PARKING & TRAFFIC
CONSULTANTS

Driving success through valuable advice

Proposed Club Burwood RSL

For Club Burwood Group

Traffic and Parking Assessment - Stage 1 Development Application

C/o: The Buchan Group

22 June 2017

Document Control

Our Reference: T2-1662, Proposed Club Burwood RSL, Traffic and Parking Assessment - Stage 1 Development Application

ISSUE	DATE	ISSUE DETAILS	AUTHOR	REVIEWED
1	22 June 2017	Final	NA/AM	AM

Contact

Andrew Morse
02-89200800
0414 618002
andrew.morse@parkingconsultants.com

PARKING & TRAFFIC CONSULTANTS
Suite 102, 506 Miller Street
Cammeray NSW 2062

Ph. +61 2 8920 0800
Fax +61 2 8076 8665

Suite 406, 838 Collins Street
Docklands VIC 3008

Ph. +61 3 9020 7333

Contents

1 Introduction

Parking and Traffic Consultants Pty Ltd (PTC) has been engaged by Club Burwood RSL (the Club) to undertake a Parking and Traffic Assessment for the proposed redevelopment of a site bounded by Shaftesbury Road, George Street, Marmaduke Street and Deane Street in Burwood.

The site location is illustrated in Figure 1.

Figure 1 - Site Location

This Parking and Traffic Assessment has been prepared to accompany a Stage 1 Development Application (DA) to Burwood Municipal Council. It provides a detailed assessment of the proposal as well as the forecast traffic activity on the local road network resulting from the project once completed and in operation.

This report also provides high-level assessment of the parking provision and car park/servicing arrangements, although a more detailed assessment will be presented in relation to the Stage 2 Development Application.

1.1 Project Summary

The existing Club Burwood is located at 96 Shaftesbury Road, which is on the eastern side of Shaftesbury Road on the south-eastern fringe of the Town Centre. The Club operates on Monday and Tuesday between 09:00am to Midnight, and between 09:00am to 03:00am, on Wednesday to Sunday.

Club Burwood RSL is proposing to develop a new club on the site bounded by Shaftesbury Road, George Street, Marmaduke Street and Deane Street and includes all properties, except the apartment building located on the corner of Shaftesbury Road and Deane Street.

The area of the development site is 9,248m^2. The proposed Club Burwood RSL will accommodate a number of uses including:

- A variety of food and beverage outlets,
- Club bar and gaming facilities,
- A theatre,
- Conference facilities,
- A gym,
- A crèche for the use of club patrons.

1.2 Structure of Report

This report presents the following considerations relation to Traffic and Parking assessment of the Proposal:

Section 2 A description of the project,

Section 3 A description of the road network and public transport serving the development property,

Section 4 Assessment of the existing road network

Section 5 Preliminary assessment of the proposed parking access arrangement,

Section 6 Preliminary assessment of the proposed parking provision in the context of the relevant planning control requirements,

Section 7 Determination of the traffic activity associated with the development proposal, and the adequacy of the surrounding road network,

Section 8 Conclusion.

1.3 Development Proposal

The Stage 1 DA seeks concept approval for the mixed-use redevelopment of the site including:

- Uses including a registered club, hotel or motel accommodation, commercial premises, entertainment facilities, function centre and recreation facility (indoor);
- Building envelope associated with the podium;
- Building envelope for one tower above the podium, with a maximum height of 95 metres;
- Maximum GFA across the site of 37,173m^2;
- Vehicle access points; and
- A maximum of 1,250 car parking spaces and loading/servicing area provided within the basement envelope.

The Stage 1 DA does not seek the approval for demolition or construction works, design of the building exteriors, final arrangement of land uses or the layout, mix and number of Hotel rooms. The parking and servicing arrangement have been drawn to establish the extent of the basement and do not represent the final layout of these facilities. Such approvals will be sought via subsequent Stage 2 DAs following the approval of the Stage 1 DA.

The conceptual architectural drawings provide for the following GFA for each component of the development:

Table 1 - Conceptual Land Use Area Calculations

	Land Use	GFA (m^2)
1	Gaming	3, 300
2	F&B	7, 750
3	Event Theatre	1, 400
4	Leisure Pool, Gym	1, 160
5	Office	1, 240
6	Circulation	6,950
7	B.O.H	5, 440
8	Hotel	7,430
9	Conference Facility	2,500
Total GFA		37,170

Details of the proposal are presented on the architectural drawings prepared by Buchan Group and those illustrating the parking and access arrangements are included as **Attachment 1**.

2 Existing Transport Facilities

The proposed development site is served by State, Regional and Local Roads. Primary access to the site is provided by Shaftesbury Road, a local road, which provides north-south access between Parramatta Road and Burwood Heights. east-west access, to the north of the site, is provided by Victoria Street, whilst to the south, east-west access is provided via Railway Parade.

A number of smaller local roads, which create a grid-like road network, service the Burwood Town Centre and provide connections to State Roads, which provide external access to the greater regions of Sydney. The roads servicing the site are illustrated in Figure 2.

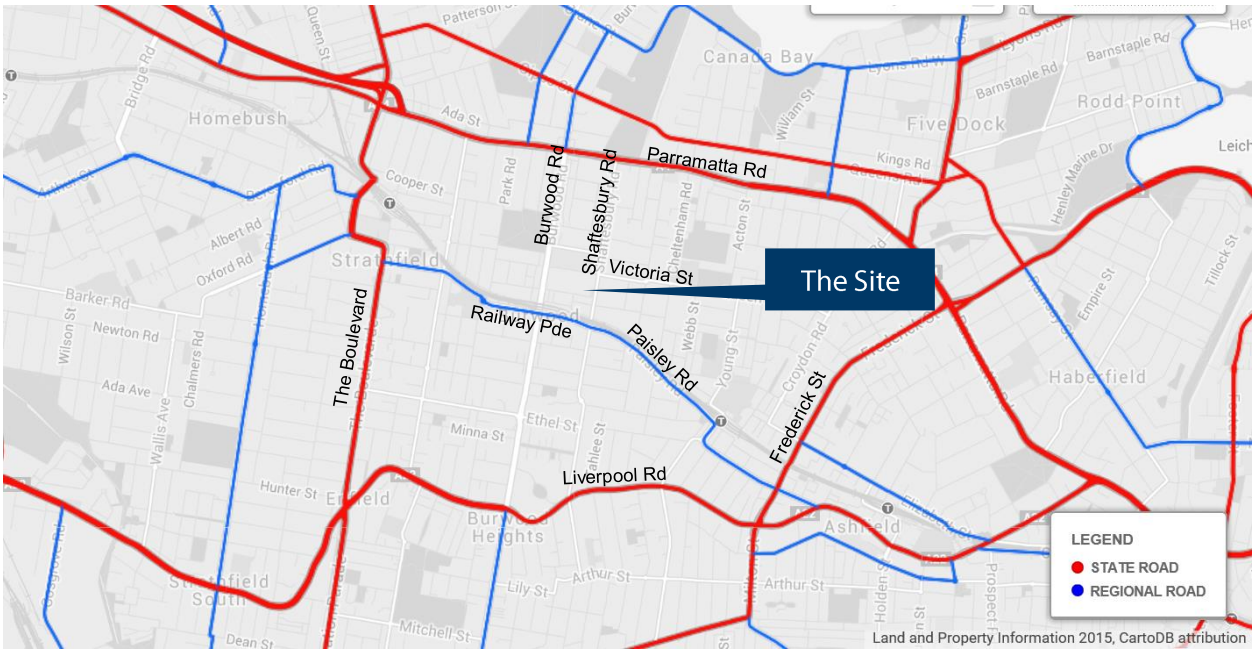


Figure 2 - Road Classification

The NSW administrative road hierarchy comprises the following road classifications, which align with the generic road hierarchy as follows:

- **State Roads** - Freeways and Primary Arterials (RMS Managed)
- **Regional Roads** - Secondary or sub arterials (Council Managed, Part funded by the State)
- **Local Roads** - Collector and local access roads (Council Managed)

The roads servicing the site are described in Tables below:

Shaftesbury Road	
Road Classification	Local Road
Alignment	North – South
Number of Lanes	2 lanes in each direction
Carriageway Type	Undivided
Carriageway Width	10m
Speed Limit	50km/h
School Zone	No
Parking Controls	Parking not permitted
Forms Site Frontage	Yes

Figure 3 - Shaftesbury Road (Southbound)

George Street	
Road Classification	Local Road
Alignment	East – West
Number of Lanes	1 lane one-way
Carriageway Type	Undivided
Carriageway Width	6m
Speed Limit	40km/h
School Zone	No
Parking Controls	2P Ticket 9am-6pm Mon-Sat & Public Holidays
Forms Site Frontage	Yes

Figure 4 - George Street (Eastbound)

Deane Street	
Road Classification	Local Road
Alignment	East – West
Number of Lanes	1 lane one-way
Carriageway Type	Undivided
Carriageway Width	6m
Speed Limit	40km/h
School Zone	No
Parking Controls	2P Ticket 8am-6pm Mon-Fri, 8am-1pm Sat
Forms Site Frontage	Yes

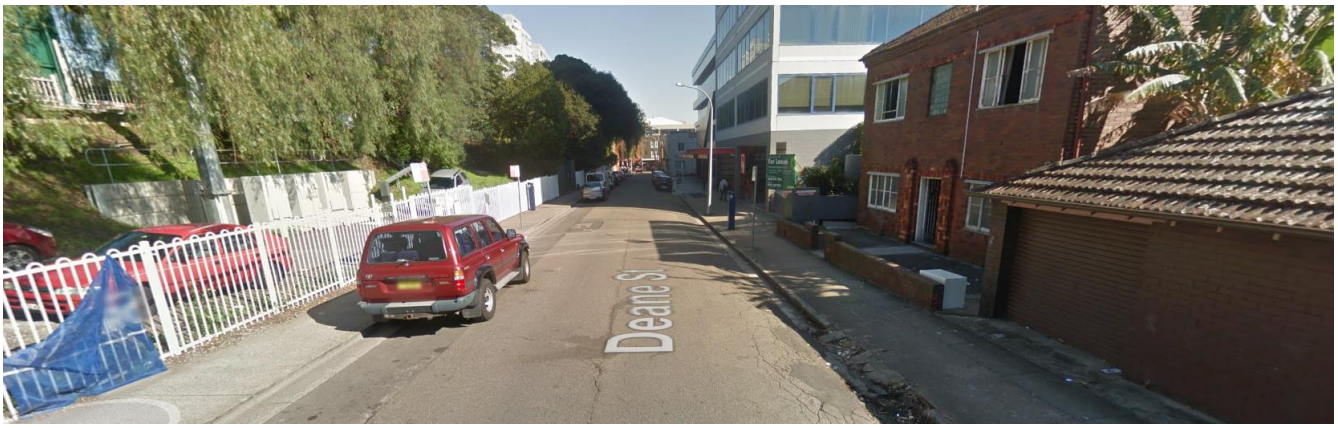


Figure 5 - Deane Street (Westbound)

Marmaduke Street	
Road Classification	Local Road
Alignment	North – South
Number of Lanes	1 lane in each direction
Carriageway Type	Undivided
Carriageway Width	6m
Speed Limit	40km/h
School Zone	No
Parking Controls	Parking not permitted
Forms Site Frontage	Yes

Figure 6 - Marmaduke Street (Northbound)

Waimea Street	
Road Classification	Local Road
Alignment	East – West
Number of Lanes	1 lane in each direction
Carriageway Type	Undivided
Carriageway Width	7m
Speed Limit	40km/h
School Zone	No
Parking Controls	2P Ticket 9am-6pm Mon-Sat & Public Holidays
Forms Site Frontage	Yes

Figure 7 - Waimea Street (Westbound)

Railway Parade	
Road Classification	Regional Road
Alignment	East – West
Number of Lanes	1 lane in each direction
Carriageway Type	Undivided
Carriageway Width	10m
Speed Limit	40km/h
School Zone	No
Parking Controls	2P Ticket 9am-6pm Mon-Sat & Public Holidays
Forms Site Frontage	No

Figure 8 - Railway Parade (Eastbound)

Victoria Street	
Road Classification	State Road
Alignment	East – West
Number of Lanes	2 lanes Eastbound, 1 lane Westbound
Carriageway Type	Undivided
Carriageway Width	8m
Speed Limit	50km/h
School Zone	No
Parking Controls	Parking not permitted
Forms Site Frontage	No

Figure 9 - Victoria Street (Eastbound)

Burwood Road	
Road Classification	Local Road
Alignment	North – South
Number of Lanes	1 lane in each direction
Carriageway Type	Undivided
Carriageway Width	10m
Speed Limit	40km/h
School Zone	No
Parking Controls	1/2P Mon-Sat, North of George St
Forms Site Frontage	No

Figure 10 - Burwood Rd (Southbound)

2.1 Public Transport

The NSW Planning Guidelines for Walking and Cycling (2004) suggests a distance of 400m is a walkable catchment for accessibility to off-site parking provisions and local amenities. Furthermore, the guide also suggests that an 800m catchment is an acceptable, walkable distance if the development is within an area with public transport links.

The following subsections discuss the availability of public transport within 400-800m available in the vicinity of the Club site.

2.1.1 Club Shuttle Bus Services

The Club operates a free courtesy bus service for residents living within an area of approximately three kilometres of the Club, which will be retained in relation to the new Club. The catchment area includes the neighbouring suburbs of Burwood, Strathfield, Homebush, Concord, Five Dock, Haberfield, Ashfield, Croydon, Ashbury, Enfield, Belfield and South Strathfield.

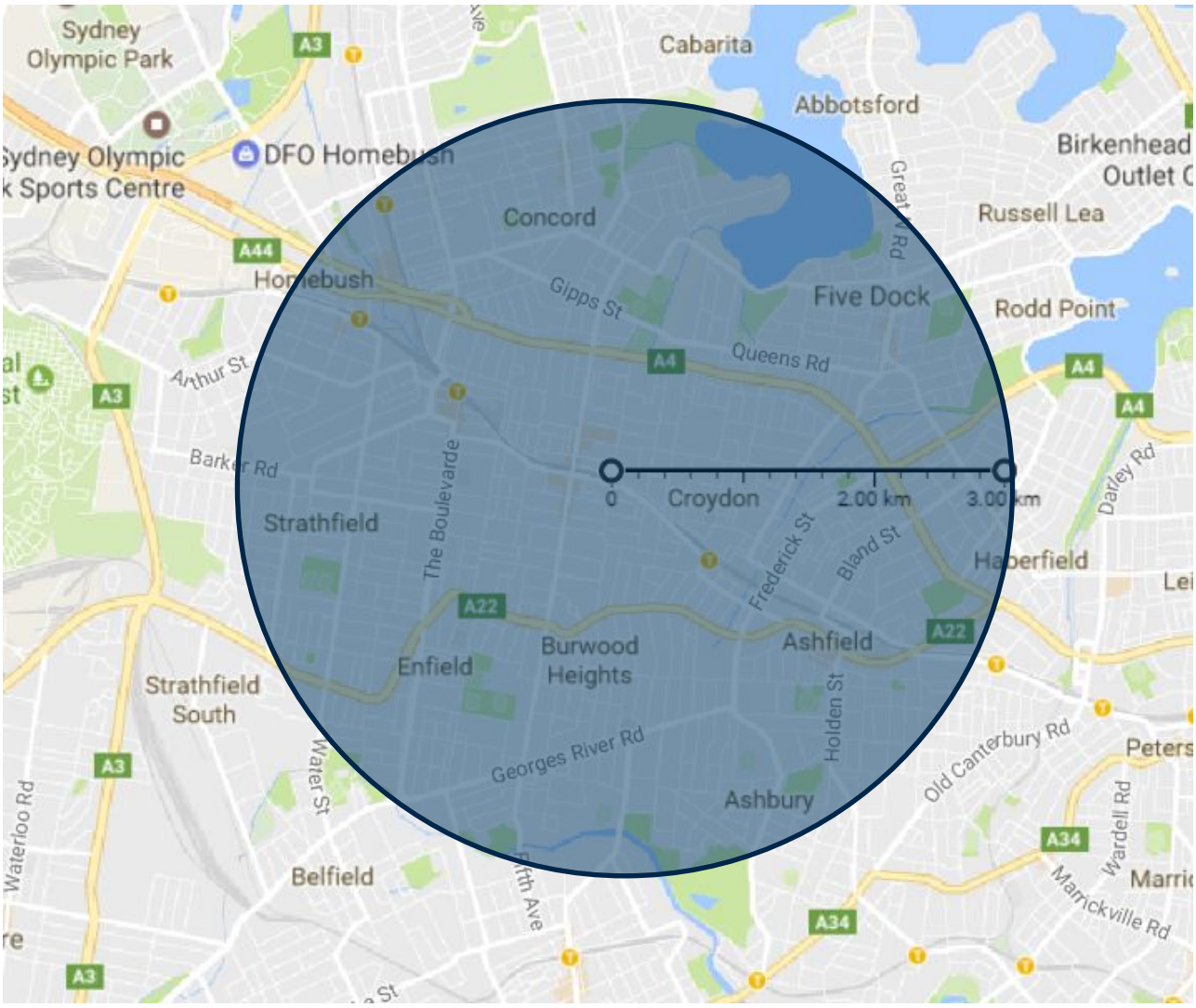


Figure 11 - Indicative Area Served by Club Shuttle Bus

The shuttle bus operates as a door-to-door service on Wednesday to Sunday typically between 5pm to midnight with the last bus departing from the Club at 2:05am. To use this service, residents are required to call to arrange a pick-up and drop-off service.

2.2 Public Bus Services

The Club site is also accessible by Sydney Buses services that operate within the vicinity of the site. The 2 closest major bus stops are located at Westfield Burwood and at Burwood Station Stand H, a 500m and 400m walk to the site respectively (see Figure 12). This places them within the comfortable walking distance as set out by the NSW Planning Guidelines. Many bus routes service these two stops, a summary is given in Table 2.

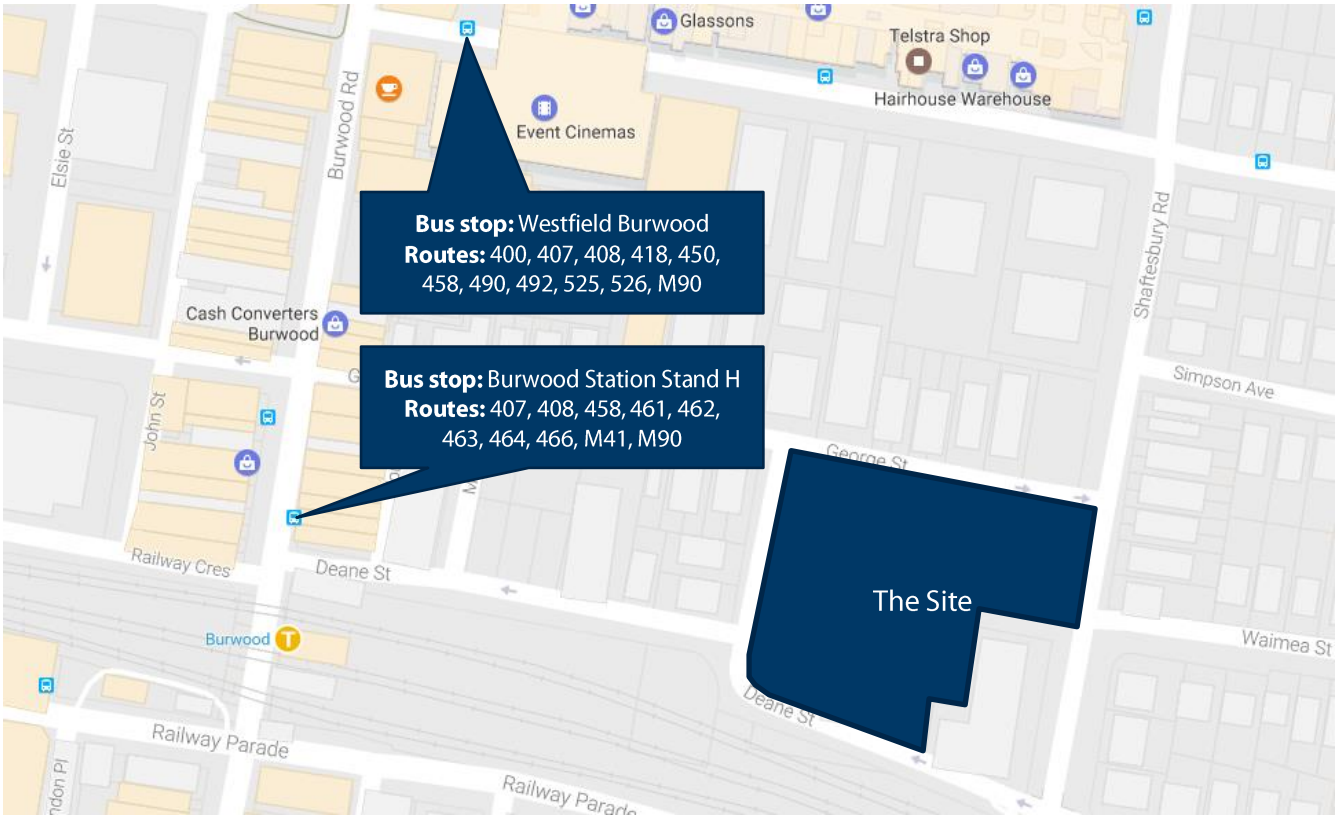


Figure 12 - Nearby bus services

Table 2 - Bus Services

Route	Description	Frequency
400	Burwood to Bondi Junction LIMITED STOPS	Every 20-30min Mon-Sun
407	Rookwood to Burwood via Strathfield	Every 30min Mon-Fri, Every 60min Sat-Sun
408	Burwood to Rookwood via Strathfield	Every 30min Mon-Fri, Every 60min Sat-Sun
418	Bondi Junction to Burwood	Every 30min Mon-Sun
450	Hurstville to Burwood	Every 30min Mon-Sat, Every 60min Sun
458	Macquarie University to Burwood	Every 30min Mon-Fri, Every 60min Sat-Sun
461	Burwood to The Domain	Every 10min (peak) or 20min (off-peak) Mon-Fri, Every 30min Sat-Sun
462	Ashfield to Mortlake	Every 30min early mornings and evenings Mon -Sun

463	Burwood to Bayview Park	Every 60min Mon-Fri
464	Ashfield to Mortlake	Every 30min Mon-Sun
466	Ashfield to Cabarita Wharf	Every 30min Mon-Sun
490	Drummoyne to Hurstville	Every 30min Mon-Sun
492	Drummoyne to Rockdale	Every 30min Mon-Sun
525	Parramatta to Burwood	Every 30min Mon-Sun
526	Rhodes to Burwood	Every 30min Mon-Sun
M41	Hurstville to Macquarie Park / Macquarie Park to Hurstville	Every 10min (peak), 15min (off-peak) Mon-Fri, Every 20min Sat-Sun, Every 30min evenings
M90	Liverpool to Burwood / Burwood to Liverpool	Every 10min (peak), 15min (off-peak) Mon-Fri, Every 20min Sat-Sun, Every 30min evenings

2.2.1 Train Services

The site is accessible from the Sydney rail network via Burwood Station, which is located 210m (walking distance) from the Station entrance to the Marmaduke Street entrance to the Club, as shown in Figure 13. By way of comparison, the existing Club site is situated a 600m walking distance from the station. The close proximity of the new Club to the Station provides the opportunity to increase rail use as a mode share for staff and patrons.

Figure 13 - Location of Burwood Station

Burwood station directly services train lines T1 – North Shore, Northern & Western Line and T2 – Airport, Inner West & South Line. The combined coverage of these two train lines extends to much of metropolitan and suburban Sydney. It is noted that the express service from Central connects with Burwood with only 1 stop at Redfern providing an 11 minute journey time from the City.

Access to the T3 – Bankstown Line and T6 – Carlingford Line is very straightforward with direct trains to Lidcombe and Clyde, respectively.

2.2.2 Cycling

There are a number of cycle paths that serve the proposed site and nearby areas. The existing cycle path extends along the streets adjacent to the site, including Deane Street, Marmaduke Street and Waimea Street.

This route also connects to Burwood Station for greater commute coverage using a combined train & bicycle transport mode.

The route extends well past the Burwood LGA towards Strathfield, Concord, Canada Bay, Ashfield, and Canterbury enabling cycling as a viable alternative to buses and trains to and from nearby suburbs.

It is intended that bike parking racks will be provided within the Club car park so that patrons can ride to the club, although this detail will be described in the Stage 2 DA.

3 Existing Traffic Conditions

The modelling of the existing road network and the projected traffic activity has been established to include the key morning and afternoon periods, which represents the peak loads and therefore worst-case scenarios.

Since the proposed development is a club and the expected peak hours of the traffic will be on the weekend, to estimate the impact of the proposed development, traffic surveys are conducted on weekday (Thursday, 12/05/2016) and weekend (Saturday, 07/05/2016).

