

Attachment A4

Transport Assessment



Image courtesy of Bates Smart

923-925 Bourke Street, Waterloo

Transport Assessment

Prepared for: **Fabcot Pty Ltd**

2 September 2022

PROJECT INFORMATION

Project Name:	923-925 Bourke Street, Waterloo
Client:	Fabcot Pty Ltd
Project Number:	2015
Prepared By:	JMT Consulting

DOCUMENT HISTORY

Document Title	Revision	Date issued	Author
923-935 Bourke Street, Waterloo	Draft #1	06.08.21	JM
923-935 Bourke Street, Waterloo	Draft #2	04.11.21	JM
923-935 Bourke Street, Waterloo	Issue	18.11.21	JM
923-935 Bourke Street, Waterloo	Rev A	02.09.22	JM

This document has been prepared on behalf of Fabcot Pty Ltd. Use of this document by a third party to inform decisions is the sole responsibility of that third party. J Milston Transport Consulting Pty Ltd assumes no liability with respect to any reliance placed upon this document. Reproduction of this document or any part thereof is not permitted without prior written permission of J Milston Transport Consulting Pty Ltd and Fabcot Pty Ltd.

Table of Contents

1	Introduction	1
1.1	<i>Background</i>	1
1.2	<i>Site location</i>	1
1.3	<i>Proposal description</i>	2
1.4	<i>Report purpose</i>	2
2	Existing Transport Conditions	3
2.1	<i>Existing site uses</i>	3
2.2	<i>Road network</i>	4
2.3	<i>Public transport</i>	5
2.4	<i>Pedestrian and cycling network</i>	8
3	Transport and Access Strategy	10
3.1	<i>Site access</i>	10
3.2	<i>On-street car parking</i>	11
3.3	<i>On-site car parking provision</i>	12
3.4	<i>Car park design</i>	13
3.5	<i>Loading dock</i>	13
3.6	<i>Bicycle parking</i>	15
3.7	<i>Motorcycle parking</i>	15
3.8	<i>Pedestrian connections</i>	16
3.9	<i>Electric vehicle charging facilities</i>	17
3.10	<i>Green travel plan</i>	17
4	Traffic Impact Assessment	20
4.1	<i>Background traffic volumes</i>	20
4.2	<i>Forecast traffic generation</i>	20
4.3	<i>Traffic distribution</i>	23
4.4	<i>Background traffic growth</i>	26
4.5	<i>Traffic modelling</i>	26
5	Summary	31
	Appendix A: Traffic Modelling Results	32

Figures

Figure 1	Site location and local context.....	1
Figure 2	Existing site view from Young Street	3
Figure 3	Existing road network.....	4
Figure 4	Public transport access	5
Figure 5	Sydney Metro network	7
Figure 6	Existing cycling network	8
Figure 7	Bourke Road shared pathway (view south of Powell Street).....	9
Figure 8	Proposed site access	10
Figure 9	Swept path – Young Street access point	11
Figure 10	Swept path analysis – loading dock.....	14
Figure 11	Existing central median on Bourke Street adjacent to site	14
Figure 12	Existing and potential future pedestrian connections.....	16
Figure 13	Arrival directions to site (with right turns from/to McEvoy Street)	24
Figure 14	Departure directions from site (with right turns from/to McEvoy Street)	24
Figure 15	Arrival directions to site (with right turn bans from/to McEvoy Street)	25
Figure 16	Departure directions from site (with right turn bans from/to McEvoy Street)	25
Figure 17	SIDRA network layout.....	27
Figure 18	Intersection modelling results – AM peak weekday hour.....	29
Figure 19	Intersection modelling results – PM weekday peak hour.....	30
Figure 20	Intersection modelling results – Saturday peak hour	30

Tables

Table 1	Existing bus routes.....	6
Table 2	Car parking numbers	12
Table 3	List of potential GTP measures.....	18
Table 4	Peak hour vehicle trip generation for commercial uses	21
Table 5	Traffic generation rates – retail	22
Table 6	Forecast traffic generation	23
Table 7	Forecast traffic growth rates from STFM	26
Table 8	Level of service grades / description	28

1 Introduction

1.1 Background

This transport assessment report relates to 923-935 Bourke Street, Waterloo and is submitted to the City of Sydney in support of a request for Planning Proposal seeking amendments to the Sydney Local Environmental Plan 2012.

1.2 Site location

The site is shown in Figure 1 and is bounded by McEvoy Street to the north, Bourke Street to the east, Young Street to the west and an adjoining warehouse building to the south.



Figure 1 Site location and local context

1.3 Proposal description

The broad intent of the Planning Proposal is to achieve a mixed-use development outcome, including a supermarket, which facilitates a suitable urban form to support local strategic planning intent for the establishment of a new 'neighbourhood centre' within the site. The Planning Proposal seeks amendment to maximum building height mapping and to introduce a site-specific criteria based exemption to the retail floor area cap outside of Green Square Town Centre and other planned centres. The indicative reference scheme in support of the proposal accommodates a mixed-use development including a subterranean supermarket, retail, commercial, residential apartments on podium and rooftop communal facilities. Basement parking is accommodated for all uses, with ground level loading and 'Direct to Boot' pick up facilities.

1.4 Report purpose

This report has been prepared to summarise the traffic and transport implications of the Planning Proposal. Specifically the assessment considers the following items:

- Existing transport conditions, including:
 - Surrounding road network
 - Vehicle site access
 - Car parking
 - Loading and servicing arrangements
 - Public transport provision
 - 'Direct to Boot' drive through provisions
- Proposed site access arrangements
- Proposed vehicle loading and servicing arrangements
- Proposed parking rates to be adopted as part of a future development application for the site, including indicative parking numbers based on the reference scheme prepared by Bates Smart
- Additional traffic movements resulting from the Planning Proposal and impacts to the adjacent road network
- Public transport, walking and cycling measures

2 Existing Transport Conditions

2.1 Existing site uses

The existing site comprises of a light industrial and commercial facility with a total site area of approximately 6,534m². Approximately 50 on-site car parking spaces are provided for the building, with vehicle access obtained via one of two driveways from Young Street.



Figure 2 Existing site view from Young Street

2.2 Road network

To manage the extensive network of roads for which councils are responsible under the Roads Act 1993, Transport for NSW (TfNSW) in partnership with local government established an administrative framework of *State*, *Regional*, and *Local Road* categories. State Roads are managed and financed by TfNSW and Regional and Local Roads are managed and financed by councils.

Regional Roads perform an intermediate function between the main arterial network of State Roads and council controlled Local Roads. Due to their network significance TfNSW provides financial assistance to councils for the management of their Regional Roads. Key State and Regional roads which provide access to the site are illustrated in Figure 3 below, which demonstrates the site is very well connected to the surrounding road network.

The site is primarily serviced by the State Roads including McEvoy Street, Bourke Street and Lachlan Street, as well as Regional Roads such as Bourke Street and Elizabeth Street. The site is also serviced by local roads managed by Council including direct frontage to Young Street.



Figure 3 Existing road network

2.3 Public transport

The site has access to a number of nearby public transport network as illustrated in Figure 4 below.



Figure 4 Public transport access

Green Square railway station located approximately 800m from the site. Green Square is serviced by the T8 (Airport and South) line which provides direct access to the Sydney CBD, Sydney Airport, Revesby and Glenfield, Campbelltown and Macarthur. Between 6am and 10pm on weekdays train services operate every 5 to 7 minutes in each direction, with frequencies increasing to every 15 minutes outside of this time period.

A number of bus services also operate from the bus stops located along the streets within the site immediate vicinity. The closest bus stop is located immediately adjacent to the site on Bourke Street which is served by frequent bus services. A summary of these bus services is provided in Table 1 below.

Table 1 Existing bus routes

Route Number	Route Description	Weekday Frequency	
		Peak	Off-peak
M20	Botany to Gore Hill	10-15 minutes	15-20 minutes
301	Eastgardens to Redfern via Mascot	30 minutes	30 minutes
302	Eastgardens to Redfern via Kingsford	No service	1 hour
303	Sans Souci to Redfern via Mascot	15-30 minutes	30 minutes- 1 hour
304	Rosebery to City Circular Quay via Zetland	5-15 minutes	15 minutes
343	Kingsford to Chatswood	3-5 minutes	10 minutes
355	Marrickville Metro to Bondi Junction via Moore Park & Erskineville	30 minutes	30 minutes

Sydney Metro is a major public transport infrastructure project currently in the construction phase within proximity of the subject site. The Sydney Metro City and Southwest metro line (currently under construction) will connect to the recently opened Sydney Metro Northwest line at Chatswood station and provide significantly improved connectivity from the southwest and Sydney CBD to Chatswood and the northwest.

Waterloo Metro Station is one of the new stations of Sydney Metro City & Southwest line. It is bounded by Botany Road and Cope Street, Raglan Street and Wellington Street. This new station will be located approximately 1km west of the subject site which is within viable walking distance for residents, visitors and staff to mass transit.

The expansion of the Sydney Metro network will further improve public transport accessibility to the site.

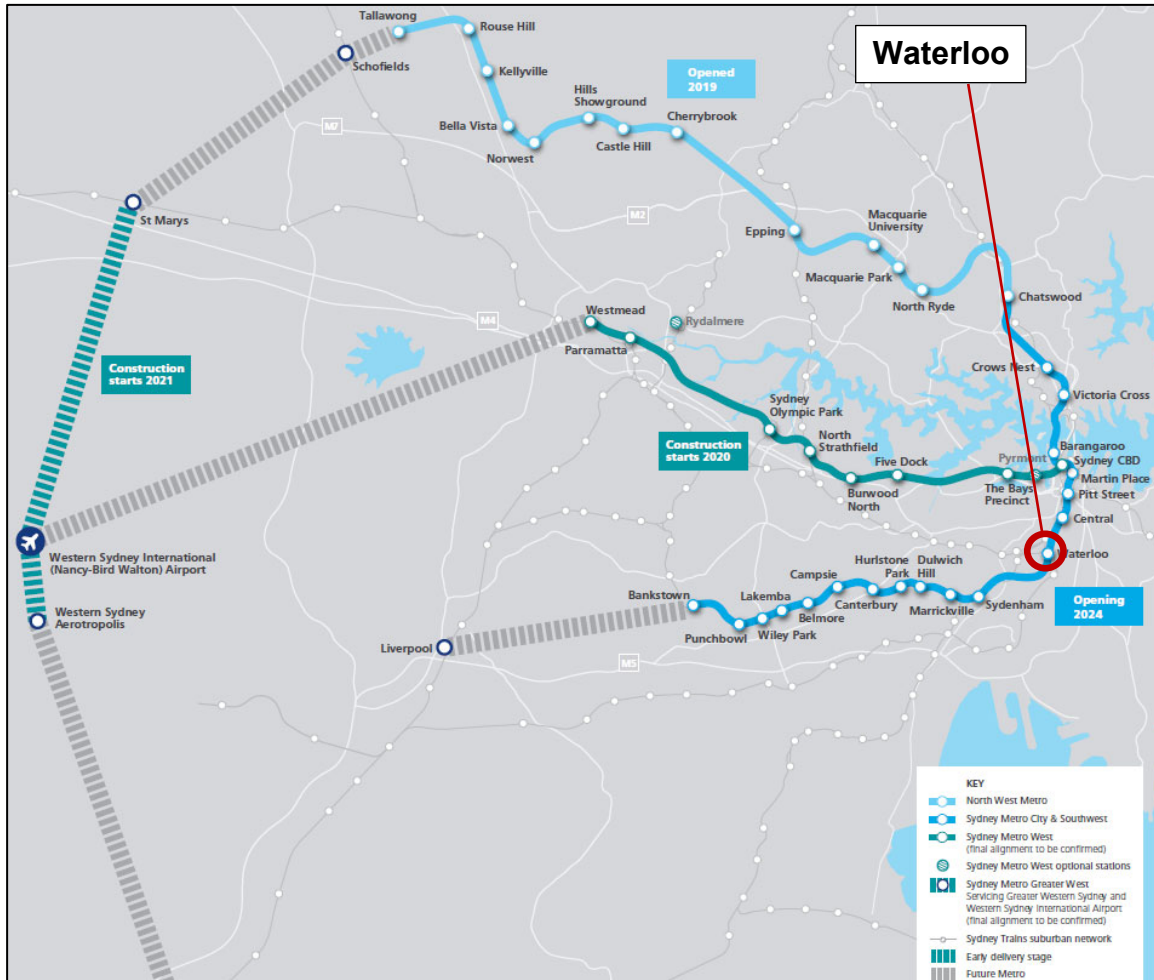


Figure 5 Sydney Metro network

Source: Transport for NSW

2.4 Pedestrian and cycling network

The pedestrian environment in the vicinity of the site is strong, with pedestrian footpaths are provided on both sides of all surrounding streets. Controlled pedestrian crossings are provided on all legs at the following signalised intersections:

- Bourke Street with Danks Street
- Bourke Street with Potter Street
- Bourke Street with Lachlan Street, and
- Bourke Street with McEvoy Street.

An extensive cycleway network is available in the immediate vicinity of the site as shown in Figure 6. An off-road shared path is provided along Bourke Street along the site frontage (see Figure 7). In addition, an off-road separated cycleway is also provided along Bourke Street north of Phillip Street, which provides a high quality cycleway connection through to the Sydney CBD. A similar facility is also provided along George Street to the west of the site.

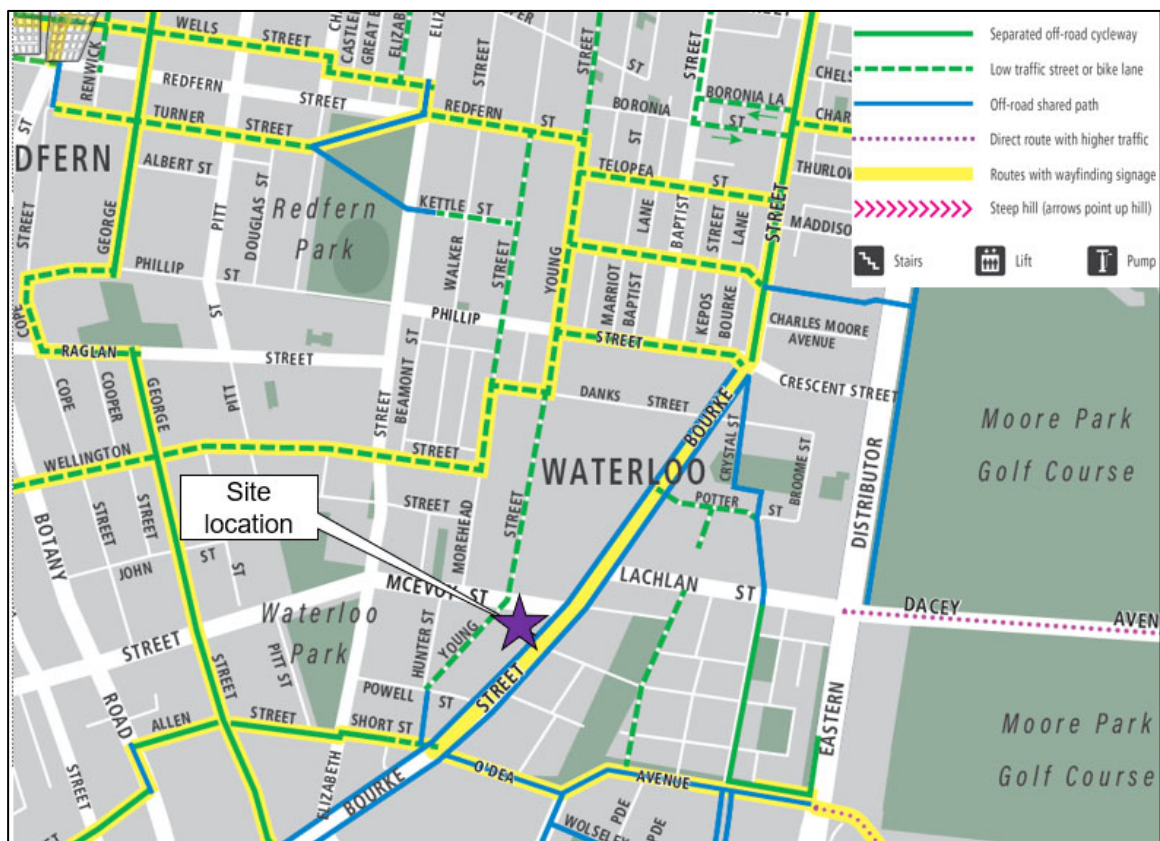


Figure 6 Existing cycling network



Figure 7 Bourke Road shared pathway (view south of Powell Street)

3 Transport and Access Strategy

3.1 Site access

Under the reference scheme prepared by Bates Smart, vehicle access (including B99s) would be obtained from Young Street at the south-western end of the site as shown in Figure 8.

Vehicles would access the on-site car parking area on the southern boundary of the site. The site would also offer a 'Direct to Boot' service to facilitate online order pickups. A parking area will be provided at ground level for customers to access the Direct to Boot service with access and egress for these vehicles obtained via Young Street.

To ensure safe egress and separation from the quieter residential streets, including Young Street, that service vehicles accessing the loading dock would be separated from the general vehicles and enter and exit the site via Bourke Street with a left in, left out arrangement. A loading dock management plan would be in place ensure safe egress in and out from the loading dock at all times of the day.

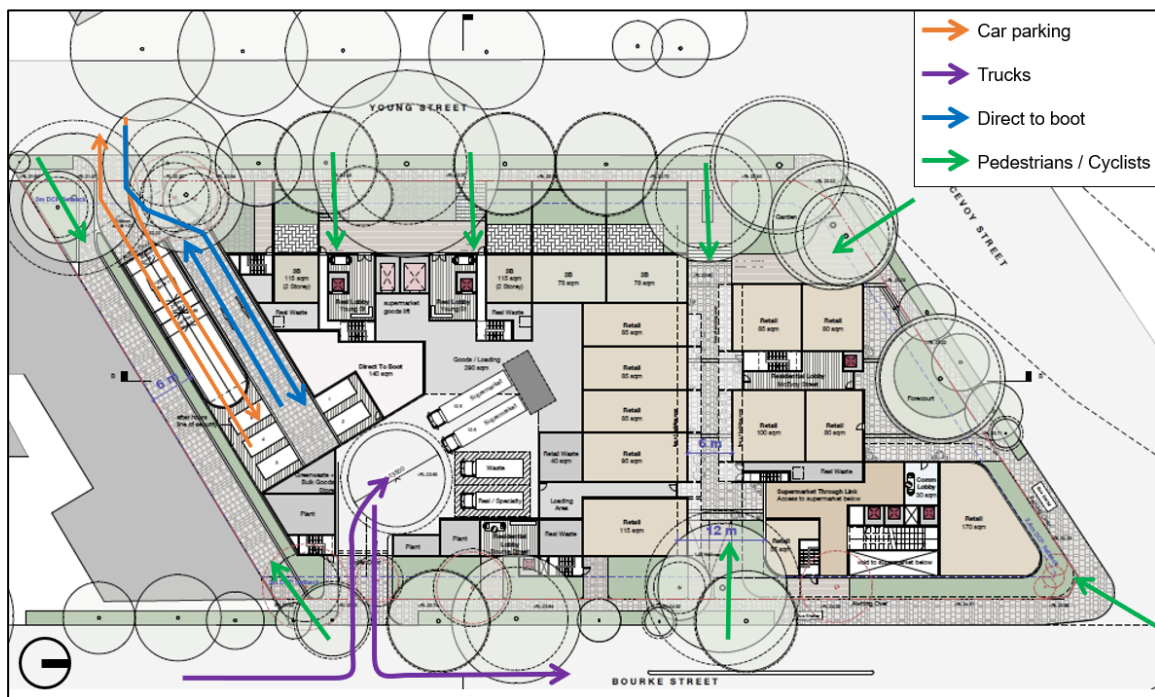


Figure 8 Proposed site access

The site access driveway width on Young Street to facilitate entry and exit to the site would be significantly reduced compared to existing, with a 6m crossover allowing for simultaneous entry and exit of a B99 vehicle as indicated in Figure 9 below. The reference design has carefully considered the position of existing trees along Young Street, with the driveway crossover positioned 3.5m from Tree 3 on Young Street so that it can be retained.

The current driveway width is approximately 9m and therefore the development of the site provides an opportunity to improve the environment for pedestrians along Young Street.

