# **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**

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# 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 6,534m<sup>2</sup>. 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.

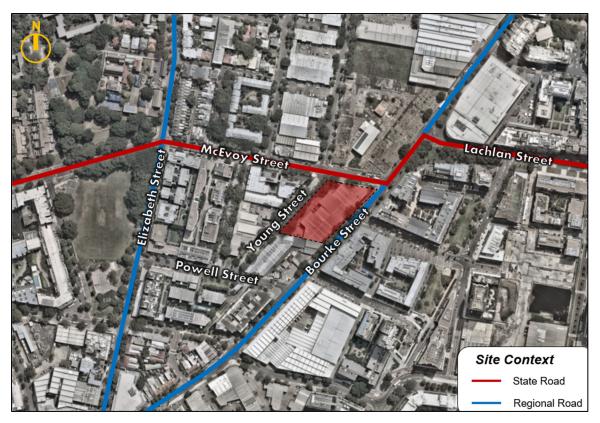


Figure 3 Existing road network



# 2.3 Public transport

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

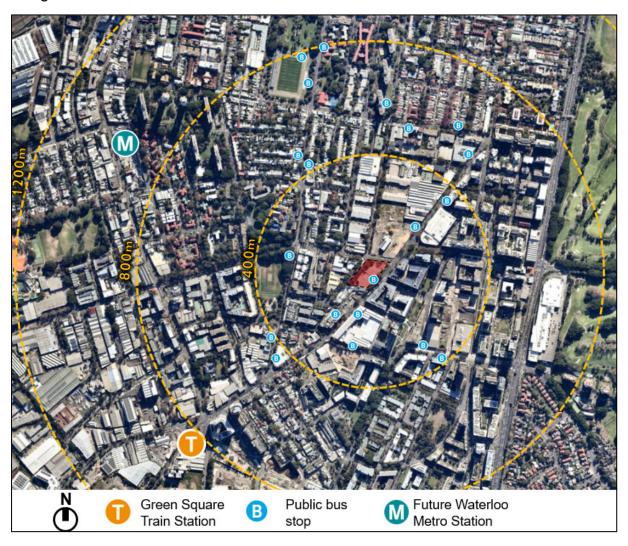


Figure 4 Public transport access

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 F	requency
		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.



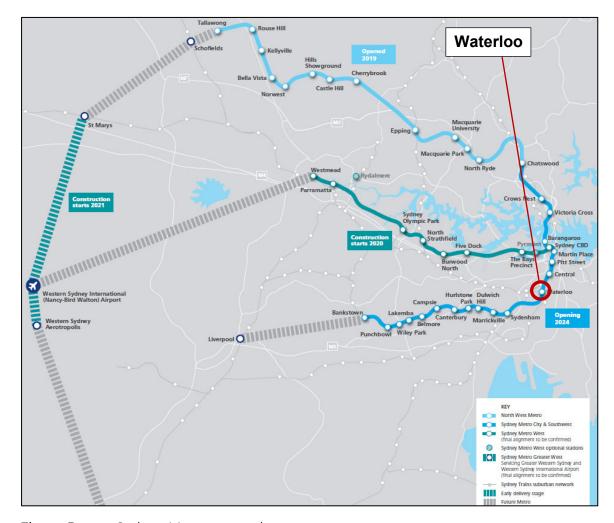


Figure 5 Sydney Metro network

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.

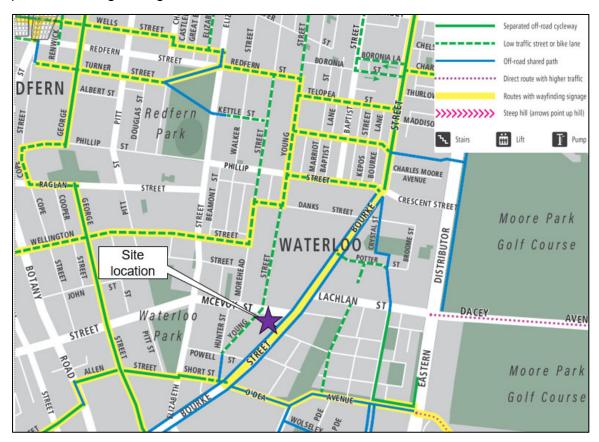


Figure 6 Existing cycling network



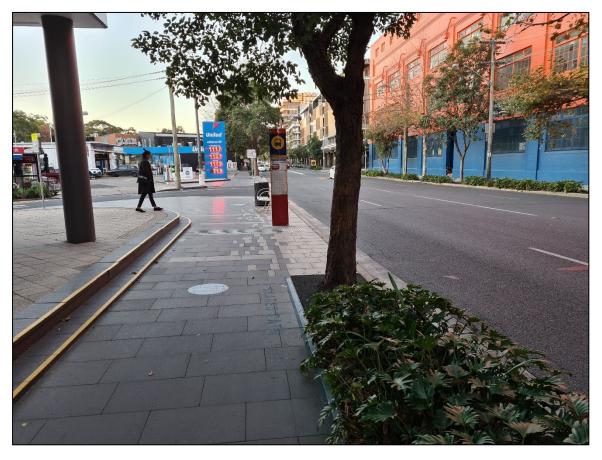


Figure 7 Bourke Road shared pathway (view south of Powell Street)



# **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 Streosed 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.

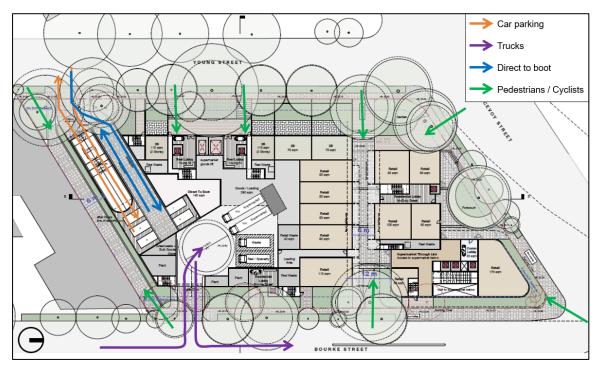


Figure 8 Proposed site access



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.

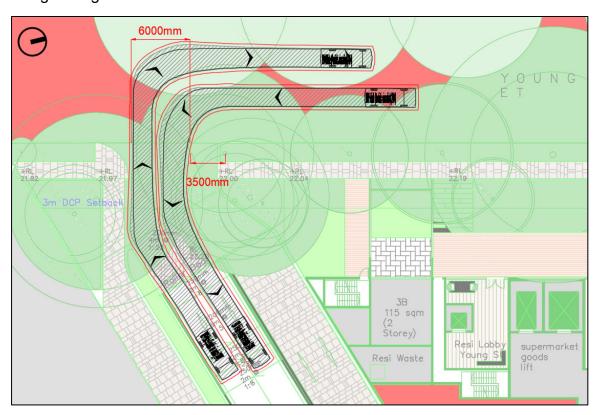


Figure 9 Vehicle swept paths – Young Street access point

# 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 2,000m<sup>2</sup> of retail GFA. For buildings with less than 2,000m<sup>2</sup> of retail GFA on land in Category F<sup>1</sup> the LEP specifies a maximum car parking rate of 1 space per 50m<sup>2</sup>. 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 50m<sup>2</sup> 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

Туре	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 <sup>2</sup>	12
Total	103		

<sup>&</sup>lt;sup>1</sup> Based on Public Transport Accessibility Level Map

<sup>&</sup>lt;sup>2</sup> 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 F<sup>3</sup>, 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 75m<sup>2</sup>. Based on the 2,025m<sup>2</sup> 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.

-

<sup>&</sup>lt;sup>3</sup> 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.

