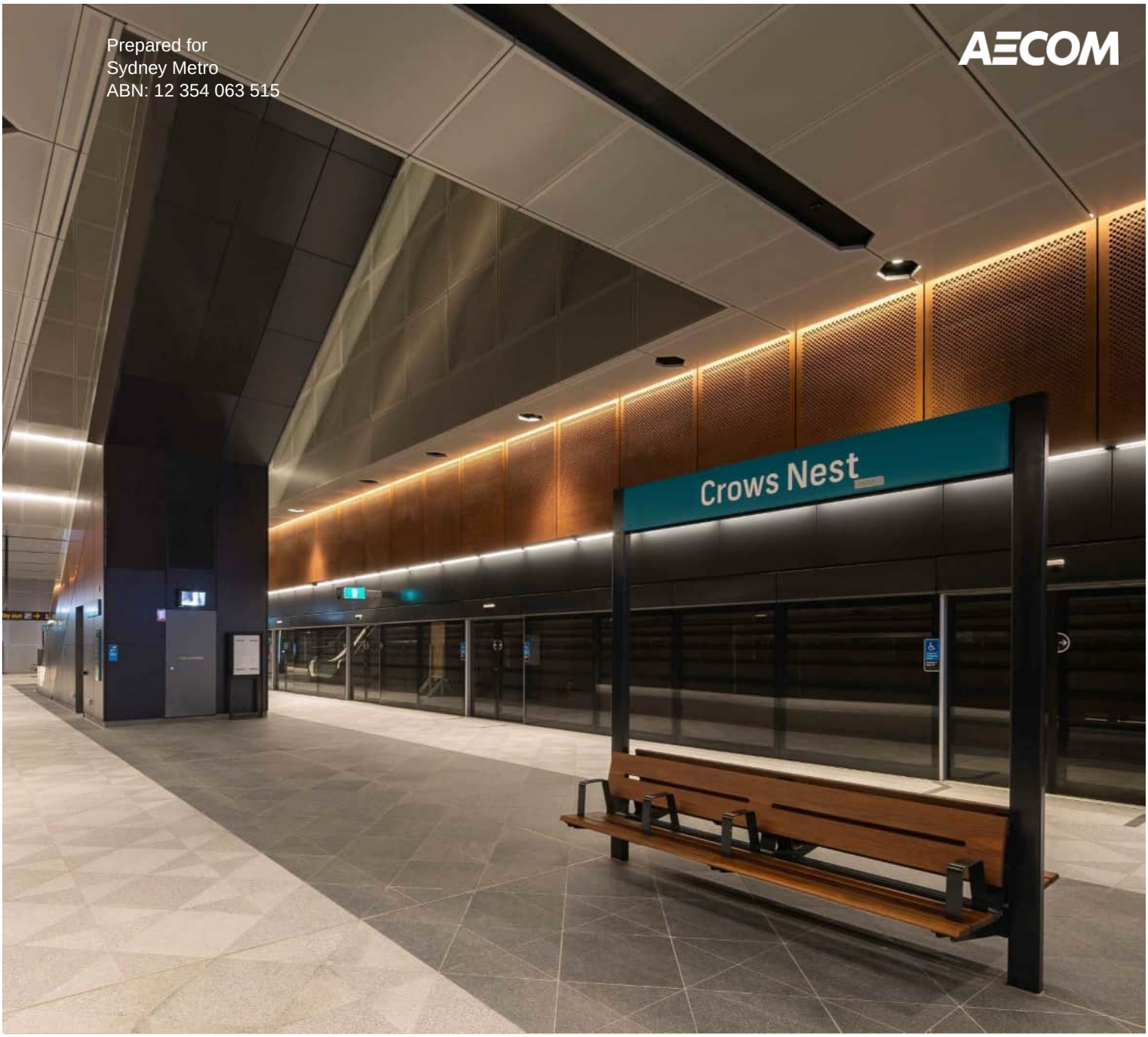
Prepared for
Sydney Metro
ABN: 12 354 063 515



Block 3 Report

Sydney Metro C&SW - Traffic and Interchange Monitoring

01-Aug-2024
Sydney Metro City and Southwest - Traffic and Interchange Monitoring
Doc No. 60705686-ACM-B3-RPT-TR-001-R01

Block 3 Report

Sydney Metro C&SW - Traffic and Interchange Monitoring

Client: Sydney Metro

ABN: 12 354 063 515

Prepared by

AECOM Australia Pty Ltd
Gadigal Country, Level 21, 420 George Street, Sydney NSW 2000, PO Box Q410, QVB Post Office NSW 1230, Australia
T +61 2 8008 1700 www.aecom.com
ABN 20 093 846 925

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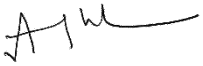
00	19-Jul-2024	Draft report	Anoop Sridhar Associate Director	
01	01-Aug-2024	Final report	Anoop Sridhar Associate Director	

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Terms and abbreviations

Term	Definition
AECOM	AECOM Australia Pty Ltd
Block 3	The third study block of the traffic and interchange monitoring program
BOAM	Bus Opal Assignment Model
CBD	Central Business District
CoA	Conditions of Approval
Condition D12	Refers to Item D12 of the Sydney Metro City & Southwest Chatswood to Sydenham conditions of approval, which specifies requirements for traffic operational monitoring of the Sydney Metro City & Southwest Chatswood to Sydenham.
CSELR	CBD and South-East Light Rail
CSSI	Critical State Significant Infrastructure
IAP	Interchange Access Plan
LOS	Level of Service
post-opening	denotes post-opening scenarios of the Sydney Metro City & Southwest line operating between Chatswood to Sydenham
pre-opening	denotes pre-opening scenarios of the Sydney Metro City & Southwest line operating between Chatswood to Sydenham
PTIPS	Public Transport Information and Priority Systems
SCATS	Sydney Coordinated Adaptive Traffic System
SIDRA Intersection	SIDRA Intersection modelling software, the modelling software used to assess the traffic performance.
SHB	Sydney Harbour Bridge
Sydney Metro	A New South Wales Government Agency constituted under the *Transport Administration Act 1988 (NSW))*.
Sydney Metro City & Southwest	The metro railway between Chatswood and Bankstown, including 15.5 kilometres of twin metro railway tunnels from Chatswood to Marrickville under Sydney Harbour.
Sydney Metro Northwest	The former Northwest Rail Link, i.e. operating metro railway between Tallawong Station at Rouse Hill and Chatswood.
Sydney Metro West	The metro railway that will connect the Sydney CBD and Parramatta, linking communities along the way with a new underground railway.
Sydney Metro Western Sydney Airport	The metro railway that will link St Marys to the Western Sydney International (Nancy Bird Walton) airport and the Aerotropolis.
TfNSW	Transport for NSW (A New South Wales Government Agency constituted under the *Transport Administration Act 1988 (NSW))*.
the Project	Traffic and interchange monitoring assessments for the Sydney Metro City & Southwest Chatswood to Sydenham
TCS	Traffic Control Signal
TSN	Transit Stop Number

1.0 Introduction

This section provides an introduction of the traffic and interchange monitoring for the Sydney Metro City & Southwest (C&SW) between Chatswood Station and Sydenham Station (the Project), including the project overview, project objectives and overall scope of works covered under this Project.

1.1 Project overview

Sydney Metro is the largest public transport project in Australia, designed to address congestion, enhance connectivity, and meet the evolving needs of Sydney's population and economy. It encompasses four major metro lines: Sydney Metro Northwest, Sydney Metro West, Sydney Metro Western Sydney Airport, and Sydney Metro City & Southwest.

AECOM Australia Pty Ltd (AECOM) has been appointed by Sydney Metro to conduct traffic and interchange monitoring assessments for the Sydney Metro City & Southwest between Chatswood Station and Sydenham Station (the Project).

The purpose of this assessment is to evaluate the impact of the Sydney Metro City & Southwest (Chatswood to Sydenham) operations on the nine stations and their surrounding intersections and interchange facilities. The study involves evaluating the performance of these intersections and interchange both before and after the introduction of the metro line. This assessment is crucial for fulfilling the requirements of the Critical State Significant Infrastructure (CSSI) application Conditions of Approval (CoA) overseen by the NSW Department of Planning and Environment.

Traffic and interchange monitoring will be conducted in six study blocks, spanning a period of 12-months before the commencement of the CSSI operations (pre-opening) and 12-months after the commencement (post-opening). This comprehensive monitoring approach will provide insights into the traffic and interchange dynamics during different stages of the Sydney Metro City & Southwest Line (Chatswood to Sydenham), allowing for a thorough and robust impact assessment.

Figure 1-1 presents a timeline overview of the study blocks, highlighting the specific periods under observation.

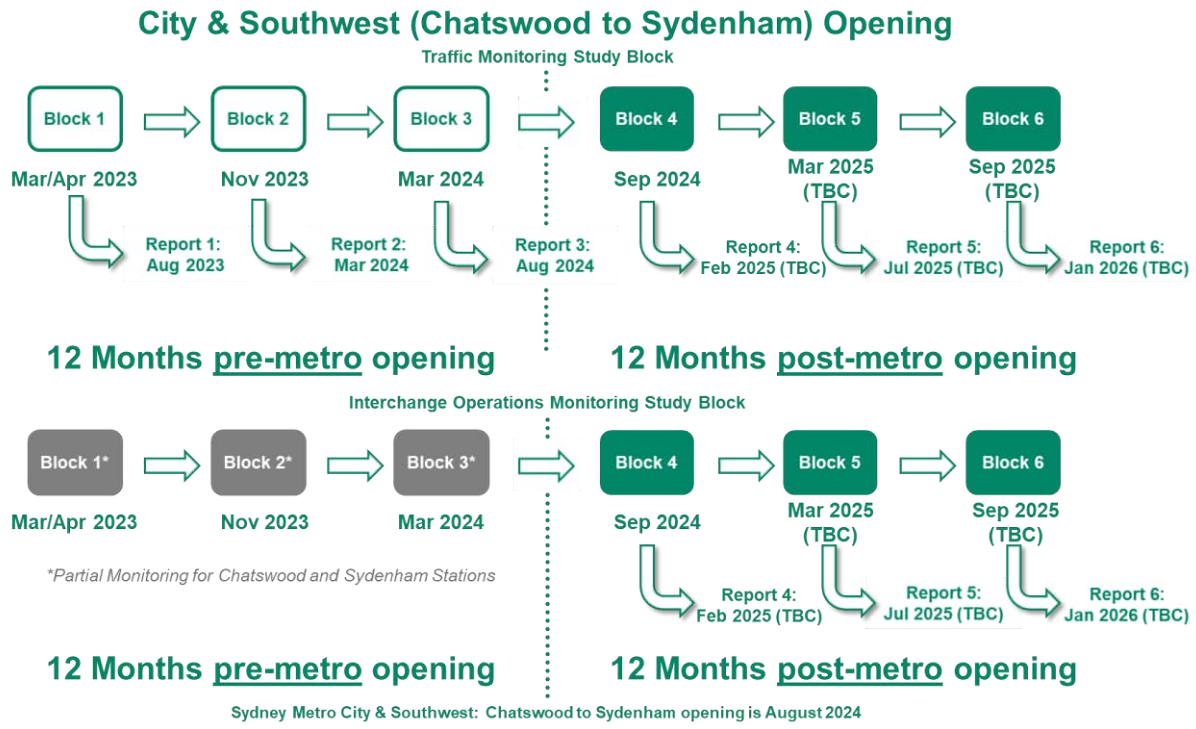


Figure 1-1 Traffic and interchange monitoring program

1.2 Purpose of this report

The Sydney Metro City & Southwest Chatswood to Sydenham – Traffic and Interchange Operation Monitoring report (this report) has been prepared to meet the requirements of Condition D12 of the CoA (outlined in Section 2.2).

This report provides traffic and interchange operation assessments of the nine stations along the Sydney Metro City & Southwest Line (Chatswood to Sydenham) during the monitoring timeframe of March 2024 (Block 3).

1.3 Scope of this study

The overall scope of works for the Block 3 study covers the following:

- **Traffic monitoring**: Intersection surveys (including re-surveys) were conducted in March 2024, including:
  - classified intersection count surveys conducted continuously for a one-week period, including light vehicles, heavy vehicles, buses, cyclist and pedestrian counts
  - vehicular queue length surveys (at the signal change to green for signalised intersections and aggregated every two minutes for priority intersections) conducted for the following nominated peak periods during the same one-week period:
    - weekday AM peak: 6am–10am
    - weekday PM peak: 3pm–7pm
    - weekend peak: 10am–2pm.
- **Transport interchange monitoring:** only Chatswood Station and Sydenham Station were considered for the interchange monitoring for the Block 3 study due to the existing operational train/metro stations. Interchange operation surveys were conducted at these two stations continuously for a one-week period same as intersection surveys in March 2024. Interchange operation surveys collected the following information for taxi, bus stop and kiss and ride facilities at each station:
  - vehicle counts
  - vehicle occupancy (boarding and alighting passengers only)
  - vehicle dwell time
  - vehicle queue length outside the bay on a lane-by-lane basis.
- **Site observations**: Site visits were undertaken in conjunction with the traffic and interchange operation monitoring for at least one weekday AM peak period, one weekday PM peak period, and one weekend peak period at each station.
- **Intersection assessment**: To assess the intersection operation performance during Block 3, a combination of isolated and network traffic modelling assessments was undertaken using SIDRA Intersection modelling software (SIDRA Intersection). The following data was obtained from Sydney Metro for developing the SIDRA Intersection models:
  - Sydney Coordinated Adaptive Traffic System (SCATS) traffic detector count data
  - SCATS traffic signal data and sub-systems information.
- **Stakeholder consultation:** Key findings of the Block 3 study were provided to Sydney Metro and the following key stakeholders in July 2024 for review and feedback:
  - Transport for NSW (TfNSW)
  - Willoughby City Council
  - North Sydney City Council
  - City of Sydney

- Inner West Council.

Additionally, Block 3 study findings were presented to TfNSW, Willoughby City Council and Inner West Council. Appendix A provides the minutes from these stakeholder meetings.

1.4 Structure of this report

This report is structured as follows:

- Section 1.0 provides an introduction to the Project
- Section 2.0 provides the context and background of the Project
- Section 3.0 outlines the study area of the Project
- Section 4.0 describes the methodology adopted for the traffic and interchange operation assessments
- Section 5.0 details the traffic monitoring and intersection performance
- Section 6.0 details the interchange monitoring performance
- Section 7.0 provides a summary of the traffic and interchange monitoring.

2.0 Context and background

This section provides an overview of the strategic context of the Project within the overall Sydney Metro program and the background of the CSSI CoA for the Sydney Metro City & Southwest Line (Chatswood to Sydenham).

2.1 Context

Sydney Metro is Australia's largest public transport project, aiming to alleviate congestion, improve connectivity, and support the growing population and economic needs of Sydney. The main objectives of Sydney Metro are to enhance the overall transport experience, establish a robust and sustainable transport system, increase public transport usage and enhance the resilience of the transport network.

By 2032, Sydney Metro is expected to create a network of four metro lines (Northwest, West, Western Sydney Airport, and City & Southwest), spanning 113 kilometres, and encompassing 46 stations.

2.1.1 Sydney Metro Northwest

Sydney Metro Northwest marked the initial phase of the Sydney Metro project, commencing operations in May 2019. Spanning approximately 36 kilometres from Tallawong to Chatswood, this line consists of 13 stations.

2.1.2 Sydney Metro City & Southwest

Sydney Metro City & Southwest further extends the constructed Sydney Metro Northwest from Chatswood to Bankstown via the Sydney Central Business District (CBD) with 30 kilometres of metro rail. Sydney Metro City & Southwest between Chatswood and Sydenham is due to open in 2024, with seven new metro stations and 11 upgraded stations as shown in Figure 2-1. This will establish connectivity between metro stations in the city and southwest with those further west, including future metro stations on the Sydney Metro West and Sydney Metro Western Sydney Airport.

Sydney Metro City & Southwest project consists of two phases: Chatswood to Sydenham; and Sydenham to Bankstown. This study focuses on the assessments for the Chatswood to Sydenham phase of the Sydney Metro City & Southwest project.

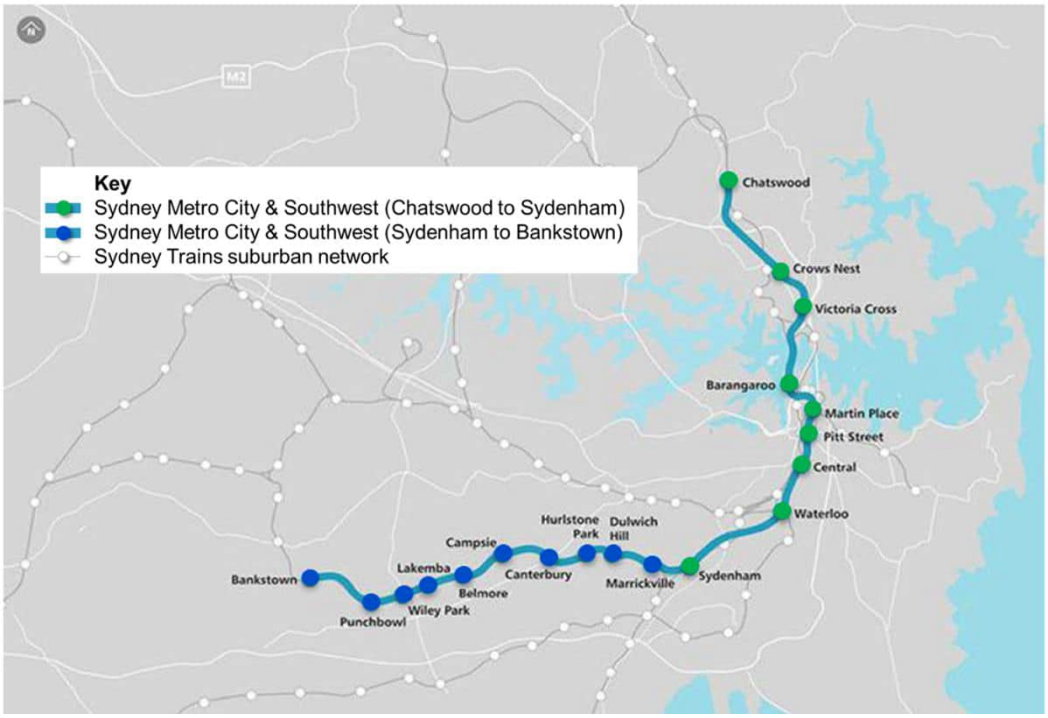


Figure 2-1 Sydney Metro City & Southwest overview

2.1.3 Sydney Metro West

Sydney Metro West is an upcoming 24-kilometre metro line that will establish a vital connection between Greater Parramatta and the Sydney CBD, linking the communities along its route. This line will incorporate 10 new metro stations, located at key destinations including Westmead, Parramatta, Sydney Olympic Park, The Bays Precinct, and the Sydney CBD.

Construction for the Sydney Metro West project commenced in 2020 and is currently in progress.

2.1.4 Sydney Metro Western Sydney Airport

Sydney Metro Western Sydney Airport line is an upcoming 23-kilometre line and will link the new Western Sydney International (Nancy-Bird Walton) Airport with the Western Sydney Aerotropolis, and St Marys. The Sydney Metro Western Sydney Airport project includes the construction of six new metro stations and will provide connectivity to the existing Sydney Trains suburban T1 Western Line.

Construction for the Sydney Metro Western Sydney Airport project commenced in 2020 and is currently in progress.

2.2 Background

On 10 January 2017, the NSW Minister for Planning granted approval to the CSSI application for the Sydney Metro City & Southwest Chatswood to Sydenham. The infrastructure approval, which is regulated under Section 115ZB of the *Environmental Planning and Assessment Act 1979*, is subject to the Minister's conditions of approval for the CSSI.

The Conditions of Approval are administered by the NSW Department of Planning and Environment (previously the NSW Department of Planning, Industry and Environment) and delivered by the Proponent – Sydney Metro.

Part D of the Conditions of Approval outlines conditions for environmental management during operations of the project. Condition D12 specifies the requirement for traffic operational monitoring of the Project as per the following requirement:

> *"Traffic on local roads around each station must be monitored 12 months before the CSSI commences operation and for a period of no less than 12 months after commencement of operation. If monitoring indicates unacceptable traffic intrusion on local roads/streets as a result of operation of the CSSI beyond those that could reasonably be predicted in the EIS and/or Interchange Access Plan(s) in Condition E92, appropriate traffic management measures to mitigate the monitored impacts must be implemented following consultation with the Sydney Coordination Office and Relevant Road Authorities."*

3.0 Study area

This section provides an overview of the study area for both traffic and interchange monitoring, which was identified by Sydney Metro in consultation with key stakeholders (as listed in Section 1.3) during late 2022.

3.1 Overview

The Sydney Metro City & Southwest Line (Chatswood to Sydenham) includes a total of nine stations. For ease of referencing, each station has been assigned a three-character identifier based on the TfNSW Asset Reference Codes Register[1]. Table 3-1 displays the list of these stations along with their corresponding identifiers.

Table 3-1 Station three-character identifiers

Station	Station ID[1]
Chatswood	CWD[3]
Chatswood Dive Site[2]	
Crows Nest	CST
Victoria Cross	VIC
Barangaroo	BGU
Martin Place	MPL
Gadigal (formerly Pitt Street)	PIT
Central	CEN
Waterloo	WLO
Sydenham	SYD

Notes:
1. *TfNSW Asset Codes Register* TS 01499:2.00 Version 2 has been used as a reference.
2. Chatswood Dive Site is not a station
3. CWD refers to Chatswood Dive Site in the context of the traffic assessment and Chatswood Station in the context of the interchange operation monitoring assessment.

All stations in Block 3, except Sydenham Station, had either traffic monitoring or interchange operation monitoring, while Sydenham Station had both intersection and interchange monitoring.

Table 3-2 outlines the type of assessment undertaken for each station in the Block 3 study.

Table 3-2 Assessments undertaken for each station in Block 3

Station	Traffic monitoring	Interchange monitoring	Remarks
Chatswood	✗	✓	No changes to road network
Chatswood Dive Site	✓	✗	No new kerbside usage proposed
Crows Nest	✓	✗	Interchanges not operational during Block 3
Victoria Cross	✓	✗	Interchanges not operational during Block 3
Barangaroo	✓	✗	Interchanges not operational during Block 3
Martin Place	✓	✗	No new kerbside usage proposed

Station	Traffic monitoring	Interchange monitoring	Remarks
Gadigal	✓	✗	No new kerbside usage proposed
Central	✓	✗	No new kerbside usage proposed
Waterloo	✓	✗	Interchanges not operational during Block 3
Sydenham	✓	✓	Nil

3.2 Traffic monitoring

The study area for traffic monitoring comprises a total of 65 intersections spread across the nine stations. To facilitate ease of reference, each intersection is assigned two unique identifiers:

- Intersection ID: A five-character code formed by combining the three-character identifier of the corresponding station (as listed in Table 3-1) with the index of the intersection within the study area surrounding that station. For example, CEN03 represents the third intersection in the Central Station study area.
- S.ID: A two-character identifier used to index all intersections within the Project study area.

Table 3-3 outlines each intersection's S.ID, Intersection ID, traffic control signal (TCS) ID designated by TfNSW, name, and control type. Of the 65 intersections within the study area, 58 intersections were assessable via SIDRA Intersection modelling during Block 3. The following intersections either were impacted by construction works or were not operational during Block 3 and hence were excluded from the analysis:

- CST12 – Hume Street/Clarke Lane
- BGU16 – New Pedestrian Mid-block Crossing at New Hickson Road (north of Metro Station)
- BGU17 – New Pedestrian Mid-block Crossing at New Hickson Road (south of Metro Station)
- CEN04 – New Pedestrian Mid-block Crossing at Randle Lane
- WLO04 – Cope Street/Wellington Street
- WLO06 – New Pedestrian Mid-block Crossing at Cope Street.

Additionally, the pedestrian bridge crossing along Mowbray Road (CWD02) was solely included in traffic surveys for data collection and was not modelled.

Figure 3-1 to Figure 3-9 depict the location of each intersection within each station's study area based on their Intersection ID.

Table 3-3 Traffic assessment intersections

S.ID	Intersection ID	TCS ID	Intersection name	Intersection control type
01	CWD01	3037	Mowbray Road/Hampden Road	Signal
02	CWD02	-	Pedestrian Bridge Crossing along Mowbray Road	Pedestrian only - Bridge Crossing
03	CST01	768	Pacific Highway/Albany Street	Signal
04	CST02	767	Pacific Highway/Oxley Street	Signal
05	CST03	766	Pacific Highway/Hume Street	Signal
06	CST04	765	Pacific Highway/Falcon Street/ Shirley Road	Signal
07	CST05	-	Clarke Street/Oxley Street	Priority - Give Way

S.ID	Intersection ID	TCS ID	Intersection name	Intersection control type
08	CST06	-	Clarke Street/Hume Street	Priority - Give Way
09	CST07	-	Clarke Street/Willoughby Road	Priority - Give Way
10	CST08	516	Albany Street/Willoughby Road	Signal
11	CST09	-	Albany Street/Oxley Street	Roundabout
12	CST10	-	Albany Street/Clarke Lane	Priority - Give Way
13	CST11	-	Oxley Street/Clarke Lane	Priority - Give Way
14	CST12	-	Hume Street/Clarke Lane	Priority - Stop
15	CST13	763	Pacific Highway/Alexander Street	Signal
16	CST14	764	Falcon Street/Alexander Street	Signal
17	VIC01	1206	Pacific Highway/Berry Street	Signal
18	VIC02	874	Miller Street/Berry Street	Signal
19	VIC03	1156	Miller Street/McLaren Street	Signal
20	VIC04	630	Pacific Highway/Miller Street	Signal
21	BGU01	-	Hickson Road/Towns Place	Priority - Give Way
22	BGU02	-	Dalgety Road/Towns Place	Roundabout
23	BGU03	-	Kent Street/Argyle Street	Priority - Give Way
24	BGU04	4272	Pedestrian Mid-block Crossing at Kent Street near Gas Lane	Pedestrian only - Signal
25	BGU05	4272	Kent Street/Sydney Harbour Bridge (SHB) On-ramp	Signal
26	BGU06	4625	Hickson Road/Napoleon Street/ Sussex Street	Signal
27	BGU07	308	Margaret Street/Kent Street/ Napoleon Street	Signal
28	BGU08	319	Margaret Street/Clarence Street	Signal
29	BGU09	3042	Margaret Street/York Street	Signal
30	BGU10	3939	Pedestrian Mid-block Crossing at Sussex Street under Exchange Place	Pedestrian only - Signal
31	BGU11	4109	Pedestrian Mid-block Crossing at Kent Street near Margaret Street	Pedestrian only - Signal
32	BGU12	310	Sussex Street/Erskine Street	Signal
33	BGU13	307	Kent Street/Erskine Street	Signal
34	BGU14	284	Sussex Street/King Street	Signal
35	BGU15	283	Kent Street/King Street	Signal
36	BGU16	-*	New Pedestrian Mid-block Crossing at New Hickson Road (north of Metro Station)	Pedestrian only - Signal
37	BGU17	-*	New Pedestrian Mid-block Crossing at New Hickson Road (south of Metro Station)	Pedestrian only - Signal
38	BGU18	305	Shelley Street/Erskine Street	Signal

S.ID	Intersection ID	TCS ID	Intersection name	Intersection control type
39	MPL01	244	Hunter Street/Castlereagh Street/ Bligh Street	Signal
40	MPL02	302	Hunter Street/Elizabeth Street/ Chifley Square	Signal
41	MPL03	1412	Bent Street/Bligh Street	Signal
42	MPL04	242	Bent Street/Phillip Street	Signal
43	MPL05	245	Pedestrian Mid-block Crossing at Castlereagh Street	Pedestrian only - Signal
44	MPL06	287	Pedestrian Mid-block Crossing at Elizabeth Street	Pedestrian only - Signal
45	PIT01	2312	Pitt Street/Bathurst Street	Signal
46	PIT02	2281	Castlereagh Street/Bathurst Street	Signal
47	PIT03	250	Park Street/Castlereagh Street	Signal
48	PIT04	235	Park Street/Pitt Street	Signal
49	CEN01	293	Elizabeth Street/Eddy Avenue	Signal
50	CEN02	293	Elizabeth Street/Foveaux Street	Signal
51	CEN03	-	Elizabeth Street/Cooper Street	Priority - Give Way
52	CEN04	-*	New Pedestrian Mid-block Crossing at Randle Lane	Pedestrian only - Signal
53	CEN05	2916	Elizabeth Street/Randle Street	Signal
54	WLO01	47	Botany Road/Raglan Street/ Henderson Road	Signal
55	WLO02	-	Raglan Street/Cope Street	Roundabout
56	WLO03	137	Botany Road/Wellington Street/ Buckland Street	Signal
57	WLO04	-	Cope Street/Wellington Street	Roundabout
58	WLO05	55	Wyndham Street/Henderson Road	Signal
59	WLO06	-*	New Pedestrian Mid-block Crossing at Cope Street	Pedestrian only - Signal
60	SYD01	3320	Railway Parade/Gleeson Avenue	Signal
61	SYD02	1152	Burrows Avenue/Gleeson Avenue	Signal
62	SYD03	-	Burrows Avenue/George Street	Priority - Give Way
63	SYD04	4946	Railway Parade/Sydenham Road	Signal
64	SYD05	-	Marrickville Road/Buckley Street	Priority - Give Way
65	SYD06	-	Sydenham Road/Buckley Street	Priority - Give Way

**Note: The new pedestrian mid-block crossings were under construction during Block 3 and were not assigned a TCS number.*

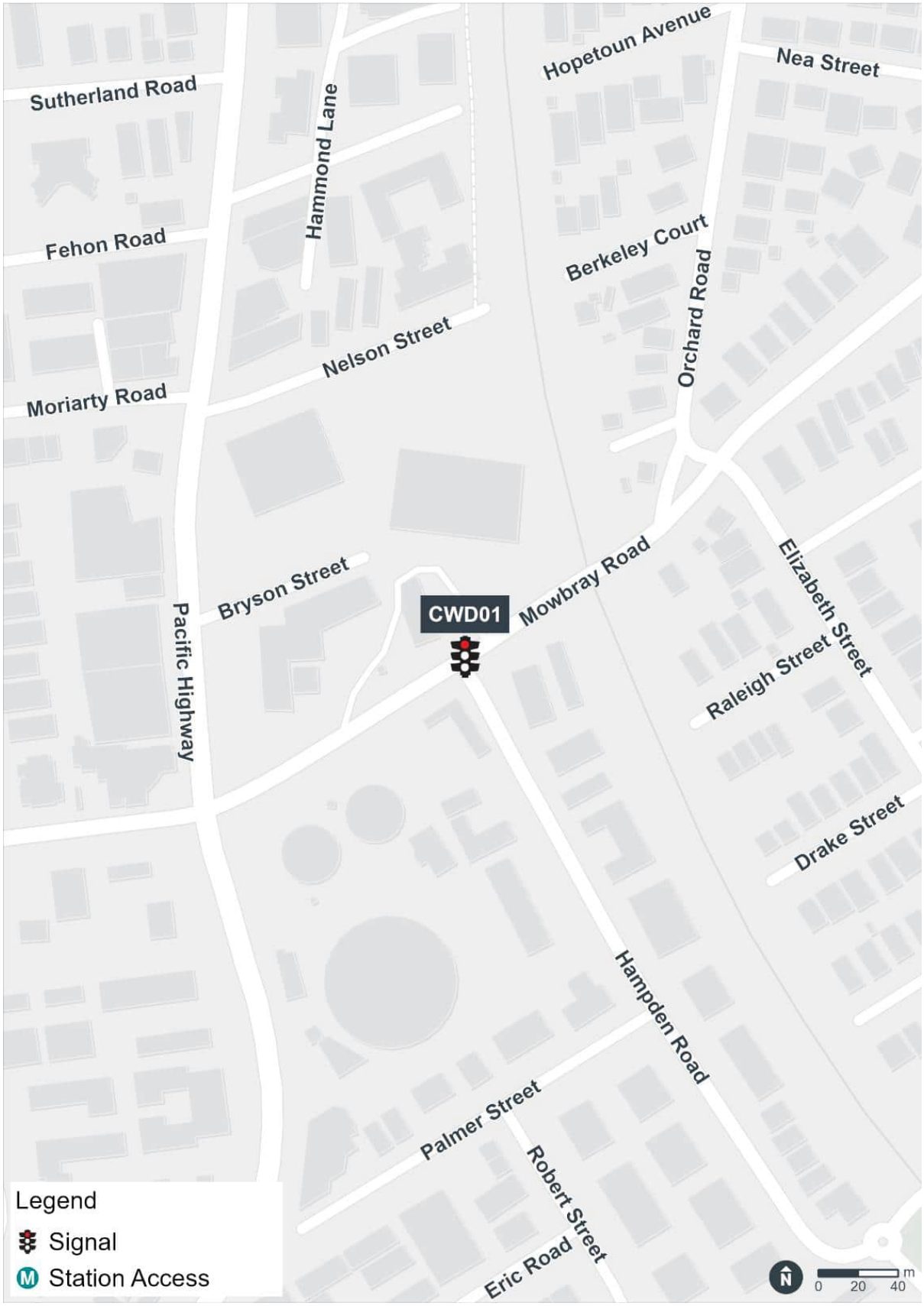


Figure 3-1 Chatswood Dive Site traffic study area

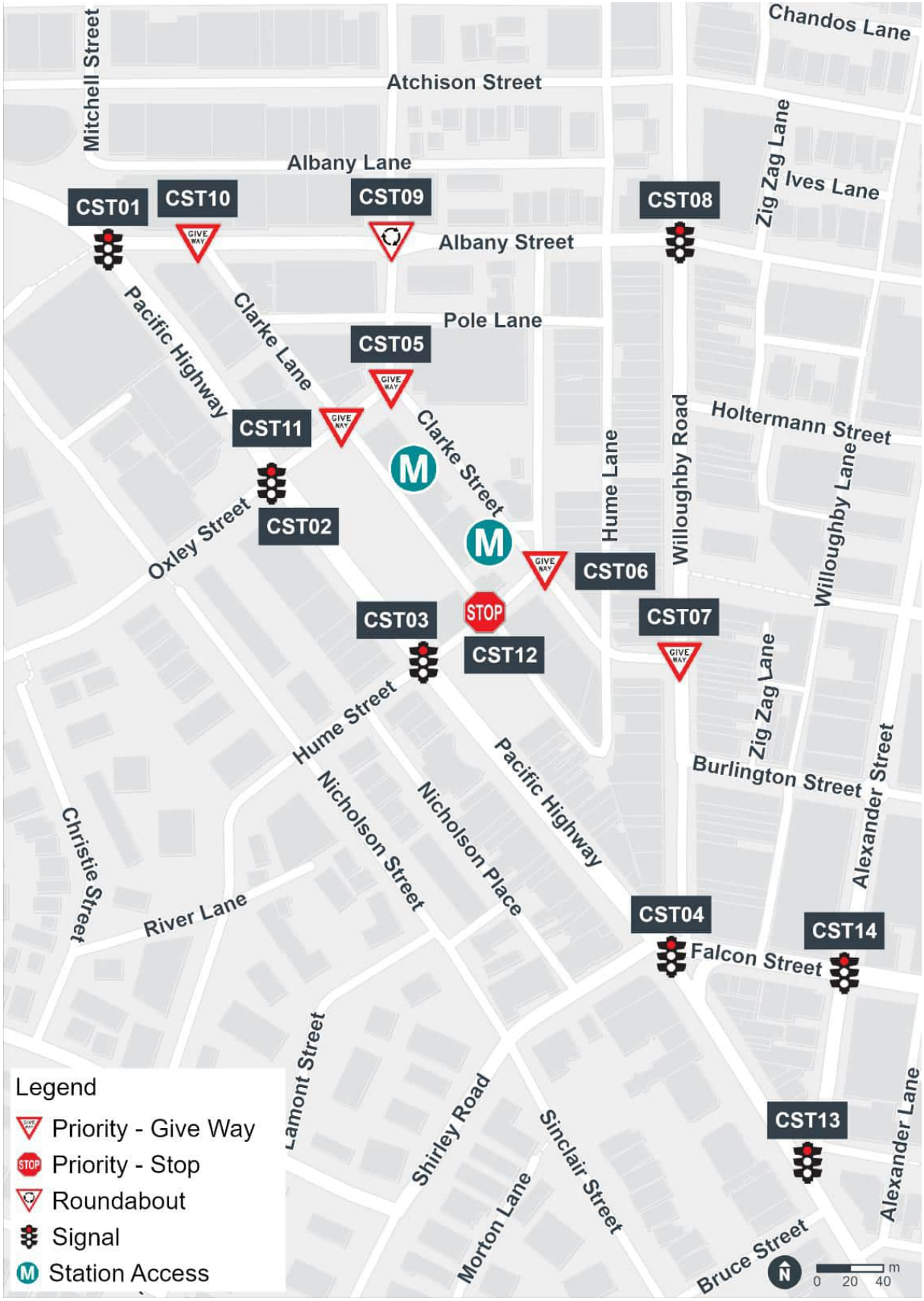


Figure 3-2 Crows Nest Station traffic study area

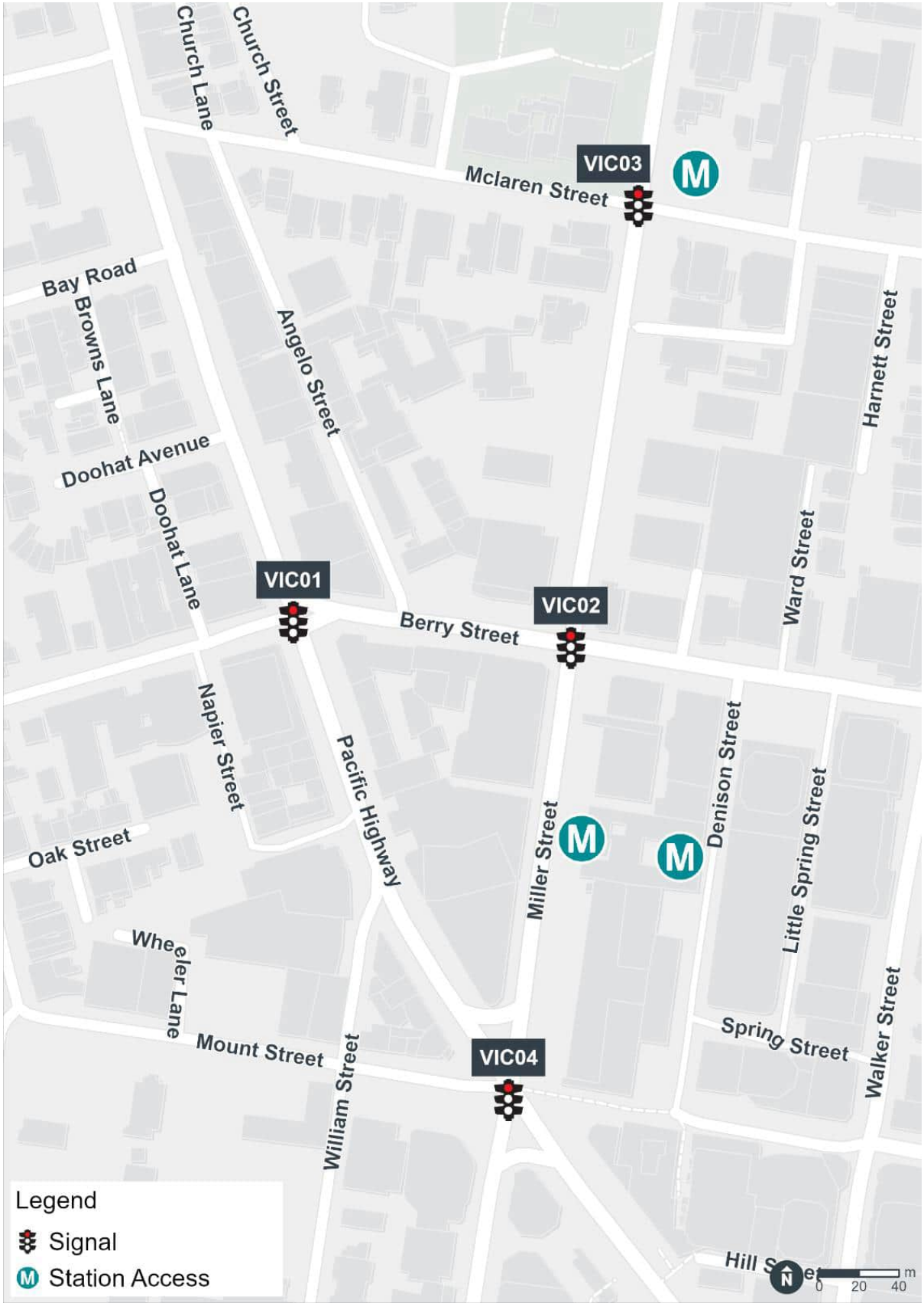


Figure 3-3 Victoria Cross Station traffic study area

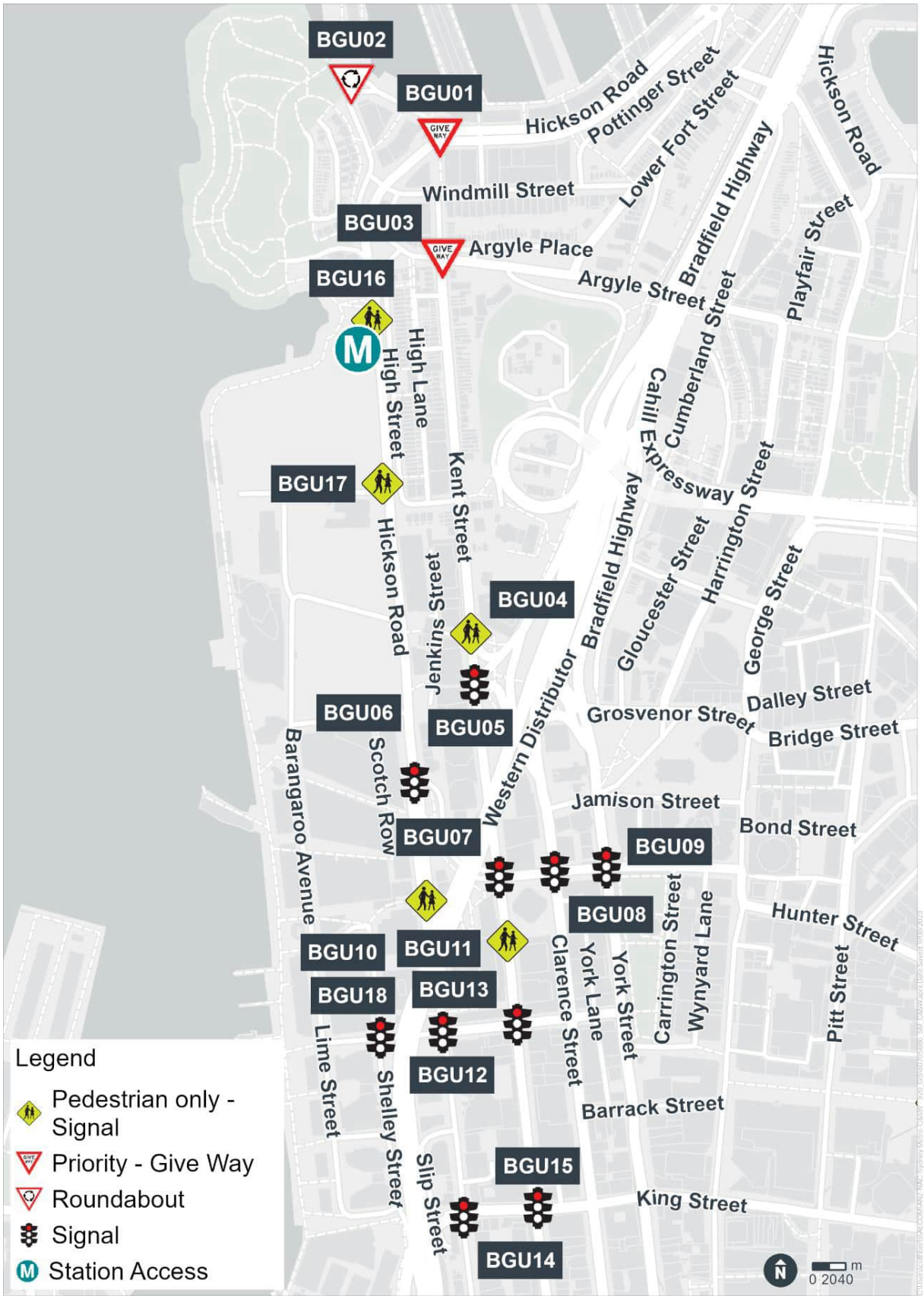


Figure 3-4 Barangaroo Station traffic study area

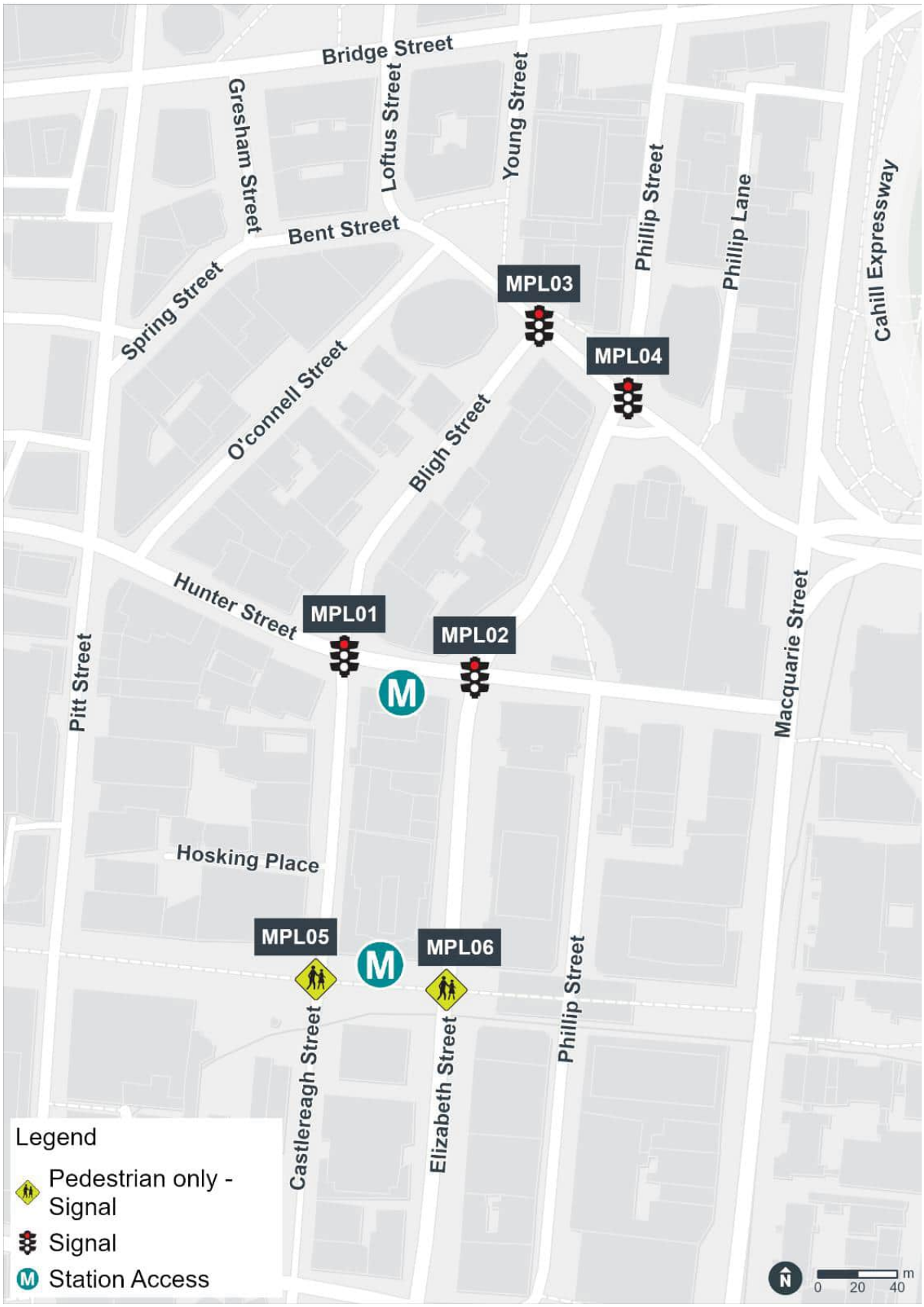


Figure 3-5 Martin Place Station traffic study area

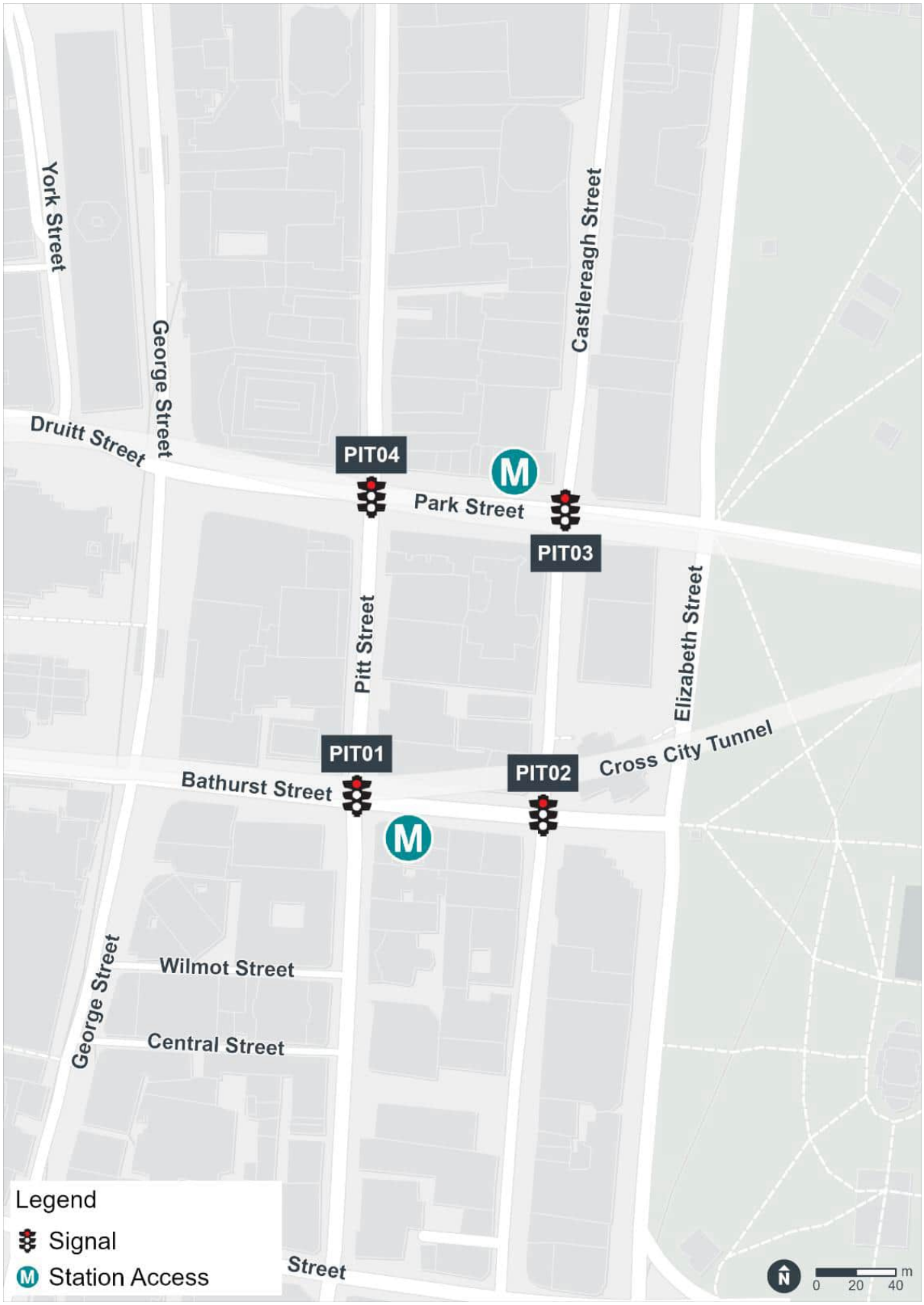


Figure 3-6 Gadigal Station traffic study area

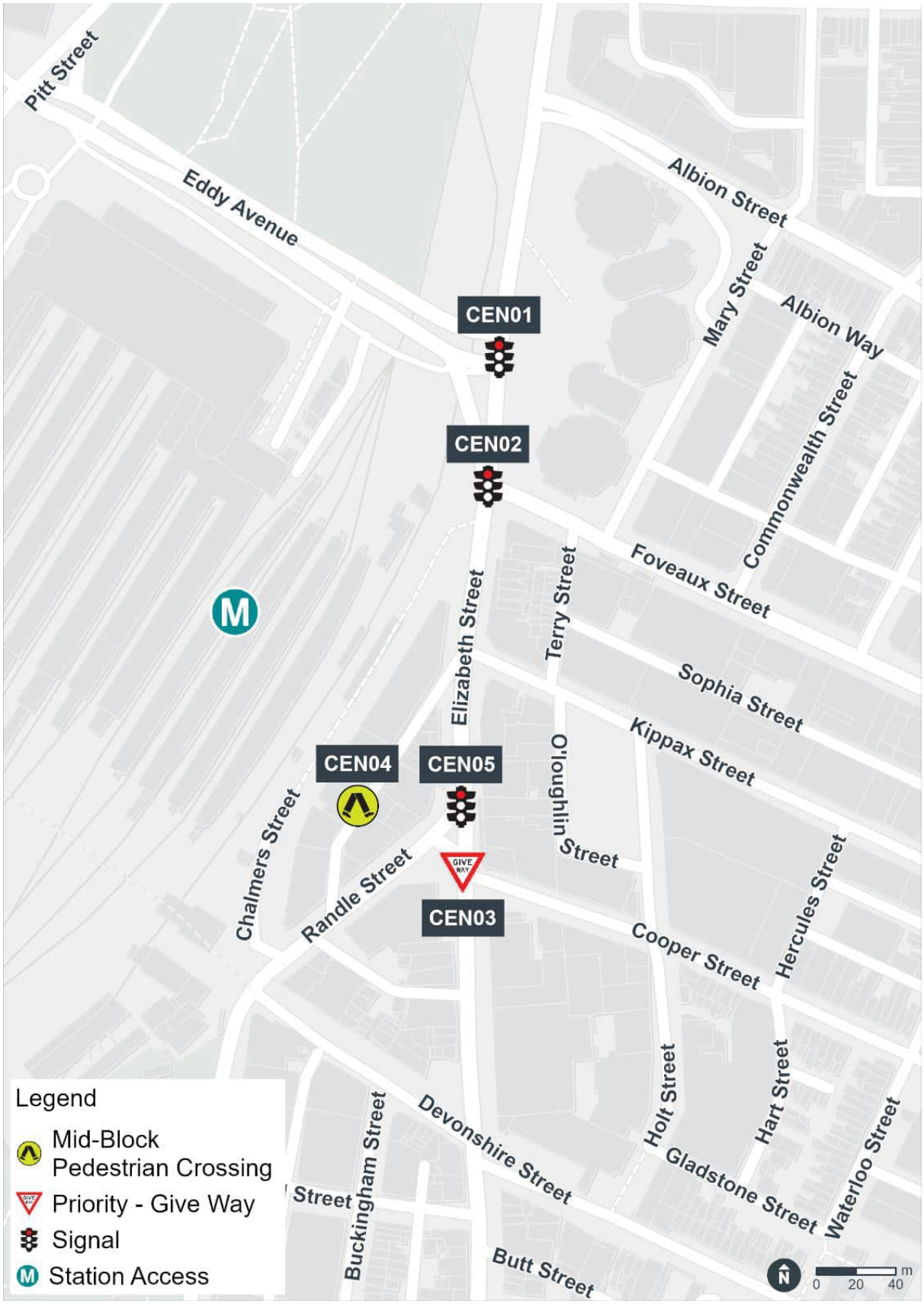


Figure 3-7 Central Station traffic study area

Figure 3-8 Waterloo Station traffic study area

Figure 3-9 Sydenham Station traffic study area

3.3 Transport interchange monitoring

The transport interchange monitoring study area includes taxi, bus stop and kiss and ride facilities located near the nine stations along the City & Southwest Line (Chatswood to Sydenham). In Block 3, surveys were conducted only for facilities near operating interchanges, namely Chatswood Station and Sydenham Station.

Similar to the intersections in the traffic study area, a five-character identifier was assigned to each taxi, bus stop, kiss and ride and accessible parking facility for ease of referencing, with the first three-characters matching the station identifiers in Table 3-1. The fourth character identifies the type of interchange facility and the fifth character indexes it.

Table 3-4 outlines the interchange facilities assessed in the Block 3 study, including the associated type, identifier, station, street and side of road location, and number of bays.

Table 3-4 Block 3 – interchange facilities

Type	ID	Station	Street	Side of road	Number of bays
Kiss and ride	CWDK1	Chatswood	Railway Street	West	1
Kiss and ride	CWDK2	Chatswood	Albert Avenue	North	2
Kiss and ride	CWDK3	Chatswood	Endeavour Street	North	2
Taxi	CWDT1	Chatswood	Victoria Avenue	North	11
Taxi	CWDT2	Chatswood	Endeavour Street	North	2
Bus[1]	SYDB1	Sydenham	Railway Parade	South	3
Kiss and ride	SYDK1	Sydenham	Burrows Avenue	North	4
Kiss and ride[2]	SYDK2	Sydenham	Sydenham Road	East	2
Taxi	SYDT1	Sydenham	Burrows Avenue	North	2
Accessible parking[3]	SYDA1	Sydenham	Bolton Street	North	2

Notes:
1. SYDB1 encompasses transit stop number (TSN) 220421, TSN 2204125 and TSN 220450.
2. SYDK2 is a kiss and ride facility. At the time of the Block 3 study, kerbside signage indicated this was a no parking zone. It has been included as part of the Block 3 study for comparison with future study blocks.
3. SYDA1 is an accessible parking area. At the time of the Block 3 study, the accessible parking bays had been constructed and signposted as such. It has been included as part of the Block 3 study for comparison with future study blocks.

Figure 3-10 and Figure 3-11 depict the location of each taxi, bus stop and kiss and ride facility assessed surrounding Chatswood Station and Sydenham Station, respectively.

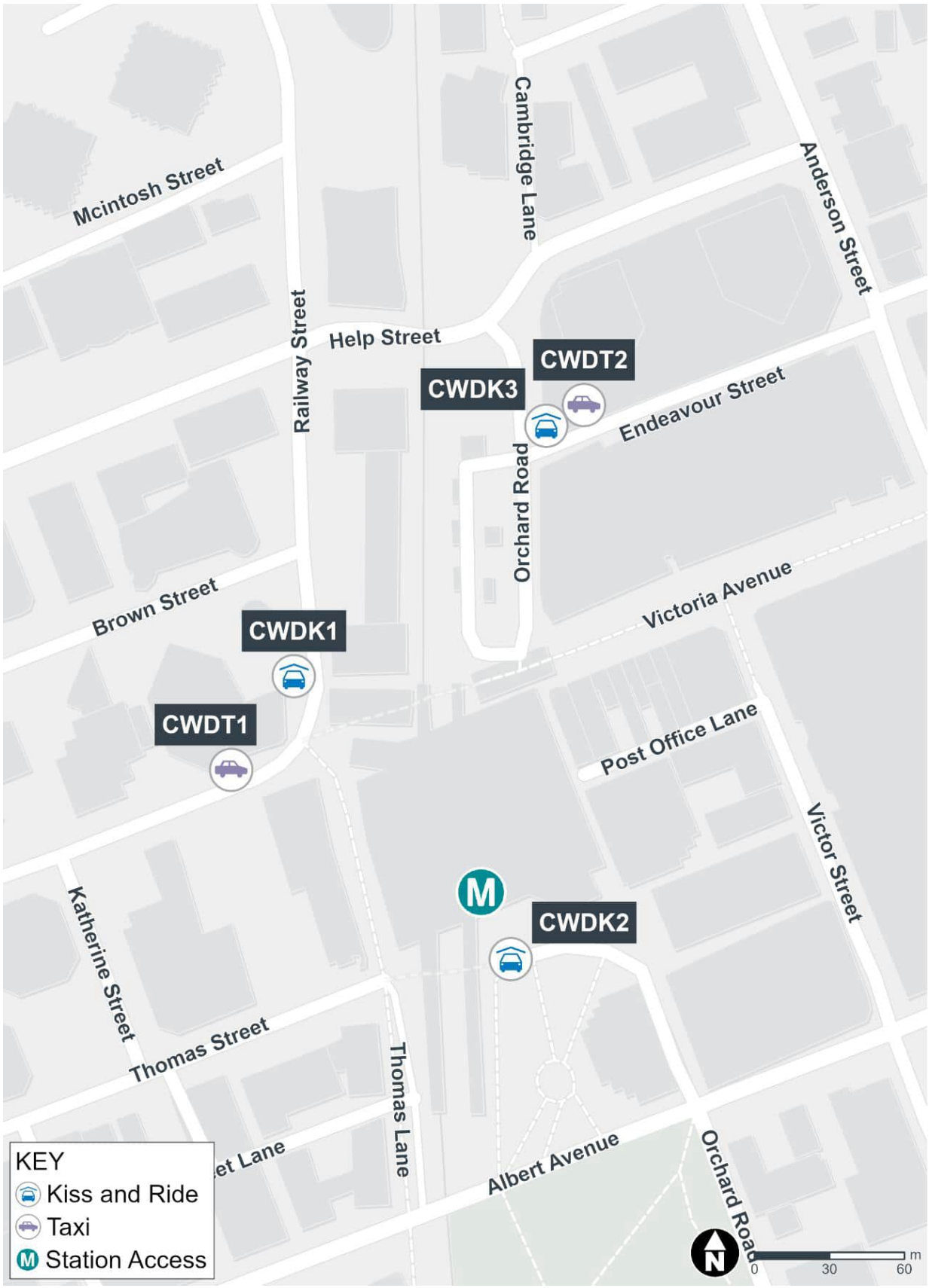


Figure 3-10 Chatswood Station interchange study area

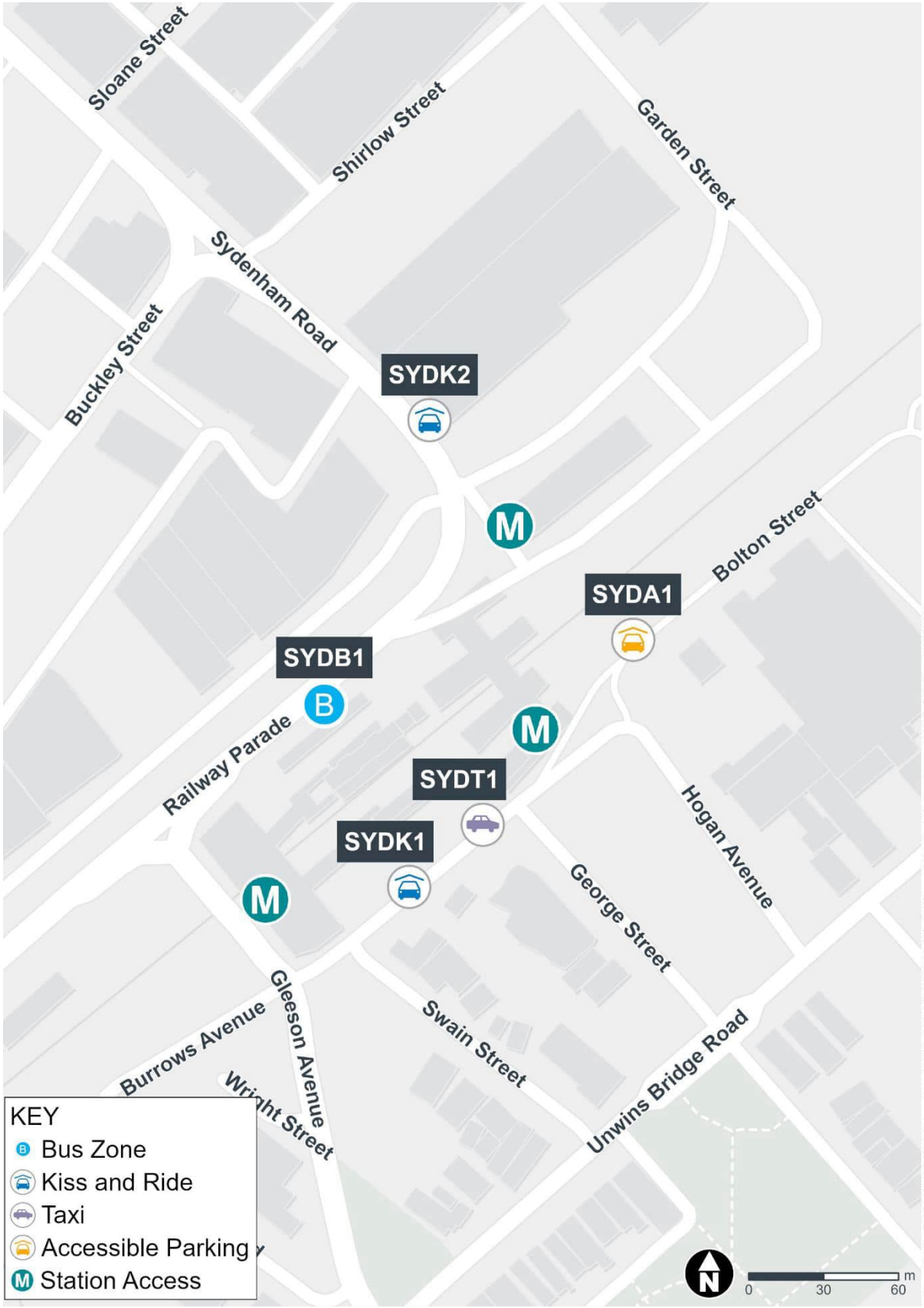


Figure 3-11 Sydenham Station interchange assessment study area

4.0 Assessment methodology

This section details the traffic and transport interchange monitoring assessment methodology undertaken for the intersections within study area and the park and ride facilities surrounding the stations identified in Section 3.2 and Section 3.3, respectively.

4.1 Traffic monitoring

Figure 4-1 provides an overview of the adopted methodology for the traffic monitoring, with further clarifications and details provided in the subsequent sections.

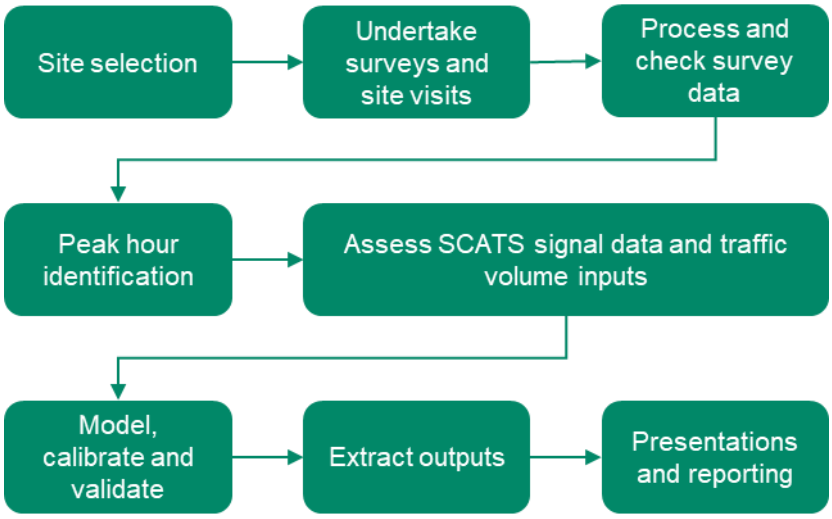


Figure 4-1 Traffic assessment methodology overview

4.1.1 Traffic surveys

Classified intersection counts were undertaken for 59 of the 65 study area intersections (as outlined in **Section 3.2**). The traffic surveys were carried out over a one-week period, and the data was aggregated in 15-minute intervals. In cases where data was corrupted or unavailable due to vandalism, re-surveys were conducted. The survey dates were as follows:

- **Traffic surveys**: Monday 4 March 2024 to Sunday 10 March 2024
- **Re-surveys**: Saturday 16 March 2024 to Friday 22 March 2024.

During the traffic surveys, data was gathered for various vehicle types including light vehicles, heavy vehicles, and buses, as well as for cyclists and pedestrians. In addition, queue lengths were also documented during the traffic surveys to aid in validating the SIDRA Intersection models.

AECOM conducted site observations in conjunction with the traffic surveys, ensuring at least one observation was carried out for each intersection during each peak period specified in Section 4.1.2 (excluding the Monday and Friday). The site observations were conducted to observe various aspects, including vehicle behaviours, any changes in lane geometry or capacity, and the condition of the traffic survey cameras to ensure that they were properly set up and not vandalised.

SCATS traffic detector count data was provided by Sydney Metro, for the same dates traffic surveys were undertaken. The traffic survey data was reviewed against the SCATS traffic detector count data to identify any potential outliers. Intersections with traffic survey volumes greater than or less than 10 per cent of the SCATS volumes underwent additional investigation and/or recounting of the traffic surveys. Once the traffic survey data were reviewed and finalised, additional data analysis was conducted as detailed in the subsequent sections.

4.1.2 Peak hour identification

Each intersection was modelled as either an isolated site or as part of a network, as described in Appendix B. In the case of intersections modelled as an isolated site, the peak hour was determined by

considering the total hourly volume (light vehicles, heavy vehicles and buses) at the intersection. For intersections modelled as part of a network, the peak hour was determined by considering the total hourly volume across the network at approaches connecting to the external network.

In consultation with Sydney Metro, the time periods used to determine the intersection or network peak hour have been updated for this block to consider the 24-hour traffic monitoring period during the survey period listed in Section 4.1.1.

Based on the revised time periods listed below, peak one-hour periods were identified for each intersection:

- weekday AM peak: 3am to 12pm
- weekday PM peak: 12pm to 3am
- weekend peak: 3am Saturday to 3am Monday.

These revised time periods will be adopted for future study blocks. It is important to note that the identified peak hour varies between different locations. However, the peak hours fall within the time periods listed above.

4.1.3 Network flow diagrams

A review was undertaken to identify any variations in peak hour traffic volumes between mid-blocks connecting adjacent intersections within the same network. These variations were primarily due to minor counting discrepancies or due to side streets, property and parking access. Survey volumes were used for the intersection modelling. Additionally, considering the fixed schedule of bus routes, adjustments were made to bus volumes whenever large discrepancies were observed.

The resulting peak hour volumes were utilised as the turning volume inputs for the SIDRA Intersection models. The network flow diagrams used to inform the traffic and pedestrian volume inputs for SIDRA Intersection modelling are included in Appendix C.

4.1.4 SCATS signal and sub-systems data

In addition to the SCATS detector count data, SCATS traffic signal data was also provided for each intersection during their respective peak hours, which aligned with the traffic survey dates.

The SCATS traffic signal data included historical information on the signal phase sequence and signal phase time frequency, as well as sub-system information for signalised intersections modelled as a part of a network. Furthermore, the signal phase sequence was reviewed against traffic survey footage to determine if any signal phases were not executed or ran in a different order. Moreover, the traffic survey footage was also examined to ascertain whether the early cut-off or late-start movements observed during site visits also occurred during the peak hours modelled.

4.1.5 SIDRA Intersection modelling

The performance of the intersections was assessed using either the site or network function (refer to Appendix B) of the SIDRA Intersection software, adopting the peak hour volumes and SCATS traffic signal data. Detailed SIDRA Intersection modelling was conducted for the intersections within the study area. The geometry of the intersections was established using desktop aerial imagery from sources such as Nearmap and Google Streetview, which was then validated through on-site observations. The models were specifically developed for the identified peak hours within the peak periods (Section 4.1.2), incorporating the peak volume inputs derived from the network flow diagrams (Section 4.1.3), as well as the SCATS signal data and sub-systems information (Section 4.1.4).

The modelled queues were validated against the queue length surveys and traffic survey footage.

4.1.6 Intersection performance assessment

The standard measure of intersection performance is vehicle delay, which is used to assess the efficiency of an intersection. SIDRA Intersection adopts the TfNSW Traffic Modelling Guidelines which categorises average intersection delay into six bands of average delay per vehicle (seconds per vehicle). These bands are determined based on the criteria outlined in Table 4-1. By analysing the average delay, SIDRA Intersection determines the level of service (LOS) for the intersection, a measure of the intersection performance.

Table 4-1 Intersection LOS criteria

LOS	Average delay (seconds per vehicle)	Criteria for traffic signals	Criteria for give way and stop signs
A	< 14	Good operation	Good operation
B	15 to 28	Good operation with acceptable delays and spare capacity	Good operation with acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	42 to 56	Near capacity	Near capacity and accident study required
E	57 to 70	At capacity; at signals, incidents will cause excess delays	At capacity, requires other control mode
F	> 70	Extra capacity required	At capacity, requires other control mode

Source: TfNSW Traffic Modelling Guidelines, LOS definitions for vehicles (NSW method) based on delay only

It is noted that the critical movement for LOS at a roundabout or priority-controlled intersection is the movement with the worst delay, whereas for a signalised intersection, the average delay over all movements is adopted.

4.2 Transport interchange monitoring

Figure 4-2 provides an overview of the adopted methodology for the interchange monitoring, with further clarifications and details are provided in the subsequent sections.

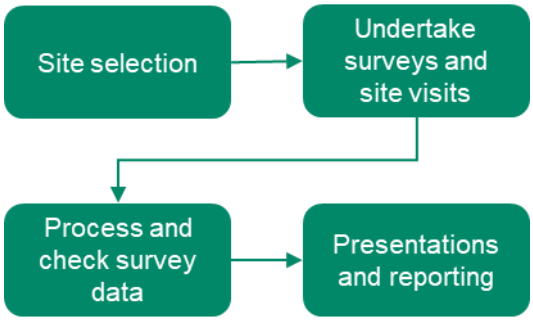


Figure 4-2 Interchange assessment methodology overview

4.2.1 Interchange surveys

Interchange surveys were undertaken at taxi, bus stop, kiss and ride and/or accessible parking facilities located at Chatswood Station and Sydenham Station (as outlined in Section 3.3).

The interchange surveys were carried out over a one-week period similar to the intersection surveys. The survey dates were Monday 4 March 2024 to Sunday 10 March 2024.

The key data captured as part of the interchange surveys includes:

- vehicle counts
- vehicle occupancy (boarding and alighting passengers only)
- vehicle dwell time
- vehicle queue length outside the bay.

In consultation with Sydney Metro, the time periods used to determine the interchange peak demand have been updated for this block to consider the 24-hour traffic monitoring period during the survey period listed in Section 4.1.1. The revised time periods are listed below:

- weekday AM peak: 3am to 12pm
- weekday PM peak: 12pm to 3am
- weekend peak: 3am Saturday to 3am Monday.

These revised time periods will be adopted for future study blocks. Site observations were completed in conjunction with the interchange surveys, ensuring at least one observation was carried out for each interchange facility during the above time periods. These observations aimed to monitor several aspects, such as kerbside lane usage, queuing outside the bays and the condition of the interchange survey cameras, ensuring they were correctly set up and not subject to vandalism.

4.2.2 Aggregation and analysis

The interchange survey data was consolidated and analysed, categorising the data based on facility type (taxi, bus stop, kiss and ride or accessible parking) to understand usage patterns at the interchange facilities near the stations. A high-level exploratory analysis of the combined data was conducted to identify the daily vehicle trends for the key data types outlined in Section 4.2.1.

To ensure the accuracy and reliability of the findings, the identified trends were compared with the survey footage. In cases where discrepancies were detected, the survey data was recounted and/or rechecked to provide reliable results. The findings from this analysis are reported in Section 6.0.

5.0 Traffic monitoring and intersection performance

This section summarises the traffic monitoring and intersection performance outputs from traffic survey data and SIDRA Intersection modelling undertaken across the Block 3 study area.

Appendix D provides an overview of the average vehicle profile, traffic volumes, cyclist and pedestrian patterns for each station.

The SIDRA Intersection movement summary outputs for all modelled intersections during each peak hour are shown in Appendix E.

5.1 Chatswood Dive Site

The Chatswood Dive Site is a temporary underground site facilitating excavation and construction works for the City & Southwest Line tunnel portal from Chatswood Station. Although not accessible to the general public, the Chatswood Dive Site facilitates the movement of workers and equipment to access the underground areas where crucial tunnelling and other metro construction operations take place. When the Sydney Metro City & Southwest Line (Chatswood to Sydenham) is operational, the Chatswood Dive Site will be used as a service facility for the operation of the Sydney Metro rail line between Chatswood and the Sydney CBD (and beyond).