The intersections surrounding the proposed Club that have been assessed are shown in Table 3. The extent of the study area and location of key intersections are shown in Figure 14.

Table 3 - Intersection Traffic Survey Locations

Survey No	Intersection	Control Type
1	Shaftesbury Road and Victoria Street E	Signals
2	Shaftesbury Road and George Street	Priority
3	Shaftesbury Road and Waimea Street	Priority
4	Shaftesbury Road and Deanne Street	Priority
5	Marmaduke Street and Deanne Street	Priority
6	George Street and Marmaduke Street	Priority
7	Burwood Road and George Street	Priority
8	Burwood Road, Deanne Street and Railway Crescent	Signals

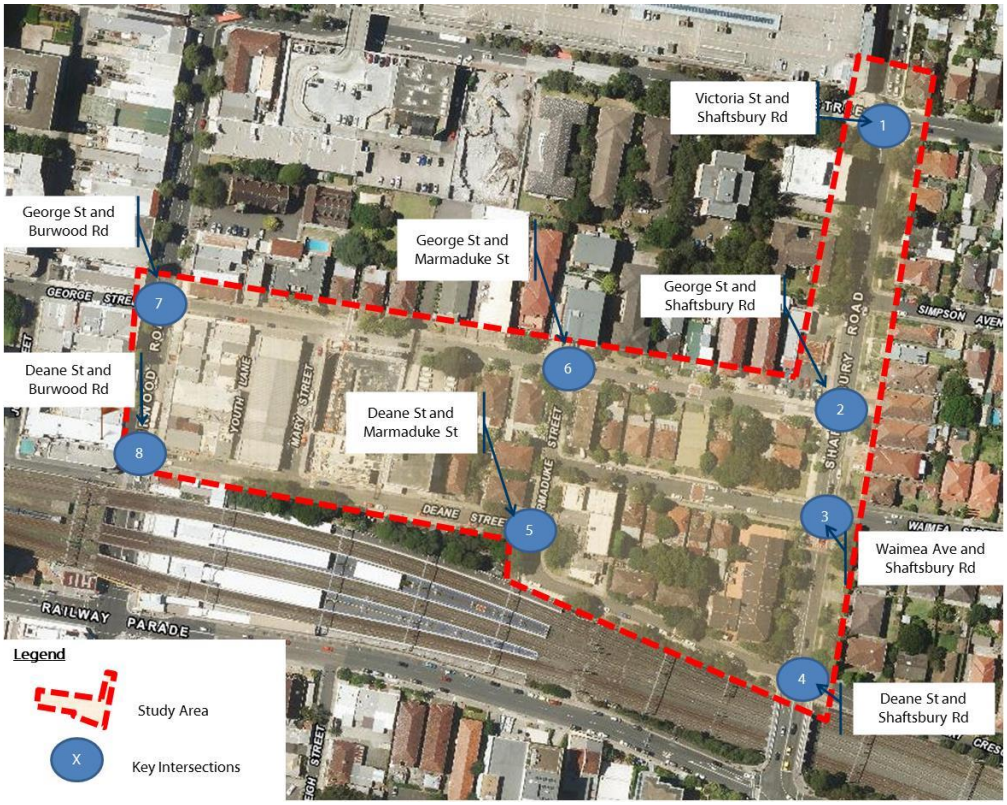


Figure 14 - Study Area with key Intersection Locations

3.1 Existing Intersection Performance

The intersections serving the Club and the operation of these intersections have been assessed using the SIDRA intersection performance assessment software.

The SIDRA software package is designed to assess the operation of single intersections, with some provisions for coordinated vehicle arrivals, as well as providing various performance indicators (Level of Service, Average Delay, etc.). In the case of a signalised intersection, SIDRA is able to determine the most efficient traffic signal phasing and timings within given parameters, e.g. a fixed cycle length.

Typically there are four performance indicators used to summarise the performance of an intersection, being:

- Degree of Saturation – The total usage of the intersection expressed as a factor of 1, with 1 representing 100% use/saturation. (e.g. 0.8 = 80% saturation)
- Average Delay – The average delay encountered by all vehicles passing through the intersection. It is often important to review the average delay of each approach as a side road could have a long delay time, while the large free flowing major road traffic will provide an overall low average delay.
- Level of Service – This is a categorisation of average delay, intended for simple reference. RMS adopts the bands, defined in Table 4 below.
- 95% Queue lengths (Q95) - is defined to be the queue length in metres that has only a 5-percent probability of being exceeded during the analysis time period. It transforms the average delay into measureable distance units.

Table 4 - Intersection Performance - Levels of Service – RMS

Level of Service	Average Delay (secs/vehicle)	Traffic Signals, Roundabout	Give Way & Stop Signs
A	<14	Good operation	
B	15 to 28	Good with acceptable delays & spare capacity	Acceptable delays & spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity & accident study required
E	57 to 70	At capacity. At signals, incidents would cause excessive delays. Roundabouts require other control mode	At capacity, requires other control mode
F	>70	Extra capacity required	Extreme delay, major treatment required

A summary of the SIDRA results is presented in the following tables and the complete SIDRA analysis sheets are presented in **Attachment 2**:

Table 5 - Summary of SIDRA Outputs Results (Existing Operation) – Thursday AM Peak

Intersection		Level of Service	Average Delay (Sec)	Degree of Saturation	95% Queue Length (m)
1	Shaftesbury Road and Victoria Street E	LOS D	51.3	0.902	242.6
2	Shaftesbury Road and George Street	LOS C	32.3	0.066	1.6
3	Shaftesbury Road and Waimea Street	LOS F	191.2	0.426	16.7
4	Shaftesbury Road and Deanne Street	LOS B	15.1	0.217	7.6
5	Marmaduke Street and Deanne Street	LOS A	5.7	0.032	0
6	George Street and Marmaduke Street	LOS A	5.9	0.019	0
7	Burwood Road and George Street	LOS A	7.9	0.283	11.7
8	Burwood Road, Deanne Street and Railway Crescent	LOS A	9.2	0.518	35.8

Table 6 - Summary of SIDRA Outputs Results (Existing Operation) - Thursday PM Peak

Intersection		Level of Service	Average Delay (Sec)	Degree of Saturation	95% Queue Length (m)
1	Shaftesbury Road and Victoria Street E	LOS E	69.2	1.278	348.4
2	Shaftesbury Road and George Street	LOS C	35.7	0.108	2.3
3	Shaftesbury Road and Waimea Street	LOS F	179.3	0.376	12.1
4	Shaftesbury Road and Deanne Street	LOS A	12.3	0.259	3.3
5	Marmaduke Street and Deanne Street	LOS A	5.1	0.064	1.5
6	George Street and Marmaduke Street	LOS A	5.7	0.024	0
7	Burwood Road and George Street	LOS A	7.7	0.169	4
8	Burwood Road, Deanne Street and Railway Crescent	LOS A	9.1	0.432	23.7

Table 7 - Summary of SIDRA Outputs Results (Existing Operation) - Saturday Peak

Intersection		Level of Service	Average Delay (Sec)	Degree of Saturation	95% Queue Length (m)
1	Shaftesbury Road and Victoria Street E	LOS E	69.2	1.278	348.4
2	Shaftesbury Road and George Street	LOS C	35.7	0.108	2.3
3	Shaftesbury Road and Waimea Street	LOS F	179.3	0.376	12.5
4	Shaftesbury Road and Deanne Street	LOS A	12.3	0.259	3.3
5	Marmaduke Street and Deanne Street	LOS A	5.7	0.018	0
6	George Street and Marmaduke Street	LOS A	5.7	0.024	0
7	Burwood Road and George Street	LOS A	7.7	0.169	4
8	Burwood Road, Deanne Street and Railway Crescent	LOS A	9.1	0.432	23.7

According to the analysis, the intersection of Shaftsbury Road and Victoria Street is operating below the acceptable level of service during the weekday and weekend evening peak periods under current conditions.

The intersection of Shaftsbury Road and George Street is operating below the acceptable level of service in all the peak conditions. This is likely due to the right turn movement, which occurs across the opposing through movement without any signalisation.

The post development analysis (see Section 7) includes the road upgrades identified by Council, which act as mitigation measures to improve the network operation at these key intersections.

The remaining intersections are operating at a good level of service in all the observed peak hours.

4 Vehicular Access & Circulation

The proposed access arrangements for patron and service vehicles have been established based on the current and proposed road layout in the area surrounding the site.

In conjunction with the proposed amendments to the existing road layout/infrastructure, consideration has been given to the Burwood Town Centre Plan.

4.1 Existing Road Environment

The proposed Club is bounded by George Street to the north, Marmaduke Street to the east, Deane Street to the south and Shaftsbury Road to the east. Waimea Street currently runs east-west through the site, although this road will be closed as part of the project, the intersection on Shaftesbury Road will be retained to form an access to the car park.

The current traffic directions are illustrated in Figure 15.

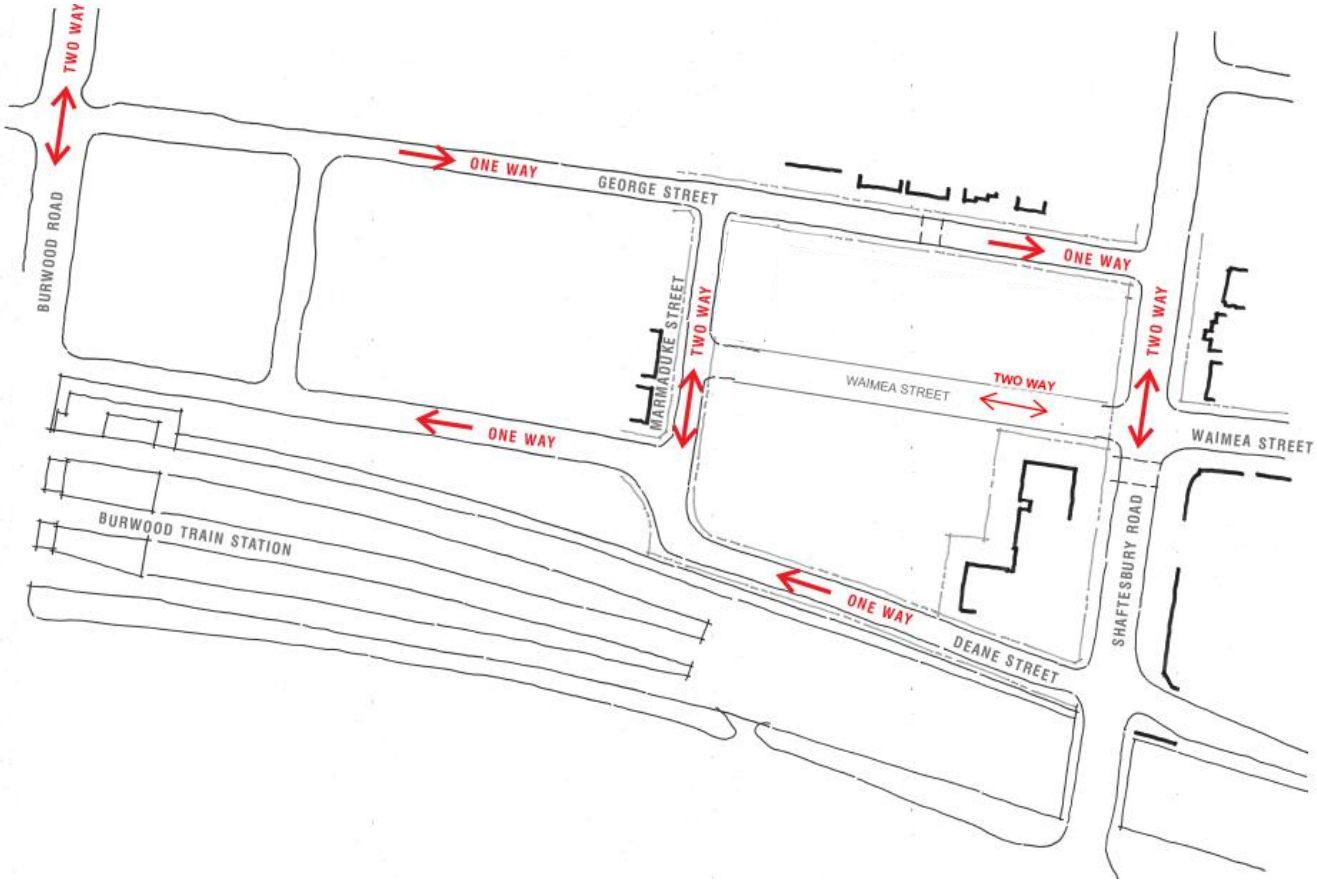


Figure 15 - Existing Traffic Directions

4.2 Council Town Planning Future Road Environment

Council has identified future planning of proposed road alterations within the Burwood Town Centre.

The plan includes the widening of George Street to accommodate two-way traffic flow, the signalisation of Shaftesbury Road at Deane Street and George Street and the closure of Deane Street to the west of the site (at Burwood Road). The planning of the development access arrangement has considered the proposed changes to the road network. The proposed road layout and traffic controls form the basis of the project traffic modelling described in Section 7.

The future changes to the road network will involve land acquisition affecting the site, including the south kerb of George Street (between Shaftsbury Road and Burwood Road) and the western kerb of Shaftsbury Road (between Waimea Street and Victoria Street) as illustrated in Figure 16.

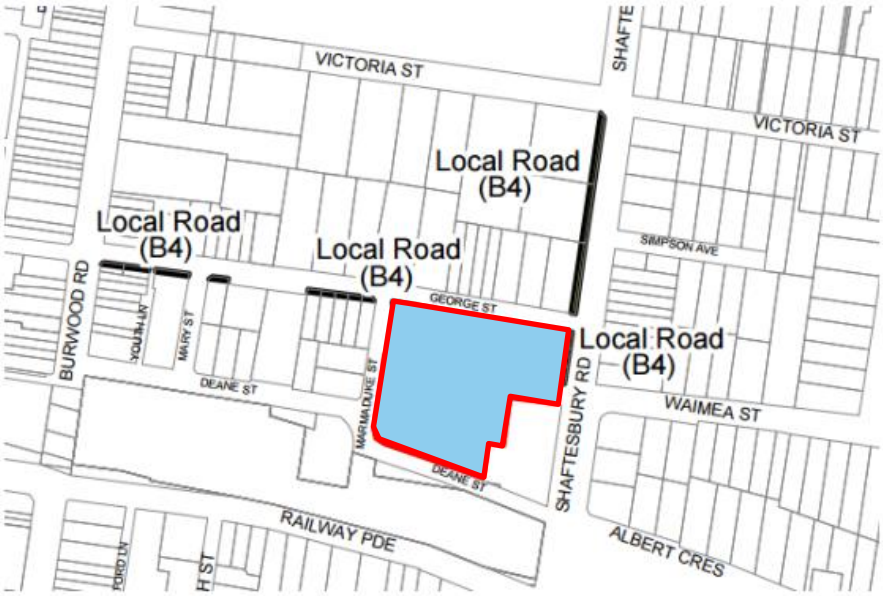


Figure 16 - Council Land Reservation Acquisition

The above land reservation acquisition will result changes to future traffic directions as illustrated in Figure 17. These changes include a staged rollout comprising the conversion of George Street to provide two-way operation between Marmaduke Street and Shaftsbury Road and a future two-way operation between Burwood Road and Marmaduke Street, upon the additional land being acquired.

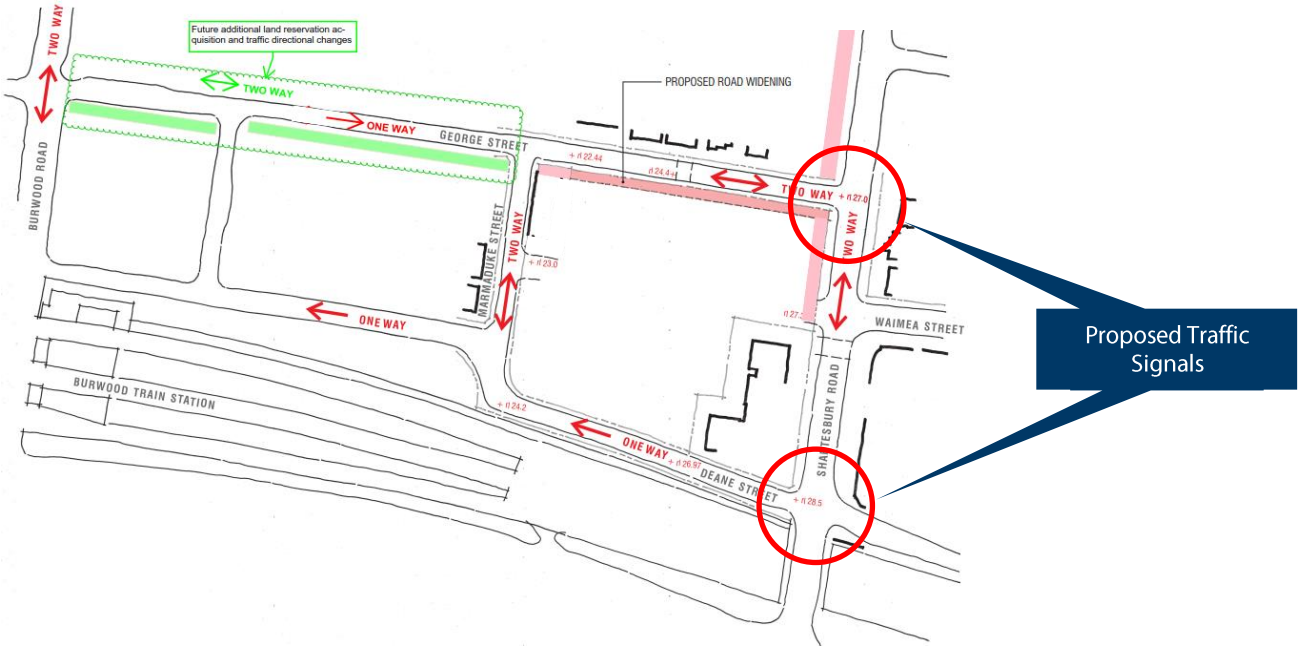


Figure 17 - Future Traffic Direction

4.3 Proposed Site Access Arrangement

The proposed site access and egress arrangement is proposed, having consideration for the future road plans and to minimise impact on the surrounding road network.

The following sections outline the proposed routes and required alterations to the existing road environment.

4.4 Customer Access Routes

The proposal will include a basement car park for patrons and a porte cochere for patrons and coaches, shuttle buses etc.

The car park will be accessible via two driveways being located on Shaftesbury Road (in the location of the existing Waimea Street alignment), and Marmaduke Street.

The location of the driveways was determined after extensive consideration of the proposed changes to the road network, to limit the impact on the operation of the road network (by minimising circulation) and to ensure that patrons would be able to enter and exit the car park efficiently.

The proposed patron vehicle access routes are illustrated in Figure 18.

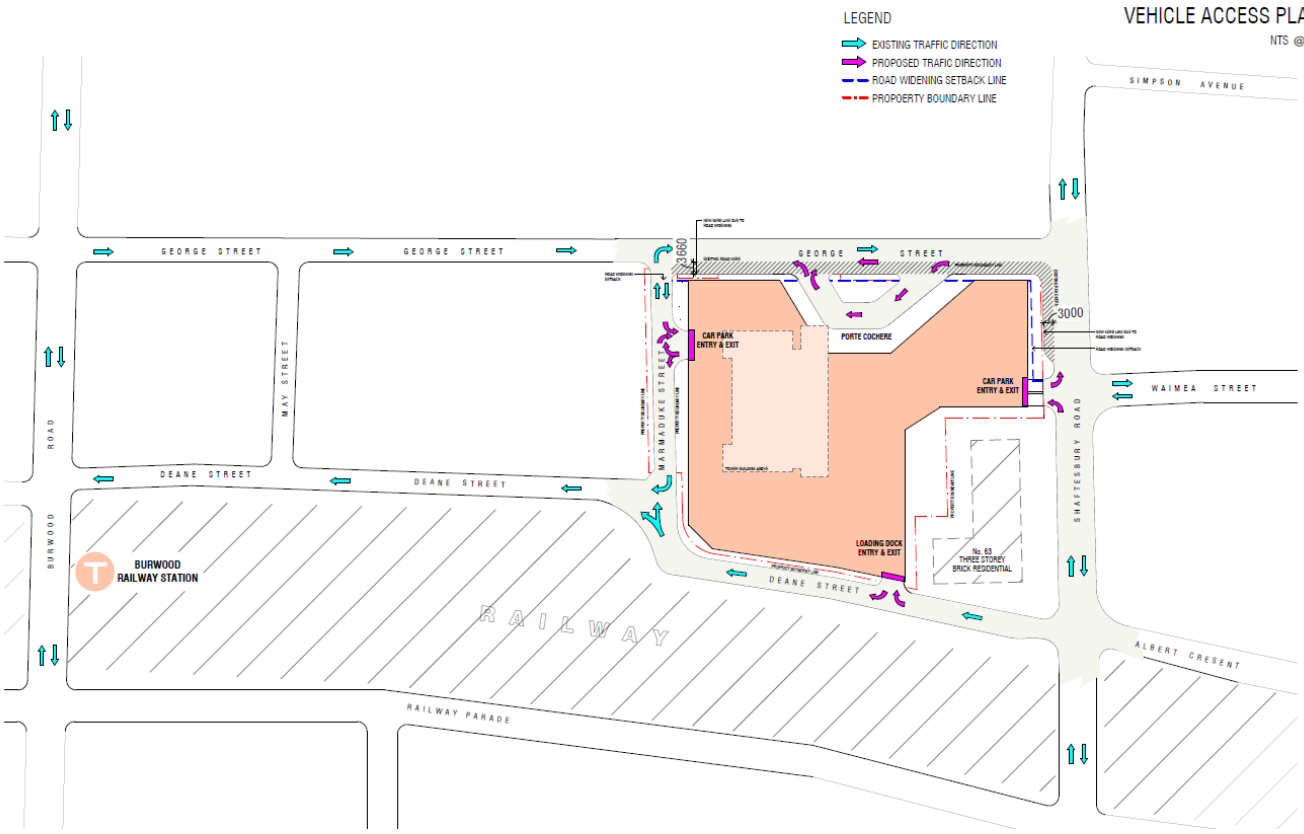


Figure 18 - Proposed Vehicle Routes

4.4.1 Shaftesbury Road Access

The Shaftesbury Road access makes use of the existing Waimea Street intersection, which retains the crossroads arrangement, rather than offsetting the driveway from the eastern section of Waimea Street. This also places the driveway at the maximum distance from the George Street intersection to separate traffic movements, and also to accommodate the future left-turn lane to be constructed on the approach to George Street.

The driveway accommodates two entry and two exit lanes which is applicable for this type and size of car park and complies with the requirements of AS2890.1.

4.4.2 Marmaduke Street Access

The Marmaduke Street access is located mid-way between Deane Street and George Street and makes use of the level change along this frontage (the levels fall towards Deane Street). The use of the Marmaduke Street frontage was determined to maximise the availability of the George Street frontage for the Porte Cochere and to enable better distribution of traffic approaching and departing this driveway.

The driveway accommodates two entry and two exit lanes which is applicable for this type and size of car park and complies with the requirements of AS2890.1.

4.5 Service Vehicle Access

A loading dock is proposed within the central area of the Club, with a dedicated access from Deane Street. This located was determined to separate customer and service vehicles and to provide access within the rear of the building. This frontage also represents the lowest level of the site, which results in a more efficient ramp down to the service area.

The service vehicle route has been determined using the turning path review of a 14.5m truck to accommodate the maximum proposed vehicle size required to serve the Club. Access to the site will be via Shaftesbury Road, with site access along Deane Street. Egress will be to the south via Marmaduke Street, George Street and Shaftsbury Road. The northern route will provide direct connection to Parramatta Road, while the south route will provide connection to the Hume Highway. The route to the south will replicate the route followed by an existing bus route, which confirms that rigid vehicles of this size are able to following this route.

4.6 Porte Cochere and Coach Route

The proposal includes a Porte Cochere to be located within the George Street frontage. This location represents a key aspect of the entrance to the Club, but also provides the most efficient and suitable location with regard to the road arrangements.

The Porte Cochere has been designed to accommodate coaches up to 14.5 metres long on the basis that they would access along George Street from Shaftesbury Road and egress by turning right on to George Street to return to Shaftesbury Road. This arrangement limits the need for coaches to drive through Burwood Town Centre to enter or exit the Club, which was a key recommendation from Council during the Pre-DA discussions.

The coach pick up drop/off route has been determined using the turning path review of a 14.5m coach.

Access to the site will be via the north or south on Shaftesbury Road, with site access along George Street. Egress will be via George Street to Shaftesbury Road whereby coaches would be able to turn left or right to access Parramatta Road or the Hume Highway.