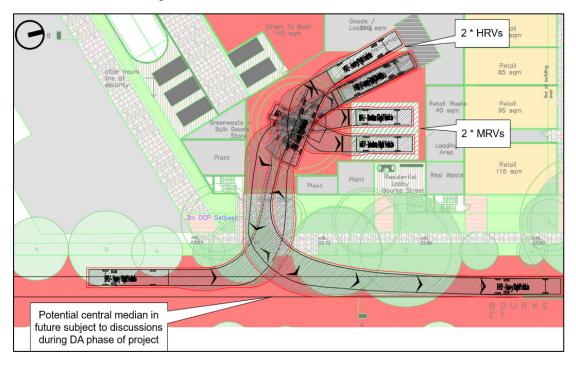


Figure 10 Swept path analysis – loading dock

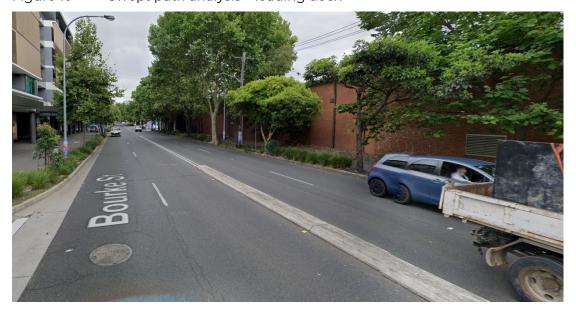


Figure 11 Existing central median on Bourke Street adjacent to site



# 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 spacesVisitor: 1 per 10 dwellings: 12 spaces

#### Retail

• Employee: 1 per 250m<sup>2</sup> GFA: 19 spaces

Visitor: 2 plus 1 per 100m<sup>2</sup> GFA over 100m<sup>2</sup> GFA: 50 spaces

#### Commercial

• Employee: 1 per 150m<sup>2</sup> GFA: 14 spaces

• Visitor: 1 per 400m<sup>2</sup> 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.

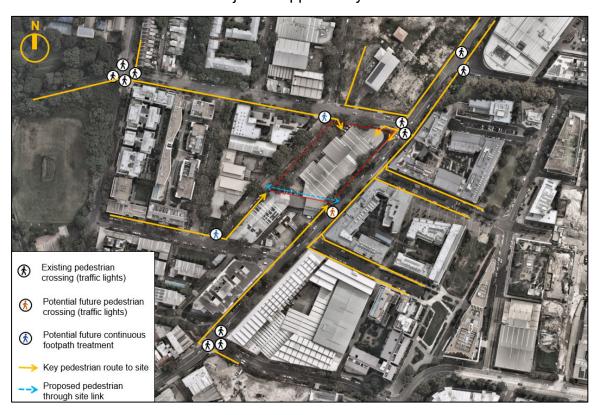


Figure 12 Existing and potential future pedestrian connections



# 3.9 Electric vehicle charging facilities

Fabcot intends to deliver a benchmark provision of publicly accessible electric vehicle charging facilities though 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:	Tenants
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	



# 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 6,534m<sup>2</sup>. 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			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

	Total Traffic Movements at	Forecast Number of	Forecast Number	Retail Traffic Generation Rate		
Peak Hour	Crescent Street Driveway	Residential Traffic Movements*	of Retail Traffic Movements	Per 100m² 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	

<sup>\*</sup> 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	Quai	Peak hour traffic generation rate  Quantum /  Forecast Traffic Generation		rate			eneration	
Scenario	Use	Unit		AM Peak Hour	PM Peak Hour	WE Peak Hour	AM peak hour	PM peak hour	WE Peak Hour
Existing site	Light industrial	6,534	m²	0.5 / 100m <sup>2</sup>	0.5 / 100m <sup>2</sup>		-32	-32	0
	Residential	121	Units	0.09 / unit	0.11 / unit	0.10 / unit	+11	+13	+12
Future site	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 Traff	Total Traffic Generation						+31	+95	+113
Net Traffic	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.



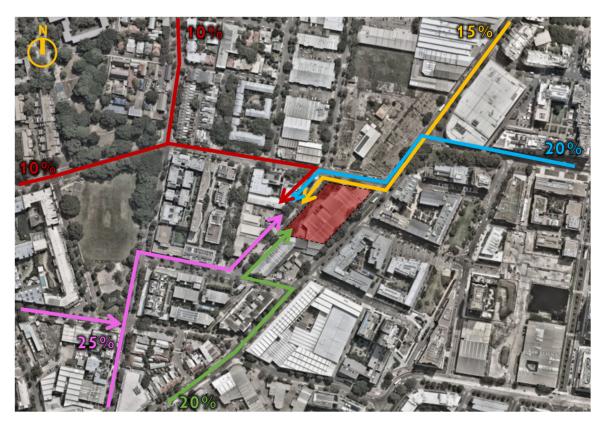


Figure 13 Arrival directions to site (with right turns from/to McEvoy Street)



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



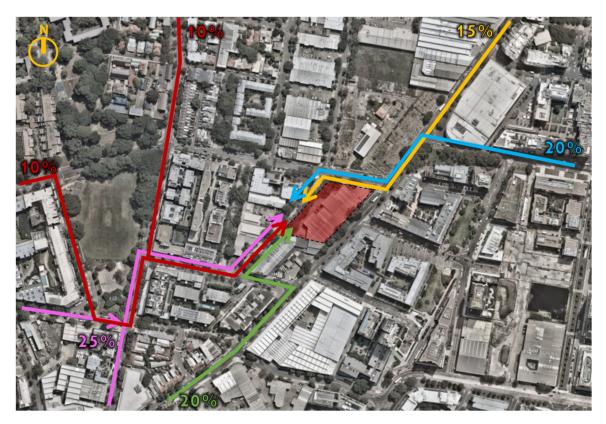


Figure 15 Arrival directions to site (with right turn bans from/to McEvoy Street)

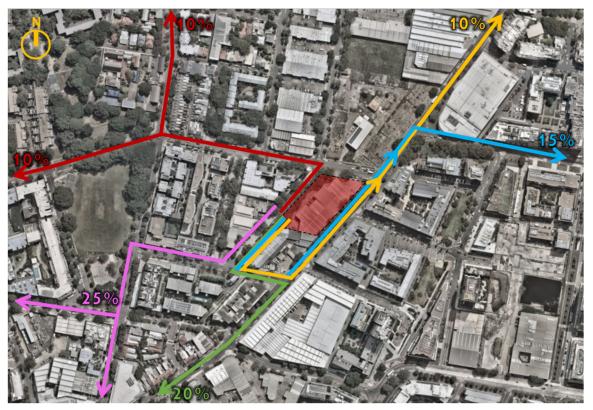


Figure 16 Departure directions from site (with right turn bans from/to McEvoy Street)



# 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.



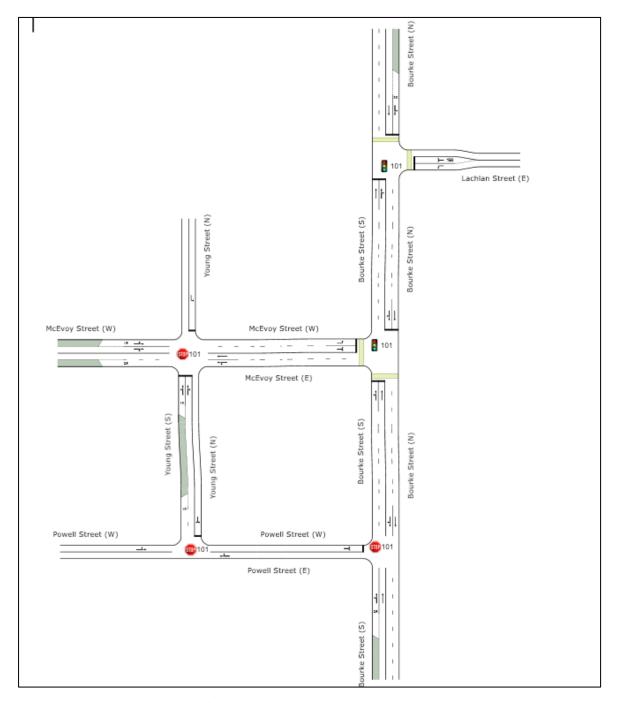


Figure 17 SIDRA network layout

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

- Reflect the revised Planning Proposal including updated floor space and onsite 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
В	15 to 28	Good with acceptable delays and spare capacity
С	29 to 42	Satisfactory
D	43 to 56	Operating near capacity
Е	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.