The Chatswood Dive Site is located south of Chatswood Station and north of Artarmon Station, bound by the Pacific Highway (A1), Mowbray Road and Nelson Street in Chatswood. Bus services are available within approximately 200 metres west of the Chatswood Dive Site on the Pacific Highway (A1) and Mowbray Road. Artarmon Station, approximately 600 metres south of the Chatswood Dive Site, offers the nearest rail service. The bridge crossing along Mowbray Road over the rail line connects residents to the east with the Pacific Highway (A1), facilitating walking and cycling in addition to general traffic.

The Chatswood Dive Site study area consists of two study sites; however, the pedestrian bridge crossing along Mowbray Road (CWD02) was not modelled given it does not function as an intersection or mid-block crossing. Table 5-1 presents the peak hours utilised for modelling the intersections.

Table 5-2 provides a summary of the intersection LOS, while Figure 5-1 visualises a geospatial summary of the intersection LOS within the Chatswood Dive Site study area.

Table 5-1 Block 3 – Chatswood Dive Site peak hours modelled

Network ID	Intersection ID	Weekday AM peak hour		Weekday PM peak hour		Weekend peak hour	
		Day	Start time	Day	Start time	Day	Start time
-	CWD01	Tuesday	8.00am	Friday	3.00pm	Saturday	1.00pm
-	CWD02	No modelling was undertaken					

Table 5-2 Block 3 - Chatswood Dive Site intersection performance summary

Intersection ID	Intersection	LOS		
		Weekday AM Peak	Weekday PM Peak	Weekend Peak
CWD01	Mowbray Road/Hampden Road (Signal)	B	B	B
CWD02	Pedestrian Bridge Crossing along Mowbray Road (Bridge)	No modelling was undertaken.		

Overall, the intersection performance in the Chatswood Dive Site study area during the peak hours is satisfactory, operating at LOS B.

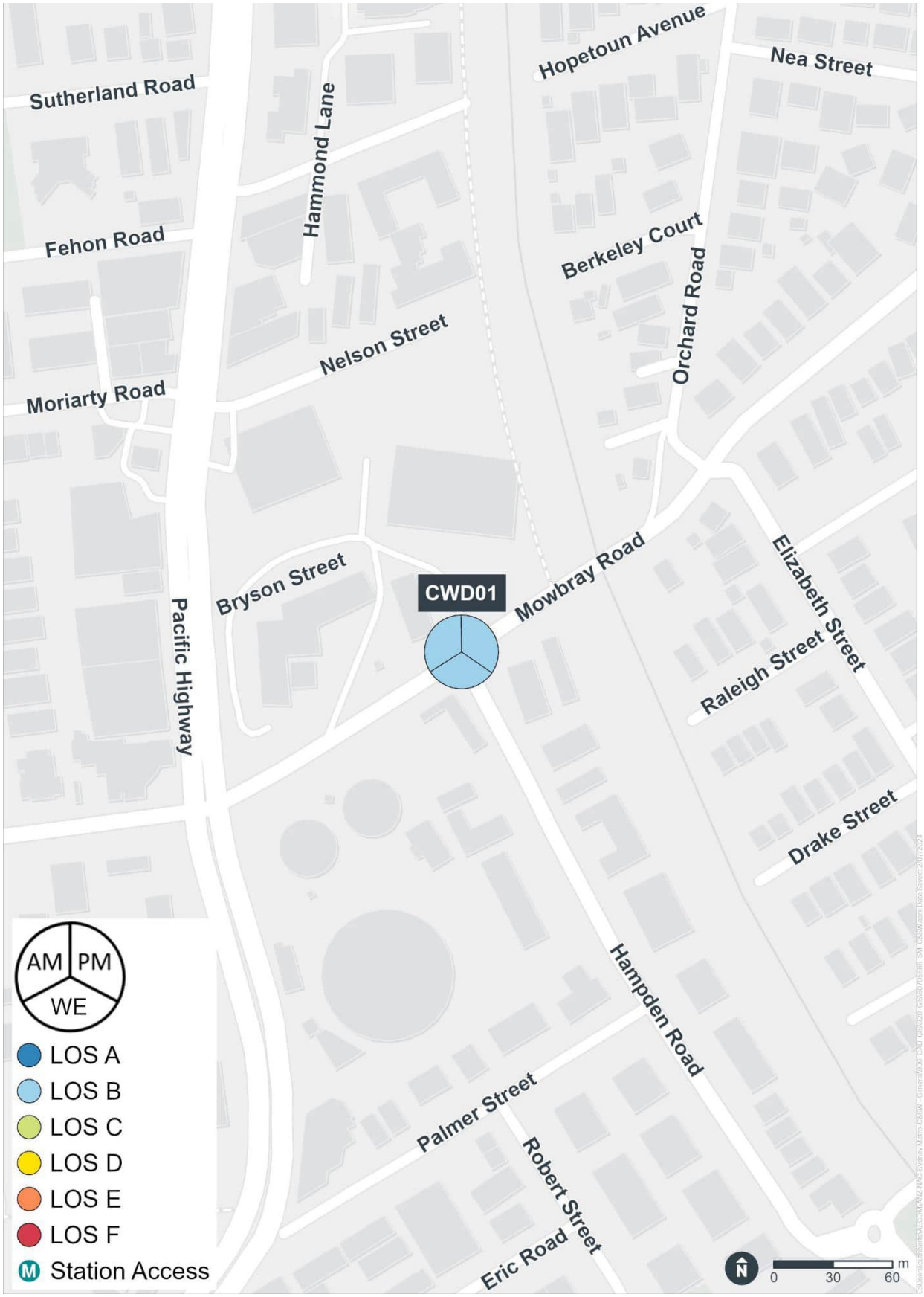
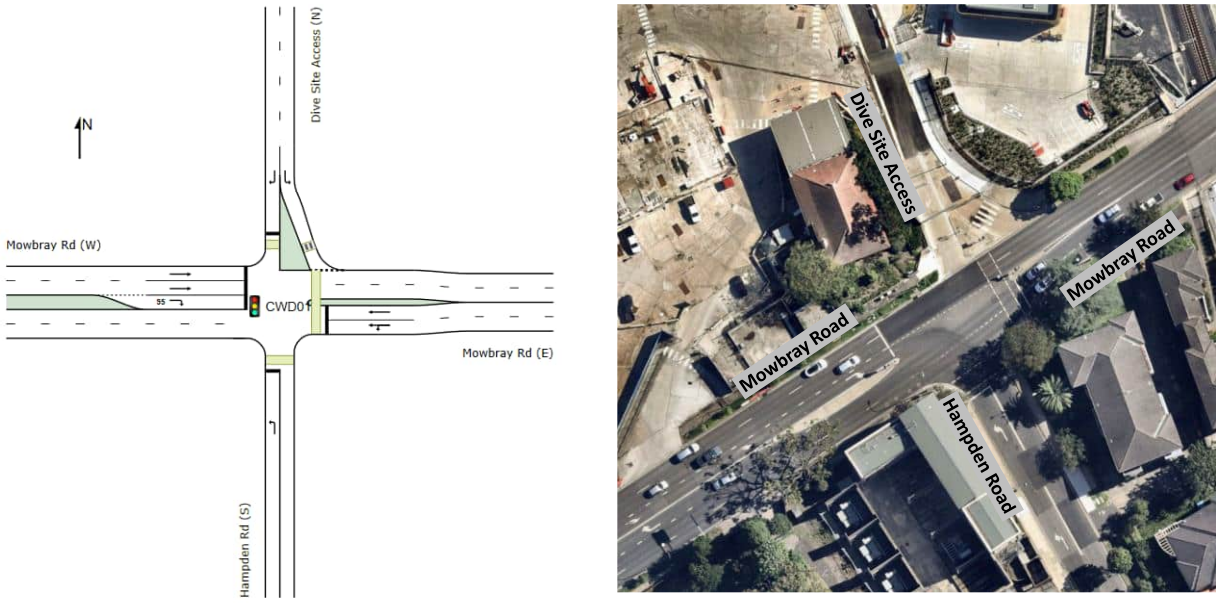


Figure 5-1 Block 3 - Chatswood Dive Site intersection performance summary

5.1.1 CWD01 – Mowbray Road/Hampden Road

This signalised intersection, composed of Mowbray Road, Hampden Road and the Chatswood Dive Site egress, is located directly south of the Chatswood Dive Site. This intersection serves as a connection point for the local road of Hampden Road, linking Chatswood and Artarmon, and the regional road of Mowbray Road, linking Willoughby to Lane Cove. Furthermore, the Chatswood Dive Site exits on to Mowbray Road at this intersection. The pedestrian bridge crossing along Mowbray Road (CWD02) connects with the eastern approach of this intersection.

Figure 5-2 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-2 Block 3 – AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of CWD01

Table 5-3 presents a performance summary of this intersection.

Table 5-3 Block 3 – Intersection performance summary of CWD01

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Mowbray Road/ Hampden Road (Signal)	Weekday AM	South	0.473	55.6	95.9	LOS D
		East	0.5	19.2	166.7	LOS B
		North	0.011	39.6	0.5	LOS C
		West	0.505	13.6	159	LOS A
		Total	**0.505**	**19.3**	**166.7**	**LOS B**
	Weekday PM	South	0.458	52.3	99.8	LOS D
		East	0.588	22.4	210.7	LOS B
		North	0.009	38.9	0.5	LOS C
		West	0.411	9.3	105.3	LOS A
		Total	**0.588**	**19.2**	**210.7**	**LOS B**

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
	Weekend	South	0.453	51.5	100.5	LOS D
		East	0.547	22.2	189.3	LOS B
		North	0.009	38.9	0.5	LOS C
		West	0.414	7.9	109.6	LOS A
		Total	**0.547**	**17.9**	**189.3**	**LOS B**

Overall, the intersection of Mowbray Road and Hampden Road performs satisfactorily at LOS B during all peak hours. The 95th percentile queue on Mowbray Road (east approach) extends back to the intersection of Elizabeth Street/Orchard Road during all peak hours.

5.1.2 CWD02 – Pedestrian Bridge Crossing along Mowbray Road

This pedestrian bridge, located east of the intersection of Mowbray Road and Hampden Road and south of the Chatswood Dive Site, provides passage along Mowbray Road for pedestrians, cyclists, and general traffic over the T1 North Shore & Western and T9 Northern rail lines. Mowbray Road is an east-west thoroughfare that connects Willoughby in the east to Lane Cove in the west, intersecting with key roads including the Pacific Highway (A1).

The pedestrian bridge was not modelled in SIDRA Intersection as it does not function as an intersection or mid-block crossing. Rather it was modelled as an extension of the eastern approach of the intersection of Mowbray Road and Hampden Road (CWD01, refer to Section 5.1.1).

5.1.3 Comparison with previous study blocks

Figure 5-3 provides a comparison of the total peak hourly traffic volumes recorded at CWD01 for Block 3 against previous study blocks. As shown, Block 3 traffic volumes are generally consistent with the previous study blocks.

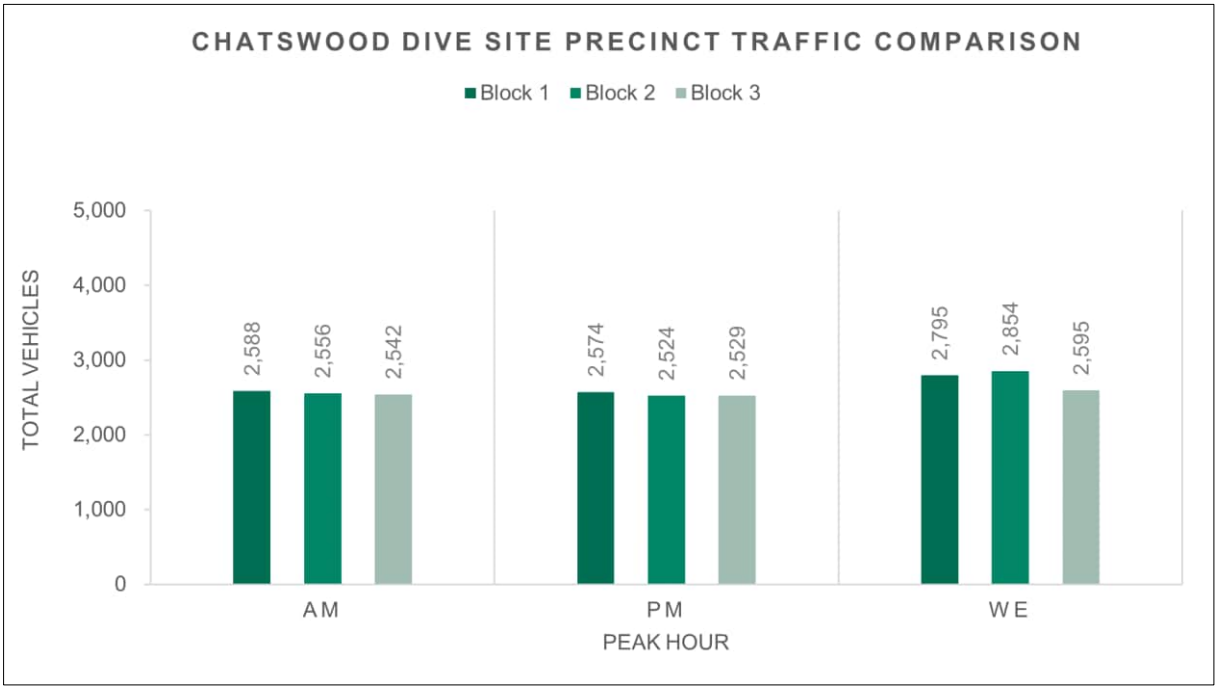
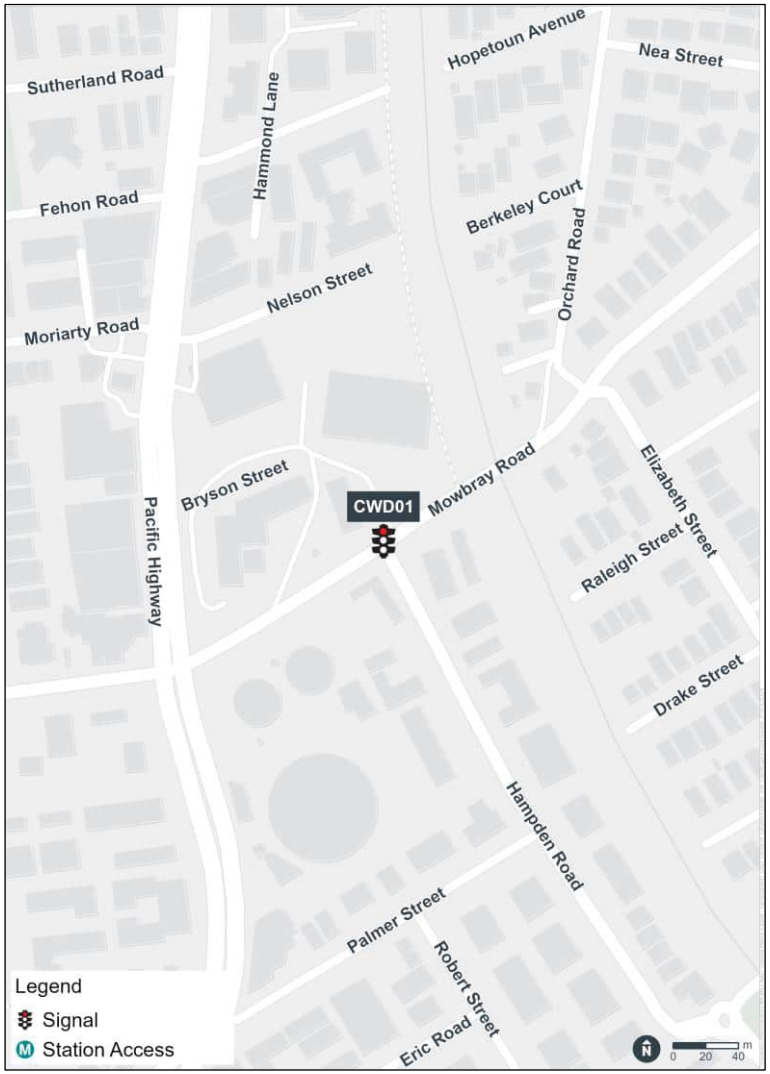


Figure 5-3 Study block comparison - Chatswood Dive Site peak hourly traffic volumes at CWD01

A comparison of the intersection LOS for Block 3 against previous study blocks is shown in Figure 5-4. The intersection in the Chatswood Dive Site study area performs at LOS B during all peak hours during Block 3, which is generally similar to previous study blocks.



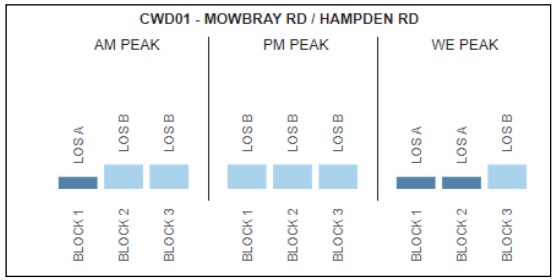


Figure 5-4 Study block comparison - Chatswood Dive Site intersection performance summary

5.2 Crows Nest Station

Crows Nest Station is a new underground station and the second stop along the City & Southwest Line (towards Sydenham). It is located in the south-east area of the St Leonards strategic centre, bounded by the Pacific Highway (A1), Oxley Street and Clarke Street in Crows Nest.

Crows Nest Station was still under construction during Block 3. The construction zone incorporated Clarke Lane, south of Oxley Street, and Hume Street, between the Pacific Highway (A1) and Clarke Street. Construction access and egress to the station was facilitated through Clarke Lane at the intersection of Oxley Street and Clarke Lane, while residential access to Clarke Lane was provided at the intersection of Hume Street and Clarke Lane via Clarke Street.

Bus services are available within approximately 150 metres of Crows Nest Station. Bus stops located on the Pacific Highway (A1) facilitate connections to the external Sydney network, while bus stops on Willoughby Road connect to the internal Crows Nest centre. St Leonards Station, approximately 500 metres north-west from Crows Nest Station, offers the nearest rail service. Within a 50-metre distance of Crows Nest Station, an existing cycleway runs along Oxley Street and Clarke Street and pedestrian footpaths are available throughout Crows Nest.

The Crows Nest Station study area consists of 14 intersections. During Block 3, the Hume Street/Clarke Lane intersection (CST12) was impacted by construction works and therefore was excluded from the analysis. Table 5-4 presents the peak hours utilised for modelling the intersections. Table 5-5 provides a summary of the intersection LOS, while Figure 5-5 visualises a geospatial summary of the intersection LOS within the Crows Nest Station study area.

Table 5-4 Block 3 - Crows Nest Station peak hours modelled

Network ID	Intersection ID	Weekday AM peak hour		Weekday PM peak hour		Weekend peak hour	
		Day	Start time	Day	Start time	Day	Start time
CST-N1	CST01	Wednesday	8.00am	Thursday	4.45pm	Saturday	11.30am
	CST02						
	CST03						
	CST04						
	CST05						
	CST06						
	CST09						
	CST10						
	CST11						
	CST12[1]						
	CST13						
	CST14						
-	CST07	Thursday	8.15am	Friday	6.30pm	Saturday	6.15pm
-	CST08	Thursday	8.15am	Wednesday	5.00pm	Saturday	12.15pm

Notes:
1. CST12 was closed due to construction works during Block 3 and therefore was excluded from the analysis.

Table 5-5 Block 3 - Crows Nest Station intersection performance summary

Intersection ID	Intersection	LOS		
		Weekday AM Peak	Weekday PM Peak	Weekend Peak
CST01	Pacific Highway/Albany Street (Signal)	LOS B	LOS B	LOS B
CST02	Pacific Highway/Oxley Street (Signal)	LOS A	LOS B	LOS B
CST03	Pacific Highway/Hume Street (Signal)	LOS A	LOS A	LOS A
CST04	Pacific Highway/Falcon Street/Shirley Road (Signal)	LOS D	LOS C	LOS C
CST05	Clarke Street/Oxley Street (Priority – Give Way)	LOS A	LOS A	LOS A
CST06	Clarke Street/Hume Street (Priority – Give Way)	LOS A	LOS A	LOS A
CST07	Clarke Street/Willoughby Road (Priority – Give Way)	LOS A	LOS A	LOS A
CST08	Albany Street/Willoughby Road (Signal)	LOS B	LOS B	LOS B
CST09	Albany Street/Oxley Street (Roundabout)	LOS A	LOS A	LOS A
CST10	Albany Street/Clarke Lane (Priority – Give Way)	LOS A	LOS B	LOS B
CST11	Oxley Street/Clarke Lane (Priority – Give Way)	LOS A	LOS A	LOS A
CST12	Hume Street/Clarke Lane (Priority – Stop)	Closed due to construction works		
CST13	Pacific Highway/Alexander Street (Signal)	LOS B	LOS A	LOS A
CST14	Falcon Street/Alexander Street (Signal)	LOS B	LOS B	LOS B

Overall, the intersection performance in the Crows Nest Station study area during the peak hours is satisfactory, operating at LOS D or better.

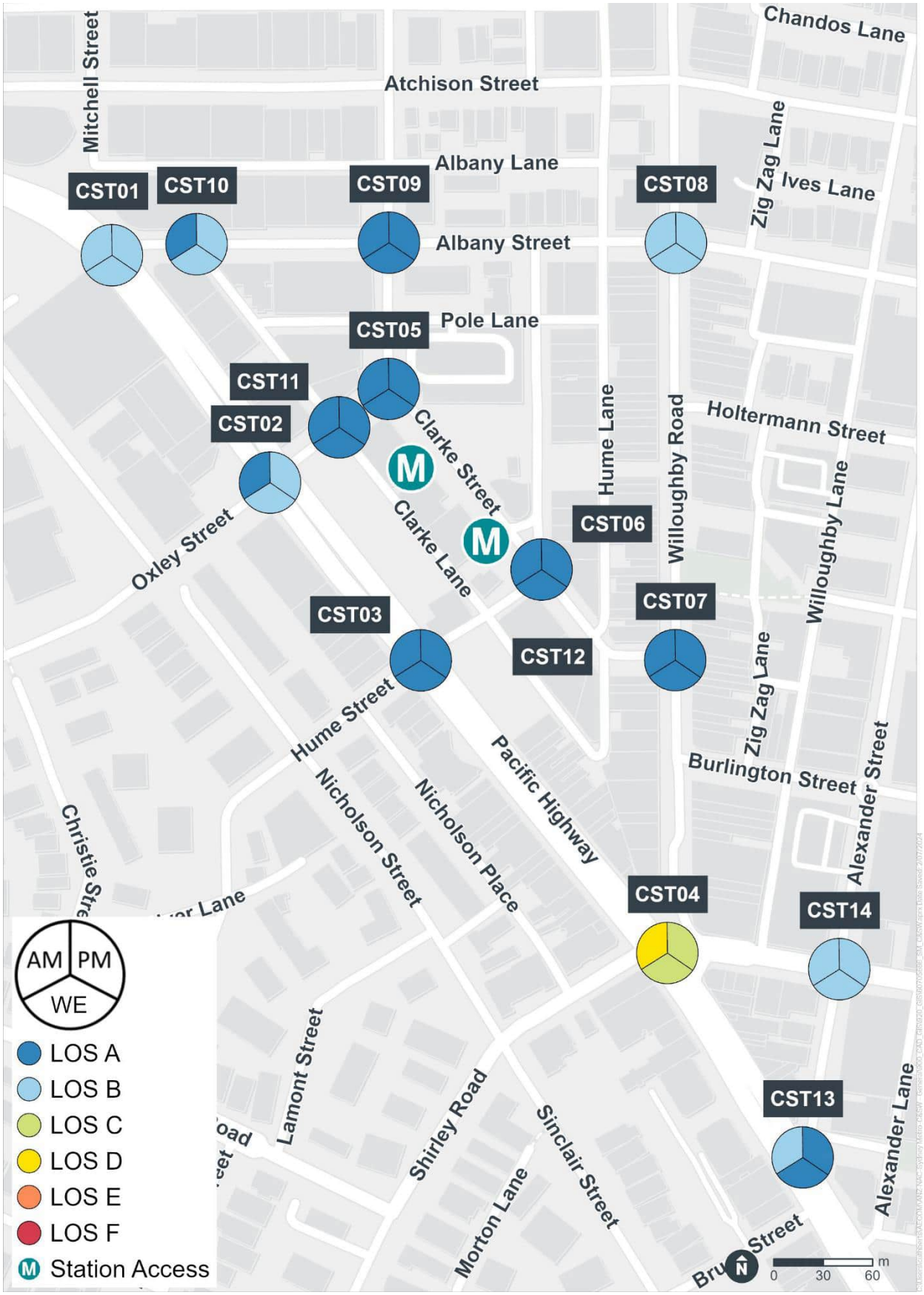
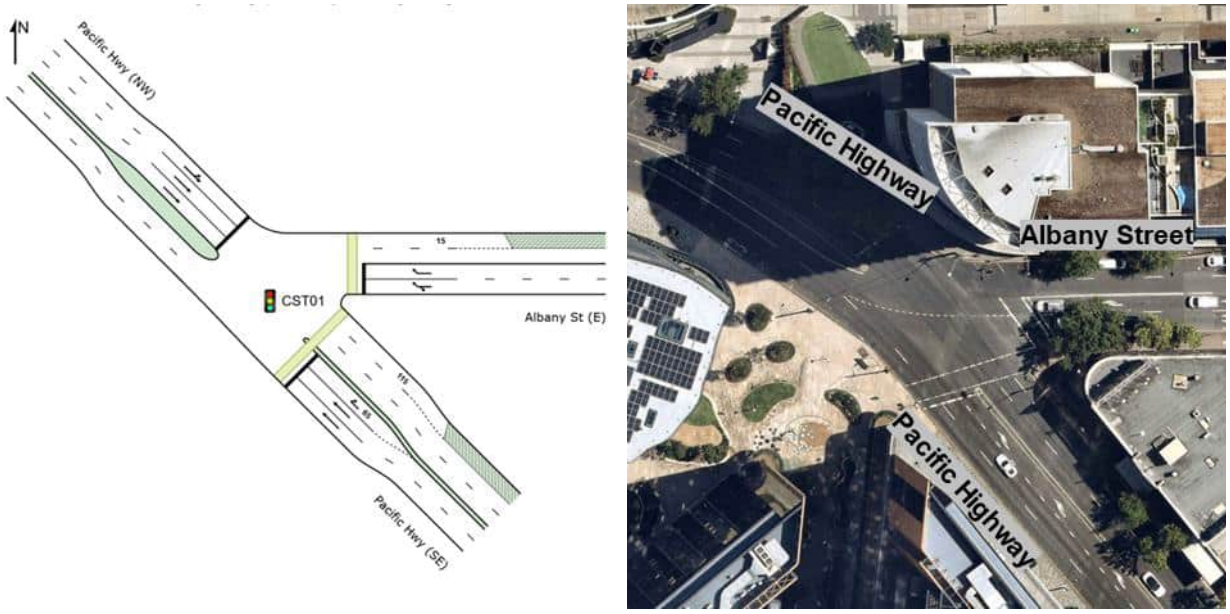


Figure 5-5 Block 3 – Crows Nest Station intersection performance summary

5.2.1 CST01 – Pacific Highway/Albany Street

This signalised intersection, composed of the Pacific Highway and Albany Street, is located north-west of Crows Nest Station. It connects the state road of the Pacific Highway (A1), linking Wahroonga and North Sydney, with the local road of Albany Street, linking Crows Nest and St Leonards.

Figure 5-6 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-6 Block 3 – AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of CST01

Table 5-6 presents a performance summary of this intersection.

Table 5-6 Block 3 – Intersection performance summary of CST01

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Pacific Highway/ Albany Street (Signal)	Weekday AM	South-east	0.731	8.1	59.6	LOS A
		East	0.696	58.6	49	LOS E
		North-west	0.662	11.9	161.8	LOS A
		Total	**0.731**	**16.6**	**161.8**	**LOS B**
	Weekday PM	South-east	0.713	19.6	148.6	LOS B
		East	0.671	53.9	49	LOS D
		North-west	0.509	10.2	101.7	LOS A
		Total	**0.713**	**20.7**	**148.6**	**LOS B**
	Weekend	South-east	0.833	10.5	69.1	LOS A
		East	0.626	52.5	49	LOS D
		North-west	0.411	10.2	72.5	LOS A
		Total	**0.833**	**17.3**	**72.5**	**LOS B**

Overall, the intersection of the Pacific Highway (A1) and Albany Street performs satisfactorily at LOS B during all peak hours. The 95th percentile queue on Albany Street (east approach) extends back to Clarke Lane during all peak hours.

5.2.2 CST02 – Pacific Highway/Oxley Street

This signalised intersection, composed of Pacific Highway and Oxley Street, is located directly north-west of Crows Nest Station. It connects the local road of Oxley Street, linking St Leonards and Naremburn through Crows Nest, with the state road of Pacific Highway (A1), linking Wahroonga and North Sydney.

During Block 3, the kerbside lane along the north-eastern side of the Pacific Highway (A1) on approach and departure from the intersection was closed during all peak hours due to Sydney Metro construction. Additionally, the kerbside approach lane on Oxley Street (north-east approach) was also closed during the weekday AM and weekend peak hours due to Sydney Metro construction.

Figure 5-7 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.

Source: Nearmap (February 2024)

Figure 5-7 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of CST02

Table 5-7 presents a performance summary of this intersection.

Table 5-7 Block 3 – Intersection performance summary of CST02

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Pacific Highway/ Oxley Street (Signal)	Weekday AM	South-east	0.532	7.7	86.6	LOS A
		North-east	0.657	57.2	49	LOS E
		North-west	0.534	1	30.6	LOS A
		South-west	0.617	57	62.6	LOS E
		Total	**0.657**	**13.6**	**86.6**	**LOS A**
		South-east	0.396	4.7	54.7	LOS A

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
	Weekday PM	North-east	0.286	51.8	37.7	LOS D
		North-west	0.401	14.9	125.4	LOS B
		South-west	0.825	73.1	112	LOS F
		Total	**0.825**	**24**	**125.4**	**LOS B**
	Weekend	South-east	0.393	5.1	42.9	LOS A
		North-east	0.514	52.6	49	LOS D
		North-west	0.315	12	88.5	LOS A
		South-west	0.487	54.9	66.3	LOS D
		Total	**0.514**	**18.3**	**88.5**	**LOS B**

Overall, the intersection of the Pacific Highway and Oxley Street performs satisfactorily at LOS B or better during all peak hours. The 95th percentile queue on Oxley Street (south-west approach) extends back to Nicholson Street during the weekday PM peak hour.

5.2.3 CST03 – Pacific Highway/Hume Street

This signalised intersection, composed of Pacific Highway and Hume Street, is located directly south-west of Crows Nest Station. It connects the state road of Pacific Highway (A1), linking Wahroonga and North Sydney, with the local road of Hume Street, linking Crows Nest and Wollstonecraft.

During Block 3, access to Hume Street (north-eastern approach) was closed due to Sydney Metro construction. Additionally, the kerbside lane was closed along the Pacific Highway (A1), adjacent to the construction site, in the south-eastbound direction of travel during all peak hours. The kerbside approach lane on the Pacific Highway (south-eastern approach), and the kerbside lanes on both sides of Hume Street (south-western approach) were closed off due to work zones during the weekday AM peak hour.

Figure 5-8 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.

Source: Nearmap (February 2024)

Figure 5-8 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of CST03

Table 5-8 presents a performance summary of this intersection.

Table 5-8 Block 3 – Intersection performance summary of CST03

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Pacific Highway/ Hume Street (Signal)	Weekday AM	South-east	0.458	0.5	13.7	LOS A
		North-west	0.811	5	185.9	LOS A
		South-west	0.713	70.3	62.8	LOS E
		Total	**0.811**	**5.8**	**185.9**	**LOS A**
	Weekday PM	South-east	0.254	2.2	32.8	LOS A
		North-west	0.42	5	90.9	LOS A
		South-west	0.373	61.7	35.6	LOS E
		Total	**0.42**	**6.1**	**90.9**	**LOS A**
	Weekend	South-east	0.315	1.3	19.6	LOS A
		North-west	0.339	4.5	64.6	LOS A
		South-west	0.288	59.6	25.6	LOS E
		Total	**0.339**	**5**	**64.6**	**LOS A**

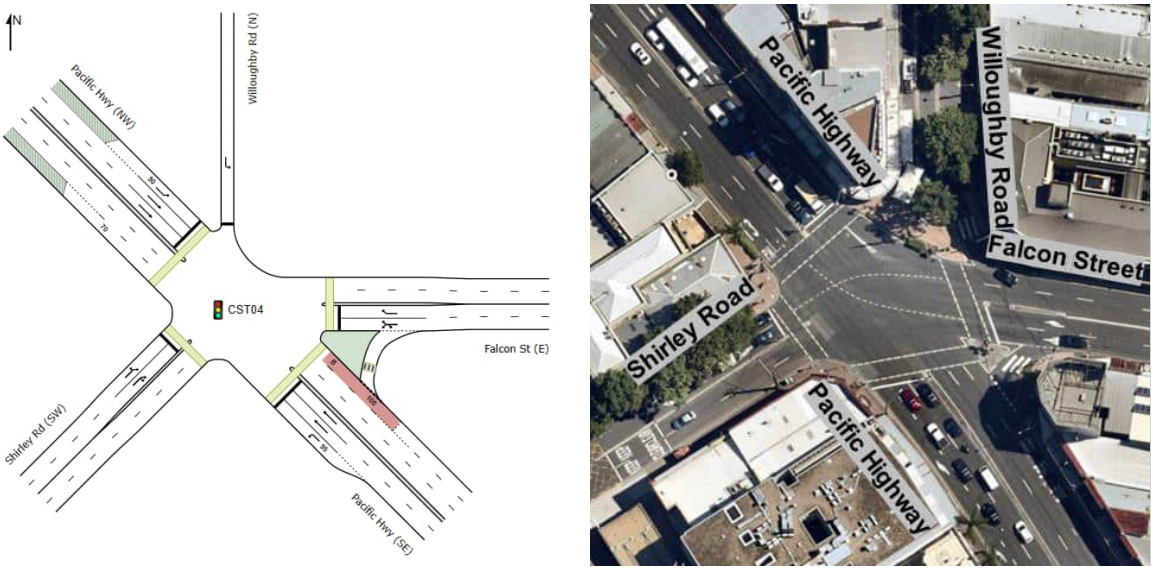
Overall, the intersection of the Pacific Highway (A1) and Hume Street performs satisfactorily at LOS A during all peak hours. The 95th percentile queue on the Pacific Highway (A1) (north-west approach) extends back to Oxley Street during the weekday AM peak hour.

5.2.4 CST04 – Pacific Highway/Falcon Street/Shirley Road

This signalised intersection, composed of Pacific Highway, Falcon Street and Shirley Road, is located south-east of Crows Nest Station. It connects the state road of Pacific Highway (A1), linking Wahroonga

to North Sydney, with the state road of Falcon Street, linking Crows Nest and Neutral Bay, and Shirley Road, linking Crows Nest and Wollstonecraft. Willoughby Road is an unsignalised approach, serving as an exit only route onto Falcon Street from the Crows Nest centre.

Figure 5-9 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-9 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of CST04

Table 5-9 presents a performance summary of this intersection.

Table 5-9 Block 3 - Intersection performance summary of CST04

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Pacific Highway/ Falcon Street/ Shirley Road (Signal)	Weekday AM	South-east	0.618	27.3	169.9	LOS B
		East	0.96	75.7	130.6	LOS F
		North	0.001	3.8	0	LOS A
		North-west	0.866	36.3	286.9	LOS C
		South-west	0.891	69.2	196.6	LOS E
		Total	**0.96**	**45.7**	**286.9**	**LOS D**
	Weekday PM	South-east	0.647	30.3	131.8	LOS C
		East	0.952	45.2	130.6	LOS D
		North	0.001	3.9	0	LOS A
		North-west	0.742	26.6	143.7	LOS B
		South-west	0.548	49.7	132.4	LOS D
		Total	**0.952**	**35.8**	**143.7**	**LOS C**
	Weekend	South-east	0.599	29.8	108.1	LOS C
		East	0.907	42.7	130.6	LOS D

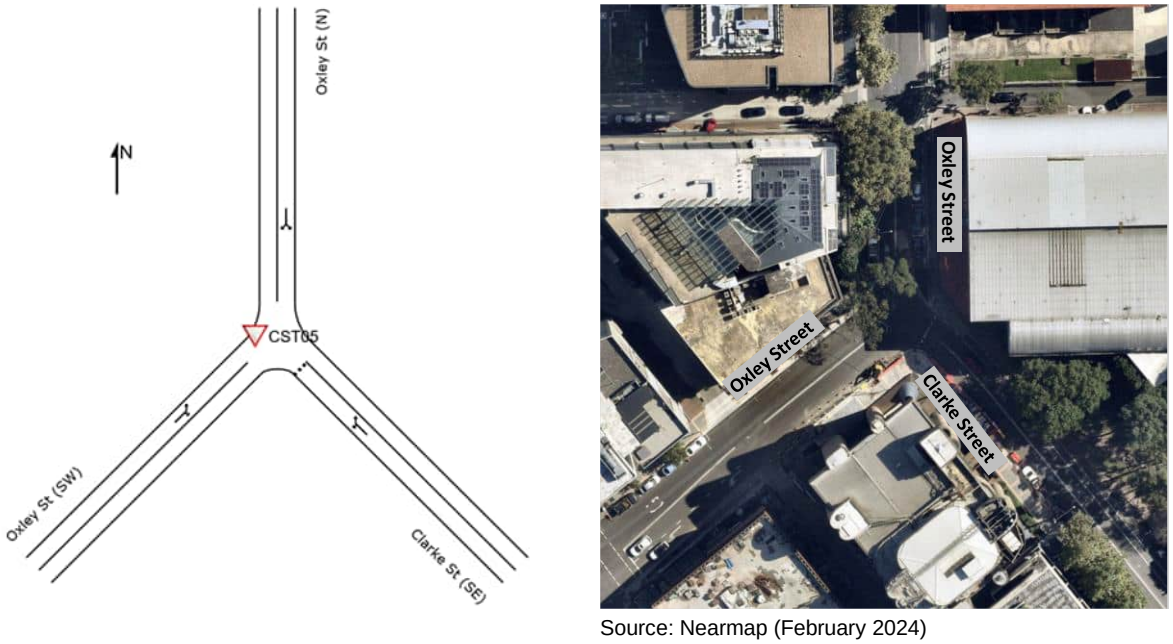
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
		North	0.001	3.8	0	LOS A
		North-west	0.678	27	111	LOS B
		South-west	0.757	49.7	166.1	LOS D
		Total	**0.907**	**36.5**	**166.1**	**LOS C**

Overall, the intersection of the Pacific Highway (A1), Falcon Street, and Shirley Road performs at LOS D or better during all peak hours, noting however it is close to capacity as indicated by the degree of saturation being close to 1.00. The 95th percentile queue on the Pacific Highway (A1) (north-west and south-east approach) extends back to Hume Street and Alexander Street, respectively, during the weekday AM peak hour. Similarly, the 95th percentile queue on Falcon Street (east approach) extends back to Alexander Street during all peak hours.

5.2.5 CST05 – Clarke Street/Oxley Street

This priority intersection, composed of Oxley Street and Clarke Street, is located directly north of Crows Nest Station. It connects the local roads of Clarke Street in Crows Nest and Oxley Street, linking Wollstonecraft and Naremburn through Crows Nest.

Figure 5-10 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-10 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of CST05

Table 5-10 presents a performance summary of this intersection.

Table 5-10 Block 3 - Intersection performance summary of CST05

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Clarke Street/ Oxley Street (Priority – Give Way)	Weekday AM	South-east	0.072	5.8	1.8	LOS A
		North	0.127	4.5	0	LOS A
		South-west	0.131	3.7	3.9	LOS A
		Total	**0.072**	**5.8**	**1.8**	**LOS A**
	Weekday PM	South-east	0.087	6	2.1	LOS A
		North	0.148	4.4	0	LOS A
		South-west	0.142	3.9	4.4	LOS A
		Total	**0.087**	**6**	**2.1**	**LOS A**
	Weekend	South-east	0.08	5.6	2	LOS A
		North	0.135	4.4	0	LOS A
		South-west	0.113	3.8	3.1	LOS A
		Total	**0.08**	**5.6**	**2**	**LOS A**

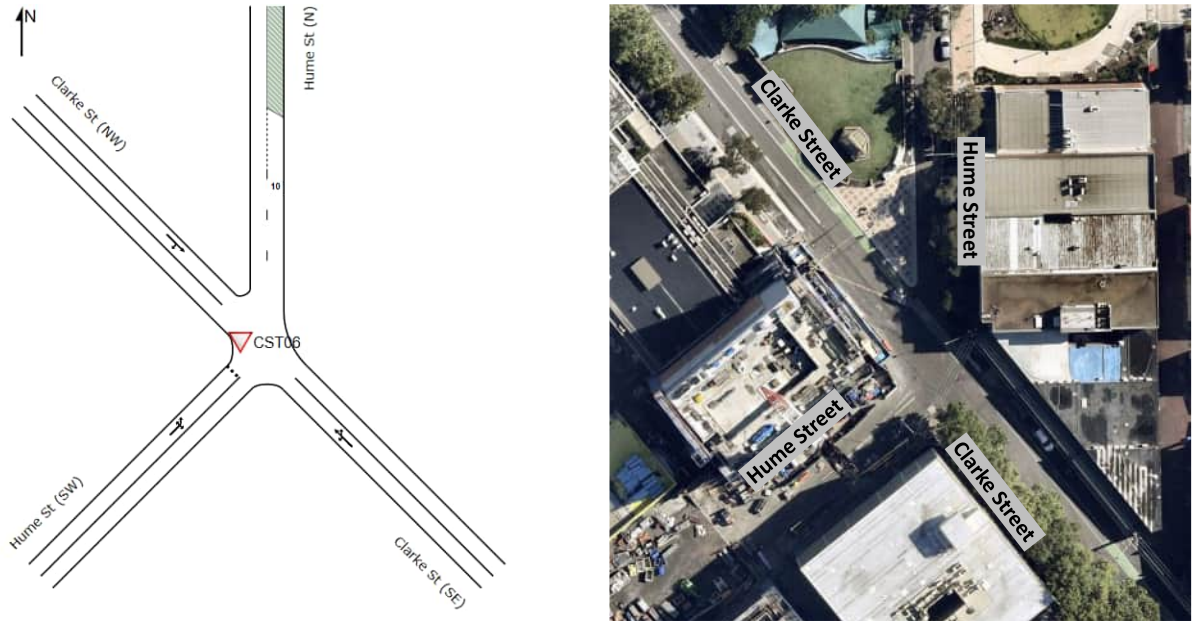
Overall, the intersection of Clarke Street and Oxley Street performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.2.6 CST06 – Clarke Street/Hume Street

This priority intersection, composed of Clarke Street and Hume Street, is located directly north-east of Crows Nest Station. It connects the local roads of Clarke Street in Crows Nest and Hume Street, linking Crows Nest and Wollstonecraft.

During Block 3, access to Hume Street (south-west approach) was limited to residential access and transportation of construction materials only. During all peak hours, Clarke Street (south-east approach) was observed to operate as a two-way one-lane road under controlled conditions, managed by on-site traffic controllers. Similarly, traffic control was observed at the intersection to facilitate construction vehicle movements.

Figure 5-11 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-11 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of CST06

Table 5-11 presents a performance summary of this intersection.

Table 5-11 Block 3 - Intersection performance summary of CST06

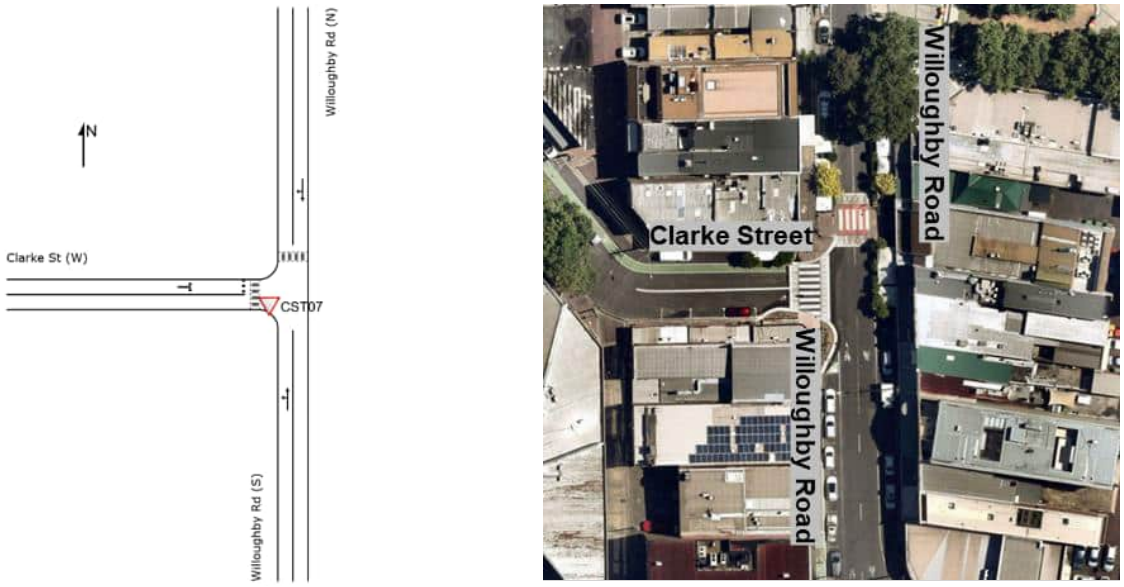
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Clarke Street/ Hume Street (Priority – Give Way)	Weekday AM	South-east	0.067	4.9	1	LOS A
		North-west	0.025	4.8	0.1	LOS A
		South-west	0.005	4.2	0.1	LOS A
		Total	**0.067**	**4.9**	**1**	**LOS A**
	Weekday PM	South-east	0.116	4.8	1.8	LOS A
		North-west	0.041	4.7	0.1	LOS A
		South-west	0.023	4.6	0.3	LOS A
		Total	**0.116**	**4.8**	**1.8**	**LOS A**
	Weekend	South-east	0.103	4.8	1.7	LOS A
		North-west	0.045	4.6	0.1	LOS A
		South-west	0.006	4.4	0.1	LOS A
		Total	**0.103**	**4.8**	**1.7**	**LOS A**

Overall, the intersection of Clarke Street and Hume Street performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.2.7 CST07 – Clarke Street/Willoughby Road

This priority intersection, composed of Clarke Street and Willoughby Road, is located east of Crows Nest Station. It connects the local roads of Clarke Street in Crows Nest and Willoughby Road, linking Crows Nest and Willoughby.

Figure 5-12 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-12 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of CST07

Table 5-12 presents a performance summary of this intersection.

Table 5-12 Block 3 - Intersection performance summary of CST07

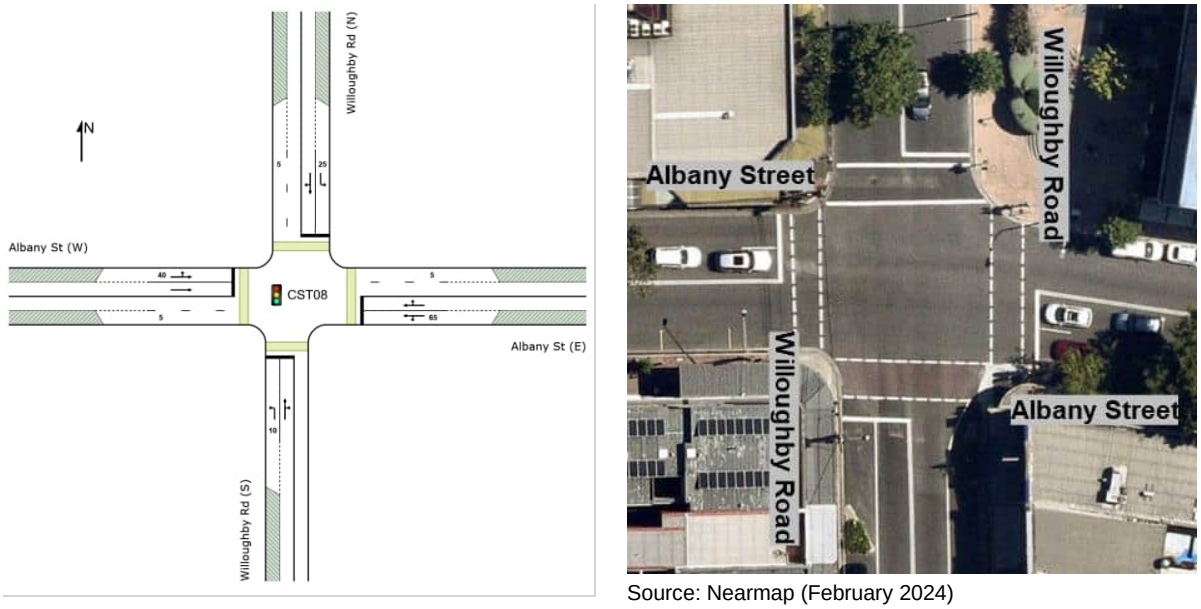
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Clarke Street/ Willoughby Road (Priority – Give Way)	Weekday AM	South	0.253	4.1	10	LOS A
		North	0.208	7.3	6.7	LOS A
		West	0.141	6.3	3.7	LOS A
		Total	**0.208**	**7.3**	**6.7**	**LOS A**
	Weekday PM	South	0.301	5.2	10.9	LOS A
		North	0.399	13.1	16	LOS A
		West	0.349	10.6	10.5	LOS A
		Total	**0.399**	**13.1**	**16**	**LOS A**
	Weekend	South	0.248	4.9	8.6	LOS A
		North	0.374	11.3	14.5	LOS A
		West	0.233	8.2	6.1	LOS A
		Total	**0.374**	**11.3**	**14.5**	**LOS A**

Overall, the intersection of Clarke Street and Willoughby Road performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.2.8 CST08 – Albany Street/Willoughby Road

This signalised intersection, composed of Albany Street and Willoughby Road, is located north-east of Crows Nest Station. It connects the local roads of Albany Street, linking Crows Nest and St Leonards, and Willoughby Road, linking Crows Nest and Willoughby.

Figure 5-13 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-13 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of CST08

Table 5-13 presents a performance summary of this intersection.

Table 5-13 Block 3 - Intersection performance summary of CST08

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Albany Street/ Willoughby Road (Signal)	Weekday AM	South	0.256	20.1	28.5	LOS B
		East	0.71	23.6	58.8	LOS B
		North	0.342	15.7	38	LOS B
		West	0.731	30.4	77.2	LOS C
		Total	**0.731**	**23.2**	**77.2**	**LOS B**
	Weekday PM	South	0.281	25	27.4	LOS B
		East	0.544	18.5	48	LOS B
		North	0.36	17.8	38.2	LOS B
		West	0.613	25.1	72.3	LOS B
		Total	**0.613**	**21.2**	**72.3**	**LOS B**
	Weekend	South	0.198	19	20.9	LOS B

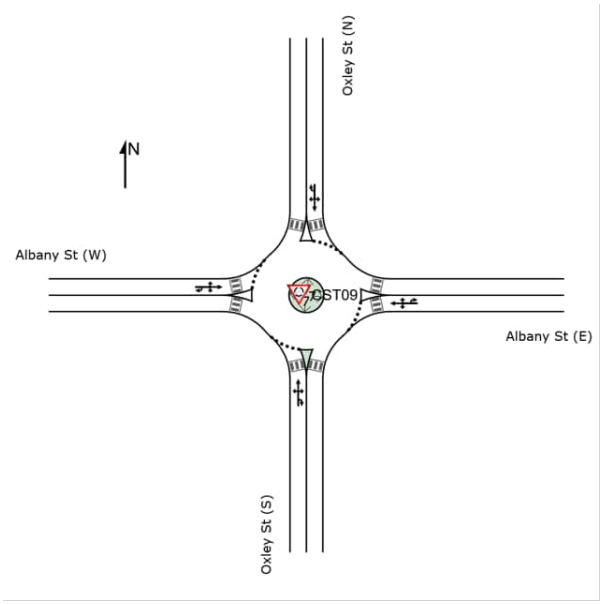
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
		East	0.798	27.2	89.6	LOS B
		North	0.358	15.9	40.5	LOS B
		West	0.625	29.5	58.9	LOS C
		Total	**0.798**	**24**	**89.6**	**LOS B**

Overall, the intersection of Albany Street and Willoughby Road performs satisfactorily at LOS B during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.2.9 CST09 – Albany Street/Oxley Street

This roundabout, composed of Albany Street and Oxley Street, is located north of Crows Nest Station. It connects the local roads of Albany Street, linking Crows Nest and St Leonards, and Oxley Street, linking Wollstonecraft and Naremburn through Crows Nest.

Figure 5-14 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-14 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of CST09

Table 5-14 presents a performance summary of this intersection.

Table 5-14 Block 3 - Intersection performance summary of CST09

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Albany Street/Oxley Street	Weekday AM	South	0.223	11.5	10.4	LOS A
		East	0.445	10.8	21.1	LOS A
		North	0.339	11.8	16.1	LOS A

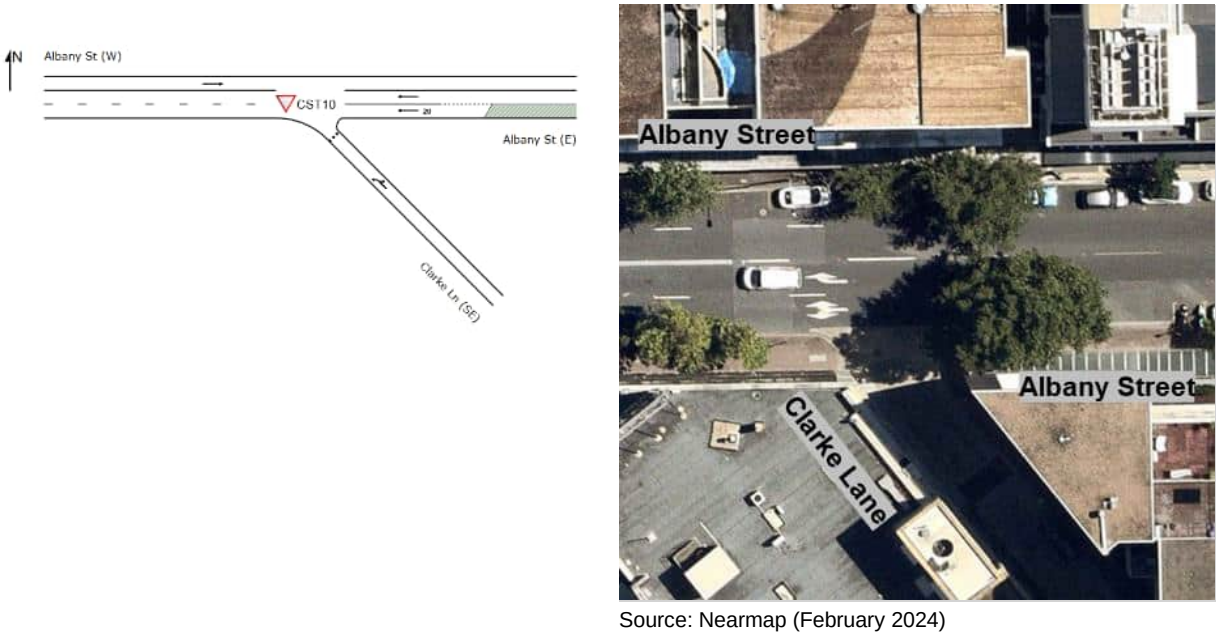
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
(Roundabout)		West	0.494	9.7	28.6	LOS A
		Total	**0.339**	**11.8**	**16.1**	**LOS A**
	Weekday PM	South	0.4	12	18.3	LOS A
		East	0.775	15.5	40.3	LOS B
		North	0.351	12.4	17.2	LOS A
		West	0.549	10.5	32.7	LOS A
		Total	**0.775**	**15.5**	**40.3**	**LOS A**
	Weekend	South	0.325	11.5	15.7	LOS A
		East	0.413	10.1	18.7	LOS A
		North	0.218	11.4	9.8	LOS A
		West	0.49	10.4	28	LOS A
		Total	**0.325**	**11.5**	**15.7**	**LOS A**

Overall, the intersection of Albany Street and Oxley Street performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.2.10 CST10 – Albany Street/Clarke Lane

This priority intersection, composed of Albany Street and Clarke Lane, is located north-west of Crows Nest Station. It connects the local roads of Clarke Lane in Crows Nest with Albany Street, linking Crows Nest and St Leonards.

Figure 5-15 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-15 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of CST10

Table 5-15 presents a performance summary of this intersection.

Table 5-15 Block 3 - Intersection performance summary of CST10

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Albany Street/ Clarke Lane (Priority – Give Way)	Weekday AM	South-east	0.04	13.9	32.8	LOS A
		East	0.217	0	62.5	LOS A
		West	0.261	0	0	LOS A
		Total	**0.04**	**13.9**	**32.8**	**LOS A**
	Weekday PM	South-east	0.045	14.6	8.2	LOS B
		East	0.126	0	60.4	LOS A
		West	0.264	0	0	LOS A
		Total	**0.045**	**14.6**	**8.2**	**LOS B**
	Weekend	South-east	0.047	19.2	19.7	LOS B
		East	0.203	0	45.5	LOS A
		West	0.246	0	0	LOS A
		Total	**0.047**	**19.2**	**19.7**	**LOS B**

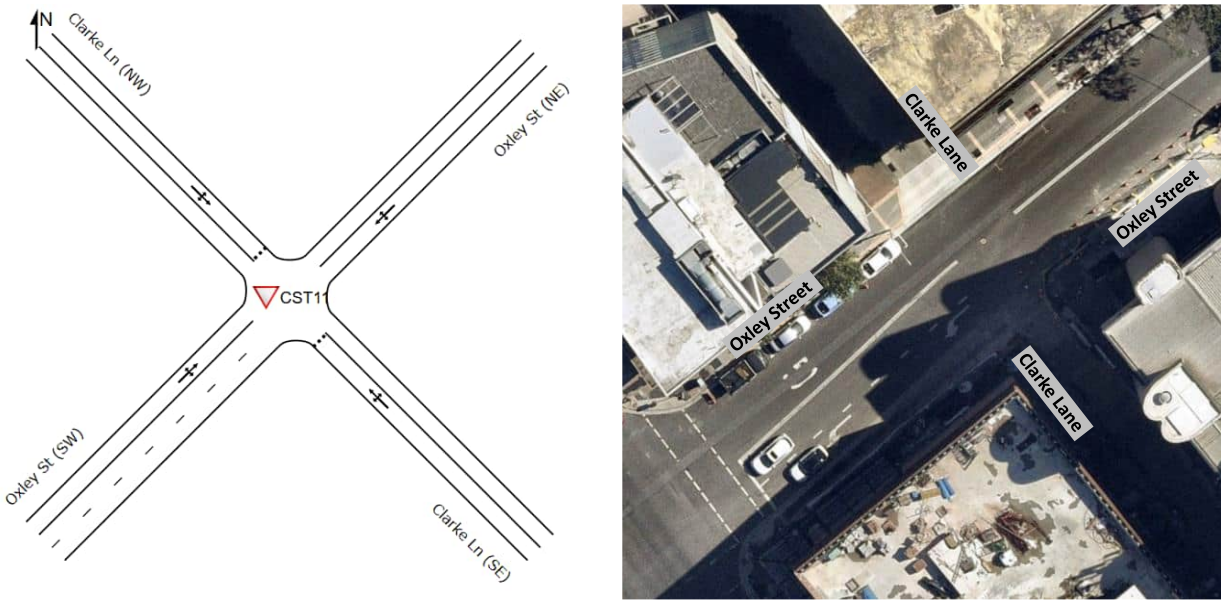
Overall, the intersection of Albany Street and Clarke Lane performs satisfactorily at LOS B or better during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.2.11 CST11 – Oxley Street/Clarke Lane

This priority intersection, composed of Oxley Street and Clarke Lane, is located directly north-west of Crows Nest Station. It connects the local roads of Clarke Lane in Crows Nest and Oxley Street, linking Wollstonecraft and Naremburn through Crows Nest.

During Block 3, access to Clarke Lane (south-east approach) was limited to Sydney Metro construction vehicles only. Additionally, the kerbside departure lane of Oxley Street (south-west approach) was closed off during the weekday AM and weekend peak hours due to Sydney Metro construction.

Figure 5-16 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-16 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of CST11

Table 5-16 presents a performance summary of this intersection.

Table 5-16 Block 3 - Intersection performance summary of CST11

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Oxley Street/ Clarke Lane (Priority – Give Way)	Weekday AM	South-east	0.011	7.8	0.2	LOS A
		North-east	0.106	3	0.1	LOS A
		North-west	0.027	6.6	0.5	LOS A
		South-west	0.116	3.3	0.2	LOS A
		Total	**0.011**	**7.8**	**0.2**	**LOS A**
	Weekday PM	South-east	0.006	6.5	0.1	LOS A
		North-east	0.127	3.3	0.3	LOS A
		North-west	0.014	6.5	0.4	LOS A
		South-west	0.119	3	0.1	LOS A
		Total	**0.006**	**6.5**	**0.1**	**LOS A**
	Weekend	South-east	0.006	9.4	5.6	LOS A
		North-east	0.089	3.5	0.5	LOS A
		North-west	0.024	6.2	21.7	LOS A
		South-west	0.092	3	0.1	LOS A
		Total	**0.006**	**9.4**	**5.6**	**LOS A**

Overall, the intersection of Oxley Street and Clarke Lane performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.2.12 CST12 – Hume Street/Clarke Lane

This priority intersection, composed of Hume Street and Clarke Lane, is located within the Crows Nest Station boundary. It connects the local roads of Clarke Lane in Crows Nest and Hume Street, linking Crows Nest and Wollstonecraft.

During Block 3, the intersection was closed due to construction works and as such, it was not assessed as part of the Block 3 study.

5.2.13 CST13 – Pacific Highway/Alexander Street

This signalised intersection, composed of Pacific Highway, Alexander Street and Hayberry Street, is located south-east of Crows Nest Station. It connects the state road of Pacific Highway (A1), linking Wahroonga to North Sydney, with the local roads of Alexander Street and Hayberry Street in Crows Nest. Hayberry Street was not modelled.

Figure 5-17 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.

Source: Nearmap (February 2024)

Figure 5-17 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of CST13

Table 5-17 presents a performance summary of this intersection.

Table 5-17 Block 3 - Intersection performance summary of CST13

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Pacific Highway/ Alexander Street (Signal)	Weekday AM	South-east	0.506	11.3	74.9	LOS A
		North	0.612	35.7	78.2	LOS C
		North-west	0.804	14.3	161.8	LOS A
		Total	**0.804**	**15.5**	**161.8**	**LOS B**
	Weekday PM	South-east	0.432	8.8	61.8	LOS A
		North	0.885	48.1	77.1	LOS D
		North-west	0.525	5.1	69.8	LOS A
		Total	**0.885**	**12.7**	**77.1**	**LOS A**

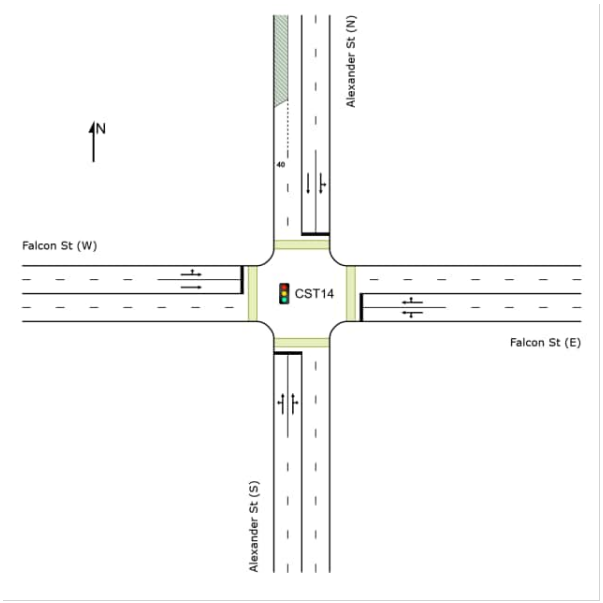
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
	Weekend	South-east	0.356	8.8	48.9	LOS A
		North	0.788	49.2	53.1	LOS D
		North-west	0.476	9.3	45.2	LOS A
		Total	**0.788**	**14.5**	**53.1**	**LOS A**

Overall, the intersection of the Pacific Highway (A1) and Alexander Street performs satisfactorily at LOS B or better during all peak hours. The 95th percentile queue on the Pacific Highway (A1) (north-west approach) extends back to Shirley Road and Falcon Street during the weekday AM peak hour.

5.2.14 CST14 – Falcon Street/Alexander Street

This signalised intersection, comprised of Falcon Street and Alexander Street, is located south-east of Crows Nest Station. It connects the local road of Alexander Street in Crows Nest with the state road of Falcon Street, linking Crows Nest and Neutral Bay.

Figure 5-18 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-18 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of CST14

Table 5-18 presents a performance summary of this intersection.

Table 5-18 Block 3 - Intersection performance summary of CST14

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Falcon Street/ Alexander Street	Weekday AM	South	0.63	68.5	92.2	LOS E
		East	0.433	19.5	94.8	LOS B
		North	0.558	54.8	84.9	LOS D

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
(Signal)		West	0.355	2.1	23.5	LOS A
		Total	**0.63**	**24.6**	**94.8**	**LOS B**
	Weekday PM	South	0.666	66.4	90.6	LOS E
		East	0.497	17.1	109.3	LOS B
		North	0.558	53.6	81.8	LOS D
		West	0.365	2.3	23.2	LOS A
		Total	**0.666**	**22.6**	**109.3**	**LOS B**
	Weekend	South	0.615	64.1	80.9	LOS E
		East	0.701	26.5	173.2	LOS B
		North	0.758	81.7	107.2	LOS F
		West	0.619	2.6	34.8	LOS A
		Total	**0.758**	**26.1**	**173.2**	**LOS B**

Overall, the intersection of Falcon Street and Alexander Street performs satisfactorily at LOS B during all peak hours. The 95th percentile queue on Alexander Street (south approach) extends back to Pacific Highway (A1) during the weekday AM and PM peak hours. Similarly, the 95th percentile queue on Alexander Street (north approach) extends back to Burlington Street during the weekend peak hour.

5.2.15 Comparison with previous study blocks

Figure 5-19 provides a comparison of the total peak hourly traffic volumes recorded across all intersections for Block 3 against previous study blocks. As shown, Block 3 traffic volumes were slightly higher during all peak hours compared to Block 1. Similarly, Block 3 traffic volumes were slightly higher during the AM peak hour, and lower during the PM and weekend peak hours compared to Block 2.

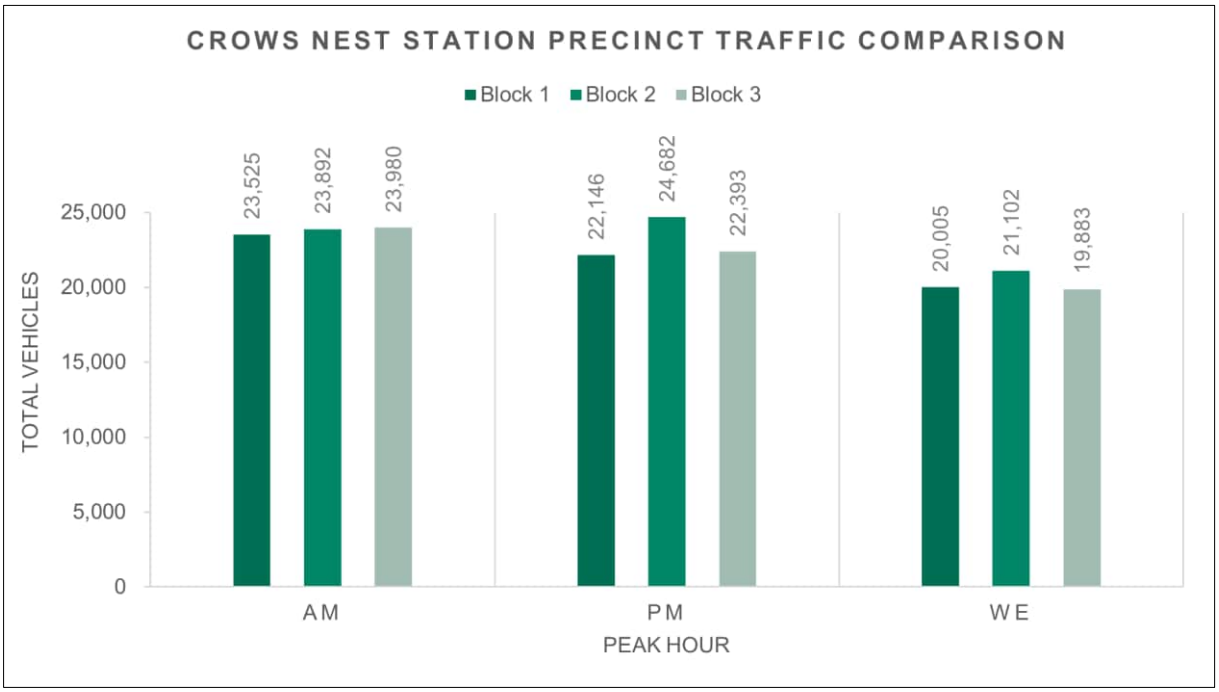


Figure 5-19 Study block comparison – Crows Nest Station peak hourly traffic volume across all intersections

A comparison of the intersection LOS for Block 3 against previous study blocks is shown in Figure 5-20 and Figure 5-21. All intersections in the Crows Nest Station study area perform at LOS D or better during Block 3, which is generally similar to previous study blocks. Pacific Highway/Falcon Street/Shirley Road (CST04) had a notable change in LOS, whereby the intersection reduced from a LOS C to a D in the weekday AM peak hour compared to Block 2. This change in LOS for CST04 was due to higher traffic volumes at this intersection during Block 3.

Figure 5-20 Study block comparison – Crows Nest Station intersection performance summary (CST01-CST08)

Figure 5-21 Study block comparison – Crows Nest Station intersection performance summary (CST09-CST14)

5.3 Victoria Cross Station

Victoria Cross Station is a new underground station and the third stop on the City & Southwest Line (towards Sydenham). It is located in the centre of the North Sydney commercial centre and north of the existing North Sydney Station.

Victoria Cross Station will have two station entrances, Victoria Cross North, at the north-east corner of the intersection of Miller Street and McLaren Street, and Victoria Cross South, at the south-east corner of the intersection of Miller Street and Berry Street. Victoria Cross Station was still under construction during Block 3. Construction access to Victoria Cross North was facilitated via McLaren Street, east of Miller Street, whereas access to Victoria Cross South was facilitated via Denison Street.

Bus services are available within approximately 150 metres of Victoria Cross Station, located along Miller Street and Pacific Highway. Pedestrian footpaths are provided on both sides of Miller Street and Pacific Highway in the vicinity of Victoria Cross Station.

The Victoria Cross Station study area consists of four intersections. Table 5-19 presents the peak hours utilised for modelling the intersections. Table 5-20 provides a summary of the intersection LOS while Figure 5-22 visualises a geospatial summary of the intersection LOS within the Victoria Cross Station study area.

Table 5-19 Block 3 - Victoria Cross Station peak hours modelled

Network ID	Intersection ID	Weekday AM peak hour		Weekday PM peak hour		Weekend peak hour	
		Day	Start time	Day	Start time	Day	Start time
VIC-N1	VIC01	Wednesday	8.00am	Friday	3.00pm	Saturday	11.45am
	VIC02						
	VIC03						
	VIC04						

Table 5-20 Block 3 - Victoria Cross Station intersection performance summary

Intersection ID	Intersection	LOS		
		Weekday AM Peak	Weekday PM Peak	Weekend Peak
VIC01	Pacific Highway/Berry Street (Signal)	LOS A	LOS A	LOS A
VIC02	Miller Street/Berry Street (Signal)	LOS C	LOS C	LOS C
VIC03	Miller Street/McLaren Street (Signal)	LOS B	LOS B	LOS B
VIC04	Pacific Highway/Miller Street (Signal)	LOS C	LOS C	LOS B

Overall, the intersection performance in the Victoria Cross Station study area during the peak hours is satisfactory, operating at LOS C or better.

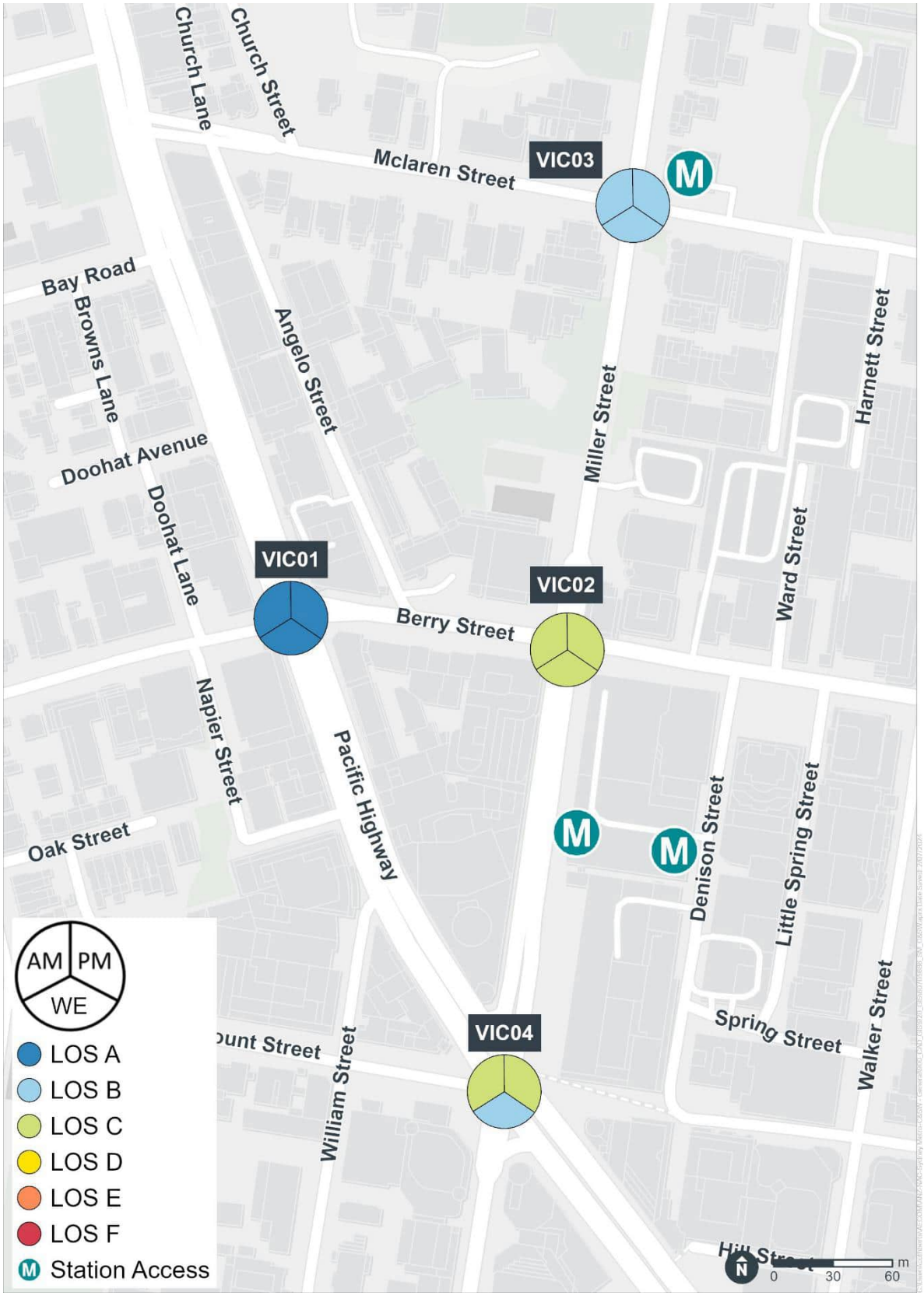
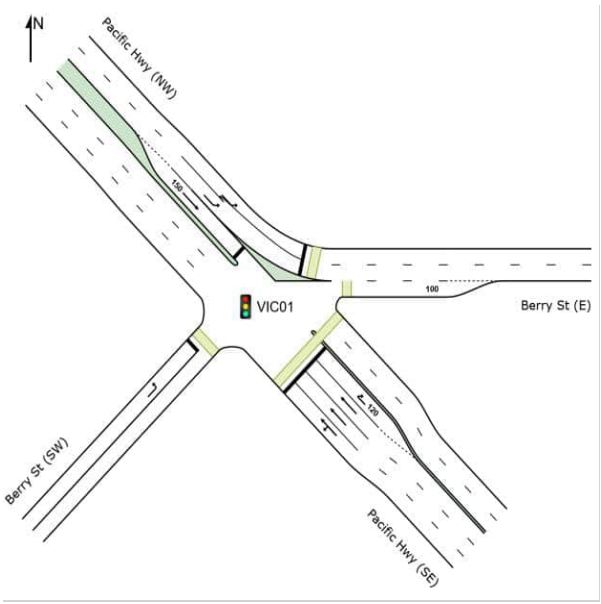


Figure 5-22 Block 3 – Victoria Cross Station intersection performance summary

5.3.1 VIC01 – Pacific Highway/Berry Street

This signalised intersection, composed of Pacific Highway and Berry Street, is located east of Victoria Cross South. It connects the state road of Pacific Highway (A1), linking Wahroonga and North Sydney, with the local road of Berry Street, linking North Sydney to the Warringah Freeway (M1). Berry Street (south-west approach) is not signalised; however, for modelling purposes, it has been simulated as a signalised approach operating in every phase.

