: 27 Jan 2023

Creation date: 20 Feb 2023

NOTE: Information is correct on date of download.

Monday to Friday								
Charlestown Square, Pearson St, Stand B, Charlestown	07:13	08:52	10:52	12:52	14:52	15:52	16:52	17:52
Wilsons Rd opp Lake Macquarie Fair, Mount Hutton	07:27	09:06	11:06	13:06	15:06	16:06	17:06	18:06
Wyndham Way before Tingira Dr, Eleebana	07:34	09:13	11:13	13:13	15:13	16:13	17:13	18:13
Berringar Rd near Allambee Pl, Valentine	07:44	09:23	11:23	13:23	15:23	16:23	17:23	18:23
Belmont Hospital, Green Point Dr, Belmont	07:53	09:32	11:32	13:32	15:32	16:32	17:32	18:32
Ross St opp Belmont 16s, Belmont	07:57	09:36	11:36	13:36	15:36	16:36	17:36	18:36
Pacific Hwy opp Macquarie St, Belmont	08:00	09:39	11:39	13:39	15:39	16:39	17:39	18:39
Glover St opp Church St, Belmont	-	09:42	11:42	13:42	15:42	16:42	17:42	18:42
Saturday								
Charlestown Square, Pearson St, Stand B, Charlestown	08:52	10:52	12:52	14:52	16:52			
Wilsons Rd opp Lake Macquarie Fair, Mount Hutton	09:05	11:05	13:05	15:05	17:05			
Wyndham Way before Tingira Dr, Eleebana	09:12	11:12	13:12	15:12	17:12			
Berringar Rd near Allambee Pl, Valentine	09:22	11:22	13:22	15:22	17:22			
Belmont Hospital, Green Point Dr, Belmont	09:30	11:30	13:30	15:30	17:30			
Ross St opp Belmont 16s, Belmont	09:34	11:34	13:34	15:34	17:34			
Pacific Hwy opp Macquarie St, Belmont	09:37	11:37	13:37	15:37	17:37			
Glover St opp Church St, Belmont	09:40	11:40	13:40	15:40	17:40			
Sunday & Public Holidays								
Charlestown Square, Pearson St, Stand B, Charlestown	08:52	10:52	12:52	14:52	16:52			
Wilsons Rd opp Lake Macquarie Fair, Mount Hutton	09:05	11:05	13:05	15:05	17:05			
Wyndham Way before Tingira Dr, Eleebana	09:12	11:12	13:12	15:12	17:12			
Berringar Rd near Allambee Pl, Valentine	09:22	11:22	13:22	15:22	17:22			
Belmont Hospital, Green Point Dr, Belmont	09:30	11:30	13:30	15:30	17:30			
Ross St opp Belmont 16s, Belmont	09:34	11:34	13:34	15:34	17:34			
Pacific Hwy opp Macquarie St, Belmont	09:37	11:37	13:37	15:37	17:37			
Glover St opp Church St, Belmont	09:40	11:40	13:40	15:40	17:40			

41

Belmont to Charlestown via Croudace Bay & Mount Hutton

B

Monday to Friday

Lake Macquarie Retirement Village, Gibson St, Belmont	-	06:52	07:52	09:50	11:50	13:50	15:24	15:50	-
Pacific Hwy before Macquarie St, Belmont	05:57	06:56	07:56	09:54	11:54	13:54	A15:29	15:54	16:57
Belmont High School, Henry St, Belmont	-	-	-	-	-	-	A15:32	-	-
Green Point Dr opp Belmont Hospital, Belmont	06:01	07:01	08:01	09:59	11:59	13:59	15:38	15:58	17:01
Berringar Rd near Allambee Pl, Valentine	06:07	07:09	08:09	10:07	12:07	14:07	15:47	16:07	17:10
Wyndham Way after Tingira Dr, Eleebana	06:16	07:18	08:18	10:16	12:16	14:16	15:55	16:16	17:18
Lake Macquarie Fair, Wilsons Rd, Mount Hutton	06:24	07:27	08:27	10:25	12:25	14:25	16:03	16:25	17:28
Oxford St after Goundry St, Gateshead	06:31	07:34	08:34	10:32	12:32	14:32	16:09	16:32	17:34
Charlestown Square, Pearson St, Stand A, Charlestown	06:37	07:40	08:40	10:38	12:38	14:38	16:16	16:38	17:41