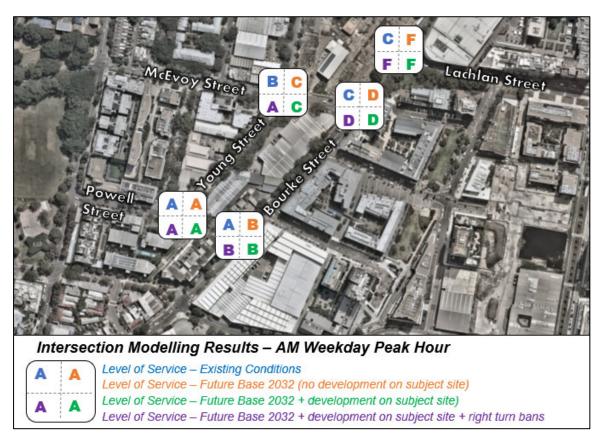


Figure 18 Intersection modelling results – AM peak weekday hour



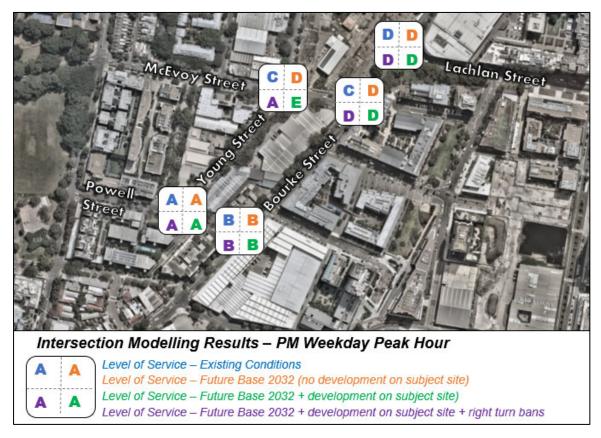


Figure 19 Intersection modelling results – PM weekday peak hour

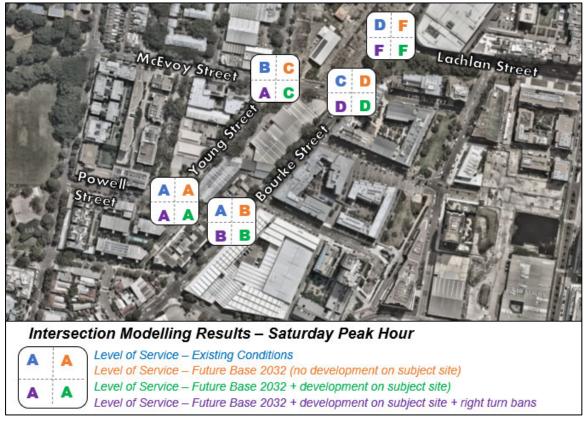


Figure 20 Intersection modelling results - Saturday peak hour



# 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**

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)

Vehic	cle Mo	vement	Perfo	rmano	:e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO' [Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAG OF QU [ Veh. veh		Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Bourk	e 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
Appro	ach	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:	Lachlar	n 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	<b>*</b> 0.796	49.5	LOS D	9.6	69.8	0.97	0.92	1.13	31.0
Appro	ach	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	: Bourk	e 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
Appro	ach	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 Ve	hicles	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 Mo	vement	Perforr	nance							
Mov	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. E	ffective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE		Que	Stop	Time	Dist.	Speed
				[ Ped	Dist ]		Rate			
	ped/h	sec		ped	m			sec	m	m/sec
East: Lachlan Str	eet (E)									
P2 Full	62	49.3	LOS E	0.2	0.2	0.95	0.95	75.9	31.9	0.42
North: Bourke Str	reet (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.

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Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model\_2022 Update.sip9

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)

Vehic	cle Mo	vement	Perfo	rmano	е									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Bourk	e Street	(S)											
1 2	L2 T1	32 462	3.3 10.0	32 462	3.3 10.0	* 0.749 0.749	45.4 38.9	LOS D LOS C	7.8 7.9	59.3 60.3	0.95 0.94	0.89 0.89	1.05 1.05	14.8 15.2
Appro	ach	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	: Bourk	e 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	<b>*</b> 0.737	57.6	LOS E	8.9	65.0	1.00	0.87	1.02	4.6
Appro	ach	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	McEvo	y 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	<b>*</b> 0.750	56.6	LOS E	6.4	47.6	1.00	0.88	1.13	6.3
Appro	ach	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 Ve	hicles	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 Mov	vement	Perforr	nance							
Mov .	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. E	ffective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE		Que	Stop	Time	Dist.	Speed
				[ Ped	Dist ]		Rate			
	ped/h	sec		ped	m			sec	m	m/sec
South: Bourke Str	reet (S)									
P1 Full	81	49.3	LOS E	0.2	0.2	0.95	0.95	78.7	35.2	0.45
West: McEvoy St	reet (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.

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

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

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

Vehi	icle Mo	vement	Perfo	rmano	ce									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS IHV]	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAG OF QI [ Veh. veh		Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
Sout	h: Youn	g 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
Appr	oach	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	: McEvo	y 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
Appr	oach	377	4.2	377	4.2	0.121	0.2	NA	0.0	0.0	0.00	0.01	0.00	59.8
North	h: Young	Street (I	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
Appr	oach	77	2.7	77	2.7	0.091	9.1	LOS A	0.1	8.0	0.31	0.89	0.31	47.2
West	t: McEvo	y 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
Appr	oach	506	5.8	506	5.8	0.144	0.8	NA	0.0	0.3	0.02	0.07	0.02	58.3
All V	ehicles	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.

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

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

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

Vehi	cle Mo	vement	Perfo	rmanc	e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO\ [Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourk	e 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
Appro	oach	529	4.2	529	4.2	0.140	0.6	NA	0.0	0.0	0.00	0.06	0.00	58.9
North	: Bourk	e 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
Appro	oach	691	3.5	691	3.5	0.194	8.0	NA	0.2	1.3	0.08	0.03	0.08	58.9
West	: Powel	Street (\	N)											
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	8.0	0.49	0.94	0.49	43.5
Appro	oach	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 Ve	ehicles	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.

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

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

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

Vehi	cle Mo	vement	Perfo	rmano	се									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS IHV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Powell	Street (E	Ξ)											
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
Appro	oach	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 (I	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
Appro	oach	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	: Powel	Street (\	N)											
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
Appro	oach	59	3.6	59	3.6	0.032	2.9	NA	0.0	0.0	0.00	0.30	0.00	55.0
All Ve	hicles	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.

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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)

Vehi	cle Mo	vement	Perfo	rmanc	e:									
Mov ID	Turn	DEM/ FLO\ [ Total veh/h		ARRI\ FLO\ [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK QUEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourl	ce 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
Appro	oach	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:	Lachla	n Street	(E)											
4	L2	741	7.0	741	7.0	<b>*</b> 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
Appro	oach	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	: Bourk	e 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	<b>*</b> 1.002	108.9	LOS F	10.2	77.3	1.00	1.29	1.91	13.2
Appro	oach	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 Ve	hicles	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 Mo	vement	Perforr	nance							
Mov .	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Et	ffective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE		Que	Stop	Time	Dist.	Speed
				[ Ped	Dist ]		Rate			
	ped/h	sec		ped	m			sec	m	m/sec
East: Lachlan Str	eet (E)									
P2 Full	62	49.3	LOS E	0.2	0.2	0.95	0.95	75.9	31.9	0.42
North: Bourke Str	reet (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.

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Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model\_2022 Update.sip9

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)

Vehi	cle Mo	vement	Perfo	rmanc	е									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI\ FLOV [ Total veh/h	VS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	ı: Bourl	ke Street	(S)											
1 2	L2 T1	38 555	2.8 11.4		2.8 11.4	0.906 * 0.906	68.0 62.1	LOS E LOS E	12.3 12.7	93.9 97.3	1.00 1.00	1.13 1.14	1.41 1.41	10.4 10.5
Appro	oach	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	: Bourk	e 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
Appro	ach	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	McEv	by Street	(W)											
10	L2	429	7.4	429	7.4	<b>*</b> 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
Appro	oach	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 Ve	hicles	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 Mo	vement	Perforr	nance							
Mov .	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Et	ffective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	EUE Dist]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m			sec	m	m/sec
South: Bourke St	reet (S)									
P1 Full	81	49.3	LOS E	0.2	0.2	0.95	0.95	78.7	35.2	0.45
West: McEvoy St	reet (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.