5 Car Parking Facilities

5.1 Car Parking Policy Requirements

The car parking rates associated with proposed uses within the Club are presented in the Burwood Development Control Plan (BDCP) 2013 and represent minimum parking requirements. The car parking rates applicable to the proposed uses are summarised in the table below. It is anticipated that given the uses proposed, the applicable car parking rates will be those specified for hotel accommodation and registered clubs.

Land Use	Required Spaces
Hotel or motel accommodation	• 1 space per accommodation unit for visitors. • 2 spaces for employees involved in the Tourist and visitor accommodation business.
Business/office premises	Middle Ring • 1 space for the first 400sqm (GFA) or part thereof, plus; • 1 space per 120sqm (GFA) or part thereof additional to the first 400 sqm. Perimeter • 1 space for the first 400sqm (GFA) or part thereof, plus; • 1 space per 80sqm (GFA) or part thereof additional to the first 400 sqm.
Registered Club	• 1 space per 5sqm (GFA) of bar, lounge, dining, auditorium or entertainment area (this is both the minimum and maximum requirement)
Restaurant/Food and Drink	• 1 space for the first 400sqm (GFA) or part thereof, plus; • 1 space per 40sqm (GFA) or part thereof additional to the first 400 sqm
Entertainment facilities; **function centres**	As determined by Council having regard to a Transport, Traffic and Parking Impact Report and Management Plan, or a Transport, Traffic and Parking Impact Report, as applicable.
Childcare centre	As determined case-by-case on the basis of a Transport, Traffic and Parking Impact Report and Management Plan prepared by the applicant, taking into account the following guidelines. • 1 space per staff member. • Adequate access and turning facilities for short-stay set-down and pick-up of children, based on 1 space per 4 licensed children.

Preliminary investigations outline the following parking requirements in line with the DCP rates:

Land Use	Unit of Measure		Rate	Parking Requirements
Hotel or motel accommodation	Hotel:	200 rooms	1 per room + 2 for employees	200 spaces 2 spaces
Club	Gaming:	3,300m^2	1 per 5m^2	660 spaces
	Food & Beverage:	400m^2	1 for first 400m^2	1 space
		7,350m^2	1 per 40m^2	184 spaces
	Event Theatre:	1,400m^2	1 per 5m^2	280 spaces
	Leisure, Pool, Gym:	1,160m^2	1 per 5m^2	232 spaces
	Office:	400m^2	1 for first 400m^2	1 spaces
		840m^2	1 per 120m^2	7 Spaces
	Conference :	(600 seats) 2,500m^2	1 per 3 seats	200 spaces
	TOTAL			1,767 spaces

The parking requirement as per the DCP results in a high parking provision, which is likely due to the following factors:

- the parking requirement of per 5m^2 is related to the RMS parking provisions for a small club (data collected in 1978). There is likely a reduction in the parking demand per square metre as the size of a Club increases, i.e. this rate is not necessarily scalable as a linear regression,
- the rate does not account for the shared / multi-use function of the facilities within the Club, i.e. patrons within one part of the Club (e.g. gaming) will likely use another part of the facility during the same visit.
- the application of multiple rates does not account for the differing peak usage times for the various uses, e.g. gym use likely peaks during the early mornings, whereas the dining areas will peak during lunchtimes and evenings.

As a part of this study, we have reviewed the car parking provisions of an existing large club in the Sydney Metropolitan area. Details can be provided on request.

This club comprises a floor area of 12,622m^2 (GFA) and a parking provision of 482 spaces. This equates to a provision ratio of 3.8 spaces per 100m^2 (or 1 space per 26.2m^2). as opposed to 20 spaces per 100m^2. The club is reasonably well served by public transport, including a shuttle bus, but is not located in the vicinity of a rail station.

The data provided by the example club indicates that the DCP rate is not representative of larger clubs and perhaps there is no direct relationship between the floor area and the parking provision, or at least that linier regression is not applicable.

Application of this rate to the proposed club (28,400m^2 excluding the Hotel and Conference areas) will result in parking provision of 1,080 spaces. In this regard, it is appropriate to apply a reduction to the minimum parking requirements for the club component.

The total parking provision for the proposed will be 1,250 car parking spaces, which includes 200 spaces for the Hotel.

This calculation makes no reduction due to the combination of uses within the Club and therefore represents a conservative estimate of the actual peak demand. For example, the provision assumes full utilisation of the Club and the Hotel separately. The more likely scenario involves the shared use of the facilities, where if the hotel was fully occupied, those guests would also represent a reasonably large population within the Club. Likewise, a function within the conferencing facility would likely involve use of the Club, and potentially the Hotel as a support facility.

The proposed parking provision (application of a reduction to the Club parking rate), and the ability for the car park to serve multiple user groups represents a complimentary use of the car park, reducing the overall scale of the basement and the potential for parts of the car park to be underutilised.

It is also important to assess the parking provision in relation to the surrounding public transport network and the density of the resident area in the vicinity of the site. Burwood Town Centre is currently undergoing a large increase in the residential density through new developments in the town centre. This will greatly increase the population within walking distance of the Club, as well as the existing proximity to the Rail Station and the high frequency rail services.

In this context, the limiting of parking will be key to balancing the mode share across a number of transport options, reducing car dependency and use. This is an important consideration in the assessment of the road network, which would be adversely affected if unconstrained parking were proposed within the development.

5.2 Parking Provision & Circulation

It is anticipated that the proposal will accommodate up to six levels of basement car parking to accommodate up to 1,250 vehicles. The provision of parking will be reviewed throughout the design development to further align with the intent of the parking provisions of the BDCP, while giving consideration to the potential parking demand relative to alternate transport options (i.e. train and bus services located within close proximity of the site) and multi-purpose trips to the various clubs facilities.

5.2.1 Parking Circulation

The following section presents an assessment of the proposed development with reference to the requirements of AS2890.1: 2004 (Off – street parking), AS 2890.3: 2015 (Bicycle Parking) and AS2890.6:2009 (Off – Street parking for people with disabilities).

The car park access and parking arrangements have been designed in accordance with the requirements of Section 2 of AS2890.1.

Table 1.1 of AS2890.1 presents a number of classifications applicable to different land-uses. According to the Table, the most appropriate car park classification applicable to the subject car park will be a Class 2 facility, which is suitable for generally medium term parking (incl. entertainment centres, hotels etc.).

The parking space dimensions and associated aisle widths for each classification are presented in Table 2.2, and accordingly, a Class 2 facility requires parking space dimensions of 2.5 x 5.4 metres with an access aisle width of 5.8 metres. The proposed car park has been designed to provide compliant parking space widths of 2.5 metres and aisle widths of at least 5.8m, which meets the minimum requirement.

An assessment of the car park design has been undertaken including column locations, aisle extensions and ramp grades and in this regard, the car park design complies with the requirements of AS2890.1 to the extent required by a Stage 1 Development Application.

6 Development Traffic Assessment

6.1 Trip Generation

The potential traffic generation associated with the proposed building has been established with reference to the existing Club and a comparison with other Clubs where data is available. Typically, traffic activity associated with a development is derived through reference to the RMS Guide to Traffic Generating Development, however, in relation to Clubs this data is limited, as described in Chapter 3.7.3 of the RMS Guide:

"3.7.3 Clubs

Overview

Surveys of licensed clubs conducted by the RTA in 1978 indicate that it is difficult to generalise on their traffic generation because of the diversified nature of clubs. Traffic generation is affected by such factors as the provision of live entertainment, gambling facilities, number of members and club location. Behavioural changes since 1978, such as the introduction of random breath testing, also make such generalisations more difficult.

The 1978 surveys of clubs found an evening peak period traffic generation of 10 veh/hr/100m^2 licensed floor area, and a total vehicle generation over the 4.00 pm to 1.00 am period of 90 veh/100m^2 licensed floor area.

A traffic generation assessment of new clubs should be based on recent surveys of similar clubs. For extensions to an existing club, the assessment should be based on the relevant club."

It is clear that the use of traffic generation data collected 38 years ago would not provide an accurate projection of the traffic activity associated with a contemporary club having regard for the numerous changed factors including current drink driving laws cited in the RMS Guide.

In accordance with the Guide, the traffic assessment has been based on surveys of other comparable Clubs.

6.1.1 Comparable Club Data

Existing traffic activity associated with a comparable large club located on the Northern Beaches was recorded through traffic surveys of the car park entries and exits.

The combined entry and exit movements from the driveways are summarised in the following graphs, which present the data in 15 minute intervals.

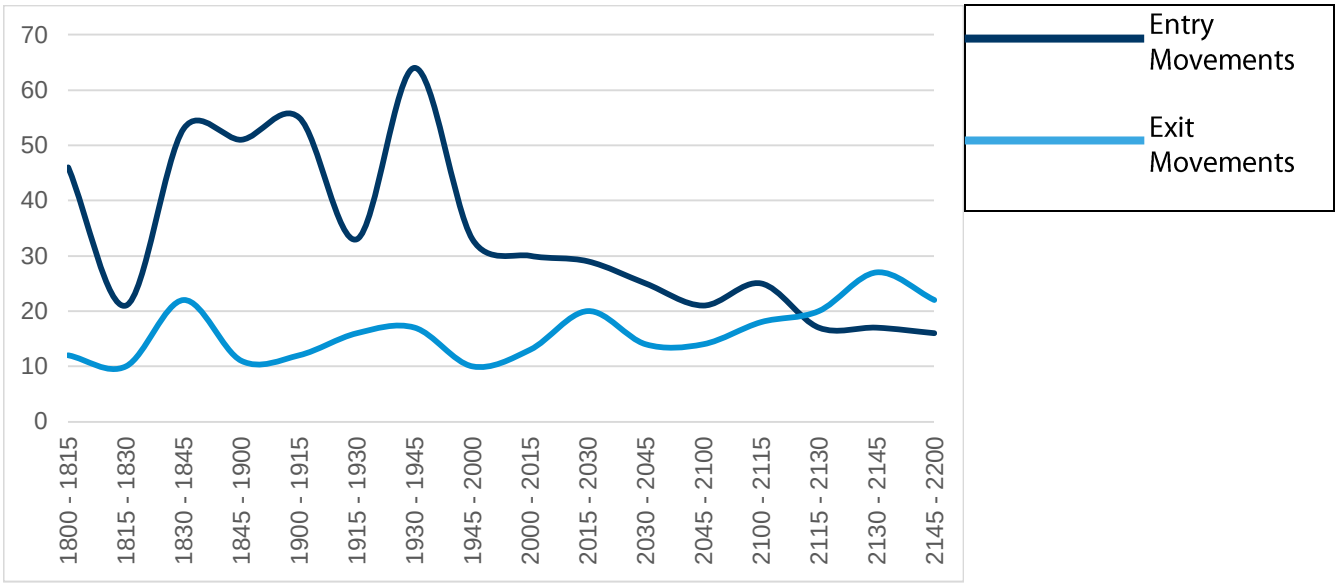


Figure 19 - Friday Evening Traffic Volumes

The Friday peak period was between 18:30 and 20:00 with the maximum number of entry movements (203) and exit movements (49) occurring between 18:45 and 19:45.

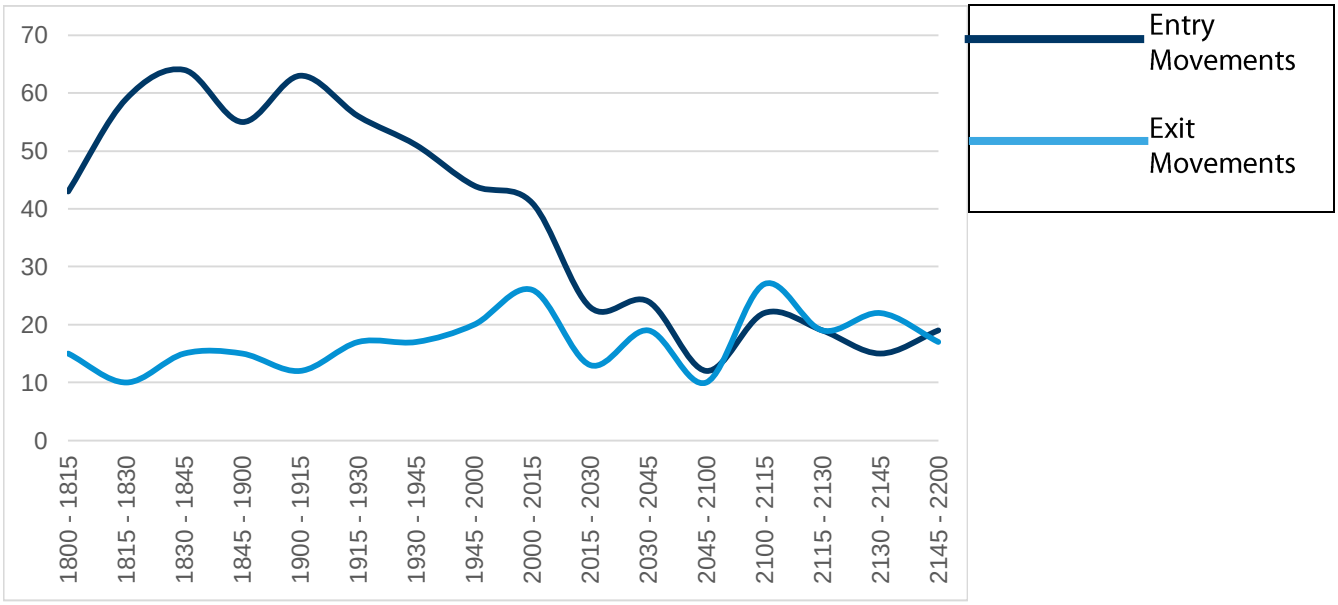
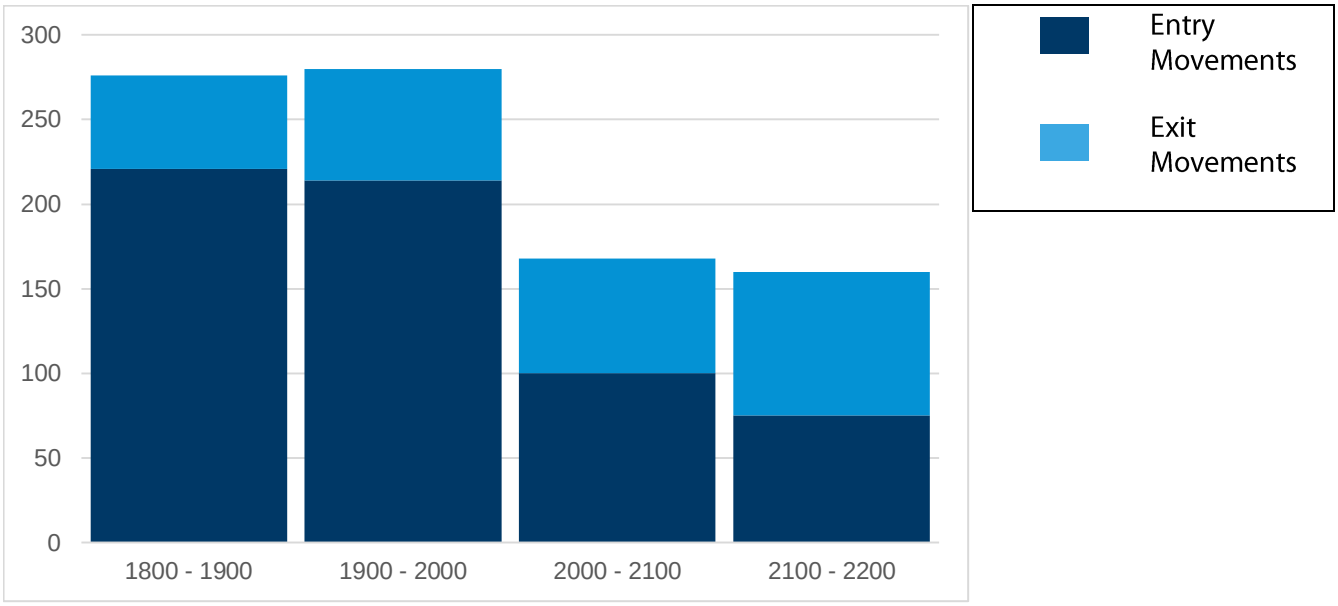
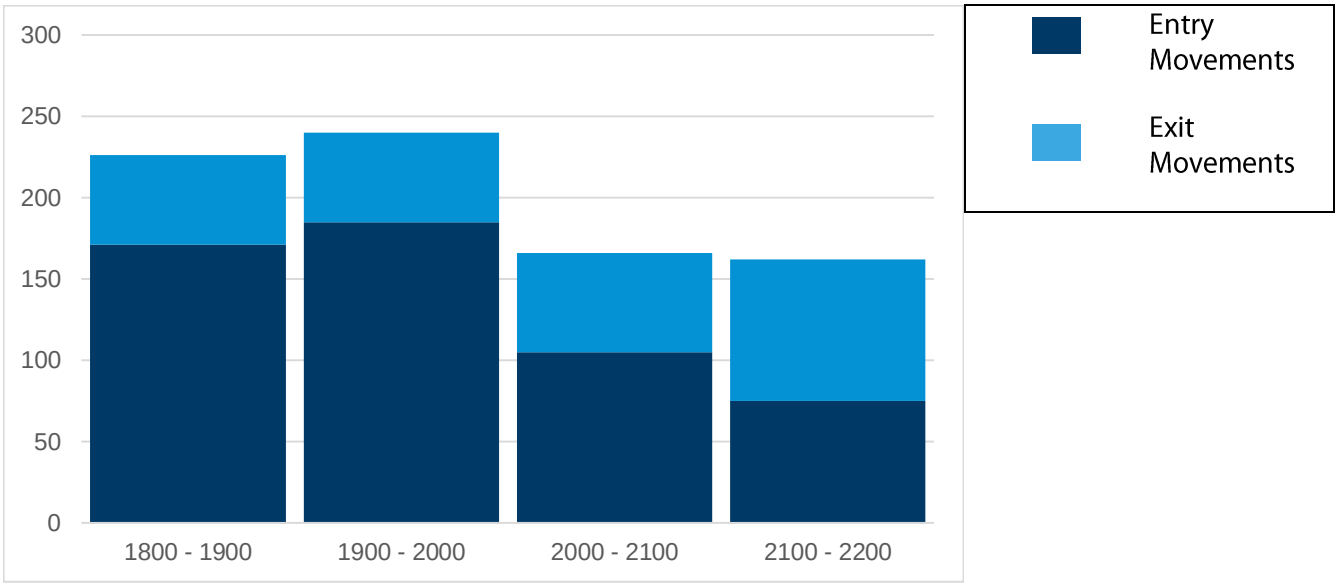


Figure 20 - Saturday Evening Traffic Volumes

The Saturday peak period was between 18:00 and 20:00 with the maximum number of entry movements (241) and exit movements (52) occurring between 18:15 and 19:15.

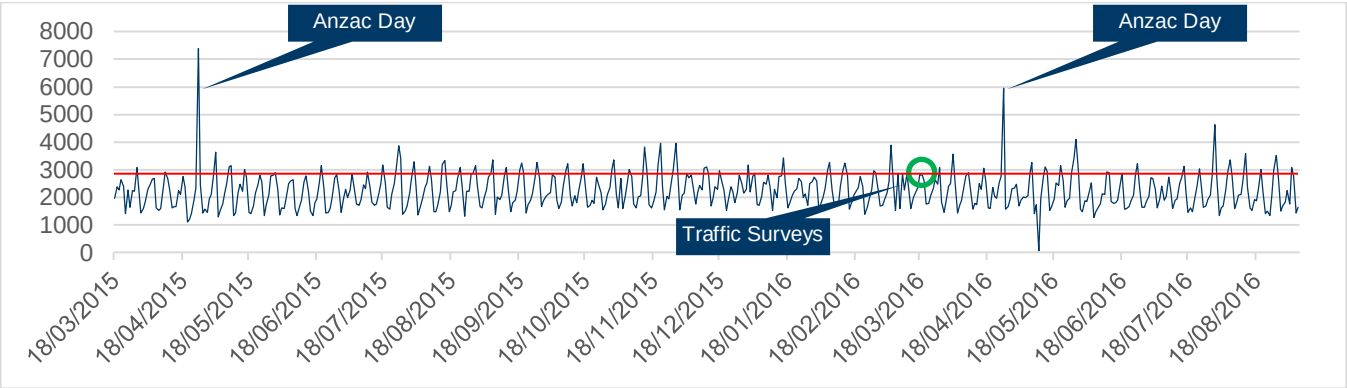
The data is presented in hourly intervals in the following graphs, which show the total entry and exit movements in each column:





The traffic surveys were undertaken during a weekend in March 2016. As a data point within a year, it is important to establish whether this represented a typical period and whether there are any seasonal effects to be factored.

In this regard, the daily patronage data from March 2015 to August 2016 has been provided by the comparable club and is summarised in the following graph:



Outliers:	
Anzac Day	25/04/2015
Anzac Day	25/04/2016
Error	11/05/2016

The data indicates that there is very little seasonal variation through the year with only Anzac Day evident as a peak day and half a dozen days where there is a higher level of activity. In this regard, the weekend of the surveys represented typical days and there is no need to adjust the figures for seasonal variation.

6.1.2 Club Component

A high level assessment of the projected traffic activity can be determined by comparing the surveyed club and the Gross Floor Areas (GFA) of the proposed club component. The GFA of the surveyed club is 12,622m^2, which generated a peak of 252 vehicles movements on a typical Friday, which also included a 250 person function. This equates to a traffic generation rate of 1 vehicle movement per 50m^2 per hour. The distribution of entry and exit movements was 82% entering and 18% exiting movements.

The proposed Club component (including the office, but excluding the hotel) will comprise 17,400m^2 GFA and application of the above rate would indicate a traffic activity of 348 movements (285 entering and 63 exiting) during the peak hour.

6.1.3 Hotel Component

Traffic activity associated with a development is derived through reference to the RMS Guide to Traffic Generating Development, however, in relation to traditional hotels this data is limited, as described in Chapter 3.4.2 of the RMS Guide:

"Hotels – traditional

Original RTA research indicated a large variance in the traffic generation rates of hotels. This variation is due to such factors as the location and age of the building, its internal design, the provision of live music and other such facilities, etc. Since these surveys were undertaken some changes have occurred in the use of hotels, partly due to the introduction of random breath testing. These changes have generally reduced traffic generation rates of hotels. It is recommended that the analysis of proposed hotel developments be based on surveys of similar existing hotels.

Where hotels are to be located in or near residential areas, an assessment of traffic generation in the late evening period must be undertaken in order to determine the impact of noise.

So, The trip generation rates for the proposed hotel development is considered from the ITE Trip Generation manual. As per ITE guidelines, the peak trip generation of each guest room 0.6 vehicles. Since the proposed development anticipated to have 200 guest rooms in the hotel development. and this will generate 120 trips in the peak hour. The distribution of trips will be 80:20 for entry and exit to the hotel development in the peak hour.

6.1.4 Existing Land-use Traffic Activity

The site accommodates a mix of single dwellings and apartments of approximately 100 units. As per the RMS Guide to Traffic Generating Developments, each unit will generate 0.19 trips in the peak hour. As per the RMS Guidelines, trips generated by the existing land uses has to be deducted from the proposed new generation traffic.

By combining Sections 5.1.2, 5.1.3 and 5.1.4 the net trip generation from the development is calculated and presented in **Table 8**.

Table 8 - Trip Generation

S.No	Land Use Component	Entry	Exit	Total
1	Club	285	63	348
2	Hotel	96	24	120
3	Existing Dwelling Units	-15	-4	-19
Total		**366**	**83**	**449**

In total the proposed development will attract 449 trips in the peak hour with a distribution ratio of 82: 18 for entry and exit traffic.

6.2 Trip Distribution

As per the proposed development plan, the distribution of traffic is derived based on the existing traffic characteristics of the club. The proposed Trip distribution for the opening year (2020) is shown in Figure 21.