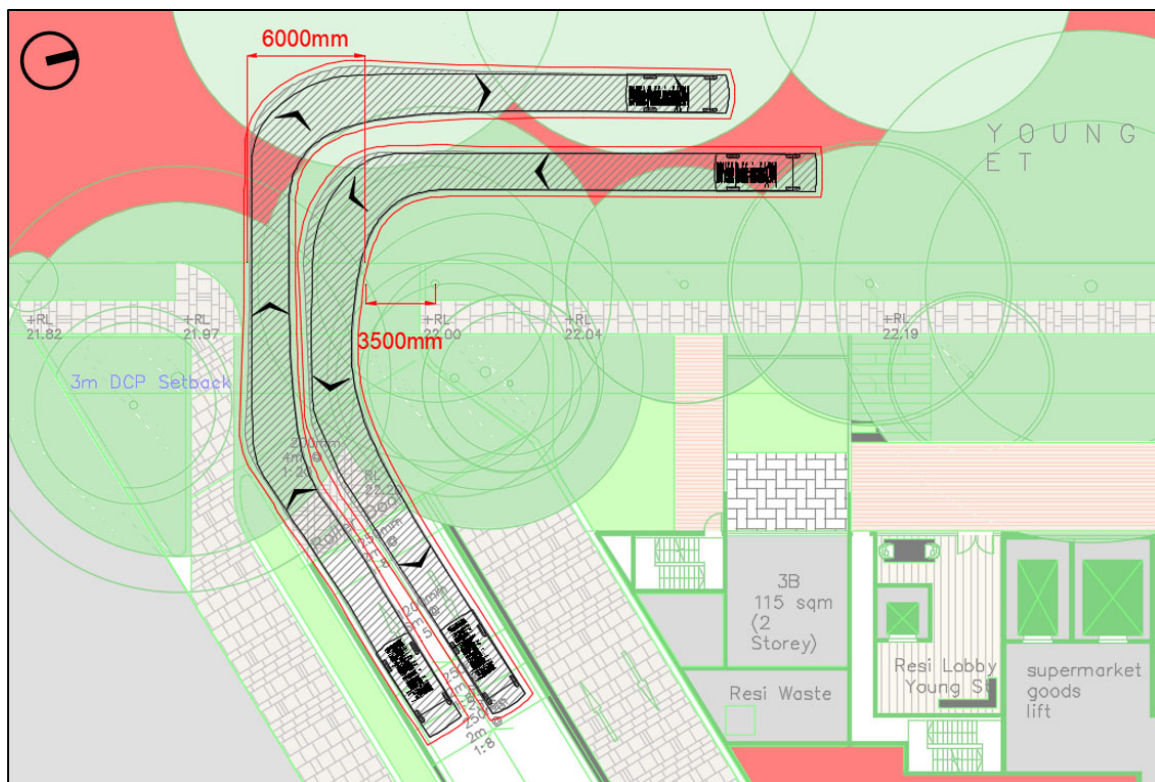


Figure 9 Vehicle swept paths – Young Street access point

3.2 On-street car parking

No on-street car parking spaces on Young Street would be impacted as a result of the proposal (based on the reference scheme) given the proposed driveway crossover point aligns with the existing site access point. The removal of an existing driveway crossover at the northern end of the site on Young Street provides an opportunity to install additional on-street parking spaces on Young Street.

3.3 On-site car parking provision

The following sections of this document outline the car parking provision for the various uses within the site, based on the reference scheme prepared for the Planning Proposal. It should be noted that the reference scheme is conceptual in nature and further investigations will need to be undertaken at subsequent stages to confirm the final parking number and layout. The final car parking requirements and provision for the site will be confirmed at the Development Application (DA) stage of the project.

3.3.1 Retail car parking

The Sydney LEP 2012 does not stipulate car parking rates for retail premises for buildings with more than 2,000m² of retail GFA. For buildings with less than 2,000m² of retail GFA on land in Category F¹ the LEP specifies a maximum car parking rate of 1 space per 50m². Although other retail centres in the City of Sydney LGA containing full line supermarkets provide for a higher rate of car parking, following instruction from Council officers a parking rate of 1 space per 50m² has been adopted for the retail uses on the site. This results in a maximum of approximately 97 retail car parking spaces provided for the retail component based on the reference design.

3.3.2 Residential car parking

An assessment of potential car parking numbers against the rates set out in Sydney LEP 2012 has been undertaken and is detailed in Table 2 below. This analysis demonstrates that up to 103 spaces could be provided based on the development yields envisaged in the reference scheme.

Table 2 Car parking numbers

Type	No. of units	SLEP 2012 parking rate	Max. no. of spaces under SLEP 2012
Studio	1	0.2 / unit	0.2
1 bed	32	0.4 / unit	12.8
2 bed	62	0.8 / unit	49.6
3 bed	26	1.1 / unit	28.6
Sub-Total	121		91
Visitor		See footnote ²	12
Total			103

¹ Based on Public Transport Accessibility Level Map

² for each dwelling up to 30 dwellings—0.167 spaces / unit, and for each dwelling more than 30 and up to 70 dwellings—0.1 spaces / unit, and for each dwelling more than 70 dwellings—0.05 spaces / unit,

3.3.3 Commercial car parking

For buildings on land in Category F³, with the commercial component having a floor space ratio of no more than 1.5:1, the Sydney LEP specifies a maximum car parking rate of 1 space per 75m². Based on the 2,025m² of commercial GFA provided in the reference scheme up to 27 car parking spaces could be delivered on the site. The traffic analysis has assumed 27 car parking spaces will be provided for the commercial component of the site.

3.4 Car park design

As part of the reference scheme developed for the Planning Proposal a basement car park has been designed to facilitate the future development. The car park and associated elements such as car parking space dimensions, circulation aisles and ramp would be designed in accordance with the relevant Australian Standard for car parking facilities, namely AS2890.1: 2004 and AS2890.6:2009.

Car parking spaces for residential uses have been designed to comply with a Class 1 car park facility for the residential and commercial uses as specified in the Australian Standard (generally low turnover long term parking) with minimum 2.4m wide spaces and aisle widths of 5.8m minimum. For the retail car parking areas 2.6m wide spaces with 6.6m aisles have been provided in accordance with the requirements of Class 3A parking areas. The detailed design of the car park will be carried out at the Development Application stage of the project.

3.5 Loading dock

The reference scheme includes an on-site loading dock which can accommodate up to four vehicles at any one time, those being:

- Two Heavy Rigid Vehicles (HRVs), 12.5m in length
- Two Medium Rigid Vehicles (MRV), 8.8m in length

This loading provision is considered suitable to accommodate the needs of the site based on the development yields associated with the reference scheme.

The loading dock is located on the ground floor at the southern end of the site, with a 13.5m diameter turntable provided to facilitate the entry and exit of vehicles from the site in a forwards direction. All retail and residential loading / unloading is to occur on-site and not in public streets. The loading dock has been designed in accordance with the requirements outlined in the relevant Australian Standard (AS2890.2, 2018). The detailed design of the loading dock will be carried out at the Development Application stage of the project.

³ Based on Public Transport Accessibility Level Map

As indicated in Figure 10 below heavy vehicles (including HRVs) have the ability to safely enter and exit the loading dock without impacting the opposing travel lane on Bourke Street. Signage will be in place to reinforce the left in / left out turning restrictions on Bourke Street. Figure 11 shows there is already a central median island in place on Bourke Street along the frontage of the site. Subject to discussions with the road authority during the DA phase of the project and depending on the final location of the loading dock access, this median could potentially be extended to act as a physical measure to prevent right turns into and out of the loading dock.

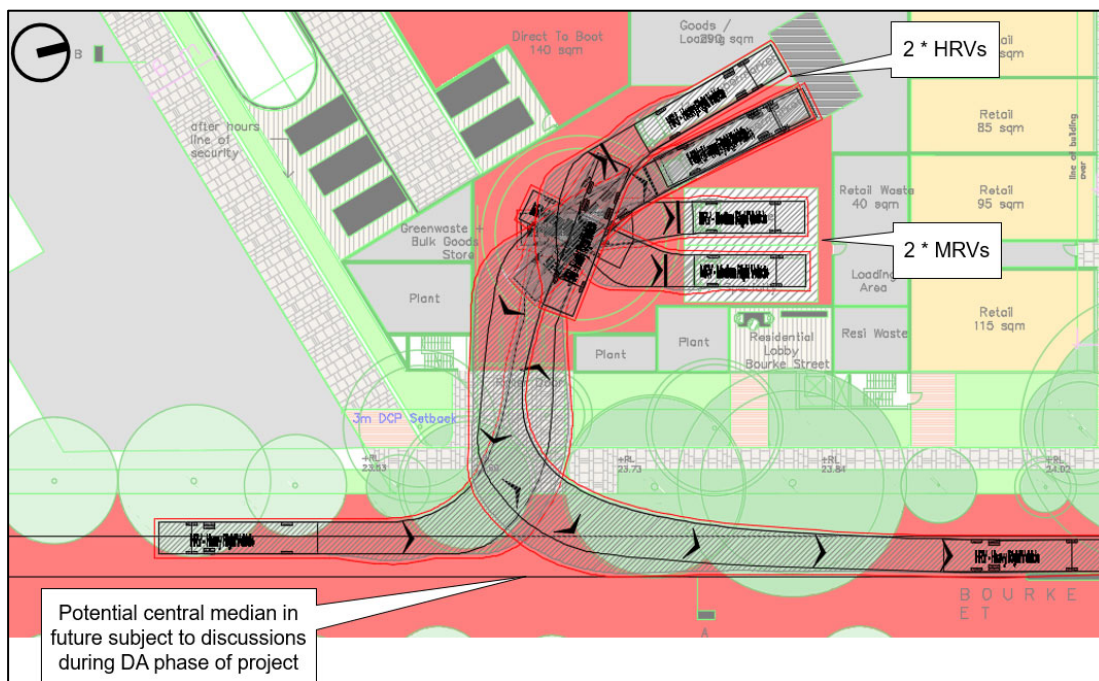


Figure 10 Swept path analysis – loading dock



Figure 11 Existing central median on Bourke Street adjacent to site

3.6 Bicycle parking

The Sydney DCP outlines minimum requirements for bicycle parking requirements for residential, commercial and retail developments. The relevant bicycle parking rates, and the associated provision based on the floor space to be provided within the development, are outlined below:

Residential

- Residents: 1 per dwelling: 121 spaces
- Visitor: 1 per 10 dwellings: 12 spaces

Retail

- Employee: 1 per 250m² GFA: 19 spaces
- Visitor: 2 plus 1 per 100m² GFA over 100m² GFA: 50 spaces

Commercial

- Employee: 1 per 150m² GFA: 14 spaces
- Visitor: 1 per 400m² GFA: 5 spaces

The reference scheme therefore provides bicycle parking consistent with the rates outlined in the Sydney DCP. The proposal includes over 120 bicycle parking spaces for building residents as well as parking for visitors to the site.

Retail and commercial staff would also be provided with end of trip facilities as part of the development, with the proposed provision including lockers, showers and change facilities.

The final layout, design and quantum of bicycle parking and end of trip facilities will be confirmed at the DA stage of the development.

3.7 Motorcycle parking

The City of Sydney Council DCP requires that motorcycle parking be provided at a rate of one space per 12 car parking spaces. It is proposed to comply with this requirement, with approximately 18 motorcycle parking spaces provided within the basement.

The final layout, design and quantum of motorcycle parking and end of trip facilities will be confirmed at the DA stage of the development.

3.8 Pedestrian connections

As indicated in Figure 12 the site benefits from a number of existing pedestrian crossing points at signalised intersections. Residents arriving to the site from the west, north and east are generally well serviced by these crossing points.

With the improved permeability to be provided via the through site link at the southern end of the site there is an opportunity to consider a new pedestrian crossing across Bourke Street. This crossing point on Bourke Street would be roughly halfway between the existing traffic lights at McEvoy Street and O’dea Avenue and facilitate improved pedestrian connections for those arriving from the Lachlan Precinct to the south and east of the site. The crossing would also promote the use of the through site link and meet the future pedestrian desire line. The future pedestrian would require approval from Transport for NSW who would be consulted at subsequent stages of the Planning Proposal process regarding the potential for this improvement measure.

Other potential improvement measures for pedestrians accessing the site could be in the form of continuous footpath treatments at either end of Young Street. These treatments would be subject to approval by Council.



Figure 12 Existing and potential future pedestrian connections

3.9 Electric vehicle charging facilities

Fabcot intends to deliver a benchmark provision of publicly accessible electric vehicle charging facilities through a future VPA. All residential car spaces in the development to be EV ready, 50% of worker car spaces are to be EV ready and 25% of retail customer car spaces are to be fitted from the outset with a three phase Level 2 EV charger at 22 kilowatts or higher) with the addition of two (2) Level 3 or 4 fast chargers accessible within the retail parking provisions.

Fabcot signals their intention to provide the above which is understood to be consistent with Council's policy.

3.10 Green travel plan

3.10.1 Background

A Green Travel Plan (GTP) is a package of measures put in place by the development occupants to try and encourage more sustainable travel. It is a means for a development to demonstrate a commitment and take a pro-active step towards improving the environmental sustainability of its activities.

More generally, the principles of a GTP are applied to all people travelling to and from a site. Government authorities are placing increasing emphasis on the need to reduce the number and lengths of motorised journeys and in doing so encourage greater use of alternative means of travel with less negative environmental impacts than the car.

3.10.2 Objectives

The main objectives of the GTP are to reduce the need to travel and promotion of sustainable means of transport. The more specific objectives include:

- High mode share for public transport, cycling and walking to work journeys;
- Ensuring adequate facilities are provided at the site to enable the tenants and visitors of the development to commute by sustainable transport modes;
- Reduce the number of car journeys associated with business travel;
- Facilitate the sustainable and safe travel of occupants; and
- Raise awareness of sustainable transport amongst tenants of the development.

3.10.3 Potential measures

A suite of potential measures is described below to be implemented as part of the GTP, which can be developed further as the development progresses.

Table 3 List of potential GTP measures

Action	Responsibility
Cycling	
Provide sufficient cycle parking to meet needs, which is easily accessible and secure	Developer
Provide adequate cycle parking facilities for visitors	Developer
Ensure cycle parking is clearly visible or provide signage to direct people to cycle bays	Building manager
Produce a map showing cycle routes and bike stands in the area	Building manager
Supply a communal toolkit for staff consisting of puncture repair equipment, a bike pump, a spare lock and lights.	Building manager
Promote the participation in annual events such as 'Ride to Work Day'	Tenants
Walking	
Identify tenants living near work that may be interested in walking to work	Building manager
Identify through the travel survey what incentives might need to be put in place for non-walkers to consider a mode shift	Building manager
Public Transport	
Develop a map showing public transport routes in the area	Building manager
Put up a noticeboard with leaflets and maps showing the main public transport routes to and from the site	Building manager
Carshare / Carpooling	
Establish a car pooling program to help people find someone to share in their daily commute.	Building manager and tenants
Develop a map showing car-share spots in the area to encourage staff and visitors to use a shared car (e.g. GoGet) if they are required to drive	Building manager and tenants
General actions	
Promotion including: <ul style="list-style-type: none"> • Allow staff the flexibility to commute outside peak periods to reduce overall congestion and travel time. • Identify a tenant/champion to complete travel coordinator duties • Provide a welcome pack upon initial occupation of each tenant which includes details around sustainable travel options 	Tenants

3.10.4 Monitoring and review

In order for the GTP to be effective, it must be reviewed on a regular basis. It is important to ensure that the GTP is meeting its objectives and having the intended impact on car use and transport choices. The GTP should be reviewed on a yearly basis by undertaking travel surveys. It is recommended that the mode shares are first reviewed at least 18 months after occupation, to allow activity levels to settle at the site.

4 Traffic Impact Assessment

4.1 Background traffic volumes

Traffic counts undertaken in February 2020 prior to the COVID-19 pandemic to understand the level of traffic movements in and around the site. The traffic counts were undertaken at the following intersections:

- Bourke Street / Lachlan Street
- Bourke Street / McEvoy Street
- Bourke Street / Powell Street
- Powell Street / Young Street
- McEvoy Street / Young Street

These traffic volumes collected in February 2020 have been used as the basis for the traffic assessment undertaken to support the Planning Proposal as described in the following sections of this document.

4.2 Forecast traffic generation

4.2.1 Existing traffic generation

The site is currently a light industrial facility with a site area of approximately 6,534m². Based on the rates noted in the RMS Guide to Traffic Generating developments document the existing traffic movements generated by the site are estimated at 32 vehicles per hour during both the AM and PM commuter peak hour periods.

4.2.2 Residential traffic generation

To inform the Planning Proposal for the adjacent Danks Street South precinct a number of nearby, comparable residential developments in the area were surveyed to identify an appropriate traffic generation rate. Of specific consideration in determining appropriate sites for the surveys was land use (predominantly residential in nature), proximity to the subject site and Green Square train station (public transport) and greater than 6-storeys in height. With reference to these selection criteria, surveys were undertaken at the following developments:

- 56-62 O'Dea Avenue, Waterloo with 355 units and 255 spaces
- 40A O'Dea Avenue, Waterloo with 172 Units and 138 spaces
- 30-36 O'Dea Avenue, Waterloo with 110 Units and 92 spaces
- 17 Danks Street, Waterloo with 43 Units and 35 spaces

Noting that the developments outlined above are primarily residential, the following trip rates were adopted:

- AM peak hour: 0.09 vehicle trips per unit
- PM peak hour: 0.11 vehicle trips per unit
- Saturday peak hour: 0.10 vehicle trips per unit

4.2.3 Commercial traffic generation

Transport for NSW (formerly Roads and Maritime) published a Technical Direction that described vehicular trip rates for commercial developments. Comparable commercial developments have been considered in order to understand the likely traffic generation resulting from the site. Four sites were selected given their similar proximity to nearby public transport as well as similar car parking rates, which were sites located in North Sydney, Chatswood, Macquarie Park and Parramatta.

Given the constrained on-site parking environment, traffic generation rates per parking space have been used to estimate the likely peak hour vehicle trips generated by the site. The average peak hour trip rates per parking space for the surveyed locations were estimated to be 0.40 and 0.25 trips per parking space during the AM and PM network peak hour respectively. The surveyed data for these sites is highlighted in Table 4 below.

Table 4 Peak hour vehicle trip generation for commercial uses

Surveyed location	North Sydney	Chatswood	Macquarie Park	Parramatta	Average
AM peak hour trips	51	47	119	185	100
PM peak hour trips	44	36	72	75	57
Parking spaces	136	150	269	402	239
AM peak hour trip rate	0.38	0.31	0.44	0.46	0.40
PM peak hour trip rate	0.32	0.24	0.27	0.19	0.25

Source: Roads and Maritime, Technical Direction 2013/14

4.2.4 Retail traffic generation

To provide a bespoke trip generation rate that reflects the travel behaviours of nearby residents in Waterloo, the Coles Dank Street retail development was surveyed in June 2022. Surveys were undertaken at the driveway access point on Crescent Street to the Coles Danks Street site. This driveway provides access to the retail centre (3,850m² GLA + 95 parking spaces) as well as 208 residential apartments. Surveys were undertaken over two separate weekdays and Saturdays, with findings across both survey periods very consistent. Weather was fine on all surveyed days which were all outside of holiday periods.

The data is summarised in the table below on a 'per GLA' and 'per parking space' basis, taking into consideration the estimated number of residential traffic movements from the site. Following consultation with Council officers, it was agreed that the retail traffic generation rate would be based on a 'per parking space' basis given the low parking rates to be adopted for the retail uses.

Table 5 Traffic generation rates – retail

Peak Hour	Total Traffic Movements at Crescent Street Driveway	Forecast Number of Residential Traffic Movements*	Forecast Number of Retail Traffic Movements	Retail Traffic Generation Rate	
				Per 100m ² GLA	Per Parking Space
Weekday AM Peak Hour	56	19	37	0.96	0.39
Weekday PM Peak Hour	121	23	98	2.55	1.03
Saturday Peak Hour	120	21	99	2.57	1.04

* Adopting the same traffic generation rate for residential uses as noted in Section 4.2.2 of this document

4.2.5 Net traffic generation

Taking into consideration existing traffic movements generated by the forecast traffic generation arising from the proposal is summarised in Table 6 below. The RMS “*Guide to Traffic Generating Developments*” document suggests that some 25% of visits to retail centres are likely to be passing trade, i.e. customers who would have driven past the development regardless of their visit to the development. The traffic assessment for the proposal has considered 25% passing trade.

Table 6 Forecast traffic generation

Scenario	Use	Quantum / Unit		Peak hour traffic generation rate			Forecast Traffic Generation		
				AM Peak Hour	PM Peak Hour	WE Peak Hour	AM peak hour	PM peak hour	WE Peak Hour
Existing site	Light industrial	6,534	m ²	0.5 / 100m ²	0.5 / 100m ²		-32	-32	0
Future site	Residential	121	Units	0.09 / unit	0.11 / unit	0.10 / unit	+11	+13	+12
	Retail	97	Parking Spaces	0.39 / parking space	1.03 / parking space	1.04 / parking space	+38	+100	+101
	Commercial	27	Parking spaces	0.40 / parking space	0.25 / parking space	0	+14	+14	0
Total Traffic Generation							+31	+95	+113
Net Traffic Generation (with passing trade for retail factored in)							+21	+70	+88

4.3 Traffic distribution

The forecast arrival and departure directions for visitors to the supermarket, based on the trade catchment for the centre, are shown in Figure 13 (arrival directions) and Figure 14 (departure directions). Following feedback from City of Sydney Council, a scenario was also tested which considered the implementation of right turn bans into and out of Young Street from McEvoy Street as per Transport for NSW’s Alexandria to Moore Park (Stage 1) project. The resulting traffic distributions to and from the site are shown in Figure 15 and Figure 16.