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Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model\_2022 Update.sip9

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)

Vehi	icle Mo	vement	Perfo	rmano	:e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAG OF QI [ Veh. veh		Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
Sout	h։ Young	g 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
Appr	oach	31	0.0	31	0.0	0.045	13.9	LOSA	0.1	0.4	0.40	0.89	0.40	43.7
East	: McEvo	y 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
Appr	oach	453	5.1	453	5.1	0.146	0.3	NA	0.0	0.0	0.00	0.01	0.00	59.8
North	h: Young	Street (I	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
Appr	oach	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	t: McEvo	y 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
Appr	oach	607	6.1	607	6.1	0.213	0.8	NA	0.1	0.4	0.02	0.07	0.02	58.2
All V	ehicles	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.

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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)

Vehi	cle Mo	vement	Perfo	rmanc	:e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO\ [Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourk	e 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
Appro	oach	636	4.6	636	4.6	0.169	0.6	NA	0.0	0.0	0.00	0.06	0.00	58.9
North	: Bourk	e 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
Appro	oach	827	4.1	827	4.1	0.236	1.0	NA	0.3	1.9	0.09	0.04	0.10	58.6
West	: Powel	Street (\	N)											
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
Appro	oach	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 Ve	ehicles	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.

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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)

Vehic	cle Mo	vement	Perfo	rmano	:e									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO' [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAG OF QU [ Veh. veh		Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Powell	Street (E	<b>:</b> )											
5 6	T1 R2	67 36	1.6 5.9	67 36	1.6 5.9	0.058 0.058	0.1 5.3	LOS A LOS A	0.1 0.1	0.6 0.6	0.12 0.12	0.20 0.20	0.12 0.12	56.5 43.0
Appro		103 Street (I	3.1 N)	103	3.1	0.058	1.9	NA	0.1	0.6	0.12	0.20	0.12	55.2
7 9	L2 R2	18 25	5.9 4.2	18 25	5.9 4.2	0.039 0.039	8.4 8.6	LOS A LOS A	0.1 0.1	0.4 0.4	0.12 0.12	0.94 0.94	0.12 0.12	36.8 48.4
Appro	ach	43	4.9	43	4.9	0.039	8.5	LOSA	0.1	0.4	0.12	0.94	0.12	45.8
West:	Powell	Street (\	N)											
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
Appro	ach	71	3.0	71	3.0	0.038	3.0	NA	0.0	0.0	0.00	0.31	0.00	55.0
All Ve	hicles	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.

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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)

Vehi	cle Mo	vement	Perfo	rmano	е									
Mov ID	Turn	DEMA FLOV [Total veh/h		ARRI FLO [ Total veh/h	WS IHV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourk	e 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
Appro	oach	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:	Lachla	n Street (	(E)											
4	L2	741	7.0	741	7.0	<b>*</b> 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
Appro	oach	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	: Bourk	e 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	<b>*</b> 1.002	108.9	LOS F	10.2	77.3	1.00	1.29	1.91	13.2
Appro	oach	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 Ve	hicles	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 Mov	vement	Perforr	nance							
Mov	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. E	ffective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	:UE Dist ]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m ¯			sec	m	m/sec
East: Lachlan Str	eet (E)									
P2 Full	62	49.3	LOS E	0.2	0.2	0.95	0.95	75.9	31.9	0.42
North: Bourke Str	eet (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.

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Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model 2022 Update.sip9

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)

Vehic	cle Mo	vement	Perfo	rmano	е									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAG OF QI [ Veh. veh	E BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	ı: Bourk	e Street	(S)											
1 2	L2 T1	38 558	2.8 11.3	38 558	2.8 11.3	0.910 * 0.910	69.2 63.4	LOS E LOS E	12.5 12.9	95.4 98.8	1.00 1.00	1.14 1.15	1.42 1.42	10.3 10.4
Appro	oach	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	: Bourk	e Street (	(N)											
8	T1 R2	636 424	9.1 6.2	636 424	9.1 6.2	0.493 0.905	10.6 66.3	LOS A LOS E	8.6 8.8	65.0 65.0	0.65 1.00	0.59 0.94	0.65 1.17	18.9 4.1
Appro		1060	7.9	1060		0.905	32.9	LOS C	8.8	65.0	0.79	0.73	0.86	7.7
West	McEvo	y Street	(W)											
10	L2	438	7.2	438	7.2	<b>*</b> 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
Appro	oach	627	7.6	627	7.6	0.917	67.7	LOSE	12.8	95.0	1.00	1.05	1.42	5.4
All Ve	hicles	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 Mov	/ement	Perforr	nance							
Mov .	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Et	ffective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	UE Dist]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m ¯			sec	m	m/sec
South: Bourke Str	reet (S)									
P1 Full	81	49.3	LOS E	0.2	0.2	0.95	0.95	78.7	35.2	0.45
West: McEvoy Str	reet (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.

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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)

Vehi	cle Mo	vement	Perfo	rmano	e_									
Mov ID	Turn	DEM/ FLO\ [ Total veh/h	WS HV] %	ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAG OF QI [ Veh. veh		Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
Sout	h։ Younզ	g 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
Appr	oach	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	McEvo	y 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
Appr	oach	457	5.1	457	5.1	0.148	0.4	NA	0.0	0.0	0.00	0.02	0.00	59.6
North	n: 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
Appr	oach	93	2.3	93	2.3	0.187	9.0	LOSA	0.1	1.0	0.29	0.90	0.29	47.3
West	: McEvo	y 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
Appr	oach	607	6.1	607	6.1	0.216	8.0	NA	0.1	0.4	0.02	0.07	0.02	58.2
All V	ehicles	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.

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om 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)

Vehi	cle Mo	vement	Perfo	rmanc	:e									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO\ [Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK QUEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourk	e 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
Appro	oach	637	4.6	637	4.6	0.169	0.6	NA	0.0	0.0	0.00	0.06	0.00	58.8
North	: Bourk	e 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
Appro	oach	825	4.1	825	4.1	0.236	1.0	NA	0.3	1.9	0.09	0.04	0.10	58.6
West	: Powel	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
Appro	oach	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 Ve	hicles	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.

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om 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)

Vehi	cle Mo	vement	Perfo	rmano	се									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS IHV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Powell	Street (E	Ξ)											
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
Appro	oach	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	g Street (I	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
Appro	oach	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	: Powel	I Street (\	N)											
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
Appro	oach	71	3.0	71	3.0	0.038	3.0	NA	0.0	0.0	0.00	0.31	0.00	55.0
All Ve	hicles	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.

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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)

Vehic	cle Mo	vement	Perfo	rmano	е									
Mov ID	Turn	DEM/ FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	ı: Bourk	e 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
Appro	oach	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:	Lachlar	n Street (	E)											
4	L2	741	7.0	741	7.0	<b>*</b> 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
Appro	oach	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	: Bourk	e 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	<b>*</b> 1.002	108.9	LOS F	10.2	77.3	1.00	1.29	1.91	13.2
Appro	oach	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 Ve	hicles	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 Mov	vement	Perforr	nance							
Mov	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. E	ffective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	:UE Dist ]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m ¯			sec	m	m/sec
East: Lachlan Str	eet (E)									
P2 Full	62	49.3	LOS E	0.2	0.2	0.95	0.95	75.9	31.9	0.42
North: Bourke Str	eet (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.

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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)

Vehi	cle Mo	vement	Perfo	rmanc	е									
Mov ID	Turn	DEM/ FLO\ [ Total veh/h		ARRI FLO\ [ Total veh/h	NS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAG OF QI [ Veh. veh		Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	ı: Bourl	ke 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
Appro	oach	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	: Bourk	e 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
Appro	oach	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	McEve	by 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
Appro	oach	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 Ve	hicles	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 Mov	vement	Perforr	nance							
Mov .	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Ef	fective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	UE Dist]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m ¯			sec	m	m/sec
South: Bourke St	reet (S)									
P1 Full	81	49.3	LOS E	0.2	0.2	0.95	0.95	78.7	35.2	0.45
West: McEvoy St	reet (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.

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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)

Vehi	cle Mo	vement	Perfo	rmano	e									
Mov ID	Turn	DEM/ FLO¹ [ Total veh/h		ARRI FLO¹ [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
Sout	h: 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
Appr	oach	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:	McEvo	y 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
Appr	oach	457	5.1	457	5.1	0.148	0.4	NA	0.0	0.0	0.00	0.02	0.00	59.6
North	n: 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
Appr	oach	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	: McEvc	y 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
Appr	oach	599	6.0	599	6.0	0.208	0.7	NA	0.0	0.0	0.00	0.07	0.00	58.4
All Ve	ehicles	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.