Monday to Friday

Pacific Hwy before Macquarie St, Belmont	17:54
Green Point Dr opp Belmont Hospital, Belmont	17:58
Berringar Rd near Allambee Pl, Valentine	18:07
Wyndham Way after Tingira Dr, Eleebana	18:15
Lake Macquarie Fair, Wilsons Rd, Mount Hutton	18:24
Oxford St after Goundry St, Gateshead	18:31
Charlestown Square, Pearson St, Stand A, Charlestown	18:38

Saturday

Lake Macquarie Retirement Village, Gibson St, Belmont	07:52	09:50	11:50	13:50	15:50
Pacific Hwy before Macquarie St, Belmont	07:56	09:54	11:54	13:54	15:54
Green Point Dr opp Belmont Hospital, Belmont	08:01	09:59	11:59	13:59	15:59
Berringar Rd near Allambee Pl, Valentine	08:09	10:07	12:07	14:07	16:07
Wyndham Way after Tingira Dr, Eleebana	08:18	10:16	12:16	14:16	16:16
Lake Macquarie Fair, Wilsons Rd, Mount Hutton	08:27	10:25	12:25	14:25	16:25
Oxford St after Goundry St, Gateshead	08:34	10:32	12:32	14:32	16:32
Charlestown Square, Pearson St, Stand A, Charlestown	08:40	10:38	12:38	14:38	16:38

Sunday & Public Holidays

Lake Macquarie Retirement Village, Gibson St, Belmont	07:52	09:50	11:50	13:50	15:50
Pacific Hwy before Macquarie St, Belmont	07:56	09:54	11:54	13:54	15:54
Green Point Dr opp Belmont Hospital, Belmont	08:01	09:59	11:59	13:59	15:59
Berringar Rd near Allambee Pl, Valentine	08:09	10:07	12:07	14:07	16:07
Wyndham Way after Tingira Dr, Eleebana	08:18	10:16	12:16	14:16	16:16
Lake Macquarie Fair, Wilsons Rd, Mount Hutton	08:27	10:25	12:25	14:25	16:25
Oxford St after Goundry St, Gateshead	08:34	10:32	12:32	14:32	16:32
Charlestown Square, Pearson St, Stand A, Charlestown	08:40	10:38	12:38	14:38	16:38

How to use this timetable

This timetable provides a snapshot of service information in 24-hour time (e.g. 5am = 05:00, 5pm = 17:00). Information contained in this timetable is subject to change without notice. Please note that timetables do not include minor stops, additional trips for special events, short term changes, holiday timetable changes, real-time information or any disruption alerts.

For the most up-to-date times, use the Trip Planner or Departures at transportnsw.info

Real-time planning


You can plan your trip with real-time information using the Trip Planner or Departures at transportnsw.info or by downloading travel apps on your smartphone or tablet.

The Trip Planner, Departures and travel apps offer various features:

- favourite your regular trips
- see where your service is on the route
- get estimated pick-up and arrival times
- receive service updates
- find nearby stations, stops, wharves and routes
- check accessibility information.

Find the latest apps at transportnsw.info/apps

Accessible services

All new buses are wheelchair-accessible with low-level floors and space for wheelchairs, prams or strollers. Look for the  symbol in this timetable. Some older buses may not have all the features you need. There will be more accessible services as older buses are replaced.

Who is providing my bus services?

The bus services shown in this timetable are run by Newcastle Transport.

Fares

In Sydney and surrounding regions, fares are based on:

- the distance you travel from tap on to tap off
- the mode of transport you choose
- whether you're eligible for a concession fare or free travel
- any Opal benefits such as discounts and capped fares that apply.

You can use an Opal card or a contactless payment to pay for your travel.

Opal cards

An Opal card is a smartcard you keep and reuse. Add value before you travel, and tap on and tap off to pay your fares throughout Sydney, the Blue Mountains, the Central Coast, the Hunter and the Illawarra.

Which Opal card is right for you?

Adult – Customers 16 years or older who are not entitled to any concessions and normally pay full fare.

Child/Youth – For customers aged 4-15 (inclusive), or customers 16 years or older who hold a NSW/ACT Senior Secondary Student Concession Card.