Figure 5-23 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-23 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of VIC01

Table 5-21 presents a performance summary of this intersection.

Table 5-21 Block 3 - Intersection performance summary of VIC01

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Pacific Highway/ Berry Street (Signal)	Weekday AM	South-east	0.88	9.3	67.8	LOS A
		North-west	0.639	12.9	102.4	LOS A
		South-west	0.107	6.2	4.1	LOS A
		Total	**0.88**	**11.1**	**102.4**	**LOS A**
	Weekday PM	South-east	0.685	10.1	49.9	LOS A
		North-west	0.455	10.8	70.3	LOS A
		South-west	0.054	5.7	2	LOS A
		Total	**0.685**	**10.4**	**70.3**	**LOS A**
	Weekend	South-east	0.527	5.9	41.1	LOS A
		North-west	0.415	10	68.6	LOS A
		South-west	0.063	9.7	4.5	LOS A

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
		Total	**0.527**	**7.8**	**68.6**	**LOS A**

Overall, the intersection of the Pacific Highway (A1) and Berry Street performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.3.2 VIC02 – Miller Street/Berry Street

This signalised intersection, composed of Miller Street and Berry Street, is located directly west of Victoria Cross South. It connects the regional road of Miller Street, linking Cammeray and North Sydney, with the local road of Berry Street, linking North Sydney to the Warringah Freeway (M1).

During Block 3, the southern departure kerbside lane of Miller Street was partially closed off during the weekday AM and PM peak hours, due to Sydney Metro construction.

Figure 5-24 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.

Source: Nearmap (February 2024)

Figure 5-24 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of VIC02

Table 5-22 presents a performance summary of this intersection.

Table 5-22 Block 3 - Intersection performance summary of VIC02

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Miller Street/Berry Street (Signal)	Weekday AM	South	0.928	44.1	133.7	LOS D
		North	0.889	54.7	120.9	LOS D
		West	0.68	33.2	141.4	LOS C
		Total	**0.928**	**40.9**	**141.4**	**LOS C**

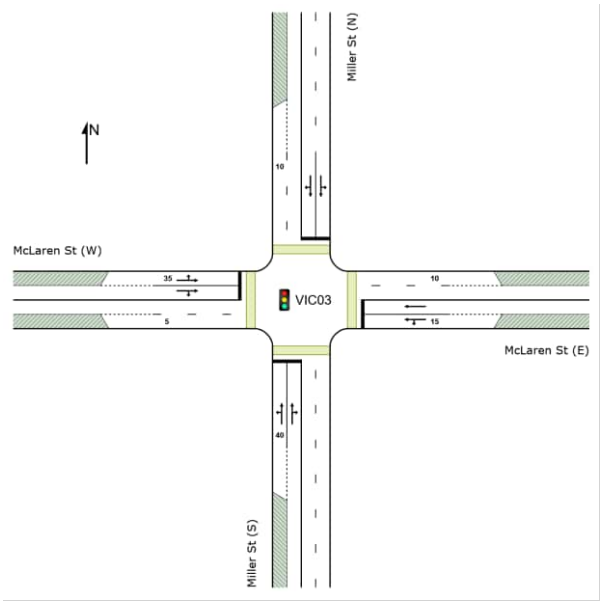
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
	Weekday PM	South	0.653	16.8	89.6	LOS B
		North	0.827	49.9	90.1	LOS D
		West	0.619	43.8	111.2	LOS D
		Total	**0.827**	**35.1**	**111.2**	**LOS C**
	Weekend	South	0.793	39.2	78.4	LOS C
		North	0.694	49.8	59	LOS D
		West	0.345	23.7	72.8	LOS B
		Total	**0.793**	**34.3**	**78.4**	**LOS C**

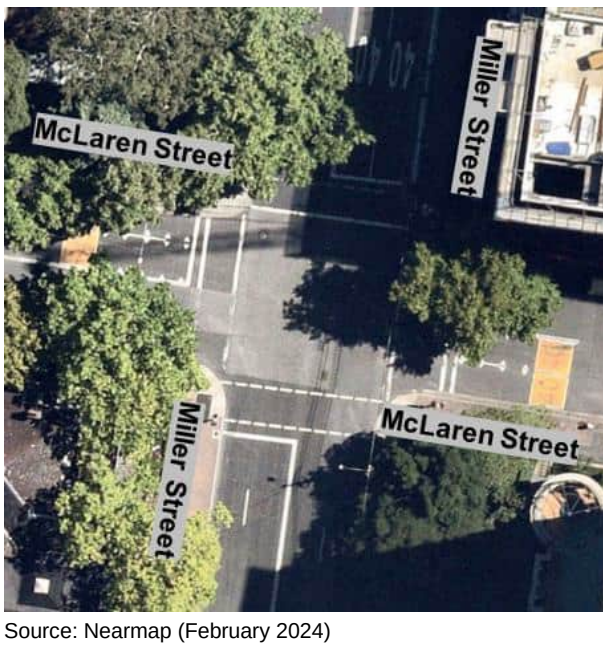
Overall, the intersection of Miller Street and Berry Street performs satisfactorily at LOS C during all peak hours. The 95th percentile queue on Berry Street (west approach) extends back to the Pacific Highway (A1) during the weekday AM and PM peak hours.

5.3.3 VIC03 – Miller Street/McLaren Street

This signalised intersection, composed of Miller Street and McLaren Street, is located directly south of Victoria Cross North. It connects the regional road of Miller Street, linking North Sydney and Cammeray, with the local road of McLaren Street in North Sydney.

Figure 5-25 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.





Source: Nearmap (February 2024)

Figure 5-25 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of VIC03

Table 5-23 presents a performance summary of this intersection.

Table 5-23 Block 3 - Intersection performance summary of VIC03

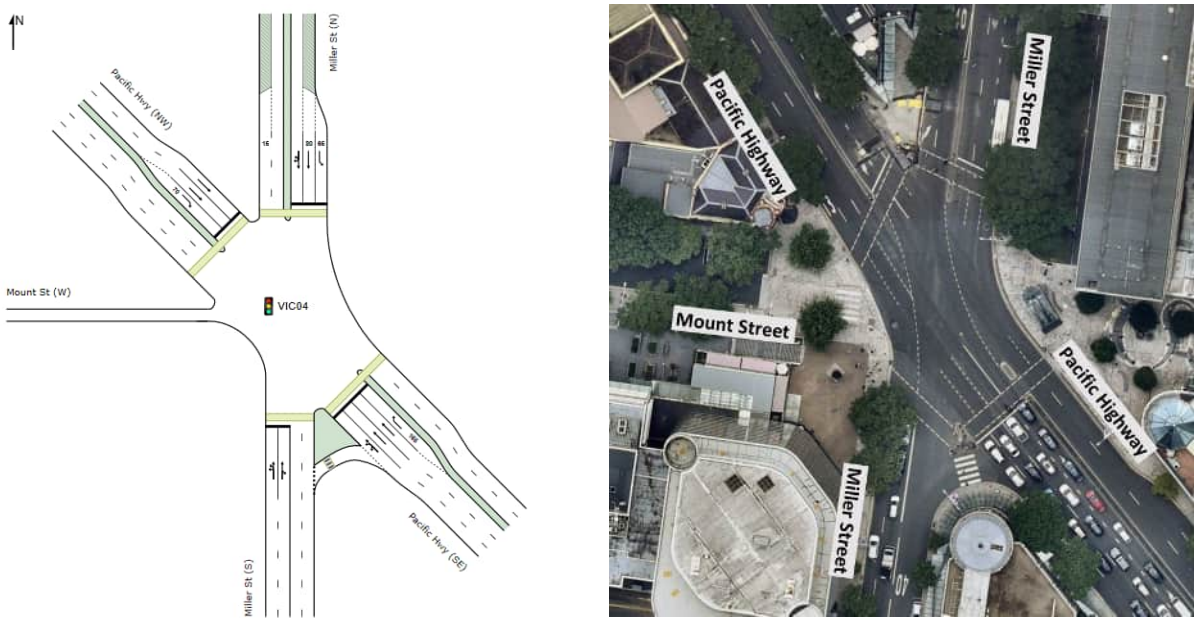
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Miller Street/McLaren Street (Signal)	Weekday AM	South	0.344	8.8	65.9	LOS A
		East	0.532	52.5	24.4	LOS D
		North	0.313	12.2	62.7	LOS A
		West	0.758	52.1	56	LOS D
		Total	**0.758**	**21.8**	**65.9**	**LOS B**
	Weekday PM	South	0.255	9.2	43.3	LOS A
		East	0.516	60.8	48.2	LOS E
		North	0.496	14.6	75.1	LOS B
		West	0.452	42.6	38.5	LOS D
		Total	**0.516**	**22.7**	**75.1**	**LOS B**
	Weekend	South	0.273	8.8	29.9	LOS A
		East	0.272	27.7	11.9	LOS B
		North	0.327	12.2	33.7	LOS A
		West	0.352	24.9	17.4	LOS B
		Total	**0.352**	**14.7**	**33.7**	**LOS B**

Overall, the intersection of Miller Street and McLaren Street performs satisfactorily at LOS B during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.3.4 VIC04 – Pacific Highway/Miller Street

This signalised intersection, composed of the Pacific Highway, Miller Street and Mount Street, is located directly south of Victoria Cross South. It connects the state road of Pacific Highway (A1), linking Wahroonga and North Sydney, with the regional road of Miller Street, linking North Sydney and Cammeray. Additionally, it provides travel to the west of North Sydney via the Mount Street unsignalised egress-only approach.

Figure 5-26 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-26 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of VIC04

Table 5-24 presents a performance summary of this intersection.

Table 5-24 Block 3 - Intersection performance summary of VIC04

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Pacific Highway/ Miller Street (Signal)	Weekday AM	South	0.482	36.4	68.4	LOS C
		South-east	0.929	45.1	200.4	LOS D
		North	0.277	7.4	14.2	LOS A
		North-west	0.947	52.5	120.3	LOS D
		Total	**0.947**	**41.2**	**200.4**	**LOS C**
	Weekday PM	South	0.673	36.1	120.4	LOS C
		South-east	0.86	34.4	112.8	LOS C
		North	0.187	10.4	12.7	LOS A
		North-west	0.568	49.1	71.1	LOS D
		Total	**0.86**	**34.6**	**120.4**	**LOS C**
	Weekend	South	0.627	41.7	65.4	LOS C
		South-east	0.666	23.7	81.2	LOS B
		North	0.405	5.4	6.8	LOS A
		North-west	0.695	38.8	83.9	LOS C
		Total	**0.695**	**27.6**	**83.9**	**LOS B**

Overall, the intersection of the Pacific Highway (A1), Miller Street and Mount Street performs satisfactorily at LOS C or better during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.3.5 Comparison with previous study blocks

Figure 5-27 provides a comparison of the total peak hourly traffic volumes recorded across all intersections for Block 3 against previous study blocks. As shown, Block 3 traffic volumes were higher in all peak hours compared to Block 1. Similarly, Block 3 traffic volumes were slightly higher during the AM and PM peak hours, and lower during the weekend peak hour compared to Block 2. The variability in traffic volumes in the area between study blocks may be due to the ongoing construction works associated with the nearby Warringah Freeway Upgrade project.

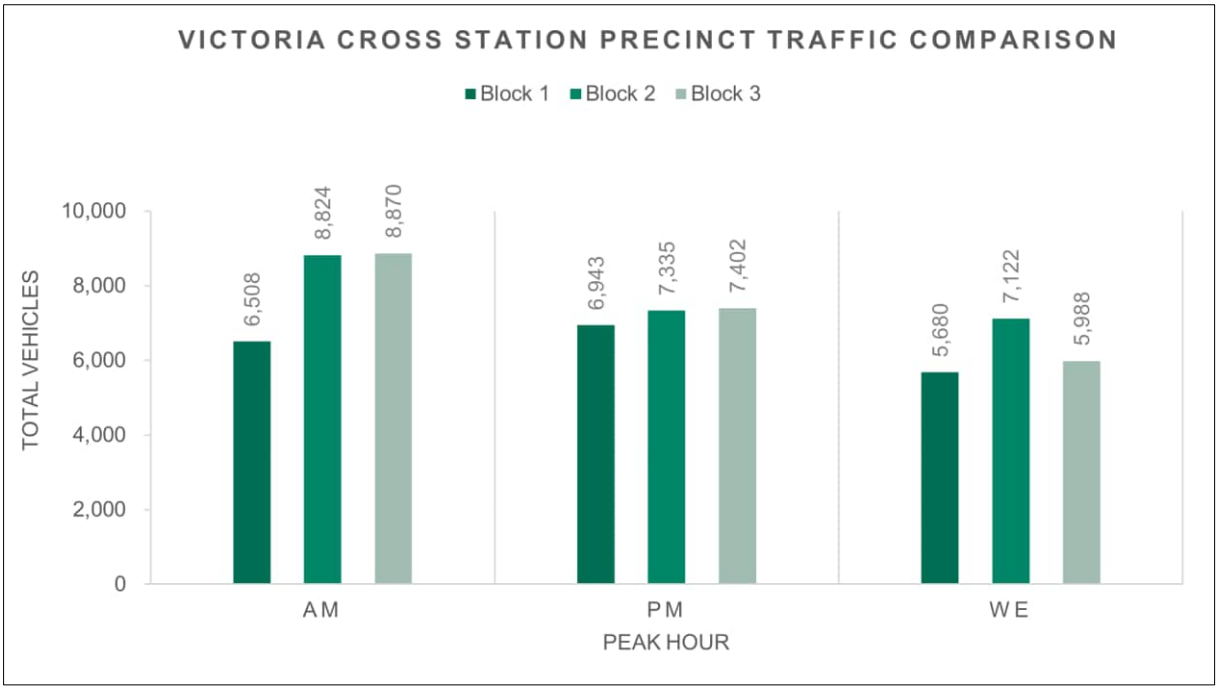


Figure 5-27 Study block comparison – Victoria Cross Station peak hourly traffic volume across all intersections

A comparison of the intersection LOS for Block 3 against previous study blocks is shown in Figure 5-28. All intersections in the Victoria Cross Station precinct perform at LOS C or better during Block 3, which is generally similar to previous study blocks.

Figure 5-28 Study block comparison – Victoria Cross Station intersection performance summary

5.4 Barangaroo Station

Barangaroo Station is a new underground station and the fourth stop on the City & Southwest Line (towards Sydenham). It is located at the northern area of Barangaroo, south of Munn Street, bounded by Hickson Road.

Barangaroo Station was still under construction during Block 3. Construction access and egress to the station was facilitated through the newly constructed Barangaroo Avenue via Hickson Road.

Bus services are available within approximately 400 metres of Barangaroo Station, located along Hickson Road and Kent Street. Dedicated cycle lanes are provided along the Sydney Harbour Bridge on-ramp and Kent Street, south of the intersection of Kent Street, Clarence Street and the Sydney Harbour Bridge on-ramp. Around the station precinct, there will be two new bus stops on Hickson Road (one northbound travel and one southbound travel). Kiss and ride bays and taxi zones will be provided at the proposed Hickson Road interchange, and coach bays underneath Munn Street bridge.

The Barangaroo Station study area consists of 18 intersections. During Block 3, two intersections (CEN16 and CEN17) were new pedestrian mid-block crossings which had not yet been constructed. Table 5-25 presents the peak hours utilised for modelling the intersections. Table 5-26 provides a summary of the intersection LOS while Figure 5-29 visualises a geospatial summary of the intersection LOS within the Barangaroo Station study area.

Table 5-25 Block 3 - Barangaroo Station peak hours modelled

Network ID	Intersection ID	Weekday AM peak hour		Weekday PM peak hour		Weekend peak hour	
		Day	Start time	Day	Start time	Day	Start time
BGU-N1	BGU01	Thursday	8.45am	Thursday	5.45pm	Saturday	5.30pm
	BGU02						
BGU-N2	BGU04	Tuesday	8.15am	Friday	5.00pm	Saturday	6.00pm
	BGU05						
	BGU07						
	BGU08						
	BGU09						
BGU-N3	BGU06	Tuesday	8.15am	Friday	5.00pm	Saturday	7.30pm
	BGU10						
	BGU11						
	BGU12						
	BGU13						
	BGU18						
BGU-N4	BGU14	Tuesday	8.15am	Friday	5.00pm	Saturday	6.15pm
	BGU15						
-	BGU03	Tuesday	8.30am	Thursday	5.00pm	Saturday	6.00pm
-	BGU16	Under construction.					
-	BGU17	Under construction.					

Table 5-26 Block 3 - Barangaroo Station intersection performance summary

Intersection ID	Intersection	LOS		
		Weekday AM Peak	Weekday PM Peak	Weekend Peak
BGU01	Hickson Road/Towns Place (Priority – Give Way)	LOS A	LOS A	LOS A
BGU02	Dalgety Road/Towns Place (Roundabout)	LOS A	LOS A	LOS A
BGU03	Kent Street/Argyle Street (Priority – Give Way)	LOS B	LOS A	LOS A
BGU04	Pedestrian Mid-block Crossing at Kent Street near Gas Lane (Pedestrian only - Signal)	LOS B	LOS B	LOS B
BGU05	Kent Street/Sydney Harbour Bridge (SHB) On-ramp (Signal)	LOS B	LOS B	LOS B
BGU06	Hickson Road/Napoleon Street/ Sussex Street (Signal)	LOS B	LOS B	LOS B
BGU07	Margaret Street/Kent Street/ Napoleon Street (Signal)	LOS B	LOS B	LOS B
BGU08	Margaret Street/Clarence Street (Signal)	LOS B	LOS B	LOS B
BGU09	Margaret Street/York Street (Signal)	LOS B	LOS B	LOS B
BGU10	Pedestrian Mid-block Crossing at Sussex Street under Exchange Place (Pedestrian only - Signal)	LOS A	LOS A	LOS A
BGU11	Pedestrian Mid-block Crossing at Kent Street near Margaret Street (Pedestrian only - Signal)	LOS A	LOS A	LOS A
BGU12	Sussex Street/Erskine Street (Signal)	LOS B	LOS B	LOS B
BGU13	Kent Street/Erskine Street (Signal)	LOS B	LOS B	LOS C
BGU14	Sussex Street/King Street (Signal)	LOS B	LOS B	LOS B
BGU15	Kent Street/King Street (Signal)	LOS B	LOS B	LOS B
BGU16	New Pedestrian Mid-block Crossing at New Hickson Road (north of Metro Station) (Pedestrian only - Signal)	Under construction.		
BGU17	New Pedestrian Mid-block Crossing at New Hickson Road (south of Metro Station) (Pedestrian only - Signal)	Under construction.		
BGU18	Shelley Street/Erskine Street (Signal)	LOS C	LOS B	LOS B

Overall, the intersection performance in the Barangaroo Station study area during the peak hours is satisfactory, operating at LOS C or better.

Figure 5-29 Block 3 – Barangaroo Station intersection performance summary

5.4.1 BGU01 – Hickson Road/Towns Place

The priority intersection, composed of Hickson Road and Towns Place, is located north of Barangaroo Station. It connects the local road of Towns Place with the regional road of Hickson Road which runs along the western waterfront of Barangaroo.

Figure 5-30 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.

Source: Nearmap (February 2024)

Figure 5-30 Block 3 – AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of BGU01

Table 5-27 presents a performance summary of this intersection.

Table 5-27 Block 3 – Intersection performance summary of BGU01

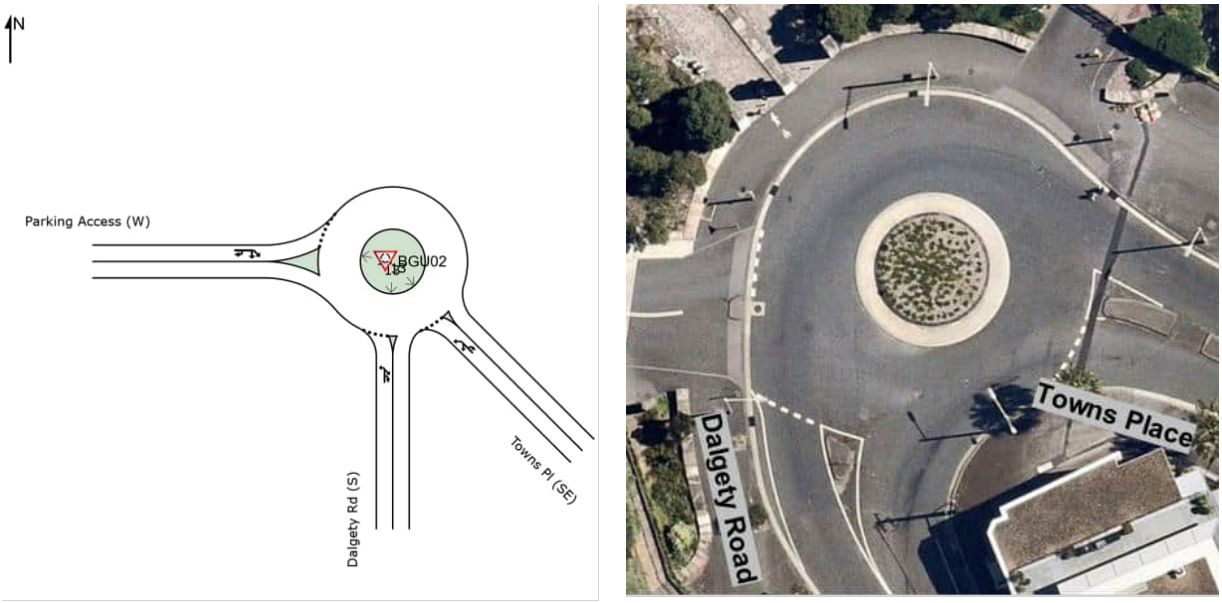
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Hickson Road/Towns Place (Priority – Give Way)	Weekday AM	East	0.207	7.3	6.9	LOS A
		North-west	0.303	10.2	9.4	LOS A
		South-west	0.287	5.4	11.4	LOS A
		Total	**0.303**	**10.2**	**9.4**	**LOS A**
	Weekday PM	East	0.253	8.2	8.3	LOS A
		North-west	0.371	11.7	11.9	LOS A
		South-west	0.362	4.8	14.6	LOS A
		Total	**0.371**	**11.7**	**11.9**	**LOS A**
	Weekend	East	0.234	6.5	7.8	LOS A
		North-west	0.35	10.3	11.8	LOS A
		South-west	0.289	4.5	11.3	LOS A
		Total	**0.35**	**10.3**	**11.8**	**LOS A**

Overall, the intersection of Hickson Road and Towns Place performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.4.2 BGU02 – Dalgety Road/Towns Place

The roundabout intersection, composed of Dalgety Road and Towns Place, is located north of Barangaroo Station. It connects the local roads of Dalgety Road and Towns Place in Barangaroo with the Barangaroo Reserve car park.

Figure 5-31 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-31 Block 3 – AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of BGU02

Table 5-28 presents a performance summary of this intersection.

Table 5-28 Block 3 – Intersection performance summary of BGU02

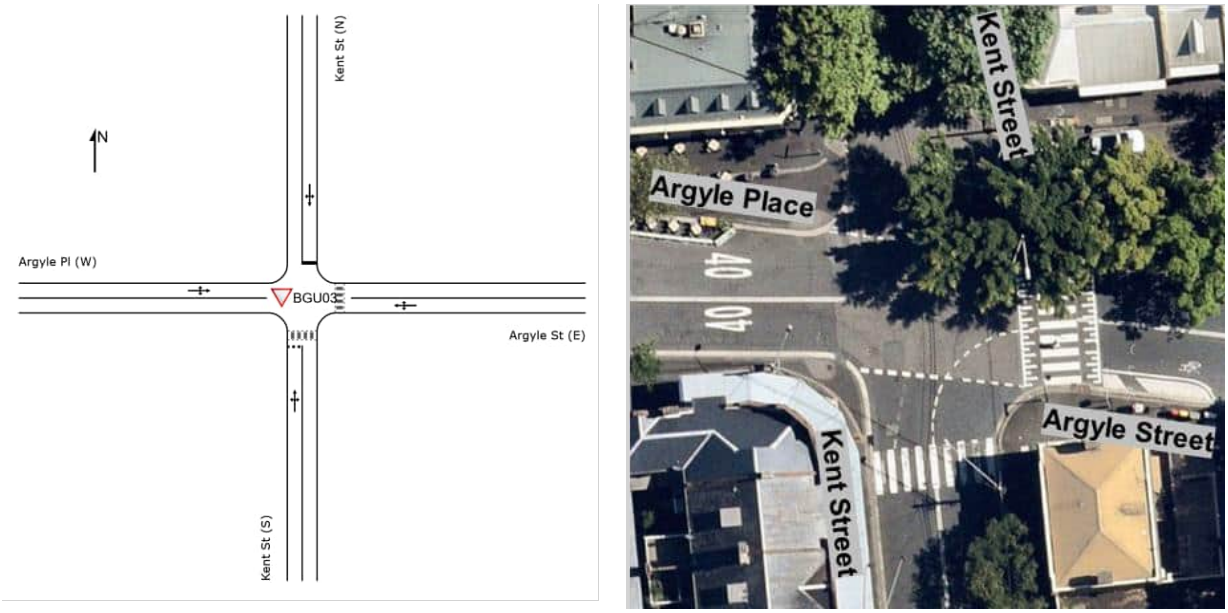
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Dalgety Road/Towns Place (Roundabout)	Weekday AM	South	0.148	7.1	6.4	LOS A
		South-east	0.103	8.2	4.8	LOS A
		West	0.004	2.3	0.2	LOS A
		Total	**0.103**	**8.2**	**4.8**	**LOS A**
	Weekday PM	South	0.147	7.1	6.3	LOS A
		South-east	0.149	8.3	6.8	LOS A
		West	0.024	1.3	0.9	LOS A
		Total	**0.149**	**8.3**	**6.8**	**LOS A**
	Weekend	South	0.213	7.2	9.6	LOS A
		South-east	0.135	8.3	5.9	LOS A
		West	0.011	1.6	0.4	LOS A
		Total	**0.135**	**8.3**	**5.9**	**LOS A**

Overall, the intersection of Dalgety Road and Towns Place performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.4.3 BGU03 – Kent Street/Argyle Street

The priority intersection, composed of Kent Street, Argyle Street and Argyle Place, is located north-east of Barangaroo Station. It connects the local roads of Argyle Street and Argyle Place in Barangaroo with Kent Street, a major local road that runs through the Sydney CBD.

Figure 5-32 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-32 Block 3 – AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of BGU03

Table 5-29 presents a performance summary of this intersection.

Table 5-29 Block 3 – Intersection performance summary of BGU03

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Kent Street/ Argyle Street (Priority – Give Way)	Weekday AM	South	0.674	16.1	57.6	LOS B
		East	0.281	5	10.2	LOS A
		North	0.036	9.5	0.9	LOS A
		West	0.143	5.2	5	LOS A
		Total	**0.674**	**16.1**	**57.6**	**LOS B**
	Weekday PM	South	0.437	13.6	19.7	LOS A
		East	0.353	6	14	LOS A
		North	0.026	9.7	0.6	LOS A
		West	0.209	5.7	7.2	LOS A
		Total	**0.437**	**13.6**	**19.7**	**LOS A**
	Weekend	South	0.545	11.9	32.7	LOS A
		East	0.282	4.6	10.4	LOS A
		North	0.025	9.3	0.6	LOS A
		West	0.152	4.8	5.4	LOS A
		Total	**0.545**	**11.9**	**32.7**	**LOS A**

Overall, the intersection of Kent Street, Argyle Street and Argyle Place performs satisfactorily at LOS B or better during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.4.4 BGU04 – Pedestrian Mid-block Crossing at Kent Street near Gas Lane

The signalised pedestrian mid-block crossing at Kent Street, near Gas Lane, is located south-east of Barangaroo Station. It offers a signalised pedestrian crossing over Kent Street near Gas Lane, a major local road that runs through the Sydney CBD. A dedicated cycleway runs along the east side of Kent Street; however, it was not considered for this assessment. The traffic signals at this intersection are co-ordinated with the intersection of Kent Street, Clarence Street and the Sydney Harbour Bridge on-ramp (BGU05).

Figure 5-33 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.

Source: Nearmap (February 2024)

Figure 5-33 Block 3 – AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of BGU04

Table 5-30 presents a performance summary of this intersection.

Table 5-30 Block 3 – Intersection performance summary of BGU04

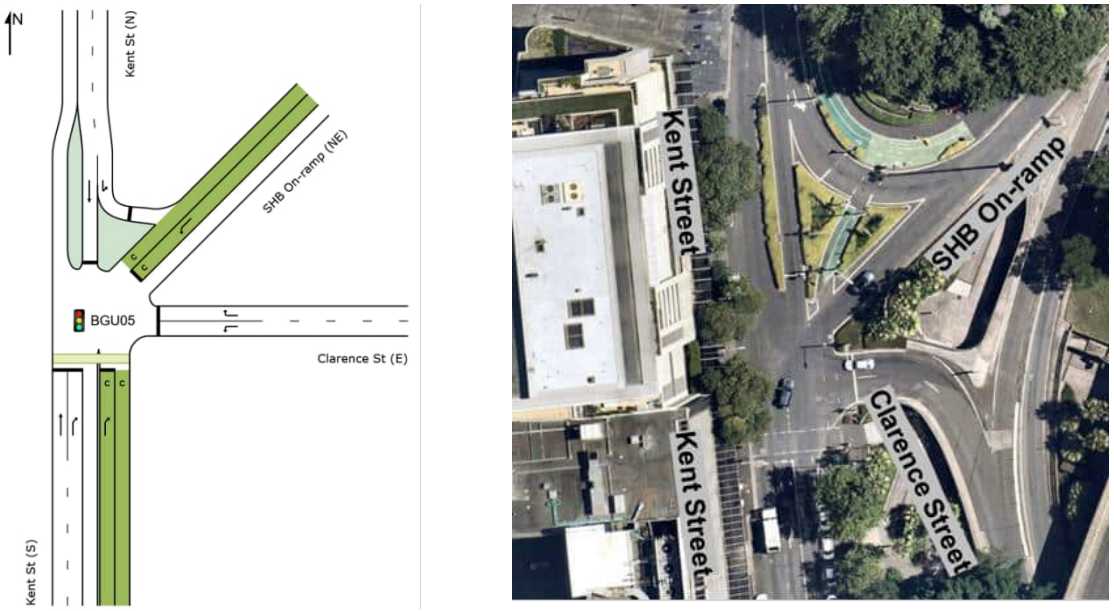
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Pedestrian Mid-block Crossing at Kent Street near Gas Lane (Pedestrian only – Signal)	Weekday AM	South	0.5	4.6	55.8	LOS A
		North	0.596	35.3	59.7	LOS C
		Total	**0.596**	**17.1**	**59.7**	**LOS B**
	Weekday PM	South	0.311	2.6	21.1	LOS A
		North	0.728	39.4	53.8	LOS C
		Total	**0.728**	**20.9**	**53.8**	**LOS B**
	Weekend	South	0.309	2.3	20.6	LOS A
		North	0.456	39.3	37.4	LOS C
		Total	**0.456**	**16.9**	**37.4**	**LOS B**

Overall, the pedestrian mid-block crossing at Kent Street, near Gas Lane, performs satisfactorily at LOS B during all peak hours. The 95th percentile queue on Kent Street (south approach) extends back to the Kent Street/Clarence Street intersection during the weekday AM peak hour.

5.4.5 BGU05 – Kent Street/Sydney Harbour Bridge (SHB) On-ramp

The signalised intersection, composed of Kent Street, Clarence Street and the Sydney Harbour Bridge (SHB) on-ramp, is located south-east of Barangaroo Station. It connects the major local roads running through the Sydney CBD of Kent Street and Clarence Street with the Sydney Harbour Bridge on-ramp, providing northbound access to the M1 Motorway. A dedicated cycleway runs along the east side of Kent Street and the north side of the SHB on-ramp. Kent St (NE) cycleway was not assessed. The traffic signals at this intersection are co-ordinated with the pedestrian mid-block crossing at Kent Street, near Gas Lane (BGU04).

Figure 5-34 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-34 Block 3 – AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of BGU05

Table 5-31 presents a performance summary of this intersection.

Table 5-31 Block 3 – Intersection performance summary of BGU05

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Kent Street/ Sydney Harbour Bridge (SHB) On-ramp (Signal)	Weekday AM	South	0.673	13.9	88.2	LOS A
		East	0.526	35.5	50.6	LOS C
		North	0.65	31.9	60.9	LOS C
		Total	**0.673**	**22.8**	**88.2**	**LOS B**
	Weekday PM	South	0.677	10.8	84.8	LOS A
		East	0.36	36.5	30.7	LOS C
		North	0.913	44.8	48.7	LOS D
		Total	**0.931**	**23.4**	**84.8**	**LOS B**
	Weekend	South	0.308	17.2	63.7	LOS B

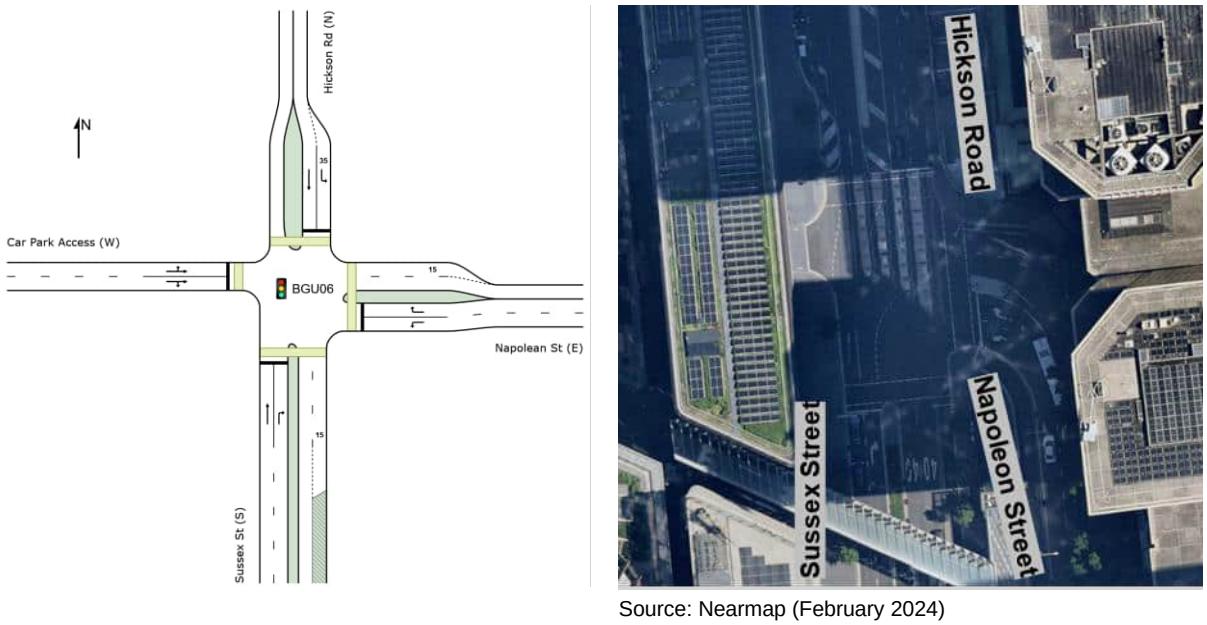
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
		East	0.406	39.6	39.3	LOS C
		North	0.831	35.9	47.2	LOS C
		Total	**0.831**	**26.4**	**63.7**	**LOS B**

Overall, the intersection of Kent Street, Clarence Street and the SHB on-ramp performs satisfactorily at LOS B during all peak hours. The 95th percentile queue on Kent Street (north approach) extends back to Gas Lane during the weekday AM peak hour.

5.4.6 BGU06 – Hickson Road/Napoleon Street/Sussex Street

The signalised intersection, composed of Hickson Road, Napoleon Street, Sussex Street and a private parking facility is located south of Barangaroo Station. It connects the parking facility exit and local road of Napoleon Street with the regional roads of Hickson Road, which runs along the western waterfront of Barangaroo, and Sussex Street running through the Sydney CBD.

Figure 5-35 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-35 Block 3 – AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of BGU06

Table 5-32 presents a performance summary of this intersection.

Table 5-32 Block 3 – Intersection performance summary of BGU06

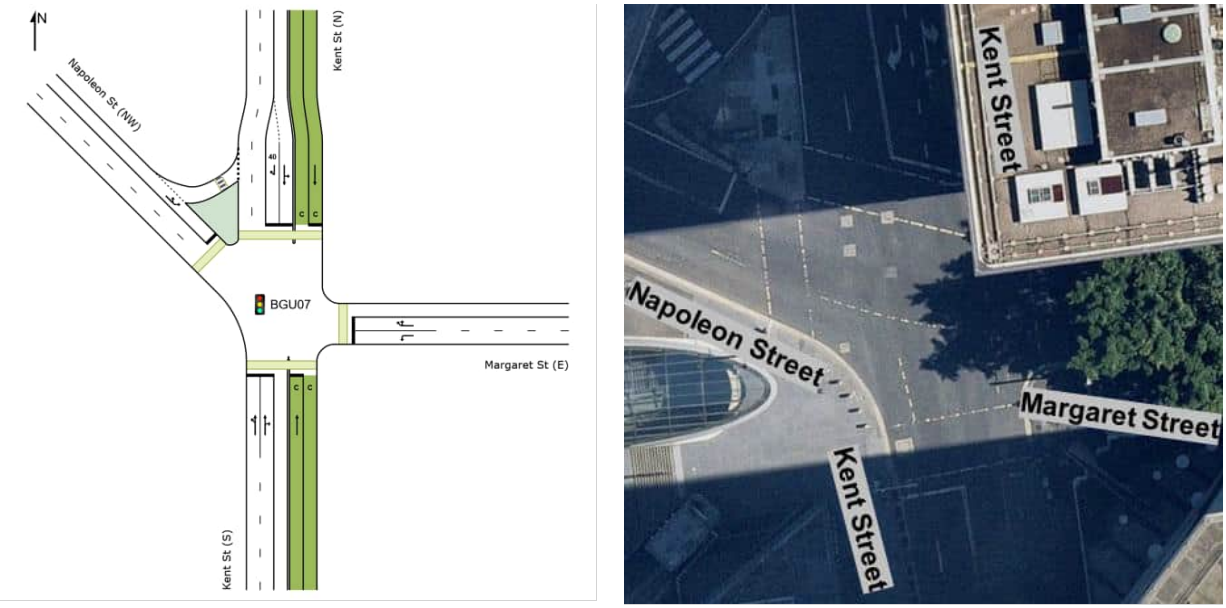
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Hickson Road/ Napoleon Street/ Sussex Street (Signal)	Weekday AM	South	0.332	13.2	47	LOS A
		East	0.551	28.9	48.1	LOS C
		North	0.342	18.9	46.4	LOS B
		West	0.208	43.8	3	LOS D
		Total	**0.551**	**19.8**	**48.1**	**LOS B**
	Weekday PM	South	0.38	15.5	57.8	LOS B
		East	0.498	30.6	40.6	LOS C
		North	0.436	21.2	58.4	LOS B
		West	0.419	39.1	14.2	LOS C
		Total	**0.498**	**22.1**	**58.4**	**LOS B**
	Weekend	South	0.34	14.1	50.1	LOS A
		East	0.534	28	51.9	LOS B
		North	0.554	23.9	76	LOS B
		West	0.215	50.1	1.6	LOS D
		Total	**0.554**	**21.6**	**76**	**LOS B**

Overall, the intersection of Hickson Road, Napoleon Street and Sussex Street performs satisfactorily at LOS B during all peak hours. The 95th percentile queue on Hickson Road (north approach) extends back to Watermans Quay during the weekend peak hour.

5.4.7 BGU07 – Margaret Street/Kent Street/Napoleon Street

The signalised intersection, composed of Margaret Street, Kent Street and Napoleon Street, is located south-east of Barangaroo Station. It connects the local roads of Napoleon Street and Margaret Street in the Sydney CBD with Kent Street, a major local road that runs through the Sydney CBD. A dedicated cycleway runs along the east side of Kent Street.

Figure 5-36 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-36 Block 3 – AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of BGU07

Table 5-33 presents a performance summary of this intersection.

Table 5-33 Block 3 – Intersection performance summary of BGU07

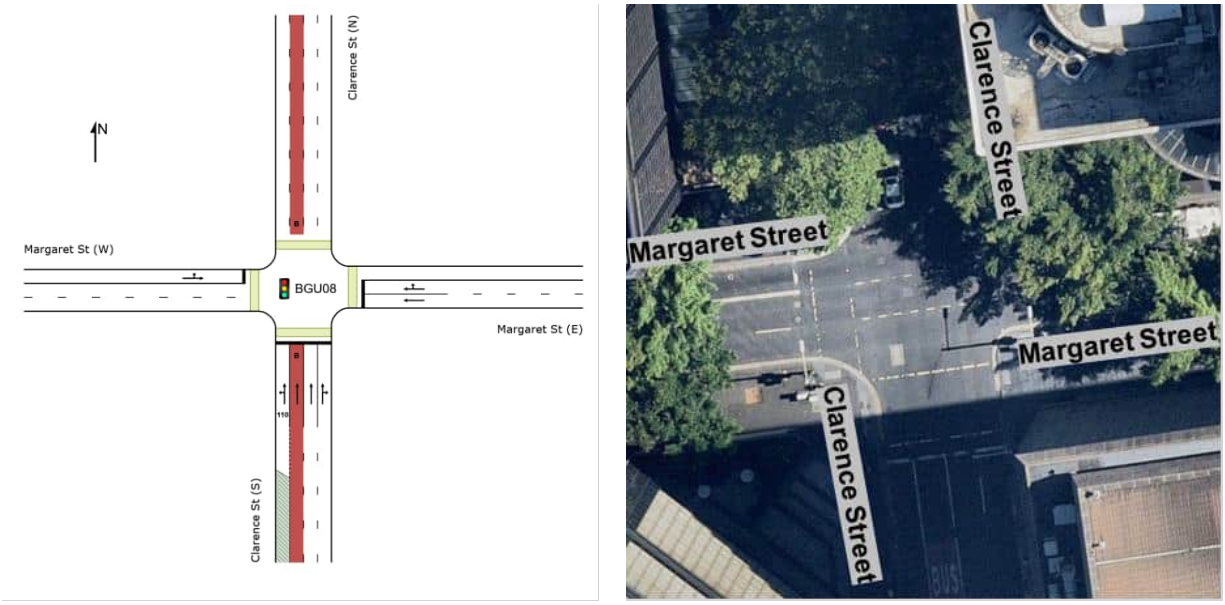
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Margaret Street/ Kent Street/ Napoleon Street (Signal)	Weekday AM	South	0.461	23.1	81.6	LOS B
		East	0.748	37.8	65.3	LOS C
		North	0.297	19.8	18.5	LOS B
		North-west	0.379	13.5	28.2	LOS A
		Total	**0.748**	**24.8**	**81.6**	**LOS B**
	Weekday PM	South	0.4	18.5	64.9	LOS B
		East	0.457	30.2	47.9	LOS C
		North	0.308	9.5	6.5	LOS A
		North-west	0.384	14.7	32.6	LOS B
		Total	**0.457**	**17.9**	**64.9**	**LOS B**
	Weekend	South	0.286	17.7	49.4	LOS B
		East	0.604	33.1	65.3	LOS C
		North	0.245	30.2	46.7	LOS C
		North-west	0.476	14.2	47.3	LOS A
		Total	**0.604**	**22.8**	**65.3**	**LOS B**

Overall, the intersection of Margaret Street, Kent Street and Napoleon Street performs satisfactorily at LOS B during all peak hours. The 95th percentile queue on Margaret Street (east approach) extends back to Clarence Street during all peak hours.

5.4.8 BGU08 – Margaret Street/Clarence Street

The signalised intersection, composed of Margaret Street and Clarence Street, is located south-east of Barangaroo Station. It connects the local road of Margaret Street with Clarence Street, a major local road that runs through the Sydney CBD.

Figure 5-37 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-37 Block 3 – AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of BGU08

Table 5-34 presents a performance summary of this intersection.

Table 5-34 Block 3 – Intersection performance summary of BGU08

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Margaret Street/ Clarence Street (Signal)	Weekday AM	South	0.363	22.3	54.9	LOS B
		East	0.482	16.3	53.3	LOS B
		West	0.494	41.7	42.5	LOS C
		Total	**0.494**	**22.4**	**54.9**	**LOS B**
	Weekday PM	South	0.582	22.2	90.4	LOS B
		East	0.274	14.7	35.2	LOS B
		West	0.471	38	39.1	LOS C
		Total	**0.582**	**22.1**	**90.4**	**LOS B**
	Weekend	South	0.267	20.2	42	LOS B
		East	0.289	16.1	49.5	LOS B
		West	0.439	36.5	50.7	LOS C
		Total	**0.439**	**20.6**	**50.7**	**LOS B**

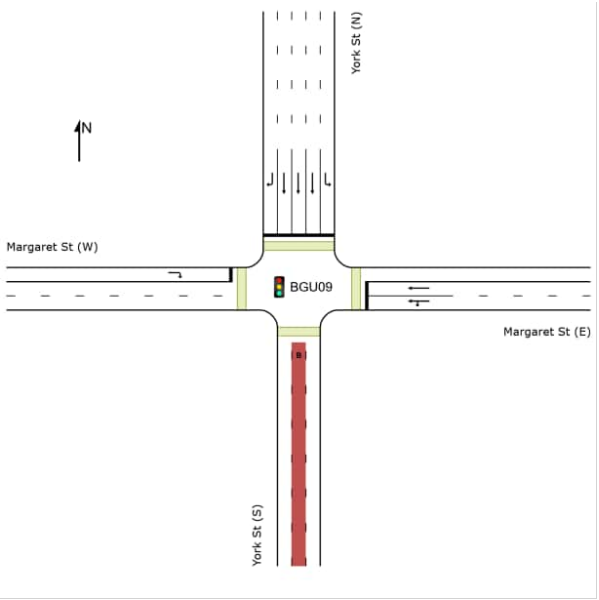
Overall, the intersection of Margaret Street and Clarence Street performs satisfactorily at LOS B during all peak hours. The 95th percentile queue on Margaret Street (west approach) extends back to Kent Street during the weekday AM and weekend peak hours. Similarly, the 95th percentile queue on

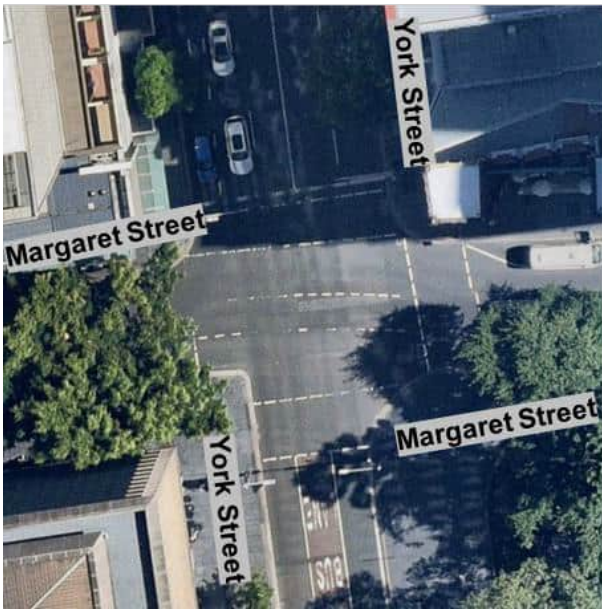
Margaret Street (east approach) extends back to York Street during the weekday AM and weekend peak hours.

5.4.9 BGU09 – Margaret Street/York Street

The signalised intersection, composed of Margaret Street and York Street, is located south-east of Barangaroo Station. It connects the local road of Margaret Street with York Street, a major local road that runs through the Sydney CBD.

Figure 5-38 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.





Source: Nearmap (February 2024)

Figure 5-38 Block 3 – AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of BGU09

Table 5-35 presents a performance summary of this intersection.

Table 5-35 Block 3 – Intersection performance summary of BGU09

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Margaret Street/York Street (Signal)	Weekday AM	East	0.208	31.2	26.3	LOS C
		North	0.362	12.8	55.9	LOS A
		West	0.288	39.2	21.3	LOS C
		Total	**0.362**	**16.2**	**55.9**	**LOS B**
	Weekday PM	East	0.202	23.9	30.1	LOS B
		North	0.328	17.6	56.2	LOS B
		West	0.27	32.1	24.1	LOS C
		Total	**0.328**	**19.8**	**56.2**	**LOS B**
	Weekend	East	0.09	14.9	7.7	LOS B
		North	0.641	18.7	61.8	LOS B
		West	0.232	20.9	16.6	LOS B
		Total	**0.641**	**18.5**	**61.8**	**LOS B**

Overall, the intersection of Margaret Street and York Street performs satisfactorily at LOS B during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.4.10 BGU10 – Pedestrian Mid-block Crossing at Sussex Street under Exchange Place

The signalised pedestrian mid-block crossing at Sussex Street, under Exchange Place, is located south of Barangaroo Station. It offers a signalised pedestrian crossing over Sussex Street, a regional road that runs through the Sydney CBD.

Figure 5-39 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.

Source: Nearmap (February 2024)

Figure 5-39 Block 3 – AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of BGU10

Table 5-36 presents a performance summary of this intersection.

Table 5-36 Block 3 – Intersection performance summary of BGU10

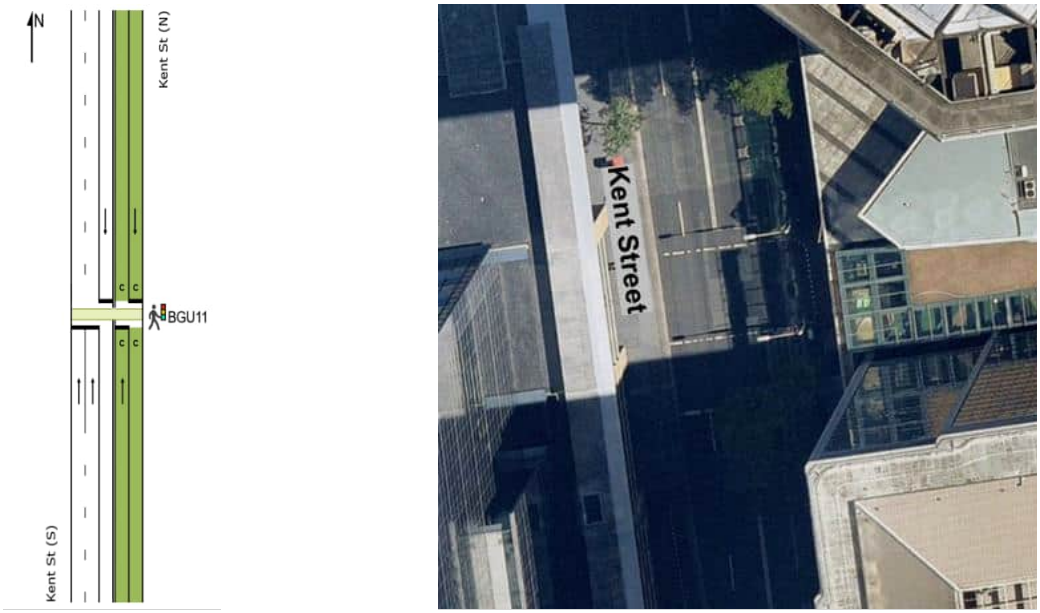
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Pedestrian Mid-block Crossing at Sussex Street under Exchange Place (Pedestrian only – Signal)	Weekday AM	South	0.208	7.3	26.5	LOS A
		North	0.189	7.2	23.5	LOS A
		Total	**0.208**	**7.3**	**26.5**	**LOS A**
	Weekday PM	South	0.206	6.8	24.4	LOS A
		North	0.193	6.8	22.5	LOS A
		Total	**0.206**	**6.8**	**24.4**	**LOS A**
	Weekend	South	0.201	7.3	24	LOS A
		North	0.218	7.4	26.2	LOS A
		Total	**0.218**	**7.3**	**26.2**	**LOS A**

Overall, the pedestrian mid-block crossing at Sussex Street under Exchange Place performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.4.11 BGU11 – Pedestrian Mid-block Crossing at Kent Street near Margaret Street

The signalised pedestrian mid-block crossing at Kent Street, near Margaret Street, is located south of Barangaroo Station. It offers a signalised pedestrian crossing over Kent Street near Margaret Street, a major local road that runs through the Sydney CBD. A dedicated cycleway runs along the east side of Kent Street.

Figure 5-40 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-40 Block 3 – AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of BGU11

Table 5-37 presents a performance summary of this intersection.

Table 5-37 Block 3 – Intersection performance summary of BGU11

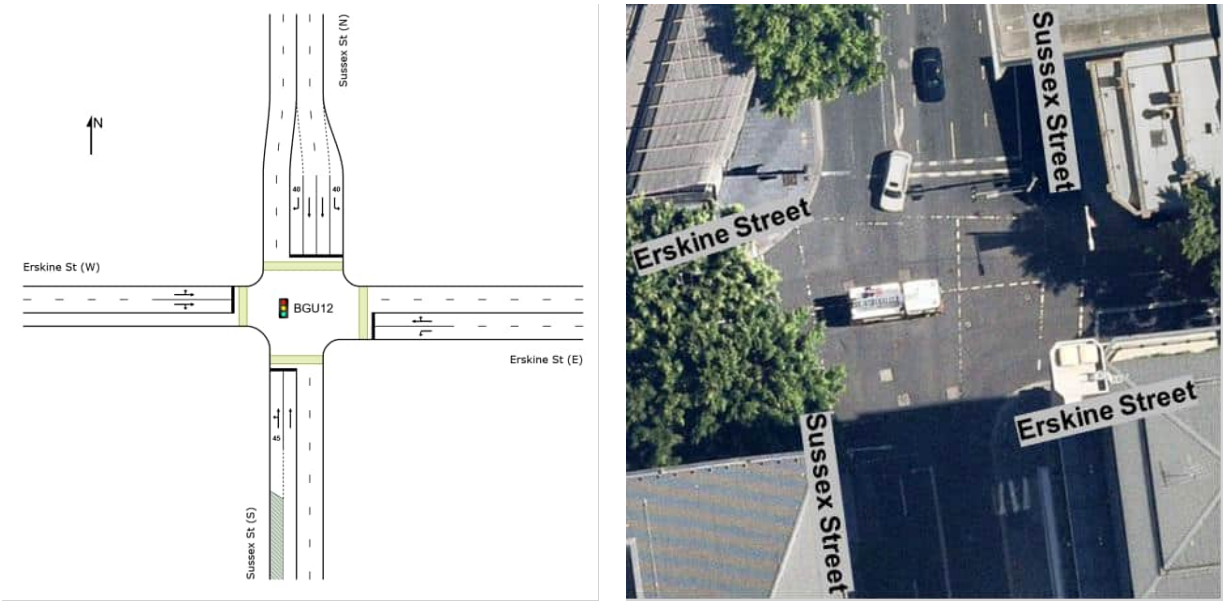
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Pedestrian Mid-block Crossing at Kent Street near Margaret Street (Pedestrian only – Signal)	Weekday AM	South	0.426	10.5	37.8	LOS A
		North	0.287	9.6	22.2	LOS A
		Total	**0.426**	**10.2**	**37.8**	**LOS A**
	Weekday PM	South	0.409	10.5	36	LOS A
		North	0.215	9.3	17.3	LOS A
		Total	**0.409**	**10.1**	**36**	**LOS A**
	Weekend	South	0.301	10.1	25.2	LOS A
		North	0.166	9.4	13	LOS A
		Total	**0.301**	**9.9**	**25.2**	**LOS A**

Overall, the pedestrian mid-block crossing at Kent Street, near Margaret Street, performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.4.12 BGU12 – Sussex Street/Erskine Street

The signalised intersection, composed of Sussex Street and Erskine Street, is located south of Barangaroo Station. It connects the regional road of Sussex Street running through the Sydney CBD with the local road of Erskine Street.

Figure 5-41 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-41 Block 3 – AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of BGU12

Table 5-38 presents a performance summary of this intersection.

Table 5-38 Block 3 – Intersection performance summary of BGU12

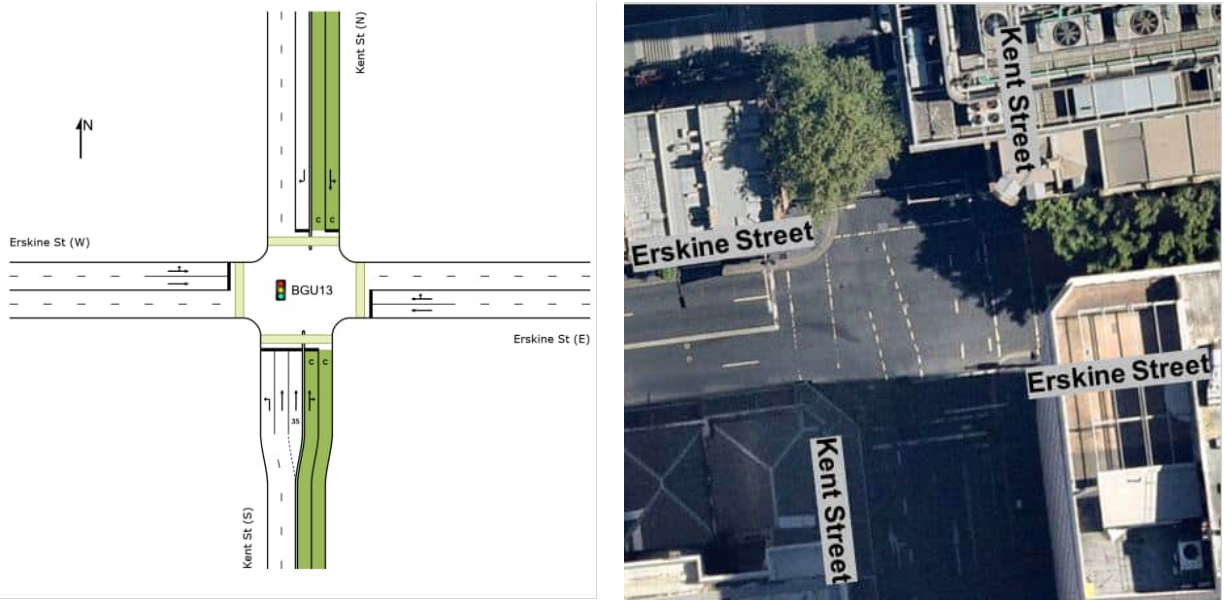
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Sussex Street/ Erskine Street (Signal)	Weekday AM	South	0.413	28.9	59.4	LOS C
		East	0.621	11.3	67	LOS A
		North	0.249	21.7	38.1	LOS B
		West	0.377	16.4	62.9	LOS B
		Total	**0.621**	**18.1**	**67**	**LOS B**
	Weekday PM	South	0.441	31.3	59.1	LOS C
		East	0.453	7.2	38.6	LOS A
		North	0.267	23.1	40.3	LOS B
		West	0.449	14.8	58.5	LOS B
		Total	**0.453**	**17.9**	**59.1**	**LOS B**
	Weekend	South	0.494	30.5	71.8	LOS C
		East	0.4	13.9	54.8	LOS A
		North	0.263	21.4	41.5	LOS B
		West	0.92	40.5	73.4	LOS C
		Total	**0.92**	**27.7**	**73.4**	**LOS B**

Overall, the intersection of Sussex Street and Erskine Street performs satisfactorily at LOS B during all peak hours. The 95th percentile queue on Erskine Street (west approach) extends back to Shelley Street during all peak hours. Similarly, the 95th percentile queue on Erskine Street (east approach) extends back to Kent Street during the weekday AM peak hour.

5.4.13 BGU13 – Kent Street/Erskine Street

The signalised intersection, composed of Kent Street and Erskine Street, is located south of Barangaroo Station. It connects the local road of Erskine Street with Kent Street, a major local road that runs through the Sydney CBD. A dedicated cycleway runs along the east side of Kent Street.

Figure 5-42 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-42 Block 3 – AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of BGU13

Table 5-39 presents a performance summary of this intersection.

Table 5-39 Block 3 – Intersection performance summary of BGU13

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Kent Street/ Erskine Street (Signal)	Weekday AM	South	0.278	13.7	47.3	LOS A
		East	0.459	37.6	41.4	LOS C
		North	0.941	42	82.2	LOS C
		West	0.445	35.4	41.6	LOS C
		Total	**0.941**	**26.2**	**82.2**	**LOS B**
	Weekday PM	South	0.286	15.3	48.3	LOS B
		East	0.406	33.8	45.1	LOS C
		North	0.756	32.7	54.6	LOS C
		West	0.435	32.8	47.2	LOS C
		Total	**0.756**	**25.7**	**54.6**	**LOS B**
	Weekend	South	0.271	21.3	42.3	LOS B

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
		East	0.264	35.7	26.1	LOS C
		North	0.534	32.9	38.3	LOS C
		West	0.583	38.8	63.4	LOS C
		Total	**0.583**	**29.6**	**63.4**	**LOS C**

Overall, the intersection of Kent Street and Erskine Street performs satisfactorily at LOS C or better during all peak hours. The 95th percentile queue on Erskine Street (east approach) extends to Clarence Street during the weekday AM and PM peak hours.

5.4.14 BGU14 – Sussex Street/King Street

The signalised intersection, composed of Sussex Street and King Street, is located south of Barangaroo Station. It connects the King Street Western Distributor (A1) off-ramp with the regional road of Sussex Street, running through the Sydney CBD. A dedicated cycleway runs along the north side of King Street.

Figure 5-43 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.

Source: Nearmap (February 2024)

Figure 5-43 Block 3 – AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of BGU14

Table 5-40 presents a performance summary of this intersection.

Table 5-40 Block 3 – Intersection performance summary of BGU14

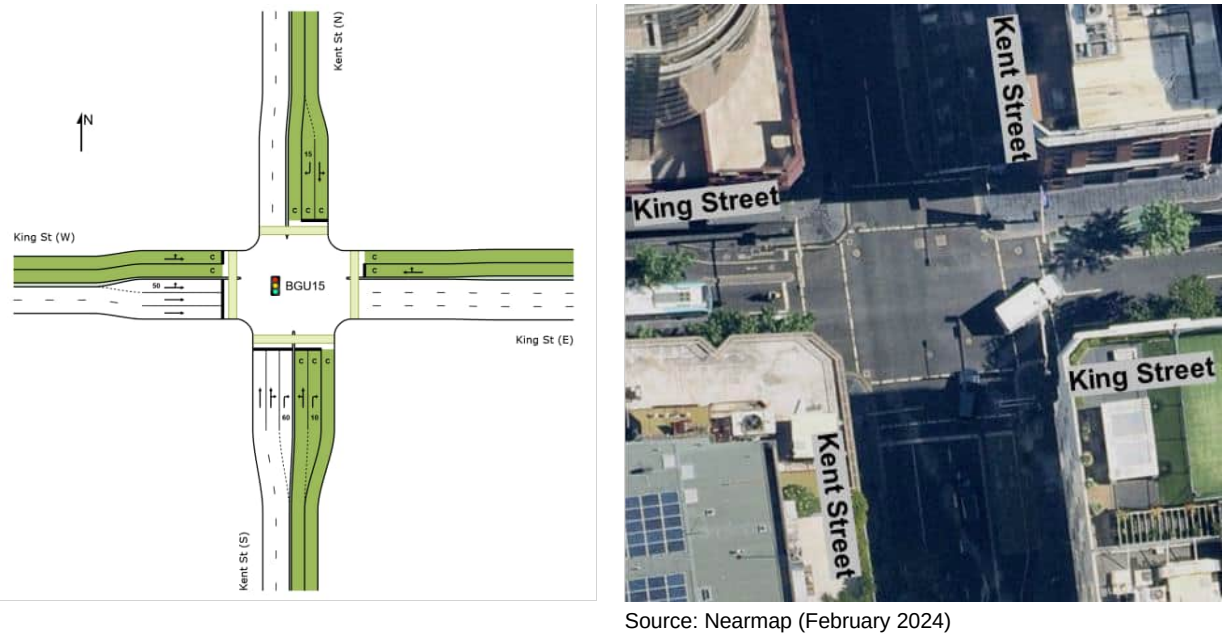
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Sussex Street/King Street (Signal)	Weekday AM	North	0.751	34	123.6	LOS C
		South-west	0.757	23.2	173.6	LOS B
		Total	**0.757**	**25.9**	**173.6**	**LOS B**
	Weekday PM	North	0.687	23.9	139	LOS B
		South-west	0.611	21.4	122.9	LOS B
		Total	**0.687**	**23.1**	**139**	**LOS B**
	Weekend	North	0.659	25.5	124	LOS B
		South-west	0.568	19.5	115	LOS B
		Total	**0.659**	**21.7**	**124**	**LOS B**

Overall, the intersection of Sussex Street and King Street performs satisfactorily at LOS B during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.4.15 BGU15 – Kent Street/King Street

The signalised intersection, composed of Kent Street and King Street, is located south of Barangaroo Station. It connects the local road of King Street with Kent Street, a major local road that runs through the Sydney CBD. A dedicated cycleway runs along the east side of Kent Street and north side of King Street.

Figure 5-44 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-44 Block 3 – AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of BGU15

Table 5-41 presents a performance summary of this intersection.

Table 5-41 Block 3 – Intersection performance summary of BGU15

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Kent Street/ King Street (Signal)	Weekday AM	South	0.712	40.4	79.1	LOS C
		West	0.627	8.7	65.5	LOS A
		Total	**0.712**	**19.8**	**79.1**	**LOS B**
	Weekday PM	South	0.456	33.8	59.3	LOS C
		West	0.478	5.9	39.4	LOS A
		Total	**0.478**	**18.3**	**59.3**	**LOS B**
	Weekend	South	0.357	32.4	46.6	LOS C
		West	0.473	11.7	68.2	LOS A
		Total	**0.473**	**19.2**	**68.2**	**LOS B**

Overall, the intersection of Kent Street and King Street performs satisfactorily at LOS B during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.4.16 BGU16 – New Pedestrian Mid-block Crossing at New Hickson Road (north of Metro Station)

The signalised pedestrian mid-block crossing at New Hickson Road (north of the metro station) is located directly east of Barangaroo Station. During Block 3, the mid-block crossing was under construction and non-operational. It was not assessed as part of the Block 3 study.

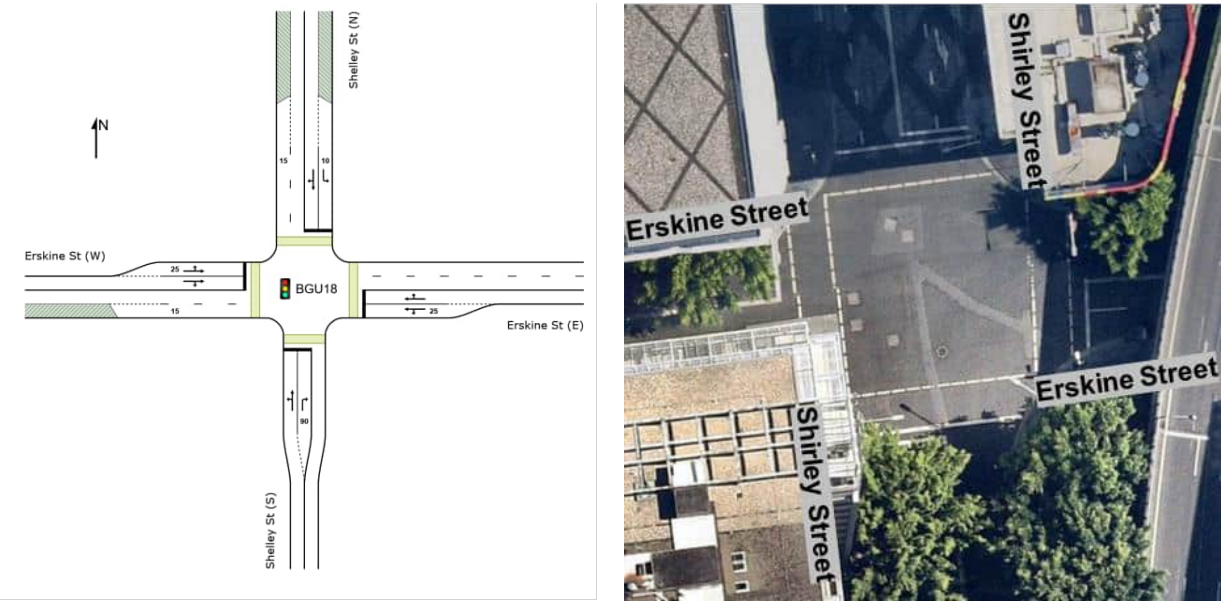
5.4.17 BGU17 – New Pedestrian Mid-block Crossing at New Hickson Road (south of Metro Station)

The signalised pedestrian mid-block crossing at New Hickson Road (south of the metro station) is located directly east of Barangaroo Station. During Block 3, the mid-block crossing was under construction and non-operational. It was not assessed as part of the Block 3 study.

5.4.18 BGU18 – Shelley Street/Erskine Street

The signalised intersection, composed of Shelley Street and Erskine Street, is located south of Barangaroo Station. It connects the local roads of Erskine Street and Shelley Street in the Sydney CBD near the King Street Wharf.

Figure 5-45 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-45 Block 3 – AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of BGU18

Table 5-42 presents a performance summary of this intersection.

Table 5-42 Block 3 – Intersection performance summary of BGU18

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Shelley Street/ Erskine Street (Signal)	Weekday AM	South	0.397	13.1	53.1	LOS A
		East	0.844	60.2	73.4	LOS E
		North	0.127	11.8	12.1	LOS A
		West	0.16	31.3	15.6	LOS C
		Total	**0.844**	**31.2**	**73.4**	**LOS C**
	Weekday PM	South	0.245	11.8	25.1	LOS A
		East	0.413	36.6	36.1	LOS C
		North	0.254	14.2	27.6	LOS A
		West	0.345	32.5	37.5	LOS C
		Total	**0.413**	**22.3**	**37.5**	**LOS B**
	Weekend	South	0.718	19.8	86.4	LOS B
		East	0.521	35.8	59.3	LOS C
		North	0.21	17.2	29.4	LOS B
		West	0.371	27.8	45.3	LOS B
		Total	**0.718**	**25.5**	**86.4**	**LOS B**

Overall, the intersection of Shelley Street and Erskine Street performs satisfactorily at LOS C or better during all peak hours. The 95th percentile queue on Erskine Street (east approach) extends back to Sussex Street during the weekday AM and weekend peak hours.

5.4.19 Comparison with previous study blocks

Figure 5-46 provides a comparison of the total peak hourly traffic volumes recorded across all intersections for Block 3 against previous study blocks. As shown, Block 3 traffic volumes are higher during the AM and weekend peak hours, and slightly lower during the PM peak hour compared to the previous study blocks.

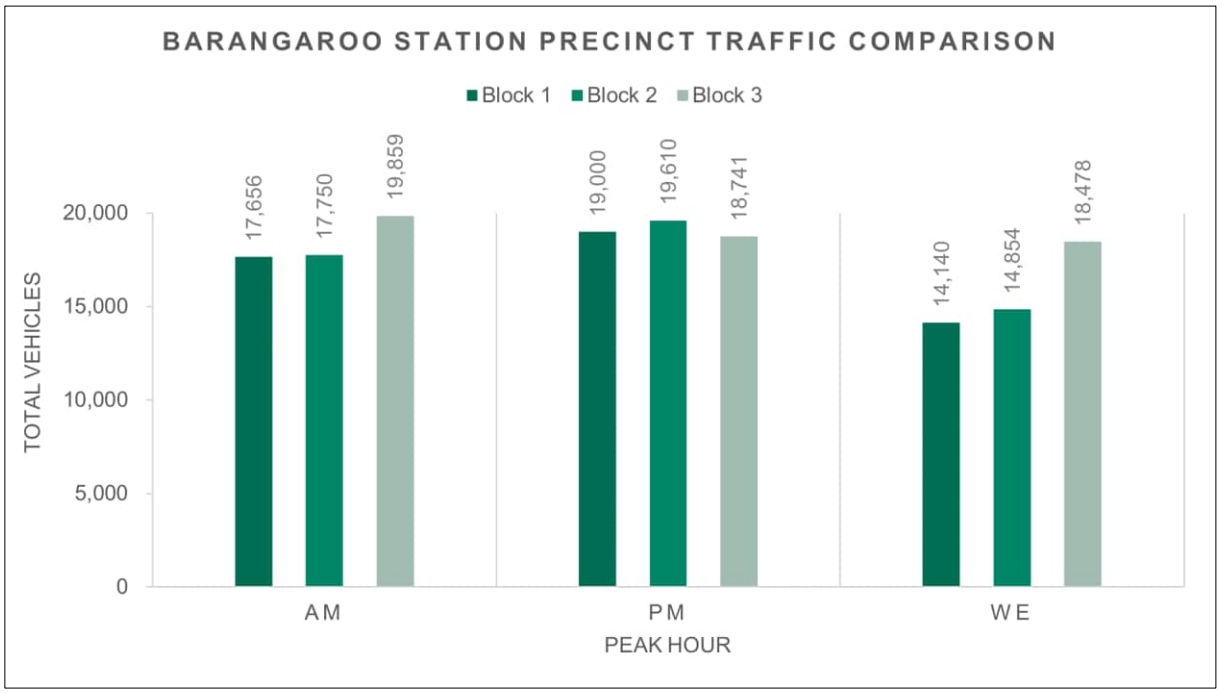


Figure 5-46 Study block comparison – Barangaroo Station peak hourly traffic volume across all intersections

A comparison of the intersection LOS for Block 3 against previous study blocks is shown in Figure 5-47 and Figure 5-48. All intersections in the Barangaroo Station study area perform at LOS C or better during Block 3, which is generally similar to previous study blocks. Kent Street/Argyle Street (BGU03) had a notable change in LOS, whereby the intersection improved from a LOS C to a LOS A in the PM peak hour compared to Block 2. The Block 3 site improvement for BGU03 is due to there being lower traffic volumes at this intersection compared to Block 2.

Figure 5-47 Study block comparison – Barangaroo Station intersection performance summary (BGU01-BGU08)

Figure 5-48 Study block comparison – Barangaroo Station intersection performance summary (BGU09-BGU15, BGU18)

5.5 Martin Place Station

Martin Place Station is a new underground station and the fifth stop on the City & Southwest Line (towards Sydenham). It is located to west of the existing Martin Place Station (Sydney Trains) in Martin Place. Martin Place Station will have two station entrances, Martin Place North, bounded by Hunter Street, Castlereagh Street and Elizabeth Street, and Martin Place South, at Martin Place. New underground pedestrian connections will link the existing Martin Place Station platforms and the metro station platforms.

Martin Place Station was still under construction during Block 3. Construction access and egress to the station was facilitated via Elizabeth Street and Castlereagh Street.

Bus services are available within approximately 150 metres of Martin Place Station, located at Elizabeth Street and Castlereagh Street. New bicycle parking racks will be provided on Castlereagh Street at both station entries, and the existing taxi ranks close to the station will be retained. The Martin Place Station study area consists of six intersections. Table 5-43 presents the peak hours utilised for modelling the intersections. Table 5-44 provides a summary of the intersection LOS while Figure 5-49 visualises a geospatial summary of the intersection LOS within the Martin Place Station study area.

Table 5-43 Block 3 – Martin Place Station peak hours modelled

Network ID	Intersection ID	Weekday AM peak hour		Weekday PM peak hour		Weekend peak hour	
		Day	Start time	Day	Start time	Day	Start time
MPL-N1	MPL01	Wednesday	8.45am	Wednesday	5.15pm	Saturday	6.00pm
	MPL02						
	MPL03						
	MPL04						
-	MPL05	Thursday	8.45am	Wednesday	5.45pm	Saturday	5.45pm
-	MPL06	Thursday	8.45am	Wednesday	5.15pm	Saturday	5.15pm

Table 5-44 Block 3 – Martin Place Station intersection performance summary

Intersection ID	Intersection	LOS		
		Weekday AM Peak	Weekday PM Peak	Weekend Peak
MPL01	Hunter Street/Castlereagh Street/ Bligh Street (Signal)	LOS B	LOS B	LOS B
MPL02	Hunter Street/Elizabeth Street/ Chifley Square (Signal)	LOS B	LOS B	LOS B
MPL03	Bent Street/Bligh Street (Signal)	LOS A	LOS A	LOS A
MPL04	Bent Street/Phillip Street (Signal)	LOS B	LOS B	LOS B
MPL05	Pedestrian Mid-block Crossing at Castlereagh Street (Signal)	LOS A	LOS A	LOS A
MPL06	Pedestrian Mid-block Crossing at Elizabeth Street (Signal)	LOS A	LOS A	LOS A

Overall, the intersection performance in the Martin Place Station study area during the peak hours is satisfactory, operating at LOS B or better.