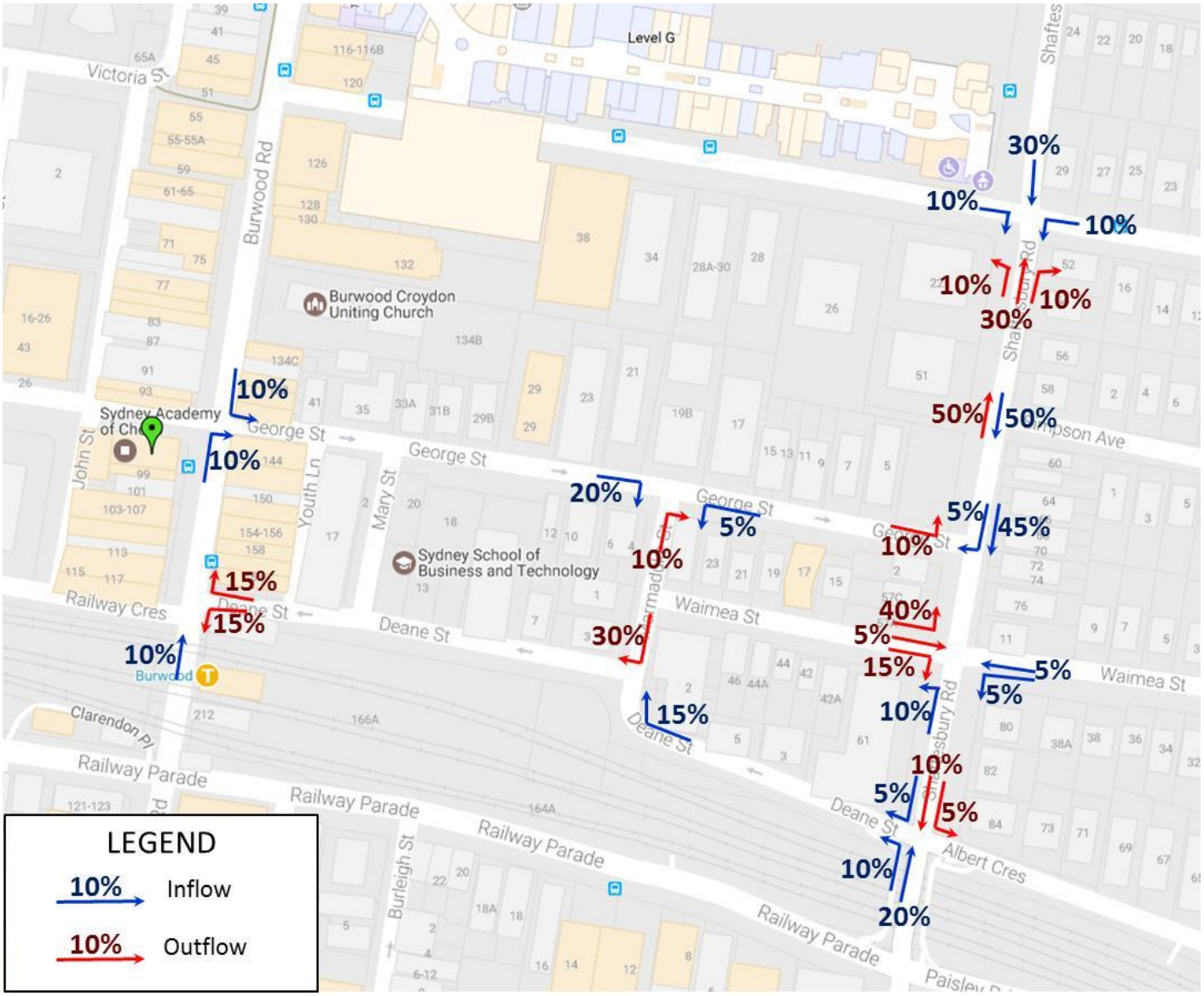


Figure 21 - Trip Distribution

6.3 Traffic Modelling Scenarios

In order to assess the potential traffic impact associated with the project and the impacts of background traffic growth, a number of modelling scenarios have been developed and modelled. The assessment scenarios are summarised in the following table:

Table 9 - Traffic Modelling Scenarios

Scenario	Year	Network description
S1	2016	As existing – do nothing
S2	2020	As existing (1.5% Growth) – do nothing
S3	2020	As existing (1.5% Growth) + Development Traffic + Road Network Changes
S4	2020	As existing (1.5% Growth) + Development Traffic + Road Network Changes + Signals

Since the proposed development peak hours are anticipated in the evening, either a weekday or Saturday, AM peak hours are not considered for the future year intersection analysis.

The road network changes in the post-development scenario include converting the George Street to two directional Road from Shaftsbury Road to Marmaduke Street and the signalisation of:

- Shaftsbury Road & George Street Intersection
- Shaftsbury Road & Deane Street Intersection
- Burwood Road & George Street Intersection

The proposed new traffic signals will assist in improving the capacity and safety of the road network as well as reducing the queue lengths on the intersections, which will ease traffic movements to and from the proposed Club.

6.4 Traffic Modelling Results

The results of the traffic modelling are presented and are summarised in the following Tables 8 (Weekday PM peak) and 9 (PM peak): SIDRA modelling results for all the scenarios are presented in Attachment 3.

Table 10 - Opening Year Intersection Analysis - Weekday - PM Peak

ID	Intersection	Proposed Scenarios			
		S1	S2	S3	S4
1	Shaftesbury Road and Victoria Street E	LOS E	LOS F	LOS F	LOS F
2	Shaftesbury Road and George Street	LOS C	LOS C	LOS F	LOS A
3	Shaftesbury Road and Waimea Street	LOS F	LOS F	LOS F	LOS E
4	Shaftesbury Road and Deanne Street	LOS A	LOS A	LOS A	LOS A
5	Marmaduke Street and Deanne Street	LOS A	LOS A	LOS A	LOS A
6	George Street and Marmaduke Street	LOS A	LOS A	LOS A	LOS A
7	Burwood Road and George Street	LOS A	LOS A	LOS A	LOS A
8	Burwood Road, Deanne Street and Railway Crescent	LOS A	LOS A	LOS A	LOS B

Table 11 - Opening Year Intersection Analysis - Weekend - PM Peak

ID	Intersection	Proposed Scenarios			
		S1	S2	S3	S4
1	Shaftesbury Road and Victoria Street E	LOS E	LOS E	LOS F	LOS F
2	Shaftesbury Road and George Street	LOS C	LOS C	LOS C	LOS A
3	Shaftesbury Road and Waimea Street	LOS F	LOS F	LOS F	LOS D
4	Shaftesbury Road and Deanne Street	LOS A	LOS A	LOS A	LOS A
5	Marmaduke Street and Deanne Street	LOS A	LOS A	LOS A	LOS A
6	George Street and Marmaduke Street	LOS A	LOS A	LOS A	LOS A
7	Burwood Road and George Street	LOS A	LOS A	LOS A	LOS A
8	Burwood Road, Deanne Street and Railway Crescent	LOS A	LOS A	LOS A	LOS B

The road network adjacent to the proposed new development is running at high degree of saturation and all the main road intersections (Shaftsbury Road & Burwood Road) will be reaching their maximum capacities in the short-term as a result of background traffic growth. The changes to the road network and the introduction of traffic signals will provide additional capacity as highlighted by the results.

The intersection of Shaftsbury Road and Victoria Street is running beyond its current capacity in the existing scenario as well as without the development.

The intersection of Shaftsbury Road and Waimea Street is displaying a Level of Service F in all scenarios due to the right turn from Waimea Street east on to Shaftesbury Road. This movement is not impacted by the Club movements, and all other movements at this intersection are operating with acceptable average delays.

Following the introduction of traffic signals, the intersection of Shaftsbury Road and George Street has improved capacity and Level of Service.

The modelling confirms that the proposed Club and the background traffic growth to 2020 will be accommodated by the road network due to the changes in permitted traffic directions, as well as the signalisation of key intersections proposed by Council.

7 Conclusion

This report has assessed the proposed parking provision, traffic impacts relating to a Stage 1 Development Application for the proposed Club Burwood development. The assessment presented in this report has concluded that:

- The proposed development will result in a 449 vehicular trips during the peak periods. The road network will be capable of accommodating these movements along with anticipated background growth following the introduction of road improvements identified by Council,
- The parking provision has been assessed based on recently collected data from a club of a similar scale and demonstrated that the proposed parking provision will be adequate to support the demands associated with the development,
- The proposed access arrangements have been determined to provide flexible entry and exit routes for patrons while limiting impacts on the surrounding road network,
- The proposal includes a Porte Cochere within the primary frontage to accommodate drop-off and pick-up of patrons with vehicles up to a 14.5 metre long coach,
- The loading arrangements will be accessed via a dedicated access to the rear of the development in isolation to all patron vehicle movements.

Attachment 1 – Architectural Drawings

BASEMENT LEVEL 7

BASEMENT 7

213 CARS

CLUB BURWOOD RSL

NEW CLUB DEVELOPMENT

STAGE 1 DA

A-CDA-1001 1:500 @ A3

0m 5m 10m 15m 20m

ISSUE: A

16/06/2017

APP

THE BUCHAN GROUP

BASEMENT LEVEL 6

BASEMENT 6

209 CARS

CLUB BURWOOD RSL

NEW CLUB DEVELOPMENT

STAGE 1 DA

A-CDA-1002 1:500 @ A3

0m 5m 10m 15m 20m

ISSUE: A

16/06/2017

APP

THE BUCHAN GROUP

Burwood | 216007

BASEMENT LEVEL 5

BASEMENT 5

209 CARS

CLUB BURWOOD RSL

NEW CLUB DEVELOPMENT

STAGE 1 DA

A-CDA-1003 1:500 @ A3

0m 5m 10m 15m 20m

ISSUE: A

16/06/2017

APP

THE BUCHAN GROUP

BASEMENT LEVEL 4

BASEMENT 4

206 CARS

CLUB BURWOOD RSL

NEW CLUB DEVELOPMENT

STAGE 1 DA

A-CDA-1004 1:500 @ A3

0m 5m 10m 15m 20m

ISSUE: A

16/06/2017

APP

THE BUCHAN GROUP

Burwood | 216007

BASEMENT LEVEL 3

BASEMENT 3

207 CARS

CLUB BURWOOD RSL

NEW CLUB DEVELOPMENT

STAGE 1 DA

A-CDA-1005 1:500 @ A3

0m 5m 10m 15m 20m

ISSUE: A

16/06/2017

APP

THE BUCHAN GROUP

BASEMENT LEVEL 2

BASEMENT 2

180 CARS

CLUB BURWOOD RSL

NEW CLUB DEVELOPMENT

STAGE 1 DA

A-CDA-1006 1:500 @ A3

0m 5m 10m 15m 20m

ISSUE: A

16/06/2017

APP

THE BUCHAN GROUP

Burwood | 216007

LOADING DOCK LEVEL

GFA LEGEND

- GAMING
- F&B
- CONFERENCE FACILITY
- AUDITORIUM
- LEISURE, POOL, GYM
- HOTEL
- OFFICE
- CIRCULATION
- B.O.H

GEORGE STREET

MARMADUKE STREET

SHAFTESBURY ROAD

DEANE STREET

ROAD WIDENING SETBACK

EXISTING ROAD LINE

PROPERTY BOUNDARY LINE

F&B (CLUB USE)

F.S

PLANT

LINE OF LOW WALL BELOW

POINT CHAIN DRIVE HAS ABOVE

STORAGE/ STAFF

DRY

WET

KEG ROOM

BAR/ KITCHEN

STORAGE

WASTE MANAGEMENT

ENTRY (FROM SHAFTESBURY ROAD)

PLANT

CAR PARK ENTRY/EXIT RAMP

RL 22

PASSENGER BLIND LIFT

RAMP

TURNING BAY

KITCHEN/ BOH/ STORAGE

HOTEL

GOODS LIFT

HOTEL SERVICE LIFT

LOADING DOCK

RL 21.20

AUDITORIUM GOODS LIFT & STORAGE (LOW HEIGHT)

CLUB STAIR AND LIFT ENTRY THROUGH TO GROUND

RL 23.15

RL 22

CLUB PATRON LIFT

STRONG ROOM & SECURITY

SECURE LIFT

PREP KITCHEN

FREEZER

COOL ROOM

GENERATOR SWITCH ROOM

LOADING DOCK RAMP

TO BURWOOD ROAD/ BURWOOD STATION

BAR

SUBSTATION

F&B (CLUB USE

SPORTS BAR (OPTIONAL)

No. 63 THREE STOREY BRICK RESIDENTIAL

22.43

23.17

22.62

22.77

23.07

23.20

23.38

24.37

24.62

104340

2430 6700 4630 8700 8300 8700 8300 8700 8300 9500 8300 10000 6680 5110

A B C D E F G H I J K L M N O

1 2 3 4 5 6 7 8 9 10 11 12 13 14

4290 7400 8000 8000 6300 5620 8000 8000 8000 8000 7300 4330

71610

CLUB BURWOOD RSL

NEW CLUB DEVELOPMENT

STAGE 1 DA

A-CDA-1007 1:500 @ A3

0m 5m 10m 15m 20m

ISSUE: A

16/06/2017

APP

THE BUCHAN GROUP

Burwood | 216007

GROUND LEVEL

GFA LEGEND

- GAMING
- F&B
- CONFERENCE FACILITY
- AUDITORIUM
- LEISURE, POOL, GYM
- HOTEL
- OFFICE
- CIRCULATION
- B.O.H

GEORGE STREET

EXISTING ROAD KERB

NEW KERB LINE DUE TO ROAD WIDENING

PROPERTY BOUNDARY LINE

ROAD WIDENING SETBACK

EXISTING TREES

ADJACENT RESIDENTIAL

DA APPROVED 22 STOREY RESIDENTIAL BUILDING

MARMADUKE STREET

SHAFTESBURY ROAD

DEANE STREET

F.S

F&B

HOTEL LOUNGE

RECEPTION

ENTRY LOBBY
FFL 24.60

CLUB PATRON LIFT

HOTEL PATRON LIFT

BOH

GOODS LIFT

M

F

CIRCULATION

LINE OF VOID ABOVE

LINE OF LEVEL 1 ABOVE

PROPOSED LANDSCAPING

COACH DROP OFF

PORTE COCHERE

RL 24.8

RL 24.5

25.23

50

ACCESSIBLE ENTRY RAMP

BOH

STAGE

DANCE FLOOR

3000

27.23

27.35

STORAGE

STEPPED SEATING ZONE

RL 28.12

BAR

KITCHEN/ BOH

CARPARK RAMP

27.2

GROUND LEVEL
RL 27.00

ESCALATOR UP/DWN TO MARMADUKE ST LOBBY

VOID

TRANSITION ZONE

OFFICE

BOH/ CASH BOX

SECURE LIFT

CLUB PATRON LIFT

BAR + CASH POINT

GAMING

OUTDOOR GAMING

LOADING DOCK RAMP

No. 63
THREE STOREY
BRICK RESIDENTIAL

22.43
23.17
24.26
24.70
25.62
26.27
26.97
27.1
22.62
22.77
23.07
23.20
23.38
24.37
24.62
24.58
25.79
26.62
26.84

CLUB BURWOOD RSL

NEW CLUB DEVELOPMENT

STAGE 1 DA

A-CDA-1008 1:500 @ A3

0m 5m 10m 15m 20m

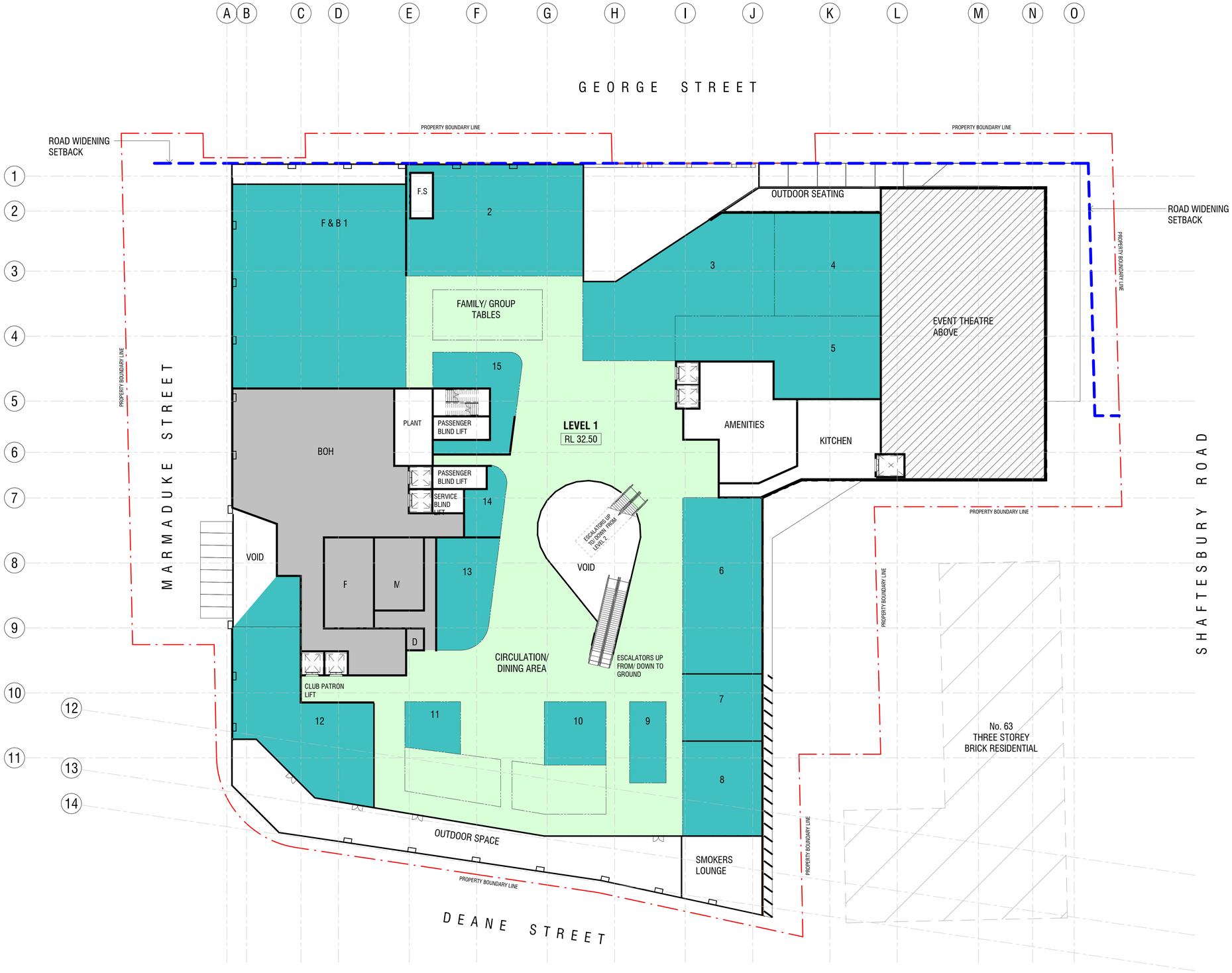
ISSUE: A

16/06/2017

APP

THE BUCHAN GROUP

LEVEL 1



GFA LEGEND

- GAMING
- F&B
- CONFERENCE FACILITY
- AUDITORIUM
- LEISURE, POOL, GYM
- HOTEL
- OFFICE
- CIRCULATION
- B.O.H

CLUB BURWOOD RSL

NEW CLUB DEVELOPMENT

STAGE 1 DA

A-CDA-1009 1:500 @ A3

0m 5m 10m 15m 20m

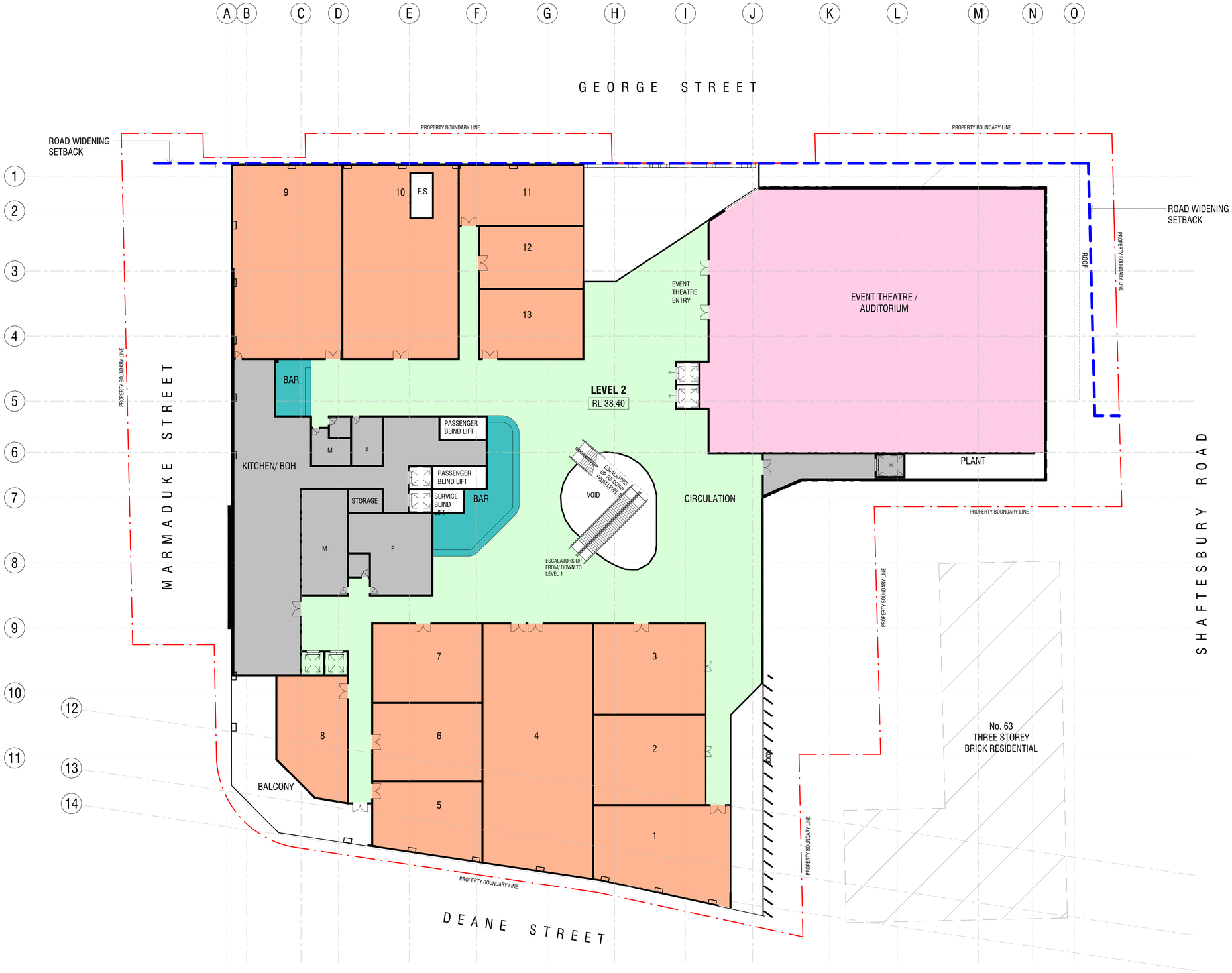
ISSUE: A

16/06/2017

APP

THE BUCHAN GROUP

LEVEL 2



GFA LEGEND

- GAMING
- F&B
- CONFERENCE FACILITY
- AUDITORIUM
- LEISURE, POOL, GYM
- HOTEL
- OFFICE
- CIRCULATION
- B.O.H

CLUB BURWOOD RSL

NEW CLUB DEVELOPMENT

STAGE 1 DA

A-CDA-1010 1:500 @ A3

0m 5m 10m 15m 20m

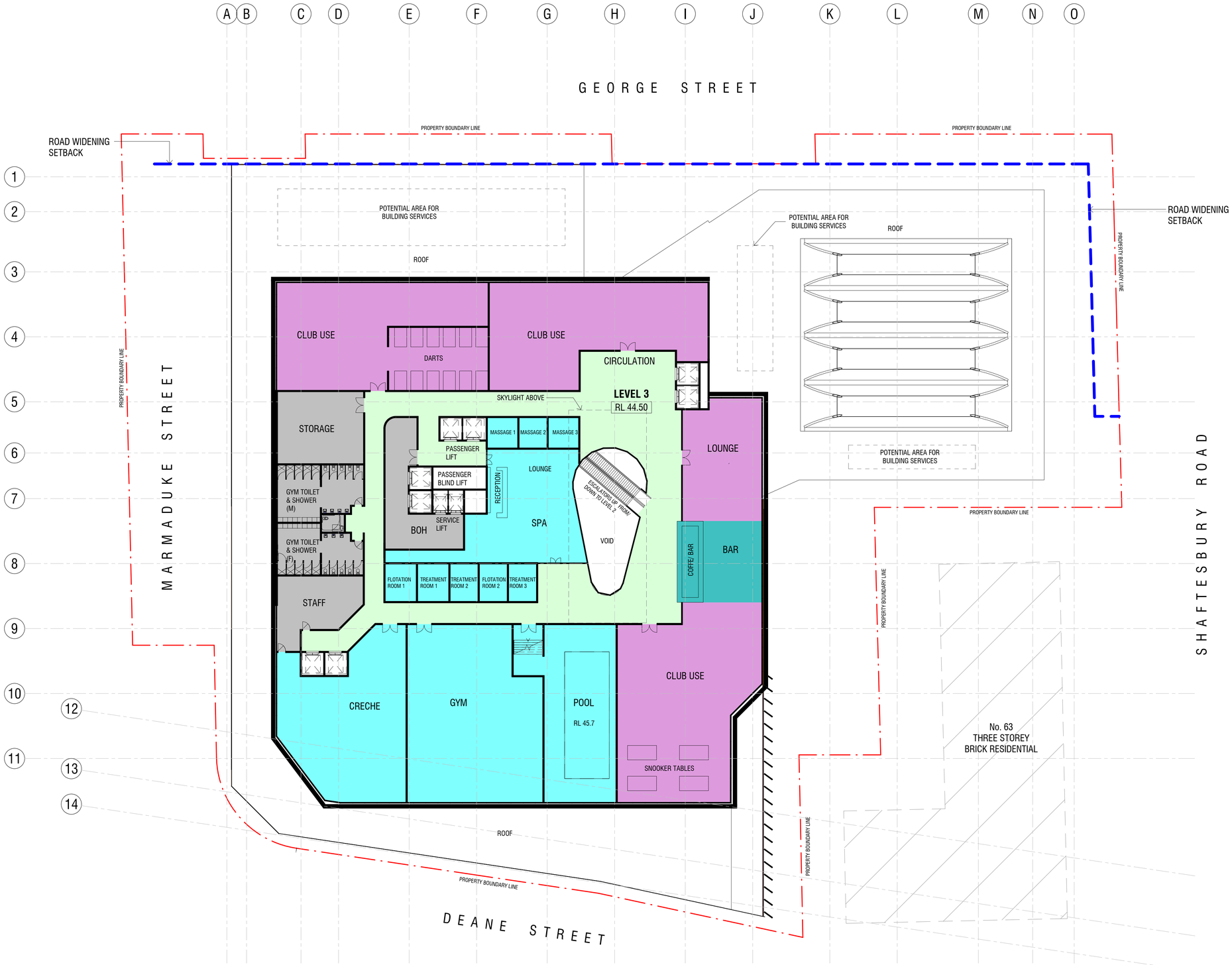
ISSUE: A

16/06/2017

APP

THE BUCHAN GROUP

LEVEL 3



GFA LEGEND

- GAMING
- F&B
- CONFERENCE FACILITY
- AUDITORIUM
- LEISURE, POOL, GYM
- HOTEL
- OFFICE
- CIRCULATION
- B.O.H

CLUB BURWOOD RSL

NEW CLUB DEVELOPMENT

STAGE 1 DA

A-CDA-1011 1:500 @ A3

0m 5m 10m 15m 20m

ISSUE: A

16/06/2017

APP

THE BUCHAN GROUP

Attachment 2 – Modelling - Existing Road Network Analysis

MOVEMENT SUMMARY

Site: 101 [1 Shaftsbury Road - Victoria St - Saturday - PM]