Figure 13 Arrival directions to site (with right turns from/to McEvoy Street)



Figure 14 Departure directions from site (with right turns from/to McEvoy Street)



Figure 15 Arrival directions to site (with right turn bans from/to McEvoy Street)



Figure 16 Departure directions from site (with right turn bans from/to McEvoy Street)

4.4 Background traffic growth

Following discussions with Council officers and TfNSW, the traffic modelling has taken into consideration potential traffic growth from surrounding development in the area. Outputs from the Sydney Strategic Traffic Forecasting Model (STFM) were provided by TfNSW to inform the future year traffic modelling. The STFM indicated traffic growth rates on Bourke Street and McEvoy Street of between 1.6% per annum and 2.3% per annum respectively as summarised in Table 7 below. These annual growth rates were applied to the traffic volumes collected in February 2020 and 12 years of growth applied to obtain forecast 2032 traffic volumes.

Table 7 Forecast traffic growth rates from STFM

Street	2021 AM flows	2036 AM flows	% Annual Growth AM	2021 PM flows	2036 PM flows	% Annual Growth PM
Bourke Street	2852	3550	1.6%	2819	3658	2.0%
McEvoy Street	2615	3535	2.3%	3205	4019	1.7%

4.5 Traffic modelling

The traffic modelling undertaken to support the proposal has been conducted using the TfNSW approved 'SIDRA Network' modelling package. SIDRA Network, unlike SIDRA Intersection, considers the operation of intersections in a coordinated manner including downstream and upstream queuing effects. SIDRA Network also has the ability to consider the interaction of traffic signal phasing / timing at adjoining intersections – in this case on Bourke Street at the intersections of McEvoy Street and Lachlan Street.

A key benefit of using SIDRA Network, as is now commonly recommended by TfNSW, is that any vehicle queues arising at a site are considered in the model and will impact the operation of the adjacent intersections. As can be seen in the figure below, the traffic modelling has considered the operation of four key intersections close to the site in a linked manner.

The SIDRA Network layout adopted for the modelling is illustrated in Figure 17.

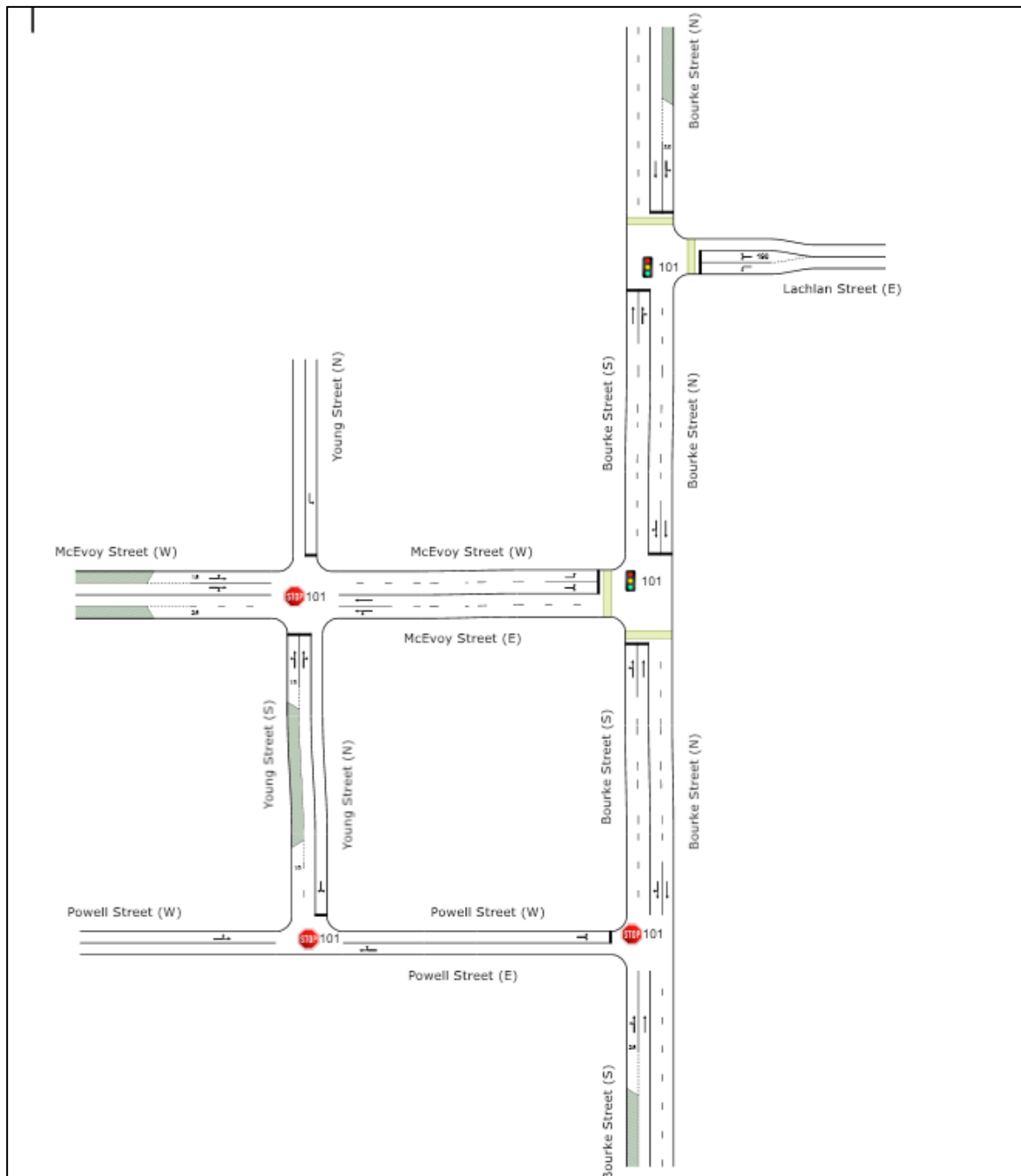


Figure 17 SIDRA network layout

Following advice from Council and TfNSW, the modelling has been updated to:

- Reflect the revised Planning Proposal including updated floor space and on-site parking assumptions
- Consider a reduced traffic generation rate for retail uses that reflects local travel behaviours (as recommended by Council); and
- Incorporate traffic growth assumptions on the surrounding road network (i.e. traffic growth not associated with the subject site)

The traffic modelling metric used to analyse the performance of the intersections is intersection Level of Service (LOS). Level of Service is a measure that uses the average delay experienced by vehicles to categorically assign each approach and movement with a qualitative ordinal grade (A through F, with A being the best and F being the worst). RMS Traffic Modelling Guidelines indicate the average delay relating to each grade, this is outlined in Table 8. In typical urban environments it is typical for intersections to operate at Level of Service D or E and still remain within acceptable performance levels.

Table 8 Level of service grades / description

Level of service grade	Average delay (seconds)	Description
A	Less than 14	Good operation
B	15 to 28	Good with acceptable delays and spare capacity
C	29 to 42	Satisfactory
D	43 to 56	Operating near capacity
E	57 to 70	At capacity. At signals, incidents will cause excessive delays. Roundabouts require other control mode
F	Greater than 71	Unsatisfactory with excessive queuing

The modelling results indicate that the proposal is not anticipated to significantly impact the surrounding road network. Intersection level of service remains unchanged for all sites when compared to the ‘future base’ scenario (i.e. no development) with most intersections operating at Level of Service D or below. The exception to this is the Bourke Street / Lachlan Street in the AM peak hour and Saturday peak hour, where due to the adopted background traffic growth rates the intersection is forecast to operate at ‘Level of Service F’.

This performance issue is a direct result of background traffic growth on the surrounding road network, with the modelling demonstrating that the Planning Proposal would not materially change the operation of this intersection.

Traffic associated with the Planning Proposal comprises approximately 1.5% of total intersection movements and contributing to less than 9% of the total traffic growth compared to current day conditions. Average vehicle delays in the morning peak hour through this intersection increase by less than half a second compared to the future base scenario, while during the Saturday peak hour average delays increase by approximately 8 seconds.

It is also worthwhile noting that a significant level of traffic already travelling along key roads in the vicinity of the site such as McEvoy Street and Bourke Street do so for the purpose of accessing nearby shopping centres such as East Village. While not specifically considered in the traffic analysis, all traffic associated with the proposal would not be ‘new’ – instead trips (particularly from those in the local area not currently served by a full line supermarket) would be diverted to Waterloo that would otherwise have been travelling to these existing centres. Therefore in this context the net traffic generation and associated road network performance as documented is considered to provide a conservative forecast of potential impacts and would most likely be better than the conservative level of service as projected.

The results of the traffic modelling are illustrated in Figure 18 (AM peak hour), Figure 19 (PM peak hour) and Figure 20 (Saturday peak hour) on the following pages. Detailed traffic modelling outputs are provided in Appendix A of this document.

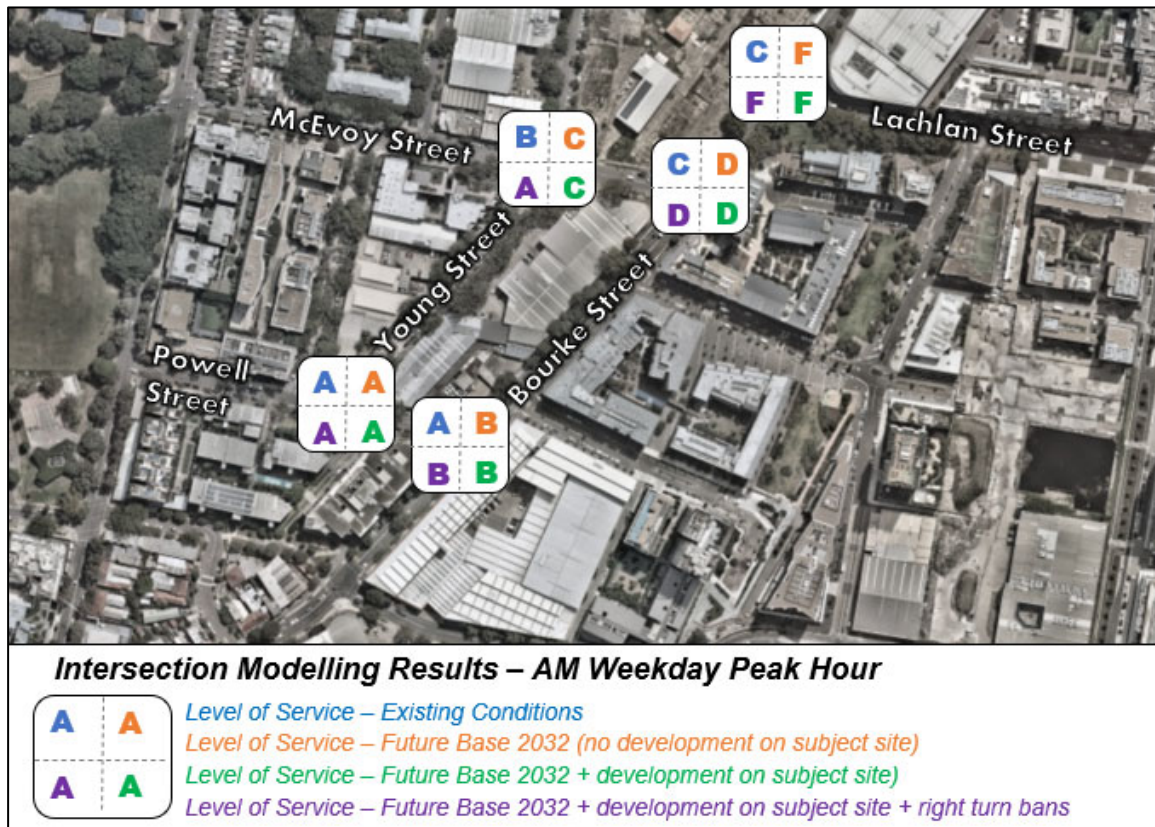


Figure 18 Intersection modelling results – AM peak weekday hour

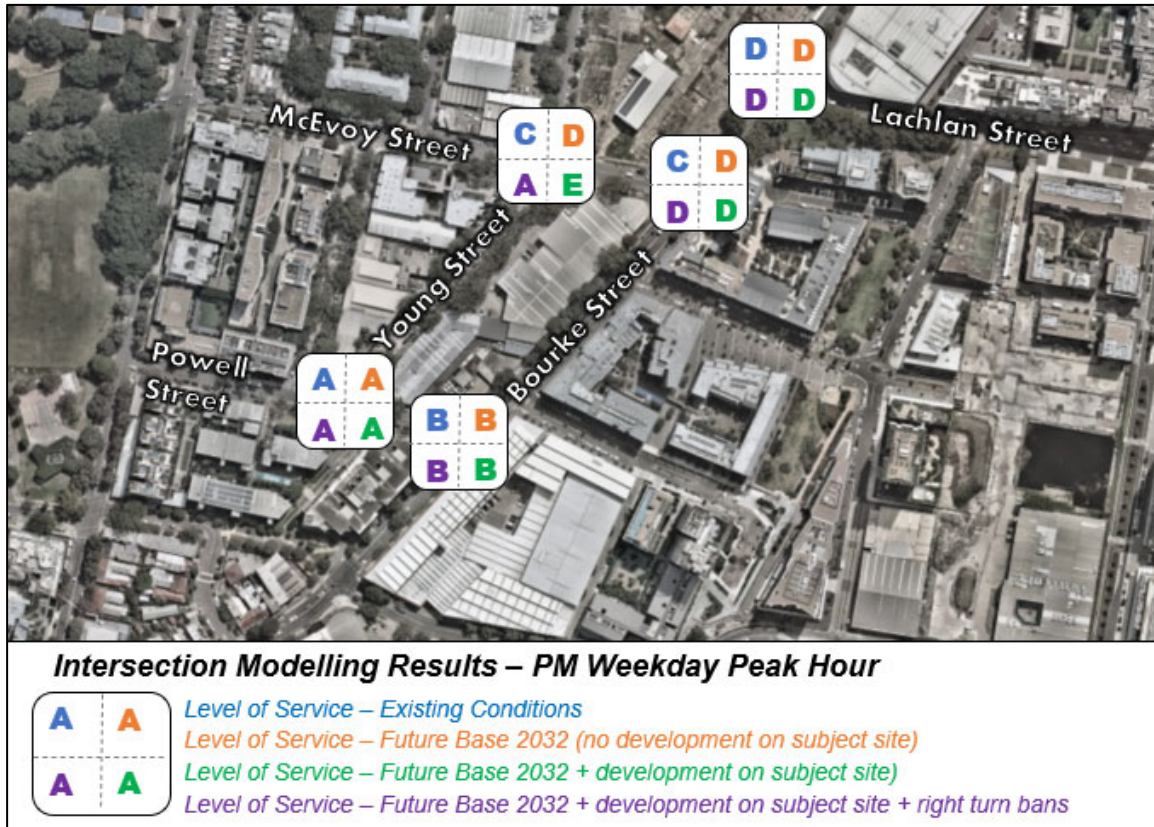


Figure 19 Intersection modelling results – PM weekday peak hour

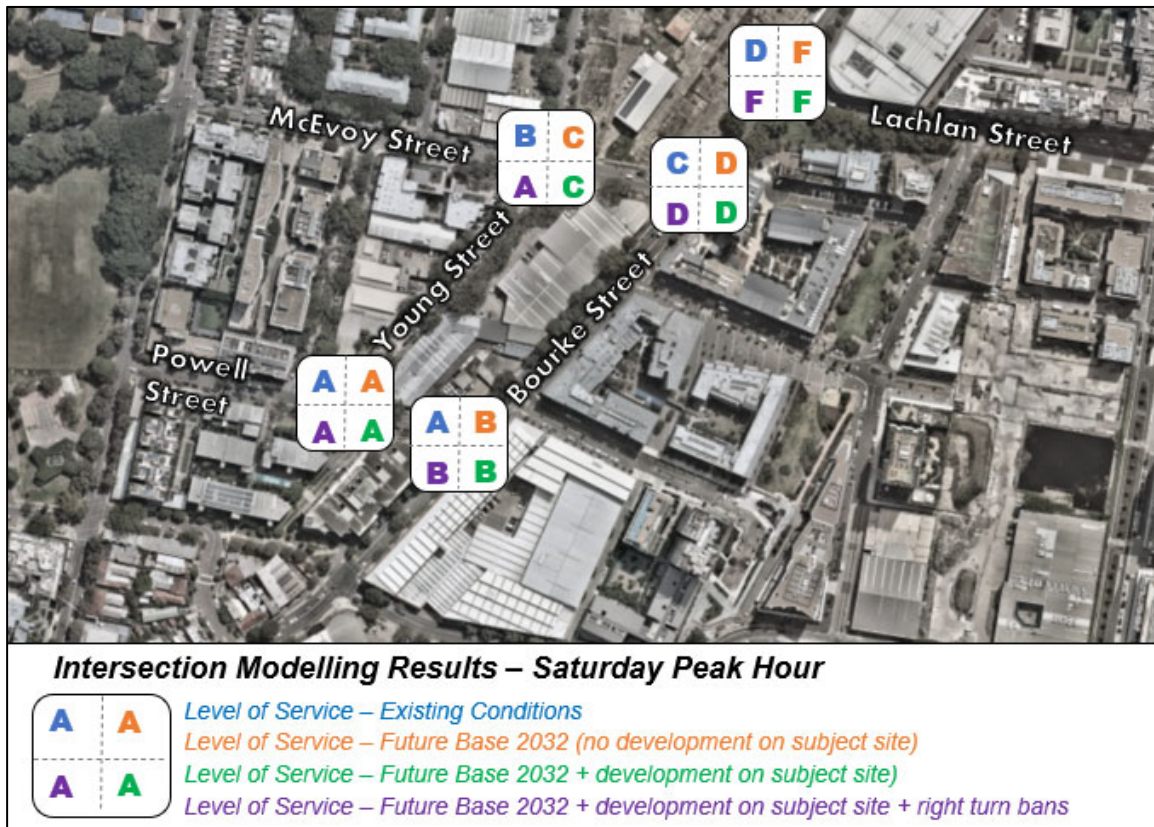


Figure 20 Intersection modelling results – Saturday peak hour

5 Summary

This transport assessment report has been undertaken by JMT Consulting to support a Planning Proposal for the site at 923-935 Bourke Street, Waterloo. The proposal seeks to amend the Sydney Local Environmental Plan to increase maximum height and density controls on the site, facilitating the future development of a mixed-use site including retail, commercial and residential floor space. Key findings of the transport assessment are as follows:

- Vehicle access to the site for general vehicles would be provided at the rear via a driveway on Young Street
- Service vehicle access to an on-site loading dock is to be provided via Bourke Street to segregate cars and trucks – providing a strong safety outcome
- Car parking and bicycle parking on the site for all uses will be delivered in accordance with the parking rates outlined in the Sydney DCP, with the final number of spaces to be determined at the Development Application stage of the project.
- Traffic modelling undertaken indicates that the proposal is not anticipated to result in unacceptable traffic impacts on the surrounding road network – with all intersections retaining their level of service compared to a ‘future base’ scenario.
- The proposal would provide benefits to the broader road network by providing for a full line supermarket in a rapidly growing area currently underserved by retail – removing the need for residents of Waterloo and surrounding suburbs to have to drive to other nearby shopping centres (e.g. East Village, Eastgardens, Surry Hills shopping centre) to undertake their shopping trips.
- Travel demand management measures have been suggested to improve the mode share of public transport and active transport. These items should be considered further at subsequent stages of the project.

In the above context, the traffic and transport impacts arising from the proposal are considered acceptable.