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5 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)

Vehi	cle Mo	vement	Perfo	rmanc	e									
Mov ID	Turn	DEM/ FLO\ [ Total veh/h		ARRI FLO\ [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK QUEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourl	ke Street	(S)											
1 2	L2 T1	65 572	1.6 5.0	65 572	1.6 5.0	0.169 0.169	5.6 0.0	LOS A LOS A	0.0 0.0	0.0 0.0	0.00	0.12 0.05	0.00	57.7 59.2
Appro		637	4.6	637	4.6	0.169	0.6	NA	0.0	0.0	0.00	0.06	0.00	59.1
North	: Bourk	ce Street	(N)											
8	T1	783	4.2	783	4.2	0.236	0.5	LOSA	0.3	2.3	0.09	0.03	0.09	58.7
9 Appro	R2 pach	42 825	2.5 4.1	42 825	2.5 4.1	0.236 0.236	10.1	LOS A NA	0.3	2.3	0.21	0.08	0.21	51.6 58.6
West	: Powel	II 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
Appro	oach	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 Ve	hicles	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.

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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)

Vehi	cle Mo	vement	Perfo	rmano	:e									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Powell	Street (E	<u> </u>											
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
Appro	oach	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 (I	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
Appro	oach	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 (\	N)											
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
Appro	oach	71	3.0	71	3.0	0.038	3.0	NA	0.0	0.0	0.00	0.31	0.00	55.0
All Ve	ehicles	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.

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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)

Vehic	cle Mo	vement	Perfo	rmanc	:e									
Mov ID	Turn	DEMA FLO\ [Total	WS HV]	ARRI FLO' [ Total	WS HV]	Deg. Satn	Delay	Level of Service	AVERAG OF QI [ Veh.	UEUE Dist ]	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed
South	: Bourk	veh/h ce Street	% (S)	veh/h	%	v/c	sec		veh	m	_		_	km/h
2	T1 R2	416	4.8 1.9	416 388	4.8 1.9	0.372 * 0.833	15.6 59.6	LOS B	8.9 9.1	64.7 65.0	0.71	0.63 0.90	0.71	41.4 19.4
Appro		804	3.4	804	3.4	0.833	36.9	LOSC	9.1	65.0	0.85	0.76	0.89	27.6
East:	Lachla	n 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
Appro	ach	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	: Bourk	e 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
Appro	ach	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 Ve	hicles	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 Mo	vement	Perforr	nance							
Mov	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. E	ffective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE	UE	Que	Stop	Time	Dist.	Speed
				[Ped	Dist ]		Rate			
	ped/h	sec		ped	m			sec	m	m/sec
East: Lachlan Str	eet (E)									
P2 Full	87	49.3	LOS E	0.3	0.3	0.95	0.95	75.9	31.9	0.42
North: Bourke Sti	reet (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.

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Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model\_2022 Update.sip9

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)

Vehi	cle Mo	vement	Perfo	rmanc	e:									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO' [Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		E BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	ı: Bourl	ke Street	(S)											
1 2	L2 T1	43 456	2.4 6.2	43 456	2.4 6.2	* 0.808 0.808	53.1 46.7	LOS D LOS D	8.8 8.8	64.4 64.4	0.99 0.98	0.97 0.97	1.18 1.18	12.9 13.2
Appro	ach	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	: Bourk	e 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
Appro	ach	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	McEve	by 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	8.0	260	8.0	<b>*</b> 0.815	58.6	LOS E	9.0	63.7	1.00	0.91	1.18	6.1
Appro	ach	639	0.7	639	0.7	0.815	41.2	LOSC	10.1	71.2	0.90	0.88	0.99	8.3
All Ve	hicles	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 Mo	vement	Perforr	nance							
Mov .	Dem.	Aver.	Level of	AVERAGE		Prop. Et		Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	EUE Dist]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m			sec	m	m/sec
South: Bourke St	reet (S)									
P1 Full	69	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
West: McEvoy St	reet (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.

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Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model\_2022 Update.sip9



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

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

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

Vehi	cle Mo	vement		rmano	:e									
Mov ID	Turn	DEMA FLOV [Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAG OF QI [ Veh. veh		Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	า: Young	g 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
Appro	oach	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:	McEvo	y 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
Appro	oach	484	1.1	484	1.1	0.153	0.3	NA	0.0	0.0	0.00	0.01	0.00	59.8
North	n: Young	Street (I	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
Appro	oach	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	: McEvo	y 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	8.0	554	8.0	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
Appro	oach	641	0.7	641	0.7	0.181	0.9	NA	0.1	0.7	0.04	0.08	0.04	58.1
All Ve	ehicles	1234	0.8	1234	8.0	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.

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

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

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

Vehi	cle Mo	vement	Perfo	rmanc	:e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO\ [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourk	e 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
Appro	oach	515	4.1	515	4.1	0.136	0.7	NA	0.0	0.0	0.00	0.07	0.00	58.6
North	: Bourk	e 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
Appro	oach	779	3.9	779	3.9	0.224	1.0	NA	0.3	2.0	0.10	0.05	0.10	58.5
West	Powel	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
Appro	oach	62	0.0	62	0.0	0.126	13.4	LOSA	0.2	1.2	0.51	0.94	0.51	39.5
All Ve	hicles	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.

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

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

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

Vehi	cle Mo	vement	Perfo	rmano	е									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Powell	Street (E	Ξ)											
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
Appro	oach	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 (1	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
Appro	oach	55	0.0	55	0.0	0.049	8.4	LOSA	0.1	0.5	0.14	0.93	0.14	46.1
West	: Powel	Street (\	N)											
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
Appro	oach	79	2.7	79	2.7	0.042	2.8	NA	0.0	0.0	0.00	0.29	0.00	55.2
All Ve	ehicles	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.

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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)

Vehi	cle Mo	vement	Perfo	rmano	e:									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourk	ce Street	(S)											
2	T1 R2	508 475	6.2 3.3	508 475	6.2 3.3	0.439 * 0.929	11.7 66.2	LOS A LOS E	8.6 9.0	63.5 65.0	0.56 1.00	0.50 0.96	0.56 1.20	44.9 18.1
Appro	oach	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:	Lachla	n 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	<b>*</b> 0.905	71.3	LOS F	9.3	66.5	1.00	1.02	1.44	25.8
Appro	oach	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	: Bourk	e 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
Appro	oach	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 Ve	hicles	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 Mov	vement	Perforr	nance							
Mov .	Dem.	Aver.	Level of	AVERAGE		Prop. E		Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	EUE Dist]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m			sec	m	m/sec
East: Lachlan Str	eet (E)									
P2 Full	87	49.3	LOS E	0.3	0.3	0.95	0.95	75.9	31.9	0.42
North: Bourke Str	reet (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.

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Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model\_2022 Update.sip9

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)

Vehi	cle Mc	vement	Perfo	rmano	e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK QUEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourl	ke Street		VCII/II	70	V/C	300		VCII	- '''				KIII/II
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
Appro	oach	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	: Bourk	e 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	<b>*</b> 0.911	64.6	LOS E	9.2	65.0	1.00	0.94	1.17	4.2
Appro	oach	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	: McEv	oy 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	<b>*</b> 0.909	68.1	LOS E	12.4	88.3	1.00	1.00	1.37	5.3
Appro	oach	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 Ve	hicles	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 Mov	vement	Perforr	nance							
Mov .	Dem.	Aver.	Level of	AVERAGE		Prop. E		Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	EUE Dist]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m			sec	m	m/sec
South: Bourke Str	reet (S)									
P1 Full	69	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
West: McEvoy Str	reet (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.

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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)

Vehi	cle Mo	vement	Perfo	rmano	:е									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO' [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAG OF QI [ Veh. veh	E BACK JEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
Sout	h: Younզ	g 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
Appr	oach	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	McEvo	y 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
Appr	oach	598	0.9	598	0.9	0.188	0.4	NA	0.0	0.0	0.00	0.01	0.00	59.8
North	n: Young	Street (I	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
Appr	oach	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	:: McEvo	y 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
Appr	oach	784	0.9	784	0.9	0.348	1.1	NA	0.2	1.1	0.05	0.08	0.05	57.7
All Ve	ehicles	1515	0.8	1515	8.0	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.