Gold Senior/Pensioner – For eligible NSW and interstate seniors, pensioners, war widows/ers and asylum seekers.

Concession – For eligible tertiary students, job seekers, apprentices and trainees.

How to get an Opal card

You can get an Adult or Child/Youth Opal card over the counter at Opal retailers that display the Opal sign . To find your nearest retailer visit transportnsw.info/opal.

If you are eligible to travel with concession fares, you can apply for a Gold Senior/Pensioner or Concession Opal card online. Visit transportnsw.info/opal for more information.

Contactless payments

If you have an American Express, Mastercard, Visa card or linked device, you can use it to pay for all public transport on the Opal network. Just make sure to tap on and tap off at Opal readers at the beginning and end of your trip.

Always separate your cards when you tap on and tap off so your preferred card is charged.

You will receive the same travel benefits of an Adult Opal card when you tap on and tap off consistently with the same credit card, debit card or linked device. This includes daily, weekly and weekend travel caps, and a \$2 transfer discount when you change between metro/train, ferry, bus and light rail services within 60 minutes. Adult Opal fare pricing applies.

Find out more at transportnsw.info/contactless

Explanation of definitions and symbols



Wheelchair Accessible

43

Charlestown to Belmont via Mount Hutton & Floraville

B

Valid from: 27 Jan 2023

Creation date: 20 Feb 2023

NOTE: Information is correct on date of download.

Monday to Friday										
Charlestown Square, Pearson St, Stand B, Charlestown	06:46	07:52	08:52	10:00	11:00	12:00	13:00	14:00	14:57	
Lake Macquarie Fair, Wilsons Rd, Mount Hutton	06:58	08:05	09:04	10:12	11:12	12:12	13:12	14:12	15:09	
Violet Town Rd opp Regent St, Tingira Heights	07:06	08:13	09:12	10:20	11:20	12:20	13:20	14:20	15:17	
Pacific Hwy opp Macquarie St, Belmont	07:18	08:27	09:25	10:33	11:33	12:33	13:33	14:33	15:30	
Glover St opp Church St, Belmont	07:21	08:30	09:28	10:36	11:36	12:36	13:36	14:36	15:33	

Monday to Friday			
Charlestown Square, Pearson St, Stand B, Charlestown	16:00	17:00	18:00
Lake Macquarie Fair, Wilsons Rd, Mount Hutton	16:12	17:12	18:12
Violet Town Rd opp Regent St, Tingira Heights	16:20	17:19	18:19
Pacific Hwy opp Macquarie St, Belmont	16:33	17:32	18:30
Glover St opp Church St, Belmont	16:36	17:35	18:33

Saturday										
Charlestown Square, Pearson St, Stand B, Charlestown	07:47	08:47	09:47	10:47	11:47	12:47	13:47	14:47	15:47	
Lake Macquarie Fair, Wilsons Rd, Mount Hutton	07:59	08:59	09:59	10:59	11:59	12:59	13:59	14:59	15:59	
Violet Town Rd opp Regent St, Tingira Heights	08:07	09:07	10:07	11:07	12:07	13:07	14:07	15:07	16:07	
Pacific Hwy opp Macquarie St, Belmont	08:18	09:18	10:18	11:18	12:18	13:18	14:18	15:18	16:18	
Glover St opp Church St, Belmont	08:22	09:22	10:22	11:22	12:22	13:22	14:22	15:22	16:22	

Saturday		
Charlestown Square, Pearson St, Stand B, Charlestown	16:47	17:47
Lake Macquarie Fair, Wilsons Rd, Mount Hutton	16:59	17:59
Violet Town Rd opp Regent St, Tingira Heights	17:07	18:07
Pacific Hwy opp Macquarie St, Belmont	17:18	18:18
Glover St opp Church St, Belmont	17:22	18:22