Appendix A: Traffic Modelling Results

MOVEMENT SUMMARY

Site: 101 [Lachlan / Bourke (Site Folder: AM Existing)]

Network: N102 [Existing AM (Network Folder: General)]

Lachlan / Bourke

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
South: Bourke Street (S)														
2	T1	509	9.3	509	9.3	0.544	20.6	LOS B	8.6	65.0	0.79	0.70	0.79	37.6
3	R2	311	7.8	311	7.8	*0.809	62.2	LOS E	8.7	65.0	1.00	0.88	1.08	18.8
Approach		820	8.7	820	8.7	0.809	36.4	LOS C	8.7	65.0	0.87	0.77	0.90	28.1
East: Lachlan Street (E)														
4	L2	618	6.0	618	6.0	0.796	33.8	LOS C	12.6	92.6	0.85	0.89	0.95	25.8
6	R2	116	3.6	116	3.6	*0.796	49.5	LOS D	9.6	69.8	0.97	0.92	1.13	31.0
Approach		734	5.6	734	5.6	0.796	36.3	LOS C	12.6	92.6	0.87	0.90	0.98	27.2
North: Bourke Street (N)														
7	L2	34	6.3	34	6.3	*0.803	61.2	LOS E	5.1	38.4	1.00	0.96	1.28	29.1
8	T1	262	8.8	262	8.8	0.803	53.9	LOS D	5.5	41.4	0.99	0.96	1.27	21.7
Approach		296	8.5	296	8.5	0.803	54.7	LOS D	5.5	41.4	0.99	0.96	1.27	22.8
All Vehicles		1849	7.5	1849	7.5	0.809	39.3	LOS C	12.6	92.6	0.89	0.85	0.99	26.7

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Lachlan Street (E)											
P2	Full	62	49.3	LOS E	0.2	0.2	0.95	0.95	75.9	31.9	0.42
North: Bourke Street (N)											
P3	Full	56	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
All Pedestrians		118	49.3	LOS E	0.2	0.2	0.95	0.95	77.2	33.5	0.43

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 [McEvoy / Bourke (Site Folder: AM Existing)]

Network: N102 [Existing AM (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
South: Bourke Street (S)														
1	L2	32	3.3	32	3.3	*0.749	45.4	LOS D	7.8	59.3	0.95	0.89	1.05	14.8
2	T1	462	10.0	462	10.0	0.749	38.9	LOS C	7.9	60.3	0.94	0.89	1.05	15.2
Approach		494	9.6	494	9.6	0.749	39.3	LOS C	7.9	60.3	0.94	0.89	1.05	15.2
North: Bourke Street (N)														
8	T1	533	7.7	533	7.7	0.410	11.7	LOS A	8.7	65.0	0.70	0.62	0.70	17.6
9	R2	347	5.5	347	5.5	*0.737	57.6	LOS E	8.9	65.0	1.00	0.87	1.02	4.6
Approach		880	6.8	880	6.8	0.737	29.8	LOS C	8.9	65.0	0.82	0.72	0.82	8.4
West: McEvoy Street (W)														
10	L2	358	7.1	358	7.1	0.750	36.0	LOS C	9.5	70.2	0.88	0.88	0.96	9.3
12	R2	157	7.4	157	7.4	*0.750	56.6	LOS E	6.4	47.6	1.00	0.88	1.13	6.3
Approach		515	7.2	515	7.2	0.750	42.3	LOS C	9.5	70.2	0.91	0.88	1.01	8.1
All Vehicles		1888	7.6	1888	7.6	0.750	35.7	LOS C	9.5	70.2	0.88	0.81	0.93	10.5

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Bourke Street (S)											
P1	Full	81	49.3	LOS E	0.2	0.2	0.95	0.95	78.7	35.2	0.45
West: McEvoy Street (W)											
P4	Full	46	49.3	LOS E	0.1	0.1	0.95	0.95	78.6	35.2	0.45
All Pedestrians		127	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45

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 [McEvoy / Young (Site Folder: AM Existing)]

 Network: N102 [Existing AM (Network Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Young Street (S)														
1	L2	19	0.0	19	0.0	0.018	9.1	LOS A	0.0	0.2	0.24	0.86	0.24	48.8
2	T1	2	0.0	2	0.0	0.025	18.8	LOS B	0.0	0.2	0.74	0.97	0.74	40.3
3	R2	4	0.0	4	0.0	0.025	21.7	LOS B	0.0	0.2	0.74	0.97	0.74	24.0
Approach		25	0.0	25	0.0	0.025	12.0	LOS A	0.0	0.2	0.37	0.88	0.37	45.3
East: McEvoy Street (E)														
4	L2	5	0.0	5	0.0	0.077	5.5	LOS A	0.0	0.0	0.00	0.02	0.00	58.1
5	T1	372	4.2	372	4.2	0.121	0.2	LOS A	0.0	0.0	0.00	0.01	0.00	59.8
Approach		377	4.2	377	4.2	0.121	0.2	NA	0.0	0.0	0.00	0.01	0.00	59.8
North: Young Street (N)														
7	L2	77	2.7	77	2.7	0.091	9.1	LOS A	0.1	0.8	0.31	0.89	0.31	47.2
Approach		77	2.7	77	2.7	0.091	9.1	LOS A	0.1	0.8	0.31	0.89	0.31	47.2
West: McEvoy Street (W)														
10	L2	56	1.9	56	1.9	0.144	5.6	LOS A	0.0	0.0	0.00	0.14	0.00	57.0
11	T1	443	6.2	443	6.2	0.144	0.1	LOS A	0.0	0.3	0.02	0.07	0.02	58.6
12	R2	7	14.3	7	14.3	0.144	7.5	LOS A	0.0	0.3	0.04	0.02	0.04	59.4
Approach		506	5.8	506	5.8	0.144	0.8	NA	0.0	0.3	0.02	0.07	0.02	58.3
All Vehicles		985	4.8	985	4.8	0.144	1.5	NA	0.1	0.8	0.04	0.13	0.04	57.5

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.

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

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

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

MOVEMENT SUMMARY

 Site: 101 [Bourke / Powell (Site Folder: AM Existing)]

 Network: N102 [Existing AM (Network Folder: General)]

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	51	2.1	51	2.1	0.140	5.6	LOS A	0.0	0.0	0.00	0.11	0.00	57.9
2	T1	479	4.4	479	4.4	0.140	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	59.0
Approach		529	4.2	529	4.2	0.140	0.6	NA	0.0	0.0	0.00	0.06	0.00	58.9
North: Bourke Street (N)														
8	T1	655	3.5	655	3.5	0.194	0.3	LOS A	0.2	1.3	0.07	0.03	0.07	59.0
9	R2	36	2.9	36	2.9	0.194	8.9	LOS A	0.2	1.3	0.16	0.07	0.16	53.3
Approach		691	3.5	691	3.5	0.194	0.8	NA	0.2	1.3	0.08	0.03	0.08	58.9
West: Powell Street (W)														
10	L2	15	0.0	15	0.0	0.080	8.7	LOS A	0.1	0.8	0.49	0.94	0.49	19.7
12	R2	28	0.0	28	0.0	0.080	14.4	LOS A	0.1	0.8	0.49	0.94	0.49	43.5
Approach		43	0.0	43	0.0	0.080	12.5	LOS A	0.1	0.8	0.49	0.94	0.49	39.9
All Vehicles		1263	3.7	1263	3.7	0.194	1.1	NA	0.2	1.3	0.06	0.07	0.06	58.2

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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Wednesday, 20 July 2022 11:14:33 AM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

 Site: 101 [Powell / Young (Site Folder: AM Existing)]

 Network: N102 [Existing AM (Network Folder: General)]

Powell / Young
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
East: Powell Street (E)														
5	T1	57	1.9	57	1.9	0.048	0.1	LOS A	0.1	0.5	0.10	0.20	0.10	56.7
6	R2	29	7.1	29	7.1	0.048	5.3	LOS A	0.1	0.5	0.10	0.20	0.10	43.6
Approach		86	3.7	86	3.7	0.048	1.9	NA	0.1	0.5	0.10	0.20	0.10	55.4
North: Young Street (N)														
7	L2	15	7.1	15	7.1	0.032	8.4	LOS A	0.0	0.3	0.11	0.94	0.11	36.9
9	R2	21	5.0	21	5.0	0.032	8.6	LOS A	0.0	0.3	0.11	0.94	0.11	48.4
Approach		36	5.9	36	5.9	0.032	8.5	LOS A	0.0	0.3	0.11	0.94	0.11	45.9
West: Powell Street (W)														
10	L2	31	6.9	31	6.9	0.032	5.7	LOS A	0.0	0.0	0.00	0.30	0.00	55.0
11	T1	28	0.0	28	0.0	0.032	0.0	LOS A	0.0	0.0	0.00	0.30	0.00	55.0
Approach		59	3.6	59	3.6	0.032	2.9	NA	0.0	0.0	0.00	0.30	0.00	55.0
All Vehicles		181	4.1	181	4.1	0.048	3.5	NA	0.1	0.5	0.07	0.38	0.07	52.9

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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Wednesday, 20 July 2022 11:14:33 AM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

Site: 101 [Lachlan / Bourke (Site Folder: AM Future Base)]

Network: N101 [AM Future Base (Network Folder: General)]

Lachlan / Bourke

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
2	T1	612	10.3	612	10.3	0.635	19.7	LOS B	8.5	65.0	0.79	0.71	0.79	38.3
3	R2	373	9.9	373	9.9	1.027	110.4	LOS F	8.6	65.0	1.00	1.11	1.62	12.3
Approach		984	10.2	984	10.2	1.027	54.0	LOS D	8.6	65.0	0.87	0.87	1.11	22.2
East: Lachlan Street (E)														
4	L2	741	7.0	741	7.0	* 1.011	107.2	LOS F	32.2	238.8	1.00	1.21	1.73	11.5
6	R2	139	4.5	139	4.5	1.011	111.7	LOS F	18.3	134.7	1.00	1.19	1.79	19.6
Approach		880	6.6	880	6.6	1.011	107.9	LOS F	32.2	238.8	1.00	1.21	1.74	13.1
North: Bourke Street (N)														
7	L2	40	5.3	40	5.3	1.002	113.7	LOS F	8.9	67.0	1.00	1.27	1.92	19.9
8	T1	315	10.0	315	10.0	* 1.002	108.9	LOS F	10.2	77.3	1.00	1.29	1.91	13.2
Approach		355	9.5	355	9.5	1.002	109.4	LOS F	10.2	77.3	1.00	1.28	1.91	14.1
All Vehicles		2219	8.6	2219	8.6	1.027	84.3	LOS F	32.2	238.8	0.94	1.07	1.49	16.3

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped ped	Dist] m					
East: Lachlan Street (E)											
P2	Full	62	49.3	LOS E	0.2	0.2	0.95	0.95	75.9	31.9	0.42
North: Bourke Street (N)											
P3	Full	56	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
All Pedestrians		118	49.3	LOS E	0.2	0.2	0.95	0.95	77.2	33.5	0.43

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 [McEvoy / Bourke (Site Folder: AM Future Base)]

Network: N101 [AM Future Base (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
South: Bourke Street (S)														
1	L2	38	2.8	38	2.8	0.906	68.0	LOS E	12.3	93.9	1.00	1.13	1.41	10.4
2	T1	555	11.4	555	11.4	*0.906	62.1	LOS E	12.7	97.3	1.00	1.14	1.41	10.5
Approach		593	10.8	593	10.8	0.906	62.5	LOS E	12.7	97.3	1.00	1.14	1.41	10.5
North: Bourke Street (N)														
8	T1	639	9.1	639	9.1	0.496	10.7	LOS A	8.6	65.0	0.65	0.59	0.65	18.9
9	R2	417	6.3	417	6.3	0.890	64.8	LOS E	8.8	65.0	1.00	0.93	1.14	4.2
Approach		1056	8.0	1056	8.0	0.890	32.0	LOS C	8.8	65.0	0.79	0.72	0.84	7.9
West: McEvoy Street (W)														
10	L2	429	7.4	429	7.4	*0.903	60.7	LOS E	12.8	95.0	0.99	1.04	1.34	5.9
12	R2	188	8.4	188	8.4	0.903	70.5	LOS F	9.0	67.2	1.00	1.01	1.42	5.2
Approach		618	7.7	618	7.7	0.903	63.7	LOS E	12.8	95.0	0.99	1.03	1.36	5.7
All Vehicles		2266	8.6	2266	8.6	0.906	48.6	LOS D	12.8	97.3	0.90	0.91	1.13	8.1

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Bourke Street (S)											
P1	Full	81	49.3	LOS E	0.2	0.2	0.95	0.95	78.7	35.2	0.45
West: McEvoy Street (W)											
P4	Full	46	49.3	LOS E	0.1	0.1	0.95	0.95	78.6	35.2	0.45
All Pedestrians		127	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45

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 [McEvoy / Young (Site Folder: AM Future Base)]

 Network: N101 [AM Future Base (Network Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Young Street (S)														
1	L2	23	0.0	23	0.0	0.022	9.3	LOS A	0.0	0.3	0.27	0.85	0.27	48.7
2	T1	2	0.0	2	0.0	0.045	24.3	LOS B	0.1	0.4	0.82	1.00	0.82	36.2
3	R2	5	0.0	5	0.0	0.045	29.7	LOS C	0.1	0.4	0.82	1.00	0.82	19.6
Approach		31	0.0	31	0.0	0.045	13.9	LOS A	0.1	0.4	0.40	0.89	0.40	43.7
East: McEvoy Street (E)														
4	L2	6	0.0	6	0.0	0.094	5.5	LOS A	0.0	0.0	0.00	0.02	0.00	58.1
5	T1	446	5.2	446	5.2	0.146	0.2	LOS A	0.0	0.0	0.00	0.01	0.00	59.8
Approach		453	5.1	453	5.1	0.146	0.3	NA	0.0	0.0	0.00	0.01	0.00	59.8
North: Young Street (N)														
7	L2	93	2.3	93	2.3	0.186	9.0	LOS A	0.1	1.0	0.29	0.90	0.29	47.3
Approach		93	2.3	93	2.3	0.186	9.0	LOS A	0.1	1.0	0.29	0.90	0.29	47.3
West: McEvoy Street (W)														
10	L2	67	1.6	67	1.6	0.213	5.6	LOS A	0.0	0.0	0.00	0.17	0.00	56.6
11	T1	532	6.5	532	6.5	0.213	0.1	LOS A	0.1	0.4	0.02	0.06	0.02	58.6
12	R2	8	12.5	8	12.5	0.213	8.1	LOS A	0.1	0.4	0.03	0.01	0.03	59.5
Approach		607	6.1	607	6.1	0.213	0.8	NA	0.1	0.4	0.02	0.07	0.02	58.2
All Vehicles		1183	5.2	1183	5.2	0.213	1.6	NA	0.1	1.0	0.04	0.13	0.04	57.4

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.

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

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

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

MOVEMENT SUMMARY

 Site: 101 [Bourke / Powell (Site Folder: AM Future Base)]

 Network: N101 [AM Future Base (Network Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	61	1.7	61	1.7	0.169	5.6	LOS A	0.0	0.0	0.00	0.11	0.00	57.9
2	T1	575	4.9	575	4.9	0.169	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	59.0
Approach		636	4.6	636	4.6	0.169	0.6	NA	0.0	0.0	0.00	0.06	0.00	58.9
North: Bourke Street (N)														
8	T1	785	4.2	785	4.2	0.236	0.5	LOS A	0.3	1.9	0.09	0.03	0.09	58.8
9	R2	42	2.5	42	2.5	0.236	10.1	LOS A	0.3	1.9	0.20	0.08	0.21	51.6
Approach		827	4.1	827	4.1	0.236	1.0	NA	0.3	1.9	0.09	0.04	0.10	58.6
West: Powell Street (W)														
10	L2	18	0.0	18	0.0	0.124	9.0	LOS A	0.2	1.2	0.59	0.94	0.59	17.6
12	R2	34	0.0	34	0.0	0.124	17.9	LOS B	0.2	1.2	0.59	0.94	0.59	41.7
Approach		52	0.0	52	0.0	0.124	14.8	LOS B	0.2	1.2	0.59	0.94	0.59	37.7
All Vehicles		1515	4.2	1515	4.2	0.236	1.3	NA	0.3	1.9	0.07	0.08	0.07	57.9

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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Thursday, 11 August 2022 2:51:39 PM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

 Site: 101 [Powell / Young (Site Folder: AM Future Base)]

 Network: N101 [AM Future Base (Network Folder: General)]

Powell / Young
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
East: Powell Street (E)														
5	T1	67	1.6	67	1.6	0.058	0.1	LOS A	0.1	0.6	0.12	0.20	0.12	56.5
6	R2	36	5.9	36	5.9	0.058	5.3	LOS A	0.1	0.6	0.12	0.20	0.12	43.0
Approach		103	3.1	103	3.1	0.058	1.9	NA	0.1	0.6	0.12	0.20	0.12	55.2
North: Young Street (N)														
7	L2	18	5.9	18	5.9	0.039	8.4	LOS A	0.1	0.4	0.12	0.94	0.12	36.8
9	R2	25	4.2	25	4.2	0.039	8.6	LOS A	0.1	0.4	0.12	0.94	0.12	48.4
Approach		43	4.9	43	4.9	0.039	8.5	LOS A	0.1	0.4	0.12	0.94	0.12	45.8
West: Powell Street (W)														
10	L2	37	5.7	37	5.7	0.038	5.7	LOS A	0.0	0.0	0.00	0.31	0.00	55.0
11	T1	34	0.0	34	0.0	0.038	0.0	LOS A	0.0	0.0	0.00	0.31	0.00	55.0
Approach		71	3.0	71	3.0	0.038	3.0	NA	0.0	0.0	0.00	0.31	0.00	55.0
All Vehicles		217	3.4	217	3.4	0.058	3.6	NA	0.1	0.6	0.08	0.38	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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Thursday, 11 August 2022 2:51:39 PM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

Site: 101 [Lachlan / Bourke (Site Folder: AM Future Base + Dev)]

Network: N101 [AM Future Base + Dev (Network Folder: General)]

Lachlan / Bourke

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
2	T1	615	10.3	615	10.3	0.638	19.7	LOS B	8.5	65.0	0.79	0.72	0.79	38.2
3	R2	373	9.9	373	9.9	1.027	110.4	LOS F	8.6	65.0	1.00	1.11	1.62	12.3
Approach		987	10.1	987	10.1	1.027	54.0	LOS D	8.6	65.0	0.87	0.87	1.10	22.3
East: Lachlan Street (E)														
4	L2	741	7.0	741	7.0	* 1.011	107.2	LOS F	32.2	238.8	1.00	1.21	1.73	11.5
6	R2	139	4.5	139	4.5	1.011	111.7	LOS F	18.3	134.7	1.00	1.19	1.79	19.6
Approach		880	6.6	880	6.6	1.011	107.9	LOS F	32.2	238.8	1.00	1.21	1.74	13.1
North: Bourke Street (N)														
7	L2	40	5.3	40	5.3	1.002	113.7	LOS F	8.9	67.0	1.00	1.27	1.92	19.9
8	T1	315	10.0	315	10.0	* 1.002	108.9	LOS F	10.2	77.3	1.00	1.29	1.91	13.2
Approach		355	9.5	355	9.5	1.002	109.4	LOS F	10.2	77.3	1.00	1.28	1.91	14.1
All Vehicles		2222	8.6	2222	8.6	1.027	84.2	LOS F	32.2	238.8	0.94	1.07	1.49	16.3

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped ped	Dist] m					
East: Lachlan Street (E)											
P2	Full	62	49.3	LOS E	0.2	0.2	0.95	0.95	75.9	31.9	0.42
North: Bourke Street (N)											
P3	Full	56	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
All Pedestrians		118	49.3	LOS E	0.2	0.2	0.95	0.95	77.2	33.5	0.43

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 [McEvoy / Bourke (Site Folder: AM Future Base + Dev)]

Network: N101 [AM Future Base + Dev (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	38	2.8	38	2.8	0.910	69.2	LOS E	12.5	95.4	1.00	1.14	1.42	10.3
2	T1	558	11.3	558	11.3	*0.910	63.4	LOS E	12.9	98.8	1.00	1.15	1.42	10.4
Approach		596	10.8	596	10.8	0.910	63.7	LOS E	12.9	98.8	1.00	1.15	1.42	10.3
North: Bourke Street (N)														
8	T1	636	9.1	636	9.1	0.493	10.6	LOS A	8.6	65.0	0.65	0.59	0.65	18.9
9	R2	424	6.2	424	6.2	0.905	66.3	LOS E	8.8	65.0	1.00	0.94	1.17	4.1
Approach		1060	7.9	1060	7.9	0.905	32.9	LOS C	8.8	65.0	0.79	0.73	0.86	7.7
West: McEvoy Street (W)														
10	L2	438	7.2	438	7.2	*0.917	65.2	LOS E	12.8	95.0	1.00	1.06	1.39	5.5
12	R2	189	8.3	189	8.3	0.917	73.5	LOS F	9.3	69.8	1.00	1.03	1.47	5.0
Approach		627	7.6	627	7.6	0.917	67.7	LOS E	12.8	95.0	1.00	1.05	1.42	5.4
All Vehicles		2283	8.6	2283	8.6	0.917	50.5	LOS D	12.9	98.8	0.90	0.93	1.16	7.8

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped ped	Dist] m					
South: Bourke Street (S)											
P1	Full	81	49.3	LOS E	0.2	0.2	0.95	0.95	78.7	35.2	0.45
West: McEvoy Street (W)											
P4	Full	46	49.3	LOS E	0.1	0.1	0.95	0.95	78.6	35.2	0.45
All Pedestrians		127	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45

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 [McEvoy / Young (Site Folder: AM Future Base + Dev)]

 Network: N101 [AM Future Base + Dev (Network Folder: General)]

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Young Street (S)														
1	L2	32	0.0	32	0.0	0.030	9.3	LOS A	0.1	0.4	0.27	0.85	0.27	48.7
2	T1	2	0.0	2	0.0	0.074	24.5	LOS B	0.1	0.6	0.83	1.00	0.83	35.8
3	R2	9	0.0	9	0.0	0.074	30.0	LOS C	0.1	0.6	0.83	1.00	0.83	19.2
Approach		43	0.0	43	0.0	0.074	14.6	LOS B	0.1	0.6	0.42	0.89	0.42	42.7
East: McEvoy Street (E)														
4	L2	14	0.0	14	0.0	0.095	5.5	LOS A	0.0	0.0	0.00	0.05	0.00	56.1
5	T1	443	5.2	443	5.2	0.148	0.2	LOS A	0.0	0.0	0.00	0.02	0.00	59.7
Approach		457	5.1	457	5.1	0.148	0.4	NA	0.0	0.0	0.00	0.02	0.00	59.6
North: Young Street (N)														
7	L2	93	2.3	93	2.3	0.187	9.0	LOS A	0.1	1.0	0.29	0.90	0.29	47.3
Approach		93	2.3	93	2.3	0.187	9.0	LOS A	0.1	1.0	0.29	0.90	0.29	47.3
West: McEvoy Street (W)														
10	L2	67	1.6	67	1.6	0.216	5.6	LOS A	0.0	0.0	0.00	0.17	0.00	56.6
11	T1	532	6.5	532	6.5	0.216	0.1	LOS A	0.1	0.4	0.02	0.06	0.02	58.6
12	R2	8	12.5	8	12.5	0.216	8.2	LOS A	0.1	0.4	0.03	0.01	0.03	59.5
Approach		607	6.1	607	6.1	0.216	0.8	NA	0.1	0.4	0.02	0.07	0.02	58.2
All Vehicles		1200	5.2	1200	5.2	0.216	1.8	NA	0.1	1.0	0.05	0.15	0.05	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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Thursday, 11 August 2022 2:54:03 PM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

 Site: 101 [Bourke / Powell (Site Folder: AM Future Base + Dev)]

 Network: N101 [AM Future Base + Dev (Network Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	65	1.6	65	1.6	0.169	5.6	LOS A	0.0	0.0	0.00	0.12	0.00	57.7
2	T1	572	5.0	572	5.0	0.169	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	58.9
Approach		637	4.6	637	4.6	0.169	0.6	NA	0.0	0.0	0.00	0.06	0.00	58.8
North: Bourke Street (N)														
8	T1	783	4.2	783	4.2	0.236	0.5	LOS A	0.3	1.9	0.09	0.03	0.09	58.7
9	R2	42	2.5	42	2.5	0.236	10.1	LOS A	0.3	1.9	0.21	0.08	0.21	51.6
Approach		825	4.1	825	4.1	0.236	1.0	NA	0.3	1.9	0.09	0.04	0.10	58.6
West: Powell Street (W)														
10	L2	24	0.0	24	0.0	0.156	9.0	LOS A	0.2	1.5	0.58	0.94	0.58	17.6
12	R2	42	0.0	42	0.0	0.156	18.1	LOS B	0.2	1.5	0.58	0.94	0.58	41.7
Approach		66	0.0	66	0.0	0.156	14.8	LOS B	0.2	1.5	0.58	0.94	0.58	37.5
All Vehicles		1528	4.1	1528	4.1	0.236	1.4	NA	0.3	1.9	0.08	0.09	0.08	57.7

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.