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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)

Vehic	cle Mo	vement	Perfo	rmanc	e:e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO\ [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Bourk	e 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
Appro	ach	608	4.8	608	4.8	0.162	0.7	NA	0.0	0.0	0.00	0.07	0.00	58.6
North	: Bourk	e 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
Appro	ach	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 (\	N)											
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
Appro	ach	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 Ve	hicles	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.

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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)

Vehi	cle Mo	vement	Perfo	rmano	:e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Powell	Street (E	Ξ)											
5	T1	89	1.2	89	1.2	0.077	0.2	LOS A	0.1	8.0	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
Appro	oach	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 (I	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
Appro	oach	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	Powel	Street (\	N)											
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
Appro	oach	94	2.2	94	2.2	0.050	2.8	NA	0.0	0.0	0.00	0.29	0.00	55.2
All Ve	hicles	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.

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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)

Vehi	cle Mo	vement	Perfo	rmano	e:									
Mov ID	Turn	DEMA FLO\ [Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourk	e Street			- / -									,
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
Appro	oach	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:	Lachla	n 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
Appro	oach	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	: Bourk	e Street	(N)											
7	L2	68	0.0	68	0.0	<b>*</b> 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
Appro	oach	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 Ve	hicles	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 Mo	vement	Perforr	nance							
Mov .	Dem.	Aver.	Level of	AVERAGE		Prop. E	ffective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	:UE Dist ]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m ¯			sec	m	m/sec
East: Lachlan St	reet (E)									
P2 Full	87	49.3	LOS E	0.3	0.3	0.95	0.95	75.9	31.9	0.42
North: Bourke St	reet (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.

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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)

Vehic	cle Mo	vement	Perfo	rmano	e:									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAG OF Ql [ Veh. veh		Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Bourk	e Street	(S)											
1 2	L2 T1	53 526	2.0 7.0	53 526	2.0 7.0	0.920 * 0.920	71.9 66.9	LOS F LOS E	12.7 12.7	93.4 93.4	1.00 1.00	1.14 1.15	1.44 1.46	9.9 9.9
Appro	ach	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	: Bourk	e Street (	(N)											
8	T1 R2	509 479	7.0 0.9	509 479	7.0 0.9	0.406 * 0.952	8.6 72.5	LOS A LOS F	7.4 9.2	55.0 65.0	0.49 1.00	0.43 1.02	0.49 1.35	21.8 3.8
Appro		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	McEvo	y 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
Appro	ach	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 Ve	hicles	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 Mo	vement	Perforr	nance							
Mov	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. E	ffective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	EUE Dist ]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m			sec	m	m/sec
South: Bourke St	reet (S)									
P1 Full	69	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
West: McEvoy St	reet (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.

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om 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)

Vehi	cle Mo	vement	Perfo	rmano	:e									
Mov ID	Turn	DEM/ FLO\ [ Total veh/h		ARRI FLO' [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
Sout	h։ Younզ	g 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
Appr	oach	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	: McEvo	y 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
Appr	oach	624	8.0	624	8.0	0.197	0.7	NA	0.0	0.0	0.00	0.04	0.00	59.2
North	n: 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
Appr	oach	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	: McEvo	y 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
Appr	oach	794	0.9	794	0.9	0.379	1.4	NA	0.2	1.8	0.07	0.09	0.08	57.3
All V	ehicles	1568	0.8	1568	8.0	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.

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Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model\_2022 Update.sip9

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)

Vehi	cle Mo	vement	Perfo	rmano	:e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourk	e 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
Appro	oach	618	4.8	618	4.8	0.165	0.9	NA	0.0	0.0	0.00	0.09	0.00	58.3
North	: Bourk	e 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
Appro	oach	916	3.8	916	3.8	0.268	1.3	NA	0.4	3.0	0.12	0.05	0.13	58.1
West	: Powel	Street (\	V)											
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
Appro	oach	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 Ve	hicles	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.

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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	DEMA FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK QUEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
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	g Street (I	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
Appro	oach	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.

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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)

Vehi	cle Mo	vement	Perfo	rmanc	e:									
Mov ID	Turn	DEMA FLO\ [Total veh/h		ARRI FLO' [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourk	e 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	<b>*</b> 0.917	63.4	LOS E	9.0	65.0	1.00	0.95	1.18	18.6
Appro	oach	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:	Lachla	n 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
Appro	oach	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	: Bourk	e 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	<b>*</b> 0.937	74.1	LOS F	11.7	86.2	1.00	1.17	1.54	17.5
Appro	oach	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 Ve	hicles	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 Mov	vement	Perforr	nance							
Mov .	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Ef	fective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	UE Dist]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m			sec	m	m/sec
East: Lachlan Str	eet (E)									
P2 Full	87	49.3	LOS E	0.3	0.3	0.95	0.95	75.9	31.9	0.42
North: Bourke Str	eet (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.

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Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model 2022 Update.sip9

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)

Vehic	cle Mo	vement	Perfo	rmano	e:									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO' [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAG OF QU [ Veh. veh	E BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Bourk	e Street	(S)											
1 2	L2 T1	53 532	2.0 6.9	53 532	2.0 6.9	0.928 * 0.928	74.3 69.4	LOS F LOS E	13.0 13.0	96.0 96.0	1.00 1.00	1.16 1.17	1.47 1.48	9.6 9.6
Appro	ach	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	Bourk	e Street (	(N)											
8	T1 R2	518 479	6.9 0.9	518 479	6.9 0.9	0.413 * 0.952	8.6 72.6	LOS A LOS F	7.6 9.2	56.2 65.0	0.49 1.00	0.44 1.02	0.49 1.35	21.7 3.7
Appro	ach	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:	McEvo	y 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
Appro	ach	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 Ve	hicles	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 Mov	vement	Perforr	nance							
Mov .	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Ef	fective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	UE Dist]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m ¯			sec	m	m/sec
South: Bourke Str	reet (S)									
P1 Full	69	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
West: McEvoy Str	reet (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.

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)

Vehi	cle Mo	vement	Perfo	rmano	:e									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	h: 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
Appr	oach	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:	McEvo	y 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
Appr	oach	624	0.8	624	8.0	0.197	0.7	NA	0.0	0.0	0.00	0.04	0.00	59.2
North	n: 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
Appr	oach	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	:: McEvc	y 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
Appr	oach	763	1.0	763	1.0	0.352	8.0	NA	0.0	0.0	0.00	0.07	0.00	58.2
All Ve	ehicles	1523	0.8	1523	8.0	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.

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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)

Vehi	cle Mo	vement	Perfo	rmano	:e									
Mov ID	Turn	DEM/ FLO¹ [ Total veh/h		ARRI FLO' [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK QUEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourk	e 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
Appro	oach	618	4.8	618	4.8	0.165	0.9	NA	0.0	0.0	0.00	0.09	0.00	58.3
North	: Bourk	e 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
Appro	oach	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
Appro	oach	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 Ve	ehicles	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.

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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)

Vehi	cle Mo	vement	: Perfo	rmano	е									
Mov ID	Turn	DEM/ FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK QUEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Powell	Street (E	Ξ)											
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
Appro	oach	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
Appro	oach	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	: Powel	l 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
Appro	oach	116	1.8	116	1.8	0.062	3.4	NA	0.0	0.0	0.00	0.35	0.00	54.3
All Ve	ehicles	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.

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Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Wednesday, 20 July 2022 11:15:30 AM

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)

Vehi	cle Mo	vement	Perfo	rmanc	:e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO' [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAG OF QU [ Veh. veh		Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourk	e 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
Appro	oach	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:	Lachlar	n Street (	E)											
4	L2	586	4.5	586	4.5	<b>*</b> 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
Appro	oach	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	: Bourk	e 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	<b>*</b> 0.900	62.8	LOS E	8.3	60.7	0.95	1.06	1.43	19.6
Appro	oach	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 Ve	hicles	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 Mov	vement	Perforr	nance							
Mov .	Dem.	Aver.	Level of	AVERAGE		Prop. Et		Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	UE Dist]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m			sec	m	m/sec
East: Lachlan Str	eet (E)									
P2 Full	100	49.4	LOS E	0.3	0.3	0.95	0.95	76.0	31.9	0.42
North: Bourke Str	eet (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.