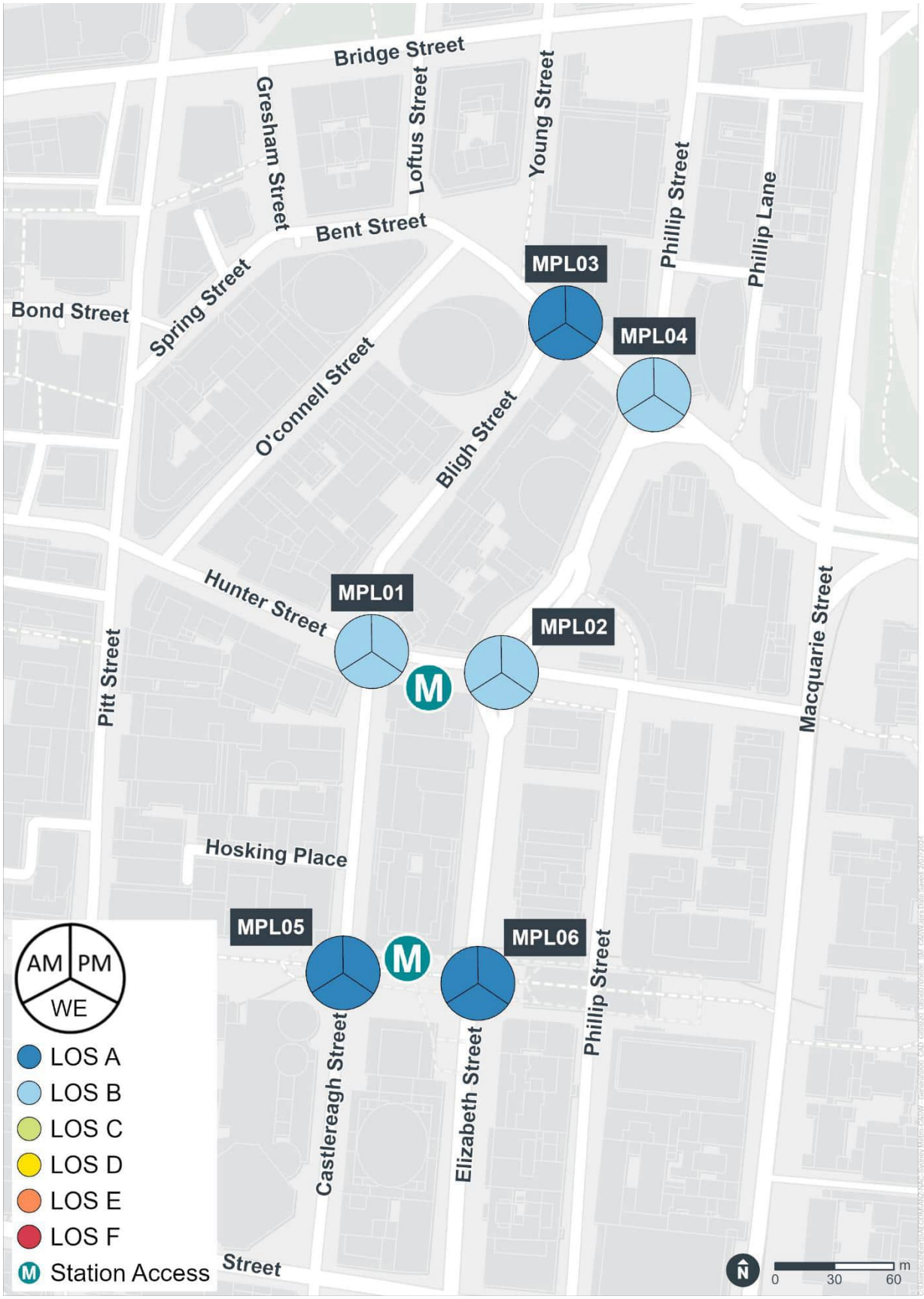


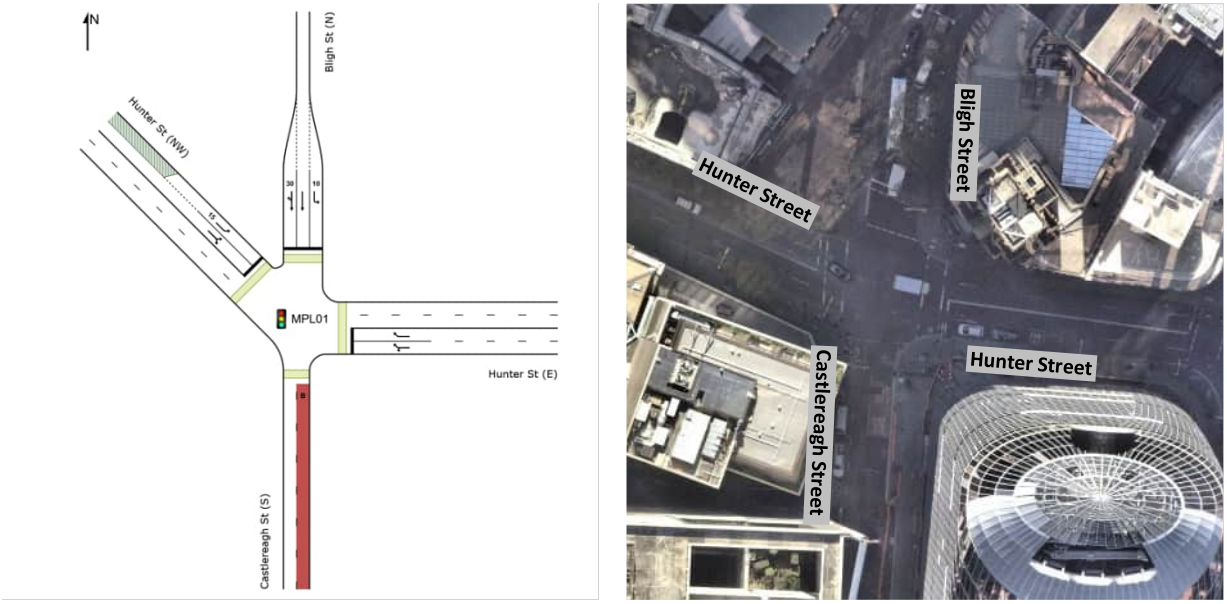
Figure 5-49 Block 3 – Martin Place Station intersection performance summary

5.5.1 MPL01 – Hunter Street/Castlereagh Street/Bligh Street

The signalised intersection, composed of Hunter Street, Castlereagh Street and Bligh Street, is located directly north-west of Martin Place North. It connects the local roads of Bligh Street and Hunter Street in the Sydney CBD with Castlereagh Street, a major local road running through the Sydney CBD.

During Block 3, the kerbside bus lane on Castlereagh Street (southern leg) was closed during the weekend peak hour due to Sydney Metro construction.

Figure 5-50 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-50 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of MPL01

Table 5-45 presents a performance summary of this intersection.

Table 5-45 Block 3 - Intersection performance summary of MPL01

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Hunter Street/ Castlereagh Street/ Bligh Street (Signal)	Weekday AM	East	0.37	10.4	43.6	LOS A
		North	0.511	50	29.8	LOS D
		North-west	0.273	11.5	33.1	LOS A
		Total	**0.511**	**18.3**	**43.6**	**LOS B**
	Weekday PM	East	0.288	11.9	32.8	LOS A
		North	0.605	54.3	33.6	LOS D
		North-west	0.266	9.5	31.3	LOS A
		Total	**0.605**	**19.4**	**33.6**	**LOS B**
	Weekend	East	0.319	22.4	40.9	LOS B
		North	0.278	39.3	21.3	LOS C
		North-west	0.142	10.7	18.6	LOS A
		Total	**0.319**	**21.2**	**40.9**	**LOS B**

Overall, the intersection of Hunter Street, Castlereagh Street and Bligh Street performs satisfactorily at LOS B during all peak hours. The 95th percentile queue on Hunter Street (east approach) extends back to Elizabeth Street during the weekday AM and weekend peak hours.

5.5.2 MPL02 – Hunter Street/Elizabeth Street/Chifley Square

The signalised intersection, composed of Hunter Street, Elizabeth Street and Chifley Square, is located directly north-east of Martin Place North. It connects the local roads of Chifley Square and Hunter Street in the Sydney CBD with Elizabeth Street, a major local road linking the Sydney CBD and Waterloo.

Figure 5-51 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.

Source: Nearmap (February 2024)

Figure 5-51 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of MPL02

Table 5-46 presents a performance summary of this intersection.

Table 5-46 Block 3 - Intersection performance summary of MPL02

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Hunter Street/ Elizabeth Street/ Chifley Square (Signal)	Weekday AM	South	0.716	25.1	155.5	LOS B
		East	0.601	34.7	53.1	LOS C
		North-east	0.442	14.9	32.3	LOS B
		West	0.471	31.9	65.3	LOS C
		Total	**0.716**	**26.8**	**155.5**	**LOS B**
	Weekday PM	South	0.719	24.3	165.1	LOS B
		East	0.385	30.6	37.5	LOS C
		North-east	0.27	25	44.4	LOS B
		West	0.428	31	65.3	LOS C
		Total	**0.719**	**26.9**	**165.1**	**LOS B**
	Weekend	South	0.619	18.3	119.7	LOS B
		East	0.299	29	23.5	LOS C

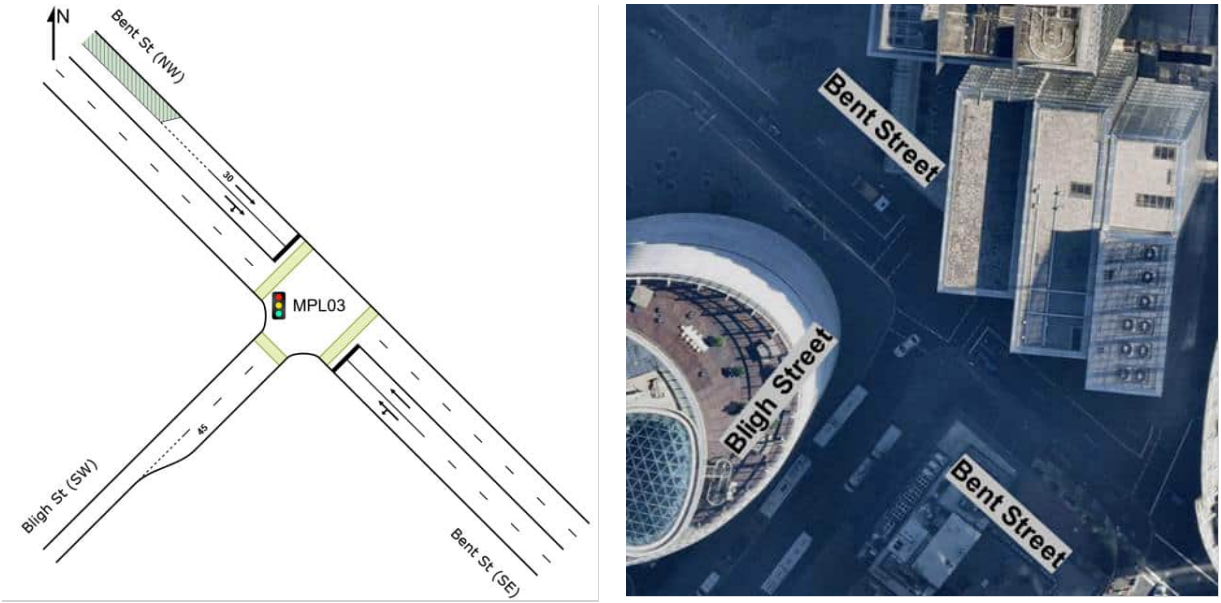
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
		North-east	0.231	11.2	16.5	LOS A
		West	0.266	26.2	41.7	LOS B
		Total	**0.619**	**20.3**	**119.7**	**LOS B**

Overall, the intersection of Hunter Street, Elizabeth Street and Chifley Square performs satisfactorily at LOS B during all peak hours. The 95th percentile queue on Elizabeth Street (south approach) extends back to the mid-block crossing on Elizabeth Street (MPL06) during the weekday AM and PM peak hours. Similarly, the 95th percentile queue on Hunter Street (west approach) extends back to Bligh Street during all peak hours.

5.5.3 MPL03 – Bent Street/Bligh Street

The signalised intersection, composed of Bent Street and Bligh Street, is located north of Martin Place North. It connects the local roads of Bent Street and Bligh Street in the Sydney CBD, providing access to the major local road of Castlereagh Street further south.

Figure 5-52 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-52 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of MPL03

Table 5-47 presents a performance summary of this intersection.

Table 5-47 Block 3 - Intersection performance summary of MPL03

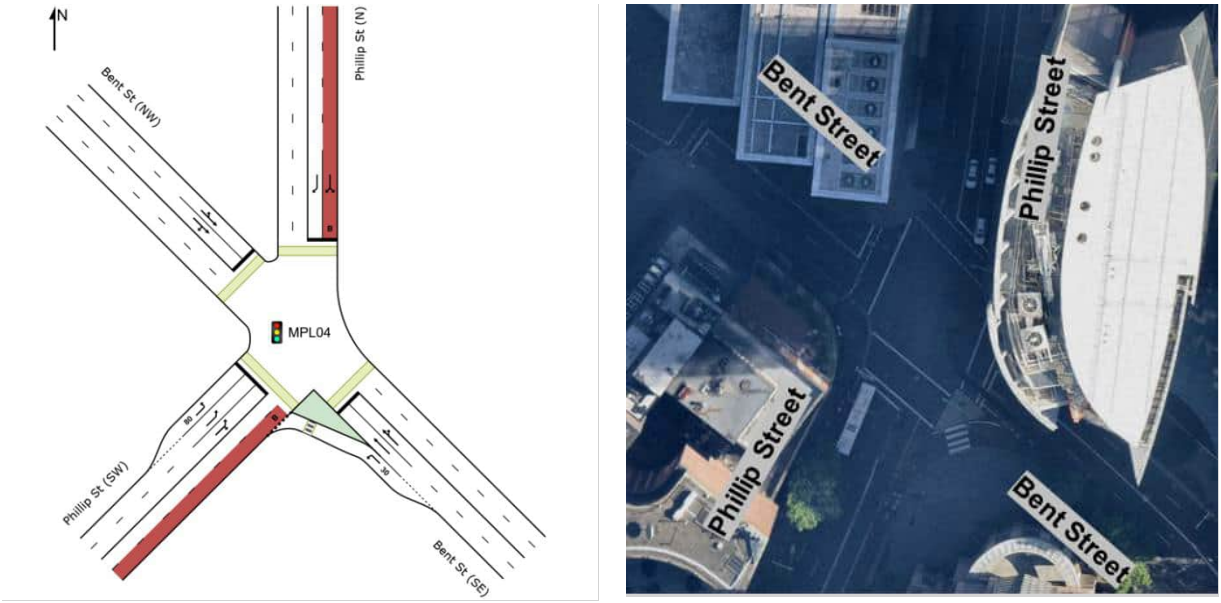
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Bent Street/ Bligh Street (Signal)	Weekday AM	South-east	0.266	5.8	54	LOS A
		North-west	0.161	7	11.4	LOS A
		Total	**0.266**	**6**	**54**	**LOS A**
	Weekday PM	South-east	0.23	3.9	24	LOS A
		North-west	0.123	3.9	13.5	LOS A
		Total	**0.23**	**3.9**	**24**	**LOS A**
	Weekend	South-east	0.453	7	46.9	LOS A
		North-west	0.09	5.5	11.1	LOS A
		Total	**0.453**	**6.7**	**46.9**	**LOS A**

Overall, the intersection of Bent Street and Bligh Street performs satisfactorily at LOS A during all peak hours. The 95th percentile queue on Bent Street (south-east approach) extends back to Phillip Street during the weekday AM and weekend peak hours.

5.5.4 MPL04 – Bent Street/Phillip Street

The signalised intersection, composed of Bent Street and Phillip Street, is located north of Martin Place North. It connects the local roads of Bent Street and Phillip Street in the Sydney CBD, providing access to the major local road of Elizabeth Street further south.

Figure 5-53 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-53 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of MPL04

Table 5-48 presents a performance summary of this intersection.

Table 5-48 Block 3 - Intersection performance summary of MPL04

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Bent Street/ Phillip Street (Signal)	Weekday AM	South-east	0.586	22.9	84.3	LOS B
		North	0.266	21.1	42.8	LOS B
		North-west	0.12	18.2	12.5	LOS B
		South-west	0.503	15	51.1	LOS B
		Total	**0.586**	**19.4**	**84.3**	**LOS B**
	Weekday PM	South-east	0.615	34.4	72	LOS C
		North	0.182	13.5	28.3	LOS A
		North-west	0.32	31.2	28.4	LOS C
		South-west	0.388	10	43.9	LOS A
		Total	**0.615**	**19.3**	**72**	**LOS B**
	Weekend	South-east	0.5	30.3	71.1	LOS C
		North	0.159	16.6	23	LOS B
		North-west	0.141	17.4	14.3	LOS B
		South-west	0.28	12.4	39.2	LOS A
		Total	**0.5**	**19.7**	**71.1**	**LOS B**

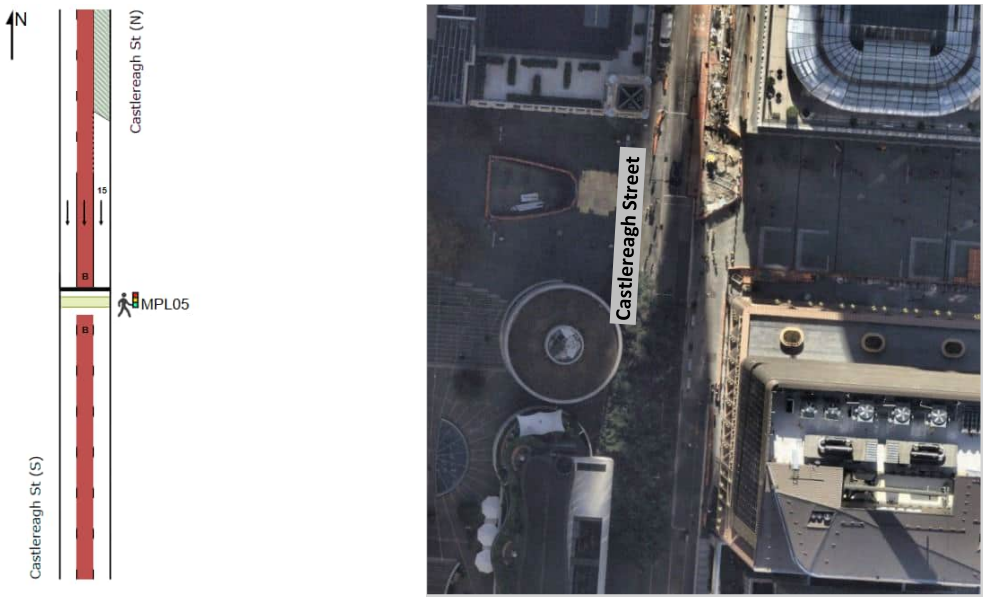
Overall, the intersection of Bent Street and Phillip Street performs satisfactorily at LOS B during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.5.5 MPL05 – Pedestrian Mid-block Crossing at Castlereagh Street

The signalised pedestrian mid-block crossing at Castlereagh Street is located directly north-west of Martin Place South. It offers a signalised pedestrian crossing over Castlereagh Street, a major local road that runs through the Sydney CBD.

During Block 3, the eastern kerbside lane was closed during all peak hours due to Sydney Metro construction. Additionally, the bus lane was also closed during the weekend peak hour due to Sydney Metro construction.

Figure 5-54 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-54 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of MPL05

Table 5-49 presents a performance summary of this intersection.

Table 5-49 Block 3 - Intersection performance summary of MPL05

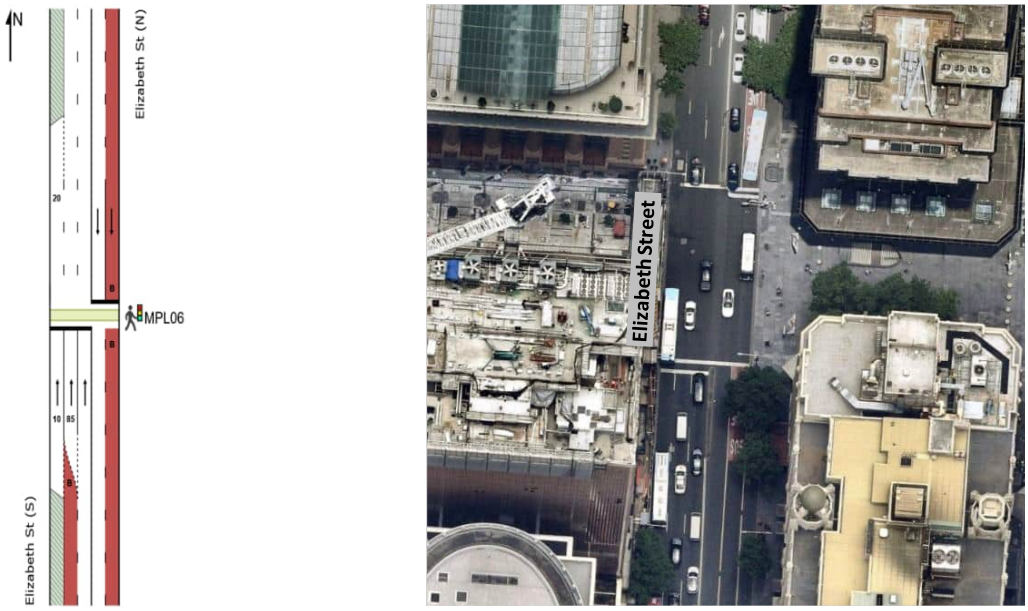
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Pedestrian Mid-block Crossing at Castlereagh Street (Pedestrian only – Signal)	Weekday AM	North	0.412	8.1	39	LOS A
		Total	**0.412**	**8.1**	**39**	**LOS A**
	Weekday PM	North	0.37	7.8	34.3	LOS A
		Total	**0.37**	**7.8**	**34.3**	**LOS A**
	Weekend	North	0.189	6.3	19	LOS A
		Total	**0.189**	**6.3**	**19**	**LOS A**

Overall, the pedestrian mid-block crossing at Castlereagh Street performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.5.6 MPL06 – Pedestrian Mid-block Crossing at Elizabeth Street

The signalised pedestrian mid-block crossing at Elizabeth Street is located directly north-east of Martin Place South. It offers a signalised pedestrian crossing over Elizabeth Street, a major local road linking the Sydney CBD and Waterloo.

Figure 5-55 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-55 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of MPL06

Table 5-50 presents a performance summary of this intersection.

Table 5-50 Block 3 - Intersection performance summary of MPL06

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Pedestrian Mid-block Crossing at Elizabeth Street (Pedestrian only – Signal)	Weekday AM	South	0.454	9.3	68.8	LOS A
		North	0.39	8.2	56.7	LOS A
		Total	**0.454**	**10.2**	**68.8**	**LOS A**
	Weekday PM	South	0.444	9	83.7	LOS A
		North	0.381	7.8	68.4	LOS A
		Total	**0.444**	**10**	**83.7**	**LOS A**
	Weekend	South	0.33	8.1	56.2	LOS A
		North	0.254	7.1	41	LOS A
		Total	**0.33**	**8.9**	**56.2**	**LOS A**

Overall, the pedestrian mid-block crossing at Elizabeth Street performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.5.7 Comparison with previous study blocks

Figure 5-56 provides a comparison of the total peak hourly traffic volumes recorded across all intersections for Block 3 against previous study blocks. As shown, Block 3 traffic volumes are relatively similar for the AM peak hour, slightly lower during the PM peak hour, and slightly higher during the weekend peak hour compared to the previous study blocks.

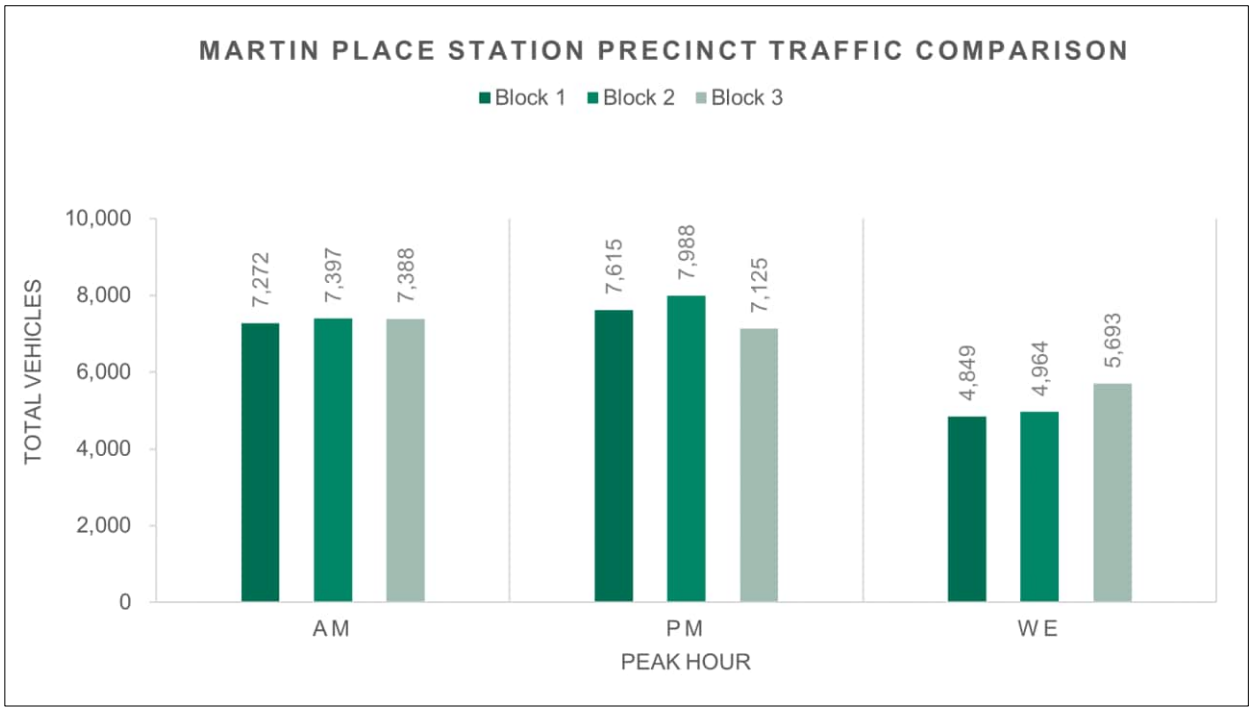
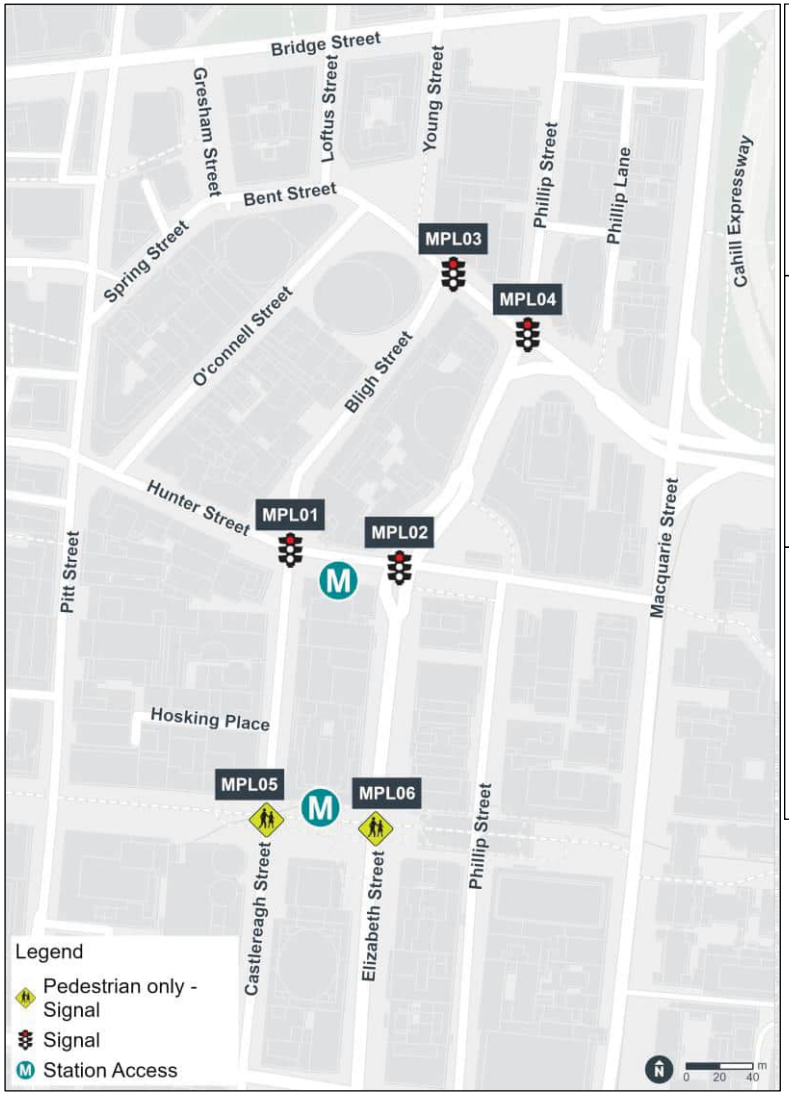


Figure 5-56 Study block comparison – Martin Place Station peak hourly traffic volumes across all intersections

A comparison of the intersection LOS for Block 3 against previous study blocks is shown in Figure 5-57. All intersections in the Martin Place Station study area perform at a LOS B or better during Block 3, which is generally similar to previous study blocks.



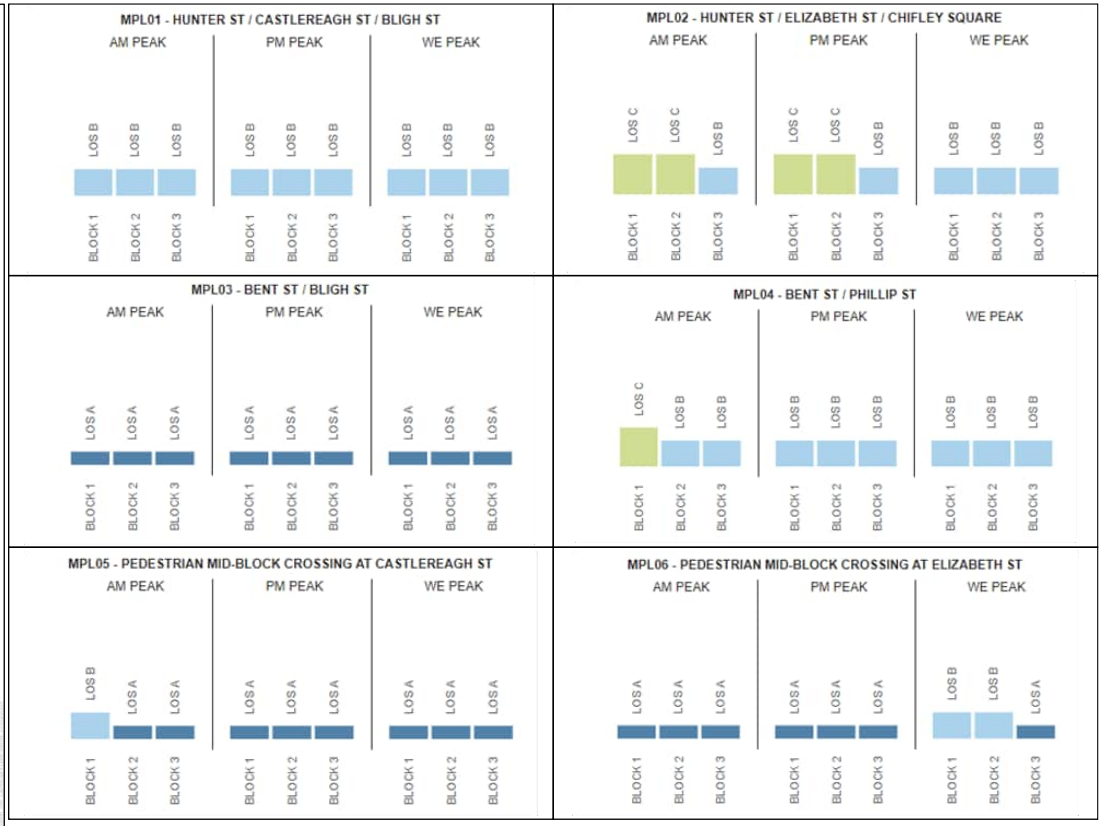


Figure 5-57 Study block comparison – Martin Place Station intersection performance summary

5.6 Gadigal Station

Gadigal Station (previously Pitt Street Station) is a new underground station and the sixth stop on the City & Southwest Line (towards Sydenham). It is located at the junction of Sydney's southern CBD and the midtown retail precinct. Gadigal Station will have station entrances within two new pedestrian plazas, Pitt Street North, bounded by Pitt Street, Park Street and Castlereagh Street, and Pitt Street South, at the corner of Pitt Street and Bathurst Street.

Gadigal Station was still under construction during Block 3. Construction access to Pitt Street North was facilitated via Park Street whereas access to Pitt Street South was facilitated via Bathurst Street.

Several bus routes operate within the vicinity of the new Gadigal Station. Bus services are available within approximately 100 metres of Gadigal Station, located at Elizabeth Street and Park Street. The CBD and South-East Light Rail (CSELR) project which is currently operational along George Street.

To accommodate future pedestrian demand, footpath widening is planned for Bathurst Street, immediately outside the future Pitt Street South. New bicycle parking racks will be provided on Park Street and Bathurst Street.

The Gadigal Station study area consists of four intersections. Table 5-51 presents the peak hours utilised for modelling the intersections. Table 5-52 provides a summary of the intersection LOS while Figure 5-58 visualises a geospatial summary of the intersection LOS within the Gadigal Station study area.

Table 5-51 Block 3 - Gadigal Station peak hours modelled

Network ID	Intersection ID	Weekday AM peak hour		Weekday PM peak hour		Weekend peak hour	
		Day	Start time	Day	Start time	Day	Start time
PIT-N1	PIT01	Friday	8.00am	Wednesday	4.45pm	Saturday	5.15pm
	PIT02						
	PIT03						
	PIT04						

Table 5-52 Block 3 - Gadigal Station intersection performance summary

Intersection ID	Intersection	LOS		
		Weekday AM Peak	Weekday PM Peak	Weekend Peak
PIT01	Pitt Street/Bathurst Street (Signal)	LOS B	LOS B	LOS A
PIT02	Castlereagh Street/Bathurst Street (Signal)	LOS A	LOS B	LOS A
PIT03	Park Street/Castlereagh Street (Signal)	LOS B	LOS B	LOS B
PIT04	Park Street/Pitt Street (Signal)	LOS B	LOS B	LOS B

Overall, in the Gadigal Station study area, the intersection performance during the peak hours is satisfactory, operating at LOS B or better.

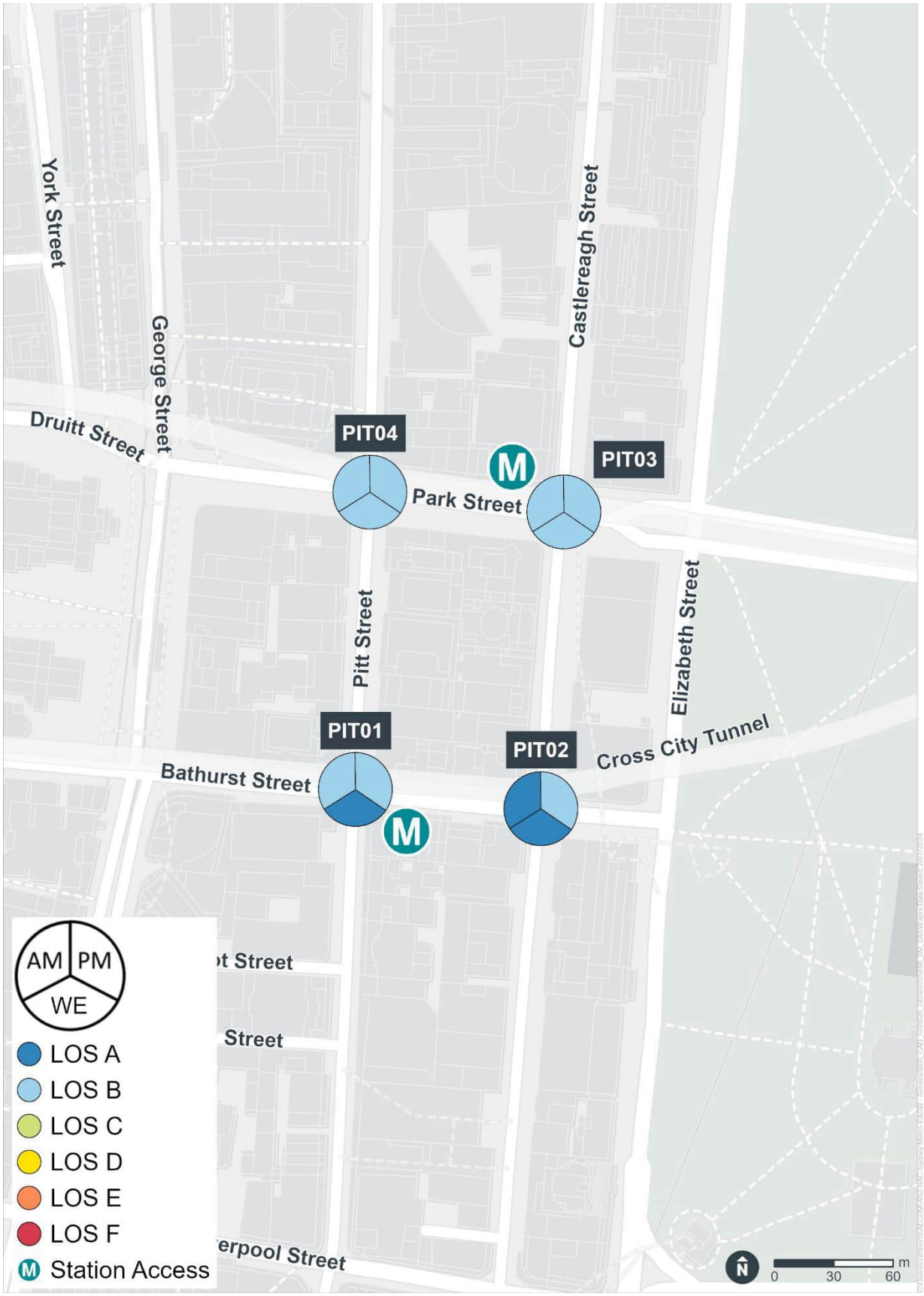


Figure 5-58 Block 3 – Gadigal Station intersection performance summary

5.6.1 PIT01 – Pitt Street/Bathurst Street

The signalised intersection, composed of Pitt Street and Bathurst Street, is located directly north-west of Pitt Street South. It connects the major local road of Pitt Street and major regional road of Bathurst Street running through the inner Sydney CBD.

During Block 3, the available storage on the right turn kerbside lane on Pitt Street (south approach) was reduced during all peak hours due to the presence of a Sydney Metro construction work zone.

Figure 5-59 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.

Source: Nearmap (February 2024)

Figure 5-59 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of PIT01

Table 5-53 presents a performance summary of this intersection.

Table 5-53 Block 3 - Intersection performance summary of PIT01

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Pitt Street/ Bathurst Street (Signal)	Weekday AM	South	0.659	49.9	46.9	LOS D
		West	0.313	10.3	47	LOS A
		Total	**0.659**	**20.3**	**47**	**LOS B**
	Weekday PM	South	0.69	50.4	50.5	LOS D
		West	0.283	9.4	47.1	LOS A
		Total	**0.69**	**20.8**	**50.5**	**LOS B**
	Weekend	South	0.672	25	24.5	LOS B
		West	0.338	8.8	30.8	LOS A
		Total	**0.672**	**12.7**	**30.8**	**LOS A**

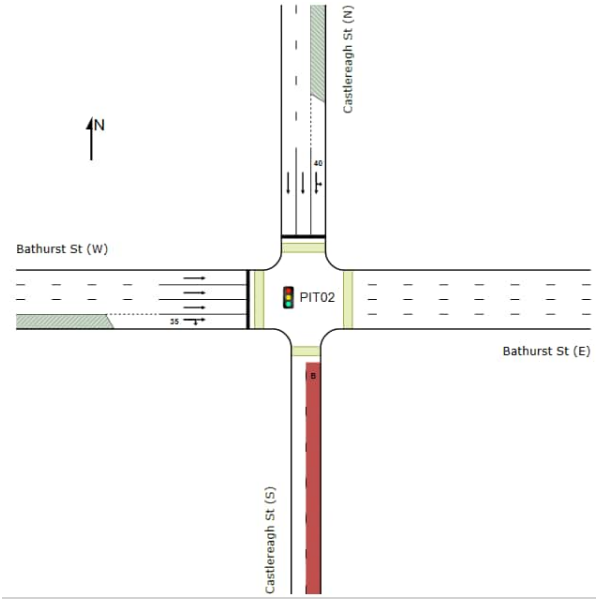
Overall, the intersection of Pitt Street and Bathurst Street performs satisfactorily at LOS B or better during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

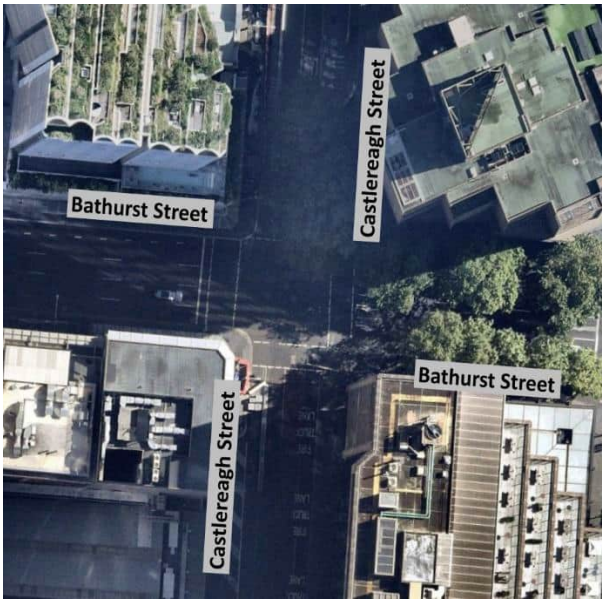
5.6.2 PIT02 – Castlereagh Street/Bathurst Street

The signalised intersection, composed of Castlereagh Street and Bathurst Street, is located north-east of Pitt Street South. It connects the major local road of Castlereagh Street and major regional road of Bathurst Street running through the inner Sydney CBD.

During Block 3, the western kerb side lane on Castlereagh Street (north approach) was closed off due to construction works.

Figure 5-60 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.





Source: Nearmap (February 2024)

Figure 5-60 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of PIT02

Table 5-54 presents a performance summary of this intersection.

Table 5-54 Block 3 - Intersection performance summary of PIT02

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Castlereagh Street/ Bathurst Street (Signal)	Weekday AM	North	0.348	23.3	53.9	LOS B
		West	0.29	12.1	54.3	LOS A
		Total	**0.348**	**14.2**	**54.3**	**LOS A**
	Weekday PM	North	0.339	22.1	54.4	LOS B
		West	0.311	15.4	59.9	LOS B
		Total	**0.339**	**16.9**	**59.9**	**LOS B**
	Weekend	North	0.342	13.5	25.5	LOS A
		West	0.353	5	23.7	LOS A
		Total	**0.353**	**6.4**	**25.5**	**LOS A**

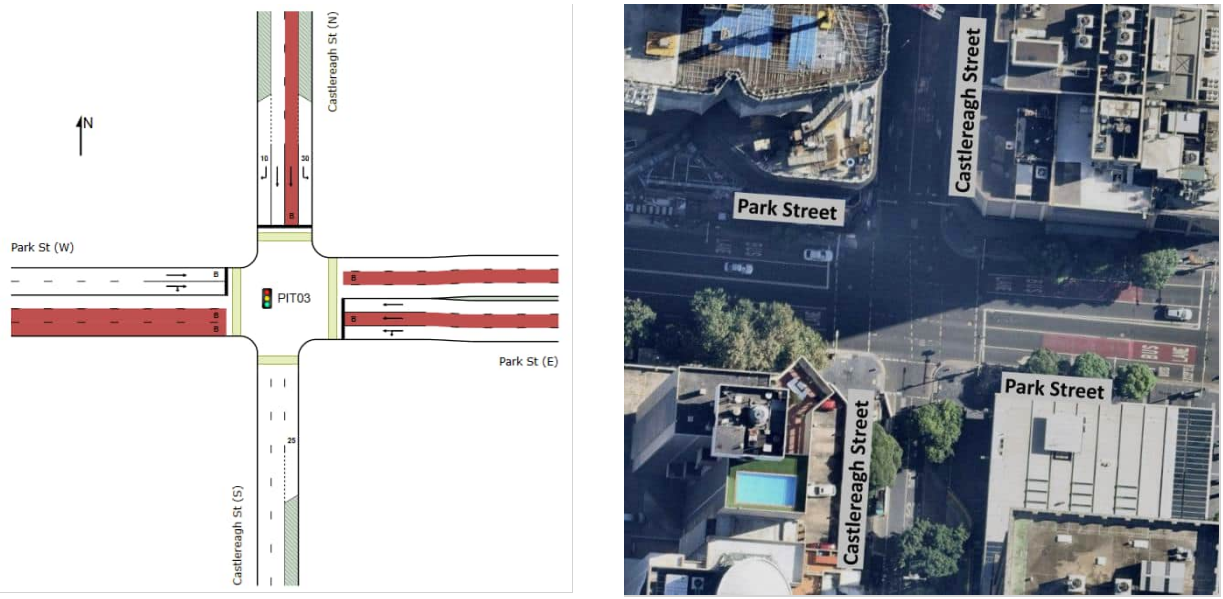
Overall, the intersection of Castlereagh Street and Bathurst Street performs satisfactorily at LOS B or better during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.6.3 PIT03 – Park Street/Castlereagh Street

The signalised intersection, composed of Park Street and Castlereagh Street, is located directly south-east of Pitt Street North. It connects the major regional road of Park Street and major local road of Castlereagh Street running through the inner Sydney CBD.

During Block 3, the northern kerbside lane on Park Street (west approach) was occupied by a work zone during all peak hours. Additionally, the western kerbside lane on Castlereagh Street (southern leg) was closed during all peak hours due to construction works.

Figure 5-61 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-61 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of PIT03

Table 5-55 presents a performance summary of this intersection.

Table 5-55 Block 3 - Intersection performance summary of PIT03

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Park Street/ Castlereagh Street (Signal)	Weekday AM	East	0.353	11.3	63.8	LOS A
		North	0.578	48.3	49.6	LOS D
		West	0.292	12.8	40.6	LOS A
		Total	**0.578**	**24.2**	**63.8**	**LOS B**
	Weekday PM	East	0.371	11	67.7	LOS A
		North	0.64	45.9	50.9	LOS D
		West	0.3	12.8	41.9	LOS A
		Total	**0.64**	**25.4**	**67.7**	**LOS B**
	Weekend	East	0.462	9.7	79.9	LOS A
		North	0.467	45.8	39.6	LOS D
		West	0.185	10	22.7	LOS A
		Total	**0.467**	**20.7**	**79.9**	**LOS B**

Overall, the intersection of Park Street and Castlereagh Street performs satisfactorily at LOS B during all peak hours. The 95th percentile queue on Park Street (east approach) extends back to Elizabeth Street during all peak hours.

5.6.4 PIT04 – Park Street/Pitt Street

The signalised intersection, composed of Park Street and Pitt Street, is located directly south-west of Pitt Street North. It connects the major regional road of Park Street and major local road of Pitt Street running through the inner Sydney CBD.

During Block 3, the kerbside departure lane of Park Street (east approach) was occupied by a work zone towards Castlereagh Street during all peak hours.

Figure 5-62 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.

Source: Nearmap (February 2024)

Figure 5-62 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of PIT04

Table 5-56 presents a performance summary of this intersection.

Table 5-56 Block 3 - Intersection performance summary of PIT04

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Park Street/ Pitt Street (Signal)	Weekday AM	South	0.634	26.5	47.8	LOS B
		East	0.667	12.7	62.7	LOS A
		West	0.159	9.2	12.4	LOS A
		Total	**0.667**	**19**	**62.7**	**LOS B**
	Weekday PM	South	0.482	23	28.9	LOS B
		East	0.664	11.5	66.8	LOS A
		West	0.142	9.1	10.8	LOS A
		Total	**0.664**	**16**	**66.8**	**LOS B**
	Weekend	South	0.438	22.7	28.2	LOS B
		East	0.723	12.3	75.3	LOS A
		West	0.072	8.9	5.3	LOS A

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
		Total	**0.723**	**16.2**	**75.3**	**LOS B**

Overall, the intersection of Park Street and Pitt Street performs satisfactorily at LOS B during all peak hours. The 95th percentile queue on Park Street (east approach) extends back to Castlereagh Street during the weekend peak hour.

5.6.5 Comparison with previous study blocks

Figure 5-63 provides a comparison of the total peak hourly traffic volumes recorded across all intersections for Block 3 against previous study blocks. As shown, traffic volumes are slightly lower in Block 3 during all peak hours compared to previous study blocks.

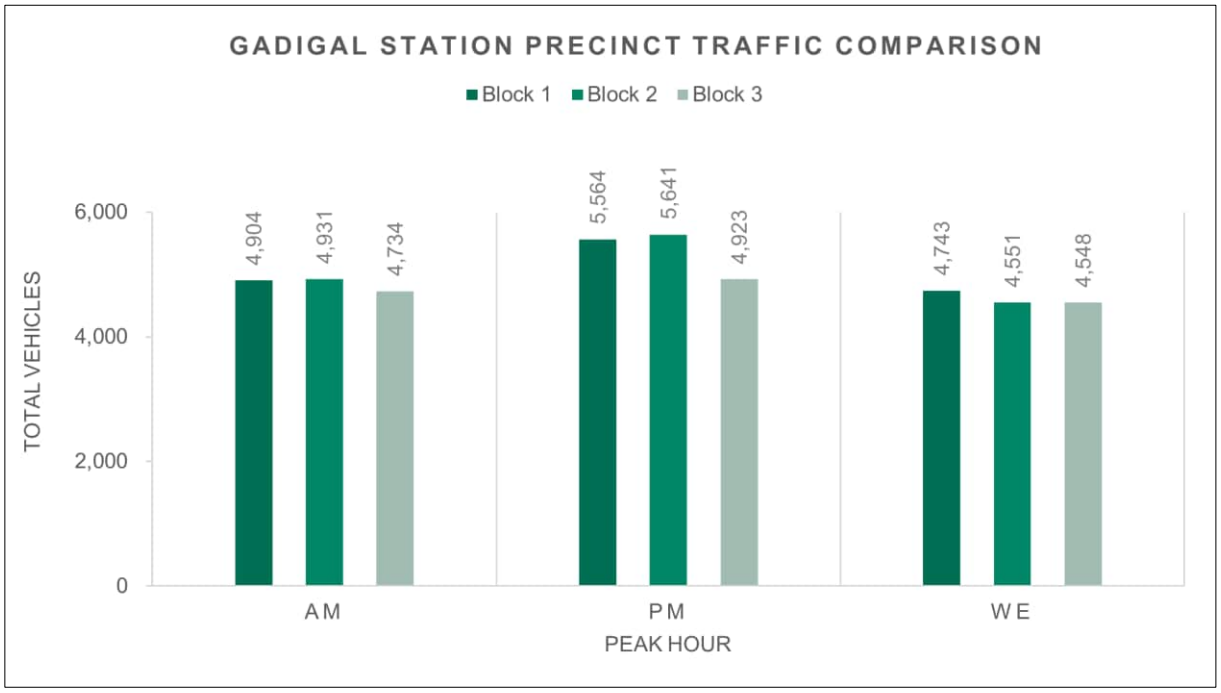


Figure 5-63 Study block comparison – Gadigal Station peak hourly traffic volumes across all intersections

A comparison of the intersection LOS for Block 3 against previous study blocks is shown in Figure 5-64. All intersections in the Gadigal Station study area perform at LOS B or better during Block 3, which is generally similar to previous study blocks.

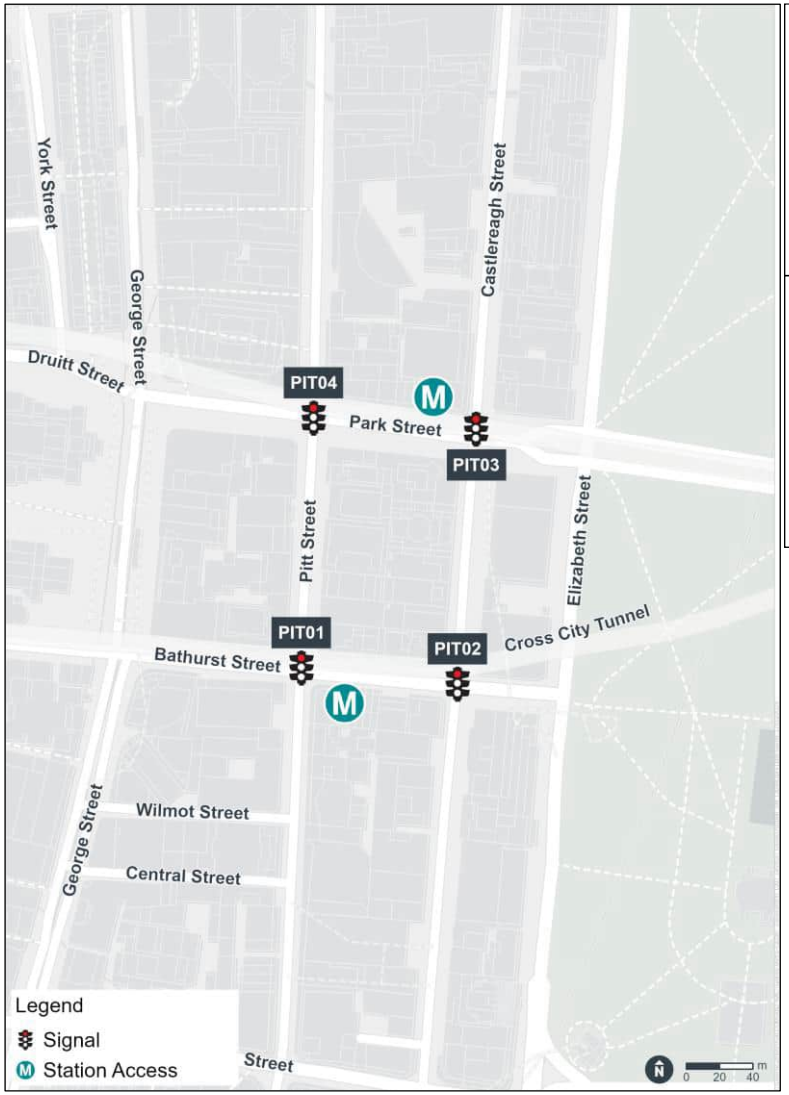


Figure 5-64 Study block comparison – Gadigal Station intersection performance summary

5.7 Central Station

Central Station is an existing station and the seventh stop on the City & Southwest Line (towards Sydenham). It is located at the southern end of the Sydney CBD, directly south of Belmore Park between Pitt Street and Elizabeth Street.

Central Station (metro) was still under construction during Block 3. The metro lines are being built under the existing platforms 13, 14 and 15 in Central Station. In addition to the existing seven entrances, a new eastern entrance is being constructed at Chalmers Street.

Bus services are available within approximately 100 metres of Central Station, located at Eddy Avenue, Pitt Street, Lee Street and Elizabeth Street. Dedicated cycle lanes are currently provided along Elizabeth Street and Eddy Avenue near Central Station. Enhancement of pedestrian and cycling infrastructure around the station will be enabled by the Sydney Metro City & Southwest project and further investigated by TfNSW.

The Central Station study area consists of five intersections. During Block 3, one intersection (CEN04) was a new pedestrian mid-block crossing which had not yet been constructed. Table 5-57 presents the peak hours utilised for modelling the intersections. Table 5-58 provides a summary of the intersection LOS while Figure 5-65 visualises a geospatial summary of the intersection LOS within the Central Station study area.

Table 5-57 Block 3 - Central Station peak hours modelled

Network ID	Intersection ID	Weekday AM peak hour		Weekday PM peak hour		Weekend peak hour	
		Day	Start time	Day	Start time	Day	Start time
CEN-N1	CEN01	Tuesday	8.00am	Thursday	5.00pm	Saturday	1.45pm
	CEN02						
CEN-N2	CEN03	Wednesday	8.00am	Wednesday	5.00pm	Saturday	5.45pm
	CEN05						
	CEN04	Under construction.					

Table 5-58 Block 3 - Central Station intersection performance summary

Intersection ID	Intersection	LOS		
		Weekday AM Peak	Weekday PM Peak	Weekend Peak
CEN01	Elizabeth Street/Eddy Avenue (Signal)	LOS B	LOS B	LOS B
CEN02	Elizabeth Street/Foveaux Street (Signal)	LOS B	LOS B	LOS B
CEN03	Elizabeth Street/Cooper Street (Priority – Give Way)	LOS A	LOS A	LOS A
CEN04	New Pedestrian Mid-block Crossing at Randle Lane (Pedestrian only – Signal)	Under construction		
CEN05	Elizabeth Street/Randle Street (Signal)	LOS A	LOS A	LOS A

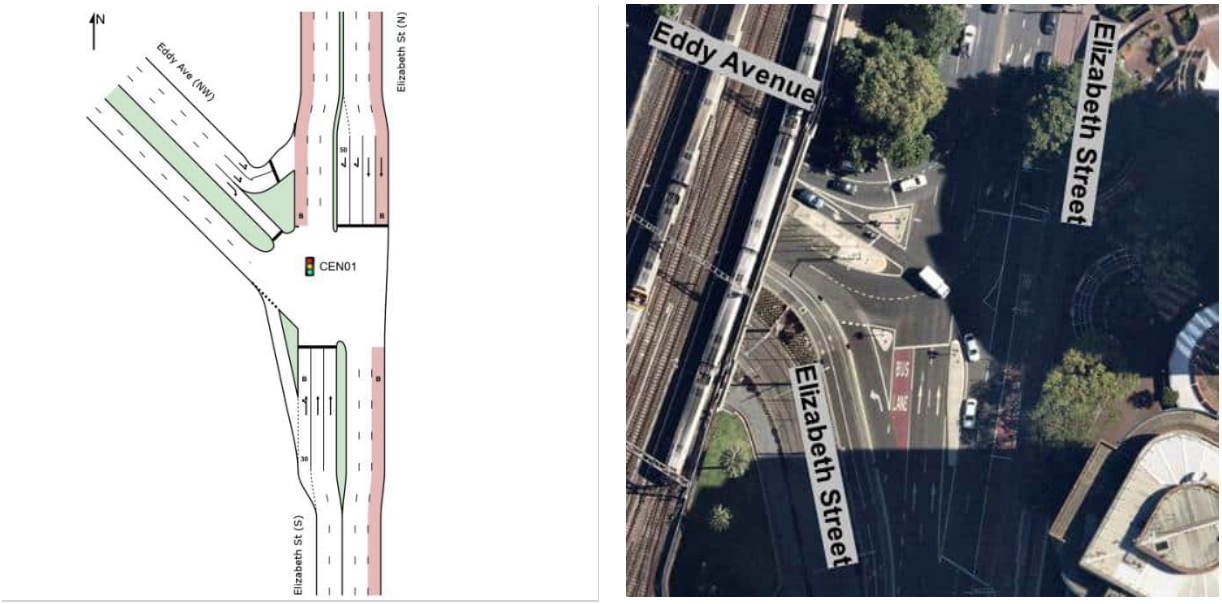
Overall, the intersection performance in the Central Station study area during the peak hours is satisfactory, operating at LOS B or better.

Figure 5-65 Block 3 – Central Station intersection performance summary

5.7.1 CEN01 – Elizabeth Street/Eddy Avenue

The signalised intersection, composed of Elizabeth Street and Eddy Avenue, is located north of Central Station. It connects the regional roads of Eddy Avenue, running through the Sydney CBD, and Elizabeth Street, linking the Sydney CBD and Waterloo. The traffic signals at this intersection are co-ordinated with the intersection of Elizabeth Street and Foveaux Street (CEN02).

Figure 5-66 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-66 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of CEN01

Table 5-59 presents a performance summary of this intersection.

Table 5-59 Block 3 - Intersection performance summary of CEN01

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Elizabeth Street/ Eddy Avenue (Signal)	Weekday AM	South	0.818	14.7	57.1	LOS B
		North	0.763	38.1	160.3	LOS C
		North-west	0.764	27.3	82.5	LOS B
		Total	**0.818**	**23**	**160.3**	**LOS B**
	Weekday PM	South	0.533	6.9	57.1	LOS A
		North	0.852	45.6	219.6	LOS D
		North-west	0.859	27	94.9	LOS B
		Total	**0.859**	**23.8**	**219.6**	**LOS B**
	Weekend	South	0.402	6.2	43.4	LOS A
		North	0.494	30.7	70.9	LOS C
		North-west	0.748	28.2	68.8	LOS B
		Total	**0.748**	**19.2**	**70.9**	**LOS B**

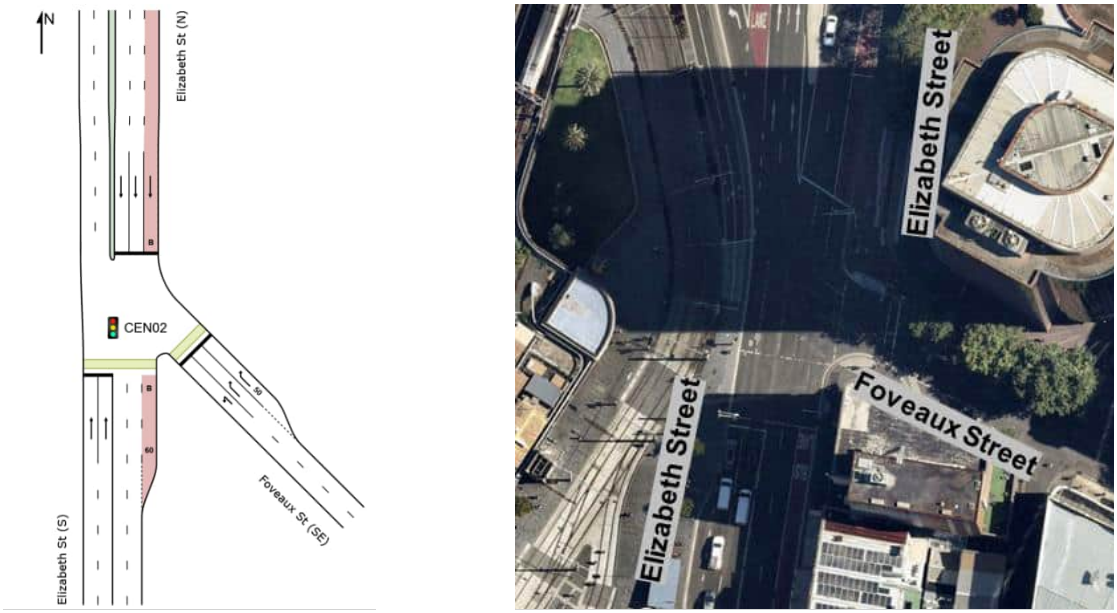
Overall, the intersection of Elizabeth Street and Eddy Avenue performs satisfactorily at LOS B during all peak hours. The 95th percentile queue on Elizabeth Street (north approach) extends back to Albion

Street during the weekday AM and PM peak hours. Similarly, the 95th percentile queue on Eddy Avenue (north-west approach) extends back to the pedestrian mid-block crossing on Eddy Avenue during all peak hours.

5.7.2 CEN02 – Elizabeth Street/Foveaux Street

The signalised intersection, composed of Elizabeth Street and Foveaux Street, is located north of Central Station. It connects the regional roads of Foveaux Street, running through Surry Hills, and Elizabeth Street, linking the Sydney CBD and Waterloo. The traffic signals at this intersection are co-ordinated with the intersection of Elizabeth Street and Eddy Avenue (CEN01).

Figure 5-67 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-67 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of CEN02

Table 5-60 presents a performance summary of this intersection.

Table 5-60 Block 3 - Intersection performance summary of CEN02

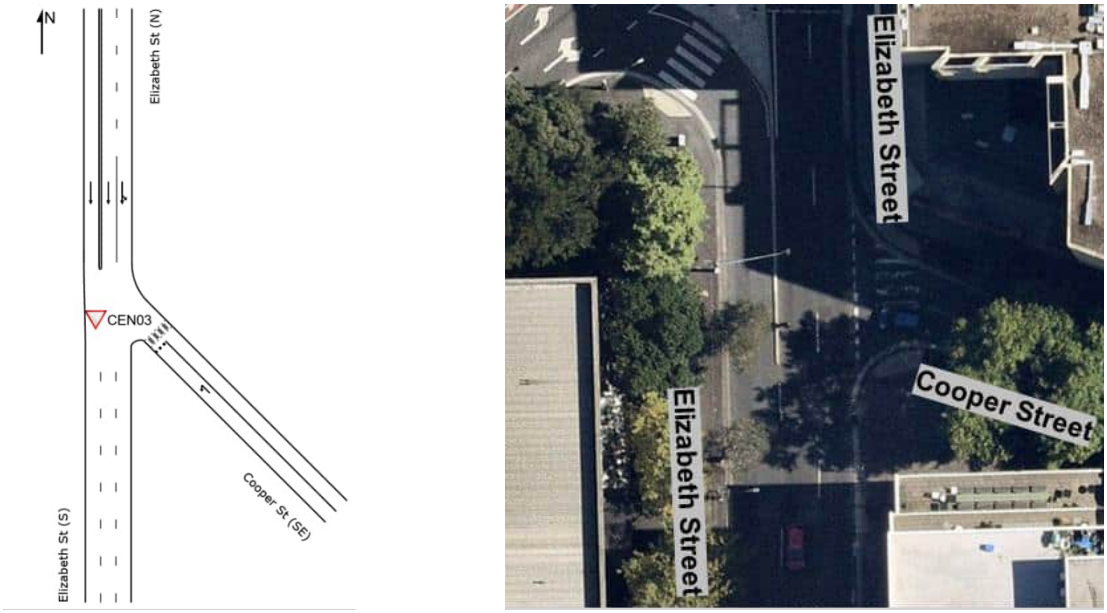
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Elizabeth Street/ Foveaux Street (Signal)	Weekday AM	South	0.722	31.2	170.9	LOS C
		South-east	0.661	25.3	88.8	LOS B
		North	0.402	11	57.1	LOS A
		Total	**0.722**	**24.2**	**170.9**	**LOS B**
	Weekday PM	South	0.549	31.3	111.5	LOS C
		South-east	0.736	25.5	112.8	LOS B
		North	0.58	15	57.1	LOS B
		Total	**0.736**	**23.6**	**112.8**	**LOS B**
	Weekend	South	0.47	24.3	97.4	LOS B
		South-east	0.379	22.5	58.8	LOS B
		North	0.381	8.8	57.1	LOS A
		Total	**0.47**	**18.5**	**97.4**	**LOS B**

Overall, the intersection of Elizabeth Street and Foveaux Street performs satisfactorily at LOS B during all peak hours. The 95th percentile queue on Elizabeth Street (north approach) extends back to Eddy Avenue during all peak hours.

5.7.3 CEN03 – Elizabeth Street/Cooper Street

The priority intersection, composed of Elizabeth Street and Cooper Street, is located south of Central Station. It connects the local road of Cooper Street with the regional road of Elizabeth Street, linking the Sydney CBD to Waterloo.

Figure 5-68 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-68 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of CEN03

Table 5-61 presents a performance summary of this intersection.

Table 5-61 Block 3 - Intersection performance summary of CEN03

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Elizabeth Street/ Cooper Street (Priority – Give Way)	Weekday AM	South-east	0.076	6.6	2.1	LOS A
		North	0.209	3.4	4.9	LOS A
		Total	**0.076**	**6.6**	**2.1**	**LOS A**
	Weekday PM	South-east	0.175	9.3	4.7	LOS A
		North	0.294	4	3.8	LOS A
		Total	**0.175**	**9.3**	**4.7**	**LOS A**
	Weekend	South-east	0.06	6.2	1.7	LOS A
		North	0.218	2.8	3.5	LOS A
		Total	**0.06**	**6.2**	**1.7**	**LOS A**

Overall, the intersection of Elizabeth Street and Cooper Street performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.7.4 CEN04 – New Pedestrian Mid-block Crossing at Randle Lane

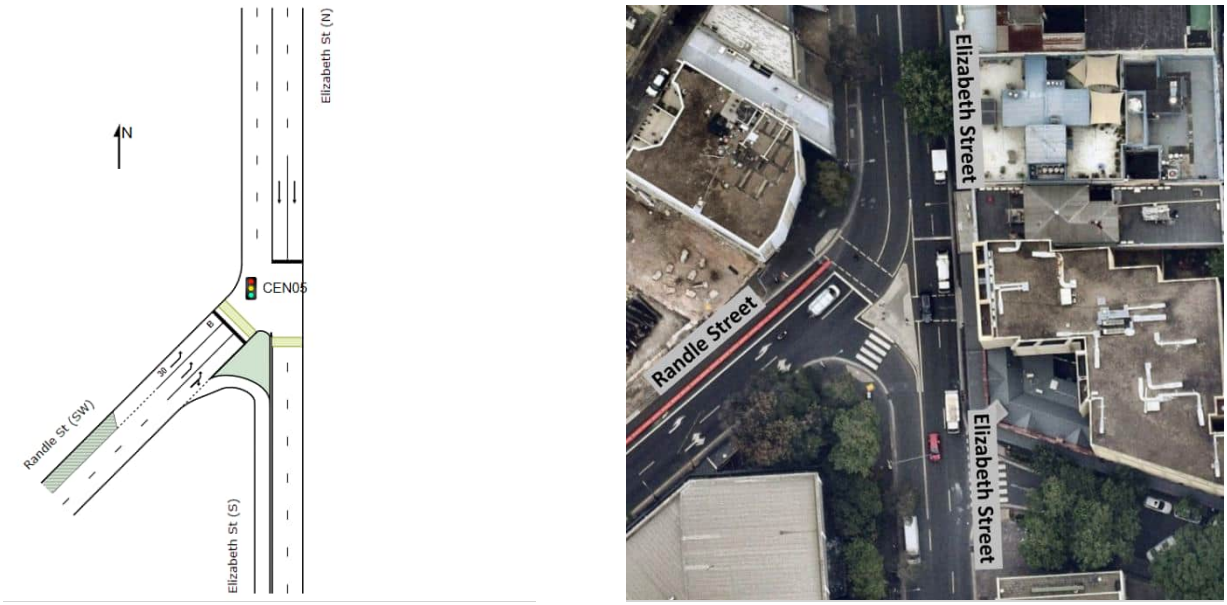
The signalised pedestrian mid-block crossing at Randle Lane is located directly south of Central Station. During Block 3, the mid-block crossing was under construction and non-operational. As such, it was not assessed as part of the Block 3 study.

5.7.5 CEN05 – Elizabeth Street/Randle Street

The signalised intersection, composed of Elizabeth Street and Randle Street, is located south of Central Station. It connects the local road of Randle Street with the regional road of Elizabeth Street, linking the Sydney CBD to Waterloo.

During Block 3, the kerbside bus lane on Randle Street (south-western approach) was closed off due to construction works.

Figure 5-69 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-69 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of CEN05

Table 5-62 presents a performance summary of this intersection.

Table 5-62 Block 3 - Intersection performance summary of CEN05

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Elizabeth Street/ Randle Street (Signal)	Weekday AM	North	0.245	2.6	33.3	LOS A
		South-west	0.437	7.4	60	LOS A
		Total	**0.437**	**5.6**	**60**	**LOS A**
	Weekday PM	North	0.348	2.9	53.2	LOS A
		South-west	0.292	6.1	32.8	LOS A
		Total	**0.348**	**4.3**	**53.2**	**LOS A**
	Weekend	North	0.251	1.6	27.9	LOS A
		South-west	0.287	6.1	29.8	LOS A
		Total	**0.287**	**3.8**	**29.8**	**LOS A**

Overall, the intersection of Elizabeth Street and Randle Street performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.7.6 Comparison with previous study blocks

Figure 5-70 provides a comparison of the total peak hourly traffic volumes recorded across all intersections for Block 3 against previous study blocks. As shown, Block 3 traffic volumes are relatively similar in the AM peak hour, and lower in the PM and weekend peak hours compared to Block 1 and Block 2.

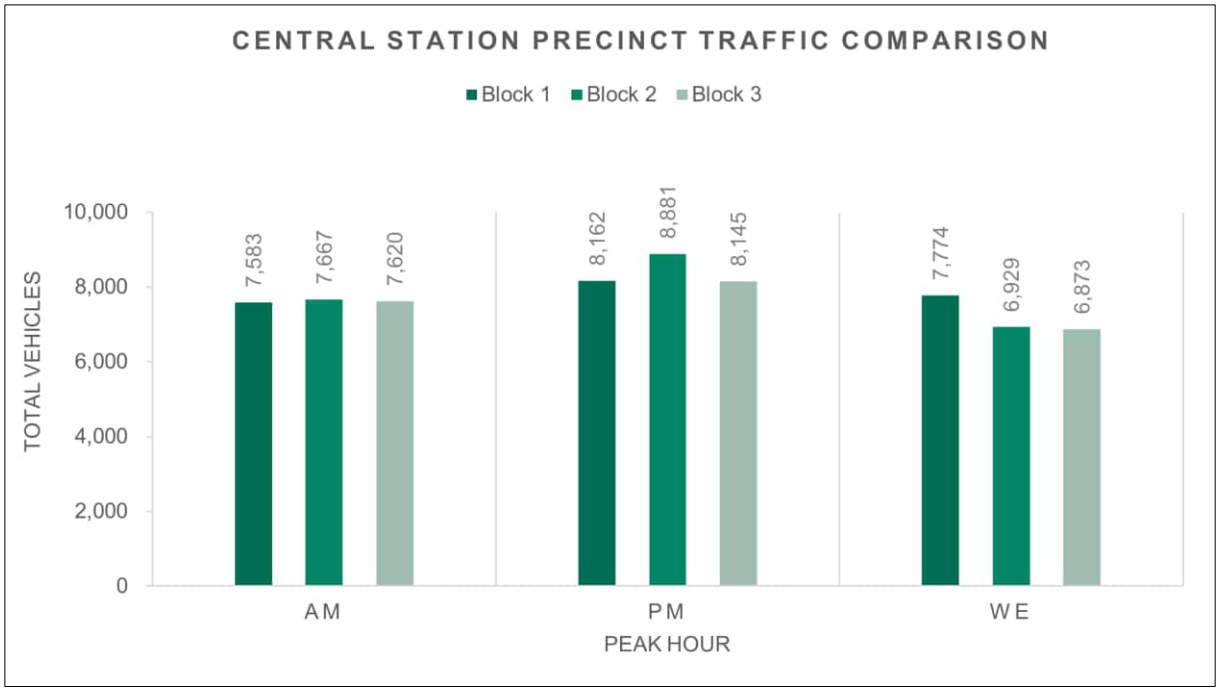
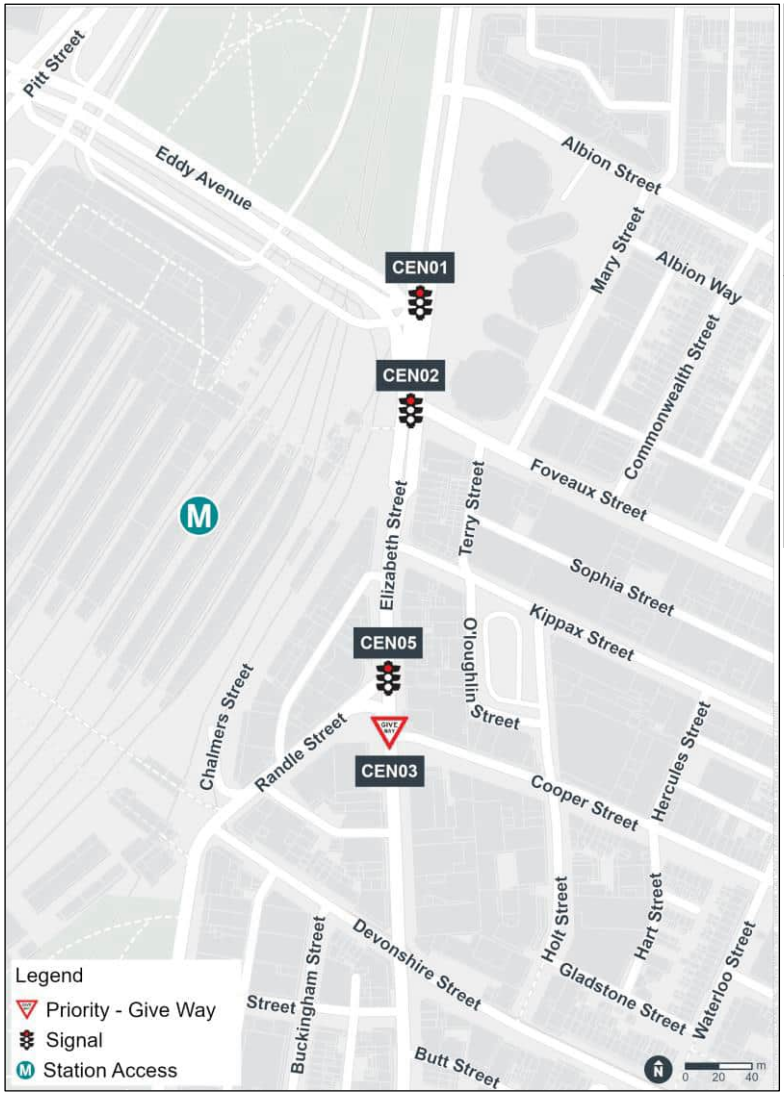


Figure 5-70 Study block comparison – Central Station peak hourly traffic volumes across all intersections

A comparison of the intersection LOS for Block 3 against previous study blocks is shown in Figure 5-71. All intersections in the Central Station study area perform at LOS B or better during Block 3, which is generally similar to previous study blocks.