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

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

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

MOVEMENT SUMMARY

 Site: 101 [Powell / Young (Site Folder: AM Future Base + Dev)]

 Network: N101 [AM Future Base + Dev (Network Folder: General)]

Powell / Young
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
East: Powell Street (E)														
5	T1	67	1.6	67	1.6	0.060	0.1	LOS A	0.1	0.6	0.12	0.21	0.12	56.3
6	R2	40	5.3	40	5.3	0.060	5.3	LOS A	0.1	0.6	0.12	0.21	0.12	42.2
Approach		107	2.9	107	2.9	0.060	2.1	NA	0.1	0.6	0.12	0.21	0.12	54.7
North: Young Street (N)														
7	L2	23	4.5	23	4.5	0.058	8.3	LOS A	0.1	0.6	0.13	0.93	0.13	36.8
9	R2	40	2.6	40	2.6	0.058	8.6	LOS A	0.1	0.6	0.13	0.93	0.13	48.4
Approach		63	3.3	63	3.3	0.058	8.5	LOS A	0.1	0.6	0.13	0.93	0.13	46.2
West: Powell Street (W)														
10	L2	37	5.7	37	5.7	0.038	5.7	LOS A	0.0	0.0	0.00	0.31	0.00	55.0
11	T1	34	0.0	34	0.0	0.038	0.0	LOS A	0.0	0.0	0.00	0.31	0.00	55.0
Approach		71	3.0	71	3.0	0.038	3.0	NA	0.0	0.0	0.00	0.31	0.00	55.0
All Vehicles		241	3.1	241	3.1	0.060	4.0	NA	0.1	0.6	0.09	0.43	0.09	52.0

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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Thursday, 11 August 2022 2:54:03 PM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

■ Site: 101 [Lachlan / Bourke (Site Folder: AM Future Base + Dev (right turn bans))]
 ■ Network: N101 [AM Future Base + Dev (right turn bans) (Network Folder: General)]

Lachlan / Bourke

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
2	T1	615	10.3	615	10.3	0.638	19.7	LOS B	8.5	65.0	0.79	0.72	0.79	38.2
3	R2	373	9.9	373	9.9	1.027	110.5	LOS F	8.6	65.0	1.00	1.11	1.62	12.3
Approach		987	10.1	987	10.1	1.027	54.0	LOS D	8.6	65.0	0.87	0.87	1.11	22.3
East: Lachlan Street (E)														
4	L2	741	7.0	741	7.0	* 1.011	107.2	LOS F	32.2	238.8	1.00	1.21	1.73	11.5
6	R2	139	4.5	139	4.5	1.011	111.7	LOS F	18.3	134.7	1.00	1.19	1.79	19.6
Approach		880	6.6	880	6.6	1.011	107.9	LOS F	32.2	238.8	1.00	1.21	1.74	13.1
North: Bourke Street (N)														
7	L2	40	5.3	40	5.3	1.002	113.7	LOS F	8.9	67.0	1.00	1.27	1.92	19.9
8	T1	315	10.0	315	10.0	* 1.002	108.9	LOS F	10.2	77.3	1.00	1.29	1.91	13.2
Approach		355	9.5	355	9.5	1.002	109.4	LOS F	10.2	77.3	1.00	1.28	1.91	14.1
All Vehicles		2222	8.6	2222	8.6	1.027	84.2	LOS F	32.2	238.8	0.94	1.07	1.49	16.3

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped ped	Dist] m					
East: Lachlan Street (E)											
P2	Full	62	49.3	LOS E	0.2	0.2	0.95	0.95	75.9	31.9	0.42
North: Bourke Street (N)											
P3	Full	56	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
All Pedestrians		118	49.3	LOS E	0.2	0.2	0.95	0.95	77.2	33.5	0.43

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 [McEvoy / Bourke (Site Folder: AM Future Base + Dev (right turn bans))]
 ■ Network: N101 [AM Future Base + Dev (right turn bans) (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	38	2.8	38	2.8	0.916	71.0	LOS F	12.8	97.4	1.00	1.15	1.44	10.0
2	T1	562	11.2	562	11.2	*0.916	65.2	LOS E	13.2	101.0	1.00	1.16	1.44	10.1
Approach		600	10.7	600	10.7	0.916	65.5	LOS E	13.2	101.0	1.00	1.16	1.44	10.1
North: Bourke Street (N)														
8	T1	636	9.1	636	9.1	0.493	10.6	LOS A	8.6	65.0	0.65	0.59	0.65	37.1
9	R2	424	6.2	424	6.2	0.905	66.3	LOS E	8.8	65.0	1.00	0.94	1.17	4.1
Approach		1060	7.9	1060	7.9	0.905	32.9	LOS C	8.8	65.0	0.79	0.73	0.86	16.3
West: McEvoy Street (W)														
10	L2	433	7.3	433	7.3	*0.909	62.5	LOS E	12.8	95.0	0.99	1.04	1.36	5.8
12	R2	189	8.3	189	8.3	0.909	71.7	LOS F	9.1	68.3	1.00	1.02	1.44	12.2
Approach		622	7.6	622	7.6	0.909	65.3	LOS E	12.8	95.0	0.99	1.04	1.39	8.1
All Vehicles		2282	8.6	2282	8.6	0.916	50.3	LOS D	13.2	101.0	0.90	0.93	1.15	11.5

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped ped	Dist] m					
South: Bourke Street (S)											
P1	Full	81	49.3	LOS E	0.2	0.2	0.95	0.95	78.7	35.2	0.45
West: McEvoy Street (W)											
P4	Full	46	49.3	LOS E	0.1	0.1	0.95	0.95	78.6	35.2	0.45
All Pedestrians		127	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45

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 [McEvoy / Young (Site Folder: AM Future Base + Dev (right turn bans))]

 Network: N101 [AM Future Base + Dev (right turn bans) (Network Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Young Street (S)														
1	L2	32	0.0	32	0.0	0.030	9.3	LOS A	0.1	0.4	0.27	0.85	0.27	48.7
2	T1	2	0.0	2	0.0	0.010	23.5	LOS B	0.0	0.1	0.79	0.92	0.79	38.8
Approach		34	0.0	34	0.0	0.030	10.2	LOS A	0.1	0.4	0.30	0.86	0.30	48.0
East: McEvoy Street (E)														
4	L2	14	0.0	14	0.0	0.095	5.5	LOS A	0.0	0.0	0.00	0.05	0.00	56.1
5	T1	443	5.2	443	5.2	0.148	0.2	LOS A	0.0	0.0	0.00	0.02	0.00	59.7
Approach		457	5.1	457	5.1	0.148	0.4	NA	0.0	0.0	0.00	0.02	0.00	59.6
North: Young Street (N)														
7	L2	93	2.3	93	2.3	0.186	9.0	LOS A	0.1	1.0	0.28	0.90	0.28	47.3
Approach		93	2.3	93	2.3	0.186	9.0	LOS A	0.1	1.0	0.28	0.90	0.28	47.3
West: McEvoy Street (W)														
10	L2	67	1.6	67	1.6	0.208	5.6	LOS A	0.0	0.0	0.00	0.18	0.00	56.6
11	T1	532	6.5	532	6.5	0.208	0.1	LOS A	0.0	0.0	0.00	0.05	0.00	58.9
Approach		599	6.0	599	6.0	0.208	0.7	NA	0.0	0.0	0.00	0.07	0.00	58.4
All Vehicles		1182	5.2	1182	5.2	0.208	1.5	NA	0.1	1.0	0.03	0.14	0.03	57.5

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.

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

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

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

MOVEMENT SUMMARY

 **Site: 101 [Bourke / Powell (Site Folder: AM Future Base + Dev (right turn bans))]**  **Network: N101 [AM Future Base + Dev (right turn bans) (Network Folder: General)]**

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	65	1.6	65	1.6	0.169	5.6	LOS A	0.0	0.0	0.00	0.12	0.00	57.7
2	T1	572	5.0	572	5.0	0.169	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	59.2
Approach		637	4.6	637	4.6	0.169	0.6	NA	0.0	0.0	0.00	0.06	0.00	59.1
North: Bourke Street (N)														
8	T1	783	4.2	783	4.2	0.236	0.5	LOS A	0.3	2.3	0.09	0.03	0.09	58.7
9	R2	42	2.5	42	2.5	0.236	10.1	LOS A	0.3	2.3	0.21	0.08	0.21	51.6
Approach		825	4.1	825	4.1	0.236	1.0	NA	0.3	2.3	0.10	0.04	0.10	58.6
West: Powell Street (W)														
10	L2	29	0.0	29	0.0	0.149	9.0	LOS A	0.2	1.4	0.55	0.93	0.55	32.2
12	R2	32	0.0	32	0.0	0.149	20.4	LOS B	0.2	1.4	0.55	0.93	0.55	41.6
Approach		61	0.0	61	0.0	0.149	14.9	LOS B	0.2	1.4	0.55	0.93	0.55	38.1
All Vehicles		1523	4.1	1523	4.1	0.236	1.4	NA	0.3	2.3	0.07	0.08	0.07	58.0

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.
 Delay Model: SIDRA Standard (Geometric Delay is included).
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 **Site: 101 [Powell / Young (Site Folder: AM Future Base + Dev (right turn bans))]**

 **Network: N101 [AM Future Base + Dev (right turn bans) (Network Folder: General)]**

Powell / Young
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
East: Powell Street (E)														
5	T1	67	1.6	67	1.6	0.060	0.1	LOS A	0.1	0.6	0.12	0.21	0.12	56.3
6	R2	40	5.3	40	5.3	0.060	5.3	LOS A	0.1	0.6	0.12	0.21	0.12	42.2
Approach		107	2.9	107	2.9	0.060	2.1	NA	0.1	0.6	0.12	0.21	0.12	54.7
North: Young Street (N)														
7	L2	37	2.9	37	2.9	0.058	8.3	LOS A	0.1	0.6	0.11	0.94	0.11	36.9
9	R2	31	3.4	31	3.4	0.058	8.7	LOS A	0.1	0.6	0.11	0.94	0.11	48.4
Approach		67	3.1	67	3.1	0.058	8.4	LOS A	0.1	0.6	0.11	0.94	0.11	44.7
West: Powell Street (W)														
10	L2	37	5.7	37	5.7	0.038	5.7	LOS A	0.0	0.0	0.00	0.31	0.00	55.0
11	T1	34	0.0	34	0.0	0.038	0.0	LOS A	0.0	0.0	0.00	0.31	0.00	55.0
Approach		71	3.0	71	3.0	0.038	3.0	NA	0.0	0.0	0.00	0.31	0.00	55.0
All Vehicles		245	3.0	245	3.0	0.060	4.1	NA	0.1	0.6	0.08	0.44	0.08	51.7

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.

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

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

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

MOVEMENT SUMMARY

Site: 101 [Lachlan / Bourke (Site Folder: PM Existing)]

Network: N101 [Existing PM (Network Folder: General)]

Lachlan / Bourke

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
South: Bourke Street (S)														
2	T1	416	4.8	416	4.8	0.372	15.6	LOS B	8.9	64.7	0.71	0.63	0.71	41.4
3	R2	388	1.9	388	1.9	*0.833	59.6	LOS E	9.1	65.0	1.00	0.90	1.08	19.4
Approach		804	3.4	804	3.4	0.833	36.9	LOS C	9.1	65.0	0.85	0.76	0.89	27.6
East: Lachlan Street (E)														
4	L2	604	1.7	604	1.7	0.845	43.5	LOS D	15.3	108.8	0.91	0.95	1.11	22.2
6	R2	97	1.1	97	1.1	*0.845	59.3	LOS E	9.0	63.7	1.00	0.97	1.27	28.5
Approach		701	1.7	701	1.7	0.845	45.7	LOS D	15.3	108.8	0.92	0.95	1.13	23.5
North: Bourke Street (N)														
7	L2	56	0.0	56	0.0	*0.837	61.1	LOS E	7.3	53.9	1.00	1.01	1.29	29.1
8	T1	353	8.4	353	8.4	0.837	54.3	LOS D	7.9	59.1	1.00	1.01	1.29	21.5
Approach		408	7.2	408	7.2	0.837	55.3	LOS D	7.9	59.1	1.00	1.01	1.29	22.9
All Vehicles		1914	3.6	1914	3.6	0.845	44.0	LOS D	15.3	108.8	0.91	0.88	1.06	24.9

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.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Lachlan Street (E)											
P2	Full	87	49.3	LOS E	0.3	0.3	0.95	0.95	75.9	31.9	0.42
North: Bourke Street (N)											
P3	Full	16	49.2	LOS E	0.0	0.0	0.95	0.95	78.5	35.2	0.45
All Pedestrians		103	49.3	LOS E	0.3	0.3	0.95	0.95	76.3	32.4	0.42

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 [McEvoy / Bourke (Site Folder: PM Existing)]

Network: N101 [Existing PM (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	43	2.4	43	2.4	* 0.808	53.1	LOS D	8.8	64.4	0.99	0.97	1.18	12.9
2	T1	456	6.2	456	6.2	0.808	46.7	LOS D	8.8	64.4	0.98	0.97	1.18	13.2
Approach		499	5.9	499	5.9	0.808	47.3	LOS D	8.8	64.4	0.98	0.97	1.18	13.2
North: Bourke Street (N)														
8	T1	519	6.9	519	6.9	0.402	9.6	LOS A	8.8	65.0	0.58	0.52	0.58	20.3
9	R2	443	1.0	443	1.0	* 0.826	58.0	LOS E	9.2	65.0	1.00	0.90	1.06	4.6
Approach		962	4.2	962	4.2	0.826	31.9	LOS C	9.2	65.0	0.78	0.70	0.80	7.9
West: McEvoy Street (W)														
10	L2	379	0.6	379	0.6	0.734	29.2	LOS C	10.1	71.2	0.83	0.86	0.86	11.1
12	R2	260	0.8	260	0.8	* 0.815	58.6	LOS E	9.0	63.7	1.00	0.91	1.18	6.1
Approach		639	0.7	639	0.7	0.815	41.2	LOS C	10.1	71.2	0.90	0.88	0.99	8.3
All Vehicles		2100	3.5	2100	3.5	0.826	38.4	LOS C	10.1	71.2	0.86	0.82	0.95	9.7

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped ped	Dist] m					
South: Bourke Street (S)											
P1	Full	69	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
West: McEvoy Street (W)											
P4	Full	52	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
All Pedestrians		121	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45

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 [McEvoy / Young (Site Folder: PM Existing)]

 Network: N101 [Existing PM (Network Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Young Street (S)														
1	L2	22	0.0	22	0.0	0.022	9.4	LOS A	0.0	0.3	0.28	0.85	0.28	48.7
2	T1	1	0.0	1	0.0	0.070	25.0	LOS B	0.1	0.6	0.83	1.00	0.83	36.0
3	R2	9	0.0	9	0.0	0.070	29.0	LOS C	0.1	0.6	0.83	1.00	0.83	19.3
Approach		33	0.0	33	0.0	0.070	15.6	LOS B	0.1	0.6	0.45	0.90	0.45	41.3
East: McEvoy Street (E)														
4	L2	7	0.0	7	0.0	0.098	5.5	LOS A	0.0	0.0	0.00	0.02	0.00	58.0
5	T1	477	1.1	477	1.1	0.153	0.2	LOS A	0.0	0.0	0.00	0.01	0.00	59.8
Approach		484	1.1	484	1.1	0.153	0.3	NA	0.0	0.0	0.00	0.01	0.00	59.8
North: Young Street (N)														
7	L2	76	0.0	76	0.0	0.087	9.5	LOS A	0.1	0.9	0.37	0.89	0.37	46.8
Approach		76	0.0	76	0.0	0.087	9.5	LOS A	0.1	0.9	0.37	0.89	0.37	46.8
West: McEvoy Street (W)														
10	L2	71	0.0	71	0.0	0.181	5.6	LOS A	0.0	0.0	0.00	0.12	0.00	57.2
11	T1	554	0.8	554	0.8	0.181	0.1	LOS A	0.1	0.7	0.04	0.08	0.04	58.2
12	R2	17	0.0	17	0.0	0.181	7.7	LOS A	0.1	0.7	0.08	0.03	0.08	58.7
Approach		641	0.7	641	0.7	0.181	0.9	NA	0.1	0.7	0.04	0.08	0.04	58.1
All Vehicles		1234	0.8	1234	0.8	0.181	1.6	NA	0.1	0.9	0.05	0.12	0.05	57.4

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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Wednesday, 20 July 2022 11:15:06 AM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

 Site: 101 [Bourke / Powell (Site Folder: PM Existing)]

 Network: N101 [Existing PM (Network Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	63	1.7	63	1.7	0.136	5.6	LOS A	0.0	0.0	0.00	0.15	0.00	57.3
2	T1	452	4.4	452	4.4	0.136	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	58.8
Approach		515	4.1	515	4.1	0.136	0.7	NA	0.0	0.0	0.00	0.07	0.00	58.6
North: Bourke Street (N)														
8	T1	724	3.8	724	3.8	0.224	0.4	LOS A	0.3	2.0	0.09	0.04	0.09	58.7
9	R2	55	5.8	55	5.8	0.224	9.0	LOS A	0.3	2.0	0.22	0.10	0.22	51.1
Approach		779	3.9	779	3.9	0.224	1.0	NA	0.3	2.0	0.10	0.05	0.10	58.5
West: Powell Street (W)														
10	L2	19	0.0	19	0.0	0.126	8.6	LOS A	0.2	1.2	0.51	0.94	0.51	18.8
12	R2	43	0.0	43	0.0	0.126	15.5	LOS B	0.2	1.2	0.51	0.94	0.51	42.8
Approach		62	0.0	62	0.0	0.126	13.4	LOS A	0.2	1.2	0.51	0.94	0.51	39.5
All Vehicles		1356	3.8	1356	3.8	0.224	1.5	NA	0.3	2.0	0.08	0.10	0.08	57.6

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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Wednesday, 20 July 2022 11:15:06 AM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

 Site: 101 [Powell / Young (Site Folder: PM Existing)]

 Network: N101 [Existing PM (Network Folder: General)]

Powell / Young
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
East: Powell Street (E)														
5	T1	76	1.4	76	1.4	0.065	0.1	LOS A	0.1	0.7	0.13	0.20	0.13	56.4
6	R2	41	5.1	41	5.1	0.065	5.3	LOS A	0.1	0.7	0.13	0.20	0.13	42.7
Approach		117	2.7	117	2.7	0.065	2.0	NA	0.1	0.7	0.13	0.20	0.13	55.0
North: Young Street (N)														
7	L2	22	0.0	22	0.0	0.049	8.2	LOS A	0.1	0.5	0.14	0.93	0.14	36.8
9	R2	33	0.0	33	0.0	0.049	8.6	LOS A	0.1	0.5	0.14	0.93	0.14	48.5
Approach		55	0.0	55	0.0	0.049	8.4	LOS A	0.1	0.5	0.14	0.93	0.14	46.1
West: Powell Street (W)														
10	L2	39	5.4	39	5.4	0.042	5.7	LOS A	0.0	0.0	0.00	0.29	0.00	55.2
11	T1	40	0.0	40	0.0	0.042	0.0	LOS A	0.0	0.0	0.00	0.29	0.00	55.2
Approach		79	2.7	79	2.7	0.042	2.8	NA	0.0	0.0	0.00	0.29	0.00	55.2
All Vehicles		251	2.1	251	2.1	0.065	3.6	NA	0.1	0.7	0.09	0.39	0.09	52.7