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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)

Vehic	cle Mo	vement	Perfo	rmano	e									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAG OF QU [ Veh. veh		Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Bourk	e Street	(S)											
1 2	L2 T1	53 383	0.0 5.8	53 383	0.0 5.8	* 0.701 0.701	46.3 39.6	LOS D LOS C	7.0 7.0	51.2 51.2	0.95 0.94	0.85 0.85	1.01 1.00	14.4 14.9
Appro	ach	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	: Bourk	e Street (	(N)											
8	T1 R2	504 399	5.0 4.0	504 399	5.0 4.0	0.381 * 0.715	10.8 54.6	LOS A LOS D	8.9 9.0	65.0 65.0	0.66 1.00	0.59 0.87	0.66 1.00	18.7 4.9
Appro	ach	903	4.5	903	4.5	0.715	30.2	LOSC	9.0	65.0	0.81	0.71	0.81	8.3
West	McEvo	y 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	<b>*</b> 0.716	55.1	LOS D	7.1	49.9	1.00	0.86	1.07	6.5
Appro	ach	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 Ve	hicles	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 Mov	/ement	Perforr	nance							
Mov .	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Ef	fective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	UE Dist]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m			sec	m	m/sec
South: Bourke Str	reet (S)									
P1 Full	74	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
West: McEvoy Str	reet (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.

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

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

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

Vehi	cle Mo	vement	Perfo	rmano	e_									
Mov ID	Turn	DEM/ FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
Sout	h։ Younզ	g 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
Appr	oach	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	McEvo	y 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
Appr	oach	515	3.1	515	3.1	0.221	0.2	NA	0.0	0.0	0.00	0.00	0.00	59.8
North	n: 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
Appr	oach	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	:: McEvo	y 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
Appr	oach	455	1.4	455	1.4	0.121	0.7	NA	0.1	0.4	0.03	0.06	0.03	58.4
All V	ehicles	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.

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

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

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

Vehi	cle Mo	vement	Perfo	rmanc	:e									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO\ [Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK QUEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourk	e 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
Appro	oach	506	4.4	506	4.4	0.134	0.7	NA	0.0	0.0	0.00	0.07	0.00	58.6
North	: Bourk	e 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
Appro	oach	671	4.4	671	4.4	0.187	0.7	NA	0.2	1.1	0.06	0.03	0.06	59.1
West	Powel	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	8.0	0.44	0.93	0.44	44.0
Appro	oach	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 Ve	hicles	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.

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

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

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

Vehi	cle Mo	vement	Perfo	rmano	е									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Powell	Street (E	Ξ)											
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
Appr	oach	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
Appr	oach	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	: Powel	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
Appr	oach	56	0.0	56	0.0	0.029	2.5	NA	0.0	0.0	0.00	0.27	0.00	55.5
All Ve	ehicles	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.

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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)

Vehi	cle Mo	vement	Perfo	rmano	e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourk	e Street	(S)											
2	T1 R2	495 397	6.4 2.7	495 397	6.4 2.7	0.447 1.089	13.9 149.9	LOS A LOS F	8.8 9.1	65.0 65.0	0.65 1.00	0.58 1.24	0.65 1.94	42.9 9.5
Appro	oach	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:	Lachla	n Street (	(E)											
4 6	L2 R2	683 145	5.2 9.4	683 145	5.2 9.4	* 1.094 1.094	165.9 167.6	LOS F LOS F	37.7 20.4	275.9 151.4	1.00 1.00	1.38 1.36	2.17 2.23	7.9 14.5
Appro	oach	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	: Bourk	e 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	<b>*</b> 1.073	152.0	LOS F	16.9	123.6	1.00	1.49	2.19	9.9
Appro	oach	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 Ve	hicles	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 Mov	vement	Perforr	nance							
Mov .	Dem.	Aver.	Level of	AVERAGE		Prop. E	ffective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	:UE Dist ]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m ¯			sec	m	m/sec
East: Lachlan Str	eet (E)									
P2 Full	100	49.4	LOS E	0.3	0.3	0.95	0.95	76.0	31.9	0.42
North: Bourke Str	eet (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.

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Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model 2022 Update.sip9

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)

Vehic	cle Mo	vement	Perfo	rmanc	e:									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO\ [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAG OF QU [ Veh. veh		Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Bourk	e 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
Appro	ach	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	: Bourk	e 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
Appro	ach	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:	McEvo	y 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
Appro	ach	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 Ve	hicles	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)

Ped	destrian Mo	vement	Perforr	nance							
Мον		Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. E	ffective	Travel	Travel	Aver.
ID	Crossing	Flow	Delay	Service	QUE [ Ped	EUE Dist]	Que	Stop Rate	Time	Dist.	Speed
		ped/h	sec		ped	m			sec	m	m/sec
Sou	th: Bourke St	reet (S)									
P1	Full	74	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
Wes	st: McEvoy St	reet (W)									
P4	Full	34	49.2	LOS E	0.1	0.1	0.95	0.95	78.6	35.2	0.45
All F	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.

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5 Site: 101 [McEvoy / Young (Site Folder: Saturday Future Base)1

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

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

Vehi	cle Mo	vement	Perfo	rmano	e									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO' [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
Sout	h: Young	g 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	8.0	0.71	0.96	0.71	32.6
3	R2	7	0.0	7	0.0	0.091	48.1	LOS D	0.1	8.0	0.91	1.00	0.91	16.7
Appr	oach	25	0.0	25	0.0	0.091	21.9	LOS B	0.1	8.0	0.44	0.92	0.44	37.0
East	McEvo	y 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
Appr	oach	619	3.9	619	3.9	0.267	0.3	NA	0.0	0.0	0.00	0.01	0.00	59.8
North	n: 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
Appr	oach	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	:: McEvo	y 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
Appr	oach	546	1.9	546	1.9	0.148	0.9	NA	0.1	0.6	0.04	0.06	0.04	58.4
All Ve	ehicles	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.

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5 Site: 101 [Bourke / Powell (Site Folder: Saturday Future Base)1

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

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

Vehic	cle Mo	vement	Perfo	rmano	:e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK QUEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	ı: Bourk	e 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
Appro	oach	607	5.4	607	5.4	0.162	0.7	NA	0.0	0.0	0.00	0.07	0.00	58.6
North	: Bourk	e 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
Appro	oach	805	5.5	805	5.5	0.229	8.0	NA	0.2	1.6	0.08	0.03	0.08	58.8
West	Powel	Street (\	N)											
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
Appro	oach	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 Ve	hicles	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.

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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)

Vehi	cle Mo	vement	Perfo	rmano	ce									
Mov ID	Turn	DEM/ FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS IHV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Powell	Street (E	Ξ)											
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
Appro	oach	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 (I	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
Appro	oach	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	: Powel	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
Appro	oach	67	0.0	67	0.0	0.035	2.5	NA	0.0	0.0	0.00	0.27	0.00	55.5
All Ve	ehicles	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.

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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)

Vehi	cle Mo	vement	Perfo	rmanc	e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO' [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		E BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourk	e 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
Appro	oach	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:	Lachlar	n Street (	E)											
4	L2	693	5.2	693	5.2	<b>*</b> 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
Appro	oach	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	: Bourk	e 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	<b>*</b> 1.089	163.9	LOS F	17.8	130.5	1.00	1.53	2.27	9.3
Appro	oach	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 Ve	ehicles	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 Mov	vement	Perforr	nance							
Mov .	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Ef	fective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	UE Dist]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m			sec	m	m/sec
East: Lachlan Str	eet (E)									
P2 Full	100	49.4	LOS E	0.3	0.3	0.95	0.95	76.0	31.9	0.42
North: Bourke Str	eet (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.