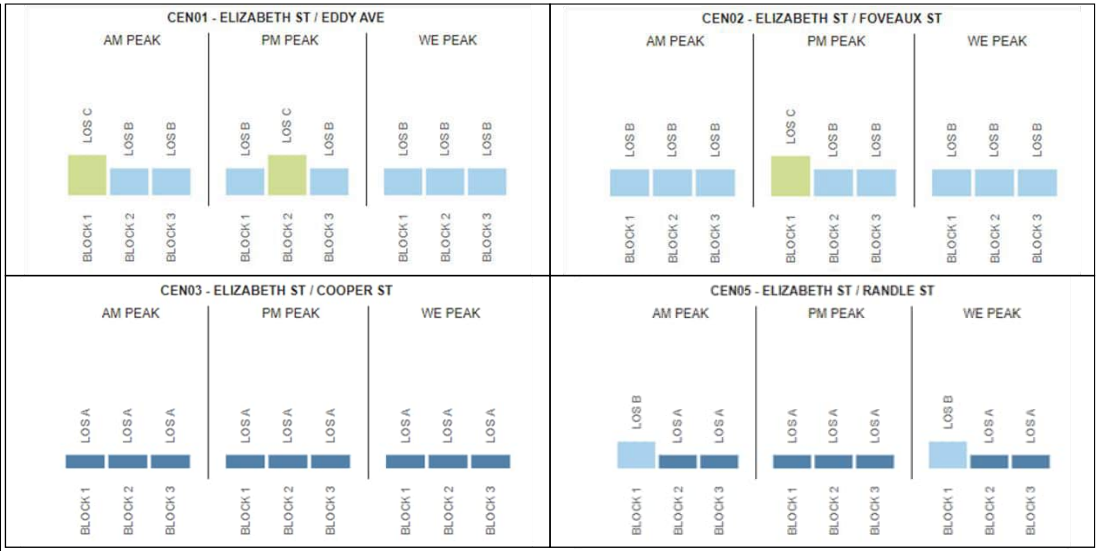


Figure 5-71 Study block comparison – Central Station intersection performance summary

5.8 Waterloo Station

Waterloo Station is a new underground station and the eighth stop on the City & Southwest Line (towards Sydenham). It is located in the north-western quadrant of Waterloo, bounded by Botany Road, Cope Street, Raglan Street and Wellington Street.

Waterloo Station was still under construction during Block 3. Construction access and egress to the station was facilitated via Cope Street, which was closed off to general traffic between Raglan Street and Wellington Street.

Bus services are available within approximately 150 metres of Waterloo Station, located along Botany Road. The existing bus stops will be retained for northbound routes, and the existing bus stops for southbound routes will be relocated to the mid-block on Botany Road between Raglan Street and Wellington Street. A new on-road marked cycle link will be provided along Wellington Street.

The Waterloo Station study area consists of six intersections. During Block 3, one intersection (WLO06) was a new pedestrian mid-block crossing which had not yet been constructed. Additionally, the Cope Street/Wellington Street intersection (WLO04) was impacted by construction works and therefore was excluded from the analysis. Table 5-63 presents the peak hours utilised for modelling the intersections.

Table 5-64 provides a summary of the intersection LOS while Figure 5-72 visualises a geospatial summary of the intersection LOS within the Waterloo Station study area.

Table 5-63 Block 3 - Waterloo Station peak hours modelled

Network ID	Intersection ID	Weekday AM peak hour		Weekday PM peak hour		Weekend peak hour	
		Day	Start time	Day	Start time	Day	Start time
WLO-N1	WLO01	Wednesday	8.00am	Wednesday	5.00pm	Saturday	12.45pm
	WLO02						
	WLO03						
	WLO04[1]						
	WLO05						
-	WLO06	Under construction.					

Notes:
1. WLO04 was impacted by construction works during Block 3 and therefore was excluded from the analysis.

Table 5-64 Block 3 - Waterloo Station intersection performance summary

Intersection ID	Intersection	LOS		
		Weekday AM Peak	Weekday PM Peak	Weekend Peak
WLO01	Botany Road/Raglan Street/ Henderson Road (Signal)	LOS C	LOS D	LOS C
WLO02	Raglan Street/Cope Street (Roundabout)	LOS A	LOS A	LOS A
WLO03	Botany Road/Wellington Street/ Buckland Street (Signal)	LOS A	LOS A	LOS A
WLO04	Cope Street/Wellington Street (Roundabout)	Impacted by construction works		
WLO05	Wyndham Street/Henderson Road (Signal)	LOS C	LOS C	LOS C
WLO06	New Pedestrian Mid-block Crossing at Cope Street (Pedestrian only – Signal)	Under construction		

Overall, the intersection performance in the Waterloo Station study area during the peak hours is satisfactory, operating at LOS D or better.

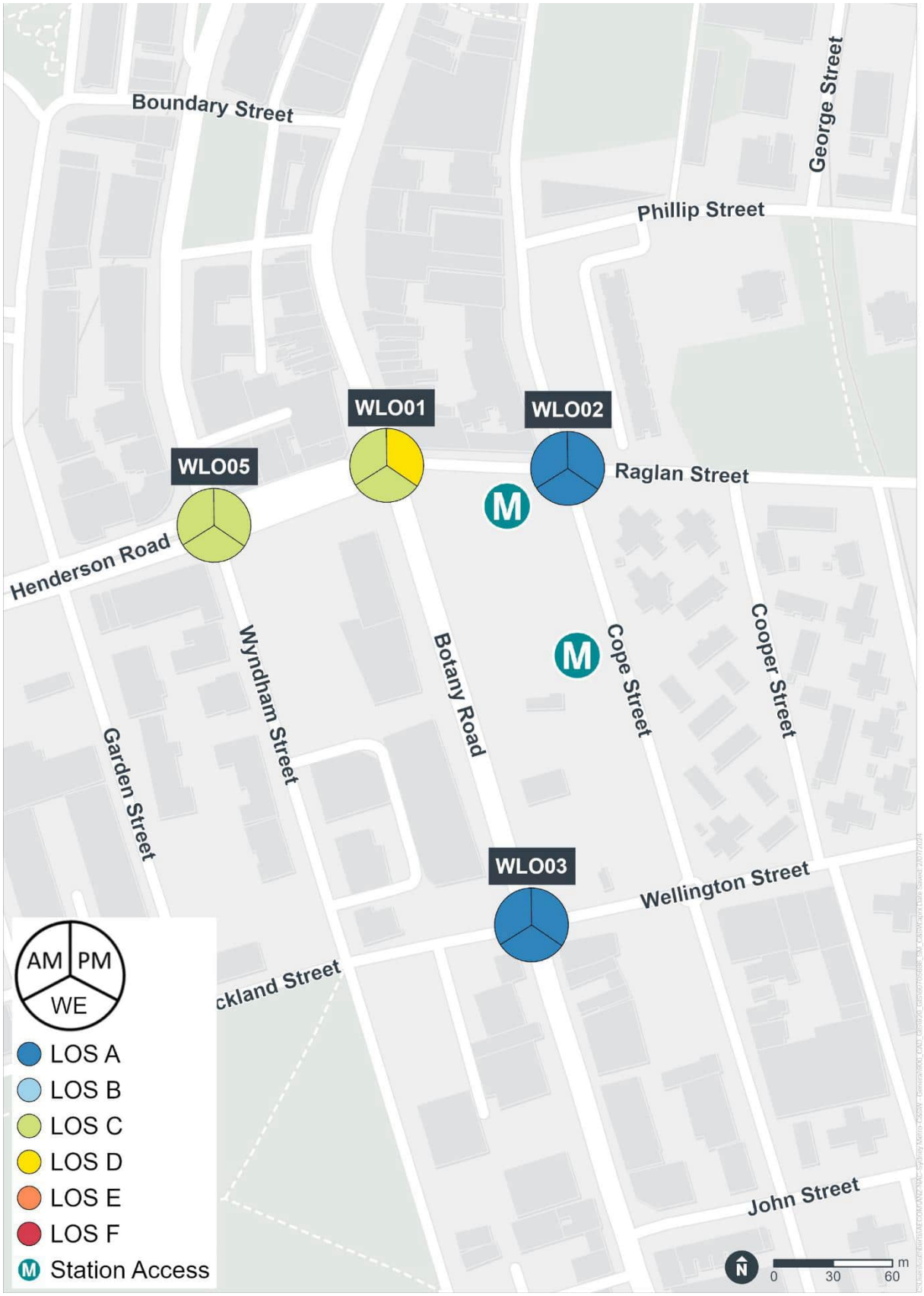


Figure 5-72 Block 3 – Waterloo Station intersection performance summary

5.8.1 WLO01 – Botany Road/Raglan Street/Henderson Road

The signalised intersection, composed of Botany Road, Raglan Street and Henderson Road, is located directly north-west of Waterloo Station. It connects the local road of Raglan Street in Waterloo with the state roads of Botany Road, linking Waterloo and Matraville, and Henderson Road, linking Waterloo and Eveleigh.

Figure 5-73 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.

Source: Nearmap (February 2024)

Figure 5-73 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of WLO01

Table 5-65 presents a performance summary of this intersection.

Table 5-65 Block 3 - Intersection performance summary of WLO01

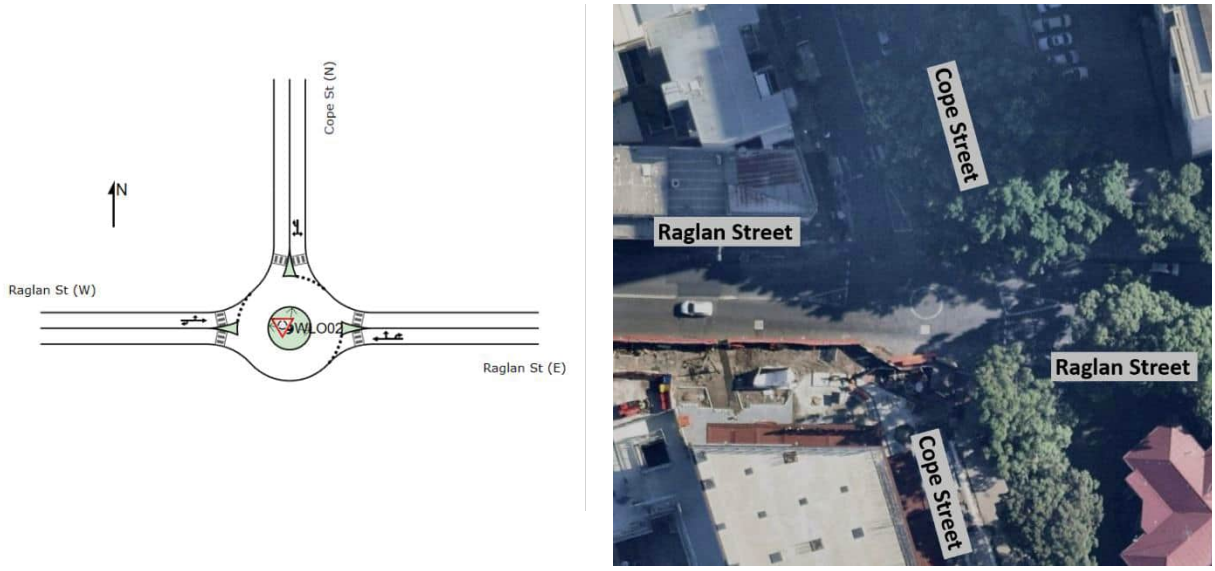
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Botany Road/ Raglan Street/ Henderson Road (Signal)	Weekday AM	South	0.709	34.8	135.4	LOS C
		East	0.827	89.8	67.4	LOS F
		North	0.754	24.2	116.9	LOS B
		West	0.661	16.7	27.8	LOS B
		Total	**0.827**	**32.9**	**135.4**	**LOS C**
	Weekday PM	South	0.77	55	142.4	LOS D
		East	0.944	111.7	106.1	LOS F
		North	0.776	25.4	130.8	LOS B
		West	0.896	25.3	106.1	LOS B
		Total	**0.944**	**42.8**	**142.4**	**LOS D**
	Weekend	South	0.515	41.8	87.5	LOS C
		East	0.593	72.2	50.2	LOS F
		North	0.594	23	148.1	LOS B
		West	0.572	17.3	24.2	LOS B
		Total	**0.594**	**31.5**	**148.1**	**LOS C**

Overall, the intersection of Botany Road, Raglan Street and Henderson Road performs satisfactorily at LOS D or better during all peak hours. The 95th percentile queue on Raglan Street (east approach) extends back to Cope Street during the weekday AM and PM peak hours.

5.8.2 WLO02 – Raglan Street/Cope Street

The roundabout, composed of Raglan Street and Cope Street, is located directly north-east of Waterloo Station. It connects the local roads of Raglan Street and Cope Street in Waterloo. During Block 3, Cope Street (south approach) was closed off due to Sydney Metro construction works.

Figure 5-74 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-74 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of WLO02

Table 5-66 presents a performance summary of this intersection.

Table 5-66 Block 3 - Intersection performance summary of WLO02

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Raglan Street/Cope Street (Roundabout)	Weekday AM	East	0.219	8.5	10.4	LOS A
		North	0.061	9.7	2.4	LOS A
		West	0.211	8.3	8.9	LOS A
		Total	**0.061**	**9.7**	**2.4**	**LOS A**
	Weekday PM	East	0.513	9.2	19.6	LOS A
		North	0.201	10.9	5.8	LOS A
		West	0.281	8.3	13	LOS A
		Total	**0.201**	**10.9**	**5.8**	**LOS A**
	Weekend	East	0.173	8.6	8.2	LOS A
		North	0.082	9.7	3.3	LOS A
		West	0.206	8.3	8.8	LOS A
		Total	**0.082**	**9.7**	**3.3**	**LOS A**

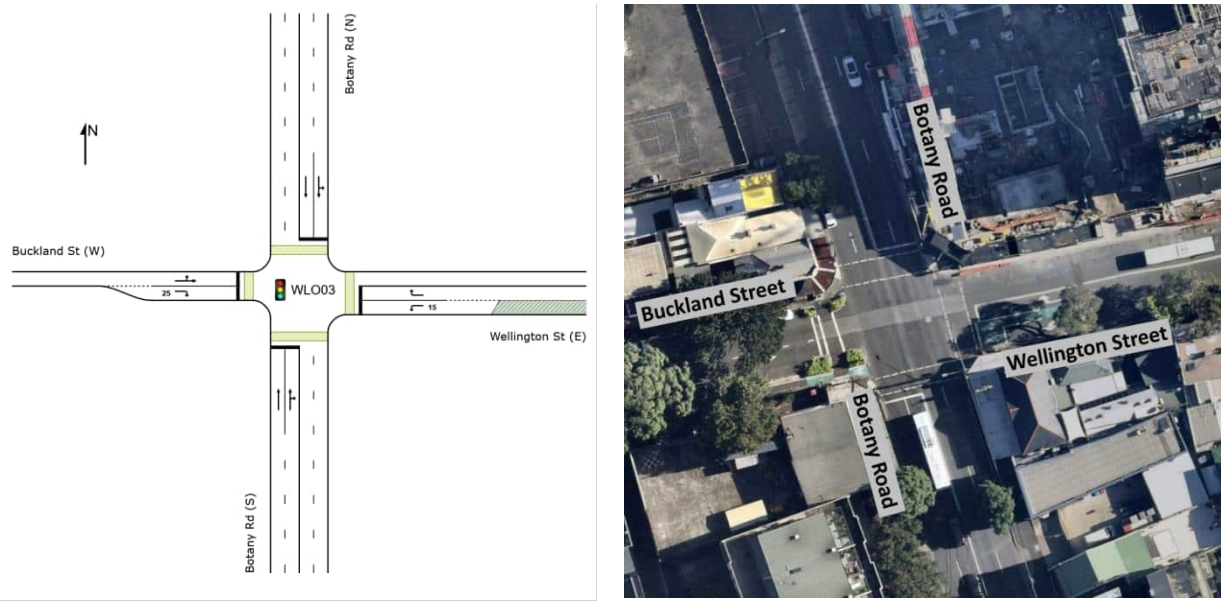
Overall, the intersection of Raglan Street and Cope Street performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.8.3 WLO03 – Botany Road/Wellington Street/Buckland Street

The signalised intersection, composed of Botany Road, Wellington Street and Buckland Street, is located directly south-west of Waterloo Station. It connects the local roads of Wellington Street in Waterloo and Buckland Street, linking Waterloo and Alexandria, with the state road of Botany Road, linking Waterloo and Matraville.

During Block 3, Wellington Street (east approach) was closed off due to Sydney Metro construction.

Figure 5-75 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-75 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of WLO03

Table 5-67 presents a performance summary of this intersection.

Table 5-67 Block 3 - Intersection performance summary of WLO03

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Botany Road/ Wellington Street/ Buckland Street (Signal)	Weekday AM	South	0.267	4	45.2	LOS A
		East	0.018	57.4	1.5	LOS E
		North	0.349	3.6	55.8	LOS A
		West	0.412	59.8	26.7	LOS E
		Total	**0.412**	**6.5**	**55.8**	**LOS A**
	Weekday PM	South	0.224	3.9	36.6	LOS A
		East	0.013	57.9	0.8	LOS E
		North	0.373	1.1	24.6	LOS A
		West	0.37	59.7	23.7	LOS E
		Total	**0.373**	**4.5**	**36.6**	**LOS A**
	Weekend	South	0.27	3.5	43.4	LOS A

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
		East	0.007	58.6	0.4	LOS E
		North	0.591	6.3	77.3	LOS A
		West	0.3	59.3	18.9	LOS E
		Total	**0.591**	**8.3**	**77.3**	**LOS A**

Overall, the intersection of Botany Road, Wellington Street and Buckland Street performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

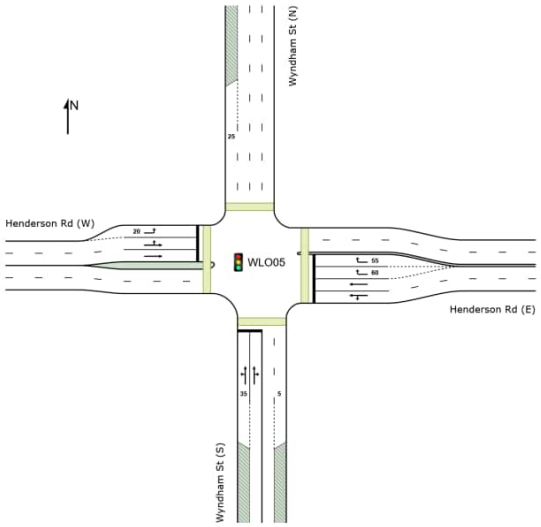
5.8.4 WLO04 – Cope Street/Wellington Street

The roundabout, composed of Cope Street and Wellington Street, is located directly south-east of Waterloo Station. It connects the local roads of Cope Street, linking Waterloo and Redfern, and Wellington Street in Waterloo. During Block 3, the intersection was closed off due to construction works and was not operational to the public. As such, it was not assessed as part of the Block 3 study.

5.8.5 WLO05 – Wyndham Street/Henderson Road

The signalised intersection, composed of Wyndham Street and Henderson Road, is located west of Waterloo Station. It connects Henderson Road, linking Waterloo and Eveleigh, and Wyndham Street in Alexandria.

Figure 5-76 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-76 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of WLO05

Table 5-68 presents a performance summary of this intersection.

Table 5-68 Block 3 - Intersection performance summary of WLO05

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Wyndham Street/ Henderson Road (Signal)	Weekday AM	South	0.73	62	92.2	LOS E
		East	0.569	7.7	48.7	LOS A
		West	0.746	65.6	91.6	LOS E
		Total	**0.746**	**29.5**	**92.2**	**LOS C**
	Weekday PM	South	0.777	64.1	107.8	LOS E
		East	0.53	10.7	66.7	LOS A
		West	0.773	65.1	127.5	LOS E
		Total	**0.777**	**33.3**	**127.5**	**LOS C**
	Weekend	South	0.58	48.3	89.1	LOS D
		East	0.581	11.5	42.7	LOS A
		West	0.587	56.8	88.7	LOS E
		Total	**0.587**	**31.1**	**89.1**	**LOS C**

Overall, the intersection of Wyndham Street and Henderson Road performs satisfactorily at LOS C during all peak hours. The 95th percentile queue on Henderson Road (east approach) extends back to Botany Road during the weekday PM peak hour. Similarly, the 95th percentile queue on Henderson Road (west approach) extends back to Garden Street during all peak hours.

5.8.6 WLO06 – New Pedestrian Mid-block Crossing at Cope Street

The new unsignalised pedestrian mid-block crossing at Cope Street is located directly east of Waterloo Station. During Block 3, the mid-block crossing was under construction and non-operational. As such, it was not assessed as part of the Block 3 study.

5.8.7 Comparison with previous study blocks

Figure 5-77 provides a comparison of the total peak hourly traffic volumes recorded across all intersections for Block 3 against previous study blocks. As shown, Block 3 traffic volumes are slightly lower during all peak hours compared to previous study blocks.

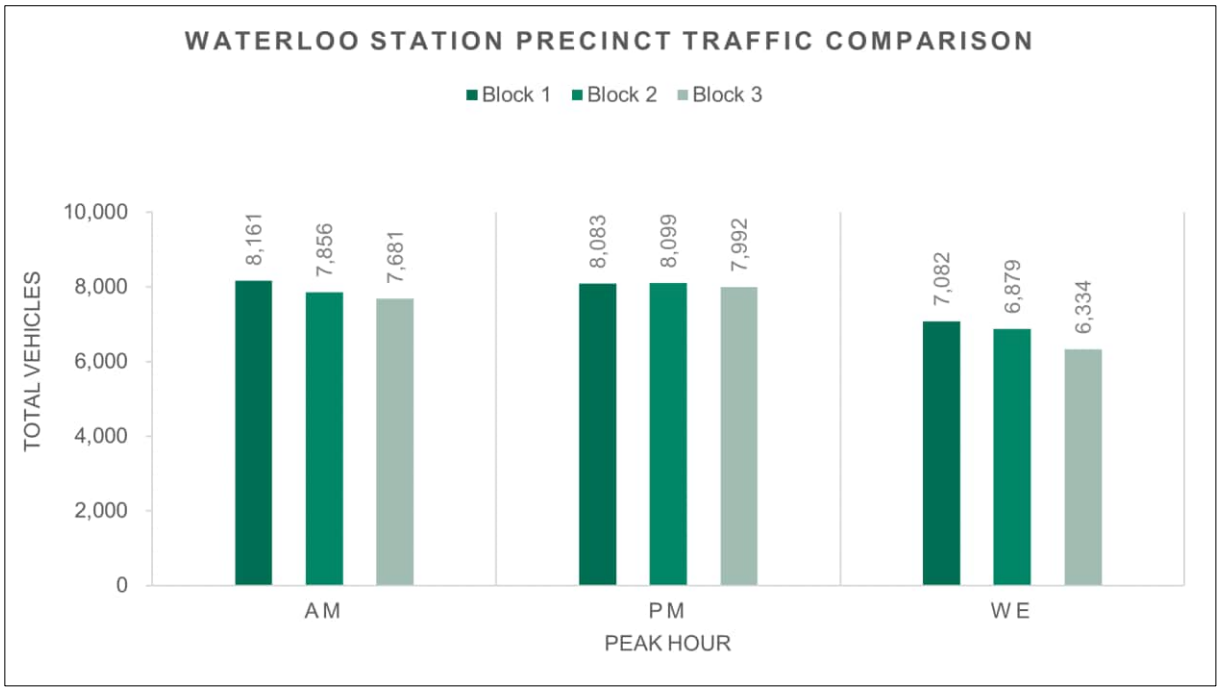


Figure 5-77 Study block comparison – Waterloo Station peak hourly traffic volumes across all intersections

A comparison of the intersection LOS for Block 3 against previous study blocks is shown in Figure 5-78. All intersections in the Waterloo Station study area perform at LOS D or better during Block 3, which is generally similar to previous study blocks.

Botany Road/Raglan Street (WLO01) had a notable change in LOS, whereby the intersection reduced from a LOS C to a LOS D in the PM peak hour compared to Block 2. This change in LOS for WLO01 was due to higher traffic volumes at this intersection in Block 3 during the PM peak hour. Additionally, Wyndham Street/Henderson Road (WLO05) improved from a LOS D to a LOS C in the weekend peak hour compared to Block 2. The Block 3 site improvement for WLO05 is due to lower traffic volumes at this intersection during the weekend peak hour compared to Block 2.

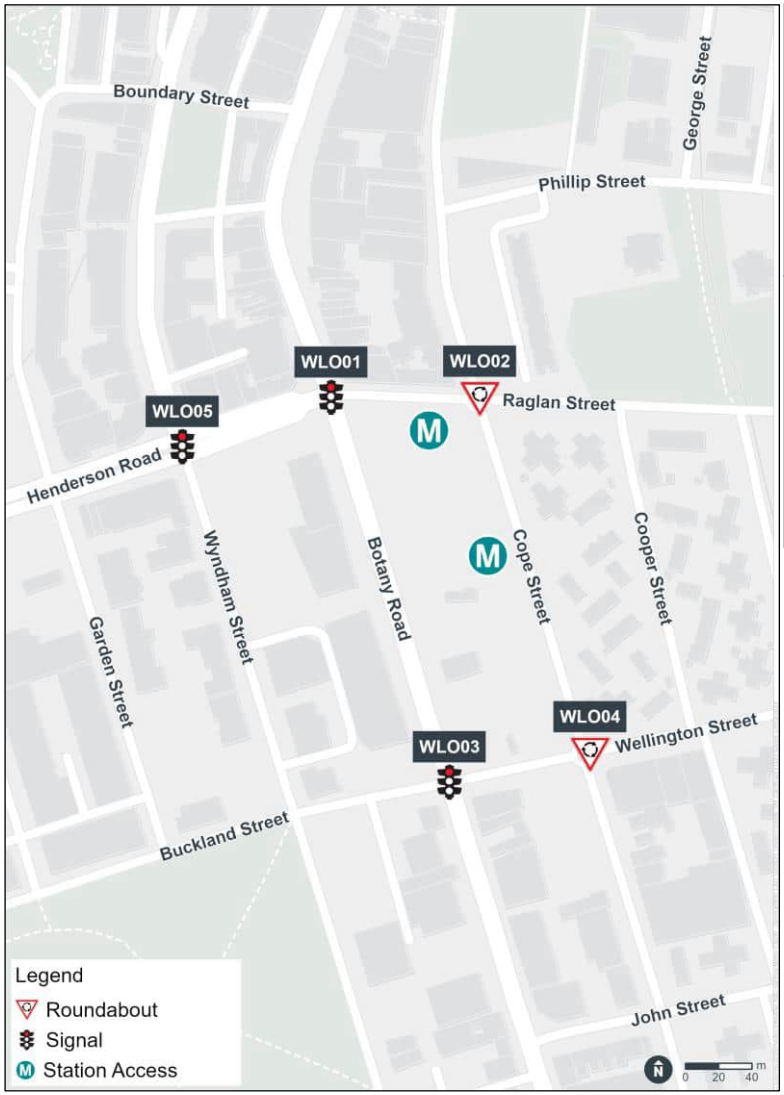


Figure 5-78 Study block comparison – Waterloo Station intersection performance summary

5.9 Sydenham Station

Sydenham Station is an existing station and the ninth stop on the City & Southwest Line (towards Sydenham). It is located in the north-western area of Sydenham, bounded by Railway Parade, Gleeson Avenue, and Burrows Avenue in Sydenham.

Platforms 1 and 2 of the existing Sydenham Station are currently being upgraded and extended to facilitate metro functionality. In addition to the existing entrance at Gleeson Avenue, two new entrances will be constructed – one in the north and the other in the south. The northern entry will open onto a plaza near the corner of Railway Parade and the southern entry, which was operable during Block 3, provides access onto a plaza on Burrows Avenue near Hogan Avenue.

Bus services are provided within approximately 100 metres of Sydenham Station, located along Burrows Avenue and Railway Parade.

The Sydenham Station study area consists of six intersections. Table 5-69 presents the peak hours utilised for modelling the intersections. Table 5-70 provides a summary of the intersection LOS while Figure 5-79 visualises a geospatial summary of the intersection LOS within the Sydenham Station study area.

Table 5-69 Block 3 - Sydenham Station peak hours modelled

Network ID	Intersection ID	Weekday AM peak hour		Weekday PM peak hour		Weekend peak hour	
		Day	Start time	Day	Start time	Day	Start time
SYD-N1	SYD01	Wednesday	8.00am	Thursday	4.45pm	Saturday	11.30am
	SYD02						
-	SYD03	Thursday	7.45am	Thursday	4.15pm	Saturday	11.30am
-	SYD04	Tuesday	8.00am	Friday	3.15pm	Saturday	11.00am
-	SYD05	Wednesday	8.00am	Monday	3.15pm	Saturday	11.45am
-	SYD06	Thursday	8.00am	Friday	3.15pm	Saturday	11.45am

Table 5-70 Block 3 - Sydenham Station intersection performance summary

Intersection ID	Intersection	LOS		
		Weekday AM Peak	Weekday PM Peak	Weekend Peak
SYD01	Railway Parade/Gleeson Avenue (Signal)	LOS A	LOS A	LOS A
SYD02	Burrows Avenue/Gleeson Avenue (Signal)	LOS B	LOS B	LOS B
SYD03	Burrows Avenue/George Street (Priority – Give Way)	LOS A	LOS A	LOS A
SYD04	Railway Parade/Sydenham Road (Signal)	LOS A	LOS A	LOS A
SYD05	Marrickville Road/Buckley Street (Priority – Give Way)	LOS A	LOS A	LOS A
SYD06	Sydenham Road/Buckley Street (Priority – Give Way)	LOS A	LOS A	LOS A

Overall, the intersection performance in the Sydenham Station study area during the peak hours is satisfactory, operating at LOS B or better.

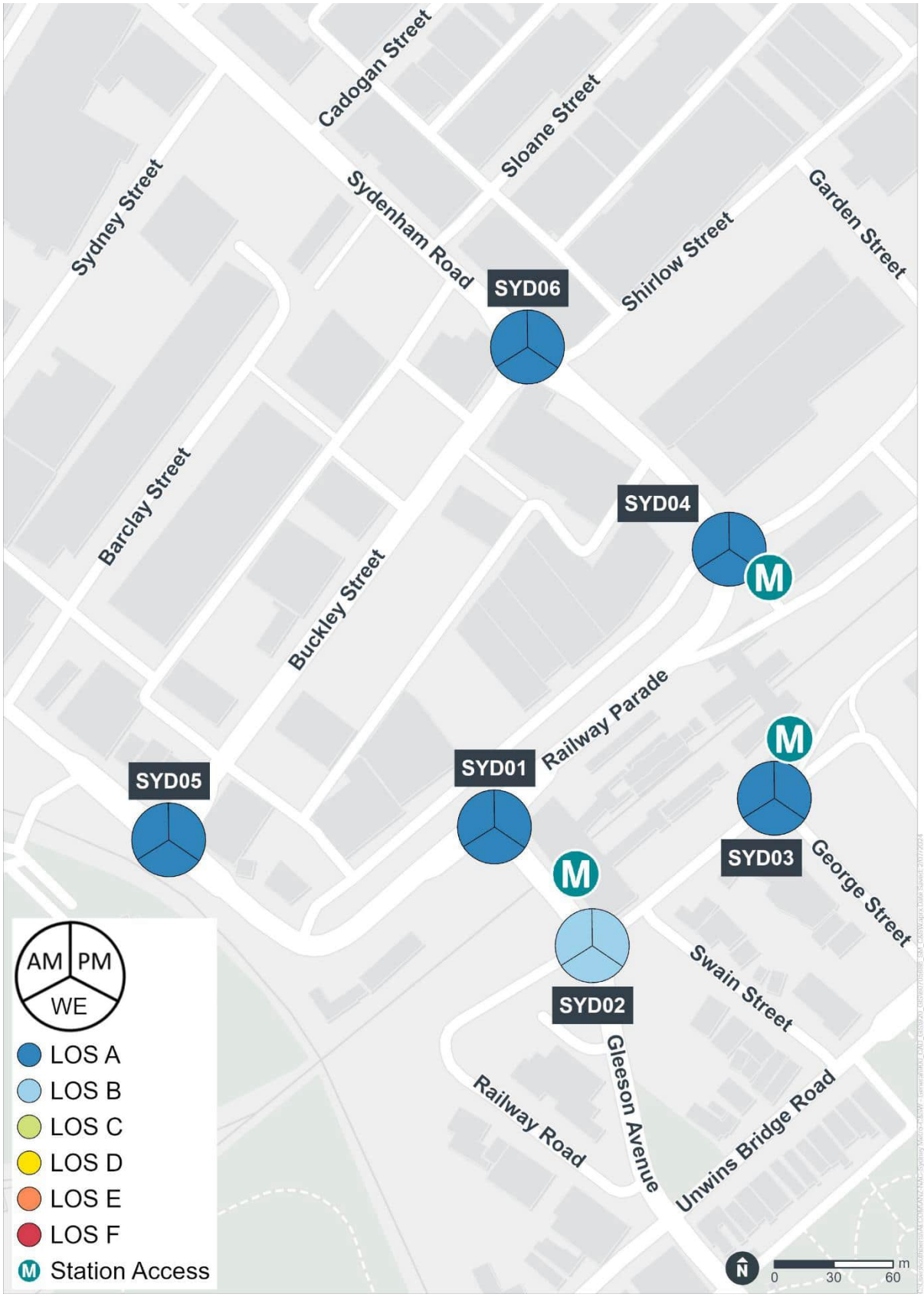
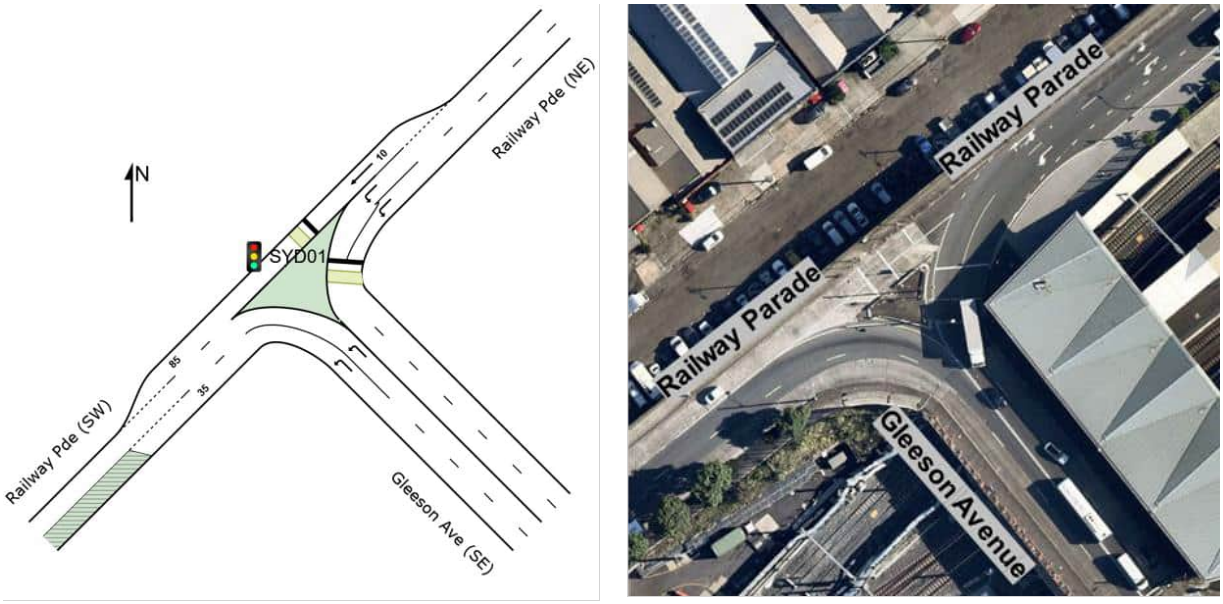


Figure 5-79 Block 3 – Sydenham Station intersection performance summary

5.9.1 SYD01 – Railway Parade/Gleeson Avenue

The signalised intersection, composed of Railway Parade and Gleeson Avenue, is located directly west of Sydenham Station. It connects the state roads of Railway Parade and Gleeson Avenue in Sydenham.

Figure 5-80 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-80 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of SYD01

Table 5-71 presents a performance summary of this intersection.

Table 5-71 Block 3 - Intersection performance summary of SYD01

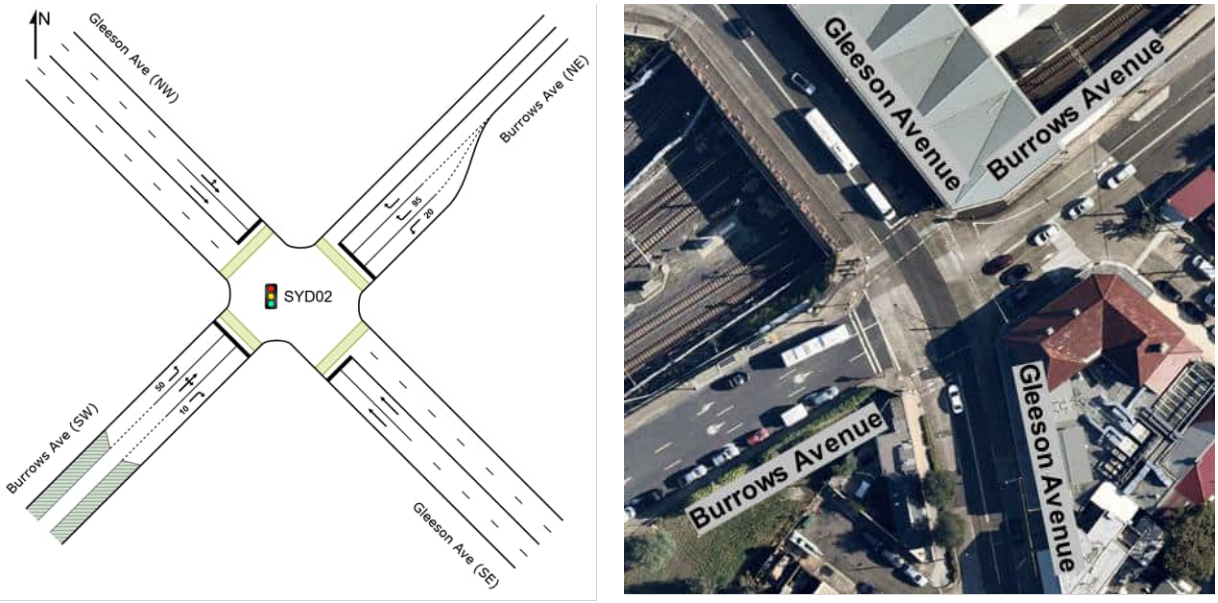
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Railway Parade/ Gleeson Avenue (Signal)	Weekday AM	South-east	0.42	4.9	0	LOS A
		North-east	0.487	12.8	73.6	LOS A
		Total	**0.487**	**9.1**	**73.6**	**LOS A**
	Weekday PM	South-east	0.509	5.3	0	LOS A
		North-east	0.358	11.7	49.1	LOS A
		Total	**0.509**	**8.1**	**49.1**	**LOS A**
	Weekend	South-east	0.429	4.9	0	LOS A
		North-east	0.386	9.4	62.4	LOS A
		Total	**0.429**	**7.2**	**62.4**	**LOS A**

Overall, the intersection of Railway Parade and Gleeson Avenue performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.9.2 SYD02 – Burrows Avenue/Gleeson Avenue

The signalised intersection, composed of Burrows Avenue and Gleeson Avenue, is located directly south of Sydenham Station. It connects the local road of Burrows Avenue with the state road of Gleeson Avenue in Sydenham.

Figure 5-81 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-81 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of SYD02

Table 5-72 presents a performance summary of this intersection.

Table 5-72 Block 3 - Intersection performance summary of SYD02

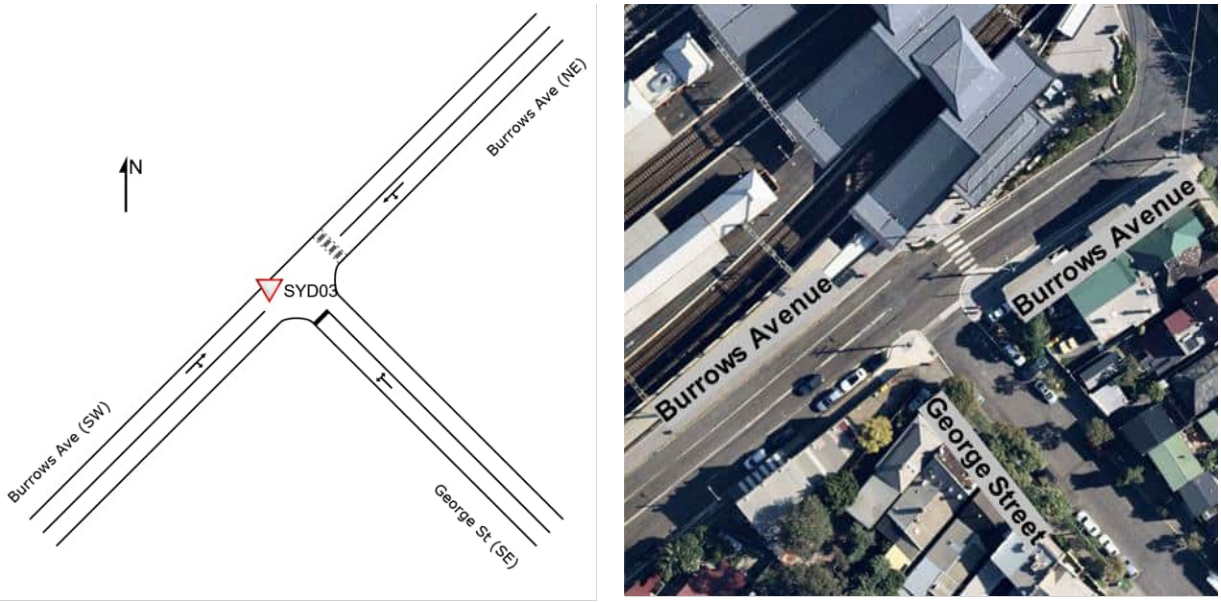
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Burrows Avenue/ Gleeson Avenue (Signal)	Weekday AM	South-east	0.356	15	78.5	LOS B
		North-east	0.5	57	42.4	LOS E
		North-west	0.539	5.7	59.3	LOS A
		South-west	0.159	53.9	10.1	LOS D
		Total	**0.539**	**16.5**	**78.5**	**LOS B**
	Weekday PM	South-east	0.38	15.7	93.3	LOS B
		North-east	0.725	71.6	82.7	LOS F
		North-west	0.431	5.8	46.3	LOS A
		South-west	0.171	58.4	11.7	LOS E
		Total	**0.725**	**23.7**	**93.3**	**LOS B**
	Weekend	South-east	0.353	12.9	84	LOS A
		North-east	0.552	59.8	47.8	LOS E
		North-west	0.503	5.7	62.5	LOS A
		South-west	0.136	56.3	8.7	LOS D
		Total	**0.552**	**15.5**	**84**	**LOS B**

Overall, the intersection of Burrows Avenue and Gleeson Avenue performs satisfactorily at LOS B during all peak hours. The 95th percentile queue on Gleeson Avenue (north-west approach) extends back to Railway Parade during the weekday AM and weekend peak hours.

5.9.3 SYD03 – Burrows Avenue/George Street

The priority intersection, composed of Burrows Avenue and George Street, is located directly east of Sydenham Station. It connects the local roads of Burrows Avenue and George Street in Sydenham.

Figure 5-82 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-82 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of SYD03

Table 5-73 presents a performance summary of this intersection.

Table 5-73 Block 3 - Intersection performance summary of SYD03

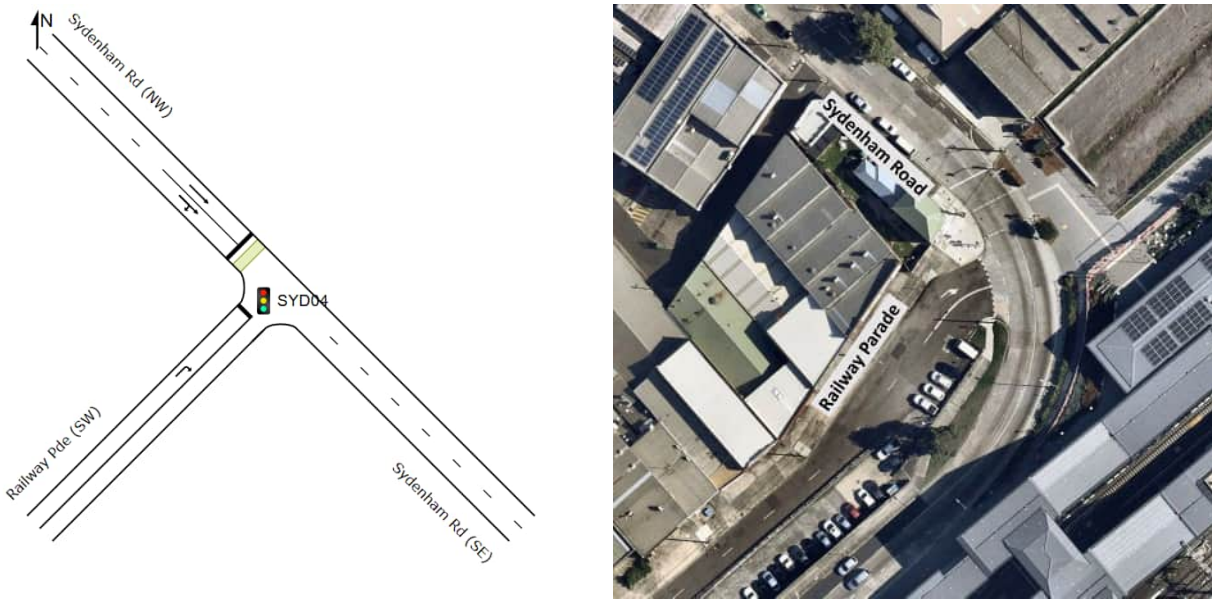
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Burrows Avenue/ George Street (Priority – Give Way)	Weekday AM	South-east	0.017	9.6	0.4	LOS A
		North-east	0.215	4.1	8.4	LOS A
		South-west	0.207	5.4	6.8	LOS A
		Total	**0.017**	**9.6**	**0.4**	**LOS A**
	Weekday PM	South-east	0.03	12.3	0.7	LOS A
		North-east	0.288	4.3	11.8	LOS A
		South-west	0.205	5.8	6.5	LOS A
		Total	**0.03**	**12.3**	**0.7**	**LOS A**
	Weekend	South-east	0.011	12	0.2	LOS A
		North-east	0.177	3.8	6.5	LOS A
		South-west	0.152	5.3	4.6	LOS A
		Total	**0.011**	**12**	**0.2**	**LOS A**

Overall, the intersection of Burrows Avenue and George Street performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.9.4 SYD04 – Railway Parade/Sydenham Road

The signalised intersection, composed of Railway Parade and Sydenham Road, is located directly North of Sydenham Station. It connects the state roads of Railway Parade and Sydenham Road in Sydenham.

Figure 5-83 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-83 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of SYD04

Table 5-74 presents a performance summary of this intersection.

Table 5-74 Block 3 - Intersection performance summary of SYD04

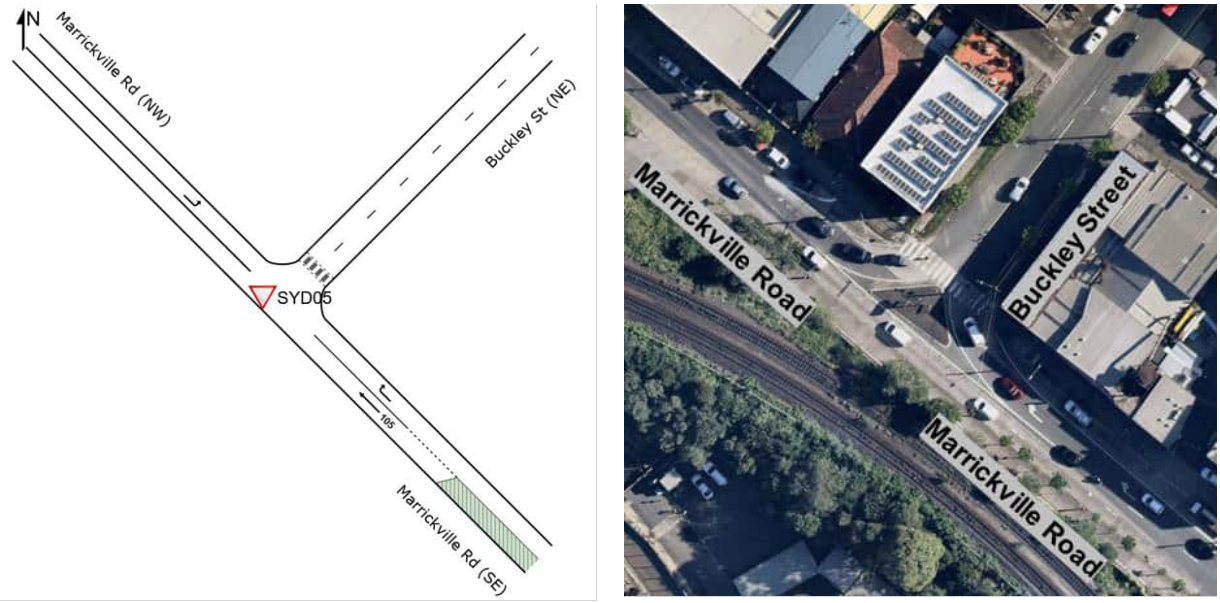
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Pedestrian Mid-block Crossing at Sydenham Road (Pedestrian only - Signal)	Weekday AM	North-west	0.444	6.4	66.4	LOS A
		South-west	0.066	32.5	4.9	LOS C
		Total	**0.444**	**6.8**	**66.4**	**LOS A**
	Weekday PM	North-west	0.431	5.8	68	LOS A
		South-west	0.041	34.1	3.7	LOS C
		Total	**0.431**	**6.1**	**68**	**LOS A**
	Weekend	North-west	0.399	5.4	59.5	LOS A
		South-west	0.098	35.7	7.6	LOS C
		Total	**0.399**	**6.1**	**59.5**	**LOS A**

Overall, the pedestrian mid-block crossing at Sydenham Road performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.9.5 SYD05 – Marrickville Road/Buckley Street

The priority intersection, composed of Marrickville Road and Buckley Street, is located west of Sydenham Station. It connects the state roads of Buckley Street in Sydenham and Marrickville Road, linking Sydenham and Dulwich Hill.

Figure 5-84 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-84 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of SYD05

Table 5-75 presents a performance summary of this intersection.

Table 5-75 Block 3 - Intersection performance summary of SYD05

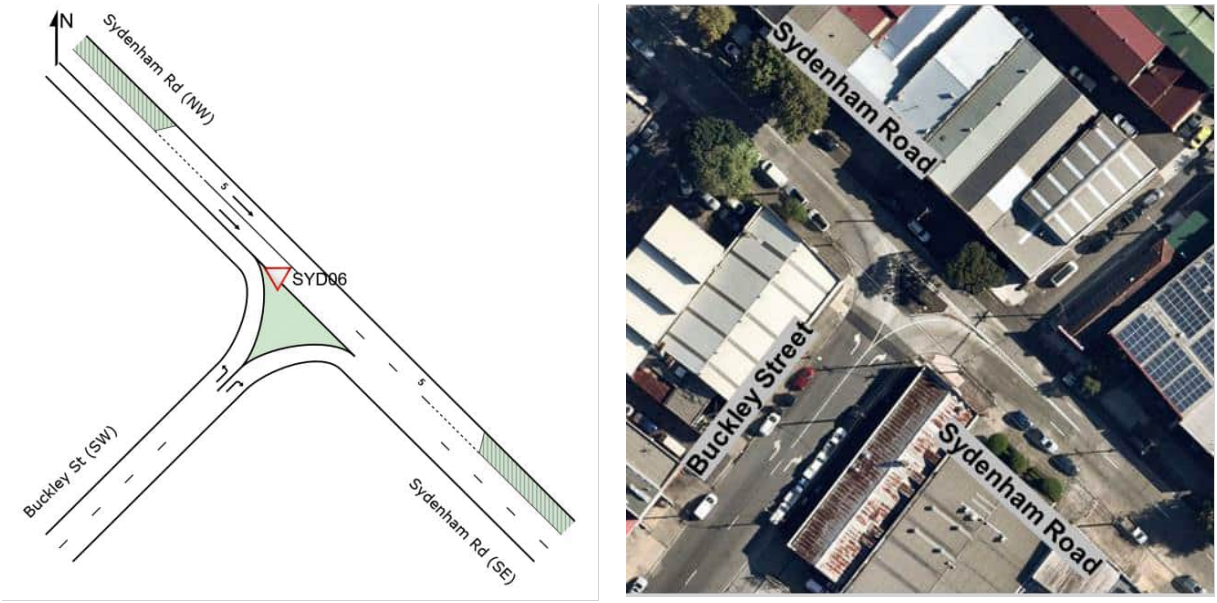
Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Marrickville Road/ Buckley Street (Priority – Give Way)	Weekday AM	South-east	0.715	8	36	LOS A
		North-west	0.845	10.4	60.7	LOS A
		Total	**0.845**	**10.4**	**60.7**	**LOS A**
	Weekday PM	South-east	0.738	7.4	42.2	LOS A
		North-west	0.813	8.5	44.4	LOS A
		Total	**0.813**	**8.5**	**44.4**	**LOS A**
	Weekend	South-east	0.298	6.1	11	LOS A
		North-west	0.311	6	10.8	LOS A
		Total	**0.298**	**6.1**	**11**	**LOS A**

Overall, the intersection of Marrickville Road and Buckley Street performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.9.6 SYD06 – Sydenham Road/Buckley Street

The priority intersection, composed of Sydenham Road and Buckley Street, is located north of Sydenham Station. It connects the state roads of Buckley Street in Sydenham and Sydenham Road, linking Sydenham and Marrickville.

Figure 5-85 illustrates both the general intersection layout as modelled in SIDRA Intersection and the layout as per aerial imagery.



Source: Nearmap (February 2024)

Figure 5-85 Block 3 - AM peak model SIDRA Intersection layout (left) and Nearmap aerial imagery (right) of SYD06

Table 5-76 presents a performance summary of this intersection.

Table 5-76 Block 3 - Intersection performance summary of SYD06

Intersection	Peak	Approach	Degree of saturation	Average delay (seconds)	95th percentile queue (metres)	LOS
Sydenham Road/ Buckley Street (Priority – Give Way)	Weekday AM	North-west	0.349	0.1	0	LOS A
		South-west	0.26	5.8	0	LOS A
		Total	**0.26**	**5.8**	**0**	**LOS A**
	Weekday PM	North-west	0.399	0.1	0	LOS A
		South-west	0.218	5.8	0	LOS A
		Total	**0.218**	**5.8**	**0**	**LOS A**
	Weekend	North-west	0.371	0.1	0	LOS A
		South-west	0.208	5.8	0	LOS A
		Total	**0.208**	**5.8**	**0**	**LOS A**

Overall, the intersection of Sydenham Road and Buckley Street performs satisfactorily at LOS A during all peak hours. The 95th percentile queue lengths are accommodated within the approach distances for all approaches.

5.9.7 Comparison with previous study blocks

Figure 5-86 provides a comparison of the total peak hourly traffic volumes recorded across all intersections for Block 3 against previous study blocks. As shown, Block 3 traffic volumes are higher in

all peak hours compared to Block 1. Similarly, Block 3 traffic volumes are slightly higher during the AM peak hour, and slightly lower in the PM and weekend peak hours compared to Block 2.

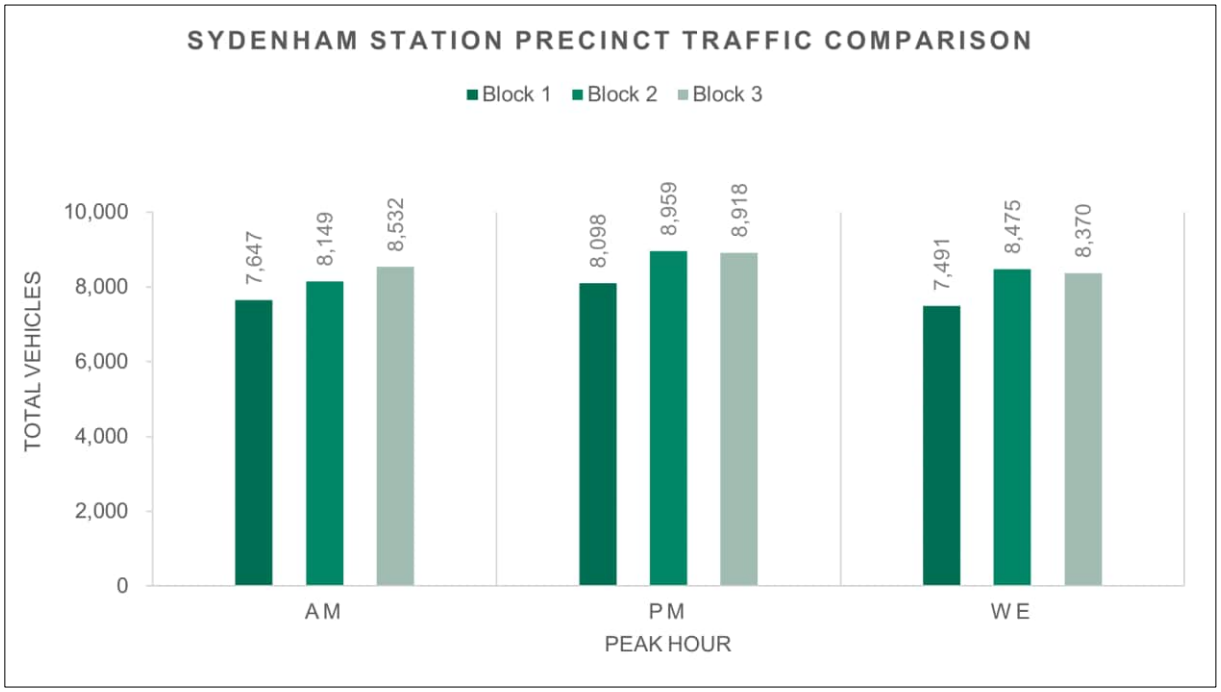
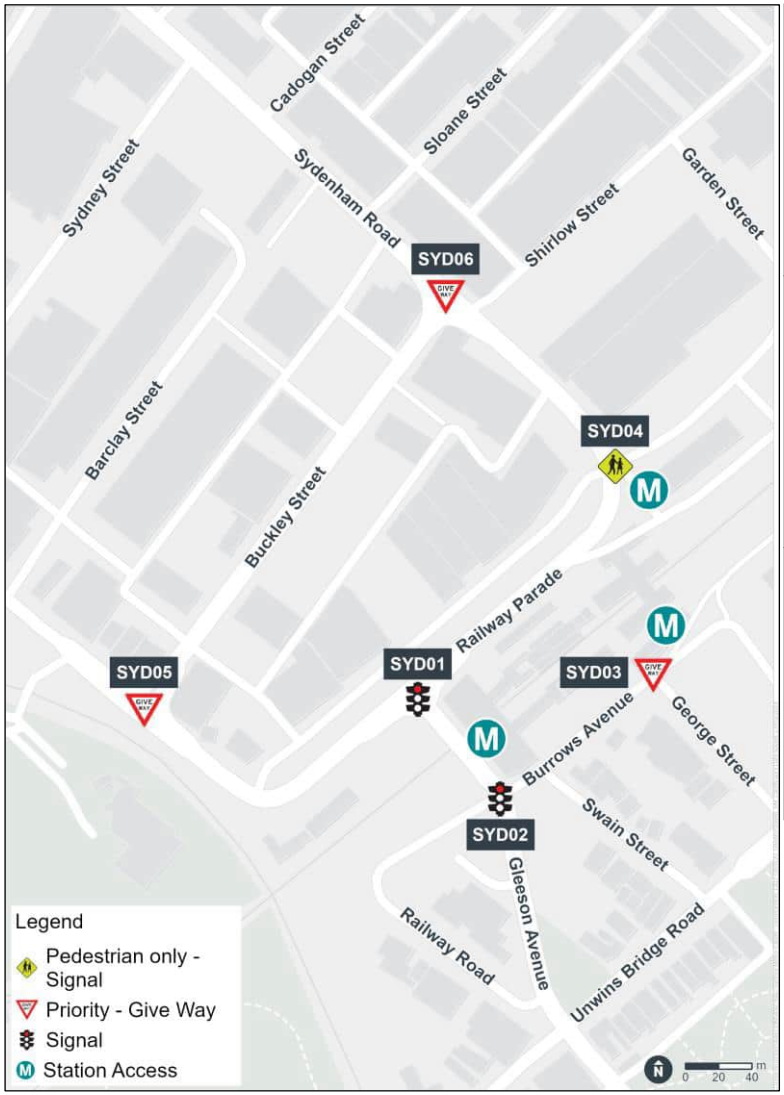


Figure 5-86 Study block comparison – Sydenham Station peak hourly traffic volumes across all intersections

A comparison of the intersection LOS for Block 3 against previous study blocks is shown in Figure 5-87. All intersections in the Sydenham site perform at a LOS B or better during Block 3, which is generally similar to previous study blocks.



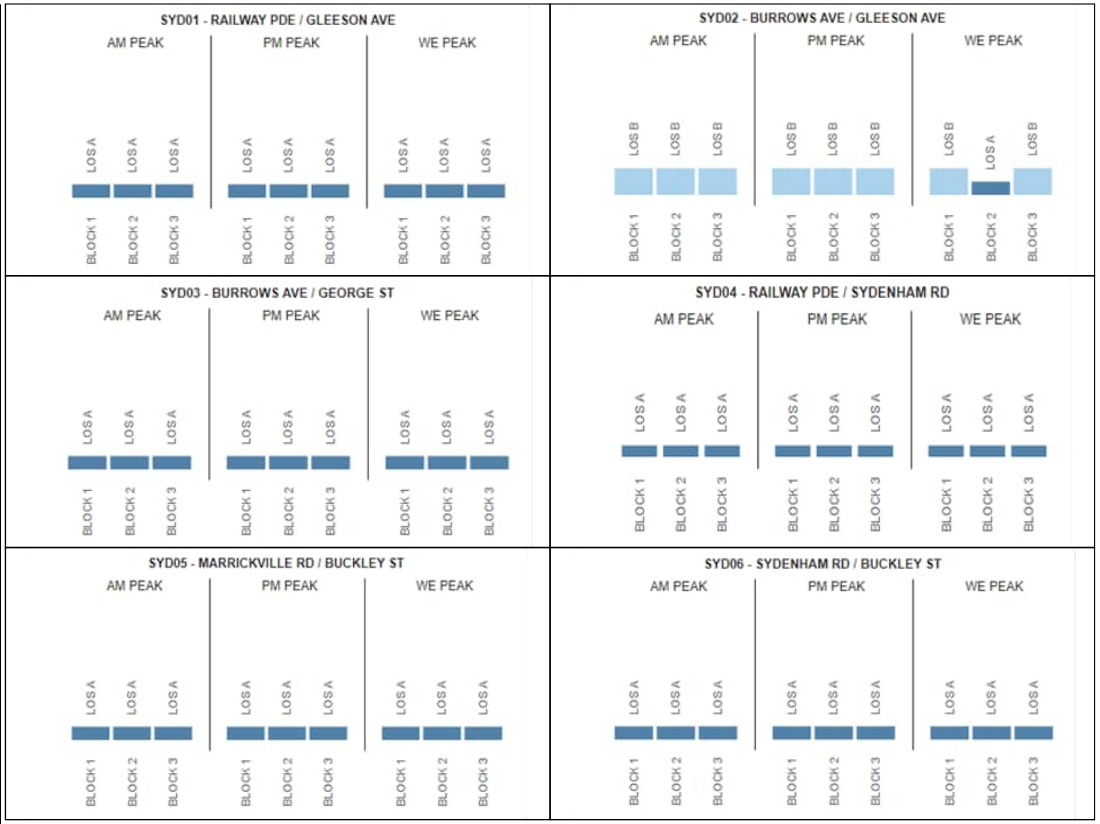


Figure 5-87 Study block comparison – Sydenham Station intersection performance summary

6.0 Transport interchange monitoring

This section details analysis of the interchange traffic survey data at kerbside facilities nearby station interchanges.

6.1 Chatswood Station

In the Chatswood Station study area, a total of five taxi and kiss and ride facilities were assessed during Block 3. These included three kiss and ride facilities and two taxi facilities. Refer to Section 3.3 for detailed information about their locations and the number of bays.

6.1.1 Kiss and ride

Table 6-1 presents a summary of the kiss and ride facilities' peak hour vehicle demands, as well as the average dwell time and total number of boarding/alighting passengers during the identified peak hours.

Based on the interchange survey data, the following were the key observations:

- CWDK1 Railway Street:
  - The highest demand recorded at CWDK1 occurred during the weekday AM peak hour, when there were 24 vehicles per hour.
  - The average dwell time during the weekday and weekend peak hours ranged from one to three minutes.
- CWDK2 69 Albert Avenue:
  - The highest demand recorded at CWDK2 occurred during the weekday AM peak hour, when there were 76 vehicles per hour.
  - The average dwell time during the weekday and weekend peak hours ranged from one to three minutes.
  - Queues were observed to extend outside the bays occasionally. Queues outside the bays were generally only 1 or 2 vehicles long.
- CWDK3 Endeavour Street:
  - The highest demand recorded at CWDK3 occurred during the weekday AM peak hour, when there were 39 vehicles per hour.
  - The average dwell time during the weekday and weekend peak hours ranged from one to two minutes.
  - Queues were observed to extend outside the bays occasionally. Queues outside the bays were generally only 1 or 2 vehicles long.

Table 6-1 Block 3 – Chatswood Station interchange assessment peak hour summary (kiss and ride)

ID	Peak hour			
	Summary	Weekday AM	Weekday PM	Weekend
CWDK1 (Railway Street)	Peak hour	Wednesday 7am-8am	Tuesday 6pm-7pm	Saturday 9pm-10pm
	Vehicles (vehicle per hour)	24	21	24
	Average dwell time (minutes)	1	3	2
	Boarding/alighting passenger (excluding driver)	27	36	33

ID	Peak hour			
	Summary	Weekday AM	Weekday PM	Weekend
CWDK2 (Albert Avenue)	Peak hour	Thursday 7am-8am	Tuesday 4pm-5pm	Sunday 12pm-1pm
	Vehicles (vehicle per hour)	76	40	27
	Average dwell time (minutes)	1	2	3
	Boarding/alighting passenger (excluding driver)	107	44	43
CWDK3 (Endeavour Street)	Peak hour	Thursday 7am-8am	Wednesday 3pm-4pm	Sunday 5pm-6pm
	Vehicles (vehicle per hour)	39	30	37
	Average dwell time (minutes)	1	2	2
	Boarding/alighting passenger (excluding driver)	51	33	45

Note: Average dwell times were rounded to the nearest minute.

Figure 6-1 to Figure 6-3 presents the daily demand profile for the three kiss and ride facilities at Chatswood Station.

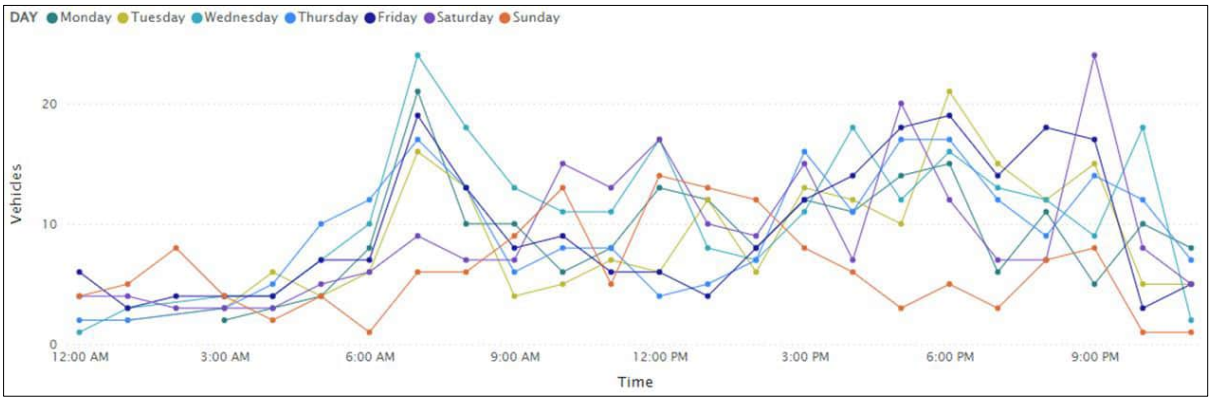


Figure 6-1 Block 3 – Daily demand profile of CWDK1

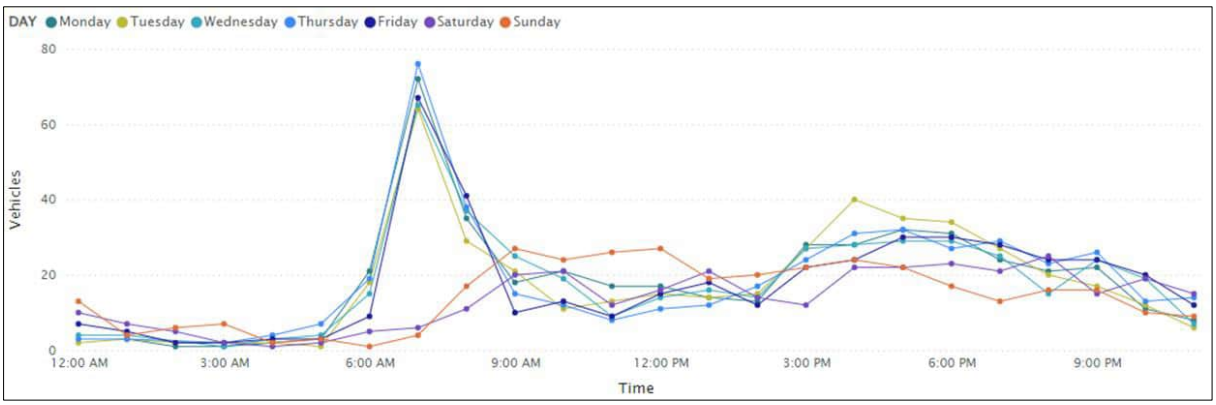


Figure 6-2 Block 3 –Daily demand profile of CWDK2

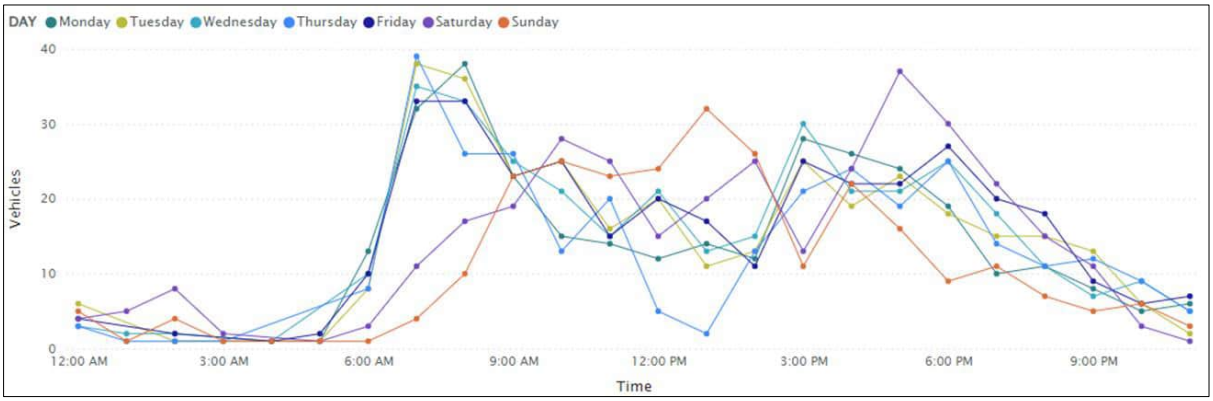


Figure 6-3 Block 3 - Daily demand profile of CWDK3

6.1.2 Taxi

Table 6-2 presents a summary of the taxi facilities' peak hour vehicle demands, as well as the average dwell time and total number of boarding/alighting passengers during the identified peak hours.

Based on the interchange survey data, the following were the key observations:

- CWDT1 Victoria Avenue:
  - The highest demand recorded at CWDT1 occurred during the weekday PM peak hour, when there were 32 vehicles per hour.
  - The average dwell time during the weekday and weekend peak hours ranged from six to 14 minutes.
- CWDT2 Endeavour Street:
  - The highest demand recorded at CWDT2 occurred during the weekday PM peak hour, when there were 21 vehicles per hour.
  - The average dwell time during the weekday and weekend peak hours ranged from one to two minutes.

Table 6-2 Block 3 - Chatswood Station interchange assessment peak hour summary (taxi)

ID	Peak hour			
	Summary	Weekday AM	Weekday PM	Weekend
CWDT1 (Victoria Avenue)	Peak hour	Friday 10am-11am	Wednesday 4pm-5pm	Sunday 3pm-4pm
	Vehicles (vehicle per hour)	28	32	29
	Average dwell time (minutes)	6	14	9
	Boarding/alighting passenger (excluding driver)	22	20	28
CWDT2 (Endeavour Street)	Peak hour	Tuesday 7am-8am	Thursday 5pm-6pm	Saturday 5pm-6pm
	Vehicles (vehicle per hour)	11	21	15
	Average dwell time (minutes)	1	2	2
	Boarding/alighting passenger (excluding driver)	13	24	23

Note: Average dwell times were rounded to the nearest minute.

Figure 6-4 and Figure 6-5 presents the daily demand profile for the two taxi facilities at Chatswood Station.