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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Wednesday, 20 July 2022 11:15:06 AM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

Site: 101 [Lachlan / Bourke (Site Folder: PM Future Base)]

Network: N101 [PM Future Base (Network Folder: General)]

Lachlan / Bourke

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
South: Bourke Street (S)														
2	T1	508	6.2	508	6.2	0.439	11.7	LOS A	8.6	63.5	0.56	0.50	0.56	44.9
3	R2	475	3.3	475	3.3	*0.929	66.2	LOS E	9.0	65.0	1.00	0.96	1.20	18.1
Approach		983	4.8	983	4.8	0.929	38.0	LOS C	9.0	65.0	0.77	0.72	0.87	27.1
East: Lachlan Street (E)														
4	L2	703	2.7	703	2.7	0.905	53.1	LOS D	23.2	165.9	0.96	1.01	1.24	19.5
6	R2	118	2.7	118	2.7	*0.905	71.3	LOS F	9.3	66.5	1.00	1.02	1.44	25.8
Approach		821	2.7	821	2.7	0.905	55.7	LOS D	23.2	165.9	0.97	1.01	1.27	20.9
North: Bourke Street (N)														
7	L2	68	0.0	68	0.0	0.943	80.6	LOS F	11.5	85.1	1.00	1.17	1.55	24.9
8	T1	431	8.6	431	8.6	*0.943	76.6	LOS F	11.5	85.1	1.00	1.18	1.57	17.1
Approach		499	7.4	499	7.4	0.943	77.1	LOS F	11.5	85.1	1.00	1.18	1.57	18.4
All Vehicles		2303	4.6	2303	4.6	0.943	52.8	LOS D	23.2	165.9	0.89	0.93	1.17	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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Lachlan Street (E)											
P2	Full	87	49.3	LOS E	0.3	0.3	0.95	0.95	75.9	31.9	0.42
North: Bourke Street (N)											
P3	Full	16	49.2	LOS E	0.0	0.0	0.95	0.95	78.5	35.2	0.45
All Pedestrians		103	49.3	LOS E	0.3	0.3	0.95	0.95	76.3	32.4	0.42

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 [McEvoy / Bourke (Site Folder: PM Future Base)]

Network: N101 [PM Future Base (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	53	2.0	53	2.0	*0.897	65.9	LOS E	11.9	87.6	1.00	1.10	1.37	10.7
2	T1	522	7.1	522	7.1	0.897	60.4	LOS E	11.9	87.6	1.00	1.11	1.38	10.7
Approach		575	6.6	575	6.6	0.897	60.9	LOS E	11.9	87.6	1.00	1.11	1.38	10.7
North: Bourke Street (N)														
8	T1	519	6.9	519	6.9	0.413	8.6	LOS A	7.6	56.3	0.49	0.44	0.49	21.7
9	R2	443	1.0	443	1.0	*0.911	64.6	LOS E	9.2	65.0	1.00	0.94	1.17	4.2
Approach		962	4.2	962	4.2	0.911	34.4	LOS C	9.2	65.0	0.72	0.67	0.80	7.4
West: McEvoy Street (W)														
10	L2	463	1.8	463	1.8	0.896	53.7	LOS D	13.4	95.0	0.97	1.01	1.25	6.6
12	R2	318	2.0	318	2.0	*0.909	68.1	LOS E	12.4	88.3	1.00	1.00	1.37	5.3
Approach		781	1.9	781	1.9	0.909	59.5	LOS E	13.4	95.0	0.98	1.01	1.30	6.0
All Vehicles		2318	4.0	2318	4.0	0.911	49.5	LOS D	13.4	95.0	0.88	0.89	1.11	7.9

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.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped ped	Dist] m					
South: Bourke Street (S)											
P1	Full	69	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
West: McEvoy Street (W)											
P4	Full	52	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
All Pedestrians		121	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45

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 [McEvoy / Young (Site Folder: PM Future Base)]

 Network: N101 [PM Future Base (Network Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Young Street (S)														
1	L2	27	0.0	27	0.0	0.036	9.8	LOS A	0.1	0.4	0.35	0.84	0.35	47.7
2	T1	1	0.0	1	0.0	0.036	38.3	LOS C	0.1	0.4	0.35	0.84	0.35	47.7
3	R2	12	0.0	12	0.0	0.205	50.2	LOS D	0.2	1.1	0.91	1.01	0.95	12.5
Approach		40	0.0	40	0.0	0.205	22.3	LOS B	0.2	1.1	0.51	0.89	0.52	36.6
East: McEvoy Street (E)														
4	L2	9	0.0	9	0.0	0.120	5.5	LOS A	0.0	0.0	0.00	0.02	0.00	57.9
5	T1	588	0.9	588	0.9	0.188	0.3	LOS A	0.0	0.0	0.00	0.01	0.00	59.8
Approach		598	0.9	598	0.9	0.188	0.4	NA	0.0	0.0	0.00	0.01	0.00	59.8
North: Young Street (N)														
7	L2	93	0.0	93	0.0	0.211	9.7	LOS A	0.2	1.1	0.39	0.92	0.39	46.6
Approach		93	0.0	93	0.0	0.211	9.7	LOS A	0.2	1.1	0.39	0.92	0.39	46.6
West: McEvoy Street (W)														
10	L2	86	0.0	86	0.0	0.348	5.7	LOS A	0.0	0.0	0.00	0.14	0.00	56.9
11	T1	677	1.1	677	1.1	0.348	0.3	LOS A	0.2	1.1	0.05	0.08	0.06	57.9
12	R2	21	0.0	21	0.0	0.348	8.8	LOS A	0.2	1.1	0.09	0.03	0.10	58.4
Approach		784	0.9	784	0.9	0.348	1.1	NA	0.2	1.1	0.05	0.08	0.05	57.7
All Vehicles		1515	0.8	1515	0.8	0.348	1.9	NA	0.2	1.1	0.06	0.13	0.07	56.9

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.

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

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

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

MOVEMENT SUMMARY

 Site: 101 [Bourke / Powell (Site Folder: PM Future Base)]

 Network: N101 [PM Future Base (Network Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	74	1.4	74	1.4	0.162	5.6	LOS A	0.0	0.0	0.00	0.14	0.00	57.3
2	T1	535	5.3	535	5.3	0.162	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	58.8
Approach		608	4.8	608	4.8	0.162	0.7	NA	0.0	0.0	0.00	0.07	0.00	58.6
North: Bourke Street (N)														
8	T1	858	3.9	858	3.9	0.269	0.6	LOS A	0.4	2.9	0.11	0.05	0.12	58.4
9	R2	65	1.6	65	1.6	0.269	9.9	LOS A	0.4	2.9	0.27	0.11	0.29	49.2
Approach		923	3.8	923	3.8	0.269	1.3	NA	0.4	2.9	0.12	0.05	0.13	58.2
West: Powell Street (W)														
10	L2	22	0.0	22	0.0	0.202	9.0	LOS A	0.3	1.9	0.63	0.95	0.65	16.1
12	R2	52	0.0	52	0.0	0.202	20.0	LOS B	0.3	1.9	0.63	0.95	0.65	40.3
Approach		74	0.0	74	0.0	0.202	16.7	LOS B	0.3	1.9	0.63	0.95	0.65	36.8
All Vehicles		1605	4.0	1605	4.0	0.269	1.8	NA	0.4	2.9	0.10	0.10	0.11	57.2

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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Wednesday, 20 July 2022 11:15:14 AM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

 Site: 101 [Powell / Young (Site Folder: PM Future Base)]

 Network: N101 [PM Future Base (Network Folder: General)]

Powell / Young
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
East: Powell Street (E)														
5	T1	89	1.2	89	1.2	0.077	0.2	LOS A	0.1	0.8	0.14	0.20	0.14	56.3
6	R2	48	4.3	48	4.3	0.077	5.4	LOS A	0.1	0.8	0.14	0.20	0.14	42.3
Approach		138	2.3	138	2.3	0.077	2.0	NA	0.1	0.8	0.14	0.20	0.14	54.9
North: Young Street (N)														
7	L2	26	4.0	26	4.0	0.061	8.4	LOS A	0.1	0.6	0.16	0.93	0.16	36.6
9	R2	39	2.7	39	2.7	0.061	8.9	LOS A	0.1	0.6	0.16	0.93	0.16	48.3
Approach		65	3.2	65	3.2	0.061	8.7	LOS A	0.1	0.6	0.16	0.93	0.16	45.8
West: Powell Street (W)														
10	L2	46	4.5	46	4.5	0.050	5.7	LOS A	0.0	0.0	0.00	0.29	0.00	55.2
11	T1	47	0.0	47	0.0	0.050	0.0	LOS A	0.0	0.0	0.00	0.29	0.00	55.2
Approach		94	2.2	94	2.2	0.050	2.8	NA	0.0	0.0	0.00	0.29	0.00	55.2
All Vehicles		297	2.5	297	2.5	0.077	3.7	NA	0.1	0.8	0.10	0.39	0.10	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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Wednesday, 20 July 2022 11:15:14 AM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

Site: 101 [Lachlan / Bourke (Site Folder: PM Future Base + Dev)]

Network: N101 [PM Future Base + Dev (Network Folder: General)]

Lachlan / Bourke

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
2	T1	513	6.2	513	6.2	0.430	10.6	LOS A	8.3	61.1	0.54	0.48	0.54	46.0
3	R2	484	3.3	484	3.3	*0.917	64.0	LOS E	9.0	65.0	1.00	0.98	1.25	18.5
Approach		997	4.8	997	4.8	0.917	36.5	LOS C	9.0	65.0	0.76	0.72	0.88	27.7
East: Lachlan Street (E)														
4	L2	713	2.7	713	2.7	0.896	49.1	LOS D	23.3	167.0	0.95	0.99	1.20	20.5
6	R2	118	2.7	118	2.7	*0.896	70.4	LOS E	8.3	59.2	1.00	1.01	1.43	26.0
Approach		831	2.7	831	2.7	0.896	52.2	LOS D	23.3	167.0	0.96	1.00	1.23	21.7
North: Bourke Street (N)														
7	L2	68	0.0	68	0.0	*0.890	65.9	LOS E	10.8	79.3	1.00	1.07	1.36	28.0
8	T1	438	8.4	438	8.4	0.890	61.3	LOS E	10.8	79.3	1.00	1.09	1.39	19.9
Approach		506	7.3	506	7.3	0.890	61.9	LOS E	10.8	79.3	1.00	1.08	1.38	21.3
All Vehicles		2334	4.6	2334	4.6	0.917	47.6	LOS D	23.3	167.0	0.88	0.90	1.11	23.8

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped ped	Dist] m					
East: Lachlan Street (E)											
P2	Full	87	49.3	LOS E	0.3	0.3	0.95	0.95	75.9	31.9	0.42
North: Bourke Street (N)											
P3	Full	16	49.2	LOS E	0.0	0.0	0.95	0.95	78.5	35.2	0.45
All Pedestrians		103	49.3	LOS E	0.3	0.3	0.95	0.95	76.3	32.4	0.42

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 [McEvoy / Bourke (Site Folder: PM Future Base + Dev)]

Network: N101 [PM Future Base + Dev (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	53	2.0	53	2.0	0.920	71.9	LOS F	12.7	93.4	1.00	1.14	1.44	9.9
2	T1	526	7.0	526	7.0	*0.920	66.9	LOS E	12.7	93.4	1.00	1.15	1.46	9.9
Approach		579	6.5	579	6.5	0.920	67.4	LOS E	12.7	93.4	1.00	1.15	1.45	9.9
North: Bourke Street (N)														
8	T1	509	7.0	509	7.0	0.406	8.6	LOS A	7.4	55.0	0.49	0.43	0.49	21.8
9	R2	479	0.9	479	0.9	*0.952	72.5	LOS F	9.2	65.0	1.00	1.02	1.35	3.8
Approach		988	4.0	988	4.0	0.952	39.5	LOS C	9.2	65.0	0.73	0.72	0.91	6.6
West: McEvoy Street (W)														
10	L2	478	1.8	478	1.8	0.887	50.1	LOS D	13.4	95.0	0.96	1.00	1.21	7.0
12	R2	319	2.0	319	2.0	*0.912	68.7	LOS E	12.5	89.0	1.00	1.00	1.37	5.3
Approach		797	1.8	797	1.8	0.912	57.5	LOS E	13.4	95.0	0.97	1.00	1.28	6.2
All Vehicles		2364	3.9	2364	3.9	0.952	52.4	LOS D	13.4	95.0	0.88	0.92	1.16	7.5

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped ped	Dist] m					
South: Bourke Street (S)											
P1	Full	69	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
West: McEvoy Street (W)											
P4	Full	52	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
All Pedestrians		121	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45

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 [McEvoy / Young (Site Folder: PM Future Base + Dev)]

 Network: N101 [PM Future Base + Dev (Network Folder: General)]

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Young Street (S)														
1	L2	40	0.0	40	0.0	0.048	9.8	LOS A	0.1	0.6	0.32	0.85	0.32	48.0
2	T1	1	0.0	1	0.0	0.048	39.5	LOS C	0.1	0.6	0.32	0.85	0.32	48.0
3	R2	17	0.0	17	0.0	0.335	57.4	LOS E	0.2	1.7	0.92	1.03	1.03	11.2
Approach		58	0.0	58	0.0	0.335	24.2	LOS B	0.2	1.7	0.49	0.90	0.52	35.4
East: McEvoy Street (E)														
4	L2	45	0.0	45	0.0	0.126	5.5	LOS A	0.0	0.0	0.00	0.11	0.00	51.7
5	T1	579	0.9	579	0.9	0.197	0.3	LOS A	0.0	0.0	0.00	0.04	0.00	59.3
Approach		624	0.8	624	0.8	0.197	0.7	NA	0.0	0.0	0.00	0.04	0.00	59.2
North: Young Street (N)														
7	L2	93	0.0	93	0.0	0.220	9.9	LOS A	0.2	1.1	0.41	0.93	0.41	46.4
Approach		93	0.0	93	0.0	0.220	9.9	LOS A	0.2	1.1	0.41	0.93	0.41	46.4
West: McEvoy Street (W)														
10	L2	86	0.0	86	0.0	0.379	5.7	LOS A	0.0	0.0	0.00	0.13	0.00	56.9
11	T1	677	1.1	677	1.1	0.379	0.5	LOS A	0.2	1.8	0.07	0.09	0.09	57.4
12	R2	31	0.0	31	0.0	0.379	9.1	LOS A	0.2	1.8	0.14	0.05	0.17	57.5
Approach		794	0.9	794	0.9	0.379	1.4	NA	0.2	1.8	0.07	0.09	0.08	57.3
All Vehicles		1568	0.8	1568	0.8	0.379	2.4	NA	0.2	1.8	0.08	0.15	0.08	56.0

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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Wednesday, 20 July 2022 11:15:23 AM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

 Site: 101 [Bourke / Powell (Site Folder: PM Future Base + Dev)]

 Network: N101 [PM Future Base + Dev (Network Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	93	1.1	93	1.1	0.165	5.6	LOS A	0.0	0.0	0.00	0.18	0.00	56.7
2	T1	525	5.4	525	5.4	0.165	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	58.6
Approach		618	4.8	618	4.8	0.165	0.9	NA	0.0	0.0	0.00	0.09	0.00	58.3
North: Bourke Street (N)														
8	T1	851	4.0	851	4.0	0.268	0.6	LOS A	0.4	3.0	0.11	0.05	0.12	58.4
9	R2	65	1.6	65	1.6	0.268	10.0	LOS A	0.4	3.0	0.28	0.12	0.30	49.0
Approach		916	3.8	916	3.8	0.268	1.3	NA	0.4	3.0	0.12	0.05	0.13	58.1
West: Powell Street (W)														
10	L2	26	0.0	26	0.0	0.255	9.5	LOS A	0.4	2.6	0.64	0.97	0.72	15.5
12	R2	66	0.0	66	0.0	0.255	20.6	LOS B	0.4	2.6	0.64	0.97	0.72	39.7
Approach		93	0.0	93	0.0	0.255	17.5	LOS B	0.4	2.6	0.64	0.97	0.72	36.4
All Vehicles		1626	3.9	1626	3.9	0.268	2.1	NA	0.4	3.0	0.11	0.12	0.12	56.7

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.

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

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

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

MOVEMENT SUMMARY

 Site: 101 [Powell / Young (Site Folder: PM Future Base + Dev)]

 Network: N101 [PM Future Base + Dev (Network Folder: General)]

Powell / Young
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
East: Powell Street (E)														
5	T1	89	1.2	89	1.2	0.089	0.2	LOS A	0.1	1.1	0.18	0.25	0.18	55.5
6	R2	67	3.1	67	3.1	0.089	5.4	LOS A	0.1	1.1	0.18	0.25	0.18	39.6
Approach		157	2.0	157	2.0	0.089	2.5	NA	0.1	1.1	0.18	0.25	0.18	53.3
North: Young Street (N)														
7	L2	54	2.0	54	2.0	0.090	8.3	LOS A	0.1	1.0	0.14	0.93	0.14	36.6
9	R2	46	2.3	46	2.3	0.090	9.0	LOS A	0.1	1.0	0.14	0.93	0.14	48.3
Approach		100	2.1	100	2.1	0.090	8.6	LOS A	0.1	1.0	0.14	0.93	0.14	44.6
West: Powell Street (W)														
10	L2	59	3.6	59	3.6	0.057	5.7	LOS A	0.0	0.0	0.00	0.33	0.00	54.6
11	T1	47	0.0	47	0.0	0.057	0.0	LOS A	0.0	0.0	0.00	0.33	0.00	54.6
Approach		106	2.0	106	2.0	0.057	3.2	NA	0.0	0.0	0.00	0.33	0.00	54.6
All Vehicles		363	2.0	363	2.0	0.090	4.4	NA	0.1	1.1	0.12	0.46	0.12	50.9

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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Wednesday, 20 July 2022 11:15:23 AM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

■ Site: 101 [Lachlan / Bourke (Site Folder: PM Future Base + Dev (right turn bans))]
 ■ Network: N101 [PM Future Base + Dev (right turn bans) (Network Folder: General)]

Lachlan / Bourke

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
2	T1	513	6.2	513	6.2	0.436	11.1	LOS A	8.5	62.7	0.55	0.49	0.55	45.4
3	R2	484	3.3	484	3.3	*0.917	63.4	LOS E	9.0	65.0	1.00	0.95	1.18	18.6
Approach		997	4.8	997	4.8	0.917	36.5	LOS C	9.0	65.0	0.77	0.72	0.86	27.7
East: Lachlan Street (E)														
4	L2	713	2.7	713	2.7	0.896	49.3	LOS D	23.0	164.7	0.95	0.99	1.20	20.5
6	R2	118	2.7	118	2.7	*0.896	69.9	LOS E	8.7	62.0	1.00	1.01	1.42	26.1
Approach		831	2.7	831	2.7	0.896	52.2	LOS D	23.0	164.7	0.96	1.00	1.23	21.7
North: Bourke Street (N)														
7	L2	68	0.0	68	0.0	0.937	78.0	LOS F	11.7	86.2	1.00	1.16	1.51	25.4
8	T1	438	8.4	438	8.4	*0.937	74.1	LOS F	11.7	86.2	1.00	1.17	1.54	17.5
Approach		506	7.3	506	7.3	0.937	74.7	LOS F	11.7	86.2	1.00	1.17	1.54	18.8
All Vehicles		2334	4.6	2334	4.6	0.937	50.4	LOS D	23.0	164.7	0.89	0.91	1.14	23.0

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped ped	Dist] m					
East: Lachlan Street (E)											
P2	Full	87	49.3	LOS E	0.3	0.3	0.95	0.95	75.9	31.9	0.42
North: Bourke Street (N)											
P3	Full	16	49.2	LOS E	0.0	0.0	0.95	0.95	78.5	35.2	0.45
All Pedestrians		103	49.3	LOS E	0.3	0.3	0.95	0.95	76.3	32.4	0.42

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 [McEvoy / Bourke (Site Folder: PM Future Base + Dev (right turn bans))]
 ■ Network: N101 [PM Future Base + Dev (right turn bans) (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	53	2.0	53	2.0	0.928	74.3	LOS F	13.0	96.0	1.00	1.16	1.47	9.6
2	T1	532	6.9	532	6.9	*0.928	69.4	LOS E	13.0	96.0	1.00	1.17	1.48	9.6
Approach		584	6.5	584	6.5	0.928	69.8	LOS E	13.0	96.0	1.00	1.17	1.48	9.6
North: Bourke Street (N)														
8	T1	518	6.9	518	6.9	0.413	8.6	LOS A	7.6	56.2	0.49	0.44	0.49	21.7
9	R2	479	0.9	479	0.9	*0.952	72.6	LOS F	9.2	65.0	1.00	1.02	1.35	3.7
Approach		997	4.0	997	4.0	0.952	39.4	LOS C	9.2	65.0	0.73	0.72	0.90	6.6
West: McEvoy Street (W)														
10	L2	473	1.8	473	1.8	0.877	47.7	LOS D	13.4	95.0	0.95	0.98	1.18	7.3
12	R2	319	2.0	319	2.0	*0.912	68.7	LOS E	12.5	89.0	1.00	1.00	1.37	5.3
Approach		792	1.9	792	1.9	0.912	56.2	LOS D	13.4	95.0	0.97	0.99	1.26	6.3
All Vehicles		2373	3.9	2373	3.9	0.952	52.5	LOS D	13.4	96.0	0.88	0.92	1.16	7.5

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped ped	Dist] m					
South: Bourke Street (S)											
P1	Full	69	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
West: McEvoy Street (W)											
P4	Full	52	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
All Pedestrians		121	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45

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 [McEvoy / Young (Site Folder: PM Future Base + Dev (right turn bans))]**

 **Network: N101 [PM Future Base + Dev (right turn bans) (Network Folder: General)]**

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Young Street (S)														
1	L2	42	0.0	42	0.0	0.042	9.8	LOS A	0.1	0.5	0.30	0.86	0.30	48.6
2	T1	1	0.0	1	0.0	0.008	34.4	LOS C	0.0	0.1	0.87	0.95	0.87	33.4
Approach		43	0.0	43	0.0	0.042	10.4	LOS A	0.1	0.5	0.31	0.86	0.31	48.1
East: McEvoy Street (E)														
4	L2	45	0.0	45	0.0	0.126	5.5	LOS A	0.0	0.0	0.00	0.11	0.00	51.7
5	T1	579	0.9	579	0.9	0.197	0.3	LOS A	0.0	0.0	0.00	0.04	0.00	59.3
Approach		624	0.8	624	0.8	0.197	0.7	NA	0.0	0.0	0.00	0.04	0.00	59.2
North: Young Street (N)														
7	L2	93	0.0	93	0.0	0.214	9.7	LOS A	0.2	1.1	0.39	0.92	0.39	46.6
Approach		93	0.0	93	0.0	0.214	9.7	LOS A	0.2	1.1	0.39	0.92	0.39	46.6
West: McEvoy Street (W)														
10	L2	86	0.0	86	0.0	0.352	5.7	LOS A	0.0	0.0	0.00	0.13	0.00	56.9
11	T1	677	1.1	677	1.1	0.352	0.2	LOS A	0.0	0.0	0.00	0.06	0.00	58.6
Approach		763	1.0	763	1.0	0.352	0.8	NA	0.0	0.0	0.00	0.07	0.00	58.2
All Vehicles		1523	0.8	1523	0.8	0.352	1.6	NA	0.2	1.1	0.03	0.13	0.03	57.4

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.