Network: N101 [Saturday - PM Network]

1 Shaftsbury Road - Victoria St - Saturday - PM - 6:00 - 7:00
Signals - Fixed Time Isolated Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road (S)													
1	L2	126	0.0	126	0.0	0.561	42.5	LOS C	23.8	168.0	0.83	0.76	30.3
2	T1	352	1.2	352	1.2	0.561	37.6	LOS C	23.8	168.0	0.85	0.76	30.6
3	R2	52	0.0	52	0.0	0.561	47.1	LOS D	5.2	36.5	1.00	0.78	28.1
Approach		529	0.8	529	0.8	0.561	39.7	LOS C	23.8	168.0	0.86	0.77	30.3
East: Victoria Road (E)													
4	L2	121	0.9	121	0.9	1.149	154.4	LOS F	40.1	285.7	1.00	1.20	9.6
5	T1	82	0.0	82	0.0	1.149	148.8	LOS F	40.1	285.7	1.00	1.20	16.4
6	R2	146	4.3	146	4.3	1.149	154.4	LOS F	40.1	285.7	1.00	1.20	16.3
Approach		349	2.1	349	2.1	1.149	153.1	LOS F	40.1	285.7	1.00	1.20	14.2
North: Shaftsbury Road (N)													
7	L2	58	0.0	58	0.0	0.730	54.5	LOS D	28.5	201.1	0.95	0.84	32.5
8	T1	413	1.0	413	1.0	0.730	51.3	LOS D	28.5	201.1	0.96	0.84	22.3
9	R2	44	0.0	44	0.0	0.730	85.7	LOS F	5.8	40.6	1.00	0.85	25.0
Approach		515	0.8	515	0.8	0.730	54.6	LOS D	28.5	201.1	0.96	0.84	24.1
West: Victoria Road (W)													
10	L2	277	5.7	277	5.7	0.295	26.6	LOS B	11.1	81.5	0.60	0.75	40.9
11	T1	114	3.7	114	3.7	0.522	32.5	LOS C	19.5	138.3	0.81	0.78	37.5
12	R2	253	0.8	253	0.8	0.522	38.1	LOS C	19.5	138.3	0.81	0.78	27.5
Approach		643	3.4	643	3.4	0.522	32.1	LOS C	19.5	138.3	0.72	0.77	35.9
All Vehicles		2037	1.9	2037	1.9	1.149	60.5	LOS E	40.1	285.7	0.87	0.86	24.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.5 %
Number of Iterations: 6 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	41.9	LOS E	0.2	0.2	0.75	0.75
P2	East Full Crossing	53	39.0	LOS D	0.2	0.2	0.72	0.72
P3	North Full Crossing	53	21.9	LOS C	0.1	0.1	0.54	0.54
P4	West Full Crossing	53	32.7	LOS D	0.1	0.1	0.66	0.66
All Pedestrians		211	33.9	LOS D			0.67	0.67

MOVEMENT SUMMARY

Site: 101 [1 Shaftsbury Road - Victoria St - Thursday - AM]

Network: N101 [Thursday - AM Network]

1 Shaftsbury Road - Victoria St - Thursday - AM - 8:00 - 9:00
Signals - Fixed Time Isolated Cycle Time = 130 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road (S)													
1	L2	124	0.0	124	0.0	0.693	41.4	LOS C	26.5	189.7	0.90	0.81	30.8
2	T1	516	3.5	516	3.5	0.693	36.8	LOS C	26.5	189.7	0.92	0.82	31.0
3	R2	98	4.3	98	4.3	0.693	45.0	LOS D	11.7	84.5	0.99	0.84	28.9
Approach		738	3.0	738	3.0	0.693	38.7	LOS C	26.5	189.7	0.93	0.82	30.6
East: Victoria Road (E)													
4	L2	111	4.8	111	4.8	0.902	63.3	LOS E	33.7	242.6	1.00	0.99	19.9
5	T1	73	0.0	73	0.0	0.902	57.7	LOS E	33.7	242.6	1.00	0.99	29.6
6	R2	288	3.6	288	3.6	0.902	63.3	LOS E	33.7	242.6	1.00	0.99	29.1
Approach		472	3.3	472	3.3	0.902	62.4	LOS E	33.7	242.6	1.00	0.99	27.5
North: Shaftsbury Road (N)													
7	L2	54	5.9	54	5.9	0.893	72.5	LOS F	22.9	164.5	1.00	1.01	27.9
8	T1	356	2.4	356	2.4	0.893	69.5	LOS E	22.9	164.5	1.00	0.99	18.3
9	R2	25	0.0	25	0.0	0.893	83.6	LOS F	7.9	56.4	1.00	0.94	25.7
Approach		435	2.7	435	2.7	0.893	70.7	LOS F	22.9	164.5	1.00	0.99	20.3
West: Victoria Road (W)													
10	L2	63	40.0	63	40.0	0.082	21.8	LOS B	1.9	18.1	0.52	0.69	42.4
11	T1	45	7.0	45	7.0	0.145	22.2	LOS B	3.5	25.5	0.65	0.63	42.4
12	R2	51	2.1	51	2.1	0.145	27.7	LOS B	3.5	25.5	0.65	0.63	33.0
Approach		159	18.5	159	18.5	0.145	23.8	LOS B	3.5	25.5	0.60	0.65	40.2
All Vehicles		1803	4.4	1803	4.4	0.902	51.3	LOS D	33.7	242.6	0.94	0.89	27.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.9 %
Number of Iterations: 8 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	26.6	LOS C	0.1	0.1	0.64	0.64
P2	East Full Crossing	53	46.6	LOS E	0.2	0.2	0.85	0.85
P3	North Full Crossing	53	19.4	LOS B	0.1	0.1	0.55	0.55
P4	West Full Crossing	53	30.5	LOS D	0.1	0.1	0.69	0.69
All Pedestrians		211	30.8	LOS D			0.68	0.68

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [1 Shaftsbury Road - Victoria St - Thursday - PM]

Network: N101 [Thursday - PM Network]

1 Shaftsbury Road - Victoria St - Thursday - PM - 5:30 - 6:30
Signals - Fixed Time Isolated Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road (S)													
1	L2	253	0.0	253	0.0	0.722	41.5	LOS C	35.7	252.5	0.88	0.83	30.4
2	T1	408	2.3	408	2.3	0.722	36.8	LOS C	35.7	252.5	0.90	0.83	30.7
3	R2	63	0.0	63	0.0	0.722	47.7	LOS D	5.8	41.1	1.00	0.83	27.9
Approach		724	1.3	724	1.3	0.722	39.4	LOS C	35.7	252.5	0.90	0.83	30.3
East: Victoria Road (E)													
4	L2	124	0.8	124	0.8	1.278	203.3	LOS F	49.2	348.4	1.00	1.35	7.5
5	T1	143	0.0	143	0.0	1.278	197.8	LOS F	49.2	348.4	1.00	1.35	13.2
6	R2	114	3.7	114	3.7	1.278	203.3	LOS F	49.2	348.4	1.00	1.35	13.1
Approach		381	1.4	381	1.4	1.278	201.3	LOS F	49.2	348.4	1.00	1.35	11.5
North: Shaftsbury Road (N)													
7	L2	47	0.0	47	0.0	0.753	51.1	LOS D	32.7	231.5	0.95	0.84	33.6
8	T1	475	1.3	475	1.3	0.753	46.3	LOS D	32.7	231.5	0.95	0.84	23.8
9	R2	40	2.6	40	2.6	0.753	90.8	LOS F	4.0	28.5	1.00	0.83	24.0
Approach		562	1.3	562	1.3	0.753	49.9	LOS D	32.7	231.5	0.95	0.84	24.8
West: Victoria Road (W)													
10	L2	214	10.8	214	10.8	0.255	29.5	LOS C	9.0	68.7	0.62	0.75	39.5
11	T1	119	4.4	119	4.4	0.595	39.7	LOS C	21.4	152.3	0.88	0.81	35.0
12	R2	247	0.4	247	0.4	0.595	45.2	LOS D	21.4	152.3	0.88	0.81	24.9
Approach		580	5.1	580	5.1	0.595	38.3	LOS C	21.4	152.3	0.79	0.79	33.1
All Vehicles		2247	2.3	2247	2.3	1.278	69.2	LOS E	49.2	348.4	0.90	0.91	22.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 2.3 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	44.2	LOS E	0.2	0.2	0.77	0.77
P2	East Full Crossing	53	34.8	LOS D	0.2	0.2	0.68	0.68
P3	North Full Crossing	53	25.3	LOS C	0.1	0.1	0.58	0.58
P4	West Full Crossing	53	28.9	LOS C	0.1	0.1	0.62	0.62
All Pedestrians		211	33.3	LOS D			0.66	0.66

MOVEMENT SUMMARY

Site: 102 [2 Shaftsbury Road - George St - Saturday - PM]

Network: N101 [Saturday - PM Network]

2 Shaftsbury Road - George St - Saturday - PM - 6:00 - 7:00
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
2	T1	477	0.9	477	0.9	0.125	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		477	0.9	477	0.9	0.125	0.0	NA	0.0	0.0	0.00	0.00	60.0
North: Shaftsbury Road													
8	T1	799	0.8	783	0.8	0.202	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		799	0.8	783 N1	0.8	0.202	0.0	NA	0.0	0.0	0.00	0.00	60.0
West: George St													
10	L2	33	0.0	33	0.0	0.036	9.2	LOS A	0.1	0.9	0.33	0.87	29.4
12	R2	9	0.0	9	0.0	0.053	26.8	LOS B	0.2	1.2	0.83	1.00	14.3
Approach		42	0.0	42	0.0	0.053	13.2	LOS A	0.2	1.2	0.44	0.90	23.8
All Vehicles		1318	0.8	1302 N1	0.8	0.202	0.4	NA	0.2	1.2	0.01	0.03	57.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.5 %
Number of Iterations: 6 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 102 [2 Shaftsbury Road - George St - Thursday - AM]

Network: N101 [Thursday - AM Network]

2 Shaftsbury Road - George St - Thursday - AM - 8:00 - 9:00
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
2	T1	702	2.8	702	2.8	0.198	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		702	2.8	702	2.8	0.198	0.0	NA	0.0	0.0	0.00	0.00	60.0
North: Shaftsbury Road													
8	T1	527	2.8	527	2.8	0.138	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		527	2.8	527	2.8	0.138	0.0	NA	0.0	0.0	0.00	0.00	60.0
West: George St													
10	L2	52	8.2	52	8.2	0.077	10.4	LOS A	0.2	1.7	0.41	0.91	28.2
12	R2	9	11.1	9	11.1	0.066	32.3	LOS C	0.2	1.6	0.86	1.00	12.4
Approach		61	8.6	61	8.6	0.077	13.8	LOS A	0.2	1.7	0.48	0.93	23.7
All Vehicles		1291	3.1	1291	3.1	0.198	0.7	NA	0.2	1.7	0.02	0.04	54.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.9 %
Number of Iterations: 8 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 102 [2 Shaftsbury Road - George St - Thursday - PM]

Network: N101 [Thursday - PM Network]

2 Shaftsbury Road - George St - Thursday - PM - 5:30 - 6:30
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
2	T1	646	1.5	646	1.5	0.211	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		646	1.5	646	1.5	0.211	0.0	NA	0.0	0.0	0.00	0.00	59.9
North: Shaftsbury Road													
8	T1	851	1.0	823	1.0	0.213	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		851	1.0	823[N1]	1.0	0.213	0.0	NA	0.0	0.0	0.00	0.00	60.0
West: George St													
10	L2	67	0.0	67	0.0	0.124	9.3	LOS A	0.3	1.8	0.34	0.90	29.2
12	R2	14	0.0	14	0.0	0.108	35.7	LOS C	0.3	2.3	0.89	1.00	11.3
Approach		81	0.0	81	0.0	0.124	13.7	LOS A	0.3	2.3	0.44	0.92	23.2
All Vehicles		1578	1.1	1551[N1]	1.2	0.213	0.7	NA	0.3	2.3	0.02	0.05	55.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 2.3 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 103 [3 Shaftsbury Road - Waimea Rd - Saturday - PM]

Network: N101 [Saturday - PM Network]

3 Shaftsbury Road - Waimea Rd - Saturday - PM - 6:00 - 7:00
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
1	L2	7	0.0	7	0.0	0.190	4.9	LOS A	0.0	0.0	0.00	0.01	40.0
2	T1	461	0.7	461	0.7	0.190	0.9	LOS A	1.1	7.5	0.13	0.09	46.6
3	R2	84	0.0	84	0.0	0.190	10.0	LOS A	1.1	7.5	0.58	0.38	32.9
Approach		553	0.6	553	0.6	0.190	2.4	NA	1.1	7.5	0.20	0.13	41.7
East: Waimea Road													
4	L2	168	1.3	168	1.3	0.395	12.7	LOS A	1.9	13.6	0.63	1.07	18.8
5	T1	38	0.0	38	0.0	0.395	56.4	LOS D	1.9	13.6	0.81	1.05	13.0
6	R2	14	0.0	14	0.0	0.395	68.2	LOS E	1.3	9.4	0.94	1.05	6.3
Approach		220	1.0	220	1.0	0.395	23.7	LOS B	1.9	13.6	0.68	1.06	15.3
North: Shaftsbury Road													
7	L2	16	0.0	15	0.0	0.221	3.5	LOS A	0.0	0.0	0.00	0.02	33.8
8	T1	756	0.8	741	0.8	0.221	0.3	LOS A	0.0	0.0	0.08	0.04	50.2
9	R2	45	0.0	44	0.0	0.221	6.4	LOS A	0.0	0.0	0.18	0.07	29.5
Approach		817	0.8	801 [N1]	0.8	0.221	0.7	NA	0.0	0.0	0.08	0.05	45.3
West: Waimea Road													
10	L2	1	0.0	1	0.0	0.023	9.5	LOS A	0.1	0.5	0.82	0.92	9.6
11	T1	2	0.0	2	0.0	0.023	43.4	LOS D	0.1	0.5	0.82	0.92	15.8
12	R2	1	0.0	1	0.0	0.023	79.6	LOS F	0.1	0.4	0.95	1.00	4.1
Approach		4	0.0	4	0.0	0.023	44.0	LOS D	0.1	0.5	0.85	0.94	10.1
All Vehicles		1594	0.7	1578 [N1]	0.7	0.395	4.6	NA	1.9	13.6	0.21	0.22	31.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.5 %
Number of Iterations: 6 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 103 [3 Shaftsbury Road - Waimea Rd - Thursday - AM]

Network: N101 [Thursday - AM Network]

3 Shaftsbury Road - Waimea Rd - Thursday - AM - 8:00 -9:00
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
1	L2	5	20.0	5	20.0	0.345	4.9	LOS A	0.0	0.0	0.00	0.00	38.8
2	T1	695	2.9	695	2.9	0.345	0.2	LOS A	1.9	13.7	0.03	0.05	55.0
3	R2	275	0.4	275	0.4	0.345	8.4	LOS A	1.9	13.7	0.58	0.72	31.4
Approach		975	2.3	975	2.3	0.345	2.6	NA	1.9	13.7	0.19	0.24	41.0
East: Waimea Road													
4	L2	253	0.0	253	0.0	0.426	11.5	LOS A	2.4	16.7	0.56	1.01	21.1
5	T1	22	0.0	22	0.0	0.426	98.0	LOS F	2.4	16.7	0.83	1.03	8.1
6	R2	6	0.0	6	0.0	0.426	120.7	LOS F	1.3	9.2	0.97	1.04	3.8
Approach		281	0.0	281	0.0	0.426	20.8	LOS B	2.4	16.7	0.59	1.01	16.2
North: Shaftsbury Road													
7	L2	15	0.0	15	0.0	0.168	3.5	LOS A	0.0	0.0	0.00	0.03	33.8
8	T1	476	3.3	476	3.3	0.168	0.9	LOS A	0.0	0.0	0.14	0.08	41.8
9	R2	48	0.0	48	0.0	0.168	8.6	LOS A	0.0	0.0	0.39	0.17	25.7
Approach		539	2.9	539	2.9	0.168	1.6	NA	0.0	0.0	0.16	0.08	37.0
West: Waimea Road													
10	L2	2	0.0	2	0.0	0.042	12.5	LOS A	0.1	0.9	0.89	0.97	7.5
11	T1	2	0.0	2	0.0	0.042	71.4	LOS F	0.1	0.9	0.89	0.97	13.0
12	R2	1	0.0	1	0.0	0.061	191.2	LOS F	0.2	1.1	0.98	1.00	1.8
Approach		5	0.0	5	0.0	0.061	71.8	LOS F	0.2	1.1	0.91	0.98	6.2
All Vehicles		1800	2.1	1800	2.1	0.426	5.3	NA	2.4	16.7	0.24	0.31	31.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.9 %
Number of Iterations: 8 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 103 [3 Shaftsbury Road - Waimea Rd - Thursday - PM]

Network: N101 [Thursday - PM Network]

3 Shaftsbury Road - Waimea Rd - Thursday - PM - 5:30 - 6:30
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
1	L2	9	0.0	9	0.0	0.299	5.0	LOS A	0.0	0.0	0.00	0.01	40.1
2	T1	653	1.5	653	1.5	0.299	0.8	LOS A	1.8	12.5	0.09	0.08	48.4
3	R2	145	0.0	145	0.0	0.299	11.4	LOS A	1.8	12.5	0.69	0.58	29.2
Approach		807	1.2	807	1.2	0.299	2.8	NA	1.8	12.5	0.20	0.17	40.0
East: Waimea Road													
4	L2	171	0.6	171	0.6	0.376	12.8	LOS A	1.7	12.1	0.64	1.07	19.3
5	T1	20	0.0	20	0.0	0.376	109.9	LOS F	1.7	12.1	0.87	1.04	7.2
6	R2	2	0.0	2	0.0	0.376	140.0	LOS F	1.1	7.9	0.97	1.03	3.5
Approach		193	0.5	193	0.5	0.376	24.3	LOS B	1.7	12.1	0.66	1.07	14.6
North: Shaftsbury Road													
7	L2	14	0.0	13	0.0	0.247	3.5	LOS A	0.0	0.0	0.00	0.02	33.9
8	T1	814	1.0	789	1.0	0.247	0.6	LOS A	0.0	0.0	0.11	0.05	45.4
9	R2	54	0.0	52	0.0	0.247	8.5	LOS A	0.0	0.0	0.27	0.10	27.5
Approach		881	1.0	854[N1]	1.0	0.247	1.2	NA	0.0	0.0	0.12	0.05	41.3
West: Waimea Road													
10	L2	3	0.0	3	0.0	0.029	11.3	LOS A	0.1	0.6	0.81	0.91	10.2
11	T1	1	0.0	1	0.0	0.029	85.5	LOS F	0.1	0.6	0.81	0.91	16.6
12	R2	1	0.0	1	0.0	0.057	179.3	LOS F	0.1	1.0	0.98	1.00	1.9
Approach		5	0.0	5	0.0	0.057	59.8	LOS E	0.1	1.0	0.84	0.93	6.4
All Vehicles		1886	1.0	1859[N1]	1.0	0.376	4.4	NA	1.8	12.5	0.21	0.21	31.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 2.3 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 104 [4 Shaftsbury Road - Deanne Street - Saturday - PM]

Network: N101 [Saturday - PM Network]

4 Shaftsbury Road - Deanne Street - Saturday - PM - 6:00 - 7:00
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
1	L2	52	0.0	52	0.0	0.156	5.5	LOS A	0.0	0.0	0.00	0.10	53.7
2	T1	551	0.6	551	0.6	0.156	0.0	LOS A	0.0	0.0	0.00	0.05	56.9
Approach		602	0.5	602	0.5	0.156	0.5	NA	0.0	0.0	0.00	0.05	56.6
East: RoadName													
4	L2	102	0.0	102	0.0	0.126	8.0	LOS A	0.5	3.2	0.48	0.72	42.4
Approach		102	0.0	102	0.0	0.126	8.0	LOS A	0.5	3.2	0.48	0.72	42.4
North: Shaftsbury Road													
7	L2	6	0.0	6	0.0	0.245	4.9	LOS A	0.0	0.0	0.00	0.01	55.1
8	T1	904	0.9	890	0.9	0.245	0.2	LOS A	0.4	2.6	0.04	0.02	58.1
9	R2	21	0.0	21	0.0	0.245	9.0	LOS A	0.4	2.6	0.09	0.03	51.8
Approach		932	0.9	917[N1]	0.9	0.245	0.4	NA	0.4	2.6	0.04	0.02	58.0
All Vehicles		1636	0.7	1621[N1]	0.7	0.245	0.9	NA	0.5	3.2	0.05	0.07	55.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.5 %
Number of Iterations: 6 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 104 [4 Shaftsbury Road - Deanne Street - Thursday - AM]

Network: N101 [Thursday - AM Network]

4 Shaftsbury Road - Deanne Street - AM - 8:00 - 9:00
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
1	L2	88	1.2	88	1.2	0.276	5.6	LOS A	0.0	0.0	0.00	0.10	53.8
2	T1	968	2.3	968	2.3	0.276	0.0	LOS A	0.0	0.0	0.00	0.05	57.0
Approach		1057	2.2	1057	2.2	0.276	0.5	NA	0.0	0.0	0.00	0.05	56.7
East: RoadName													
4	L2	101	3.1	101	3.1	0.119	7.7	LOS A	0.4	3.1	0.45	0.69	42.6
Approach		101	3.1	101	3.1	0.119	7.7	LOS A	0.4	3.1	0.45	0.69	42.6
North: Shaftsbury Road													
7	L2	8	0.0	8	0.0	0.217	4.9	LOS A	0.0	0.0	0.00	0.01	55.0
8	T1	695	2.3	695	2.3	0.217	1.1	LOS A	1.1	7.6	0.12	0.03	53.1
9	R2	27	0.0	27	0.0	0.217	15.1	LOS B	1.1	7.6	0.29	0.06	34.2
Approach		731	2.2	731	2.2	0.217	1.7	NA	1.1	7.6	0.12	0.03	52.7
All Vehicles		1888	2.2	1888	2.2	0.276	1.3	NA	1.1	7.6	0.07	0.08	52.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.9 %
Number of Iterations: 8 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 104 [4 Shaftsbury Road - Deanne Street - Thursday - PM]

Network: N101 [Thursday - PM Network]