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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)

Vehi	cle Mo	vement	Perfo	rmanc	e									
Mov ID	Turn	DEM/ FLO\ [ Total veh/h		ARRI FLO' [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK QUEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourk	e Street			- / -	., -								
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
Appro	oach	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	: Bourk	e 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
Appro	oach	1157	5.6	1154 <sup>N</sup>	5.6	0.929	36.0	LOS C	8.9	65.0	0.77	0.72	0.86	7.1
West	: McEvo	y 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	<b>*</b> 0.870	66.5	LOS E	7.6	53.4	1.00	0.96	1.34	5.4
Appro	oach	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 Ve	hicles	2334	4.7	2330 <sup>N</sup>	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 Mov	ement/	Perforr	nance							
Mov ID Crossing	Dem. Flow	Aver. Delay	Level of AVERAGE BACK C Service QUEUE			Prop. Ef Que	fective Stop	Travel Time	Travel	Aver. Speed
D Greening	FIUW	Delay	Service	QUEUE [Ped Dist]		Que	Rate	Tille	DISt.	Speed
	ped/h	sec		ped	m			sec	m	m/sec
South: Bourke Str	eet (S)									
P1 Full	74	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
West: McEvoy Str	eet (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.

obsite: 101 [McEvoy / Young (Site Folder: Saturday Future Base) + Dev)1

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

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

Vehicle Movement Performance														
Mov ID	Turn	vement DEMA FLO\	AND	rmanc ARRI FLO	VAL	Deg. Satn	Aver. Delay	Level of Service		SE BACK UEUE	Prop. Que	Effective A	ver. No.	Aver. Speed
		[ Total veh/h	HV] %	[ Total veh/h	HV]	v/c	sec	OCI VICE	[ Veh. veh	Dist ] m	Que	Rate	Cycles	km/h
South	h։ Young	g 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
Appr	oach	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	McEvo	y 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
Appr	oach	644	3.8	644	3.8	0.278	0.5	NA	0.0	0.0	0.00	0.04	0.00	59.2
North	n: Young	Street (I	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
Appr	oach	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	: McEvo	y 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
Appr	oach	556	1.9	556	1.9	0.176	1.1	NA	0.2	1.1	0.07	0.07	0.07	57.8
All Ve	ehicles	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.

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Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model\_2022 Update.sip9

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)

Vehi	cle Mo	vement	Perfo	rmano	e									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK QUEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	h: Bourk	e 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
Appr	oach	617	5.3	617	5.3	0.165	0.9	NA	0.0	0.0	0.00	0.09	0.00	58.3
North	n: Bourk	e 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
Appr	oach	799	5.5	799	5.5	0.228	8.0	NA	0.2	1.7	0.08	0.03	0.08	58.8
West	:: Powel	Street (\	N)											
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
Appr	oach	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 Ve	ehicles	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.

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

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)

Vehi	cle Mo	vement	Perfo	rmano	:e									
Mov ID	Turn	DEM/ FLO\ [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK (UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Powell	Street (E	Ξ)											
5	T1	72	1.5	72	1.5	0.072	0.2	LOS A	0.1	8.0	0.15	0.26	0.15	55.5
6	R2	58	0.0	58	0.0	0.072	5.3	LOS A	0.1	8.0	0.15	0.26	0.15	39.5
Appr	oach	129	8.0	129	8.0	0.072	2.5	NA	0.1	8.0	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	8.0	0.11	0.93	0.11	36.8
9	R2	37	0.0	37	0.0	0.077	8.6	LOS A	0.1	8.0	0.11	0.93	0.11	48.5
Appr	oach	91	0.0	91	0.0	0.077	8.3	LOS A	0.1	8.0	0.11	0.93	0.11	44.2
West	: Powel	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
Appr	oach	80	0.0	80	0.0	0.042	3.0	NA	0.0	0.0	0.00	0.32	0.00	54.7
All Ve	ehicles	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.

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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)

Vehic	cle Mo	vement	Perfo	rmanc	e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO' [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	ı: Bourk	e Street	(S)											
2	T1 R2	502 406	6.3 2.6	502 406	6.3 2.6	0.454 1.114	14.4 170.1	LOS A LOS F	8.8 9.1	65.0 65.0	0.67 1.00	0.60 1.30	0.67 2.08	42.4 8.5
Appro	oach	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:	Lachla	n Street (	E)											
4	L2	693	5.2	693	5.2	<b>*</b> 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
Appro	ach	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	: Bourk	e 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	<b>*</b> 1.089	163.9	LOS F	17.8	130.5	1.00	1.53	2.27	9.3
Appro	ach	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 Ve	hicles	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 Mo	vement	Perforr	nance							
Mov ID Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF  QUEUE  [ Rod Dist ]		Prop. E	Stop	Travel Time	Travel Dist.	Aver. Speed
	ped/h	sec		[ Ped ped	Dist ] m		Rate	sec	m	m/sec
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 St	reet (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.

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Project: C:\JMT Consulting\Projects\2015 - Woolies Waterloo\Internal\Traffic Modelling\Woolworths Waterloo SIDRA Model\_2022 Update.sip9

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)

Vehi	cle Mo	vement	Perfo	rmanc	e:									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO\ [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Bourk	e Street	(S)											
1 2 Appro	L2 T1 pach	89 482 572	1.2 6.6 5.7	89 482 572	1.2 6.6 5.7	0.934 * 0.934 0.934	77.1 71.8 72.7	LOS F LOS F	12.6 12.9 12.9	91.9 95.5 95.5	1.00 1.00 1.00	1.17 1.18 1.18	1.50 1.51 1.51	9.2 9.3 9.3
North	: Bourk	e Street (	(N)											
8 9	T1 R2	599 554	6.5 4.6	597 552	6.5 4.6	0.433 * 0.912	7.7 63.0	LOS A LOS E	8.8 8.9	65.0 65.0	0.55 1.00	0.49 0.95	0.55 1.15	23.4 4.3
Appro	oach	1153	5.6	1149 <sup>N</sup>	5.6	0.912	34.2	LOS C	8.9	65.0	0.76	0.71	0.84	7.5
West	: McEvo	y 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
Appro	oach	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 Ve	hicles	2323	4.7	2320 <sup>N</sup>	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 Mo	vement	Perforr	nance							
Mov ID Crossing	Dem.	Aver.	Level of			Prop. Et		Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUEUE [ Ped Dist ]		Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m <sup>*</sup>			sec	m	m/sec
South: Bourke St	treet (S)									
P1 Full	74	49.3	LOS E	0.2	0.2	0.95	0.95	78.6	35.2	0.45
West: McEvoy St	treet (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.

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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)

Vehi	cle Mo	vement	Perfo	rmano	:e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO' [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	ո։ Young	g Street (	S)											
1 2	L2 T1	31 1	0.0	31 1	0.0	0.027 0.006	9.5 26.1	LOS A LOS B	0.0 0.0	0.3 0.1	0.18 0.82	0.88 0.89	0.18 0.82	48.9 37.4
Appr	oach	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:	McEvo	y Street (	(E)											
4 5	L2 T1	31 609	0.0 4.0	31 609	0.0 4.0	0.061 0.276	5.5 0.2	LOS A LOS A	0.0 0.0	0.0 0.0	0.00	0.16 0.02	0.00	48.7 59.5
Appr	oach	640	3.8	640	3.8	0.276	0.4	NA	0.0	0.0	0.00	0.03	0.00	59.4
North	n: Young	Street (I	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
Appr	oach	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	: McEvo	y 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
Appr	oach	534	2.0	534	2.0	0.156	0.5	NA	0.0	0.0	0.00	0.05	0.00	58.9
All Ve	ehicles	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.

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Organisation: JMT CONSULTING | Licence: NETWORK / 1PC | Processed: Wednesday, 20 July 2022 11:16:04 AM

n 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)

Vehi	cle Mo	vement	Perfo	rmanc	e:									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO' [Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	ı: Bourk	e 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
Appro	ach	618	5.3	618	5.3	0.165	0.8	NA	0.0	0.0	0.00	0.08	0.00	58.4
North	: Bourk	e 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
Appro	oach	804	5.5	804	5.5	0.229	8.0	NA	0.2	1.7	0.08	0.03	0.08	58.8
West	Powel	Street (\	N)											
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
Appro	oach	88	0.0	88	0.0	0.183	13.7	LOSA	0.3	1.8	0.50	0.93	0.50	36.8
All Ve	hicles	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.

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o 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)

Vehi	cle Mo	vement	Perfo	rmano	е									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Total veh/h	WS HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAG OF QI [ Veh. veh	GE BACK UEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Powell	Street (E	<b>:</b> )											
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
Appro	oach	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	g Street (I	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
Appro	oach	43	0.0	43	0.0	0.038	8.3	LOSA	0.1	0.4	0.12	0.93	0.12	45.8
West	: Powel	l Street (\	N)											
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
Appro	oach	67	0.0	67	0.0	0.035	2.5	NA	0.0	0.0	0.00	0.27	0.00	55.5
All Ve	ehicles	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.

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