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

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

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

MOVEMENT SUMMARY

 **Site: 101 [Bourke / Powell (Site Folder: PM Future Base + Dev (right turn bans))]**  **Network: N101 [PM Future Base + Dev (right turn bans) (Network Folder: General)]**

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	93	1.1	93	1.1	0.165	5.6	LOS A	0.0	0.0	0.00	0.18	0.00	56.7
2	T1	525	5.4	525	5.4	0.165	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	58.6
Approach		618	4.8	618	4.8	0.165	0.9	NA	0.0	0.0	0.00	0.09	0.00	58.3
North: Bourke Street (N)														
8	T1	851	4.0	851	4.0	0.268	0.6	LOS A	0.4	3.0	0.11	0.05	0.12	58.4
9	R2	65	1.6	65	1.6	0.268	10.0	LOS A	0.4	3.0	0.28	0.12	0.30	49.0
Approach		916	3.8	916	3.8	0.268	1.3	NA	0.4	3.0	0.12	0.05	0.13	58.1
West: Powell Street (W)														
10	L2	32	0.0	32	0.0	0.260	9.5	LOS A	0.4	2.7	0.62	0.97	0.69	15.8
12	R2	66	0.0	66	0.0	0.260	20.7	LOS B	0.4	2.7	0.62	0.97	0.69	40.0
Approach		98	0.0	98	0.0	0.260	17.1	LOS B	0.4	2.7	0.62	0.97	0.69	36.1
All Vehicles		1632	3.9	1632	3.9	0.268	2.1	NA	0.4	3.0	0.11	0.12	0.12	56.7

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.
 Delay Model: SIDRA Standard (Geometric Delay is included).
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 **Site: 101 [Powell / Young (Site Folder: PM Future Base + Dev (right turn bans))]**

 **Network: N101 [PM Future Base + Dev (right turn bans) (Network Folder: General)]**

Powell / Young
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
East: Powell Street (E)														
5	T1	89	1.2	89	1.2	0.090	0.2	LOS A	0.1	1.1	0.19	0.25	0.19	55.5
6	R2	67	3.1	67	3.1	0.090	5.5	LOS A	0.1	1.1	0.19	0.25	0.19	39.4
Approach		157	2.0	157	2.0	0.090	2.5	NA	0.1	1.1	0.19	0.25	0.19	53.2
North: Young Street (N)														
7	L2	69	1.5	69	1.5	0.103	8.3	LOS A	0.2	1.1	0.14	0.93	0.14	36.6
9	R2	47	2.2	47	2.2	0.103	9.1	LOS A	0.2	1.1	0.14	0.93	0.14	48.3
Approach		117	1.8	117	1.8	0.103	8.6	LOS A	0.2	1.1	0.14	0.93	0.14	44.0
West: Powell Street (W)														
10	L2	68	3.1	68	3.1	0.062	5.7	LOS A	0.0	0.0	0.00	0.35	0.00	54.3
11	T1	47	0.0	47	0.0	0.062	0.0	LOS A	0.0	0.0	0.00	0.35	0.00	54.3
Approach		116	1.8	116	1.8	0.062	3.4	NA	0.0	0.0	0.00	0.35	0.00	54.3
All Vehicles		389	1.9	389	1.9	0.103	4.6	NA	0.2	1.1	0.12	0.48	0.12	50.5

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.

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

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

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

MOVEMENT SUMMARY

Site: 101 [Lachlan / Bourke (Site Folder: Saturday Existing)]

Network: N101 [Existing Saturday (Network Folder: General)]

Lachlan / Bourke

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
2	T1	387	5.4	387	5.4	0.353	16.7	LOS B	8.6	62.9	0.73	0.64	0.73	40.5
3	R2	335	1.9	335	1.9	0.874	64.7	LOS E	9.1	65.0	1.00	0.91	1.14	18.4
Approach		722	3.8	722	3.8	0.874	38.9	LOS C	9.1	65.0	0.86	0.77	0.92	26.9
East: Lachlan Street (E)														
4	L2	586	4.5	586	4.5	*0.885	53.9	LOS D	17.0	123.8	0.96	1.00	1.25	19.3
6	R2	116	0.9	116	0.9	0.885	65.0	LOS E	10.3	73.8	1.00	1.00	1.36	27.2
Approach		702	3.9	702	3.9	0.885	55.7	LOS D	17.0	123.8	0.96	1.00	1.27	21.1
North: Bourke Street (N)														
7	L2	74	0.0	74	0.0	0.900	69.2	LOS E	7.1	50.8	0.96	1.06	1.45	27.0
8	T1	317	4.7	317	4.7	*0.900	62.8	LOS E	8.3	60.7	0.95	1.06	1.43	19.6
Approach		391	3.8	391	3.8	0.900	64.0	LOS E	8.3	60.7	0.95	1.06	1.44	21.3
All Vehicles		1815	3.8	1815	3.8	0.900	50.8	LOS D	17.0	123.8	0.92	0.92	1.17	23.2

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped ped	Dist] m					
East: Lachlan Street (E)											
P2	Full	100	49.4	LOS E	0.3	0.3	0.95	0.95	76.0	31.9	0.42
North: Bourke Street (N)											
P3	Full	19	49.2	LOS E	0.1	0.1	0.95	0.95	78.5	35.2	0.45
All Pedestrians		119	49.3	LOS E	0.3	0.3	0.95	0.95	76.4	32.4	0.42

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 [McEvoy / Bourke (Site Folder: Saturday Existing)]

Network: N101 [Existing Saturday (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
South: Bourke Street (S)														
1	L2	53	0.0	53	0.0	* 0.701	46.3	LOS D	7.0	51.2	0.95	0.85	1.01	14.4
2	T1	383	5.8	383	5.8	0.701	39.6	LOS C	7.0	51.2	0.94	0.85	1.00	14.9
Approach		436	5.1	436	5.1	0.701	40.4	LOS C	7.0	51.2	0.94	0.85	1.01	14.8
North: Bourke Street (N)														
8	T1	504	5.0	504	5.0	0.381	10.8	LOS A	8.9	65.0	0.66	0.59	0.66	18.7
9	R2	399	4.0	399	4.0	* 0.715	54.6	LOS D	9.0	65.0	1.00	0.87	1.00	4.9
Approach		903	4.5	903	4.5	0.715	30.2	LOS C	9.0	65.0	0.81	0.71	0.81	8.3
West: McEvoy Street (W)														
10	L2	339	1.6	339	1.6	0.618	24.8	LOS B	7.8	55.4	0.75	0.81	0.75	12.7
12	R2	217	0.5	217	0.5	* 0.716	55.1	LOS D	7.1	49.9	1.00	0.86	1.07	6.5
Approach		556	1.1	556	1.1	0.716	36.6	LOS C	7.8	55.4	0.84	0.83	0.87	9.2
All Vehicles		1895	3.7	1895	3.7	0.716	34.4	LOS C	9.0	65.0	0.85	0.78	0.87	10.5

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Bourke Street (S)											
P1	Full	74	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
West: McEvoy Street (W)											
P4	Full	34	49.2	LOS E	0.1	0.1	0.95	0.95	78.6	35.2	0.45
All Pedestrians		107	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45

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 [McEvoy / Young (Site Folder: Saturday Existing)]

 Network: N101 [Existing Saturday (Network Folder: General)]

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh.	Dist] m				
South: Young Street (S)														
1	L2	13	0.0	13	0.0	0.011	9.2	LOS A	0.0	0.1	0.18	0.88	0.18	48.9
2	T1	1	0.0	1	0.0	0.039	21.1	LOS B	0.1	0.4	0.80	1.00	0.80	37.6
3	R2	6	0.0	6	0.0	0.039	26.1	LOS B	0.1	0.4	0.80	1.00	0.80	21.0
Approach		20	0.0	20	0.0	0.039	15.2	LOS B	0.1	0.4	0.41	0.92	0.41	41.4
East: McEvoy Street (E)														
4	L2	4	0.0	4	0.0	0.049	5.5	LOS A	0.0	0.0	0.00	0.03	0.00	57.7
5	T1	511	3.1	511	3.1	0.221	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach		515	3.1	515	3.1	0.221	0.2	NA	0.0	0.0	0.00	0.00	0.00	59.8
North: Young Street (N)														
7	L2	87	0.0	87	0.0	0.089	9.0	LOS A	0.1	0.9	0.31	0.88	0.31	47.2
Approach		87	0.0	87	0.0	0.089	9.0	LOS A	0.1	0.9	0.31	0.88	0.31	47.2
West: McEvoy Street (W)														
10	L2	36	0.0	36	0.0	0.121	5.6	LOS A	0.0	0.0	0.00	0.09	0.00	57.5
11	T1	408	1.5	408	1.5	0.121	0.1	LOS A	0.1	0.4	0.04	0.06	0.04	58.6
12	R2	11	0.0	11	0.0	0.121	8.1	LOS A	0.1	0.4	0.07	0.03	0.07	58.8
Approach		455	1.4	455	1.4	0.121	0.7	NA	0.1	0.4	0.03	0.06	0.03	58.4
All Vehicles		1077	2.1	1077	2.1	0.221	1.4	NA	0.1	0.9	0.05	0.12	0.05	57.7

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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Wednesday, 20 July 2022 11:15:39 AM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

 Site: 101 [Bourke / Powell (Site Folder: Saturday Existing)]

 Network: N101 [Existing Saturday (Network Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	62	3.4	62	3.4	0.134	5.6	LOS A	0.0	0.0	0.00	0.15	0.00	57.4
2	T1	444	4.5	444	4.5	0.134	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	58.8
Approach		506	4.4	506	4.4	0.134	0.7	NA	0.0	0.0	0.00	0.07	0.00	58.6
North: Bourke Street (N)														
8	T1	640	4.4	640	4.4	0.187	0.3	LOS A	0.2	1.1	0.06	0.03	0.06	59.1
9	R2	31	3.4	31	3.4	0.187	8.7	LOS A	0.2	1.1	0.13	0.06	0.13	54.2
Approach		671	4.4	671	4.4	0.187	0.7	NA	0.2	1.1	0.06	0.03	0.06	59.1
West: Powell Street (W)														
10	L2	18	0.0	18	0.0	0.079	8.6	LOS A	0.1	0.8	0.44	0.93	0.44	20.4
12	R2	28	0.0	28	0.0	0.079	13.9	LOS A	0.1	0.8	0.44	0.93	0.44	44.0
Approach		46	0.0	46	0.0	0.079	11.9	LOS A	0.1	0.8	0.44	0.93	0.44	39.8
All Vehicles		1223	4.2	1223	4.2	0.187	1.1	NA	0.2	1.1	0.05	0.08	0.05	58.2

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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Wednesday, 20 July 2022 11:15:39 AM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

 Site: 101 [Powell / Young (Site Folder: Saturday Existing)]

 Network: N101 [Existing Saturday (Network Folder: General)]

Powell / Young
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
East: Powell Street (E)														
5	T1	60	1.8	60	1.8	0.051	0.1	LOS A	0.1	0.5	0.10	0.20	0.10	56.5
6	R2	33	0.0	33	0.0	0.051	5.3	LOS A	0.1	0.5	0.10	0.20	0.10	42.9
Approach		93	1.1	93	1.1	0.051	1.9	NA	0.1	0.5	0.10	0.20	0.10	55.1
North: Young Street (N)														
7	L2	16	0.0	16	0.0	0.031	8.1	LOS A	0.0	0.3	0.11	0.93	0.11	37.0
9	R2	20	0.0	20	0.0	0.031	8.3	LOS A	0.0	0.3	0.11	0.93	0.11	48.6
Approach		36	0.0	36	0.0	0.031	8.2	LOS A	0.0	0.3	0.11	0.93	0.11	45.9
West: Powell Street (W)														
10	L2	25	0.0	25	0.0	0.029	5.6	LOS A	0.0	0.0	0.00	0.27	0.00	55.5
11	T1	31	0.0	31	0.0	0.029	0.0	LOS A	0.0	0.0	0.00	0.27	0.00	55.5
Approach		56	0.0	56	0.0	0.029	2.5	NA	0.0	0.0	0.00	0.27	0.00	55.5
All Vehicles		184	0.6	184	0.6	0.051	3.3	NA	0.1	0.5	0.07	0.36	0.07	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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Wednesday, 20 July 2022 11:15:39 AM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

Site: 101 [Lachlan / Bourke (Site Folder: Saturday Future Base)]

Network: N101 [Saturday Future Base (Network Folder: General)]

Lachlan / Bourke

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
2	T1	495	6.4	495	6.4	0.447	13.9	LOS A	8.8	65.0	0.65	0.58	0.65	42.9
3	R2	397	2.7	397	2.7	1.089	149.9	LOS F	9.1	65.0	1.00	1.24	1.94	9.5
Approach		892	4.7	892	4.7	1.089	74.4	LOS F	9.1	65.0	0.81	0.88	1.23	17.7
East: Lachlan Street (E)														
4	L2	683	5.2	683	5.2	* 1.094	165.9	LOS F	37.7	275.9	1.00	1.38	2.17	7.9
6	R2	145	9.4	145	9.4	1.094	167.6	LOS F	20.4	151.4	1.00	1.36	2.23	14.5
Approach		828	6.0	828	6.0	1.094	166.2	LOS F	37.7	275.9	1.00	1.38	2.18	9.2
North: Bourke Street (N)														
7	L2	83	0.0	83	0.0	1.073	156.6	LOS F	13.9	100.1	1.00	1.45	2.21	15.6
8	T1	386	5.4	386	5.4	* 1.073	152.0	LOS F	16.9	123.6	1.00	1.49	2.19	9.9
Approach		469	4.5	469	4.5	1.073	152.8	LOS F	16.9	123.6	1.00	1.48	2.20	11.0
All Vehicles		2189	5.1	2189	5.1	1.094	125.9	LOS F	37.7	275.9	0.92	1.20	1.79	12.0

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped ped	Dist] m					
East: Lachlan Street (E)											
P2	Full	100	49.4	LOS E	0.3	0.3	0.95	0.95	76.0	31.9	0.42
North: Bourke Street (N)											
P3	Full	19	49.2	LOS E	0.1	0.1	0.95	0.95	78.5	35.2	0.45
All Pedestrians		119	49.3	LOS E	0.3	0.3	0.95	0.95	76.4	32.4	0.42

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 [McEvoy / Bourke (Site Folder: Saturday Future Base)]

Network: N101 [Saturday Future Base (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	89	1.2	89	1.2	* 0.880	62.8	LOS E	10.9	79.6	1.00	1.07	1.34	13.4
2	T1	465	6.8	465	6.8	0.880	56.8	LOS E	11.1	82.4	1.00	1.08	1.34	11.2
Approach		555	5.9	555	5.9	0.880	57.8	LOS E	11.1	82.4	1.00	1.08	1.34	11.7
North: Bourke Street (N)														
8	T1	602	6.5	602	6.5	0.437	7.7	LOS A	8.8	65.0	0.55	0.50	0.55	23.3
9	R2	529	4.8	529	4.8	* 0.901	61.9	LOS E	8.9	65.0	1.00	0.94	1.14	8.4
Approach		1132	5.7	1132	5.7	0.901	33.1	LOS C	8.9	65.0	0.76	0.71	0.82	10.8
West: McEvoy Street (W)														
10	L2	392	2.7	392	2.7	0.829	40.9	LOS C	13.1	94.1	0.91	0.94	1.08	8.4
12	R2	202	1.0	202	1.0	* 0.861	65.6	LOS E	7.4	52.4	1.00	0.95	1.32	5.5
Approach		594	2.1	594	2.1	0.861	49.3	LOS D	13.1	94.1	0.94	0.94	1.16	7.1
All Vehicles		2280	4.8	2280	4.8	0.901	43.3	LOS D	13.1	94.1	0.87	0.86	1.04	10.1

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped ped	Dist] m					
South: Bourke Street (S)											
P1	Full	74	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
West: McEvoy Street (W)											
P4	Full	34	49.2	LOS E	0.1	0.1	0.95	0.95	78.6	35.2	0.45
All Pedestrians		107	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45

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 [McEvoy / Young (Site Folder: Saturday Future Base)]

 Network: N101 [Saturday Future Base (Network Folder: General)]

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Young Street (S)														
1	L2	17	0.0	17	0.0	0.018	9.6	LOS A	0.0	0.2	0.22	0.88	0.22	48.5
2	T1	1	0.0	1	0.0	0.091	35.4	LOS C	0.1	0.8	0.71	0.96	0.71	32.6
3	R2	7	0.0	7	0.0	0.091	48.1	LOS D	0.1	0.8	0.91	1.00	0.91	16.7
Approach		25	0.0	25	0.0	0.091	21.9	LOS B	0.1	0.8	0.44	0.92	0.44	37.0
East: McEvoy Street (E)														
4	L2	6	0.0	6	0.0	0.059	5.5	LOS A	0.0	0.0	0.00	0.03	0.00	57.1
5	T1	613	4.0	613	4.0	0.267	0.2	LOS A	0.0	0.0	0.00	0.01	0.00	59.8
Approach		619	3.9	619	3.9	0.267	0.3	NA	0.0	0.0	0.00	0.01	0.00	59.8
North: Young Street (N)														
7	L2	96	0.0	96	0.0	0.103	9.3	LOS A	0.2	1.1	0.35	0.89	0.35	45.9
Approach		96	0.0	96	0.0	0.103	9.3	LOS A	0.2	1.1	0.35	0.89	0.35	45.9
West: McEvoy Street (W)														
10	L2	43	0.0	43	0.0	0.148	5.6	LOS A	0.0	0.0	0.00	0.09	0.00	57.5
11	T1	491	2.1	491	2.1	0.148	0.2	LOS A	0.1	0.6	0.04	0.06	0.04	58.6
12	R2	13	0.0	13	0.0	0.148	9.6	LOS A	0.1	0.6	0.09	0.03	0.09	58.4
Approach		546	1.9	546	1.9	0.148	0.9	NA	0.1	0.6	0.04	0.06	0.04	58.4
All Vehicles		1286	2.7	1286	2.7	0.267	1.6	NA	0.2	1.1	0.05	0.11	0.05	57.3

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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Thursday, 11 August 2022 3:05:26 PM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

 Site: 101 [Bourke / Powell (Site Folder: Saturday Future Base)]