4 Shaftsbury Road - Deanne Street - PM - 5:30 - 6:30
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
1	L2	48	0.0	48	0.0	0.221	5.5	LOS A	0.0	0.0	0.00	0.07	55.6
2	T1	805	1.2	805	1.2	0.221	0.0	LOS A	0.0	0.0	0.00	0.03	57.8
Approach		854	1.1	854	1.1	0.221	0.3	NA	0.0	0.0	0.00	0.03	57.7
East: RoadName													
4	L2	78	0.0	78	0.0	0.099	8.1	LOS A	0.4	2.5	0.48	0.72	42.3
Approach		78	0.0	78	0.0	0.099	8.1	LOS A	0.4	2.5	0.48	0.72	42.3
North: Shaftsbury Road													
7	L2	12	0.0	11	0.0	0.259	4.9	LOS A	0.0	0.0	0.00	0.01	55.0
8	T1	960	1.1	936	1.1	0.259	0.3	LOS A	0.5	3.3	0.05	0.02	57.4
9	R2	16	0.0	15	0.0	0.259	12.3	LOS A	0.5	3.3	0.09	0.02	49.8
Approach		987	1.1	962[N1]	1.1	0.259	0.6	NA	0.5	3.3	0.05	0.02	57.3
All Vehicles		1919	1.0	1894[N1]	1.1	0.259	0.8	NA	0.5	3.3	0.04	0.05	55.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 2.3 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 105 [5 Deanne Street - Marmaduke Street - Saturday - PM]

Network: N101 [Saturday - PM Network]

5 Deanne Street - Marmaduke Street - Saturday - PM - 6:00 - 7:00
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Deanne Street													
5	T1	66	0.0	66	0.0	0.018	0.0	LOS A	0.0	0.0	0.00	0.04	58.1
6	R2	4	0.0	4	0.0	0.018	5.7	LOS A	0.0	0.0	0.00	0.08	56.0
Approach		71	0.0	70[N1]	0.0	0.018	0.3	NA	0.0	0.0	0.00	0.04	57.9
North: Marmaduke Street													
9	R2	112	0.0	112	0.0	0.082	5.1	LOS A	0.3	1.9	0.13	0.59	28.4
Approach		112	0.0	112	0.0	0.082	5.1	LOS A	0.3	1.9	0.13	0.59	28.4
All Vehicles		182	0.0	182	0.0	0.082	3.3	NA	0.3	1.9	0.08	0.38	39.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.5 %
Number of Iterations: 6 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 105 [5 Deanne Street - Marmaduke Street - Thursday - AM]

Network: N101 [Thursday - AM Network]

5 Deanne Street - Marmaduke Street - Thursday - AM - 8:00 - 9:00
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Deanne Street													
5	T1	116	0.9	116	0.9	0.032	0.0	LOS A	0.0	0.0	0.00	0.04	58.0
6	R2	7	0.0	7	0.0	0.032	5.7	LOS A	0.0	0.0	0.00	0.08	56.0
Approach		123	0.9	123	0.9	0.032	0.3	NA	0.0	0.0	0.00	0.04	57.9
North: Marmaduke Street													
9	R2	89	3.5	89	3.5	0.069	5.3	LOS A	0.2	1.6	0.19	0.59	28.0
Approach		89	3.5	89	3.5	0.069	5.3	LOS A	0.2	1.6	0.19	0.59	28.0
All Vehicles		213	2.0	213	2.0	0.069	2.4	NA	0.2	1.6	0.08	0.27	45.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.9 %
Number of Iterations: 8 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 105 [5 Deanne Street - Marmaduke Street - Thursday - PM]

Network: N101 [Thursday - PM Network]

5 Deanne Street - Marmaduke Street - Thursday - PM - 5:30 - 6:30
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Deanne Street													
5	T1	62	0.0	62	0.0	0.018	0.0	LOS A	0.0	0.0	0.00	0.05	57.5
6	R2	5	0.0	5	0.0	0.018	5.7	LOS A	0.0	0.0	0.00	0.10	54.9
Approach		67	0.0	67	0.0	0.018	0.4	NA	0.0	0.0	0.00	0.05	57.3
North: Marmaduke Street													
9	R2	88	0.0	88	0.0	0.064	5.1	LOS A	0.2	1.5	0.13	0.59	28.5
Approach		88	0.0	88	0.0	0.064	5.1	LOS A	0.2	1.5	0.13	0.59	28.5
All Vehicles		156	0.0	155[N1]	0.0	0.064	3.1	NA	0.2	1.5	0.07	0.36	40.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 2.3 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 106 [6 George Street - Marmaduke Street - Saturday - PM]

Network: N101 [Saturday - PM Network]

6 George Street - Marmaduke Street - Saturday - PM - 6:00 - 7:00
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Marmaduke Street													
3	R2	7	0.0	7	0.0	0.005	5.1	LOS A	0.0	0.1	0.13	0.58	28.5
Approach		7	0.0	7	0.0	0.005	5.1	LOS A	0.0	0.1	0.13	0.58	28.5
West: George Street													
11	T1	38	0.0	38	0.0	0.019	0.0	LOS A	0.0	0.0	0.00	0.01	59.4
12	R2	35	0.0	35	0.0	0.019	5.7	LOS A	0.0	0.0	0.00	0.62	39.5
Approach		73	0.0	73	0.0	0.019	2.7	NA	0.0	0.0	0.00	0.30	47.9
All Vehicles		80	0.0	80	0.0	0.019	3.0	NA	0.0	0.1	0.01	0.33	46.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.5 %
Number of Iterations: 6 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 106 [6 George Street - Marmaduke Street - Thursday - AM]

Network: N101 [Thursday - AM Network]

6 George Street - Marmaduke Street - Thursday - AM - 8:00 -9:00
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Marmaduke Street													
3	R2	5	0.0	5	0.0	0.004	5.1	LOS A	0.0	0.1	0.13	0.58	28.5
Approach		5	0.0	5	0.0	0.004	5.1	LOS A	0.0	0.1	0.13	0.58	28.5
West: George Street													
11	T1	56	5.7	56	5.7	0.019	0.0	LOS A	0.0	0.0	0.00	0.10	55.6
12	R2	16	13.3	16	13.3	0.019	5.9	LOS A	0.0	0.0	0.00	0.30	48.8
Approach		72	7.4	72	7.4	0.019	1.3	NA	0.0	0.0	0.00	0.14	54.0
All Vehicles		77	6.8	77	6.8	0.019	1.6	NA	0.0	0.1	0.01	0.17	52.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.9 %
Number of Iterations: 8 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 106 [6 George Street - Marmaduke Street - Thursday - PM]

Network: N101 [Thursday - PM Network]

6 George Street - Marmaduke Street - Thursday - PM - 5:30 - 6:30
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Marmaduke Street													
3	R2	8	0.0	8	0.0	0.006	5.1	LOS A	0.0	0.1	0.15	0.58	28.3
Approach		8	0.0	8	0.0	0.006	5.1	LOS A	0.0	0.1	0.15	0.58	28.3
West: George Street													
11	T1	76	0.0	76	0.0	0.024	0.0	LOS A	0.0	0.0	0.00	0.09	56.0
12	R2	16	0.0	16	0.0	0.024	5.7	LOS A	0.0	0.0	0.00	0.23	50.7
Approach		92	0.0	92	0.0	0.024	1.0	NA	0.0	0.0	0.00	0.11	55.0
All Vehicles		100	0.0	100	0.0	0.024	1.3	NA	0.0	0.1	0.01	0.15	53.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 2.3 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 107 [7 Burwood Rd - George St - Saturday - PM]

Network: N101 [Saturday - PM Network]

7 Burwood Rd - George St - Saturday - PM - 6:00 - 7:00
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Burwood Rd													
1	L2	65	0.0	65	0.0	0.168	5.2	LOS A	0.0	0.0	0.00	0.12	52.7
2	T1	501	6.7	501	6.7	0.168	0.3	LOS A	0.4	2.9	0.08	0.09	54.8
3	R2	26	0.0	26	0.0	0.168	8.5	LOS A	0.4	2.9	0.15	0.06	47.9
Approach		593	5.7	593	5.7	0.168	1.2	NA	0.4	2.9	0.07	0.09	54.3
North: Burwood Rd													
7	L2	15	0.0	15	0.0	0.149	5.5	LOS A	0.0	0.0	0.00	0.03	57.9
8	T1	541	6.8	541	6.8	0.149	0.0	LOS A	0.0	0.0	0.00	0.02	59.3
Approach		556	6.6	556	6.6	0.149	0.2	NA	0.0	0.0	0.00	0.02	59.3
All Vehicles		1148	6.1	1148	6.1	0.168	0.7	NA	0.4	2.9	0.04	0.06	56.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.5 %
Number of Iterations: 6 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 107 [7 Burwood Rd - George St - Thursday - AM]

Network: N101 [Thursday - AM Network]

7 Burwood Rd - George St - Thursday - AM - 8:00 -9:00
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Burwood Rd													
1	L2	156	1.4	156	1.4	0.283	5.2	LOS A	0.0	0.0	0.00	0.18	51.1
2	T1	563	10.7	563	10.7	0.283	0.7	LOS A	1.6	11.7	0.17	0.23	49.8
3	R2	156	1.4	156	1.4	0.283	7.9	LOS A	1.6	11.7	0.47	0.33	32.5
Approach		875	7.3	875	7.3	0.283	2.8	NA	1.6	11.7	0.19	0.24	48.2
North: Burwood Rd													
7	L2	14	15.4	14	15.4	0.119	5.7	LOS A	0.0	0.0	0.00	0.04	57.6
8	T1	408	14.9	408	14.9	0.119	0.0	LOS A	0.0	0.0	0.00	0.02	59.2
Approach		422	15.0	422	15.0	0.119	0.2	NA	0.0	0.0	0.00	0.02	59.2
All Vehicles		1297	9.8	1297	9.8	0.283	1.9	NA	1.6	11.7	0.13	0.17	51.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.9 %
Number of Iterations: 8 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 107 [7 Burwood Rd - George St - Thursday - PM]

Network: N101 [Thursday - PM Network]

7 Burwood Rd - George St - Thursday - PM - 5:30 - 6:30
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Burwood Rd													
1	L2	83	0.0	83	0.0	0.169	5.2	LOS A	0.0	0.0	0.00	0.16	51.9
2	T1	445	10.2	445	10.2	0.169	0.4	LOS A	0.5	4.0	0.11	0.14	53.0
3	R2	44	0.0	44	0.0	0.169	7.7	LOS A	0.5	4.0	0.22	0.11	43.9
Approach		573	7.9	573	7.9	0.169	1.6	NA	0.5	4.0	0.10	0.14	52.5
North: Burwood Rd													
7	L2	12	0.0	12	0.0	0.124	5.5	LOS A	0.0	0.0	0.00	0.03	57.9
8	T1	442	10.2	442	10.2	0.124	0.0	LOS A	0.0	0.0	0.00	0.01	59.3
Approach		454	10.0	454	10.0	0.124	0.1	NA	0.0	0.0	0.00	0.02	59.3
All Vehicles		1026	8.8	1026	8.8	0.169	1.0	NA	0.5	4.0	0.06	0.08	55.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 2.3 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 108 [8 Burwood Rd - Deanne St - Saturday - PM]

Network: N101 [Saturday - PM Network]

8 Burwood Rd - Deanne St - Saturday - PM - 6:00 - 7:00
Signals - Actuated Isolated Cycle Time = 27 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Burwood Rd													
1	L2	18	0.0	18	0.0	0.445	13.9	LOS A	3.1	22.6	0.81	0.68	44.7
2	T1	538	6.3	538	6.3	0.445	8.4	LOS A	3.1	22.6	0.81	0.67	42.2
Approach		556	6.1	556	6.1	0.445	8.6	LOS A	3.1	22.6	0.81	0.67	42.3
East: Deanne Rd													
4	L2	80	0.0	80	0.0	0.197	15.8	LOS B	0.9	6.5	0.83	0.73	36.0
6	R2	54	0.0	54	0.0	0.132	15.5	LOS B	0.6	4.3	0.81	0.72	27.6
Approach		134	0.0	133[N1]	0.0	0.197	15.7	LOS B	0.9	6.5	0.82	0.72	33.1
North: Burwood Rd													
8	T1	544	6.8	544	6.8	0.437	8.4	LOS A	3.0	22.2	0.80	0.67	42.5
Approach		544	6.8	544	6.8	0.437	8.4	LOS A	3.0	22.2	0.80	0.67	42.5
All Vehicles		1234	5.7	1233[N1]	5.7	0.445	9.3	LOS A	3.1	22.6	0.81	0.67	41.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.5 %
Number of Iterations: 6 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	8.2	LOS A	0.0	0.0	0.78	0.78
P2	East Full Crossing	53	8.2	LOS A	0.0	0.0	0.78	0.78
P3	North Full Crossing	53	8.2	LOS A	0.0	0.0	0.78	0.78
P4	West Full Crossing	53	8.2	LOS A	0.0	0.0	0.78	0.78
All Pedestrians		211	8.2	LOS A			0.78	0.78

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 108 [8 Burwood Rd - Deanne St - Thursday - AM]

Network: N101 [Thursday - AM Network]

8 Burwood Rd - Deanne St - Thursday - AM - 8:00- 9:00
Signals - Actuated Isolated Cycle Time = 31 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Burwood Rd													
1	L2	131	0.0	131	0.0	0.518	13.4	LOS A	4.7	35.0	0.77	0.70	43.7
2	T1	666	10.3	666	10.3	0.518	7.9	LOS A	4.7	35.0	0.77	0.68	42.2
Approach		797	8.6	797	8.6	0.518	8.8	LOS A	4.7	35.8	0.77	0.68	42.5
East: Deanne Rd													
4	L2	59	1.8	59	1.8	0.169	18.0	LOS B	0.8	5.7	0.85	0.72	34.0
6	R2	91	1.2	91	1.2	0.258	18.2	LOS B	1.3	8.9	0.86	0.75	25.5
Approach		149	1.4	149	1.4	0.258	18.1	LOS B	1.3	8.9	0.86	0.74	29.3
North: Burwood Rd													
8	T1	401	14.4	401	14.4	0.268	6.9	LOS A	2.1	16.3	0.67	0.55	44.9
Approach		401	14.4	401	14.4	0.268	6.9	LOS A	2.1	16.3	0.67	0.55	44.9
All Vehicles		1347	9.5	1347	9.5	0.518	9.2	LOS A	4.7	35.8	0.75	0.65	41.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.9 %
Number of Iterations: 8 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	10.1	LOS B	0.0	0.0	0.81	0.81
P2	East Full Crossing	53	7.8	LOS A	0.0	0.0	0.71	0.71
P3	North Full Crossing	53	10.1	LOS B	0.0	0.0	0.81	0.81
P4	West Full Crossing	53	7.1	LOS A	0.0	0.0	0.68	0.68
All Pedestrians		211	8.8	LOS A			0.75	0.75

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 108 [8 Burwood Rd - Deanne St - Thursday - PM]

Network: N101 [Thursday - PM Network]

8 Burwood Rd - Deanne St - Thursday - PM - 5:30 - 6:30
Signals - Actuated Isolated Cycle Time = 28 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Burwood Rd													
1	L2	52	0.0	52	0.0	0.432	13.7	LOS A	3.2	23.4	0.78	0.68	44.3
2	T1	519	8.5	519	8.5	0.432	8.1	LOS A	3.2	23.4	0.78	0.66	42.2
Approach		571	7.7	571	7.7	0.432	8.6	LOS A	3.2	23.7	0.78	0.66	42.5
East: Deanne Rd													
4	L2	66	0.0	66	0.0	0.169	16.3	LOS B	0.8	5.6	0.83	0.72	35.6
6	R2	53	0.0	53	0.0	0.134	16.1	LOS B	0.6	4.4	0.82	0.72	27.2
Approach		119	0.0	119	0.0	0.169	16.2	LOS B	0.8	5.6	0.82	0.72	32.3
North: Burwood Rd													
8	T1	445	9.9	445	9.9	0.340	7.8	LOS A	2.4	18.0	0.75	0.62	43.4
Approach		445	9.9	445	9.9	0.340	7.8	LOS A	2.4	18.0	0.75	0.62	43.4
All Vehicles		1135	7.8	1134 N1	7.8	0.432	9.1	LOS A	3.2	23.7	0.78	0.65	41.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 2.3 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	8.7	LOS A	0.0	0.0	0.79	0.79
P2	East Full Crossing	53	8.7	LOS A	0.0	0.0	0.79	0.79
P3	North Full Crossing	53	8.7	LOS A	0.0	0.0	0.79	0.79
P4	West Full Crossing	53	7.9	LOS A	0.0	0.0	0.75	0.75
All Pedestrians		211	8.5	LOS A			0.78	0.78

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Attachment 3 – Modelling – Post Development Analysis

MOVEMENT SUMMARY

Site: 101 [1 Shaftsbury Road - Victoria St - Saturday - PM - 2020 - With Development]

Network: N101 [Saturday - PM Network - 2020 - With Development]

1 Shaftsbury Road - Victoria St - Saturday - PM - 6:00 - 7:00
Signals - Fixed Time Isolated Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road (S)													
1	L2	145	0.0	144	0.0	0.609	38.9	LOS C	28.3	199.9	0.82	0.76	31.7
2	T1	406	1.3	404	1.3	0.609	33.9	LOS C	28.3	199.9	0.83	0.76	32.1
3	R2	66	0.0	66	0.0	0.609	45.4	LOS D	4.5	31.7	1.00	0.78	28.4
Approach		618	0.9	614 N1	0.9	0.609	36.3	LOS C	28.3	199.9	0.85	0.77	31.6
East: Victoria Road (E)													
4	L2	161	1.3	161	1.3	1.488	290.6	LOS F	61.1	436.0	1.00	1.45	5.4
5	T1	87	0.0	87	0.0	1.488	285.0	LOS F	61.1	436.0	1.00	1.45	9.8
6	R2	157	4.7	157	4.7	1.488	290.6	LOS F	61.1	436.0	1.00	1.45	9.8
Approach		405	2.3	405	2.3	1.488	289.4	LOS F	61.1	436.0	1.00	1.45	8.1
North: Shaftsbury Road (N)													
7	L2	62	0.0	62	0.0	0.825	54.6	LOS D	39.1	275.5	0.98	0.90	32.5
8	T1	534	1.0	534	1.0	0.825	50.6	LOS D	39.1	275.5	0.98	0.90	22.5
9	R2	47	0.0	47	0.0	0.825	91.2	LOS F	5.7	39.9	1.00	0.89	24.0
Approach		643	0.8	643	0.8	0.825	54.0	LOS D	39.1	275.5	0.98	0.90	23.9
West: Victoria Road (W)													
10	L2	295	5.7	295	5.7	0.344	31.3	LOS C	13.2	96.8	0.67	0.77	38.8
11	T1	122	4.3	122	4.3	0.682	40.5	LOS C	25.6	182.2	0.92	0.84	34.7
12	R2	301	1.0	301	1.0	0.682	46.0	LOS D	25.6	182.2	0.92	0.84	24.6
Approach		718	3.5	718	3.5	0.682	39.0	LOS C	25.6	182.2	0.82	0.81	32.9
All Vehicles		2384	1.9	2381 N1	1.9	1.488	85.0	LOS F	61.1	436.0	0.90	0.93	19.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1.0 %
Number of Iterations: 9 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	45.0	LOS E	0.2	0.2	0.78	0.78
P2	East Full Crossing	53	34.1	LOS D	0.2	0.2	0.67	0.67
P3	North Full Crossing	53	25.9	LOS C	0.1	0.1	0.59	0.59
P4	West Full Crossing	53	28.3	LOS C	0.1	0.1	0.61	0.61
All Pedestrians		211	33.3	LOS D			0.66	0.66

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

MOVEMENT SUMMARY

Site: 101 [1 Shaftsbury Road - Victoria St - Thursday - PM - 2020 - With Development]

Network: N101 [Thursday - PM Network - 2020 - With Development]

1 Shaftsbury Road - Victoria St - Thursday - PM - 5:30 - 6:30
Signals - Fixed Time Isolated Cycle Time = 150 seconds (Practical Cycle Time)
This Site is not connected to the Network.

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road (S)													
1	L2	279	0.0	279	0.0	0.773	39.1	LOS C	41.8	296.1	0.89	0.84	31.4
2	T1	466	2.3	466	2.3	0.773	34.3	LOS C	41.8	296.1	0.90	0.84	31.7
3	R2	78	0.0	78	0.0	0.773	48.4	LOS D	5.5	38.6	1.00	0.85	27.4
Approach		823	1.3	823	1.3	0.773	37.3	LOS C	41.8	296.1	0.91	0.84	31.1
East: Victoria Road (E)													
4	L2	165	1.3	165	1.3	1.660	362.3	LOS F	71.7	509.0	1.00	1.60	5.7
5	T1	153	0.0	153	0.0	1.660	356.8	LOS F	71.7	509.0	1.00	1.60	8.1
6	R2	122	4.3	122	4.3	1.660	362.3	LOS F	71.7	509.0	1.00	1.60	8.1
Approach		440	1.7	440	1.7	1.660	360.4	LOS F	71.7	509.0	1.00	1.60	7.3
North: Shaftsbury Road (N)													
7	L2	51	0.0	51	0.0	0.843	52.7	LOS D	43.8	309.6	0.98	0.92	33.1
8	T1	600	1.2	600	1.2	0.843	47.9	LOS D	43.8	309.6	0.98	0.91	27.5
9	R2	44	4.8	44	4.8	0.843	94.3	LOS F	4.5	32.9	1.00	0.88	23.4
Approach		695	1.4	695	1.4	0.843	51.2	LOS D	43.8	309.6	0.98	0.91	27.6
West: Victoria Road (W)													
10	L2	228	11.1	228	11.1	0.297	33.7	LOS C	10.5	80.3	0.68	0.76	37.8
11	T1	127	5.0	127	5.0	0.750	46.3	LOS D	26.1	185.9	0.96	0.91	32.9
12	R2	296	0.7	296	0.7	0.750	51.8	LOS D	26.1	185.9	0.96	0.91	26.4
Approach		652	5.2	652	5.2	0.750	44.4	LOS D	26.1	185.9	0.86	0.86	31.8
All Vehicles		2609	2.3	2609	2.3	1.660	97.2	LOS F	71.7	509.0	0.93	0.99	18.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.7 %
Number of Iterations: 6 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	47.3	LOS E	0.2	0.2	0.80	0.80
P2	East Full Crossing	53	30.8	LOS D	0.1	0.1	0.64	0.64
P3	North Full Crossing	53	28.9	LOS C	0.1	0.1	0.62	0.62
P4	West Full Crossing	53	25.3	LOS C	0.1	0.1	0.58	0.58

MOVEMENT SUMMARY

Site: 102 [2 Shaftsbury Road - George St - Saturday - PM - 2020 - With Development]

Network: N101 [Saturday - PM Network - 2020 - With Development]

2 Shaftsbury Road - George St - Saturday - PM - 6:00 - 7:00
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
1	L2	1	0.0	1	0.0	0.157	3.5	LOS A	0.0	0.0	0.00	0.00	59.7
2	T1	549	1.0	546	1.0	0.157	0.0	LOS A	0.0	0.0	0.00	0.00	59.8
Approach		551	1.0	547[N1]	1.0	0.157	0.0	NA	0.0	0.0	0.00	0.00	59.8
North: Shaftsbury Road													
8	T1	992	0.7	940	0.7	0.252	0.1	LOS A	0.2	1.5	0.03	0.01	58.6
9	R2	16	0.0	15	0.0	0.252	9.2	LOS A	0.2	1.5	0.05	0.02	57.2
Approach		1007	0.7	955[N1]	0.7	0.252	0.3	NA	0.2	1.5	0.03	0.01	58.6
West: George St													
10	L2	45	0.0	45	0.0	0.162	9.3	LOS A	0.5	3.2	0.52	0.88	22.1
12	R2	11	0.0	10	0.0	0.162	39.5	LOS C	0.5	3.2	0.52	0.88	22.1
Approach		56	0.0	55[N1]	0.0	0.162	15.0	LOS B	0.5	3.2	0.52	0.88	22.1
All Vehicles		1614	0.8	1558[N1]	0.8	0.252	0.7	NA	0.5	3.2	0.03	0.04	55.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1.0 %
Number of Iterations: 9 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 102 [2 Shaftsbury Road - George St - Thursday - PM -2020 - With Development]

Network: N101 [Thursday - PM Network - 2020 - With Development]