Sunday & Public Holidays										
Charlestown Square, Pearson St, Stand B, Charlestown	08:47	09:47	10:47	11:47	12:47	13:47	14:47	15:47	16:47	
Lake Macquarie Fair, Wilsons Rd, Mount Hutton	08:59	09:59	10:59	11:59	12:59	13:59	14:59	15:59	16:59	
Violet Town Rd opp Regent St, Tingira Heights	09:07	10:07	11:07	12:07	13:07	14:07	15:07	16:07	17:07	
Pacific Hwy opp Macquarie St, Belmont	09:18	10:18	11:18	12:18	13:18	14:18	15:18	16:18	17:18	
Glover St opp Church St, Belmont	09:22	10:22	11:22	12:22	13:22	14:22	15:22	16:22	17:22	

Sunday & Public Holidays	
Charlestown Square, Pearson St, Stand B, Charlestown	17:47
Lake Macquarie Fair, Wilsons Rd, Mount Hutton	17:59
Violet Town Rd opp Regent St, Tingira Heights	18:07
Pacific Hwy opp Macquarie St, Belmont	18:18
Glover St opp Church St, Belmont	18:22

43

Belmont to Charlestown via Floraville & Mount Hutton

B

Monday to Friday

Lake Macquarie Retirement Village, Gibson St, Belmont	-	-	07:50	08:50	09:50	10:50	11:50	12:50	13:50
Pacific Hwy before Macquarie St, Belmont	-	-	07:54	08:54	09:54	10:54	11:54	12:54	13:54
Floraville Rd near Belmont Bus Depot, Belmont North	06:15	06:57	-	-	-	-	-	-	-
Violet Town Rd at John St, Tingira Heights	06:20	07:03	08:05	09:05	10:03	11:03	12:03	13:03	14:04
Wilsons Rd opp Lake Macquarie Fair, Mount Hutton	06:28	07:12	08:14	09:14	10:12	11:12	12:12	13:12	14:12
Warners Bay Rd after E K Ave, Charlestown	06:35	07:20	08:22	09:22	10:20	11:20	12:20	13:20	14:20
Charlestown Square, Pearson St, Stand A, Charlestown	06:40	07:25	08:27	09:27	10:25	11:25	12:25	13:25	14:25

Monday to Friday

Lake Macquarie Retirement Village, Gibson St, Belmont	14:50	15:50	16:50	17:50
Pacific Hwy before Macquarie St, Belmont	14:54	15:54	16:54	17:54
Violet Town Rd at John St, Tingira Heights	15:03	16:03	17:04	18:03
Wilsons Rd opp Lake Macquarie Fair, Mount Hutton	15:12	16:12	17:13	18:11
Warners Bay Rd after E K Ave, Charlestown	15:20	16:20	17:21	18:18
Charlestown Square, Pearson St, Stand A, Charlestown	15:25	16:25	17:26	18:23

Saturday

Lake Macquarie Retirement Village, Gibson St, Belmont	07:07	08:07	09:07	10:07	11:07	12:07	13:07	14:07	15:07
Pacific Hwy before Macquarie St, Belmont	07:11	08:11	09:11	10:11	11:11	12:11	13:11	14:11	15:11
Violet Town Rd at John St, Tingira Heights	07:20	08:20	09:20	10:20	11:20	12:20	13:20	14:20	15:20
Wilsons Rd opp Lake Macquarie Fair, Mount Hutton	07:29	08:29	09:29	10:29	11:29	12:29	13:29	14:29	15:29
Warners Bay Rd after E K Ave, Charlestown	07:37	08:37	09:37	10:37	11:37	12:37	13:37	14:37	15:37
Charlestown Square, Pearson St, Stand A, Charlestown	07:42	08:42	09:42	10:42	11:42	12:42	13:42	14:42	15:42

Saturday

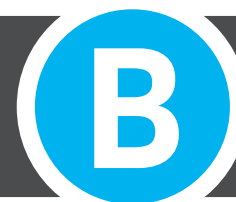
Lake Macquarie Retirement Village, Gibson St, Belmont	16:07	17:07
Pacific Hwy before Macquarie St, Belmont	16:11	17:11
Violet Town Rd at John St, Tingira Heights	16:20	17:20
Wilsons Rd opp Lake Macquarie Fair, Mount Hutton	16:29	17:29
Warners Bay Rd after E K Ave, Charlestown	16:37	17:37
Charlestown Square, Pearson St, Stand A, Charlestown	16:42	17:42