 Network: N101 [Saturday Future Base (Network Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	75	2.8	75	2.8	0.162	5.6	LOS A	0.0	0.0	0.00	0.15	0.00	57.3
2	T1	533	5.7	533	5.7	0.162	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	58.8
Approach		607	5.4	607	5.4	0.162	0.7	NA	0.0	0.0	0.00	0.07	0.00	58.6
North: Bourke Street (N)														
8	T1	768	5.6	768	5.6	0.229	0.4	LOS A	0.2	1.6	0.08	0.03	0.08	58.9
9	R2	37	2.9	37	2.9	0.229	9.8	LOS A	0.2	1.6	0.17	0.07	0.17	52.8
Approach		805	5.5	805	5.5	0.229	0.8	NA	0.2	1.6	0.08	0.03	0.08	58.8
West: Powell Street (W)														
10	L2	21	0.0	21	0.0	0.121	8.8	LOS A	0.2	1.1	0.53	0.94	0.53	18.2
12	R2	34	0.0	34	0.0	0.121	17.3	LOS B	0.2	1.1	0.53	0.94	0.53	42.3
Approach		55	0.0	55	0.0	0.121	14.0	LOS A	0.2	1.1	0.53	0.94	0.53	37.8
All Vehicles		1467	5.2	1467	5.2	0.229	1.3	NA	0.2	1.6	0.06	0.08	0.06	57.9

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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Thursday, 11 August 2022 3:05:26 PM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

 Site: 101 [Powell / Young (Site Folder: Saturday Future Base)]

 Network: N101 [Saturday Future Base (Network Folder: General)]

Powell / Young
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
East: Powell Street (E)														
5	T1	72	1.5	72	1.5	0.060	0.1	LOS A	0.1	0.6	0.11	0.20	0.11	56.4
6	R2	39	0.0	39	0.0	0.060	5.3	LOS A	0.1	0.6	0.11	0.20	0.11	42.6
Approach		111	1.0	111	1.0	0.060	1.9	NA	0.1	0.6	0.11	0.20	0.11	55.0
North: Young Street (N)														
7	L2	19	0.0	19	0.0	0.038	8.1	LOS A	0.1	0.4	0.12	0.93	0.12	36.9
9	R2	24	0.0	24	0.0	0.038	8.5	LOS A	0.1	0.4	0.12	0.93	0.12	48.6
Approach		43	0.0	43	0.0	0.038	8.3	LOS A	0.1	0.4	0.12	0.93	0.12	45.8
West: Powell Street (W)														
10	L2	31	0.0	31	0.0	0.035	5.6	LOS A	0.0	0.0	0.00	0.27	0.00	55.5
11	T1	37	0.0	37	0.0	0.035	0.0	LOS A	0.0	0.0	0.00	0.27	0.00	55.5
Approach		67	0.0	67	0.0	0.035	2.5	NA	0.0	0.0	0.00	0.27	0.00	55.5
All Vehicles		221	0.5	221	0.5	0.060	3.4	NA	0.1	0.6	0.08	0.36	0.08	52.9

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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Thursday, 11 August 2022 3:05:26 PM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

■ Site: 101 [Lachlan / Bourke (Site Folder: Saturday Future Base + Dev)]
 ■ Network: N101 [Sat Future Base + Dev (Network Folder: General)]

Lachlan / Bourke

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
2	T1	502	6.3	502	6.3	0.454	14.0	LOS A	8.8	65.0	0.66	0.59	0.66	42.8
3	R2	406	2.6	406	2.6	1.114	169.6	LOS F	9.1	65.0	1.00	1.30	2.08	8.6
Approach		908	4.6	908	4.6	1.114	83.6	LOS F	9.1	65.0	0.81	0.91	1.29	16.3
East: Lachlan Street (E)														
4	L2	693	5.2	693	5.2	* 1.106	175.1	LOS F	39.2	286.6	1.00	1.41	2.23	7.5
6	R2	145	9.4	145	9.4	1.106	176.6	LOS F	21.2	157.6	1.00	1.38	2.29	13.9
Approach		838	5.9	838	5.9	1.106	175.3	LOS F	39.2	286.6	1.00	1.40	2.24	8.8
North: Bourke Street (N)														
7	L2	83	0.0	83	0.0	1.089	168.5	LOS F	14.7	105.9	1.00	1.49	2.29	14.7
8	T1	394	5.3	394	5.3	* 1.089	163.9	LOS F	17.8	130.5	1.00	1.53	2.27	9.3
Approach		477	4.4	477	4.4	1.089	164.7	LOS F	17.8	130.5	1.00	1.52	2.28	10.3
All Vehicles		2223	5.1	2223	5.1	1.114	135.6	LOS F	39.2	286.6	0.92	1.23	1.86	11.3

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped ped	Dist] m					
East: Lachlan Street (E)											
P2	Full	100	49.4	LOS E	0.3	0.3	0.95	0.95	76.0	31.9	0.42
North: Bourke Street (N)											
P3	Full	19	49.2	LOS E	0.1	0.1	0.95	0.95	78.5	35.2	0.45
All Pedestrians		119	49.3	LOS E	0.3	0.3	0.95	0.95	76.4	32.4	0.42

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 [McEvoy / Bourke (Site Folder: Saturday Future Base + Dev)]
 ■ Network: N101 [Sat Future Base + Dev (Network Folder: General)]

New Site
 Site Category: (None)
 Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS [Total veh/h HV %]		ARRIVAL FLOWS [Total HV %]		Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. Dist]		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Bourke Street (S)														
1	L2	89	1.2	89	1.2	0.918	72.4	LOS F	12.0	87.2	1.00	1.14	1.45	9.7
2	T1	473	6.7	473	6.7	*0.918	66.9	LOS E	12.2	90.4	1.00	1.15	1.46	9.8
Approach		562	5.8	562	5.8	0.918	67.8	LOS E	12.2	90.4	1.00	1.15	1.46	9.8
North: Bourke Street (N)														
8	T1	593	6.6	591	6.6	0.429	7.6	LOS A	8.8	65.0	0.54	0.49	0.54	23.5
9	R2	564	4.5	563	4.5	*0.929	65.8	LOS E	8.9	65.0	1.00	0.96	1.18	4.1
Approach		1157	5.6	1154 ^N	5.6	0.929	36.0	LOS C	8.9	65.0	0.77	0.72	0.86	7.1
West: McEvoy Street (W)														
10	L2	411	2.6	411	2.6	0.854	44.5	LOS D	13.3	95.0	0.93	0.97	1.13	7.8
12	R2	204	1.0	204	1.0	*0.870	66.5	LOS E	7.6	53.4	1.00	0.96	1.34	5.4
Approach		615	2.1	615	2.1	0.870	51.8	LOS D	13.3	95.0	0.95	0.96	1.20	6.8
All Vehicles		2334	4.7	2330 ^N	4.7	0.929	47.8	LOS D	13.3	95.0	0.87	0.89	1.09	8.0

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.
 Delay Model: SIDRA Standard (Geometric Delay is included).
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)
 N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Pedestrian Movement Performance												
Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped Dist]		Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec	
South: Bourke Street (S)												
P1	Full	74	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45	
West: McEvoy Street (W)												
P4	Full	34	49.2	LOS E	0.1	0.1	0.95	0.95	78.6	35.2	0.45	
All Pedestrians		107	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45	

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 [McEvoy / Young (Site Folder: Saturday Future Base + Dev)]  Network: N101 [Sat Future Base + Dev (Network Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Young Street (S)														
1	L2	36	0.0	36	0.0	0.032	9.5	LOS A	0.1	0.4	0.17	0.89	0.17	48.9
2	T1	1	0.0	1	0.0	0.143	28.3	LOS B	0.2	1.3	0.88	1.00	0.88	32.4
3	R2	17	0.0	17	0.0	0.143	37.1	LOS C	0.2	1.3	0.88	1.00	0.88	16.1
Approach		54	0.0	54	0.0	0.143	18.5	LOS B	0.2	1.3	0.40	0.93	0.40	38.9
East: McEvoy Street (E)														
4	L2	41	0.0	41	0.0	0.061	5.5	LOS A	0.0	0.0	0.00	0.21	0.00	45.9
5	T1	603	4.0	603	4.0	0.278	0.2	LOS A	0.0	0.0	0.00	0.03	0.00	59.4
Approach		644	3.8	644	3.8	0.278	0.5	NA	0.0	0.0	0.00	0.04	0.00	59.2
North: Young Street (N)														
7	L2	96	0.0	96	0.0	0.141	9.1	LOS A	0.1	1.0	0.32	0.89	0.32	47.1
Approach		96	0.0	96	0.0	0.141	9.1	LOS A	0.1	1.0	0.32	0.89	0.32	47.1
West: McEvoy Street (W)														
10	L2	43	0.0	43	0.0	0.176	5.6	LOS A	0.0	0.0	0.00	0.10	0.00	57.4
11	T1	491	2.1	491	2.1	0.176	0.4	LOS A	0.2	1.1	0.08	0.07	0.08	57.9
12	R2	22	0.0	22	0.0	0.176	9.2	LOS A	0.2	1.1	0.13	0.05	0.13	57.8
Approach		556	1.9	556	1.9	0.176	1.1	NA	0.2	1.1	0.07	0.07	0.07	57.8
All Vehicles		1349	2.6	1349	2.6	0.278	2.1	NA	0.2	1.3	0.07	0.15	0.07	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.
 Delay Model: SIDRA Standard (Geometric Delay is included).
 Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 Site: 101 [Bourke / Powell (Site Folder: Saturday Future Base + Dev)]

 Network: N101 [Sat Future Base + Dev (Network Folder: General)]

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	94	2.2	94	2.2	0.165	5.6	LOS A	0.0	0.0	0.00	0.18	0.00	56.7
2	T1	523	5.8	523	5.8	0.165	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	58.6
Approach		617	5.3	617	5.3	0.165	0.9	NA	0.0	0.0	0.00	0.09	0.00	58.3
North: Bourke Street (N)														
8	T1	762	5.7	762	5.7	0.228	0.4	LOS A	0.2	1.7	0.08	0.03	0.08	58.9
9	R2	37	2.9	37	2.9	0.228	9.9	LOS A	0.2	1.7	0.18	0.07	0.18	52.6
Approach		799	5.5	799	5.5	0.228	0.8	NA	0.2	1.7	0.08	0.03	0.08	58.8
West: Powell Street (W)														
10	L2	28	0.0	28	0.0	0.184	8.8	LOS A	0.3	1.8	0.55	0.94	0.55	17.8
12	R2	53	0.0	53	0.0	0.184	17.6	LOS B	0.3	1.8	0.55	0.94	0.55	41.9
Approach		81	0.0	81	0.0	0.184	14.5	LOS B	0.3	1.8	0.55	0.94	0.55	37.9
All Vehicles		1497	5.1	1497	5.1	0.228	1.6	NA	0.3	1.8	0.07	0.10	0.07	57.4

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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Wednesday, 20 July 2022 11:15:57 AM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

 Site: 101 [Powell / Young (Site Folder: Saturday Future Base + Dev)]

 Network: N101 [Sat Future Base + Dev (Network Folder: General)]

Powell / Young
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
East: Powell Street (E)														
5	T1	72	1.5	72	1.5	0.072	0.2	LOS A	0.1	0.8	0.15	0.26	0.15	55.5
6	R2	58	0.0	58	0.0	0.072	5.3	LOS A	0.1	0.8	0.15	0.26	0.15	39.5
Approach		129	0.8	129	0.8	0.072	2.5	NA	0.1	0.8	0.15	0.26	0.15	53.1
North: Young Street (N)														
7	L2	54	0.0	54	0.0	0.077	8.1	LOS A	0.1	0.8	0.11	0.93	0.11	36.8
9	R2	37	0.0	37	0.0	0.077	8.6	LOS A	0.1	0.8	0.11	0.93	0.11	48.5
Approach		91	0.0	91	0.0	0.077	8.3	LOS A	0.1	0.8	0.11	0.93	0.11	44.2
West: Powell Street (W)														
10	L2	43	0.0	43	0.0	0.042	5.6	LOS A	0.0	0.0	0.00	0.32	0.00	54.7
11	T1	37	0.0	37	0.0	0.042	0.0	LOS A	0.0	0.0	0.00	0.32	0.00	54.7
Approach		80	0.0	80	0.0	0.042	3.0	NA	0.0	0.0	0.00	0.32	0.00	54.7
All Vehicles		300	0.4	300	0.4	0.077	4.4	NA	0.1	0.8	0.10	0.48	0.10	50.6

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.

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

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

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

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Wednesday, 20 July 2022 11:15:57 AM

Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model_2022 Update.sip9

MOVEMENT SUMMARY

Site: 101 [Lachlan / Bourke (Site Folder: Saturday Future Base + Dev (right turn bans))]

Network: N101 [Saturday Future Base + Dev (right turn bans) (Network Folder: General)]

Lachlan / Bourke

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	[Dist] m				
South: Bourke Street (S)														
2	T1	502	6.3	502	6.3	0.454	14.4	LOS A	8.8	65.0	0.67	0.60	0.67	42.4
3	R2	406	2.6	406	2.6	1.114	170.1	LOS F	9.1	65.0	1.00	1.30	2.08	8.5
Approach		908	4.6	908	4.6	1.114	84.0	LOS F	9.1	65.0	0.82	0.91	1.30	16.2
East: Lachlan Street (E)														
4	L2	693	5.2	693	5.2	* 1.106	175.1	LOS F	39.2	286.6	1.00	1.41	2.23	7.5
6	R2	145	9.4	145	9.4	1.106	176.6	LOS F	21.2	157.6	1.00	1.38	2.29	13.9
Approach		838	5.9	838	5.9	1.106	175.3	LOS F	39.2	286.6	1.00	1.40	2.24	8.8
North: Bourke Street (N)														
7	L2	83	0.0	83	0.0	1.089	168.5	LOS F	14.7	105.9	1.00	1.49	2.29	14.7
8	T1	394	5.3	394	5.3	* 1.089	163.9	LOS F	17.8	130.5	1.00	1.53	2.27	9.3
Approach		477	4.4	477	4.4	1.089	164.7	LOS F	17.8	130.5	1.00	1.52	2.28	10.3
All Vehicles		2223	5.1	2223	5.1	1.114	135.8	LOS F	39.2	286.6	0.93	1.23	1.86	11.3

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.

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

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped ped	[Dist] m					
East: Lachlan Street (E)											
P2	Full	100	49.4	LOS E	0.3	0.3	0.95	0.95	76.0	31.9	0.42
North: Bourke Street (N)											
P3	Full	19	49.2	LOS E	0.1	0.1	0.95	0.95	78.5	35.2	0.45
All Pedestrians		119	49.3	LOS E	0.3	0.3	0.95	0.95	76.4	32.4	0.42

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 [McEvoy / Bourke (Site Folder: Saturday Future Base + Dev (right turn bans))]

Network: N101 [Saturday Future Base + Dev (right turn bans) (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	89	1.2	89	1.2	0.934	77.1	LOS F	12.6	91.9	1.00	1.17	1.50	9.2
2	T1	482	6.6	482	6.6	*0.934	71.8	LOS F	12.9	95.5	1.00	1.18	1.51	9.3
Approach		572	5.7	572	5.7	0.934	72.7	LOS F	12.9	95.5	1.00	1.18	1.51	9.3
North: Bourke Street (N)														
8	T1	599	6.5	597	6.5	0.433	7.7	LOS A	8.8	65.0	0.55	0.49	0.55	23.4
9	R2	554	4.6	552	4.6	*0.912	63.0	LOS E	8.9	65.0	1.00	0.95	1.15	4.3
Approach		1153	5.6	1149 ^N	5.6	0.912	34.2	LOS C	8.9	65.0	0.76	0.71	0.84	7.5
West: McEvoy Street (W)														
10	L2	395	2.7	395	2.7	0.822	39.0	LOS C	12.9	92.4	0.90	0.93	1.05	8.7
12	R2	204	1.0	204	1.0	*0.870	66.5	LOS E	7.6	53.4	1.00	0.96	1.34	5.4
Approach		599	2.1	599	2.1	0.870	48.4	LOS D	12.9	92.4	0.93	0.94	1.15	7.2
All Vehicles		2323	4.7	2320 ^N	4.7	0.934	47.4	LOS D	12.9	95.5	0.87	0.89	1.08	8.1

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.

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

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

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

* Critical Movement (Signal Timing)

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

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped ped	Dist] m					
South: Bourke Street (S)											
P1	Full	74	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
West: McEvoy Street (W)											
P4	Full	34	49.2	LOS E	0.1	0.1	0.95	0.95	78.6	35.2	0.45
All Pedestrians		107	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45

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 [McEvoy / Young (Site Folder: Saturday Future Base + Dev (right turn bans))]

 Network: N101 [Saturday Future Base + Dev (right turn bans) (Network Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Young Street (S)														
1	L2	31	0.0	31	0.0	0.027	9.5	LOS A	0.0	0.3	0.18	0.88	0.18	48.9
2	T1	1	0.0	1	0.0	0.006	26.1	LOS B	0.0	0.1	0.82	0.89	0.82	37.4
Approach		32	0.0	32	0.0	0.027	10.1	LOS A	0.0	0.3	0.20	0.88	0.20	48.4
East: McEvoy Street (E)														
4	L2	31	0.0	31	0.0	0.061	5.5	LOS A	0.0	0.0	0.00	0.16	0.00	48.7
5	T1	609	4.0	609	4.0	0.276	0.2	LOS A	0.0	0.0	0.00	0.02	0.00	59.5
Approach		640	3.8	640	3.8	0.276	0.4	NA	0.0	0.0	0.00	0.03	0.00	59.4
North: Young Street (N)														
7	L2	96	0.0	96	0.0	0.130	9.0	LOS A	0.1	1.0	0.31	0.89	0.31	47.2
Approach		96	0.0	96	0.0	0.130	9.0	LOS A	0.1	1.0	0.31	0.89	0.31	47.2
West: McEvoy Street (W)														
10	L2	43	0.0	43	0.0	0.156	5.6	LOS A	0.0	0.0	0.00	0.11	0.00	57.3
11	T1	491	2.1	491	2.1	0.156	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.1
Approach		534	2.0	534	2.0	0.156	0.5	NA	0.0	0.0	0.00	0.05	0.00	58.9
All Vehicles		1301	2.7	1301	2.7	0.276	1.3	NA	0.1	1.0	0.03	0.12	0.03	57.8

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.

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

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

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

MOVEMENT SUMMARY

 Site: 101 [Bourke / Powell (Site Folder: Saturday Future Base + Dev (right turn bans))]

 Network: N101 [Saturday Future Base + Dev (right turn bans) (Network Folder: General)]

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Bourke Street (S)														
1	L2	88	2.4	88	2.4	0.165	5.6	LOS A	0.0	0.0	0.00	0.17	0.00	56.9
2	T1	529	5.8	529	5.8	0.165	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	58.6
Approach		618	5.3	618	5.3	0.165	0.8	NA	0.0	0.0	0.00	0.08	0.00	58.4
North: Bourke Street (N)														
8	T1	767	5.6	767	5.6	0.229	0.4	LOS A	0.2	1.7	0.08	0.03	0.08	58.9
9	R2	37	2.9	37	2.9	0.229	9.9	LOS A	0.2	1.7	0.18	0.07	0.18	52.6
Approach		804	5.5	804	5.5	0.229	0.8	NA	0.2	1.7	0.08	0.03	0.08	58.8
West: Powell Street (W)														
10	L2	41	0.0	41	0.0	0.183	8.8	LOS A	0.3	1.8	0.50	0.93	0.50	18.6
12	R2	47	0.0	47	0.0	0.183	17.8	LOS B	0.3	1.8	0.50	0.93	0.50	42.5
Approach		88	0.0	88	0.0	0.183	13.7	LOS A	0.3	1.8	0.50	0.93	0.50	36.8
All Vehicles		1511	5.1	1511	5.1	0.229	1.6	NA	0.3	1.8	0.07	0.11	0.07	57.4

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.

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

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

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

MOVEMENT SUMMARY

 Site: 101 [Powell / Young (Site Folder: Saturday Future Base + Dev (right turn bans))]

 Network: N101 [Saturday Future Base + Dev (right turn bans) (Network Folder: General)]

Powell / Young
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
East: Powell Street (E)														
5	T1	72	1.5	72	1.5	0.060	0.1	LOS A	0.1	0.6	0.11	0.20	0.11	56.4
6	R2	39	0.0	39	0.0	0.060	5.3	LOS A	0.1	0.6	0.11	0.20	0.11	42.6
Approach		111	1.0	111	1.0	0.060	1.9	NA	0.1	0.6	0.11	0.20	0.11	55.0
North: Young Street (N)														
7	L2	19	0.0	19	0.0	0.038	8.1	LOS A	0.1	0.4	0.12	0.93	0.12	36.9
9	R2	24	0.0	24	0.0	0.038	8.5	LOS A	0.1	0.4	0.12	0.93	0.12	48.6
Approach		43	0.0	43	0.0	0.038	8.3	LOS A	0.1	0.4	0.12	0.93	0.12	45.8
West: Powell Street (W)														
10	L2	31	0.0	31	0.0	0.035	5.6	LOS A	0.0	0.0	0.00	0.27	0.00	55.5
11	T1	37	0.0	37	0.0	0.035	0.0	LOS A	0.0	0.0	0.00	0.27	0.00	55.5
Approach		67	0.0	67	0.0	0.035	2.5	NA	0.0	0.0	0.00	0.27	0.00	55.5
All Vehicles		221	0.5	221	0.5	0.060	3.4	NA	0.1	0.6	0.08	0.36	0.08	52.9

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.

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

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

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