2 Shaftsbury Road - George St - Thursday - PM - 5:30 - 6:30
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
1	L2	1	0.0	1	0.0	0.189	3.5	LOS A	0.0	0.0	0.00	0.00	59.8
2	T1	729	1.4	729	1.4	0.189	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		731	1.4	731	1.4	0.189	0.0	NA	0.0	0.0	0.00	0.00	59.9
North: Shaftsbury Road													
8	T1	1046	0.9	1046	0.9	0.282	0.2	LOS A	0.4	2.9	0.04	0.01	58.3
9	R2	16	0.0	16	0.0	0.282	11.4	LOS A	0.4	2.9	0.07	0.02	56.0
Approach		1062	0.9	1062	0.9	0.282	0.4	NA	0.4	2.9	0.04	0.01	58.3
West: George St													
10	L2	82	0.0	82	0.0	0.512	22.6	LOS B	2.3	16.3	0.76	1.14	19.2
12	R2	15	0.0	15	0.0	0.512	129.4	LOS F	2.3	16.3	0.76	1.14	12.6
Approach		97	0.0	96[N1]	0.0	0.512	38.8	LOS C	2.3	16.3	0.76	1.14	18.3
All Vehicles		1889	1.1	1889	1.1	0.512	2.2	NA	2.3	16.3	0.06	0.06	51.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.7 %
Number of Iterations: 6 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 103 [3 Shaftsbury Road - Waimea Rd - Saturday - PM - 2020 - With Development]

Network: N101 [Saturday - PM Network - 2020 - With Development]

3 Shaftsbury Road - Waimea Rd - Saturday - PM - 6:00 - 7:00
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
1	L2	40	0.0	40	0.0	0.216	4.9	LOS A	0.0	0.0	0.00	0.06	39.1
2	T1	491	0.9	491	0.9	0.216	1.1	LOS A	1.3	8.9	0.14	0.13	43.4
3	R2	89	0.0	89	0.0	0.216	10.7	LOS A	1.3	8.9	0.62	0.37	32.0
Approach		620	0.7	620	0.7	0.216	2.7	NA	1.3	8.9	0.20	0.16	39.5
East: Waimea Road													
4	L2	180	1.8	180	1.8	1.119	109.8	LOS F	16.9	119.7	1.00	2.16	3.2
5	T1	57	0.0	57	0.0	1.119	201.3	LOS F	16.9	119.7	1.00	1.94	4.0
6	R2	31	0.0	31	0.0	1.119	265.9	LOS F	5.8	40.8	1.00	1.28	1.5
Approach		267	1.2	267	1.2	1.119	147.1	LOS F	16.9	119.7	1.00	2.01	3.0
North: Shaftsbury Road													
7	L2	17	0.0	16	0.0	0.313	3.5	LOS A	0.0	0.0	0.00	0.02	33.9
8	T1	803	0.9	762	0.9	0.313	0.7	LOS A	0.0	0.0	0.13	0.11	43.7
9	R2	191	0.0	181	0.0	0.313	7.2	LOS A	0.0	0.0	0.56	0.42	23.8
Approach		1011	0.7	959[N1]	0.7	0.313	2.0	NA	0.0	0.0	0.21	0.16	33.5
West: Waimea Road													
10	L2	44	0.0	44	0.0	0.306	13.1	LOS A	1.1	7.6	0.74	1.00	10.2
11	T1	14	0.0	14	0.0	0.306	82.3	LOS F	1.1	7.6	0.74	1.00	16.7
12	R2	13	0.0	13	0.0	0.612	264.2	LOS F	1.7	12.2	0.99	1.04	1.3
Approach		71	0.0	71	0.0	0.612	71.5	LOS F	1.7	12.2	0.78	1.01	5.4
All Vehicles		1968	0.7	1917[N1]	0.8	1.119	25.0	NA	16.9	119.7	0.34	0.45	10.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1.0 %
Number of Iterations: 9 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 103 [3 Shaftsbury Road - Waimea Rd - Thursday - PM - 2020 - With Development]

Network: N101 [Thursday - PM Network - 2020 - With Development]

3 Shaftsbury Road - Waimea Rd - Thursday - PM - 5:30 - 6:30
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
1	L2	42	0.0	42	0.0	0.355	5.0	LOS A	0.0	0.0	0.00	0.04	39.5
2	T1	694	1.5	694	1.5	0.355	0.7	LOS A	1.9	13.7	0.06	0.09	51.9
3	R2	155	0.0	155	0.0	0.355	13.7	LOS A	1.9	13.7	0.77	0.73	25.9
Approach		891	1.2	891	1.2	0.355	3.1	NA	1.9	13.7	0.18	0.20	41.5
East: Waimea Road													
4	L2	198	1.1	198	1.1	1.514	272.6	LOS F	29.9	210.9	1.00	2.73	1.4
5	T1	38	0.0	38	0.0	1.514	500.1	LOS F	29.9	210.9	1.00	1.92	1.4
6	R2	3	0.0	3	0.0	1.514	639.1	LOS F	6.7	46.9	1.00	1.20	0.9
Approach		239	0.9	239	0.9	1.514	313.5	LOS F	29.9	210.9	1.00	2.58	1.4
North: Shaftsbury Road													
7	L2	15	0.0	15	0.0	0.397	3.5	LOS A	0.0	0.0	0.00	0.01	33.9
8	T1	864	1.1	864	1.1	0.397	0.9	LOS A	0.0	0.0	0.09	0.09	43.9
9	R2	200	0.0	200	0.0	0.397	10.6	LOS A	0.0	0.0	0.72	0.62	20.0
Approach		1079	0.9	1079	0.9	0.397	2.7	NA	0.0	0.0	0.21	0.19	30.8
West: Waimea Road													
10	L2	46	0.0	46	0.0	0.822	89.3	LOS F	3.8	26.4	0.94	1.27	3.4
11	T1	13	0.0	13	0.0	0.822	298.7	LOS F	3.8	26.4	0.94	1.27	4.8
12	R2	13	0.0	13	0.0	2.105	1077.3	LOS F	7.1	49.9	1.00	1.12	0.3
Approach		72	0.0	72	0.0	2.105	300.6	LOS F	7.1	49.9	0.95	1.25	1.4
All Vehicles		2280	1.0	2280	1.0	2.105	44.8	NA	29.9	210.9	0.30	0.47	7.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.7 %
Number of Iterations: 6 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 104 [4 Shaftsbury Road - Deanne Street - Saturday - PM - 2020 - With Development]

Network: N101 [Saturday - PM Network - 2020 - With Development]

4 Shaftsbury Road - Deanne Street - Saturday - PM - 6:00 - 7:00
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
1	L2	87	0.0	87	0.0	0.182	5.5	LOS A	0.0	0.0	0.00	0.15	51.3
2	T1	617	0.7	617	0.7	0.182	0.0	LOS A	0.0	0.0	0.00	0.06	55.9
Approach		704	0.6	704	0.6	0.182	0.7	NA	0.0	0.0	0.00	0.07	55.3
East: RoadName													
4	L2	108	0.0	108	0.0	0.141	8.4	LOS A	0.5	3.6	0.50	0.75	42.0
Approach		108	0.0	108	0.0	0.141	8.4	LOS A	0.5	3.6	0.50	0.75	42.0
North: Shaftsbury Road													
7	L2	7	0.0	7	0.0	0.265	4.9	LOS A	0.0	0.0	0.00	0.01	55.1
8	T1	972	1.0	914	1.0	0.265	0.5	LOS A	0.8	5.7	0.08	0.03	56.3
9	R2	39	0.0	37	0.0	0.265	10.2	LOS A	0.8	5.7	0.18	0.06	44.5
Approach		1018	0.9	958[N1]	0.9	0.265	0.9	NA	0.8	5.7	0.08	0.03	56.1
All Vehicles		1831	0.7	1770[N1]	0.8	0.265	1.3	NA	0.8	5.7	0.07	0.09	53.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1.0 %
Number of Iterations: 9 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 104 [4 Shaftsbury Road - Deanne Street - Thursday - PM -2020 - With Development]

Network: N101 [Thursday - PM Network - 2020 - With Development]

4 Shaftsbury Road - Deanne Street - PM - 5:30 - 6:30
Giveway / Yield (Two-Way)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
1	L2	83	0.0	83	0.0	0.252	5.5	LOS A	0.0	0.0	0.00	0.10	53.6
2	T1	887	1.2	887	1.2	0.252	0.0	LOS A	0.0	0.0	0.00	0.05	56.9
Approach		971	1.1	971	1.1	0.252	0.5	NA	0.0	0.0	0.00	0.05	56.6
East: RoadName													
4	L2	83	0.0	83	0.0	0.113	8.5	LOS A	0.4	2.8	0.51	0.75	41.8
Approach		83	0.0	83	0.0	0.113	8.5	LOS A	0.4	2.8	0.51	0.75	41.8
North: Shaftsbury Road													
7	L2	13	0.0	12	0.0	0.284	4.9	LOS A	0.0	0.0	0.00	0.01	55.0
8	T1	1031	1.1	960	1.1	0.284	0.8	LOS A	1.2	8.2	0.10	0.03	54.5
9	R2	33	0.0	30	0.0	0.284	14.4	LOS A	1.2	8.2	0.22	0.05	39.1
Approach		1076	1.1	1002 N1	1.1	0.284	1.3	NA	1.2	8.2	0.10	0.03	54.3
All Vehicles		2129	1.0	2056 N1	1.1	0.284	1.2	NA	1.2	8.2	0.07	0.07	53.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.7 %
Number of Iterations: 6 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 105 [5 Deanne Street - Marmaduke Street - Saturday - PM - 2020 - With Development]

Network: N101 [Saturday - PM Network - 2020 - With Development]

5 Deanne Street - Marmaduke Street - Saturday - PM - 6:00 - 7:00
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Deanne Street													
5	T1	71	0.0	69	0.0	0.032	0.0	LOS A	0.0	0.0	0.00	0.06	56.8
6	R2	53	0.0	52	0.0	0.032	5.7	LOS A	0.0	0.0	0.00	0.56	39.5
Approach		123	0.0	121[N1]	0.0	0.032	2.4	NA	0.0	0.0	0.00	0.28	47.8
North: Marmaduke Street													
9	R2	151	0.0	150	0.0	0.114	5.3	LOS A	0.4	2.7	0.19	0.60	28.0
Approach		151	0.0	150[N1]	0.0	0.114	5.3	LOS A	0.4	2.7	0.19	0.60	28.0
All Vehicles		274	0.0	271[N1]	0.0	0.114	4.0	NA	0.4	2.7	0.10	0.45	37.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1.0 %
Number of Iterations: 9 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 105 [5 Deanne Street - Marmaduke Street - Thursday - PM -2020 - With Development]

Network: N101 [Thursday - PM Network - 2020 - With Development]

5 Deanne Street - Marmaduke Street - Thursday - PM - 5:30 - 6:30
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Deanne Street													
5	T1	66	0.0	65	0.0	0.031	0.0	LOS A	0.0	0.0	0.00	0.04	57.6
6	R2	54	0.0	53	0.0	0.031	5.7	LOS A	0.0	0.0	0.00	0.59	38.8
Approach		120	0.0	118[N1]	0.0	0.031	2.6	NA	0.0	0.0	0.00	0.29	47.4
North: Marmaduke Street													
9	R2	126	0.0	126	0.0	0.096	5.3	LOS A	0.3	2.2	0.18	0.60	28.0
Approach		126	0.0	126	0.0	0.096	5.3	LOS A	0.3	2.2	0.18	0.60	28.0
All Vehicles		246	0.0	244[N1]	0.0	0.096	4.0	NA	0.3	2.2	0.09	0.45	38.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.7 %
Number of Iterations: 6 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 106 [6 George Street - Marmaduke Street - Saturday - PM - 2020 - With Development]

Network: N101 [Saturday - PM Network - 2020 - With Development]

6 George Street - Marmaduke Street - Saturday - PM - 6:00 - 7:00
Giveway / Yield (Two-Way)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Marmaduke Street													
3	R2	19	0.0	19	0.0	0.018	5.4	LOS A	0.1	0.5	0.27	0.56	27.9
Approach		19	0.0	19	0.0	0.018	5.4	LOS A	0.1	0.5	0.27	0.56	27.9
East: George Street													
4	L2	16	0.0	15	0.0	0.008	5.5	LOS A	0.0	0.0	0.00	0.58	35.7
Approach		16	0.0	15 N1	0.0	0.008	5.5	NA	0.0	0.0	0.00	0.58	35.7
West: George Street													
11	T1	41	0.0	41	0.0	0.065	0.0	LOS A	0.3	2.2	0.03	0.20	50.7
12	R2	101	0.0	101	0.0	0.065	5.8	LOS A	0.3	2.2	0.07	0.53	40.6
Approach		142	0.0	142	0.0	0.065	4.1	NA	0.3	2.2	0.06	0.44	43.1
All Vehicles		177	0.0	176 N1	0.0	0.065	4.4	NA	0.3	2.2	0.07	0.46	41.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1.0 %
Number of Iterations: 9 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 106 [6 George Street - Marmaduke Street - Thursday - PM -2020 - With Development]

Network: N101 [Thursday - PM Network - 2020 - With Development]

6 George Street - Marmaduke Street - Thursday - PM - 5:30 - 6:30
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Marmaduke Street													
3	R2	20	0.0	20	0.0	0.020	5.5	LOS A	0.1	0.5	0.29	0.57	27.7
Approach		20	0.0	20	0.0	0.020	5.5	LOS A	0.1	0.5	0.29	0.57	27.7
East: George Street													
4	L2	16	0.0	16	0.0	0.009	5.5	LOS A	0.0	0.0	0.00	0.58	35.7
Approach		16	0.0	16	0.0	0.009	5.5	NA	0.0	0.0	0.00	0.58	35.7
West: George Street													
11	T1	81	0.0	81	0.0	0.042	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R2	80	0.0	80	0.0	0.045	5.8	LOS A	0.2	1.5	0.07	0.60	38.7
Approach		161	0.0	161	0.0	0.045	2.9	NA	0.2	1.5	0.03	0.30	47.1
All Vehicles		197	0.0	196[N1]	0.0	0.045	3.3	NA	0.2	1.5	0.06	0.35	44.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.7 %
Number of Iterations: 6 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 107 [7 Burwood Rd - George St - Saturday - PM - 2020 - With Development]

Network: N101 [Saturday - PM Network - 2020 - With Development]

7 Burwood Rd - George St - Saturday - PM - 6:00 - 7:00
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Burwood Rd													
1	L2	69	0.0	69	0.0	0.203	5.2	LOS A	0.0	0.0	0.00	0.11	53.0
2	T1	533	6.7	533	6.7	0.203	0.7	LOS A	0.0	0.0	0.14	0.13	52.2
3	R2	60	0.0	60	0.0	0.203	9.2	LOS A	0.0	0.0	0.34	0.16	37.4
Approach		662	5.4	662	5.4	0.203	2.0	NA	0.0	0.0	0.14	0.13	51.6
North: Burwood Rd													
7	L2	47	0.0	47	0.0	0.167	5.5	LOS A	0.0	0.0	0.00	0.09	54.3
8	T1	576	6.9	576	6.9	0.167	0.0	LOS A	0.0	0.0	0.00	0.04	58.2
Approach		623	6.4	623	6.4	0.167	0.4	NA	0.0	0.0	0.00	0.05	58.0
All Vehicles		1285	5.9	1285	5.9	0.203	1.2	NA	0.0	0.0	0.07	0.09	54.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1.0 %
Number of Iterations: 9 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 107 [7 Burwood Rd - George St - Thursday - PM -2020 - With Development]

Network: N101 [Thursday - PM Network - 2020 - With Development]

7 Burwood Rd - George St - Thursday - PM - 5:30 - 6:30
Stop (Two-Way)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Burwood Rd													
1	L2	88	0.0	88	0.0	0.201	5.2	LOS A	0.0	0.0	0.00	0.14	52.3
2	T1	474	10.2	474	10.2	0.201	0.7	LOS A	0.0	0.0	0.15	0.17	51.2
3	R2	79	0.0	79	0.0	0.201	8.3	LOS A	0.0	0.0	0.38	0.22	36.1
Approach		641	7.6	641	7.6	0.201	2.2	NA	0.0	0.0	0.16	0.17	50.3
North: Burwood Rd													
7	L2	44	0.0	44	0.0	0.141	5.5	LOS A	0.0	0.0	0.00	0.10	53.5
8	T1	471	10.3	471	10.3	0.141	0.0	LOS A	0.0	0.0	0.00	0.05	57.9
Approach		515	9.4	515	9.4	0.141	0.5	NA	0.0	0.0	0.00	0.05	57.7
All Vehicles		1156	8.4	1156	8.4	0.201	1.5	NA	0.0	0.0	0.09	0.12	53.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.7 %
Number of Iterations: 6 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 108 [8 Burwood Rd - Deanne St - Saturday - PM - 2020 - With Development]

Network: N101 [Saturday - PM Network - 2020 - With Development]

8 Burwood Rd - Deanne St - Saturday - PM - 6:00 - 7:00
Signals - Actuated Isolated Cycle Time = 28 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Burwood Rd													
1	L2	20	0.0	20	0.0	0.465	13.8	LOS A	3.5	25.6	0.80	0.67	44.9
2	T1	603	5.9	603	5.9	0.465	8.2	LOS A	3.5	25.7	0.80	0.67	42.5
Approach		623	5.7	623	5.7	0.465	8.4	LOS A	3.5	25.7	0.80	0.67	42.6
East: Deanne Rd													
4	L2	101	0.0	100	0.0	0.256	16.5	LOS B	1.2	8.7	0.85	0.74	35.3
6	R2	74	0.0	73	0.0	0.186	16.2	LOS B	0.9	6.2	0.83	0.73	27.0
Approach		175	0.0	173[N1]	0.0	0.256	16.4	LOS B	1.2	8.7	0.84	0.74	32.3
North: Burwood Rd													
8	T1	579	6.9	579	6.9	0.434	8.1	LOS A	3.2	23.8	0.79	0.65	42.9
Approach		579	6.9	579	6.9	0.434	8.1	LOS A	3.2	23.8	0.79	0.65	42.9
All Vehicles		1377	5.5	1375[N1]	5.5	0.465	9.3	LOS A	3.5	25.7	0.80	0.67	41.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1.0 %
Number of Iterations: 9 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	8.7	LOS A	0.0	0.0	0.79	0.79
P2	East Full Crossing	53	8.7	LOS A	0.0	0.0	0.79	0.79
P3	North Full Crossing	53	8.7	LOS A	0.0	0.0	0.79	0.79
P4	West Full Crossing	53	7.9	LOS A	0.0	0.0	0.75	0.75
All Pedestrians		211	8.5	LOS A			0.78	0.78

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 108 [8 Burwood Rd - Deanne St - Thursday - PM -2020 - With Development]

Network: N101 [Thursday - PM Network - 2020 - With Development]

8 Burwood Rd - Deanne St - Thursday - PM - 5:30 - 6:30
Signals - Actuated Isolated Cycle Time = 29 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Burwood Rd													
1	L2	56	0.0	56	0.0	0.455	13.5	LOS A	3.6	26.6	0.78	0.67	44.5
2	T1	583	8.1	583	8.1	0.455	8.0	LOS A	3.6	26.6	0.78	0.66	42.4
Approach		639	7.4	639	7.4	0.455	8.5	LOS A	3.6	26.9	0.78	0.66	42.7
East: Deanne Rd													
4	L2	86	0.0	86	0.0	0.227	17.0	LOS B	1.1	7.7	0.85	0.74	35.0
6	R2	73	0.0	72	0.0	0.191	16.8	LOS B	0.9	6.4	0.84	0.73	26.6
Approach		159	0.0	158 N1	0.0	0.227	16.9	LOS B	1.1	7.7	0.84	0.73	31.6
North: Burwood Rd													
8	T1	474	10.0	474	10.0	0.341	7.6	LOS A	2.5	19.2	0.73	0.60	43.8
Approach		474	10.0	474	10.0	0.341	7.6	LOS A	2.5	19.2	0.73	0.60	43.8
All Vehicles		1272	7.5	1271 N1	7.5	0.455	9.2	LOS A	3.6	26.9	0.77	0.65	41.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 0.7 %
Number of Iterations: 6 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	9.1	LOS A	0.0	0.0	0.79	0.79
P2	East Full Crossing	53	8.4	LOS A	0.0	0.0	0.76	0.76
P3	North Full Crossing	53	9.1	LOS A	0.0	0.0	0.79	0.79
P4	West Full Crossing	53	7.6	LOS A	0.0	0.0	0.73	0.73
All Pedestrians		211	8.6	LOS A			0.77	0.77

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [1 Shaftsbury Road - Victoria St - Saturday - PM - 2020 - With Development]

Network: N101 [Saturday - PM Network - 2020 - With Development]

1 Shaftsbury Road - Victoria St - Saturday - PM - 6:00 - 7:00
Signals - Fixed Time Coordinated Cycle Time = 100 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road (S)													
1	L2	145	0.0	145	0.0	0.989	73.9	LOS F	24.2	170.6	1.00	1.13	21.8
2	T1	406	1.3	406	1.3	0.989	68.8	LOS E	24.2	170.6	1.00	1.12	22.0
3	R2	66	0.0	66	0.0	0.989	74.9	LOS F	14.3	101.3	1.00	1.11	21.6
Approach		618	0.9	617[N1]	0.9	0.989	70.6	LOS F	24.2	170.6	1.00	1.12	21.9
East: Victoria Road (E)													
4	L2	161	1.3	161	1.3	0.962	70.6	LOS F	26.4	188.6	1.00	1.09	18.5
5	T1	87	0.0	87	0.0	0.962	65.1	LOS E	26.4	188.6	1.00	1.09	28.0
6	R2	157	4.7	157	4.7	0.962	70.6	LOS F	26.4	188.6	1.00	1.09	27.6
Approach		405	2.3	405	2.3	0.962	69.4	LOS E	26.4	188.6	1.00	1.09	24.6
North: Shaftsbury Road (N)													
7	L2	62	0.0	62	0.0	2.586	749.4	LOS F	62.5	440.6	1.00	2.00	4.3
8	T1	534	1.0	534	1.0	2.586	744.2	LOS F	62.5	440.6	1.00	1.96	2.3
9	R2	47	0.0	47	0.0	2.586	750.1	LOS F	53.2	375.0	1.00	1.92	4.3
Approach		643	0.8	643	0.8	2.586	745.1	LOS F	62.5	440.6	1.00	1.96	2.6
West: Victoria Road (W)													
10	L2	295	5.7	295	5.7	0.239	11.7	LOS A	5.2	38.5	0.40	0.69	49.0
11	T1	122	4.3	122	4.3	0.478	13.5	LOS A	12.2	86.8	0.69	0.73	46.5
12	R2	301	1.0	301	1.0	0.478	19.0	LOS B	12.2	86.8	0.69	0.73	38.2
Approach		718	3.5	718	3.5	0.478	15.1	LOS B	12.2	86.8	0.57	0.71	45.1
All Vehicles		2384	1.9	2383[N1]	1.9	2.586	235.7	LOS F	62.5	440.6	0.87	1.22	9.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 4.0 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	23.9	LOS C	0.1	0.1	0.69	0.69
P2	East Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94
P3	North Full Crossing	53	8.4	LOS A	0.1	0.1	0.41	0.41
P4	West Full Crossing	53	39.7	LOS D	0.1	0.1	0.89	0.89

MOVEMENT SUMMARY

Site: 101 [1 Shaftsbury Road - Victoria St - Thursday - PM - 2020 - With Development]

Network: N101 [Thursday - PM Network - 2020 - With Development - Signals]

1 Shaftsbury Road - Victoria St - Thursday - PM - 5:30 - 6:30
Signals - Fixed Time Coordinated Cycle Time = 100 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road (S)													
1	L2	279	0.0	279	0.0	1.271	162.0	LOS F	39.3	277.4	1.00	1.53	11.8
2	T1	466	2.3	466	2.3	1.271	152.3	LOS F	39.3	277.4	1.00	1.42	11.9
3	R2	78	0.0	78	0.0	1.271	153.7	LOS F	28.7	203.7	1.00	1.31	11.8
Approach		823	1.3	822 N1	1.3	1.271	155.7	LOS F	39.3	277.4	1.00	1.44	11.8
East: Victoria Road (E)													
4	L2	165	1.3	165	1.3	1.000	80.8	LOS F	30.5	216.7	1.00	1.16	16.9
5	T1	153	0.0	153	0.0	1.000	75.2	LOS F	30.5	216.7	1.00	1.16	26.2
6	R2	122	4.3	122	4.3	1.000	80.8	LOS F	30.5	216.7	1.00	1.16	25.7
Approach		440	1.7	440	1.7	1.000	78.9	LOS F	30.5	216.7	1.00	1.16	23.1
North: Shaftsbury Road (N)													
7	L2	51	0.0	51	0.0	2.765	828.7	LOS F	68.7	485.5	1.00	2.04	4.0
8	T1	600	1.2	600	1.2	2.765	823.5	LOS F	68.7	485.5	1.00	2.01	2.1
9	R2	44	4.8	44	4.8	2.765	829.4	LOS F	59.7	424.2	1.00	1.97	4.0
Approach		695	1.4	695	1.4	2.765	824.2	LOS F	68.7	485.5	1.00	2.01	2.3
West: Victoria Road (W)													
10	L2	228	11.1	228	11.1	0.192	11.5	LOS A	3.9	30.0	0.38	0.68	49.0
11	T1	127	5.0	127	5.0	0.502	15.9	LOS B	13.1	93.5	0.73	0.74	45.2
12	R2	296	0.7	296	0.7	0.502	21.4	LOS B	13.1	93.5	0.73	0.74	36.5
Approach		652	5.2	652	5.2	0.502	16.9	LOS B	13.1	93.5	0.61	0.72	43.6
All Vehicles		2609	2.3	2608 N1	2.3	2.765	286.1	LOS F	68.7	485.5	0.90	1.37	7.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 7.4 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	23.2	LOS C	0.1	0.1	0.68	0.68
P2	East Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94
P3	North Full Crossing	53	8.4	LOS A	0.1	0.1	0.41	0.41
P4	West Full Crossing	53	39.7	LOS D	0.1	0.1	0.89	0.89