Sunday & Public Holidays

Lake Macquarie Retirement Village, Gibson St, Belmont	08:07	09:07	10:07	11:07	12:07	13:07	14:07	15:07	16:07
Pacific Hwy before Macquarie St, Belmont	08:11	09:11	10:11	11:11	12:11	13:11	14:11	15:11	16:11
Violet Town Rd at John St, Tingira Heights	08:20	09:20	10:20	11:21	12:20	13:21	14:20	15:21	16:20
Wilsons Rd opp Lake Macquarie Fair, Mount Hutton	08:29	09:29	10:29	11:29	12:29	13:29	14:29	15:29	16:29
Warners Bay Rd after E K Ave, Charlestown	08:37	09:37	10:37	11:37	12:37	13:37	14:37	15:37	16:37
Charlestown Square, Pearson St, Stand A, Charlestown	08:42	09:42	10:42	11:42	12:42	13:42	14:42	15:42	16:42

43

Belmont to Charlestown via Floraville & Mount Hutton



Sunday & Public Holidays



Lake Macquarie Retirement Village, Gibson St, Belmont	17:07
Pacific Hwy before Macquarie St, Belmont	17:11
Violet Town Rd at John St, Tingira Heights	17:20
Wilsons Rd opp Lake Macquarie Fair, Mount Hutton	17:29
Warners Bay Rd after E K Ave, Charlestown	17:37
Charlestown Square, Pearson St, Stand A, Charlestown	17:42

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Explanation of definitions and symbols



Wheelchair Accessible

48

Warners Bay to Belmont via Redhead & Charlestown

B

Valid from: 27 Jan 2023

Creation date: 20 Feb 2023

NOTE: Information is correct on date of download.

Monday to Friday									
John St near Lake St, Warners Bay	06:36	07:32	09:34	11:34	13:33	14:33	15:33	16:34	18:05
Charlestown Square, Pearson St, Stand A, Charlestown	06:50	07:45	09:48	11:48	13:47	14:47	15:46	16:48	18:18
Dudley Road Shops, Dudley Rd, Whitebridge	07:01	07:57	09:59	12:00	13:58	14:58	15:58	17:01	18:30
Ocean St after Tumut Street, Dudley	07:06	08:02	10:04	12:05	14:03	15:03	16:03	17:06	18:35
Cowlshaw St near Woods St, Redhead	07:13	08:09	10:11	12:11	14:11	15:11	16:11	17:12	18:41
Ntaba Rd opp Dalrymple St, Jewells	07:24	08:20	10:23	12:23	14:23	15:23	16:23	17:23	18:51
Wommara Ave after John Fisher Rd, Belmont North	07:30	08:27	10:30	12:30	14:29	15:29	16:29	17:30	18:54
Pacific Hwy opp Macquarie St, Belmont	07:35	08:33	10:35	12:36	14:34	15:34	16:34	17:36	-
Glover St opp Church St, Belmont	07:38	08:36	10:38	12:40	14:37	15:37	16:37	17:39	-
Floraville Rd near Belmont Bus Depot, Belmont North	-	-	-	-	-	-	-	-	18:55
Saturday									
John St near Lake St, Warners Bay	07:34	09:34	11:34	13:34	15:34	17:34			
Charlestown Square, Pearson St, Stand A, Charlestown	07:48	09:48	11:48	13:48	15:48	17:48			
Dudley Road Shops, Dudley Rd, Whitebridge	07:59	09:59	11:59	13:59	15:59	17:59			
Ocean St after Tumut Street, Dudley	08:04	10:04	12:04	14:04	16:04	18:04			
Cowlshaw St near Woods St, Redhead	08:11	10:11	12:11	14:12	16:12	18:12			
Ntaba Rd opp Dalrymple St, Jewells	08:22	10:23	12:23	14:24	16:24	18:24			
Wommara Ave after John Fisher Rd, Belmont North	08:29	10:30	12:30	14:30	16:30	18:30			
Pacific Hwy opp Macquarie St, Belmont	08:35	10:35	12:35	14:35	16:35	18:35			
Glover St opp Church St, Belmont	08:38	10:38	12:38	14:38	16:38	18:38			
Sunday & Public Holidays									
John St near Lake St, Warners Bay	09:34	11:34	13:34	15:34	17:34				
Charlestown Square, Pearson St, Stand A, Charlestown	09:48	11:48	13:48	15:48	17:48				
Dudley Road Shops, Dudley Rd, Whitebridge	09:59	11:59	13:59	15:59	17:59				
Ocean St after Tumut Street, Dudley	10:04	12:04	14:04	16:04	18:04				
Cowlshaw St near Woods St, Redhead	10:11	12:11	14:12	16:12	18:12				
Ntaba Rd opp Dalrymple St, Jewells	10:23	12:23	14:24	16:24	18:24				
Wommara Ave after John Fisher Rd, Belmont North	10:30	12:30	14:30	16:30	18:30				
Pacific Hwy opp Macquarie St, Belmont	10:35	12:35	14:35	16:35	18:35				
Glover St opp Church St, Belmont	10:38	12:38	14:38	16:38	18:38				

48

Belmont to Warners Bay via Redhead & Charlestown

B

Monday to Friday

Lake Macquarie Retirement Village, Gibson St, Belmont	-	-	07:48	08:47	10:50	12:50	14:47	16:50	17:50
Pacific Hwy before Macquarie St, Belmont	-	-	07:52	08:52	10:54	12:54	14:52	16:54	17:54
Floraville Rd near Belmont Bus Depot, Belmont North	06:00	06:55	-	-	-	-	-	-	-
Ntaba Rd opp Dalrymple St, Jewells	06:07	07:03	08:05	09:05	11:07	13:07	15:04	17:04	18:06
Cowlishaw St near Woods St, Redhead	06:17	07:13	08:15	09:18	11:17	13:17	15:14	17:12	18:15
Ocean St after Tumut Street, Dudley	06:24	07:21	08:22	09:24	11:24	13:24	15:21	17:19	18:21
Dudley Road Shops, Dudley Rd, Whitebridge	06:29	07:27	08:26	09:34	11:28	13:28	15:25	17:23	18:26
Charlestown Square, Pearson St, Stand B, Charlestown	06:37	07:37	08:39	09:39	11:39	13:39	15:38	17:35	18:36
Bayview St near Taylor Cr, Warners Bay	06:47	07:47	08:49	09:49	11:49	13:49	15:49	17:46	18:46
John St near Lake St, Warners Bay	06:52	07:53	08:55	09:55	11:55	13:55	15:55	17:52	18:51

Saturday

Lake Macquarie Retirement Village, Gibson St, Belmont	07:50	08:50	10:50	12:50	14:50	16:50
Pacific Hwy before Macquarie St, Belmont	07:54	08:54	10:54	12:54	14:54	16:54
Ntaba Rd opp Dalrymple St, Jewells	08:07	09:07	11:07	13:07	15:07	17:07
Cowlishaw St near Woods St, Redhead	08:17	09:17	11:17	13:17	15:17	17:17
Ocean St after Tumut Street, Dudley	08:24	09:24	11:24	13:24	15:24	17:24
Dudley Road Shops, Dudley Rd, Whitebridge	08:28	09:28	11:28	13:28	15:28	17:28
Charlestown Square, Pearson St, Stand B, Charlestown	08:39	09:39	11:39	13:39	15:39	17:39
Bayview St near Taylor Cr, Warners Bay	08:49	09:49	11:49	13:49	15:49	17:49
John St near Lake St, Warners Bay	08:55	09:55	11:55	13:55	15:55	17:55

Sunday & Public Holidays

Lake Macquarie Retirement Village, Gibson St, Belmont	08:50	10:50	12:50	14:50	16:50
Pacific Hwy before Macquarie St, Belmont	08:54	10:54	12:54	14:54	16:54
Ntaba Rd opp Dalrymple St, Jewells	09:07	11:07	13:07	15:07	17:07
Cowlishaw St near Woods St, Redhead	09:17	11:17	13:17	15:17	17:17
Ocean St after Tumut Street, Dudley	09:24	11:24	13:24	15:24	17:24
Dudley Road Shops, Dudley Rd, Whitebridge	09:28	11:28	13:28	15:28	17:28
Charlestown Square, Pearson St, Stand B, Charlestown	09:39	11:39	13:39	15:39	17:39
Bayview St near Taylor Cr, Warners Bay	09:49	11:49	13:49	15:49	17:49
John St near Lake St, Warners Bay	09:55	11:55	13:55	15:55	17:55