MOVEMENT SUMMARY

Site: 102v [2 Shaftsbury Road - George St - Saturday - PM - 2020 - With Development - Conversion]

Network: N101 [Saturday - PM Network - 2020 - With Development]

2 Shaftsbury Road - George St - Saturday - PM - 6:00 - 7:00
Signals - Fixed Time Coordinated Cycle Time = 100 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
1	L2	1	0.0	1	0.0	0.192	6.0	LOS A	2.2	15.5	0.18	0.16	33.0
2	T1	549	1.0	549	1.0	0.192	2.9	LOS A	3.0	21.4	0.21	0.18	30.7
Approach		551	1.0	551	1.0	0.192	2.9	LOS A	3.0	21.4	0.21	0.18	30.7
North: Shaftsbury Road													
8	T1	992	0.7	670	0.8	0.268	4.7	LOS A	8.1	56.8	0.40	0.36	41.7
9	R2	16	0.0	11	0.0	0.268	9.3	LOS A	4.1	29.2	0.32	0.30	43.6
Approach		1007	0.7	680 N1	0.8	0.268	4.7	LOS A	8.1	56.8	0.40	0.36	41.7
West: George St													
10	L2	45	0.0	44	0.0	0.270	50.4	LOS D	2.5	17.6	0.95	0.75	8.3
12	R2	11	0.0	10	0.0	0.270	50.3	LOS D	2.5	17.6	0.95	0.75	8.3
Approach		56	0.0	54 N1	0.0	0.270	50.4	LOS D	2.5	17.6	0.95	0.75	8.3
All Vehicles		1614	0.8	1285 N1	1.0	0.270	5.9	LOS A	8.1	56.8	0.34	0.30	33.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 4.0 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94
P3	North Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94
P4	West Full Crossing	53	4.2	LOS A	0.0	0.0	0.29	0.29
All Pedestrians		158	30.9	LOS D			0.72	0.72

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 102v [2 Shaftsbury Road - George St - Thursday - PM -2020 - With Development - Conversion]

Network: N101 [Thursday - PM Network - 2020 - With Development - Signals]

2 Shaftsbury Road - George St - Thursday - PM - 5:30 - 6:30
Signals - Fixed Time Coordinated Cycle Time = 100 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
1	L2	1	0.0	1	0.0	0.445	6.7	LOS A	2.5	17.4	0.19	0.17	29.1
2	T1	729	1.4	729	1.4	0.445	3.0	LOS A	3.6	25.5	0.18	0.16	29.8
Approach		731	1.4	731	1.4	0.445	3.0	LOS A	3.6	25.5	0.18	0.16	29.8
North: Shaftsbury Road													
8	T1	1046	0.9	668	0.8	0.405	8.9	LOS A	8.7	61.3	0.53	0.47	32.8
9	R2	16	0.0	10	0.0	0.405	13.2	LOS A	8.7	61.3	0.46	0.42	34.9
Approach		1062	0.9	678 N1	0.8	0.405	9.0	LOS A	8.7	61.3	0.53	0.47	32.8
West: George St													
10	L2	82	0.0	81	0.0	0.438	43.5	LOS D	4.2	29.5	0.91	0.79	9.4
12	R2	15	0.0	15	0.0	0.438	43.5	LOS D	4.2	29.5	0.91	0.79	9.4
Approach		97	0.0	95 N1	0.0	0.438	43.5	LOS D	4.2	29.5	0.91	0.79	9.4
All Vehicles		1889	1.1	1504 N1	1.3	0.445	8.3	LOS A	8.7	61.3	0.38	0.34	27.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 7.4 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	38.8	LOS D	0.1	0.1	0.88	0.88
P3	North Full Crossing	53	38.8	LOS D	0.1	0.1	0.88	0.88
P4	West Full Crossing	53	7.6	LOS A	0.1	0.1	0.39	0.39
All Pedestrians		158	28.4	LOS C			0.72	0.72

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 103v [3 Shaftsbury Road - Waimea Rd - Saturday - PM - 2020 - With Development - Conversion]

Network: N101 [Saturday - PM Network - 2020 - With Development]

3 Shaftsbury Road - Waimea Rd - Saturday - PM - 6:00 - 7:00
Signals - Fixed Time Coordinated Cycle Time = 100 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
1	L2	40	0.0	40	0.0	0.345	14.2	LOS A	9.5	67.1	0.51	0.47	24.6
2	T1	491	0.9	491	0.9	0.345	11.1	LOS A	9.5	67.1	0.54	0.52	18.8
3	R2	89	0.0	89	0.0	0.345	22.5	LOS B	6.1	43.1	0.66	0.65	20.3
Approach		620	0.7	620	0.7	0.345	13.0	LOS A	9.5	67.1	0.56	0.53	19.6
East: Waimea Road													
4	L2	180	1.8	180	1.8	0.393	39.5	LOS C	7.4	52.5	0.88	0.79	9.0
5	T1	57	0.0	57	0.0	0.236	35.1	LOS C	3.6	24.9	0.86	0.71	14.5
6	R2	31	0.0	31	0.0	0.236	40.6	LOS C	3.6	24.9	0.86	0.71	9.5
Approach		267	1.2	267	1.2	0.393	38.7	LOS C	7.4	52.5	0.87	0.77	10.3
North: Shaftsbury Road													
7	L2	17	0.0	11	0.0	0.399	13.6	LOS A	9.3	65.3	0.58	0.52	21.1
8	T1	803	0.9	547	0.9	0.399	11.8	LOS A	9.3	65.3	0.62	0.56	13.0
9	R2	191	0.0	130	0.0	0.399	26.9	LOS B	8.0	56.1	0.85	0.79	11.9
Approach		1011	0.7	688 N1	0.7	0.399	14.7	LOS B	9.3	65.3	0.66	0.60	12.8
West: Waimea Road													
10	L2	44	0.0	44	0.0	0.095	36.2	LOS C	1.7	11.6	0.80	0.72	8.2
11	T1	14	0.0	14	0.0	0.089	36.5	LOS C	1.1	7.5	0.86	0.67	13.9
12	R2	13	0.0	13	0.0	0.089	41.6	LOS C	1.1	7.5	0.86	0.67	7.7
Approach		71	0.0	71	0.0	0.095	37.2	LOS C	1.7	11.6	0.82	0.70	9.4
All Vehicles		1968	0.7	1646 N1	0.9	0.399	18.9	LOS B	9.5	67.1	0.66	0.61	13.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 4.0 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	36.2	LOS D	0.1	0.1	0.85	0.85
P2	East Full Crossing	53	11.1	LOS B	0.1	0.1	0.47	0.47
P3	North Full Crossing	53	36.2	LOS D	0.1	0.1	0.85	0.85
P4	West Full Crossing	53	11.1	LOS B	0.1	0.1	0.47	0.47

MOVEMENT SUMMARY

Site: 103v [3 Shaftsbury Road - Waimea Rd - Thursday - PM - 2020 - With Development - Conversion]

Network: N101 [Thursday - PM Network - 2020 - With Development - Signals]

3 Shaftsbury Road - Waimea Rd - Thursday - PM - 5:30 - 6:30
Signals - Actuated Coordinated Cycle Time = 100 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
1	L2	42	0.0	42	0.0	0.689	26.2	LOS B	17.3	122.4	0.81	0.73	16.7
2	T1	694	1.5	694	1.5	0.689	22.7	LOS B	17.3	122.4	0.82	0.74	11.4
3	R2	155	0.0	155	0.0	0.689	40.0	LOS C	10.0	70.6	0.91	0.82	13.1
Approach		891	1.2	891	1.2	0.689	25.9	LOS B	17.3	122.4	0.83	0.76	12.2
East: Waimea Road													
4	L2	198	1.1	198	1.1	0.283	29.5	LOS C	6.7	47.2	0.72	0.76	11.4
5	T1	38	0.0	38	0.0	0.058	21.6	LOS B	1.3	8.8	0.64	0.51	20.9
6	R2	3	0.0	3	0.0	0.058	27.1	LOS B	1.3	8.8	0.64	0.51	14.5
Approach		239	0.9	239	0.9	0.283	28.2	LOS B	6.7	47.2	0.70	0.72	12.9
North: Shaftsbury Road													
7	L2	15	0.0	10	0.0	0.589	22.3	LOS B	9.2	65.3	0.73	0.65	15.9
8	T1	864	1.1	561	1.0	0.589	18.8	LOS B	9.2	65.3	0.73	0.65	9.1
9	R2	200	0.0	130	0.0	0.654	50.5	LOS D	6.4	45.0	0.99	0.83	8.0
Approach		1079	0.9	700 N1	0.8	0.654	24.7	LOS B	9.2	65.3	0.77	0.68	8.8
West: Waimea Road													
10	L2	46	0.0	46	0.0	0.066	26.8	LOS B	1.4	9.9	0.65	0.70	10.6
11	T1	13	0.0	13	0.0	0.052	25.3	LOS B	0.8	5.9	0.69	0.60	17.8
12	R2	13	0.0	13	0.0	0.052	30.4	LOS C	0.8	5.9	0.69	0.60	10.3
Approach		72	0.0	72	0.0	0.066	27.2	LOS B	1.4	9.9	0.66	0.66	12.0
All Vehicles		2280	1.0	1901 N1	1.2	0.689	25.8	LOS B	17.3	122.4	0.79	0.72	11.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 7.4 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	26.0	LOS C	0.1	0.1	0.72	0.72
P2	East Full Crossing	53	18.0	LOS B	0.1	0.1	0.60	0.60
P3	North Full Crossing	53	26.0	LOS C	0.1	0.1	0.72	0.72
P4	West Full Crossing	53	18.0	LOS B	0.1	0.1	0.60	0.60

MOVEMENT SUMMARY

Site: 104 [4 Shaftsbury Road - Deanne Street - Saturday - PM - 2020 - With Development]

Network: N101 [Saturday - PM Network - 2020 - With Development]

4 Shaftsbury Road - Deanne Street - Saturday - PM - 6:00 - 7:00
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
1	L2	87	0.0	87	0.0	0.182	5.5	LOS A	0.0	0.0	0.00	0.15	51.3
2	T1	617	0.7	617	0.7	0.182	0.0	LOS A	0.0	0.0	0.00	0.06	55.9
Approach		704	0.6	704	0.6	0.182	0.7	NA	0.0	0.0	0.00	0.07	55.3
East: RoadName													
4	L2	108	0.0	108	0.0	0.120	7.5	LOS A	0.5	3.3	0.44	0.67	43.1
Approach		108	0.0	108	0.0	0.120	7.5	LOS A	0.5	3.3	0.44	0.67	43.1
North: Shaftsbury Road													
7	L2	7	0.0	6	0.0	0.211	4.9	LOS A	0.0	0.0	0.00	0.01	55.1
8	T1	972	1.0	727	1.0	0.211	0.4	LOS A	0.5	3.5	0.07	0.03	56.6
9	R2	39	0.0	29	0.0	0.211	9.8	LOS A	0.5	3.5	0.17	0.06	45.4
Approach		1018	0.9	762[N1]	1.0	0.211	0.8	NA	0.5	3.5	0.08	0.03	56.3
All Vehicles		1831	0.7	1574[N1]	0.9	0.211	1.2	NA	0.5	3.5	0.07	0.09	53.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 4.0 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 104 [4 Shaftsbury Road - Deanne Street - Thursday - PM -2020 - With Development]

Network: N101 [Thursday - PM Network - 2020 - With Development - Signals]

4 Shaftsbury Road - Deanne Street - PM - 5:30 - 6:30
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Shaftsbury Road													
1	L2	83	0.0	83	0.0	0.252	5.5	LOS A	7.3	51.4	0.00	0.10	53.6
2	T1	887	1.2	887	1.2	0.252	0.0	LOS A	7.3	51.4	0.00	0.05	56.9
Approach		971	1.1	971	1.1	0.252	0.5	NA	7.3	51.4	0.00	0.05	56.6
East: RoadName													
4	L2	83	0.0	83	0.0	0.091	7.5	LOS A	0.4	2.6	0.44	0.65	43.1
Approach		83	0.0	83	0.0	0.091	7.5	LOS A	0.4	2.6	0.44	0.65	43.1
North: Shaftsbury Road													
7	L2	13	0.0	9	0.0	0.219	4.9	LOS A	0.0	0.0	0.00	0.01	55.0
8	T1	1031	1.1	739	1.0	0.219	0.7	LOS A	0.7	4.7	0.09	0.03	55.0
9	R2	33	0.0	23	0.0	0.219	13.6	LOS A	0.7	4.7	0.20	0.05	40.4
Approach		1076	1.1	772[N1]	1.0	0.219	1.2	NA	0.7	4.7	0.09	0.03	54.8
All Vehicles		2129	1.0	1826[N1]	1.2	0.252	1.1	NA	7.3	51.4	0.06	0.07	54.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 7.4 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 105 [5 Deanne Street - Marmaduke Street - Saturday - PM - 2020 - With Development]

Network: N101 [Saturday - PM Network - 2020 - With Development]

5 Deanne Street - Marmaduke Street - Saturday - PM - 6:00 - 7:00
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Deanne Street													
5	T1	71	0.0	65	0.0	0.030	0.0	LOS A	0.0	0.0	0.00	0.06	56.8
6	R2	53	0.0	49	0.0	0.030	5.7	LOS A	0.0	0.0	0.00	0.56	39.5
Approach		123	0.0	114 N1	0.0	0.030	2.4	NA	0.0	0.0	0.00	0.28	47.8
North: Marmaduke Street													
9	R2	151	0.0	146	0.0	0.110	5.3	LOS A	0.4	2.6	0.18	0.60	28.0
Approach		151	0.0	146 N1	0.0	0.110	5.3	LOS A	0.4	2.6	0.18	0.60	28.0
All Vehicles		274	0.0	259 N1	0.0	0.110	4.0	NA	0.4	2.6	0.10	0.46	37.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 4.0 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 105 [5 Deanne Street - Marmaduke Street - Thursday - PM -2020 - With Development]

Network: N101 [Thursday - PM Network - 2020 - With Development - Signals]

5 Deanne Street - Marmaduke Street - Thursday - PM - 5:30 - 6:30
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Deanne Street													
5	T1	66	0.0	61	0.0	0.030	0.0	LOS A	0.0	0.0	0.00	0.04	57.6
6	R2	54	0.0	50	0.0	0.030	5.7	LOS A	0.0	0.0	0.00	0.59	38.8
Approach		120	0.0	111 N1	0.0	0.030	2.6	NA	0.0	0.0	0.00	0.29	47.4
North: Marmaduke Street													
9	R2	126	0.0	121	0.0	0.091	5.2	LOS A	0.3	2.1	0.18	0.60	28.1
Approach		126	0.0	121 N1	0.0	0.091	5.2	LOS A	0.3	2.1	0.18	0.60	28.1
All Vehicles		246	0.0	232 N1	0.0	0.091	4.0	NA	0.3	2.1	0.09	0.45	38.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 7.4 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 106 [6 George Street - Marmaduke Street - Saturday - PM - 2020 - With Development]

Network: N101 [Saturday - PM Network - 2020 - With Development]

6 George Street - Marmaduke Street - Saturday - PM - 6:00 - 7:00
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Marmaduke Street													
3	R2	19	0.0	17	0.0	0.017	5.4	LOS A	0.1	0.5	0.27	0.56	27.9
Approach		19	0.0	17[N1]	0.0	0.017	5.4	LOS A	0.1	0.5	0.27	0.56	27.9
East: George Street													
4	L2	16	0.0	11	0.0	0.006	5.5	LOS A	0.0	0.0	0.00	0.58	35.7
Approach		16	0.0	11[N1]	0.0	0.006	5.5	NA	0.0	0.0	0.00	0.58	35.7
West: George Street													
11	T1	41	0.0	41	0.0	0.065	0.0	LOS A	0.3	2.3	0.02	0.20	50.8
12	R2	101	0.0	101	0.0	0.065	5.8	LOS A	0.3	2.3	0.06	0.53	40.7
Approach		142	0.0	142	0.0	0.065	4.1	NA	0.3	2.3	0.05	0.44	43.1
All Vehicles		177	0.0	171[N1]	0.0	0.065	4.3	NA	0.3	2.3	0.07	0.46	41.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 4.0 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 106 [6 George Street - Marmaduke Street - Thursday - PM -2020 - With Development]

Network: N101 [Thursday - PM Network - 2020 - With Development - Signals]

6 George Street - Marmaduke Street - Thursday - PM - 5:30 - 6:30
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Marmaduke Street													
3	R2	20	0.0	18	0.0	0.018	5.5	LOS A	0.1	0.5	0.28	0.56	27.8
Approach		20	0.0	18[N1]	0.0	0.018	5.5	LOS A	0.1	0.5	0.28	0.56	27.8
East: George Street													
4	L2	16	0.0	10	0.0	0.006	5.5	LOS A	0.0	0.0	0.00	0.58	35.7
Approach		16	0.0	10[N1]	0.0	0.006	5.5	NA	0.0	0.0	0.00	0.58	35.7
West: George Street													
11	T1	81	0.0	81	0.0	0.042	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R2	80	0.0	80	0.0	0.045	5.7	LOS A	0.2	1.6	0.05	0.61	38.8
Approach		161	0.0	161	0.0	0.045	2.9	NA	0.2	1.6	0.03	0.30	47.2
All Vehicles		197	0.0	190[N1]	0.0	0.045	3.3	NA	0.2	1.6	0.05	0.34	45.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 7.4 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Site: 107 [7 Burwood Rd - George St - Saturday - PM - 2020 - With Development]

Network: N101 [Saturday - PM Network - 2020 - With Development]

7 Burwood Rd - George St - Saturday - PM - 6:00 - 7:00
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Burwood Rd													
1	L2	69	0.0	69	0.0	0.203	5.2	LOS A	0.0	0.0	0.00	0.11	53.0
2	T1	533	6.7	533	6.7	0.203	0.7	LOS A	0.0	0.0	0.14	0.13	52.2
3	R2	60	0.0	60	0.0	0.203	9.2	LOS A	0.0	0.0	0.34	0.16	37.4
Approach		662	5.4	662	5.4	0.203	2.0	NA	0.0	0.0	0.14	0.13	51.6
North: Burwood Rd													
7	L2	47	0.0	47	0.0	0.167	5.5	LOS A	0.0	0.0	0.00	0.09	54.3
8	T1	576	6.9	576	6.9	0.167	0.0	LOS A	0.0	0.0	0.00	0.04	58.2
Approach		623	6.4	623	6.4	0.167	0.4	NA	0.0	0.0	0.00	0.05	58.0
All Vehicles		1285	5.9	1285	5.9	0.203	1.2	NA	0.0	0.0	0.07	0.09	54.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 4.0 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 107 [7 Burwood Rd - George St - Thursday - PM -2020 - With Development]

Network: N101 [Thursday - PM Network - 2020 - With Development - Signals]

7 Burwood Rd - George St - Thursday - PM - 5:30 - 6:30
Stop (Two-Way)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Burwood Rd													
1	L2	88	0.0	88	0.0	0.201	5.2	LOS A	0.0	0.0	0.00	0.14	52.3
2	T1	474	10.2	474	10.2	0.201	0.7	LOS A	0.0	0.0	0.15	0.17	51.2
3	R2	79	0.0	79	0.0	0.201	8.3	LOS A	0.0	0.0	0.38	0.22	36.1
Approach		641	7.6	641	7.6	0.201	2.2	NA	0.0	0.0	0.16	0.17	50.3
North: Burwood Rd													
7	L2	44	0.0	44	0.0	0.141	5.5	LOS A	0.0	0.0	0.00	0.10	53.5
8	T1	471	10.3	471	10.3	0.141	0.0	LOS A	0.0	0.0	0.00	0.05	57.9
Approach		515	9.4	515	9.4	0.141	0.5	NA	0.0	0.0	0.00	0.05	57.7
All Vehicles		1156	8.4	1156	8.4	0.201	1.5	NA	0.0	0.0	0.09	0.12	53.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 7.4 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 108 [8 Burwood Rd - Deanne St - Saturday - PM - 2020 - With Development]

Network: N101 [Saturday - PM Network - 2020 - With Development]

8 Burwood Rd - Deanne St - Saturday - PM - 6:00 - 7:00
Signals - Actuated Isolated Cycle Time = 28 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Burwood Rd													
1	L2	20	0.0	20	0.0	0.465	13.8	LOS A	3.5	25.6	0.80	0.67	44.9
2	T1	603	5.9	603	5.9	0.465	8.2	LOS A	3.5	25.7	0.80	0.67	42.5
Approach		623	5.7	623	5.7	0.465	8.4	LOS A	3.5	25.7	0.80	0.67	42.6
East: Deanne Rd													
4	L2	101	0.0	96	0.0	0.246	16.5	LOS B	1.2	8.3	0.84	0.74	35.4
6	R2	74	0.0	70	0.0	0.179	16.2	LOS B	0.8	5.9	0.83	0.73	27.0
Approach		175	0.0	167[N1]	0.0	0.246	16.4	LOS B	1.2	8.3	0.84	0.74	32.3
North: Burwood Rd													
8	T1	579	6.9	579	6.9	0.434	8.1	LOS A	3.2	23.8	0.79	0.65	42.9
Approach		579	6.9	579	6.9	0.434	8.1	LOS A	3.2	23.8	0.79	0.65	42.9
All Vehicles		1377	5.5	1369[N1]	5.5	0.465	9.3	LOS A	3.5	25.7	0.80	0.67	41.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 4.0 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	8.7	LOS A	0.0	0.0	0.79	0.79
P2	East Full Crossing	53	8.7	LOS A	0.0	0.0	0.79	0.79
P3	North Full Crossing	53	8.7	LOS A	0.0	0.0	0.79	0.79
P4	West Full Crossing	53	7.9	LOS A	0.0	0.0	0.75	0.75
All Pedestrians		211	8.5	LOS A			0.78	0.78

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 108 [8 Burwood Rd - Deanne St - Thursday - PM -2020 - With Development]

Network: N101 [Thursday - PM Network - 2020 - With Development - Signals]

8 Burwood Rd - Deanne St - Thursday - PM - 5:30 - 6:30
Signals - Actuated Isolated Cycle Time = 29 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Burwood Rd													
1	L2	56	0.0	56	0.0	0.455	13.5	LOS A	3.6	26.6	0.78	0.67	44.5
2	T1	583	8.1	583	8.1	0.455	8.0	LOS A	3.6	26.6	0.78	0.66	42.4
Approach		639	7.4	639	7.4	0.455	8.5	LOS A	3.6	26.9	0.78	0.66	42.7
East: Deanne Rd													
4	L2	86	0.0	82	0.0	0.216	17.0	LOS B	1.0	7.3	0.84	0.73	35.0
6	R2	73	0.0	69	0.0	0.182	16.8	LOS B	0.9	6.1	0.84	0.73	26.6
Approach		159	0.0	150 N1	0.0	0.216	16.9	LOS B	1.0	7.3	0.84	0.73	31.6
North: Burwood Rd													
8	T1	474	10.0	474	10.0	0.341	7.6	LOS A	2.5	19.2	0.73	0.60	43.8
Approach		474	10.0	474	10.0	0.341	7.6	LOS A	2.5	19.2	0.73	0.60	43.8
All Vehicles		1272	7.5	1263 N1	7.5	0.455	9.1	LOS A	3.6	26.9	0.77	0.65	41.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 7.4 %
Number of Iterations: 10 (maximum specified: 10)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	53	9.1	LOS A	0.0	0.0	0.79	0.79
P2	East Full Crossing	53	8.4	LOS A	0.0	0.0	0.76	0.76
P3	North Full Crossing	53	9.1	LOS A	0.0	0.0	0.79	0.79
P4	West Full Crossing	53	7.6	LOS A	0.0	0.0	0.73	0.73
All Pedestrians		211	8.6	LOS A			0.77	0.77

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.