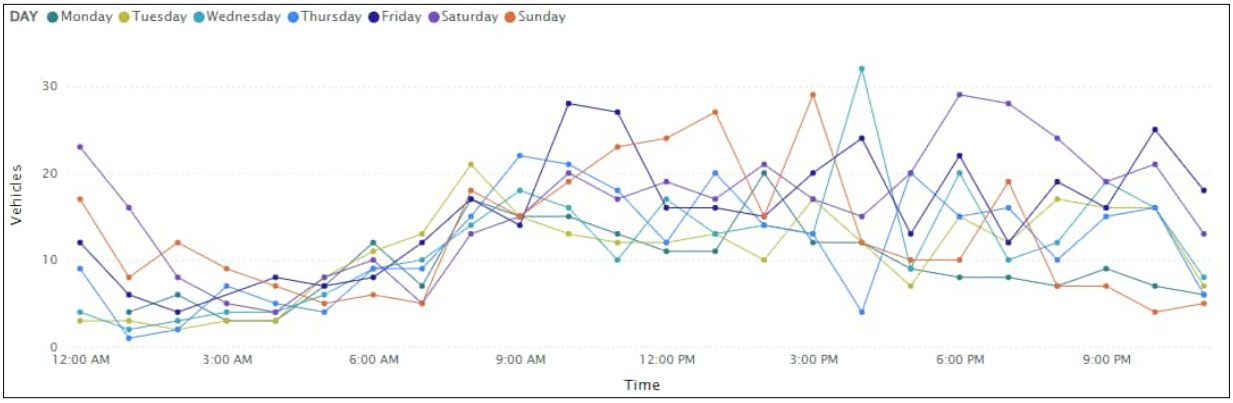


Figure 6-4 Block 3 – Daily hourly demand profile of CWDT1

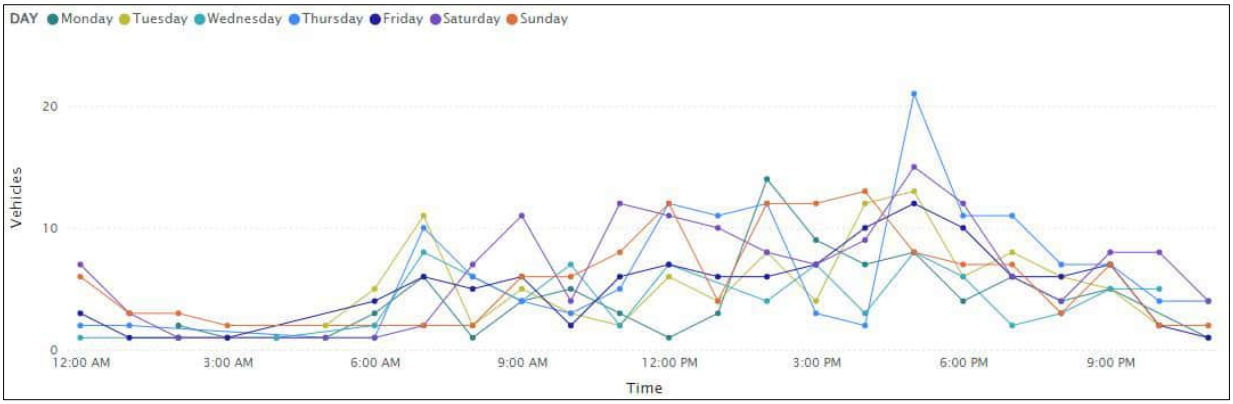
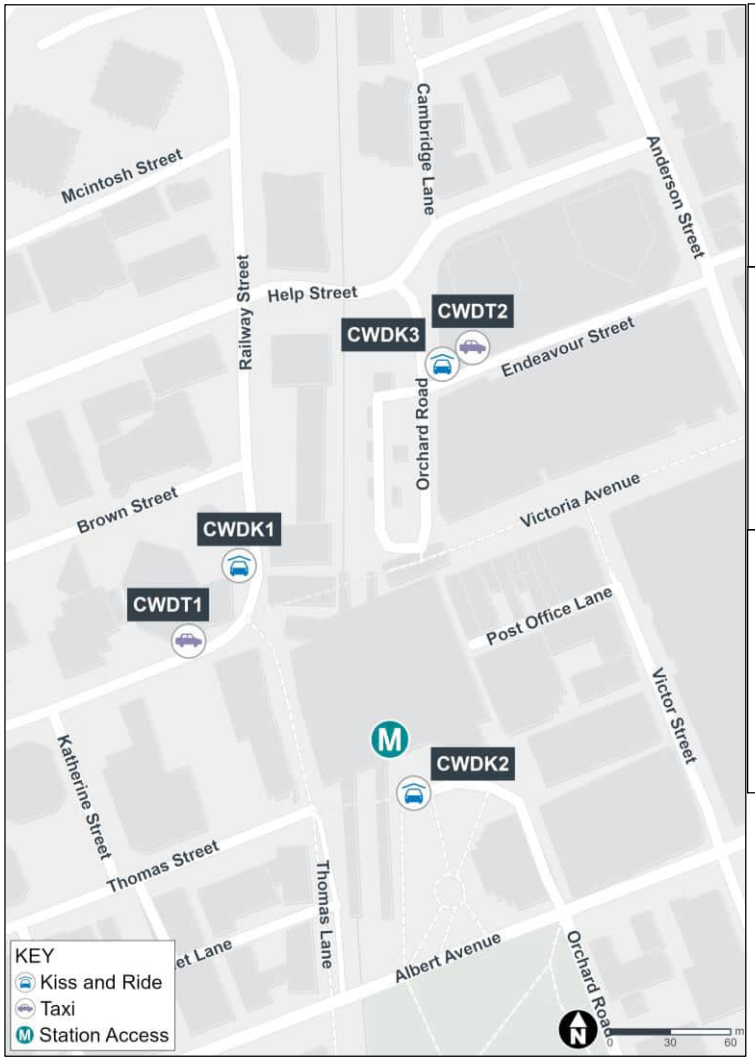


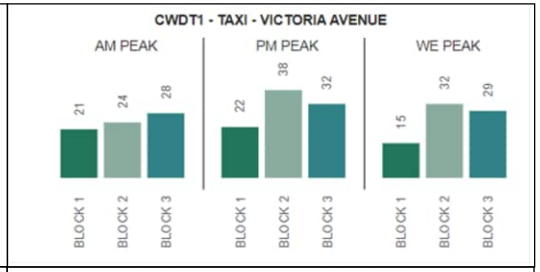
Figure 6-5 Block 3 – Daily demand profile of CWDT2

6.1.3 Comparison with previous study blocks

Figure 6-6 provides a comparison of the total peak hourly demand recorded across the interchange facilities for Block 3 against previous study blocks. Key findings were as follows:

- CWDK1 Railway Street vehicle demands are generally similar during the weekday AM and weekend peak hours, and slightly lower during the weekday PM peak hour compared to previous study blocks.
- CWDK2 69 Albert Avenue vehicle demands are higher during the weekday AM and PM peak hours, and generally similar during the weekend peak hour compared to previous study blocks.
- CWDK3 Endeavour Street vehicle demands are lower during the weekday AM and PM peak hours, and generally similar during the weekend peak hour compared to Block 1. Additionally, Block 3 vehicle demands are slightly higher during the weekday AM and weekend peak hours and generally similar during the weekday PM peak hour compared to Block 2.
- CWDT1 Victoria Avenue vehicle demands are higher during all peak hours compared to Block 1 and generally similar during all peak hours compared to Block 2.
- CWDT2 Endeavour Street vehicle demands are higher during all peak hours compared to Block 1 and generally similar during all peak hours compared to Block 2.





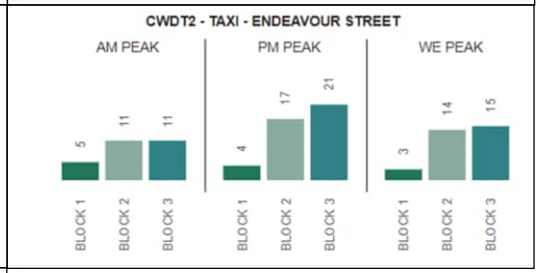


Figure 6-6 Study block comparison – Chatswood Station interchange vehicle demand summary

6.2 Sydenham Station

In the Sydenham Station study area, a total of five taxi, bus stop, kiss and ride and accessible parking facilities were assessed during Block 3. These included one bus facility, two kiss and ride facilities, one taxi facility and one accessible parking area. Refer to Section 3.3 for detailed information about their locations and the number of bays.

6.2.1 Bus

Table 6-3 presents a summary of the bus facility peak hour demands, as well as the average dwell time and total number of boarding/alighting passengers during the identified peak hours.

Based on the interchange survey data, the following were the key observations:

- SYDB1 Railway Parade:
  - The highest demand recorded at SYDB1 occurred during the weekday PM peak hour, when there were 19 buses per hour.
  - The average dwell time during the weekday and weekend peak hours ranged from two to three minutes.

Table 6-3 Block 3 - Sydenham Station interchange assessment peak hour summary (bus)

ID	Peak hour			
	Summary	Weekday AM	Weekday PM	Weekend
SYDB1 (Railway Parade)	Peak hour	Monday 7am-8am	Thursday 4pm-5pm	Saturday 8am-9am
	Vehicles (vehicle per hour)	15	19	9
	Average dwell time (minutes)	3	2	2
	Boarding/alighting passenger (excluding driver)	88	85	22

Note: Average dwell times were rounded to the nearest minute.

Figure 6-7 presents the daily demand profile for the bus facility.

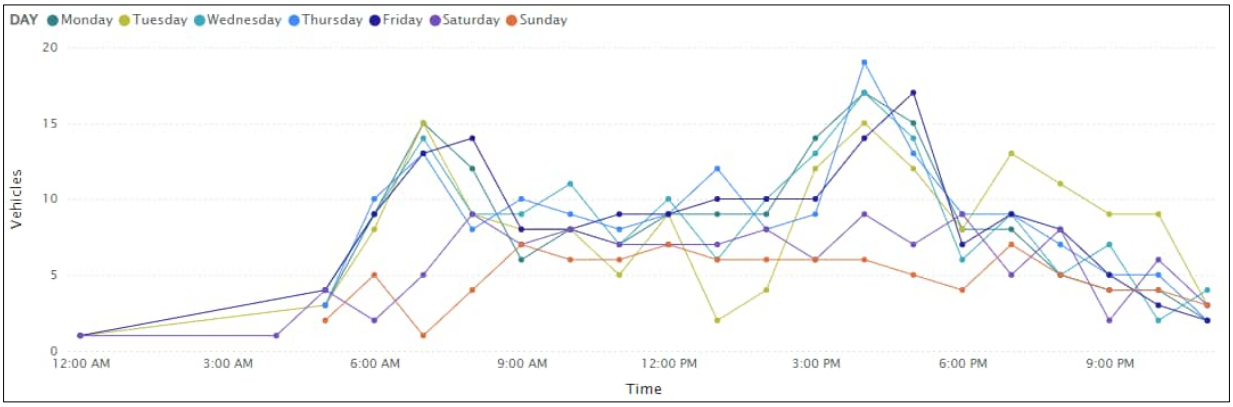


Figure 6-7 Block 3 – Daily demand profile of SYDB1

6.2.2 Kiss and ride

Table 6-4 presents a summary of the kiss and ride facilities' peak hour demands, as well as the average dwell time and total number of boarding/alighting passengers during the identified peak hours.

Based on the interchange survey data, the following were the key observations:

- SYDK1 Burrows Avenue:

- The highest demand recorded at SYDK1 occurred during the weekday AM peak hour, when there were 28 vehicles per hour.
- The average dwell time during the weekday and weekend peak hours ranged from two to five minutes.

- SYDK2 Sydenham Road:
  - The highest demand recorded at SYDK2 occurred during the weekend peak hour, when there were six vehicles per hour.
  - The average dwell time during the weekday and weekend peak hours ranged from one to four minutes.

Table 6-4 Block 3 - Sydenham Station interchange assessment peak hour summary (kiss and ride)

ID	Peak hour			
	Summary	Weekday AM	Weekday PM	Weekend
SYDK1 (Burrows Avenue)	Peak hour	Thursday 8am-9am	Thursday 6pm-7pm	Saturday 6pm-7pm
	Vehicles (vehicle per hour)	28	26	16
	Average dwell time (minutes)	2	3	5
	Boarding/alighting passenger (excluding driver)	29	40	20
SYDK2 (Sydenham Road)	Peak hour	Wednesday 8am-9am	Thursday 12pm-1pm	Sunday 8am-9am
	Vehicles (vehicle per hour)	3	4	6
	Average dwell time (minutes)	1	4	1
	Boarding/alighting passenger (excluding driver)	1	1	4

Note: Average dwell times were rounded to the nearest minute.

Figure 6-8 and Figure 6-9 provide daily demand profile for the kiss and ride facilities.

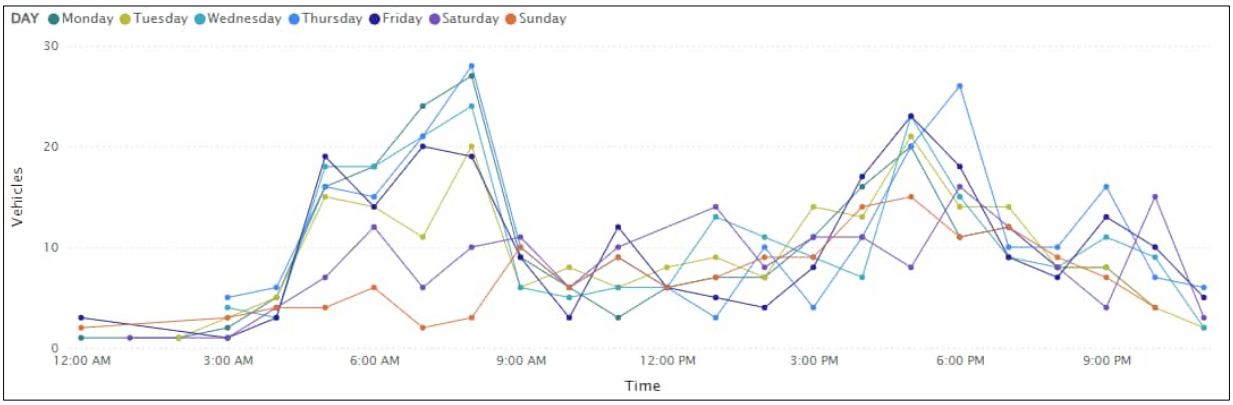


Figure 6-8 Block 3 – Daily demand profile of SYDK1

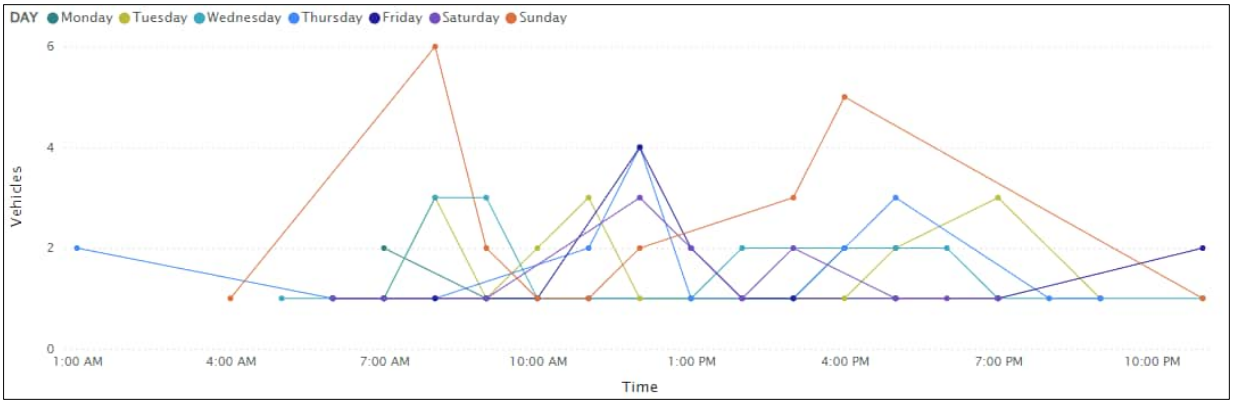


Figure 6-9 Block 3 – Daily demand profile of SYDK2

6.2.3 Taxi

Table 6-5 presents a summary of the taxi facility peak hour demands, as well as the average dwell time and total number of boarding/alighting passengers during the identified peak hours.

Based on the interchange survey data, the following were the key observations:

- SYDT1 Burrows Avenue:
  - The highest demand recorded at SYDT1 occurred during the weekday PM peak hour, when there were three vehicles per hour.
  - The average dwell time during the weekday and weekend peak hours ranged from two to 13 minutes.

Table 6-5 Block 3 - Sydenham Station interchange assessment peak hour summary (taxi)

ID	Peak hour			
	Summary	Weekday AM	Weekday PM	Weekend
SYDT1 (Burrows Avenue)	Peak hour	Tuesday 6am-7am	Thursday 2pm-3pm	Sunday 10am-11am
	Vehicles (vehicle per hour)	1	3	1
	Average dwell time (minutes)	13	2	7
	Boarding/alighting passenger (excluding driver)	3	5	3

Note: Average dwell times were rounded to the nearest minute.

Figure 6-10 presents the daily demand profile for the taxi facility.

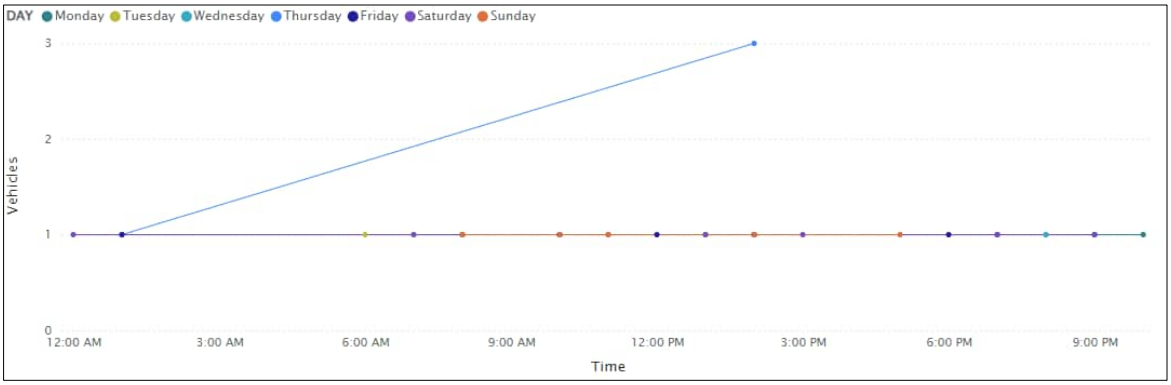


Figure 6-10 Block 3 – Daily demand profile of SYDT1

6.2.4 Accessible parking

Table 6-6 presents a summary of the accessible parking peak hour demands, as well as the average dwell time and total number of boarding/alighting passengers during the identified peak hours.

Based on the interchange survey data, the following were the key observations:

- SYDA1 Bolton Street:
  - The highest vehicle demand recorded at SYDA1 occurred during the weekday AM and PM peak hours, when there were two vehicles per hour.
  - The average dwell time during the weekday and weekend peak hours ranged from six to 49 minutes, noting there are no time restrictions on these parking spaces which results in low turnover.

Table 6-6 Block 3 - Sydenham Station interchange assessment peak hour summary (accessible parking)

ID	Peak hour			
	Summary	Weekday AM	Weekday PM	Weekend
SYDA1 (Bolton Street)	Peak hour	Monday 5am-6am	Wednesday 3pm-4pm	Sunday 10am-11am
	Vehicles (vehicle per hour)	2	2	1
	Average dwell time (minutes)	49	32	6
	Boarding/alighting passenger (excluding driver)	2	4	3

Note: Average dwell times were rounded to the nearest minute.

Figure 6-11 presents the daily demand profile for the accessible parking.

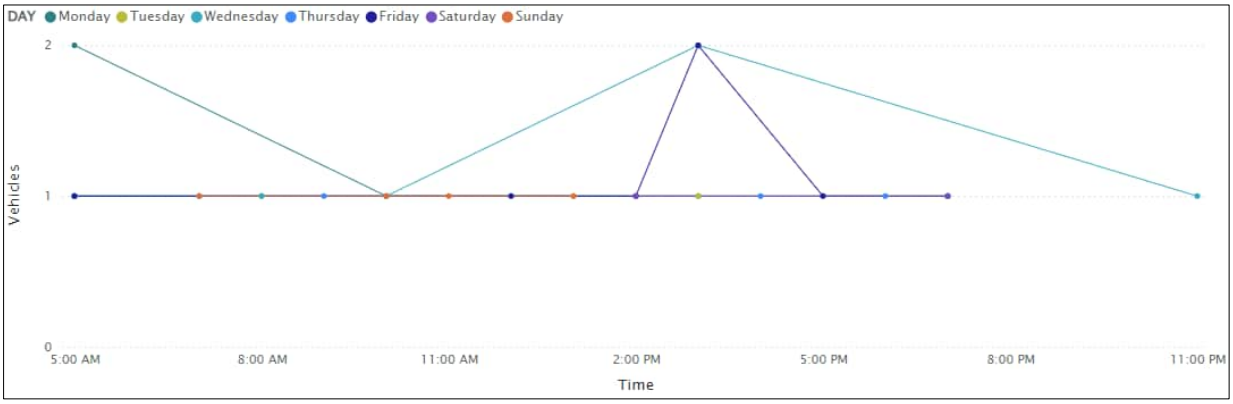


Figure 6-11 Block 3 – Daily demand profile of SYDA1

6.2.5 Comparison with previous study blocks

Figure 6-12 provides a comparison of the peak hourly traffic volumes recorded across the interchange facilities for Block 3 against previous study blocks. Key findings are as follows:

- SYDB1 Railway Parade vehicle demands are slightly lower during all peak hours compared to previous study blocks.
- SYDK1 Burrows Avenue vehicle demands are slightly higher in the weekday AM and PM peak hours, and slightly lower in the weekend peak hour compared to previous study blocks.
- SYDK2 Sydenham Road vehicle demands are generally similar in the weekday AM and PM peak hours, and slightly higher in the weekend peak hour compared to previous study blocks.
- SYDT1 Burrows Avenue vehicle demands are generally similar in all peak hours compared to Block 1 and lower in all peak hours compared to Block 2.
- SYDA1 Bolton Street vehicle demands are generally similar during all peak hours compared to previous study blocks, with the exception of Block 1 weekday PM peak hour being slightly higher than Block 3.

Figure 6-12 Study block comparison – Sydenham Station interchange vehicle demand summary

7.0 Summary

AECOM has been commissioned by Sydney Metro to undertake traffic and interchange monitoring for the Sydney Metro City & Southwest, covering the stretch between Chatswood Station and Sydenham Station (the Project).

The primary objective of the traffic and interchange monitoring assessment is to evaluate the potential impacts of metro operations at the nine stations along the Sydney Metro City & Southwest (Chatswood to Sydenham) on the surrounding intersections and interchange facilities.

To meet the CoA requirements and align with the project program for Sydney Metro City & Southwest (Chatswood to Sydenham), the traffic and interchange monitoring program will be conducted in six study blocks. The monitoring period will span 12 months before the commencement of CSSI operations (pre-opening) and another 12 months after the commencement (post-opening).

The overall scope of works for the Block 3 study covers the following:

- **Traffic monitoring:** Intersection surveys were conducted during two periods – early-March 2024 and mid-March 2024 (re-surveys). The surveys included classified intersection count survey and vehicular queue length survey.
- **Transport interchange monitoring:** Only Chatswood Station and Sydenham Station were considered for the interchange monitoring for the Block 3 study due to the existing operational train/metro stations. Interchange operation surveys were conducted at these two stations continuously for a one-week period in March 2024.
- **Site visit and observations:** Site visits were undertaken in conjunction with the traffic and interchange operation monitoring for at least one weekday AM peak period, one weekday PM peak period, and one weekday peak period at each station.
- **Intersection assessment:** To evaluate the intersection operation during Block 3, isolated and network traffic modelling assessments were performed using SIDRA Intersection modelling software.
- **Traffic and interchange monitoring report:** The key findings of the Block 3 study were presented to Sydney Metro and key stakeholders in July 2024. This report provides a summary of the details regarding the Block 3 traffic and interchange operation assessment.

Key findings of the Block 3 study are:

- **Intersection monitoring:** Based on site observation and SIDRA Intersection modelling results, intersection operation and performance of key intersections at each station are summarised as follows.
    - Chatswood Dive Site:
        - The intersection of Mowbray Road and Hampden Road (CWD01) performs at LOS B during all peak hours.
        - Block 3 intersection performance is generally similar to previous study blocks.
    - Crows Nest Station:
        - All intersections within the Crows Nest Station study area perform at LOS D or better during all peak hours.
        - Block 3 intersection performance is generally similar to previous study blocks. Pacific Highway/Falcon Street/Shirley Road (CST04) had a notable change in LOS, whereby the intersection reduced from a LOS C to a D in the weekday AM peak hour compared to Block 2. This change in LOS for CST04 was due to higher traffic volumes at this intersection in Block 3.

- Victoria Cross Station:
  - All intersections within the Victoria Cross Station study area operate at LOS C or better during all peak hours.
  - Block 3 intersection performance is generally similar to previous study blocks.
- Barangaroo Station:
  - All intersections within the Barangaroo Station study area operate at LOS C or better during all peak hours.
  - Block 3 intersection performance is generally similar to previous study blocks. Kent Street/Argyle Street (BGU03) had a notable change in LOS, whereby the intersection improved from a LOS C to a LOS A in the weekday PM peak hour compared to Block 2. The Block 3 site improvement for BGU03 is due to lower traffic volumes at this intersection during the weekday PM peak hour compared to Block 2.
- Martin Place Station:
  - All intersections within the Martin Place Station study area operate at LOS B or better during all peak hours.
  - Block 3 intersection performance is generally similar to previous study blocks.
- Gadigal Station:
  - All intersections within the Gadigal Station study area operate at LOS B or better during all peak hours.
  - Block 3 intersection performance is generally similar to previous study blocks.
- Central Station:
  - All intersections within the Central Station study area operate at LOS B or better during all peak hours.
  - Block 3 intersection performance is generally similar to previous study blocks.
- Waterloo Station:
  - All intersections within the Waterloo Station study area operate at LOS D or better during all peak hours.
  - Botany Road/Raglan Street (WLO01) had a notable change in LOS, whereby the intersection reduced from a LOS C to a LOS D in the PM peak hour compared to Block 2. This change in LOS for WLO01 was due to higher traffic volumes at this intersection in Block 3 during the PM peak hour. Additionally, Wyndham Street/Henderson Road (WLO05) improved from a LOS D to a LOS C in the weekend peak hour compared to Block 2. The Block 3 site improvement for WLO05 is due to lower traffic volumes at this intersection during the weekend peak hour compared to Block 2.
- Sydenham Station:
  - All intersections within the Sydenham Station study area operate at LOS B or better during all peak hours.
  - Block 3 intersection performance is generally similar to previous study blocks.

- **Transport interchange monitoring:** The interchange operation surveys focused on analysing taxi, bus stop and kiss and ride facilities at Chatswood Station and Sydenham station. The Key findings are summarised as follows.
  - Chatswood Station:
    - Queues were observed to occasionally extend outside the bays at the kiss and ride facilities on Albert Street (CWDK2) and Endeavour Street (CWDK3). Queues outside the bays were generally only 1 or 2 vehicles long

  - The capacities of the other interchange facilities were generally sufficient to cater for the existing demand, with no queues extending outside the bays
  - Block 3 vehicle demands were generally similar to previous study blocks in all peak hours.

- Sydenham Station:
  - The capacities of the interchange facilities were generally sufficient to cater for the existing demand, with no queues extending outside the bays
  - Block 3 vehicle demands were generally similar to previous study blocks in all peak hours.

In summary, the results from Block 3 traffic monitoring demonstrate generally satisfactory intersection performance, consistently achieving LOS D or better across all stations. The assessment of interchange facilities at Chatswood and Sydenham stations generally indicates sufficient provision to meet the demand observed during Block 3, although some short queues were observed to occur occasionally at CWDK2 and CWDK3.

Appendix A

Stakeholder meeting minutes

Appendix A Stakeholder meeting minutes

AECOM

Minutes of Meeting

Sydney Metro City & Southwest - Traffic and Interchange Operation Monitoring

Subject	Block 3 Presentation	Page	1
Venue	MS-Teams	Time	3:00pm - 4:00pm
Participants	Nita Hutapea (NH), Sydney Metro Chris Slenders (CS), TfNSW Anoop Sridhar (AS), AECOM Mack Brinums (MB), AECOM Jimmy Wan (JW), AECOM		
Apologies	Garry Hitchcox (GH), Sydney Metro Khaled Dib (KD), TfNSW Zakaria Ahmad (ZA), TfNSW		
File/Ref No.	SM-C&SW-MM-TfNSW-003	Date	23-Jul-2024
Distribution	As above		

No	Item	Action	Date
1.	• CS noted queues on Hampton Road have been observed to be longer than that reported in the appendix of the presentation. • AS noted that the queues in the appendix represent the 95th percentile queues from SIDRA, so there would be times where queues would exceed those shown. • NH also noted that we have completed queue length surveys during the surveyed periods, which have been used as part of the SIDRA calibration and validation process. • CS noted no action, but to keep in mind for future blocks once Sydney Metro opens.		
2.	• CS asked whether a PDF version of the BGU network diagrams could be provided.	AECOM to provide PDF version of the BGU network diagrams	23/07/2024
3.	• CS noted the queue length diagrams in the appendix indicate some queues for Marrickville Rd/Buckley St which is not typically expected for a free flow through movement. • NH noted there is a pedestrian crossing on Buckley Street at this intersection, so queues may form when vehicles give-way to pedestrians at the crossing. • MB confirmed that the queues in the SIDRA model relate to the left and right turns onto		

No	Item	Action	Date
	Buckley Street, associated with vehicles giving way to pedestrians on the zebra crossing.		
4.	• NH made a general note for information that as part of Block 3, the monitoring study has used the full 24-hours of data to identify the AM, PM and weekend peak hours, which has resulted in later peak hours being identified on the weekend during the CBD compared to previous blocks. This methodology will be adopted for all future blocks for consistency. • CS queried whether there were any events during the monitoring period that caused peaks to be shifted during the weekend. • NH noted that there weren't any events of significance during the surveyed period in Block 3. • AS noted for some of the locations, the difference between the late evening peak hour and the midday peak hour on the weekend was minor (e.g. Gadigal Station where weekend late evening peak was less than 100 vehicles higher than the midday peak hour).		

Enclosures:

- Block 3 Presentation
- Block 3 Data and Network Diagrams

AECOM

Minutes of Meeting

Sydney Metro City & Southwest - Traffic and Interchange Operation Monitoring

Subject	Block 3 Presentation	Page	1
Venue	MS-Teams	Time	9:00am - 10:00am
Participants	Nita Hutapea (NH), Sydney Metro Adeline Sim (ASi), Willoughby City Council Nemani Robertson (NR), Willoughby City Council Brian Duong (BD), Willoughby City Council Anoop Sridhar (AS), AECOM Mack Brinums (MB), AECOM Jimmy Wan (JW), AECOM		
Apologies	Daniel Sui (DS), Willoughby City Council Garry Hitchcox (GH), Sydney Metro		
File/Ref No.	SM-C&SW-MM-WCC-003	Date	24-Jul-2024
Distribution	As above		

No	Item	Action	Date
1.	**Introduction** • Attendees introduced themselves, highlighting their roles and organisations.		
2.	**Project Overview and Results** • NH gave an overview/background on the project. • AS gave an overview of scope of works and the approach for Block 3 monitoring.		
3.	• ASi asked if there is data on the highest dwell time for the CWDK2 and CWDK3 bays. • NH noted it may be worthwhile for future blocks to also note what the highest dwell times were and whether these were associated with pick-up or drop-off activity. • AS noted AECOM can send through details on the highest dwell times recorded in the peak hours.	AECOM to send through details on the highest dwell times recorded in the peak hours for CWDK2 and CWDK3	24/07/2024
4.	• AS noted that LOS at CWD01 dropped from A to B during weekend peak hour due to a new phase that was running in Block 3 which increased delay by around 6 seconds. • ASi queried what leg of the intersection experienced the increase in delay. • MB noted that the new phase related to vehicle movements exiting the Chatswood Dive site, and therefore the other signal phases for the other		

No	Item	Action	Date
	movements would have proportionally been reduced to account for the new phase. • NH noted that the Chatswood Dive site phase likely won't run (or will run less frequently) for future blocks due to limited vehicle movements expected from the Dive site.		
5.	• ASi queried where the LOS has changed, it would be good to know what the change in delay was to understand where in the LOS bands the intersection is operating (i.e. if it's operating at LOS B, is it closer to LOS A or LOS C). • AS noted this level of detail is presented in the Block 3 report. Block 3 report will be uploaded onto Sydney Metro's website once finalised.	AECOM to send a block comparison table showing the detailed intersection performance	24/07/2024
6.	• ASi noted the potential for rail replacement buses and maintenance, which may impact the use of taxi bays etc. It was suggested that rail replacement schedules be reviewed as part of planning for future block surveys.	AECOM and Sydney Metro	
7.	• BD noted that there are remediation works for the towers around the station, which may impact kiss and ride bays. Remediation works are expected to be ongoing for 2 years. Council to send through details of the replacement kiss and ride bay location once it has been determined. Likely locations include on Albert Avenue or behind RSL.	Council to send through details of the replacement kiss and ride bay location during tower remediation works	9/08/2024 (so this information can be considered as part of Block 4 survey planning)

Enclosures:

- Block 3 Presentation – Willoughby City Council
- Traffic survey data for Chatswood sites
- Highest recorded peak hour dwell times at Kiss and Ride locations around Chatswood Station
- Comparison of intersection performance – Chatswood Dive Site

AECOM

Minutes of Meeting

Sydney Metro City & Southwest - Traffic and Interchange Operation Monitoring

Subject	Block 3 Presentation	Page	1
Venue	MS-Teams	Time	3:00pm - 4:00pm
Participants	Garry Hitchcox (GH), Sydney Metro Nita Hutapea (NH), Sydney Metro Jennifer Adams (JA), Inner West Council Minas Kassiou (MK), Inner West Council Michael Huy (MH), Inner West Council George Tsaprounis (GT), Inner West Council Anoop Sridhar (AS), AECOM Mack Brinums (MB), AECOM Jimmy Wan (JW), AECOM		
Apologies	Manod Wickramasinghe (MW), Inner West Council		
File/Ref No.	SM-C&SW-MM-IWC-003	Date	30-Jul-2024
Distribution	As above		

No	Item	Action	Date
1.	• NH gave an overview/background on the project. • AS gave an overview of scope of works and the approach for Block 3 monitoring.		
2.	• MH queried whether surveys have been completed a minimum 12 months prior to opening of Sydney Metro. • AS noted Block 1 surveys were undertaken in March 2023, so commenced slightly earlier than 12 months pre-opening of Metro.		
3.	• MK queried how vehicle occupancy was recorded. • AS clarified that this relates to passengers boarding or alighting the vehicle, rather than total number of people in each vehicle.		
4.	• MH queried whether all taxis recorded within the taxi bay were taxis or whether some were general vehicles. • AS noted that the surveys just pick up when a vehicle is recorded in the bay rather than distinguishing what type of vehicle it is. AS noted this comment would be taken on board and considered for future blocks.		
5.	• GT queried whether the bus bays are sufficient for current demand.		

No	Item	Action	Date
	• AS noted that no queues were observed during Block 1 to 3 monitoring, suggesting that the existing zone is sufficient for the current demand.		
6.	• GT provided an overview of Council's proposal for a new cycleway and parking adjustments on Burrows Avenue. GT noted that current no parking zone can accommodate 9 bays, with the proposal involving the conversion of 4 of these bays to 1P, which could still be used for some kiss and ride activity if vacant. • NH noted Sydney Metro will review Council's email in further detail and provide a comment on the proposal.	Sydney Metro to provide comment on Council's proposal for Burrows Avenue	02/08/2024

Enclosures:

- Block 3 Presentation – Inner West Council
- Traffic survey data for Inner West Council sites

Appendix B

SIDRA Intersection modelling assumptions

Appendix B SIDRA Intersection modelling assumptions

Technical Assumptions and Outputs Memo

1.0 Traffic and Interchange monitoring data outputs

The following outputs are proposed to be provided for the traffic and interchange monitoring:

- Weekly profile graph for individual intersections for 24hr period.
- Summary of daily total traffic volumes per intersection/interchange in a tabular format.
- Weekly profile graph for each station (total of all intersections) for 24hr period.
- Summary of daily total traffic volumes for each station (total of all intersections) in a tabular format.
- Graph of total traffic flows of intersection for typical peak periods during weekdays (06:00-10:00 am and 03:00-07:00 pm) and weekends (10:00am - 02:00pm).
- Turning movements for identified peak hours during weekdays AM and PM peaks and weekend peaks in a network flow diagram in excel spreadsheets.
- Pedestrian volumes for identified peak hours during weekdays AM and PM peaks and weekend peaks in a network diagram in excel spreadsheets.
- Vehicle counts for 7-day weekly profile, typical peak periods, identified peaks for interchanges to include:
    - Vehicle counts for each bay
    - Vehicle occupancy (passenger only, driver excluded)
    - Vehicle dwell time for each bay
    - Vehicle queue length (outside the bay)

2.0 SIDRA modelling related assumptions

Table 1 outlines technical assumptions that will be applied for SIDRA modelling analysis.

Table 1 SIDRA Modelling Assumptions

Sl No.	Parameter	Assumption
1.	SIDRA Software Version	SIDRA 9.1
2.	Lane Configuration - Grade	A default 0% grade will be applied to all lanes / TCS plans where applicable.
3.	Lane Width	A default 3.3m lane width will be applied to all lanes.
4.	Approach / Exit Cruise Speed	Based on posted speed limit. A default speed of 50km/h will be adopted where posted speed limit is not enforced.
5.	Roundabout Entry Radius & Entry Angle	A default entry radius of 20m and a default entry angle of 30 degrees will be adopted for all roundabouts.
6.	Critical Gap & Follow-up Headway	The default ‘Program’ input will be adopted for all movements.
7.	Gap Acceptance	The default ‘SIDRA Standard’ gap acceptance capacity model will be adopted for all vehicle types.

Sl No.	Parameter	Assumption
		Reference will also be made to relevant standards/requirements in Austroads (RMS Modelling Guidelines), where applicable.
8.	Vehicle Movement Start Loss & End Gain	Based on SCATS data provided and survey footages / site observations
9.	Pedestrian Walking Speed (Average)	1.2 m/s
10.	Pedestrian Crossing Distance	Based on intersection geometry/Program (TCS plan where available / Nearmap aerial imageries)
11.	Peak Flow Period	30 minutes
12.	Peak Flow Factor	95%
13.	Phasing Arrangements	Based on SCATS data provided
14.	Phase Time and Frequency	Based on SCATS data provided
15.	Yellow Time & All-Red Time	Based on SCATS data provided
16.	Site Cycle/phase Time	User-Given Phase Time (Based on Phase time & frequency)
17.	Maximum Number of Iterations for Network Analysis	A default 30 iterations will be adopted. Increases of the maximum number of iterations may be applied depending on the Diagnostics Status.
18.	Network Cycle Time	User-Given Cycle Time (Based on User-Given Phase Time for all signals within the network)
19.	Network Signal Coordination	Coordinated Sites / User offsets / CCGs will be defined based on SCATS data provided. Signal offsets included in the SIDRA models provided by Sydney Metro will be adopted where relevant SCATS data are not available.
20.	Queue in Outputs (Site & Network)	95th Percentile
21.	PCU factor	LV: 1.0, HV & Bus: 2.0, Bicycles: 0.3
22.	Site level of service method	Delay (RTA NSW)
23.	Extra Bunching (Site Analysis)	Based on RMS Traffic Modelling Guidelines
24.	Movement Classes	Based on each intersection geometry (LV, HV, Buses, Bicycles)
25.	All other parameters	Default SIDRA settings

The following additional assumptions will be adopted for SIDRA modelling based on the discussion with Sydney Metro on 04 Apr 2023.

Table 2 Additional SIDRA Modelling Assumptions

Sl No.	Items	Assumption
1.	Network peak hours	For each station, peak hours will be identified for individual intersections and proposed networks (highlighted in green cells in Figure 1). By reviewing these individual and network peak hours, a station-wide peak hour will be nominated/adopted for each peak period. Peak period dates will be identified for each station

Sl No.	Items	Assumption
		for AM, PM and weekend. For eg.SYD AM Peak - Tuesday; SYD PM Peak - Thursday; WLO AM Peak - Wednesday
2.	Cyclist movements	For SIDRA modelling, cyclist movements will only be included if there is a dedicated cycling phase.
3.	Intersection approach/lane closure	Due to construction activities, some approaches/lanes were observed temporarily (partially) closed on site. These temporary closures will be reflected in the models unless it only occurs for a short period of time (for e.g. 10 to 15mins). Notes will be made to approach/lane closure observed on-site, and approach/lane excluded in SIDRA modelling.
4.	CST06 intersection geometry	Hume St North (one-way exit) will not be included in Block 1 modelling. Notes will be made to the left turn movements observed from Clarke St northwest to Hume St north.
5.	BGU05 intersection geometry	Clarence St northbound on-ramp lane to SHB will not be included in the modelling.
6.	CEN03/CEN05 intersection geometry	Elizabeth St/Randle St intersection has been included as CEN05, and will be modelled as network model with CEN03.

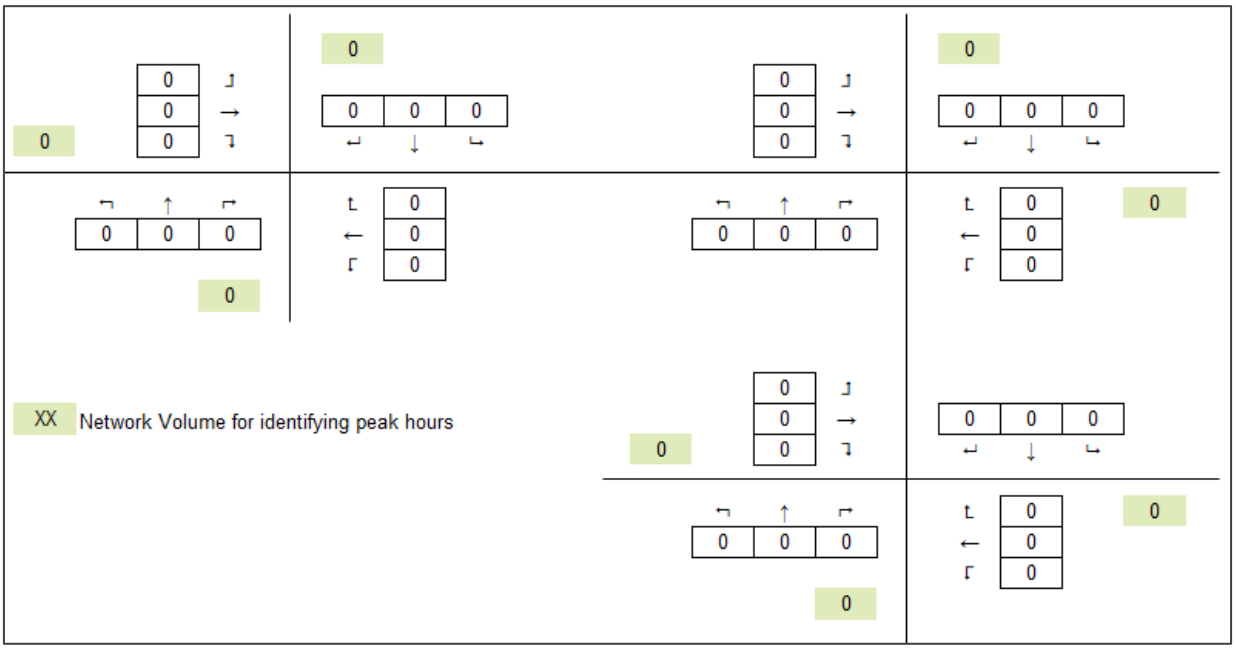


Figure 1 Adopted Network Volume for Network Peak Hour Identification

The following SIDRA outputs would be provided for each intersection.

- Degree of saturation (DoS)
- Average delay (sec)
- 95th percentile queue (m)
- Level of service (LoS)

A sample format of the output table is shown in Table 3.

Table 3 Example SIDRA output format

Intersection	Peak	Leg	Degree of saturation (DoS)	Average delay (sec)	95th percentile queue (m)	Level of service (LoS)
Road1 / Road2 (Signal / Roundabout / Priority)	AM	South				
		East				
		North				
		West				
		Total				
	PM	South				
		East				
		North				
		West				
		Total				
	Weekend	South				
		East				
		North				
		West				
		Total				

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SIDRA Network Model Coverage

S.ID	Intersection ID	Station Name	Intersection Name	Intersection Control	Intersection Geometry Layout	Intersection Geometry Code	SIDRA Network Model (AECOM Revised) Pre-opening	Coordination
01	CWD01	Chatswood Station	Mowbray Rd / Hampden Rd	Signal	3-leg Intersection	2_4_6	-	-
02	CWD02	Chatswood Station	Pedestrian Bridge Crossing along Mowbray	Pedestrian only - Bridge Crossing	Bridge Crossing	2_6	-	-
03	CST01	Crows Nest Station	Pacific Hwy / Albany St	Signal	3-leg Intersection	3_4_8	CST-N1	Offset_CST-N1
04	CST02	Crows Nest Station	Pacific Hwy / Oxley St	Signal	4-leg Intersection	2_4_6_8	CST-N1	Offset_CST-N1
05	CST03	Crows Nest Station	Pacific Hwy / Hume St	Signal	4-leg Intersection	2_4_6_8	CST-N1	Offset_CST-N1
06	CST04	Crows Nest Station	Pacific Hwy / Falcon St / Shirley Rd	Signal	5-leg Intersection	1_3_4_6_8	CST-N1	Offset_CST-N1
07	CST05	Crows Nest Station	Clarke St / Oxley St	Priority - Give Way	3-leg Intersection	1_4_6	CST-N1	-
08	CST06	Crows Nest Station	Clarke St / Hume St	Priority - Give Way	4-leg Intersection	1_4_6_8	CST-N1	-
09	CST07	Crows Nest Station	Clarke St / Willoughby Rd	Priority - Give Way	3-leg Intersection	1_5_7	-	-
10	CST08	Crows Nest Station	Albany St / Willoughby Rd	Signal	4-leg Intersection	1_3_5_7	-	-
11	CST09	Crows Nest Station	Albany St / Oxley St	Roundabout	4-leg Intersection	1_3_5_7	CST-N1	-
12	CST10	Crows Nest Station	Albany St / Clarke Ln	Priority - Give Way	3-leg Intersection	3_4_7	CST-N1	-
13	CST11	Crows Nest Station	Oxley St / Clarke Ln	Priority - Give Way	4-leg Intersection	2_4_6_8	CST-N1	-
14	CST12	Crows Nest Station	Hume St / Clarke Ln	Priority - Stop	3-leg Intersection	2_4_6	CST-N1	-
15	CST13	Crows Nest Station	Pacific Hwy / Alexander St	Signal	4-leg Intersection	1_3_4_8	CST-N1	Offset_CST-N1
16	CST14	Crows Nest Station	Falcon St / Alexander St	Signal	4-leg Intersection	1_3_5_7	CST-N1	Offset_CST-N1
17	VIC01	Victoria Cross Station	Pacific Hwy / Berry St	Signal	4-leg Intersection	3_4_6_8	VIC-N1	Offset_VIC-N1
18	VIC02	Victoria Cross Station	Miller St / Berry St	Signal	4-leg Intersection	1_3_5_7	VIC-N1	Offset_VIC-N1
19	VIC03	Victoria Cross Station	Miller St / McLaren St	Signal	4-leg Intersection	1_3_5_7	VIC-N1	-
20	VIC04	Victoria Cross Station	Pacific Hwy / Miller St	Signal	5-leg Intersection	1_4_5_7_8	VIC-N1	Offset_VIC-N1
21	BGU01	Barangaroo Station	Hickson Rd / Towns Pl	Priority - Give Way	3-leg Intersection	3_6_8	BGU-N1	-
22	BGU02	Barangaroo Station	Dalgety Rd / Towns Pl	Roundabout	3-leg Intersection	4_5_7	BGU-N1	-
23	BGU03	Barangaroo Station	Kent St / Argyle St	Priority - Give Way	4-leg Intersection	1_3_5_7	-	-
24	BGU04	Barangaroo Station	Pedestrian Mid-block Crossing at Kent St near Gas Ln	Pedestrian only - Signal	Pedestrian Mid-block Crossing	1_5	BGU-N2	Offset_BGU-N2
25	BGU05	Barangaroo Station	Kent St / Sydney Harbour Bridge (SHB) On-ramp	Signal	4-leg Intersection	1_2_3_5	BGU-N2	Offset_BGU-N2
26	BGU06	Barangaroo Station	Hickson Rd / Napoleon St / Sussex St	Signal	4-leg Intersection	1_3_5_7	BGU-N3	-
27	BGU07	Barangaroo Station	Margaret St / Kent St / Napoleon St	Signal	4-leg Intersection	1_3_5_8	BGU-N2	Offset_BGU-N2
28	BGU08	Barangaroo Station	Margaret St / Clarence St	Signal	4-leg Intersection	1_3_5_7	BGU-N2	Offset_BGU-N2
29	BGU09	Barangaroo Station	Margaret St / York St	Signal	4-leg Intersection	1_3_5_7	BGU-N2	-
30	BGU10	Barangaroo Station	Pedestrian Mid-block Crossing at Sussex St under Exchange Pl	Pedestrian only - Signal	Pedestrian Mid-block Crossing	1_5	BGU-N3	-
31	BGU11	Barangaroo Station	Pedestrian Mid-block Crossing at Kent St near Margaret St	Pedestrian only - Signal	Pedestrian Mid-block Crossing	1_5	BGU-N3	-
32	BGU12	Barangaroo Station	Sussex St / Erskine St	Signal	4-leg Intersection	1_3_5_7	BGU-N3	Offset_BGU-N3
33	BGU13	Barangaroo Station	Kent St / Erskine St	Signal	4-leg Intersection	1_3_5_7	BGU-N3	Offset_BGU-N3
34	BGU14	Barangaroo Station	Sussex St / King St	Signal	4-leg Intersection	1_3_5_6	BGU-N4	Offset_BGU-N4
35	BGU15	Barangaroo Station	Kent St / King St	Signal	4-leg Intersection	1_3_5_7	BGU-N4	Offset_BGU-N4
36	BGU16	Barangaroo Station	New Pedestrian Mid-block Crossing at New Hickson Rd (north of Metro Station)	Pedestrian only - Signal	Pedestrian Mid-block Crossing	1_5	-	-
37	BGU17	Barangaroo Station	New Pedestrian Mid-block Crossing at New Hickson Rd (south of Metro Station)	Pedestrian only - Signal	Pedestrian Mid-block Crossing	1_5	-	-
38	BGU18	Barangaroo Station	Shelley St / Erskine St	Signal	4-leg Intersection	1_3_5_7	BGU-N3	-
39	MPL01	Martin Place Station	Hunter St / Castlereagh St / Bligh St	Signal	4-leg Intersection	1_3_5_8	MPL-N1	Offset_MPL-N1
40	MPL02	Martin Place Station	Hunter St / Elizabeth St / Chifley Square	Signal	4-leg Intersection	2_3_5_7	MPL-N1	Offset_MPL-N1
41	MPL03	Martin Place Station	Bent St / Bligh St	Signal	3-leg Intersection	4_6_8	MPL-N1	Offset_MPL-N1
42	MPL04	Martin Place Station	Bent St / Phillip St	Signal	4-leg Intersection	1_4_6_8	MPL-N1	Offset_MPL-N1
43	MPL05	Martin Place Station	Pedestrian Mid-block Crossing at Castlereagh St	Pedestrian only - Signal	Pedestrian Mid-block Crossing	1_5	-	-
44	MPL06	Martin Place Station	Pedestrian Mid-block Crossing at Elizabeth St	Pedestrian only - Signal	Pedestrian Mid-block Crossing	1_5	-	-
45	PIT01	Pitt Street Station	Pitt St / Bathurst St	Signal	4-leg Intersection	1_3_5_7	PIT-N1	-
46	PIT02	Pitt Street Station	Castlereagh St / Bathurst St	Signal	4-leg Intersection	1_3_5_7	PIT-N1	-
47	PIT03	Pitt Street Station	Park St / Castlereagh St	Signal	4-leg Intersection	1_3_5_7	PIT-N1	-
48	PIT04	Pitt Street Station	Park St / Pitt St	Signal	4-leg Intersection	1_3_5_7	PIT-N1	-
49	CEN01	Central Station	Elizabeth St / Eddy Ave	Signal	3-leg Intersection	1_5_8	CEN-N1	Offset_CEN-N1
50	CEN02	Central Station	Elizabeth St / Foveaux St	Signal	3-leg Intersection	1_4_5	CEN-N1	Offset_CEN-N1
51	CEN03	Central Station	Elizabeth St / Cooper St	Priority - Give Way	3-leg Intersection	1_4_5	CEN-N2	-
52	CEN04	Central Station	New Pedestrian Mid-block Crossing at Randle Ln	Pedestrian only - Signal	Pedestrian Mid-block Crossing	2_6	-	-
53	CEN05	Central Station	Elizabeth St / Randle St	Signal	3-leg Intersection	1_5_6	CEN-N2	-
54	WLO01	Waterloo Station	Botany Rd / Raglan St / Henderson Rd	Signal	4-leg Intersection	1_3_5_7	WLO-N1	Offset_WLO-N1
55	WLO02	Waterloo Station	Raglan St / Cope St	Roundabout	4-leg Intersection	1_3_5_7	WLO-N1	-
56	WLO03	Waterloo Station	Botany Rd / Wellington St / Buckland St	Signal	4-leg Intersection	1_3_5_7	WLO-N1	Offset_WLO-N1
57	WLO04	Waterloo Station	Cope St / Wellington St	Roundabout	4-leg Intersection	1_3_5_7	WLO-N1	-
58	WLO05	Waterloo Station	Wyndham St / Henderson Rd	Signal	4-leg Intersection	1_3_5_7	WLO-N1	Offset_WLO-N1
59	WLO06	Waterloo Station	New Pedestrian Mid-block Crossing at Cope St	Pedestrian only - Signal	Pedestrian Mid-block Crossing	1_5	-	-
60	SYD01	Sydenham Station	Railway Pde / Gleeson Ave	Signal	3-leg Intersection	2_4_6	SYD-N1	-
61	SYD02	Sydenham Station	Burrows Ave / Gleeson Ave	Signal	4-leg Intersection	2_4_6_8	SYD-N1	-
62	SYD03	Sydenham Station	Burrows Ave / George St	Priority - Give Way	3-leg Intersection	2_4_6	-	-
63	SYD04	Sydenham Station	Railway Pde / Sydenham Rd	Pedestrian only - Signal	3-leg Intersection	5_6_8	-	-
64	SYD05	Sydenham Station	Marrickville Rd / Buckley St	Priority - Give Way	3-leg Intersection	2_4_8	-	-
65	SYD06	Sydenham Station	Sydenham Rd / Buckley St	Priority - Give Way	3-leg Intersection	4_6_8	-	-

Sydney Metro City & Southwest - Traffic and Interchange Operation Monitoring

Intersection Geometry

Source: Nearmap accessed XX XX XXXX

Include NearMaps layout (already prepared for each site) and include a markup showing the approach distances, short lane lengths, parking zone, no stopping zone etc.

Include SIDRA model layout

AECOM

Sydney Metro City & Southwest - Traffic and Interchange Operation Monitoring

SIDRA Model Review Checklist

Site Name:	
Site ID:	
Type:	
Scenario:	

Links to:	
SIDRA File	
Traffic Volume Input	
SCATS Data	TCS Plan

Status	
Open	Attention Required for modeller / reviewer
In Progress	Working in progress
Closed	Closed
N/A	Not Applicable/Not Required

Modeller:	
Reviewer:	
Verifier:	

Item	Model Element	Notes (For modeller)	AM Peak						PM Peak						Weekend Peak			
			Modeller		Reviewer		Verifier		Modeller		Reviewer		Verifier		Modeller		Reviewer	
1	General		Status	Notes	Status	Notes	Status	Notes	Status	Notes	Status	Notes	Status	Notes	Status	Notes	Status	Notes
1.1	SIDRA Setup	New South Wales	Open		Open		Open		Open		Open		Open		Open		Open	
1.2	Intersection Type	For priority intersections, check for 'give way' or 'stop'	Open		Open		Open		Open		Open		Open		Open		Open	
2	Intersection																	
2.1	Site Name	To be consistent with the Intersection Master List	Open		Open		Open		Open		Open		Open		Open		Open	
2.2	Site Title	Include TCS numbers in the model. if applicable	Open		Open		Open		Open		Open		Open		Open		Open	
2.3	Approach Names	Include as per Nearmap, compare with Intersection Master List	Open		Open		Open		Open		Open		Open		Open		Open	
2.4	Leg Geometry	Two-way, one-way etc.	Open		Open		Open		Open		Open		Open		Open		Open	
2.5	Approach/Exit Distance	Check and update as per NearMaps (distance till the next intersection if more than 500m)	Open		Open		Open		Open		Open		Open		Open		Open	
2.6	Extra Bunching	For isolated intersections, include as per Traffic modelling guidelines. For sites in the network, ensure Program option is selected for 'network internal' approaches (user input should still be included for 'network external' approaches, where applicable).	Open		Open		Open		Open		Open		Open		Open		Open	
3	Movement Definitions																	
3.1	Vehicle Types	Confirm inclusion of Buses, Bicycles, if relevant (for easier volume input, select Bus and bicycles for all intersections)	Open		Open		Open		Open		Open		Open		Open		Open	
3.2	OD Movements	Switch off banned movements as per site observations, compare with Intersection Master list for banned movements.	Open		Open		Open		Open		Open		Open		Open		Open	
4	Lane Geometry																	
4.1	Lane Configuration / Length	Check the full length of lane and 'short lane' based on Nearmap - refer Intersection Geometry tab (round to 5m)	Open		Open		Open		Open		Open		Open		Open		Open	
4.2	Lane Type	High angle or Low angle for slip lanes	Open		Open		Open		Open		Open		Open		Open		Open	
4.3	Lane Control		Open		Open		Open		Open		Open		Open		Open		Open	
4.4	Overflow Lane Number		Open		Open		Open		Open		Open		Open		Open		Open	
4.5	Grade	A default 0% grade will be applied to all lanes. / TCS plans where applicable.	Open		Open		Open		Open		Open		Open		Open		Open	
4.6	Lane Disciplines	Update if specific movement classes have banned movements (for eg. Right turn only for buses)	Open		Open		Open		Open		Open		Open		Open		Open	
4.7	Lane Capacity Adjustment	Justifications based on site observations required if these factors are adjusted	Open		Open		Open		Open		Open		Open		Open		Open	
5	Lane Movements																	
5.1	Lane Movement Proportion	As per site observations or survey videos. From approach lane to exit lane (e.g. bus lane on approach side should direct to bus lane on exit side)	Open		Open		Open		Open		Open		Open		Open		Open	
6	Roundabout (if applicable)																	
6.1	Number of Lanes		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
6.2	Circulating Width		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
6.3	Island Diameter		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
6.4	Ped Crossing at Roundabout	Include ped crossing for all roundabouts (with / without zebra crossing); if there's no zebra crossing, make a note in the checklist - 'No zebra crossing, priority settings (ped or veh) to be further revied with survey footages to calibrate the model.'	N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
7	Pedestrians																	
7.1	Crossing Location / Type	Full crossing / staged crossing / slip lane crossing (signalised or zebra)	Open		Open		Open		Open		Open		Open		Open		Open	
7.2	Pedestrian Volume	Update as per surveys	Open		Open		Open		Open		Open		Open		Open		Open	
7.3	Peak Flow Factor	95%	Open		Open		Open		Open		Open		Open		Open		Open	
7.4	Crossing Distance	Based on intersection geometry (round to 0.5m)	Open		Open		Open		Open		Open		Open		Open		Open	
7.5	Walking Speed (Average)	1.2 m/s (as recommended in RMS Modelling Guide)	Open		Open		Open		Open		Open		Open		Open		Open	
7.6	Pedestrian Timing Data	Adopt the SCATS walk time as minimum walk time, minimum clearance as default 5 sec, Clearance 1 & 2 as per SCATS data	Open		Open		Open		Open		Open		Open		Open		Open	
7.7	Walk Time Extension	Remain as 'unticked' (can adjust based on survey videos, where applicable)	Open		Open		Open		Open		Open		Open		Open		Open	
8	Volumes																	
8.1	Vehicle Volumes	Check individual intersections; For network model, check midblock flows (ensure inpit volumes are set to 'Separate')	Open		Open		Open		Open		Open		Open		Open		Open	
8.2	Peak Flow Period	30 minutes	Open		Open		Open		Open		Open		Open		Open		Open	
8.3	Peak Flow Factor	95%	Open		Open		Open		Open		Open		Open		Open		Open	
9	Priorities																	
9.1	Priorities	Ensure priority settings updated for turn movements at signals with opposed ped movements	Open		Open		Open		Open		Open		Open		Open		Open	
10	Gap Acceptance																	
10.1	Opposing Peds (Extra Loss)	Justifications required if these factors are adjusted	Open		Open		Open		Open		Open		Open		Open		Open	
11	Vehicle Movement Data																	
11.1	Approach / Exit Cruise Speed	Based on posted speed limits or agreed assumptions (if no posted speed limits)	Open		Open		Open		Open		Open		Open		Open		Open	
11.2	Start Loss / End Gain	Justifications required if these factors are adjusted	Open		Open		Open		Open		Open		Open		Open		Open	
11.3	Early Cut-Off / Late Start	Justifications required if these factors are adjusted	Open		Open		Open		Open		Open		Open		Open		Open	
12	Phasing & Timing (if applicable)																	
12.1	Phasing Arrangements	As per SCATS. TCS Plan	Open		Open		Open		Open		Open		Open		Open		Open	
12.2	Red Arrow Drop Off		Open		Open		Open		Open		Open		Open		Open		Open	
12.3	Phase Time / Frequency	User-give phase times. Frequency as per SCATS/Site observations	Open		Open		Open		Open		Open		Open		Open		Open	
12.4	Yellow Time	As per SCATS (if SCATS data indicates .5, round up and leave a note in the checklist)	Open		Open		Open		Open		Open		Open		Open		Open	
12.5	All-Red Time	As per SCATS (if SCATS data indicates .5, round up and leave a note in the checklist)	Open		Open		Open		Open		Open		Open		Open		Open	
13	Parameter Settings																	
13.1	Site LoS Method	Delay (RTA NSW); Site Level of Service Target LoS C	Open		Open		Open		Open		Open		Open		Open		Open	
13.2	Queue in Output	95th Percentile	Open		Open		Open		Open		Open		Open		Open		Open	
13.3	PCU factor	LV: 1.0, HV & Bus: 2.0, Bicycles: 0.3	Open		Open		Open		Open		Open		Open		Open		Open	

AECOM

Sydney Metro City & Southwest - Traffic and Interchange Operation Monitoring

SIDRA Network Model Coverage

Site Name:	CHW Network 1
Site ID:	Network
Type:	N/A
Scenario:	TBC

Links to:
SIDRA File
Traffic Volume Input
SCATS Data

Status	
Open	Attention Required for modeller / reviewer
In Progress	Working in progress
Closed	Closed
N/A	Not Applicable/Not Required

Modeller:	
Reviewer:	
Verifier:	

Item	Model Element	Notes	AM Peak						PM Peak						Sat Peak					
			Modeller		Reviewer		Verifier		Modeller		Reviewer		Verifier		Modeller		Reviewer		Verifier	
1	Network Data		Status	Notes	Status	Notes	Status	Notes	Status	Notes	Status	Notes	Status	Notes	Status	Notes	Status	Notes	Status	Notes
1.1	Queue in Output	95th Percentile	Open		Open		Open		Open		Open		Open		Open		Open		Open	
1.2	Maximum Number of Iterations	30; unless notes are given in Diagnostics	Open		Open		Open		Open		Open		Open		Open		Open		Open	
2	CCGs																			
2.1	CCG Set Up	If applicable	Open		Open		Open		Open		Open		Open		Open		Open		Open	
3	Network Timing																			
3.1	Coordinated Site Selection	If applicable	Open		Open		Open		Open		Open		Open		Open		Open		Open	
3.2	User Offset	If applicable	Open		Open		Open		Open		Open		Open		Open		Open		Open	
3.3	Route Defination	If applicable	Open		Open		Open		Open		Open		Open		Open		Open		Open	
3.4	Network Cycle Time	If applicable	Open		Open		Open		Open		Open		Open		Open		Open		Open	

Appendix C

Network flow diagrams

Appendix C Network flow diagrams

Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

Time Period:

AM

CWD01 - 8:00 AM (Tue)

CWD02 - 8:00 AM (Tue)

Legend:

- Approach Number
- Approach Total
- Departure Total

Block 3

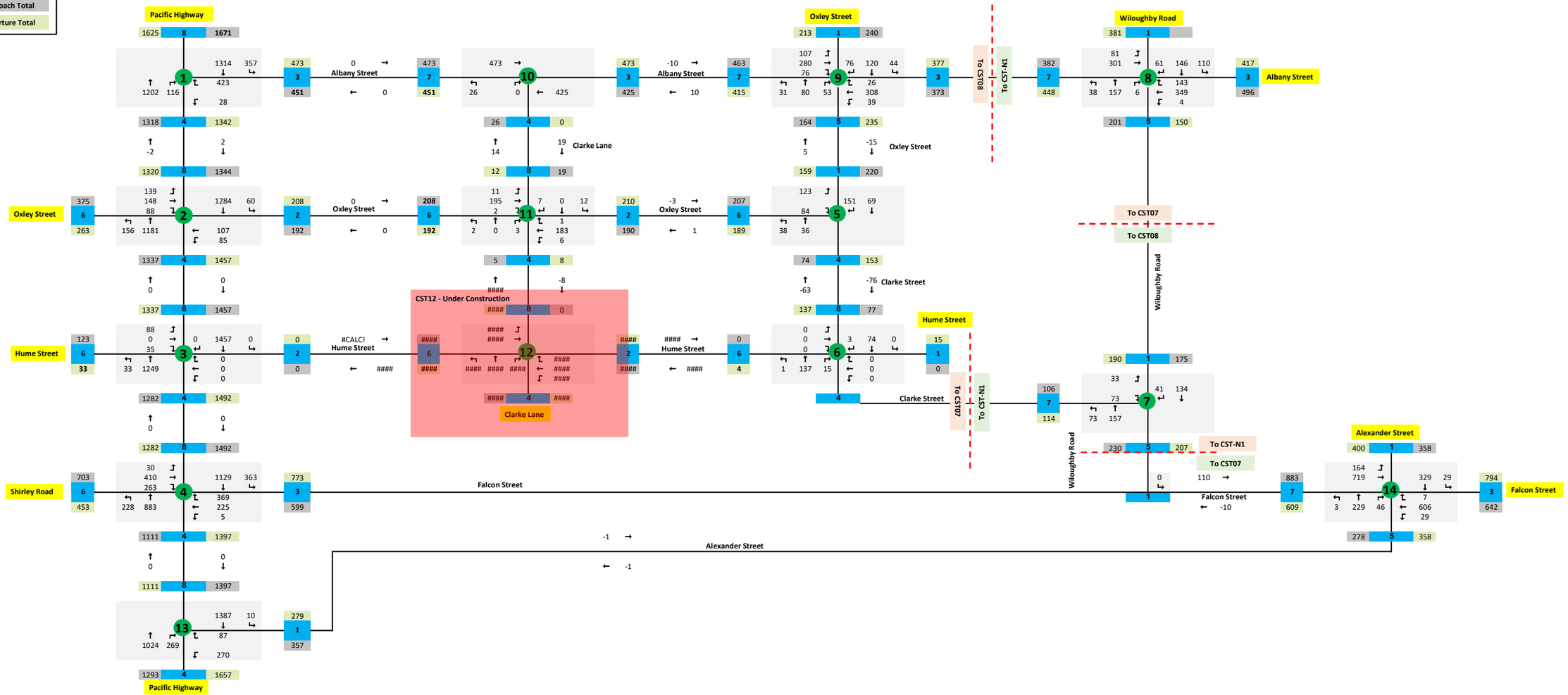
Dropdowns:

Vehicle Type:
ALL VEHICLES

Time Period:
AM

CST-N1 - 8:00 AM (Wed)
CST07 - 8:15 AM (Thu)
CST08 - 8:15 AM (Thu)

Legend:
- Approach Number
- Approach Total
- Departure Total



Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

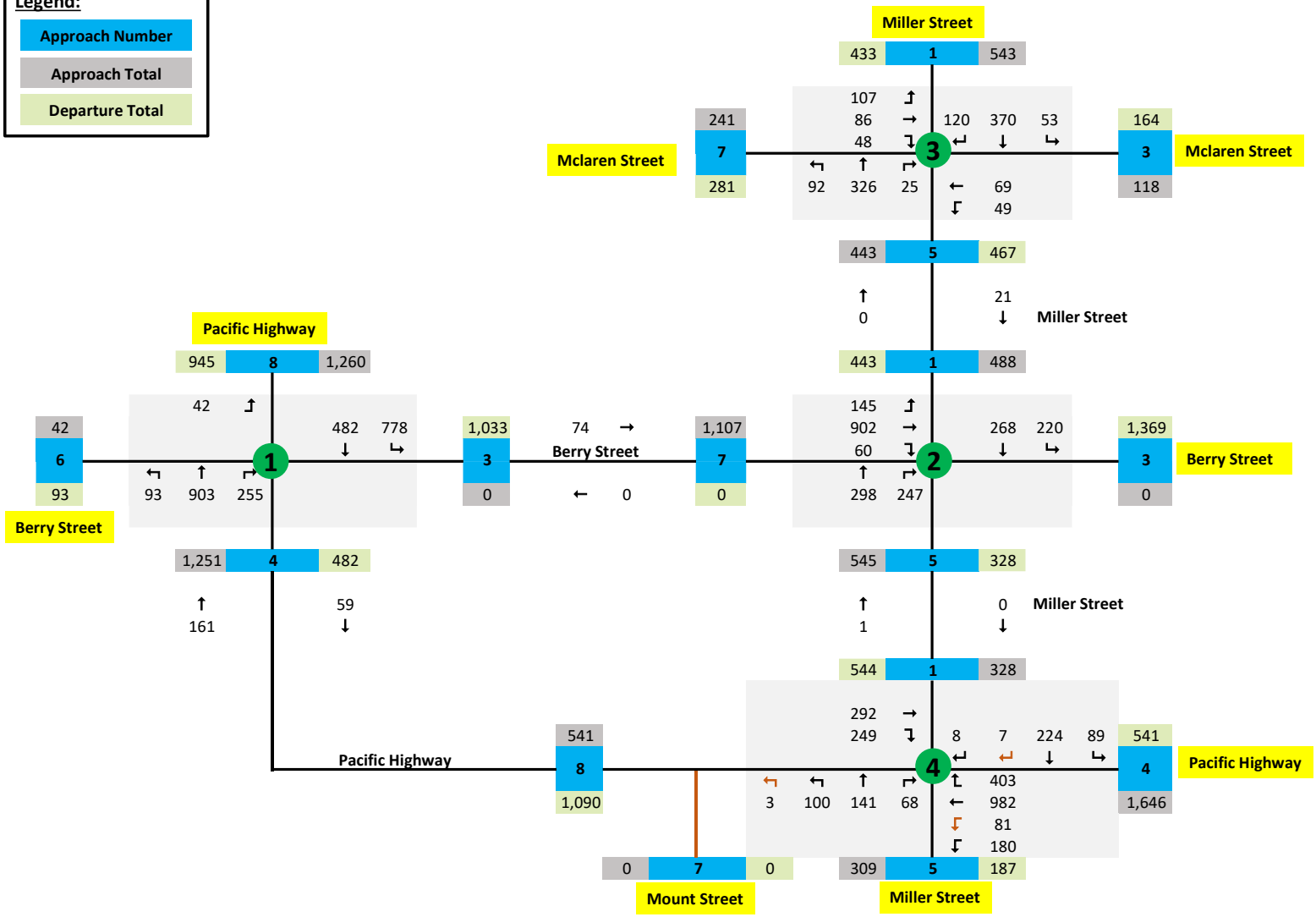
Time Period:

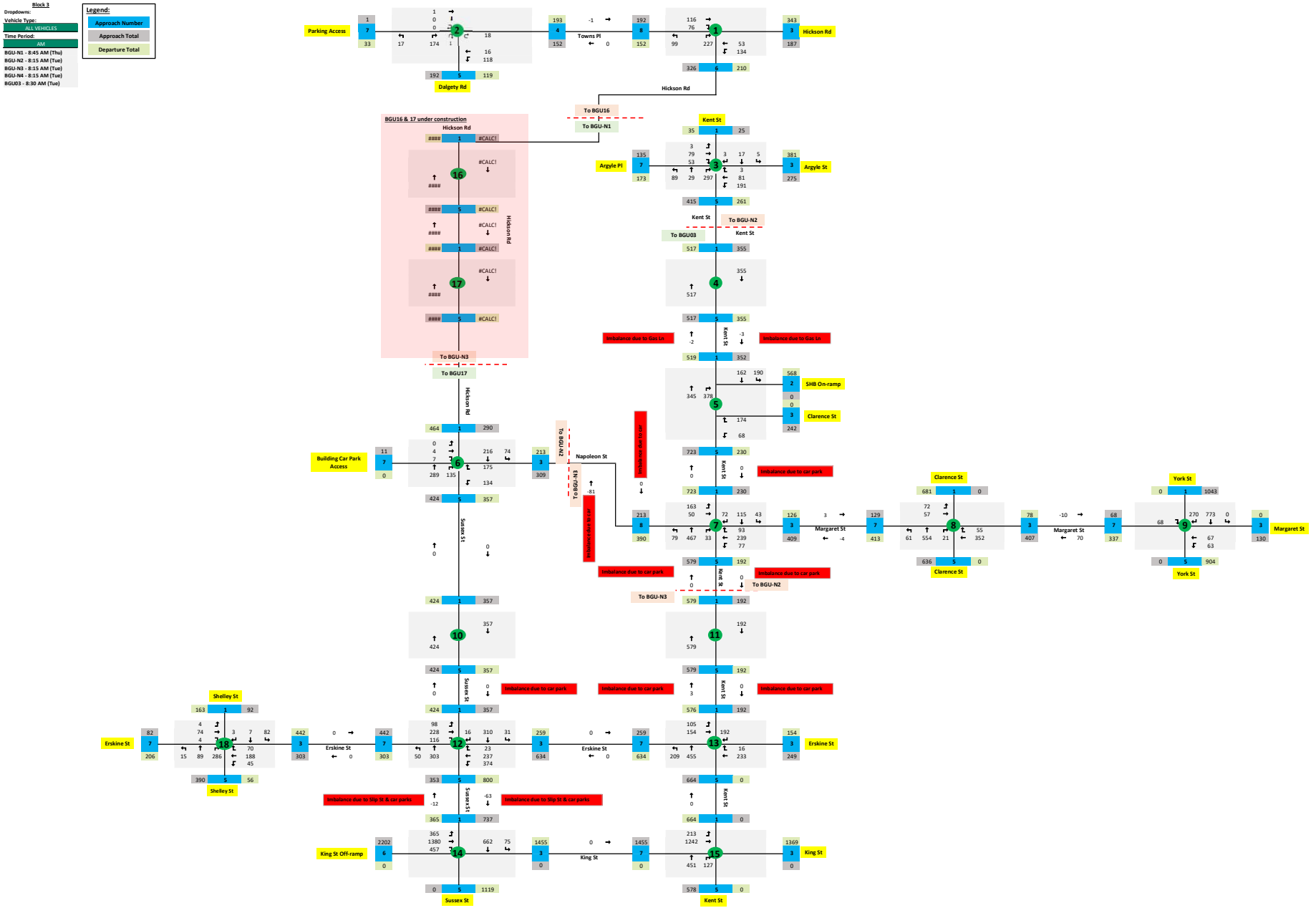
AM

VIC-N1 - 8:00 AM (Wed)

Legend:

- Approach Number
- Approach Total
- Departure Total




Block 3
Dropdowns:
Vehicle Type:
ALL VEHICLES
Time Period:
AM
BGU-N1 - 8:45 AM (Thu)
BGU-N2 - 8:15 AM (Tue)
BGU-N3 - 8:15 AM (Tue)
BGU-N4 - 8:15 AM (Tue)
BGU03 - 8:30 AM (Tue)
Legend:
Approach Number
Approach Total
Departure Total
Parking Access
Towns Pl
Hickson Rd
Dalgety Rd
To BGU16
To BGU-N1
BGU16 & 17 under construction
Argyle Pl
Argyle St
Kent St
To BGU03
To BGU-N2
To BGU-N3
To BGU17
Imbalance due to Gas Ln
SHB On-ramp
Clarence St
Building Car Park Access
Napoleon St
To BGU-N4
Imbalance due to car
Imbalance due to car park
Margaret St
York St
Sussex St
Shelley St
Erskine St
Imbalance due to Slip St & car parks
King St Off-ramp
King St

Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

Time Period:

AM

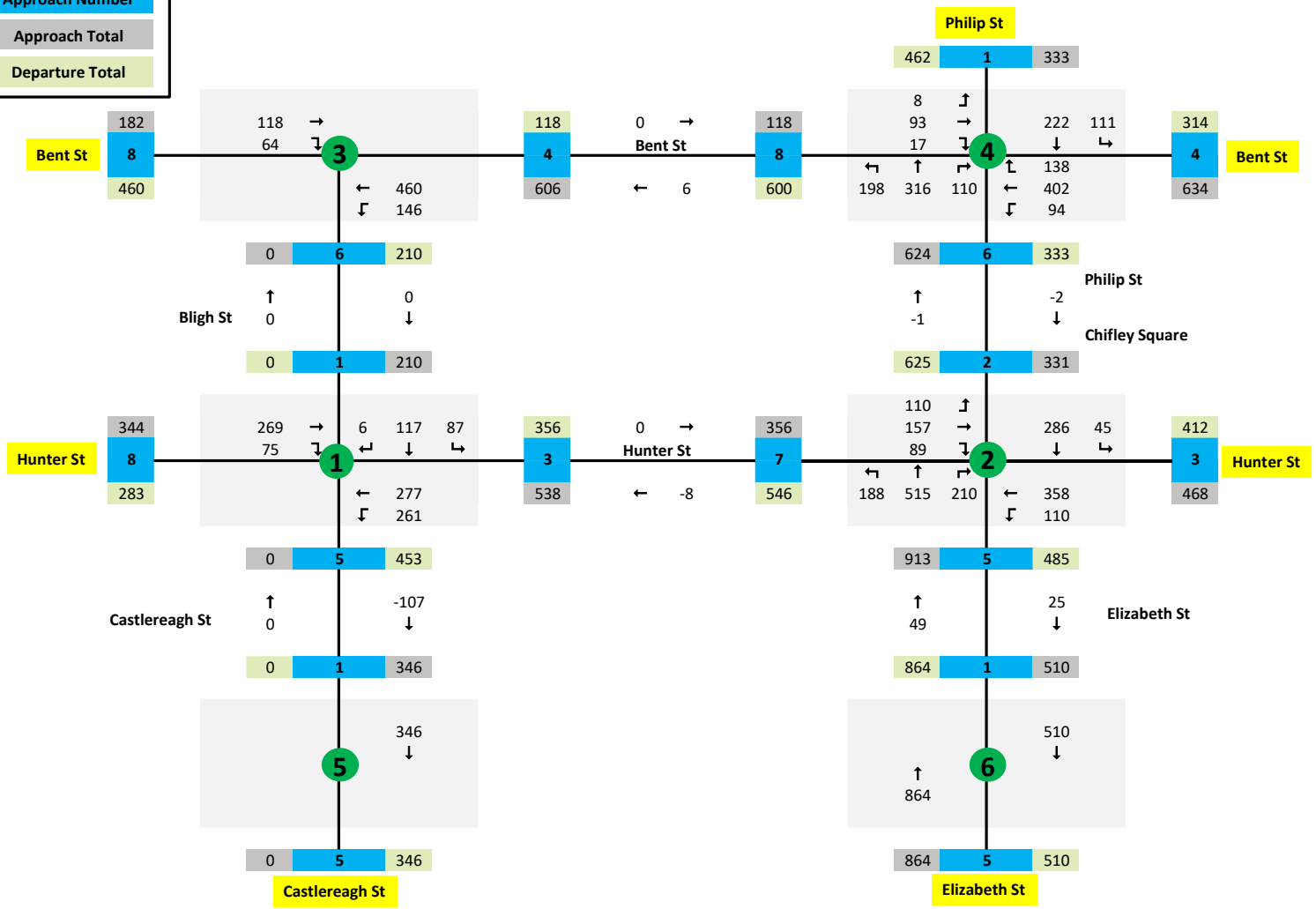
MPL-N1 - 8:45 AM (Wed)

MPL05 - 8:45 AM (Thu)

MPL06 - 8:45 AM (Thu)

Legend:

- Approach Number
- Approach Total
- Departure Total



Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

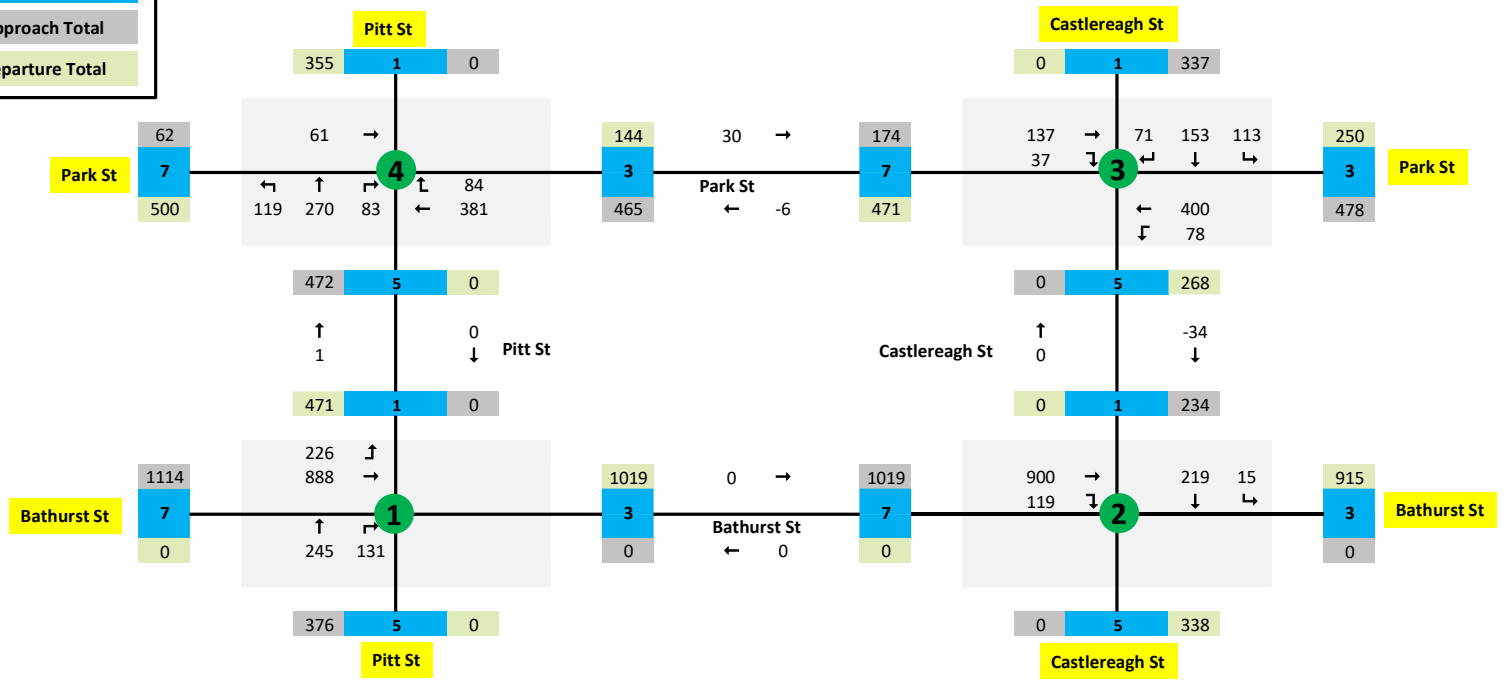
Time Period:

AM

PIT-N1 - 8:00 AM (Fri)

Legend:

- Approach Number
- Approach Total
- Departure Total



Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

Time Period:

AM

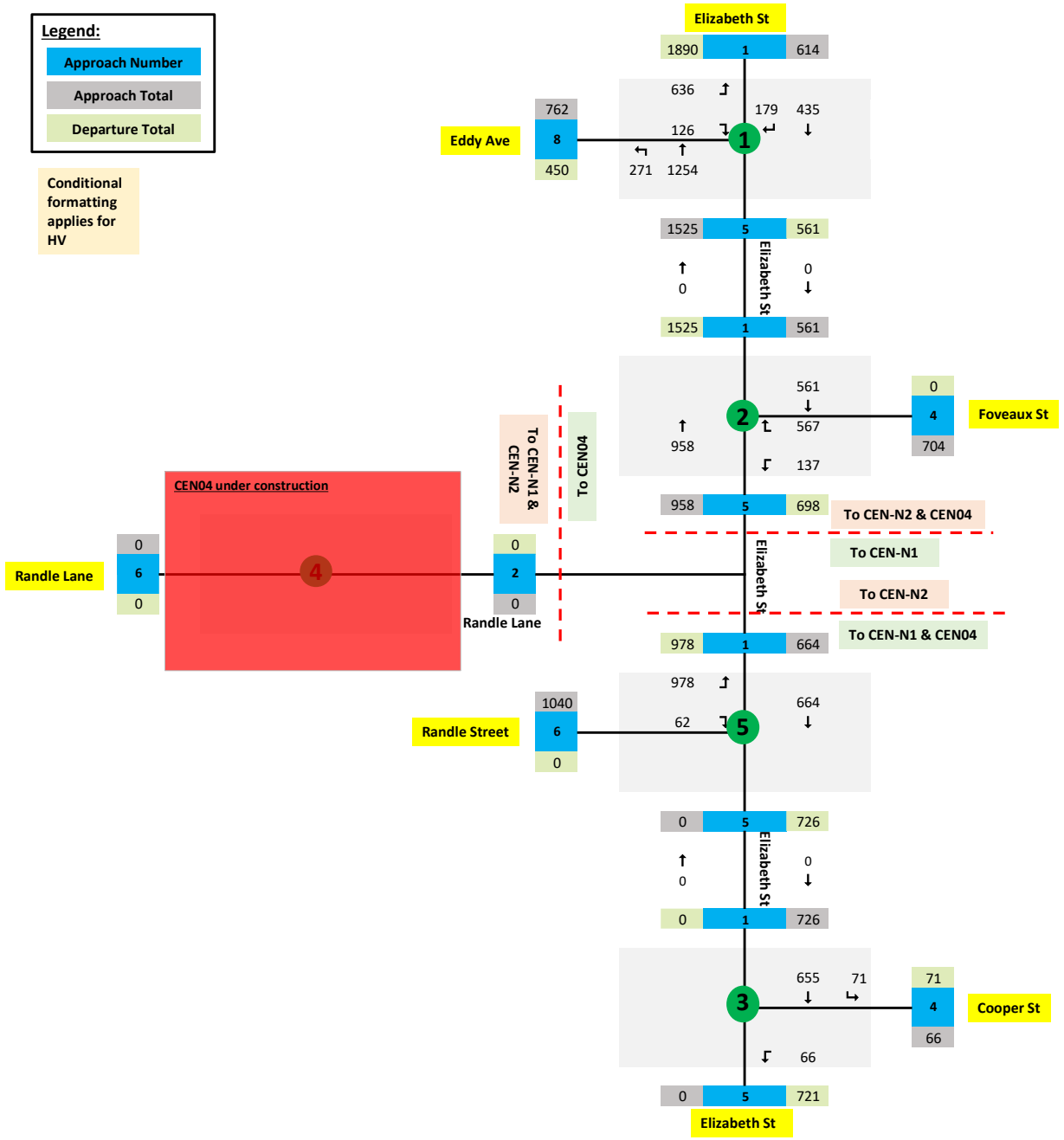
CEN-N1 - 8:00 AM (Tue)

CEN-N2 - 8:00 AM (Wed)

Legend:

- Approach Number
- Approach Total
- Departure Total

Conditional formatting applies for HV



Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

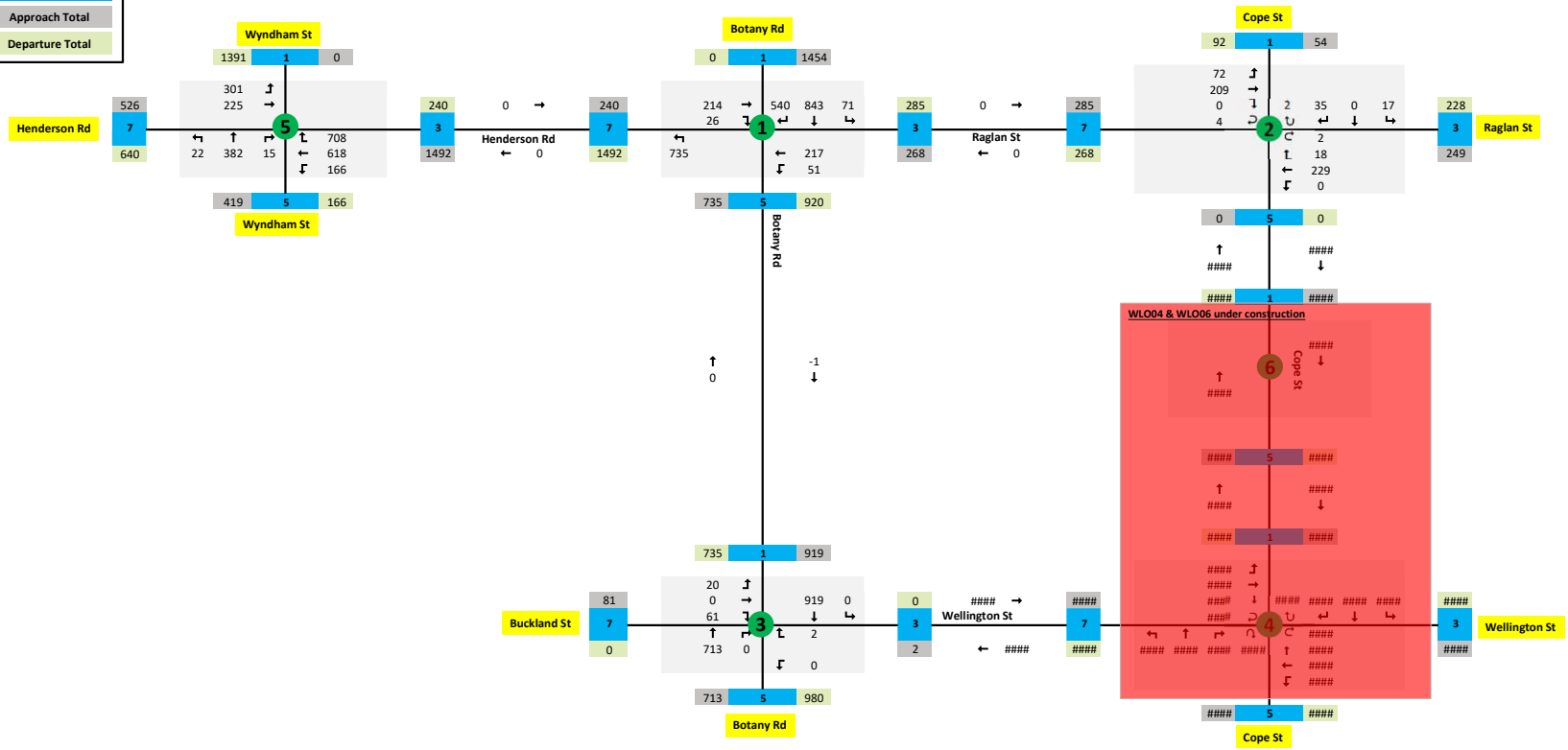
Time Period:

AM

WLO-N1 - 8:00 AM (Wed)

Legend:

- Approach Number
- Approach Total
- Departure Total



Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

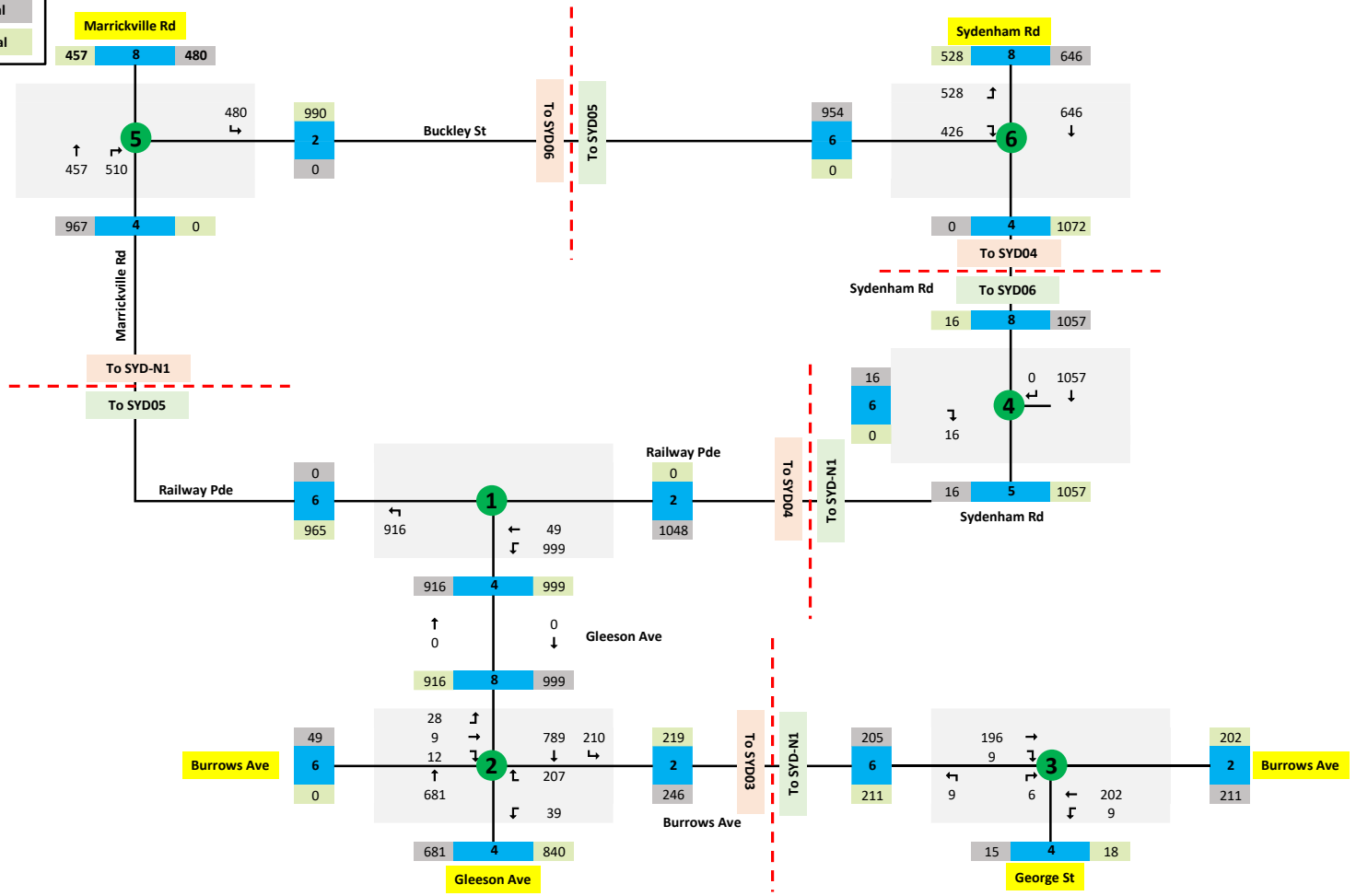
Time Period:

AM

SYD-N1 - 8:00 AM (Wed)
SYD03 - 7:45 AM (Thu)
SYD04 - 8:00 AM (Tue)
SYD05 - 8:00 AM (Wed)
SYD06 - 8:00 AM (Thu)

Legend:

- Approach Number
- Approach Total
- Departure Total



Block 3

Dropdowns:

Vehicle Type:

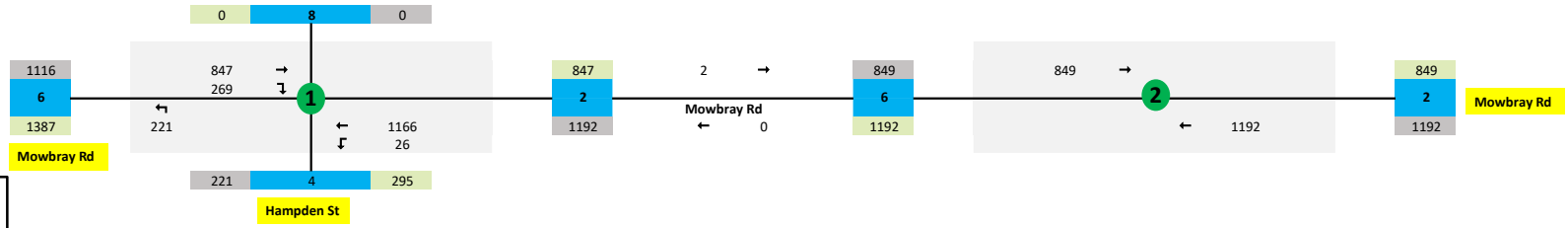
ALL VEHICLES

Time Period:

PM

CWD01 - 3:00 PM (Fri)

CWD02 - 3:00 PM (Fri)



Legend:

- Approach Number
- Approach Total
- Departure Total

Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

Time Period:

PM

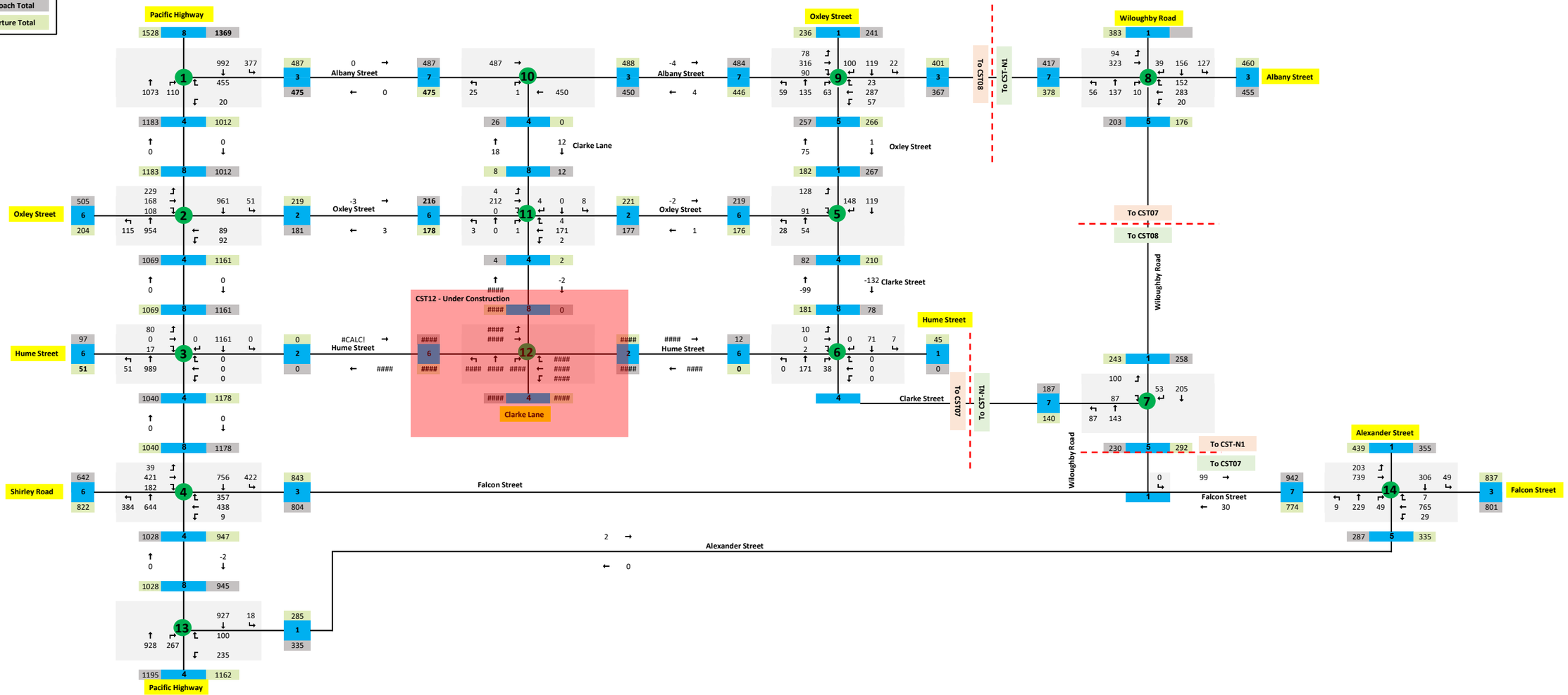
CST-N1 - 4:45 PM (Thu)

CST07 - 6:30 PM (Fri)

CST08 - 5:00 PM (Wed)

Legend:

- Approach Number
- Approach Total
- Departure Total



Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

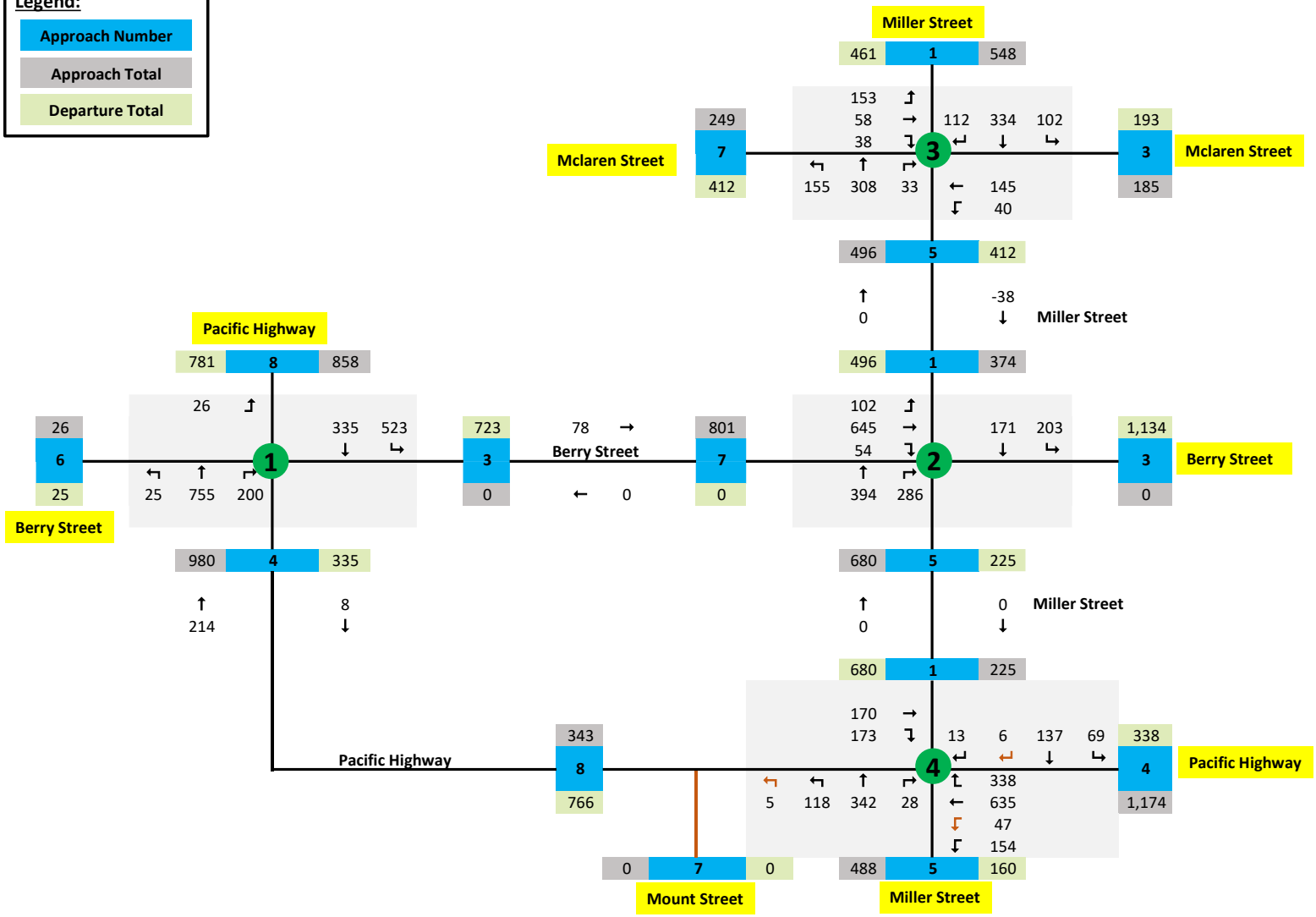
Time Period:

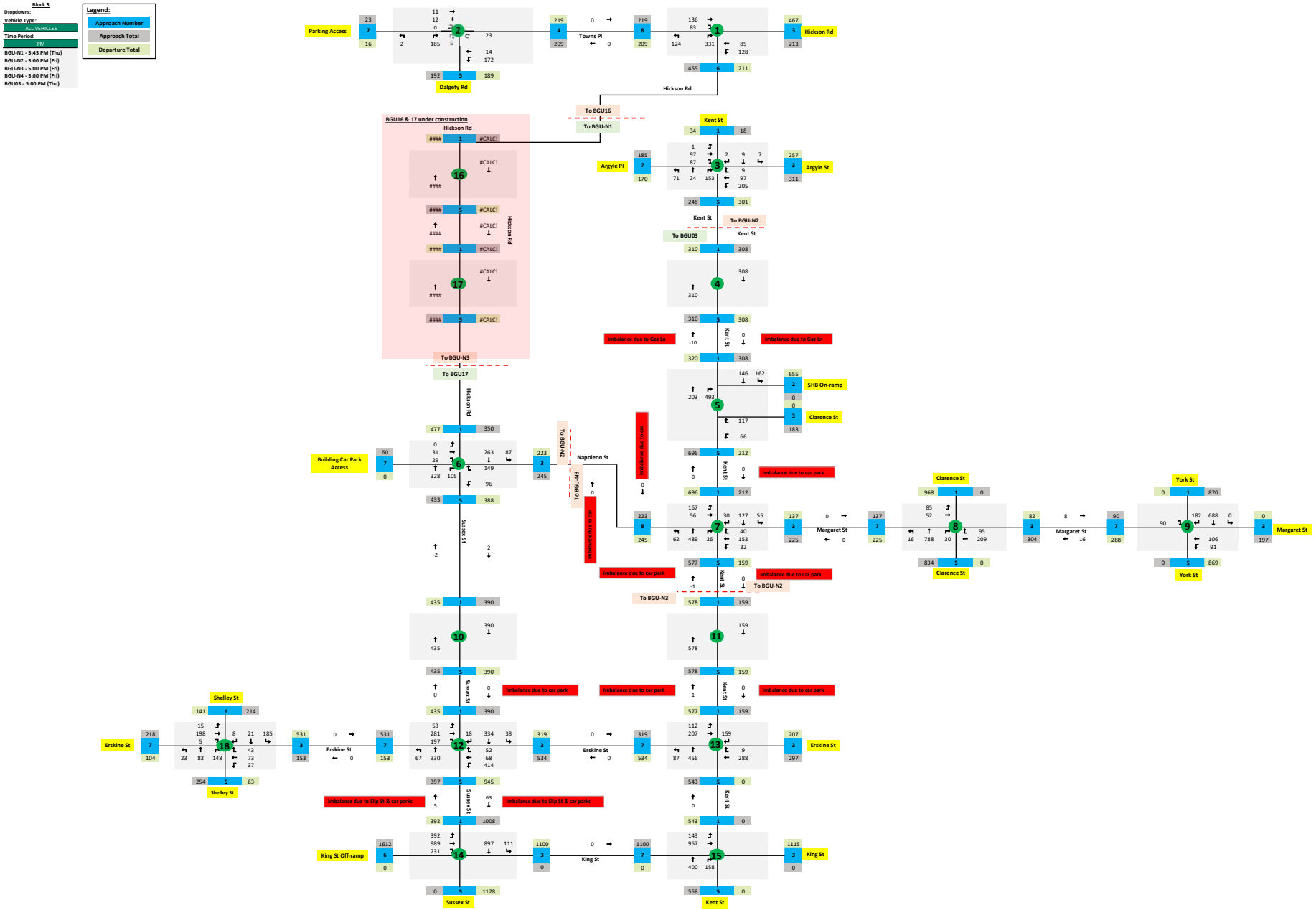
PM

VIC-N1 - 3:00 PM (Fri)

Legend:

- Approach Number
- Approach Total
- Departure Total




Block 3
Dropdowns:
Vehicle Type:
ALL VEHICLES
Time Period:
PM
BGU-N1 - 5:45 PM (Thu)
BGU-N2 - 5:00 PM (Fri)
BGU-N3 - 5:00 PM (Fri)
BGU-N4 - 5:00 PM (Fri)
BGU03 - 5:00 PM (Thu)
Legend:
Approach Number
Approach Total
Departure Total
Parking Access
Towns Pl
Hickson Rd
Dalgety Rd
To BGU16
To BGU-N1
BGU16 & 17 under construction
Kent St
Argyle Pl
Argyle St
To BGU03
To BGU-N2
Imbalance due to Gas Ln
SHB On-ramp
Clarence St
Building Car Park Access
To BGU-N4
Napoleon St
Imbalance due to car park
Margaret St
York St
To BGU-N3
Sussex St
Shelley St
Erskine St
Imbalance due to Slip St & car parks
King St Off-ramp
King St

Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

Time Period:

PM

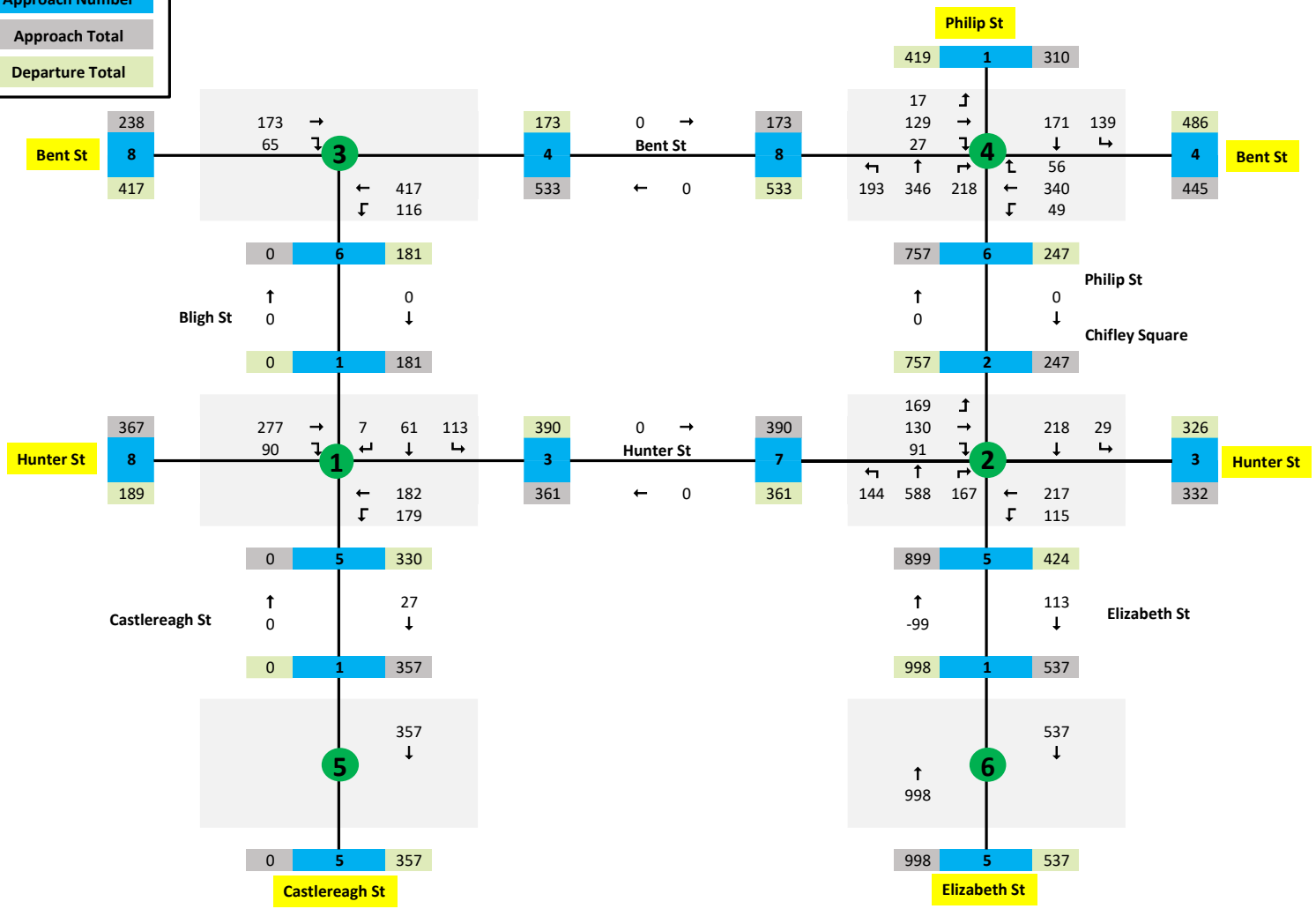
MPL-N1 - 5:15 PM (Wed)

MPL05 - 5:45 PM (Wed)

MPL06 - 5:15 PM (Wed)

Legend:

- Approach Number
- Approach Total
- Departure Total



Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

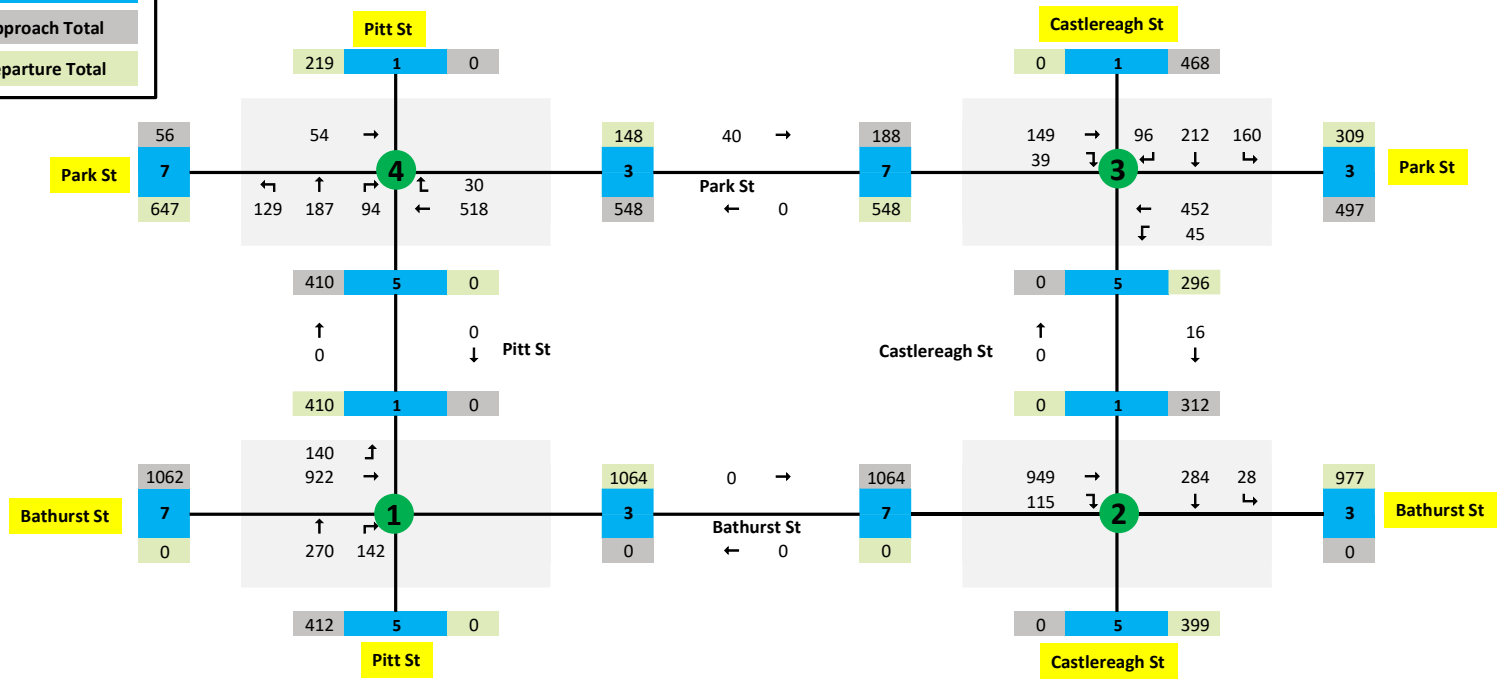
Time Period:

PM

PIT-N1 - 4:45 PM (Wed)

Legend:

- Approach Number
- Approach Total
- Departure Total



Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

Time Period:

PM

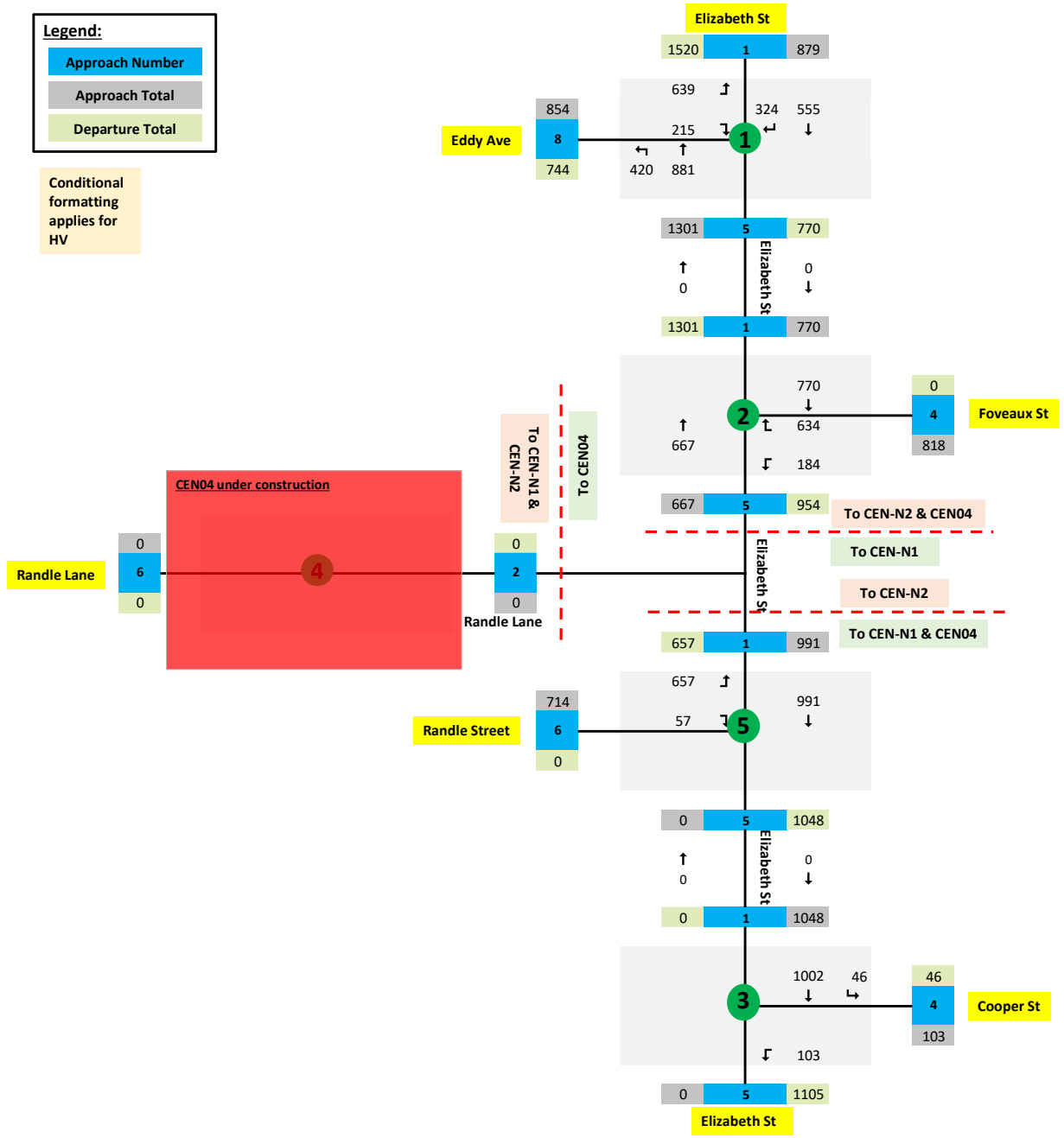
CEN-N1 - 5:00 PM (Thu)

CEN-N2 - 5:00 PM (Wed)

Legend:

- Approach Number
- Approach Total
- Departure Total

Conditional formatting applies for HV



Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

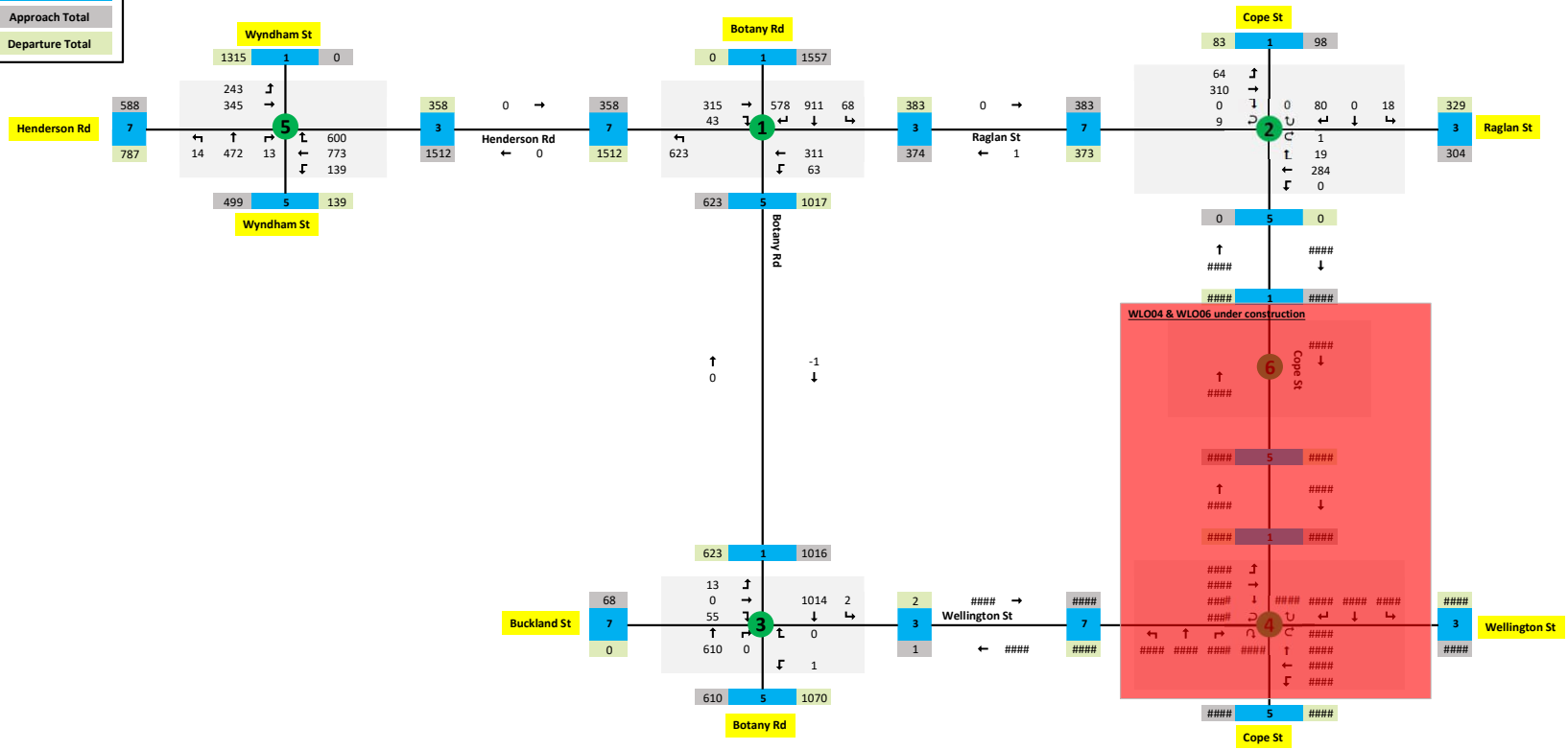
Time Period:

PM

WLO-N1 - 5:00 PM (Wed)

Legend:

- Approach Number
- Approach Total
- Departure Total



Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

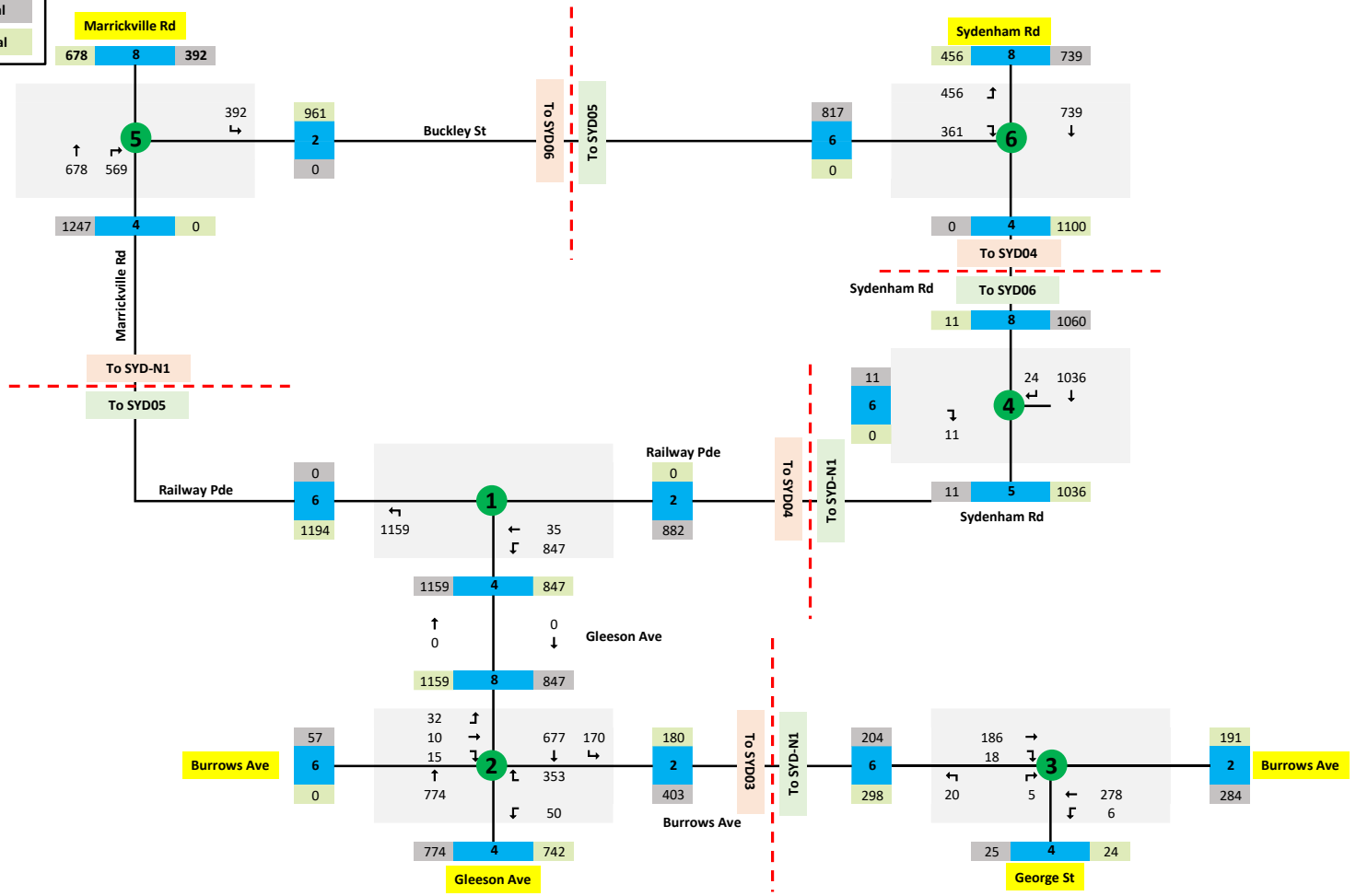
Time Period:

PM

SYD-N1 - 4:45 PM (Thu)
SYD03 - 4:15 PM (Thu)
SYD04 - 3:15 PM (Fri)
SYD05 - 3:15 PM (Mon)
SYD06 - 3:15 PM (Fri)

Legend:

- Approach Number
- Approach Total
- Departure Total



Block 3

Dropdowns:

Vehicle Type:

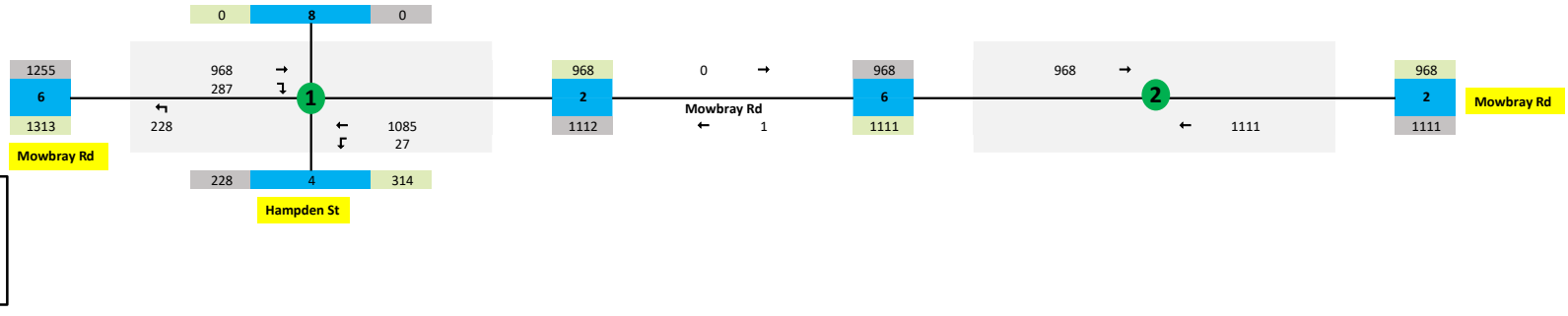
ALL VEHICLES

Time Period:

WEEKEND

CWD01 - 1:00 PM (Sat)

CWD02 - 1:00 PM (Sat)



Legend:

- Approach Number
- Approach Total
- Departure Total

Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

Time Period:

WEEKEND

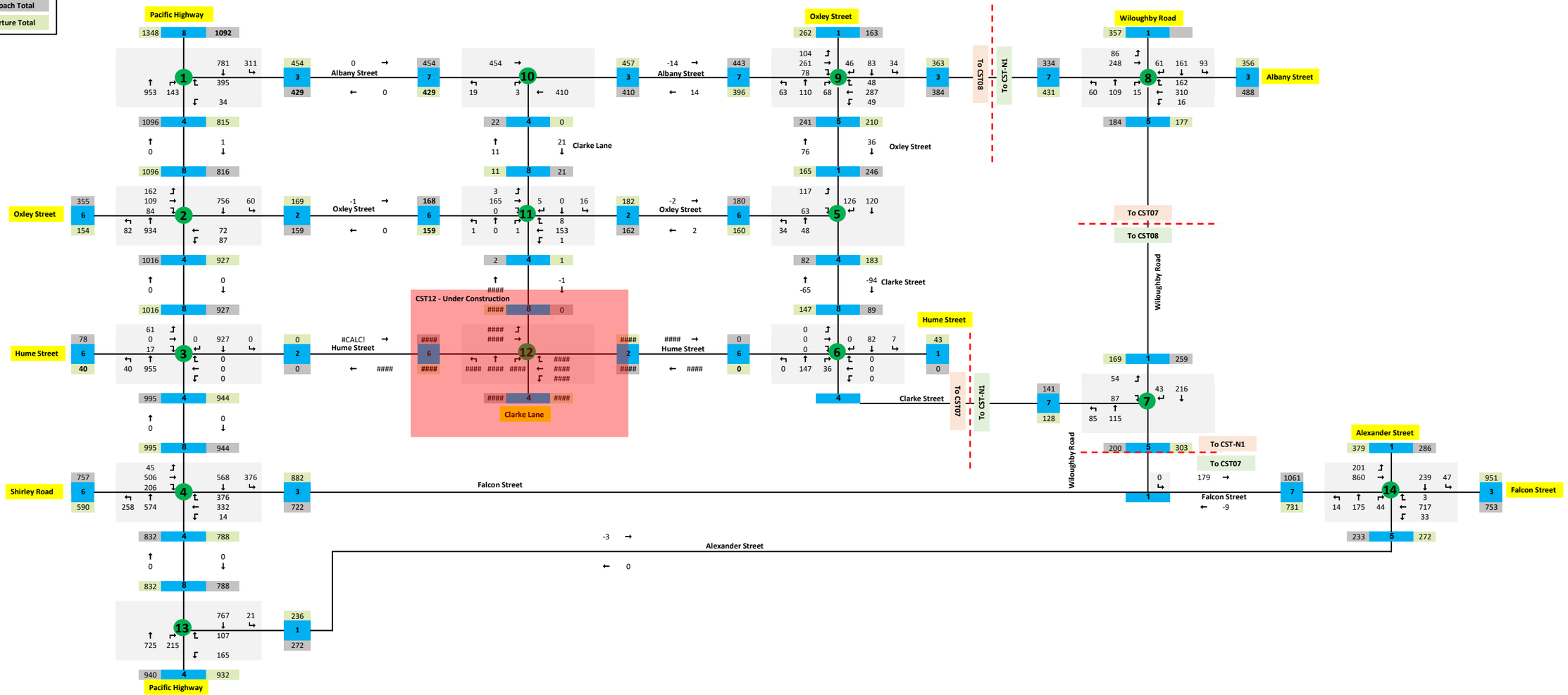
CST-N1 - 11:30 AM (Sat)

CST07 - 6:15 PM (Sat)

CST08 - 12:15 PM (Sat)

Legend:

- Approach Number
- Approach Total
- Departure Total



Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

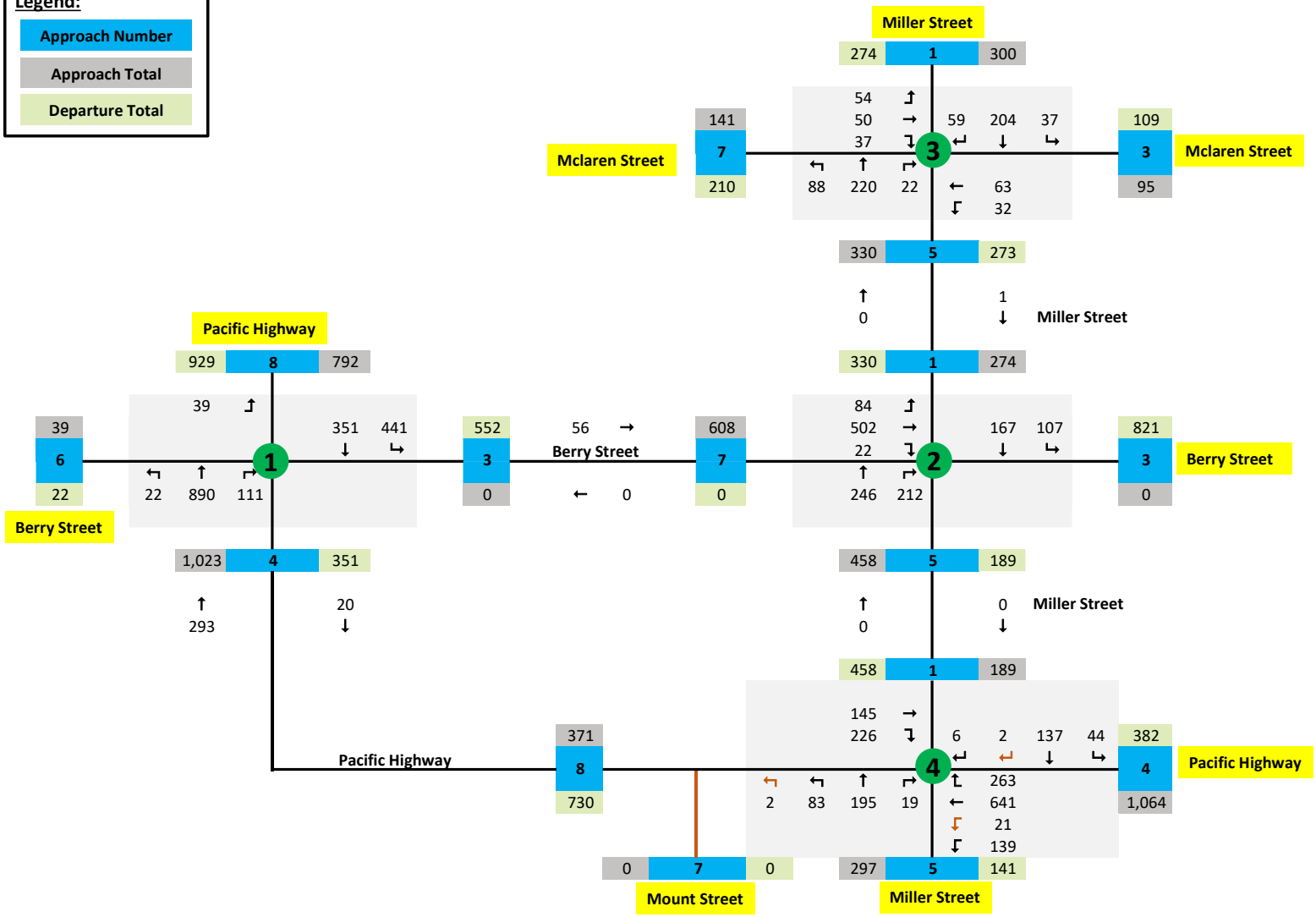
Time Period:

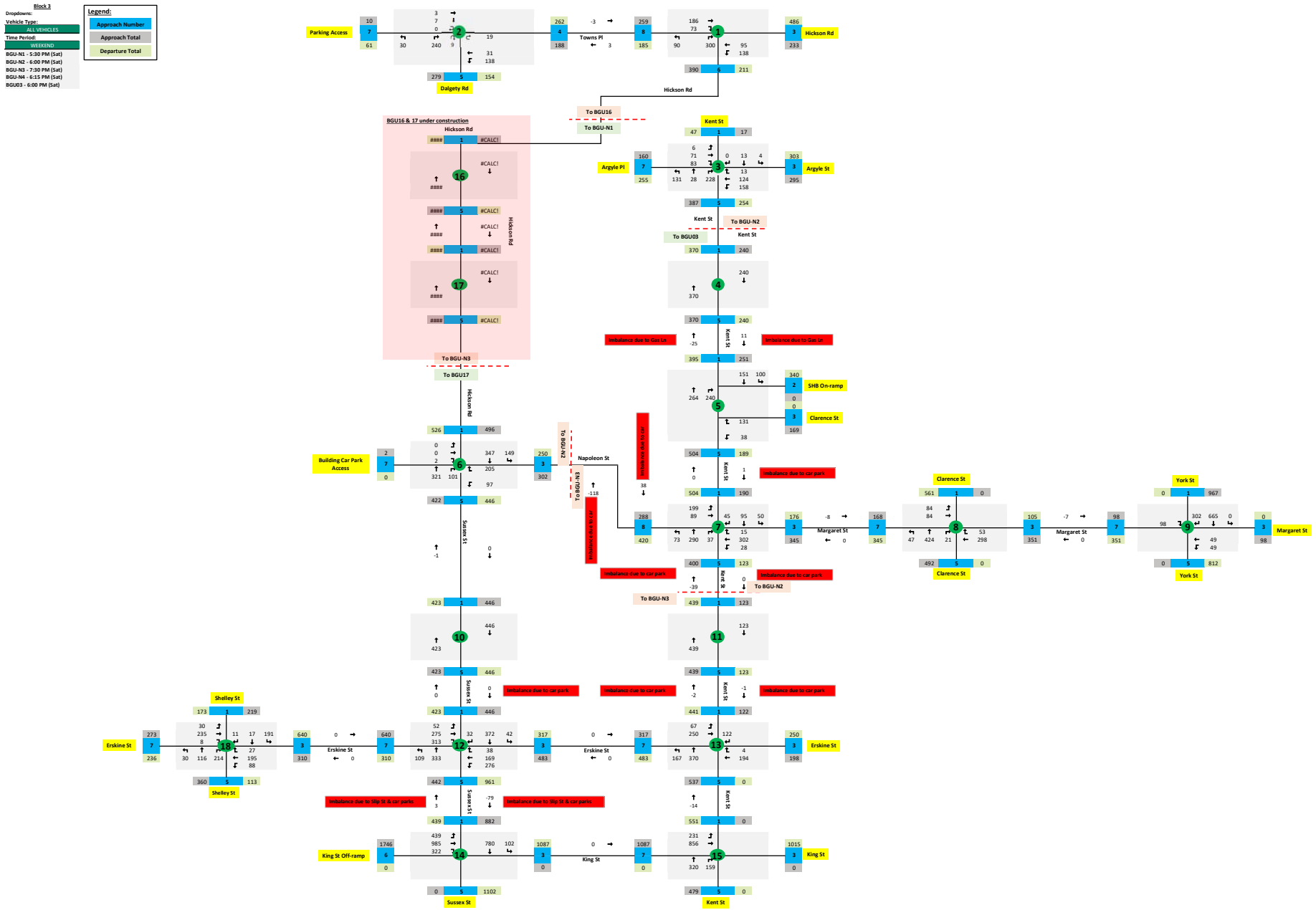
WEEKEND

VIC-N1 - 11:45 AM (Sat)

Legend:

- Approach Number
- Approach Total
- Departure Total




Block 3
Dropdowns:
Vehicle Type:
ALL VEHICLES
Time Period:
WEEKEND
BGU-N1 - 5:30 PM (Sat)
BGU-N2 - 6:00 PM (Sat)
BGU-N3 - 7:30 PM (Sat)
BGU-N4 - 6:15 PM (Sat)
BGU03 - 6:00 PM (Sat)
Legend:
Approach Number
Approach Total
Departure Total
Parking Access
Dalgety Rd
Towns Pl
Hickson Rd
To BGU16
To BGU-N1
BGU16 & 17 under construction
To BGU-N3
To BGU17
Argyle Pl
Argyle St
Kent St
To BGU03
To BGU-N2
Imbalance due to Gas Ln
SHB On-ramp
Clarence St
Building Car Park Access
Napoleon St
To BGU-N4
Imbalance due to car
Imbalance due to car park
Margaret St
York St
Sussex St
Shelley St
Erskine St
Imbalance due to Slip St & car parks
King St Off-ramp
King St

Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

Time Period:

WEEKEND

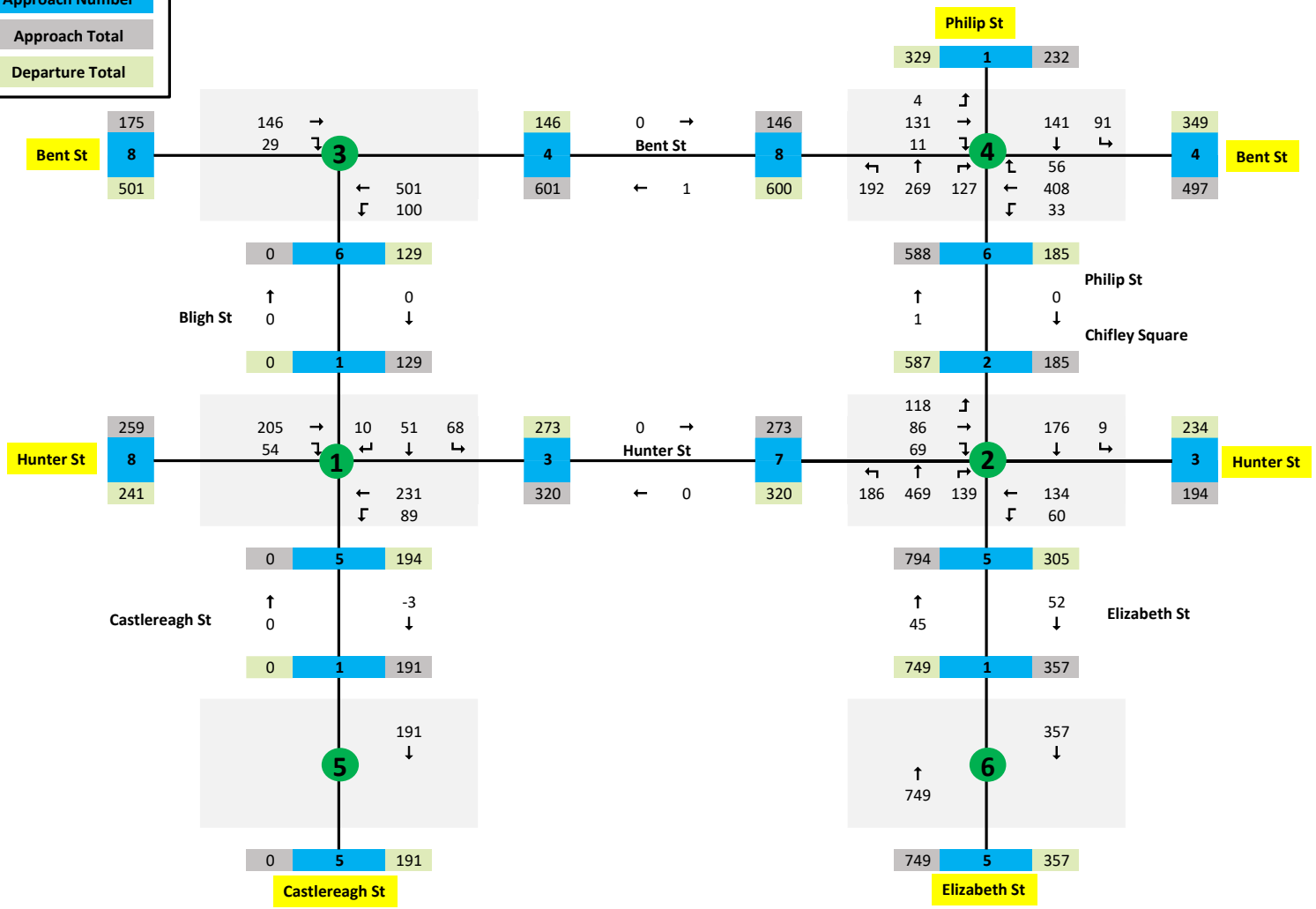
MPL-N1 - 6:00 PM (Sat)

MPL05 - 5:45 PM (Sat)

MPL06 - 5:15 PM (Sat)

Legend:

- Approach Number
- Approach Total
- Departure Total



Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

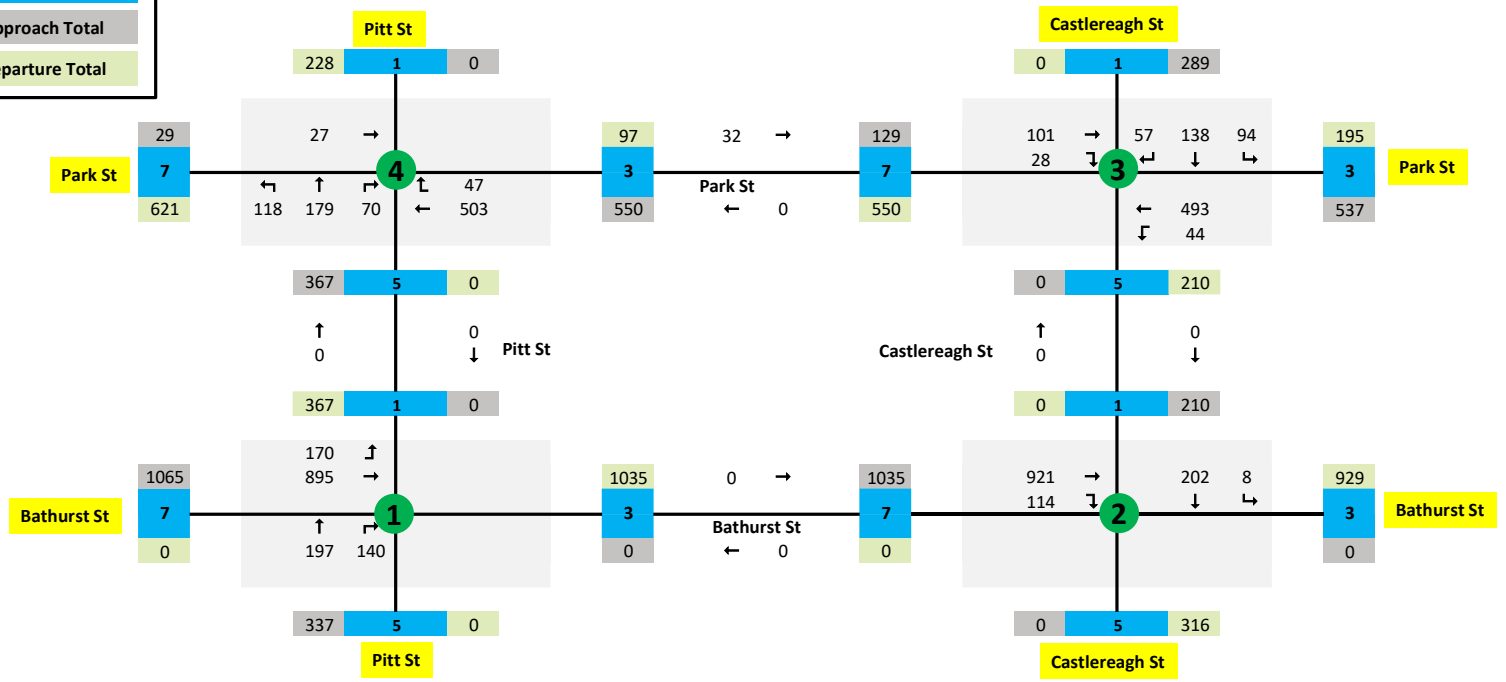
Time Period:

WEEKEND

PIT-N1 - 5:15 PM (Sat)

Legend:

- Approach Number
- Approach Total
- Departure Total



Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

Time Period:

WEEKEND

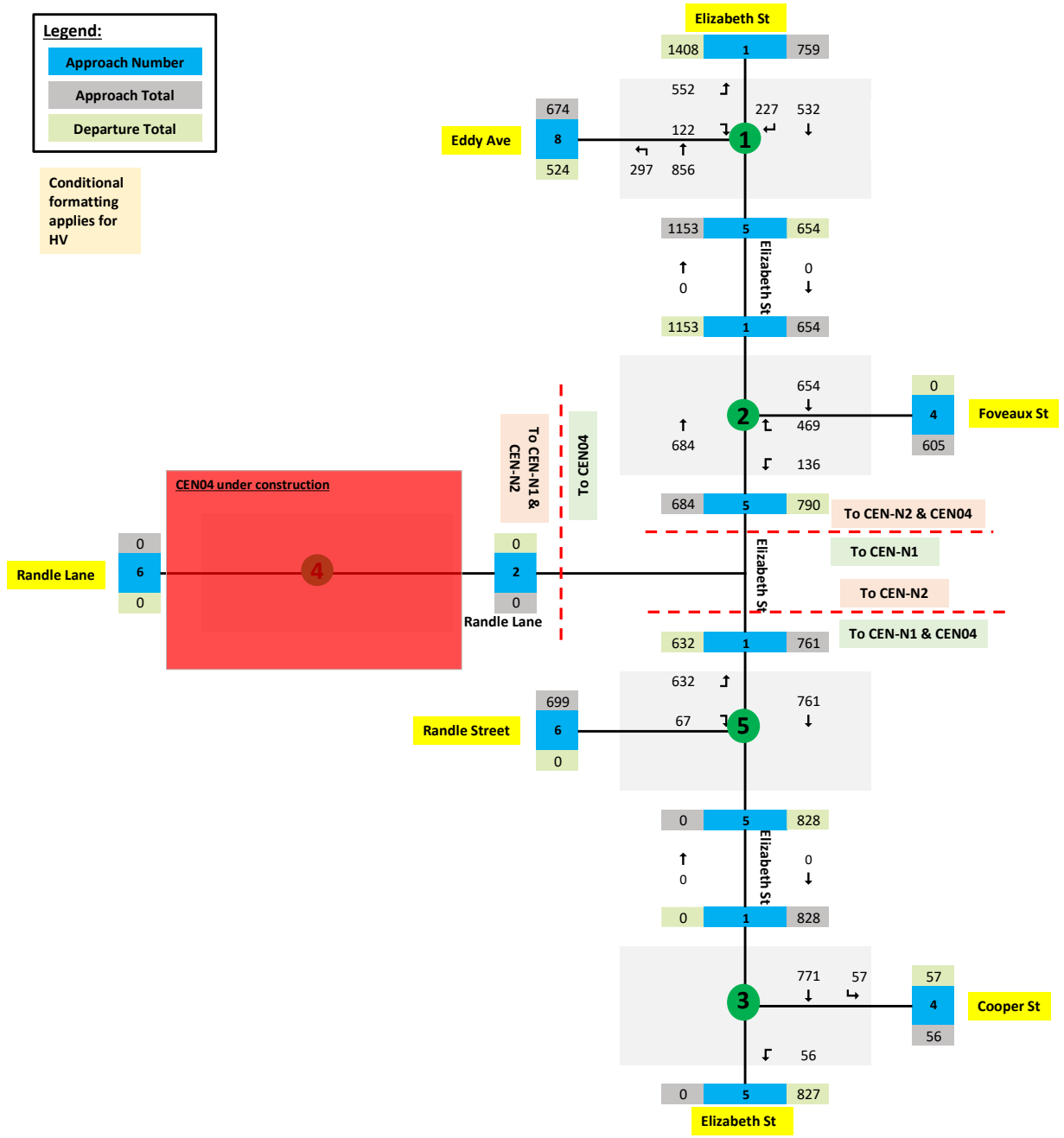
CEN-N1 - 1:45 PM (Sat)

CEN-N2 - 5:45 PM (Sat)

Legend:

- Approach Number
- Approach Total
- Departure Total

Conditional formatting applies for HV



Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

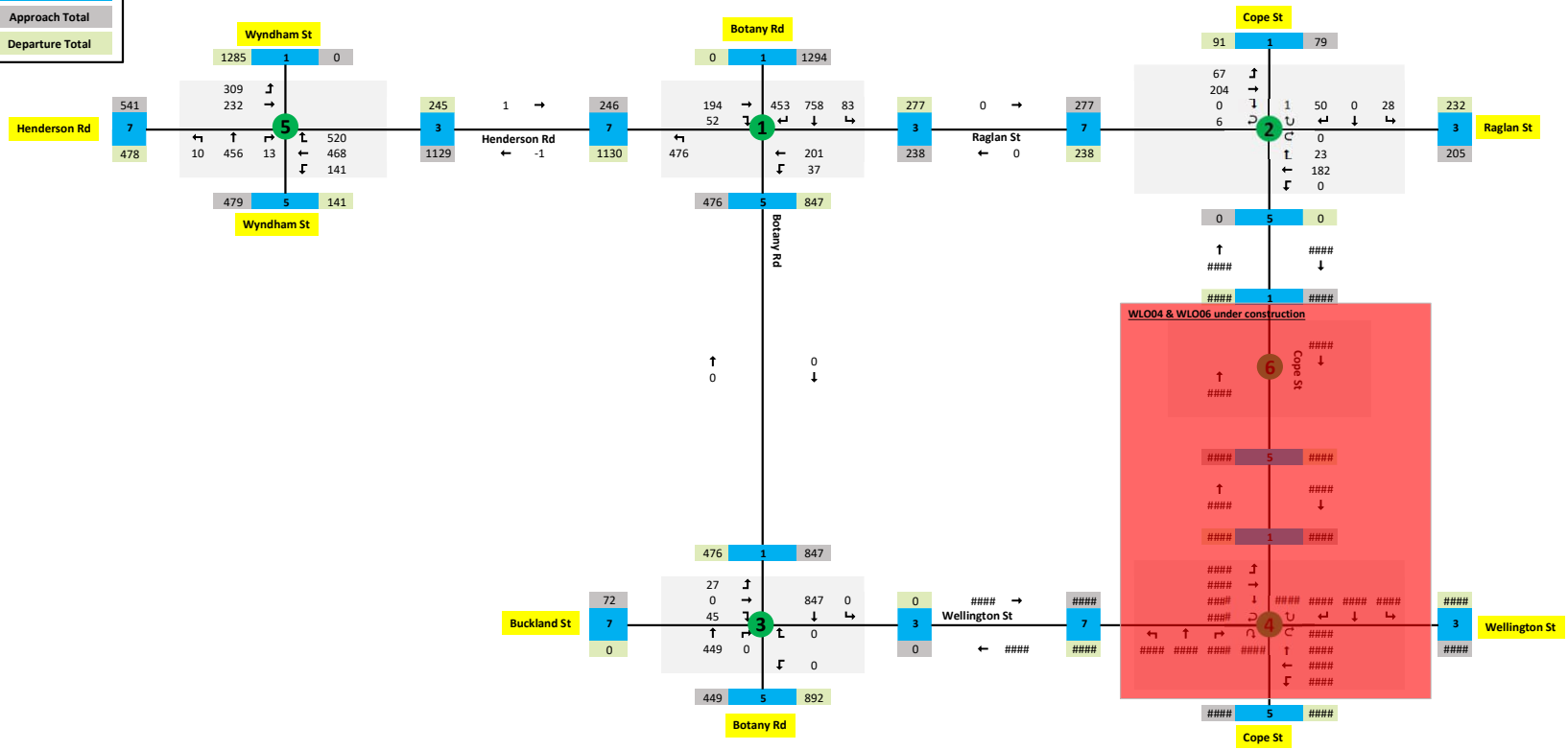
Time Period:

WEEKEND

WLO-N1 - 12:45 PM (Sat)

Legend:

- Approach Number
- Approach Total
- Departure Total



Block 3

Dropdowns:

Vehicle Type:

ALL VEHICLES

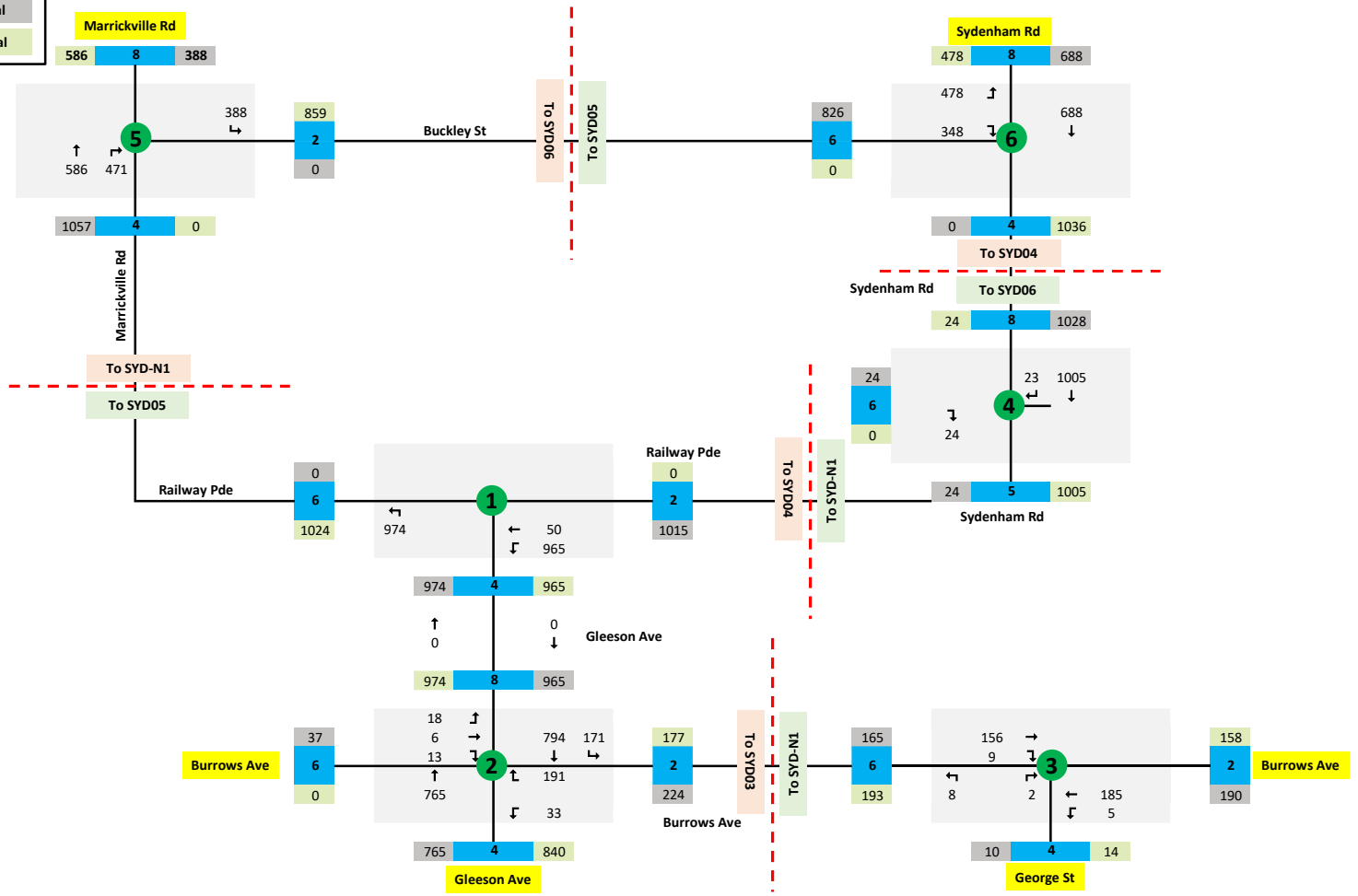
Time Period:

WEEKEND

SYD-N1 - 11:30 AM (Sat)
SYD03 - 11:30 AM (Sat)
SYD04 - 11:00 AM (Sat)
SYD05 - 11:45 AM (Sat)
SYD06 - 11:45 AM (Sat)

Legend:

- Approach Number
- Approach Total
- Departure Total



Appendix D

Traffic monitoring – Station overview

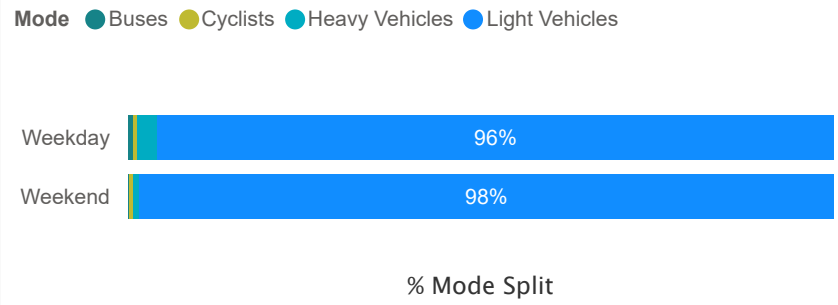
Appendix D Traffic monitoring – Station overview

Station Report

> **Chatswood Station** **2** **Intersections**

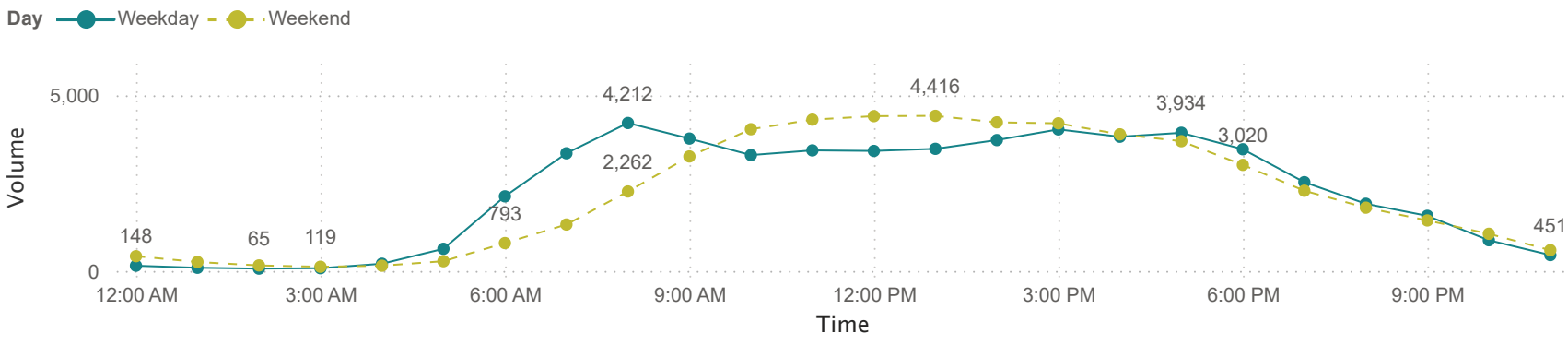
Map

Total Mode Split

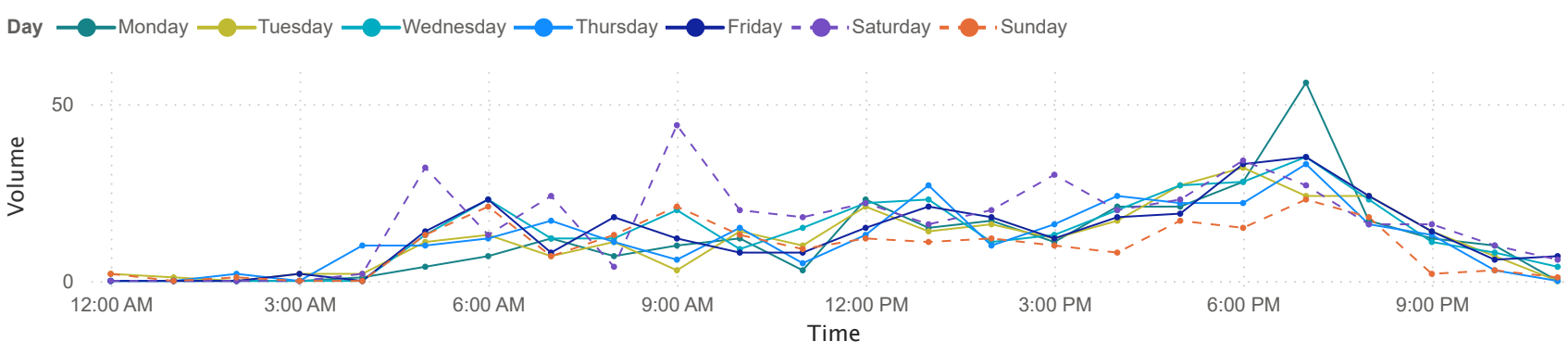


Day	Buses	Cyclists	Heavy Vehicles	Light Vehicles
Weekday	1%	1%	3%	96%
Weekend	0%	1%	1%	98%

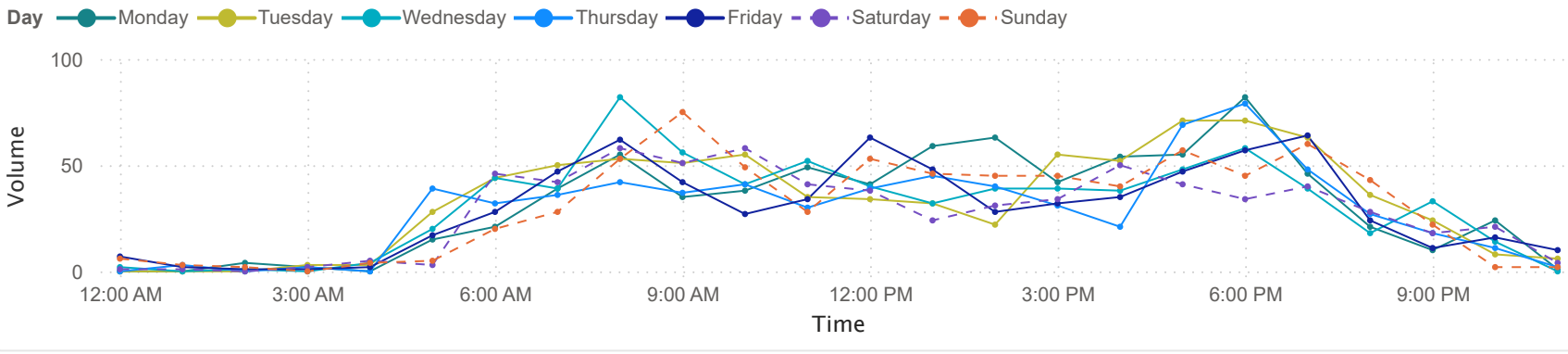
Average daily vehicles for weekday and weekend across the station



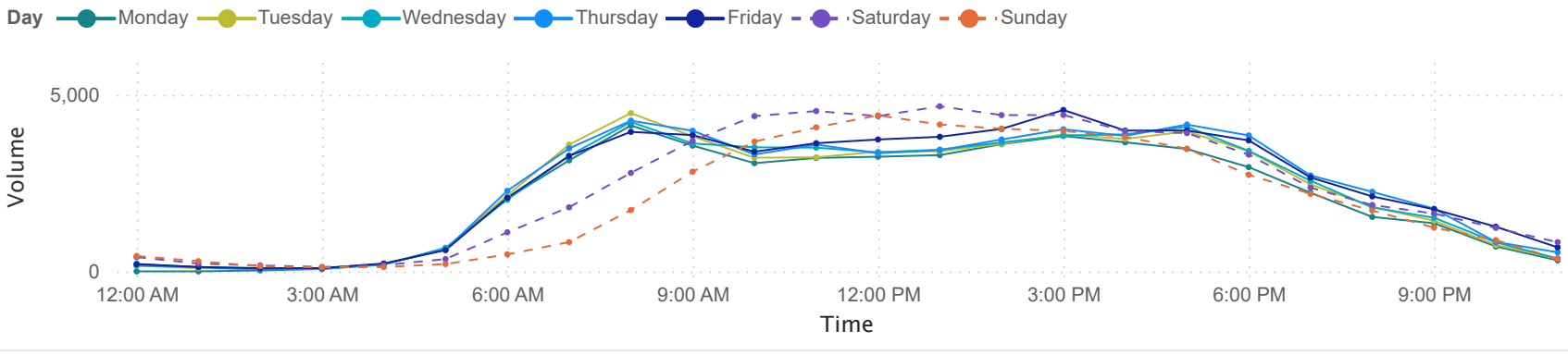
Cyclists volumes



Pedestrian volumes



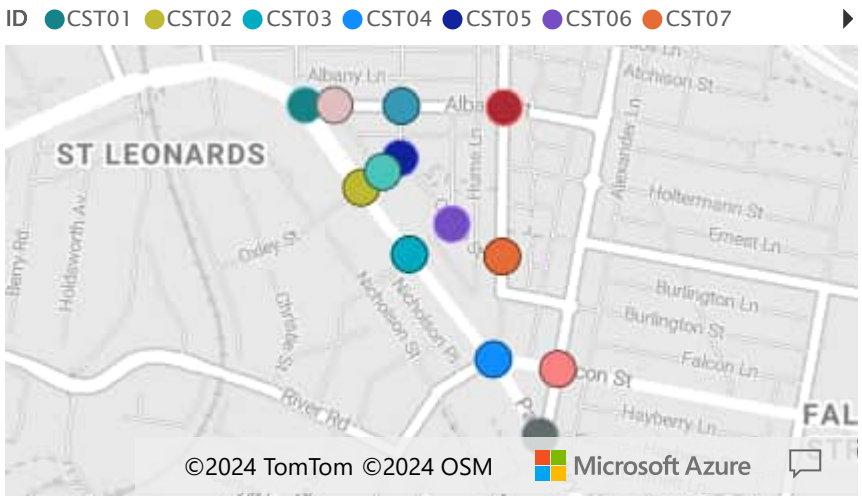
Vehicle volumes



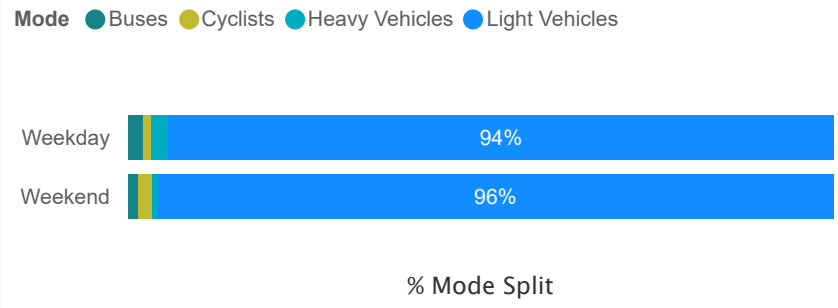
Station Report

> **Crows Nest Station** | **13** | **Intersections**

Map

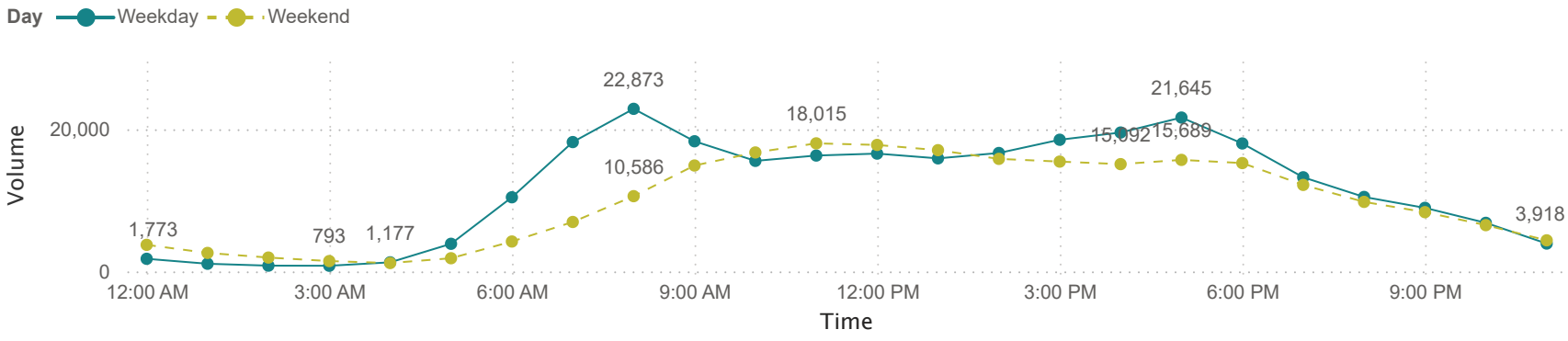


Total Mode Split

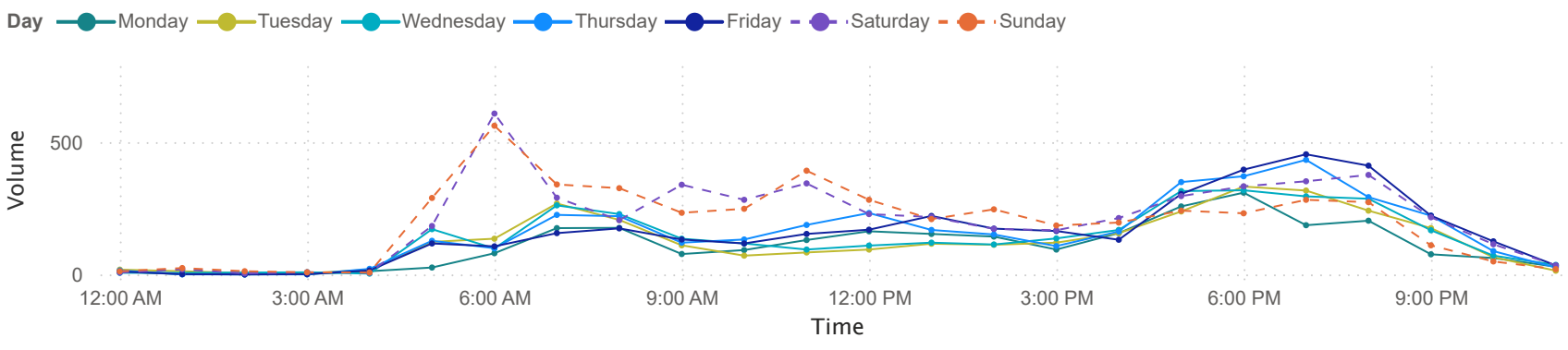


Day	Buses	Cyclists	Heavy Vehicles	Light Vehicles
Weekday	2%	1%	2%	94%
Weekend	1%	2%	1%	96%

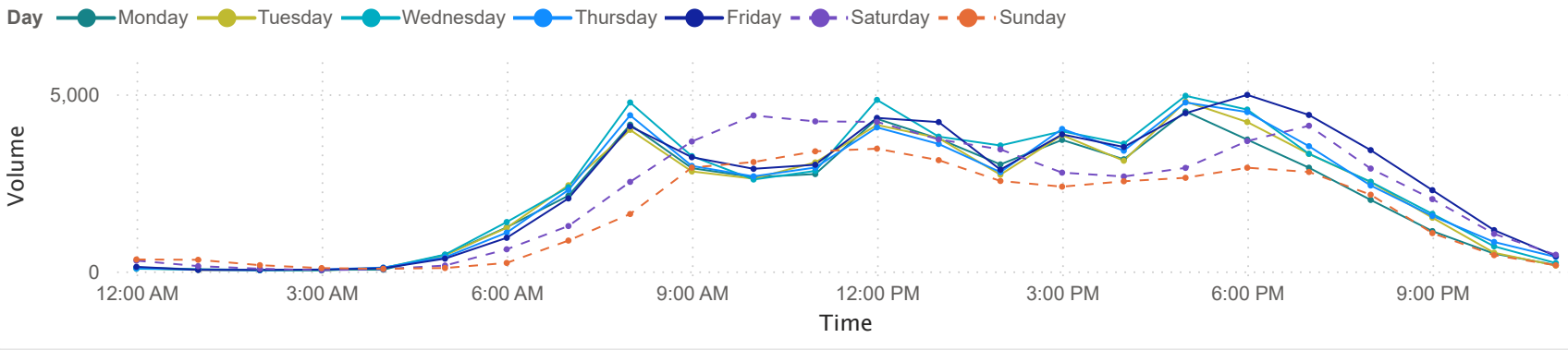
Average daily vehicles for weekday and weekend across the station



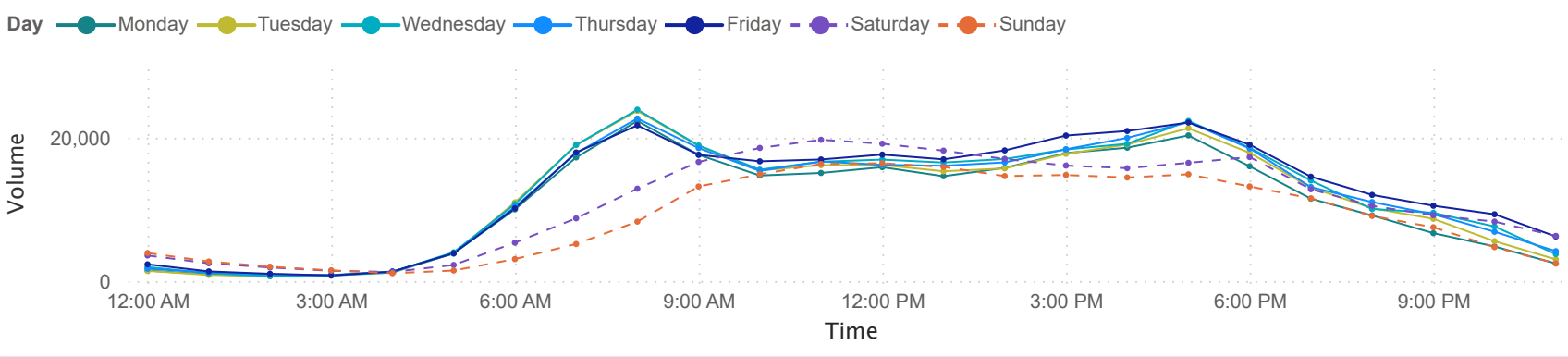
Cyclists volumes



Pedestrian volumes



Vehicle volumes

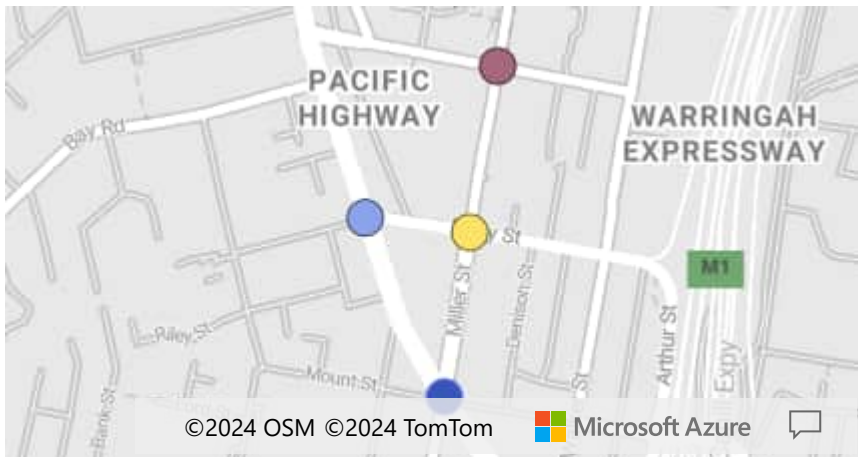


Station Report

> **Victoria Cross Station** | **4** | **Intersections**

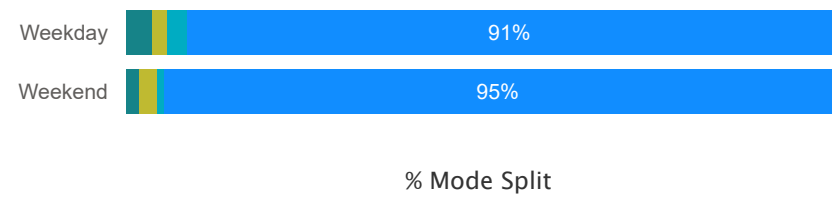
Map

ID VIC01 VIC02 VIC03 VIC04



Total Mode Split

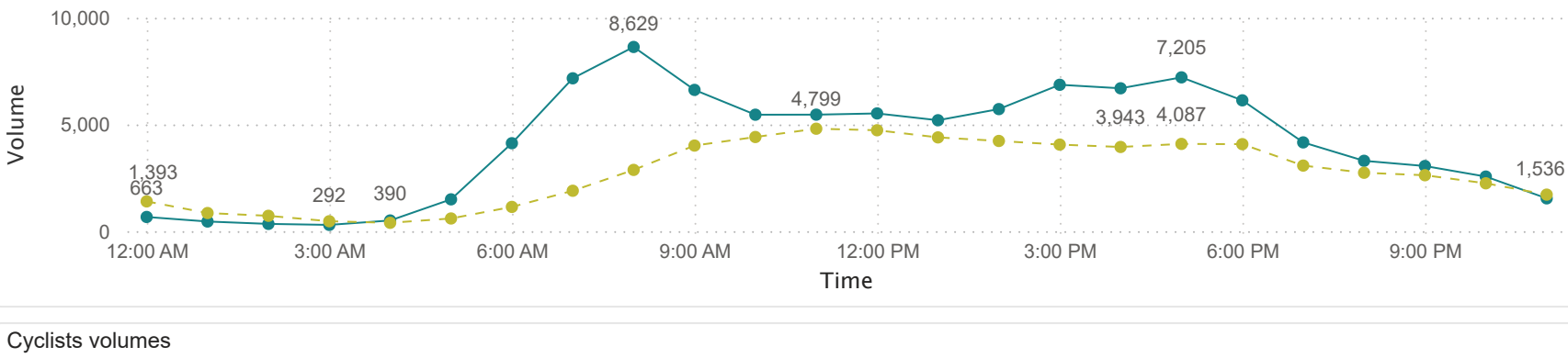
Mode Buses Cyclists Heavy Vehicles Light Vehicles



Day	Buses	Cyclists	Heavy Vehicles	Light Vehicles
Weekday	4%	2%	3%	91%
Weekend	2%	3%	1%	95%

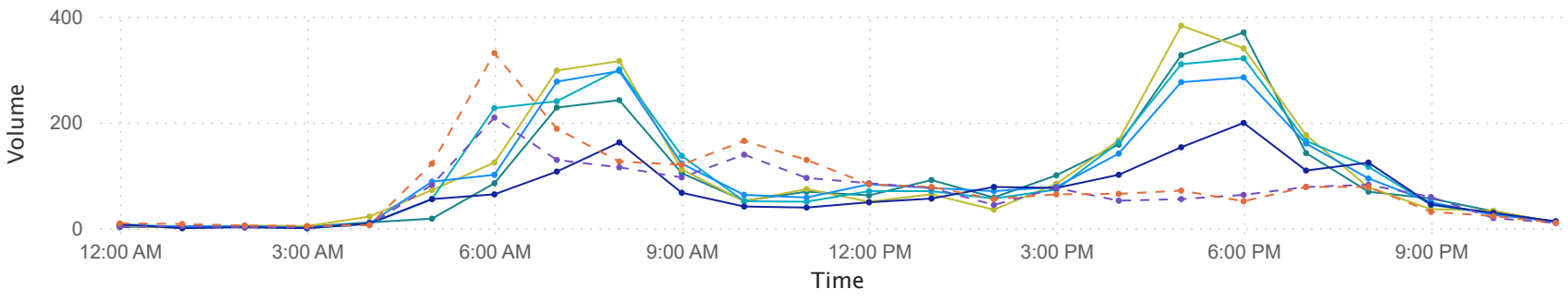
Average daily vehicles for weekday and weekend across the station

Day Weekday Weekend



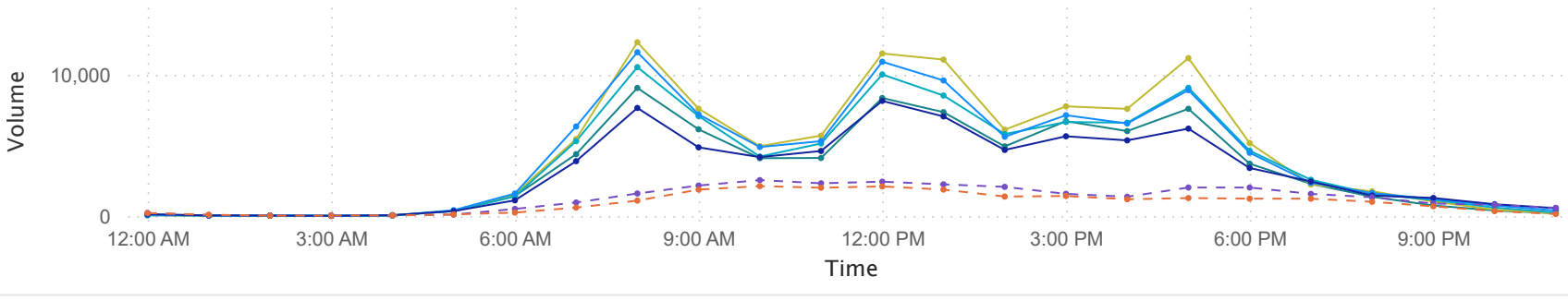
Cyclists volumes

Day Monday Tuesday Wednesday Thursday Friday Saturday Sunday



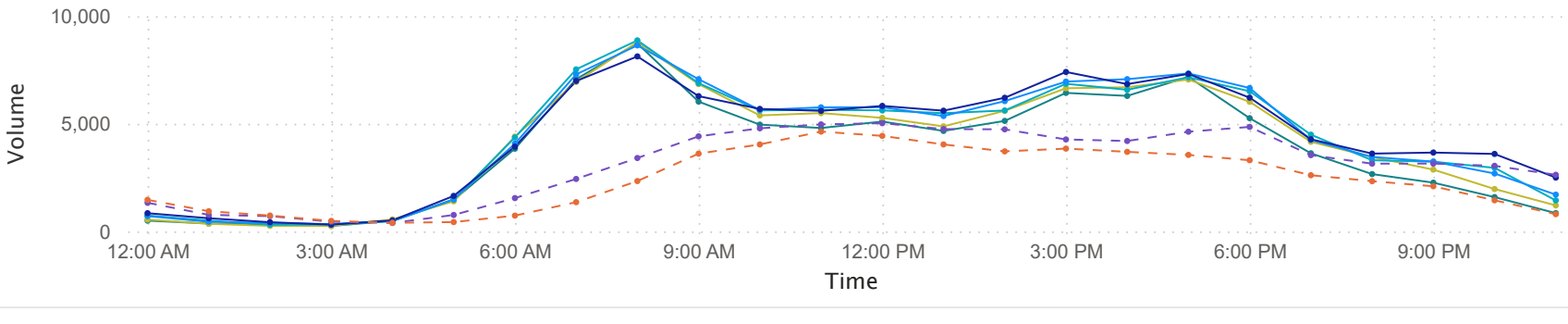
Pedestrian volumes

Day Monday Tuesday Wednesday Thursday Friday Saturday Sunday



Vehicle volumes

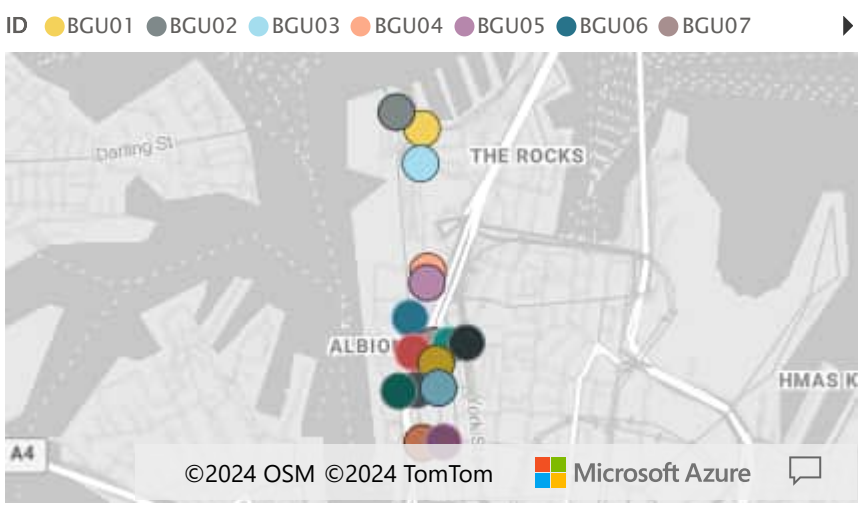
Day Monday Tuesday Wednesday Thursday Friday Saturday Sunday



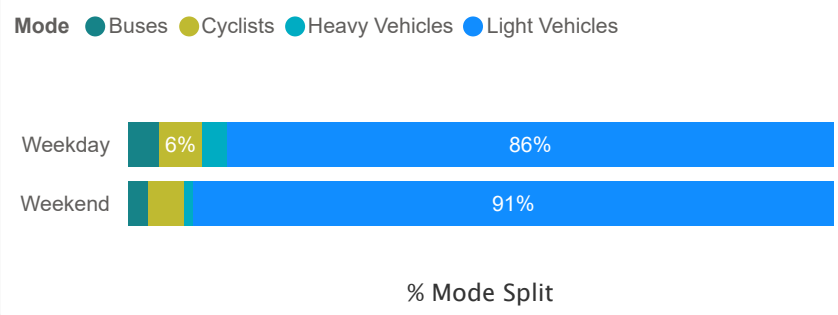
Station Report

> **Barangaroo Station** | **16** | **Intersections**

Map

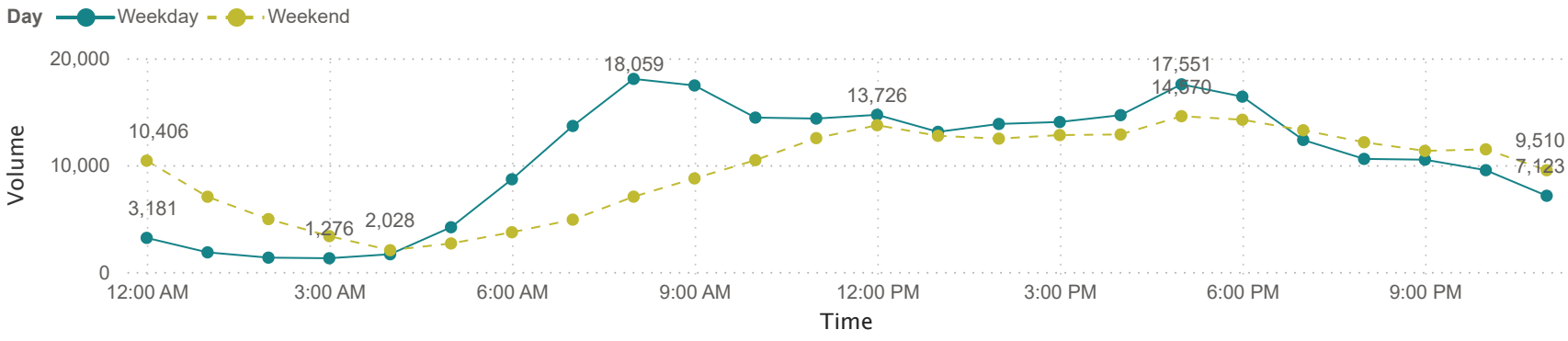


Total Mode Split

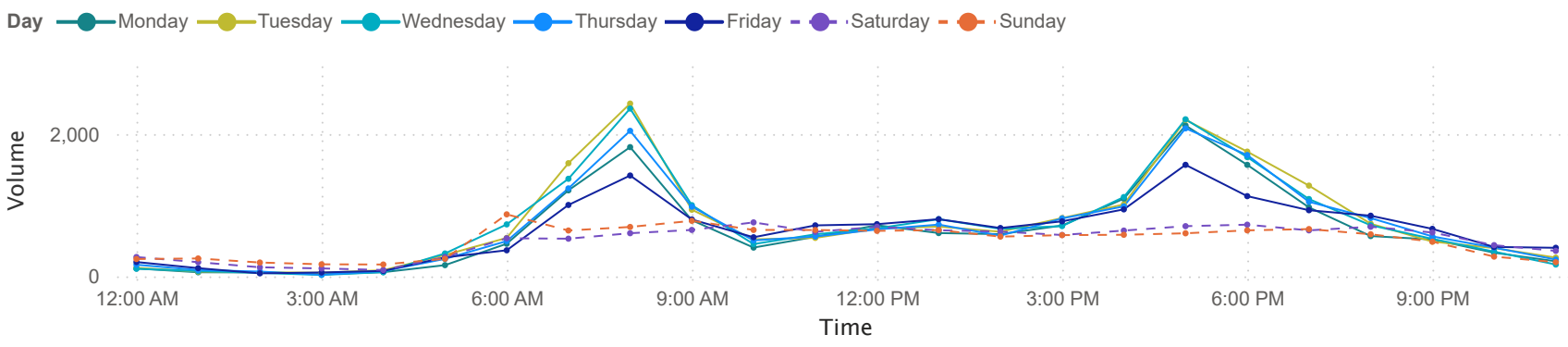


Day	Buses	Cyclists	Heavy Vehicles	Light Vehicles
Weekday	4%	6%	3%	86%
Weekend	3%	5%	1%	91%

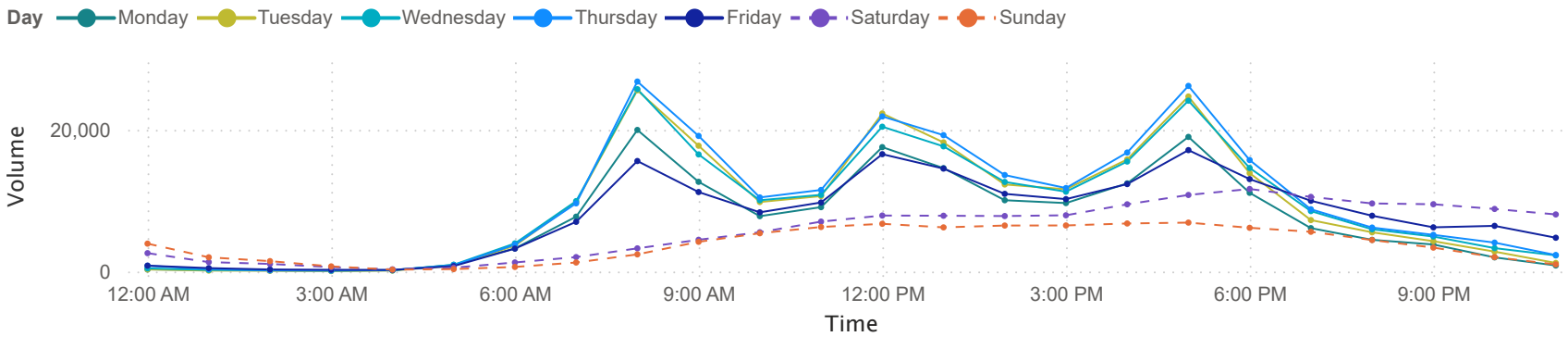
Average daily vehicles for weekday and weekend across the station



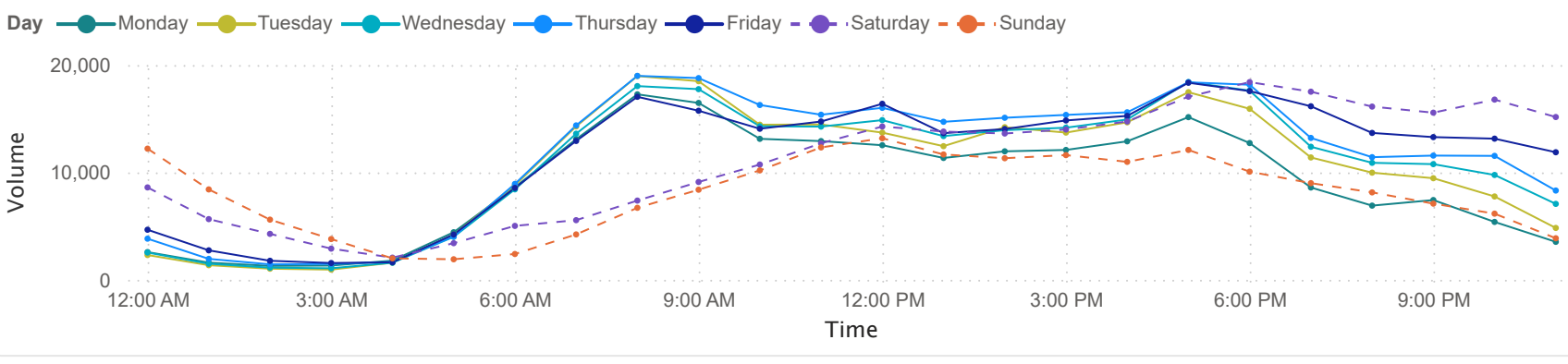
Cyclists volumes



Pedestrian volumes



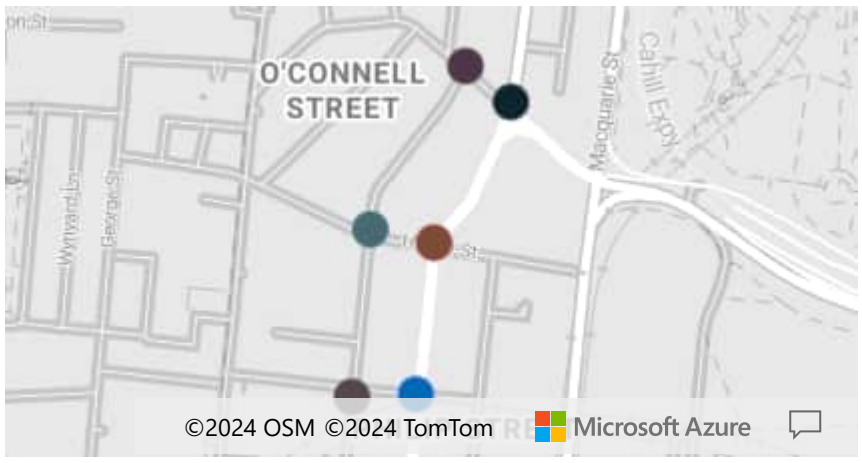
Vehicle volumes



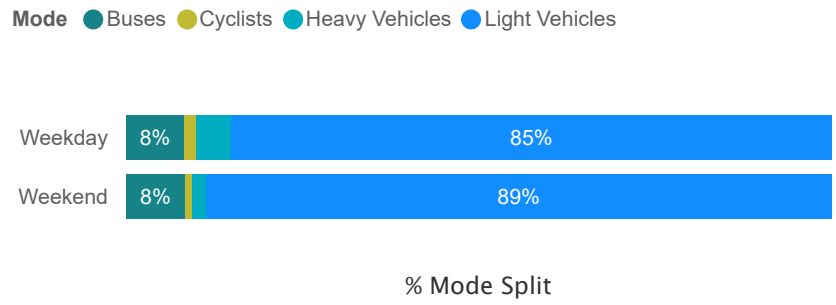
Station Report

> **Martin Place Station** | **6** | **Intersections**

Map

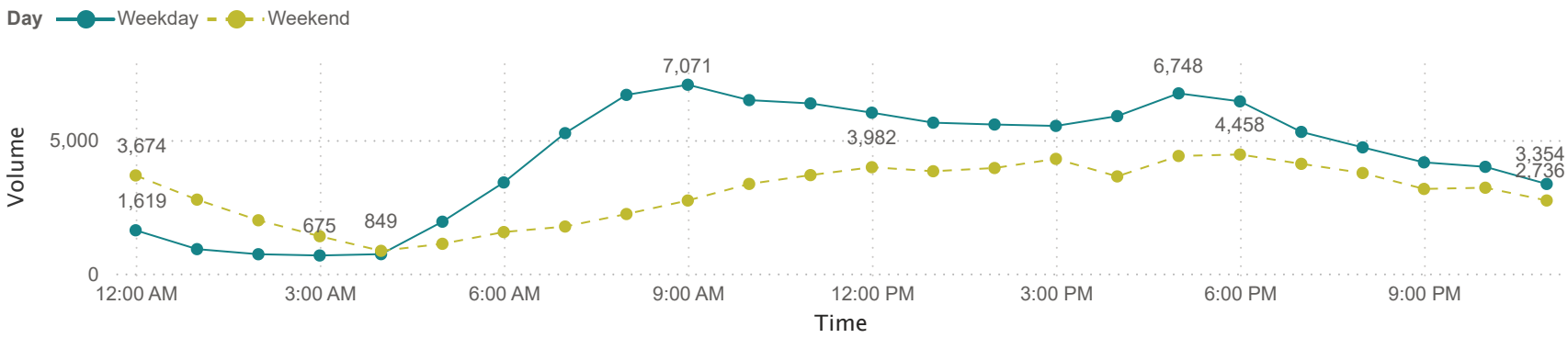


Total Mode Split

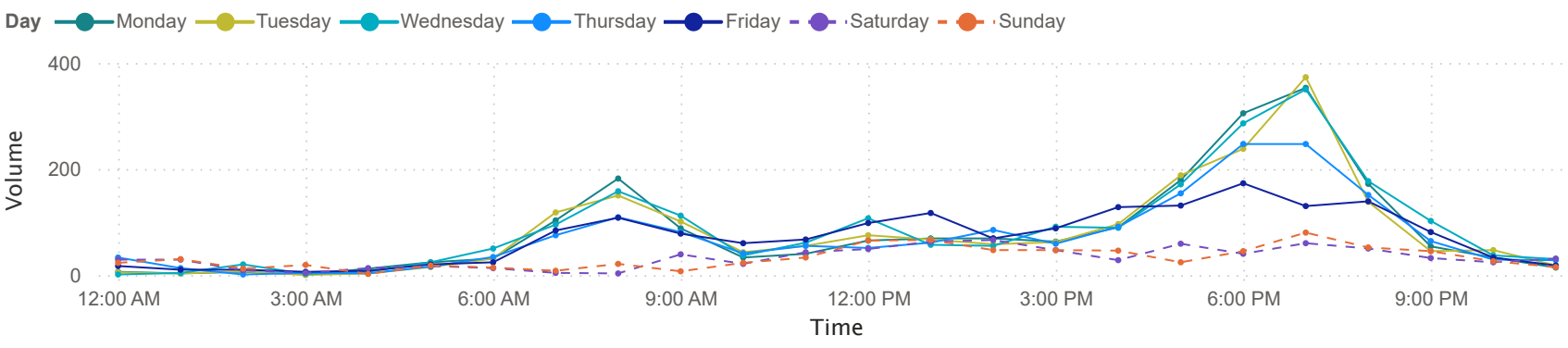


Day	Buses	Cyclists	Heavy Vehicles	Light Vehicles
Weekday	8%	2%	5%	85%
Weekend	8%	1%	2%	89%

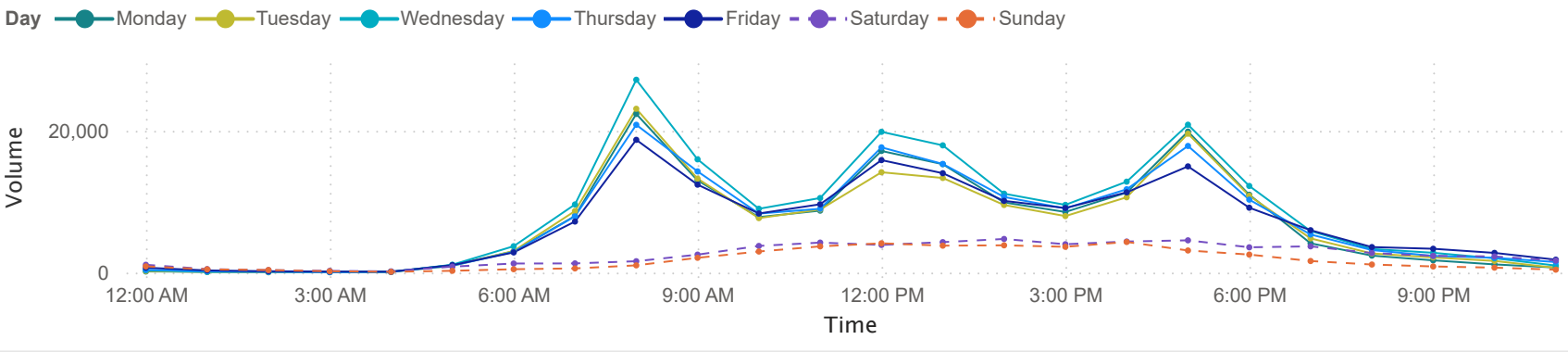
Average daily vehicles for weekday and weekend across the station



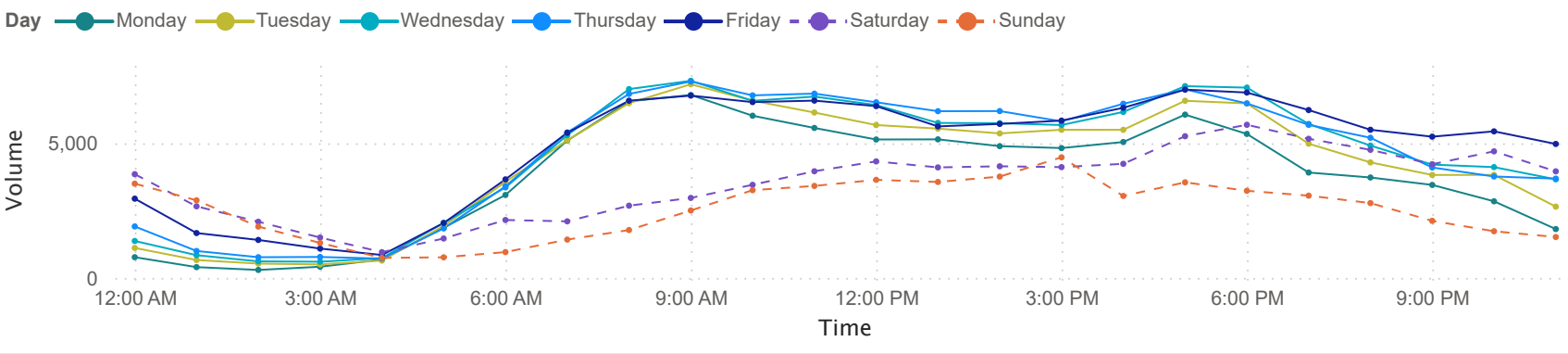
Cyclists volumes



Pedestrian volumes



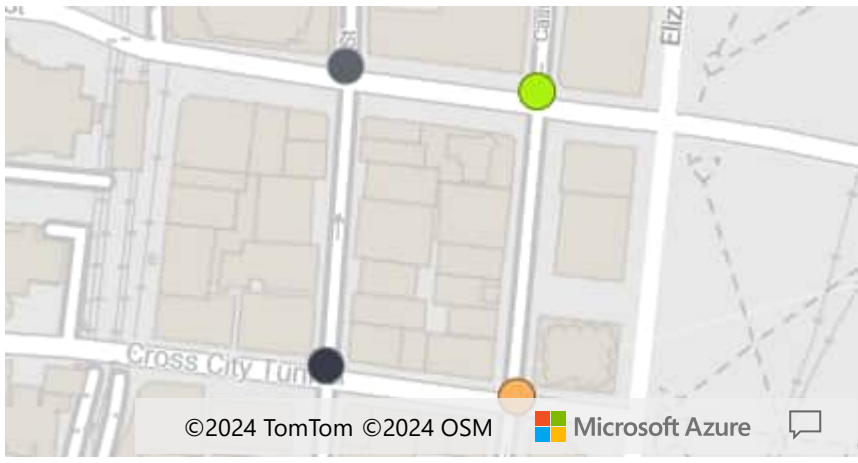
Vehicle volumes



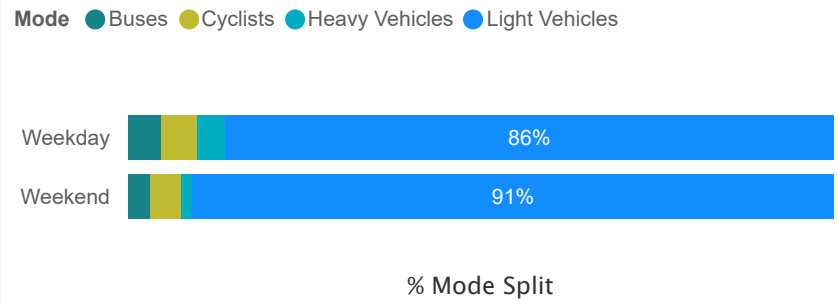
Station Report

> **Pitt Street Station** **4** **Intersections**

Map

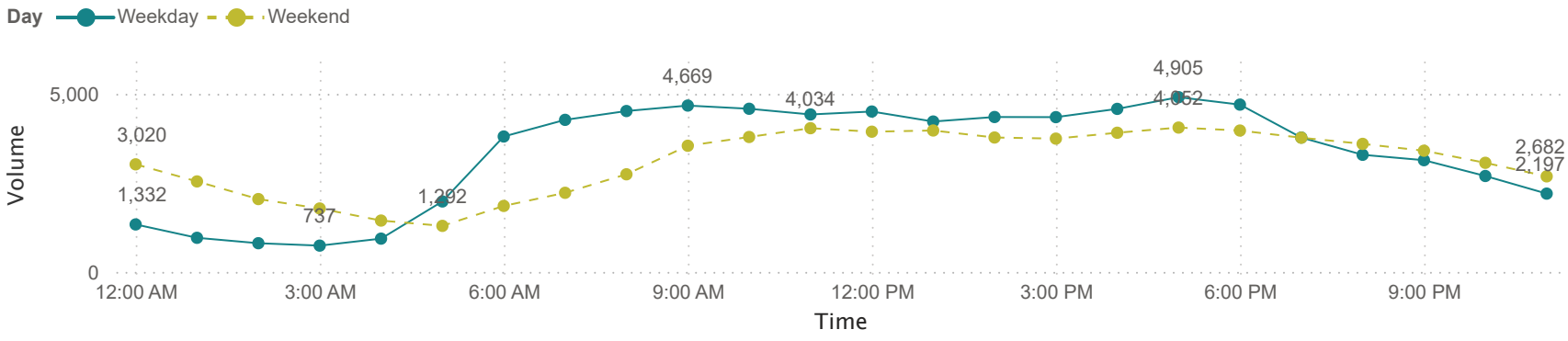


Total Mode Split

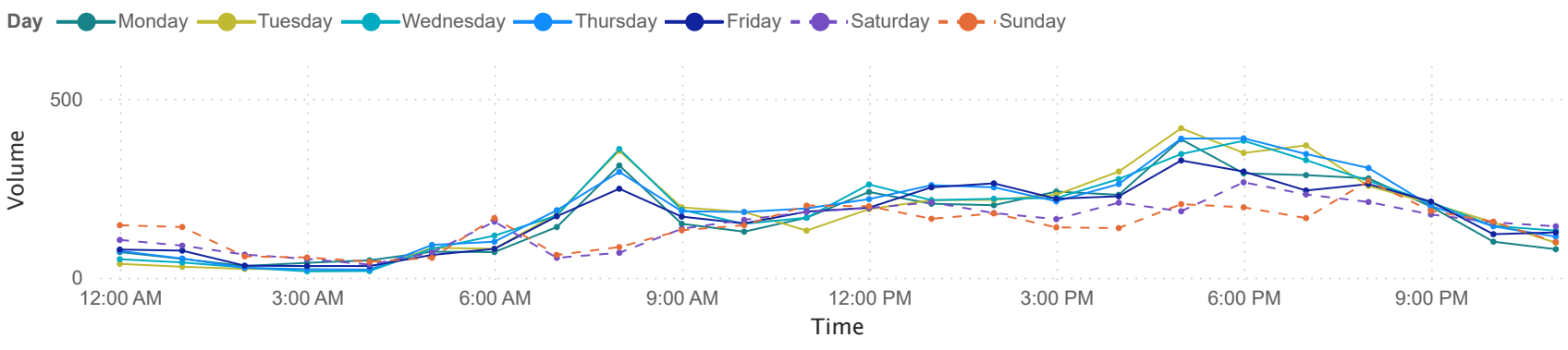


Day	Buses	Cyclists	Heavy Vehicles	Light Vehicles
Weekday	5%	5%	4%	86%
Weekend	3%	4%	2%	91%

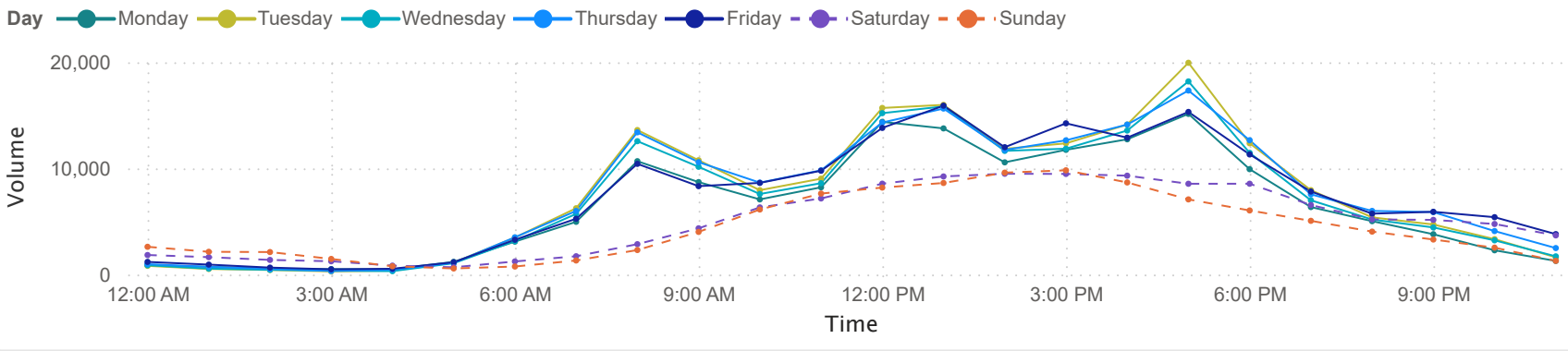
Average daily vehicles for weekday and weekend across the station



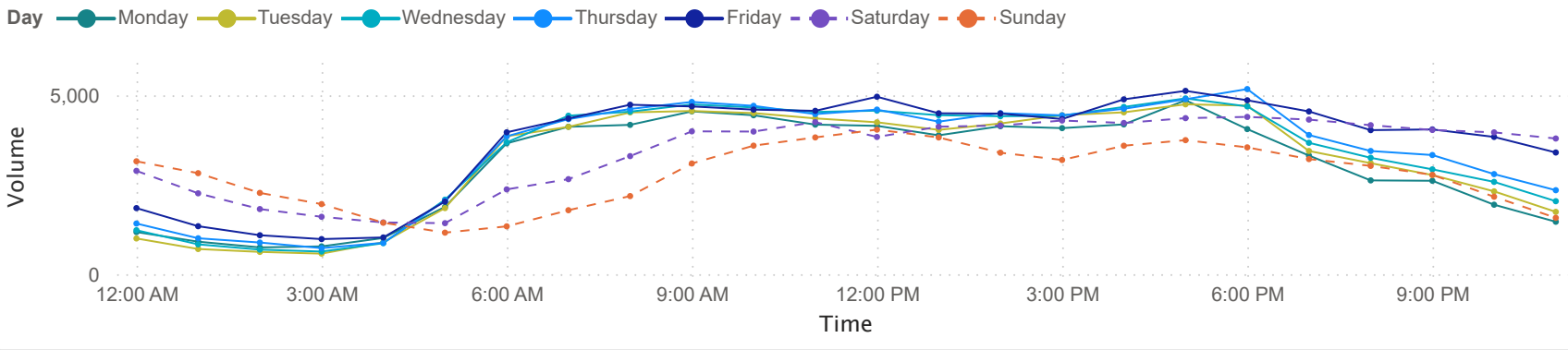
Cyclists volumes



Pedestrian volumes



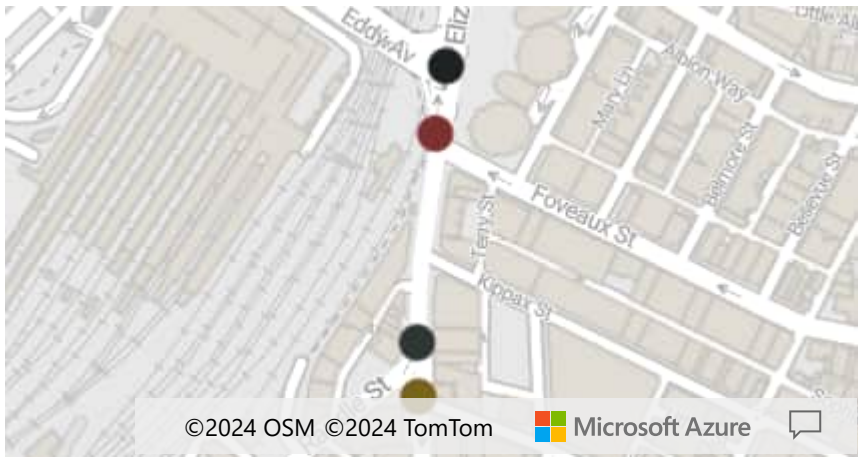
Vehicle volumes



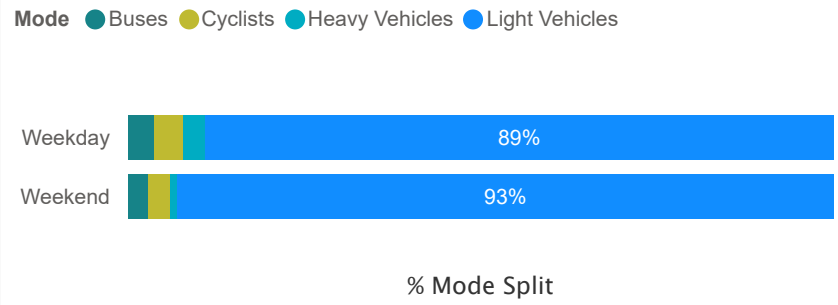
Station Report

> **Central Station** | **4** **Intersections**

Map

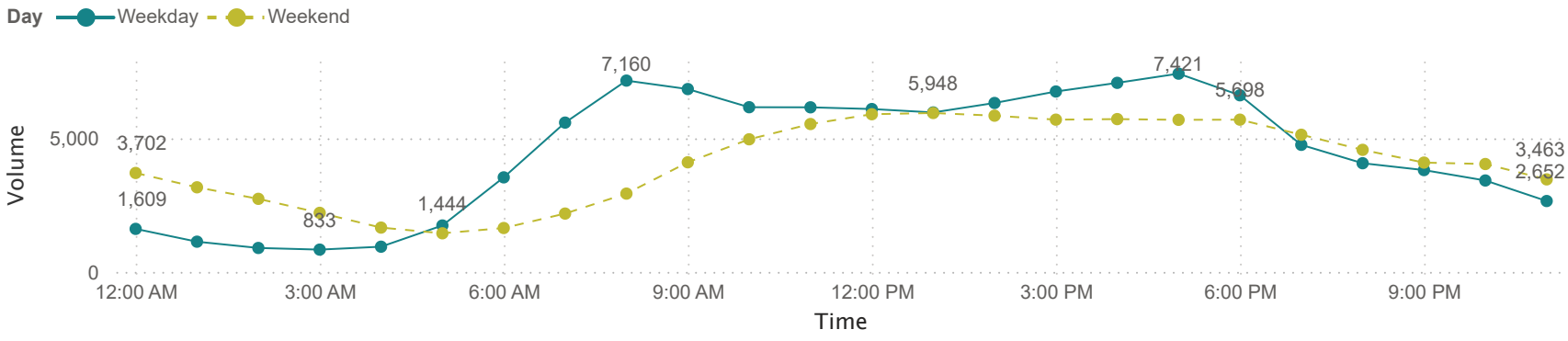


Total Mode Split

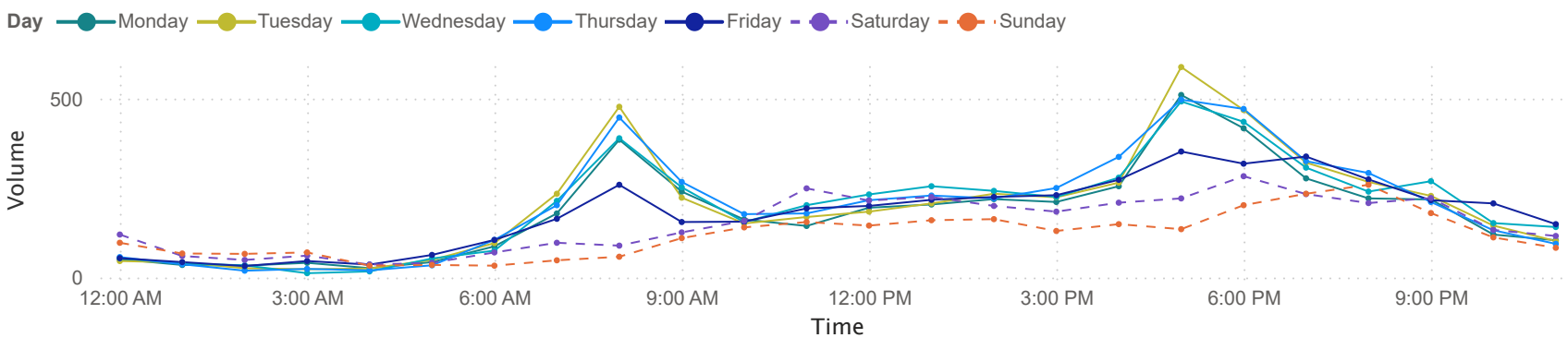


Day	Buses	Cyclists	Heavy Vehicles	Light Vehicles
Weekday	4%	4%	3%	89%
Weekend	3%	3%	1%	93%

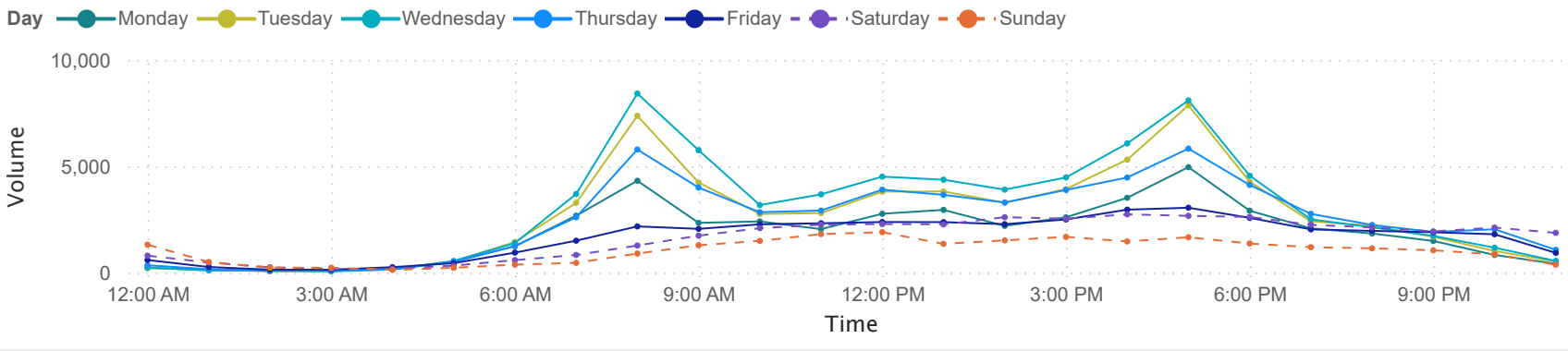
Average daily vehicles for weekday and weekend across the station



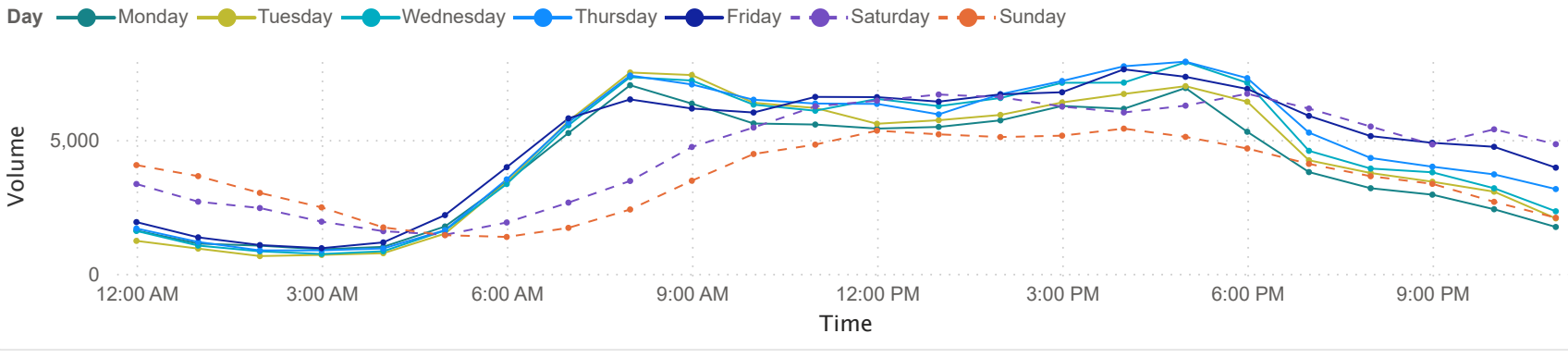
Cyclists volumes



Pedestrian volumes



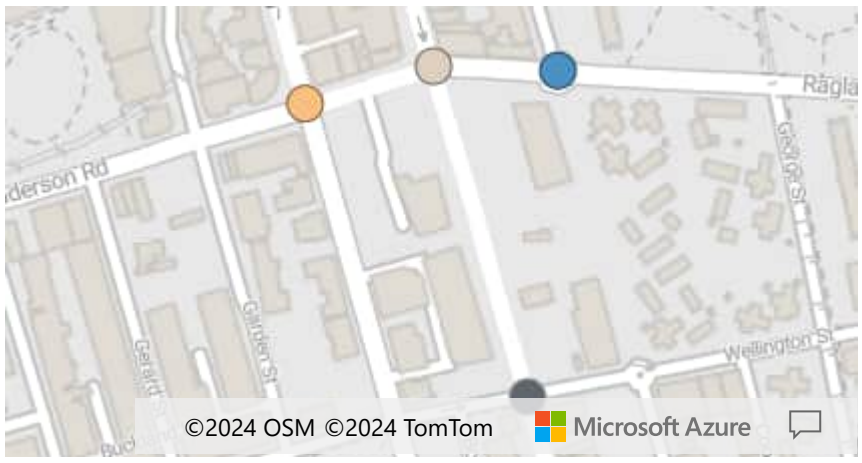
Vehicle volumes



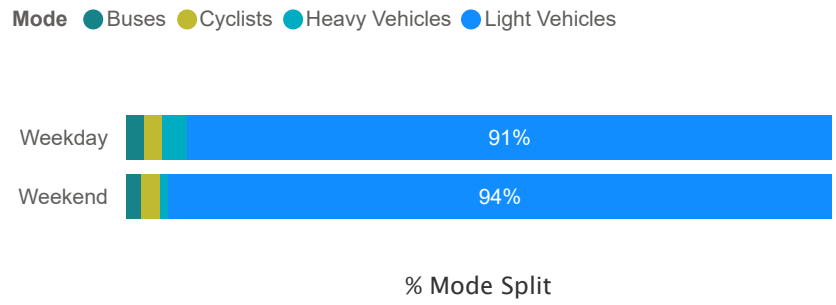
Station Report

> **Waterloo Station** | **4** | **Intersections**

Map

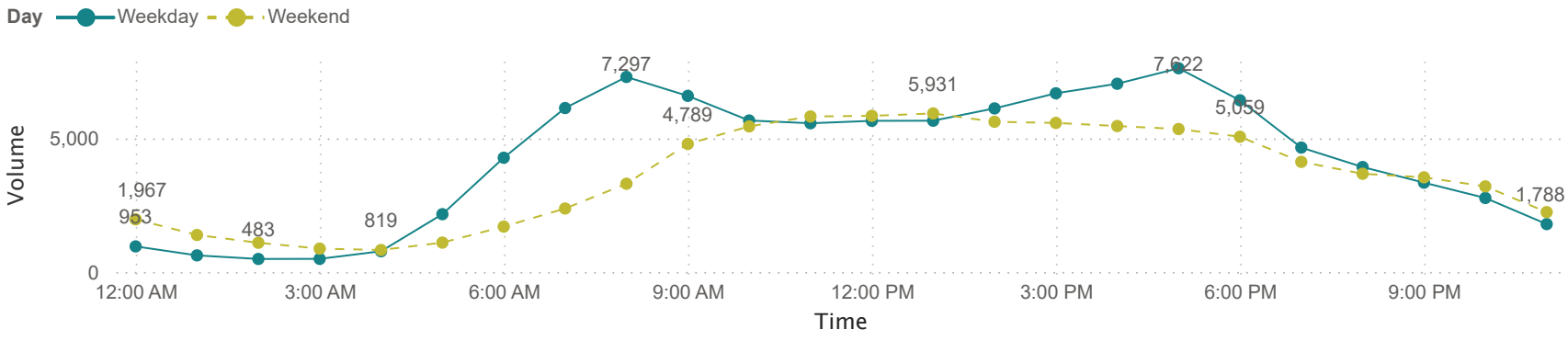


Total Mode Split

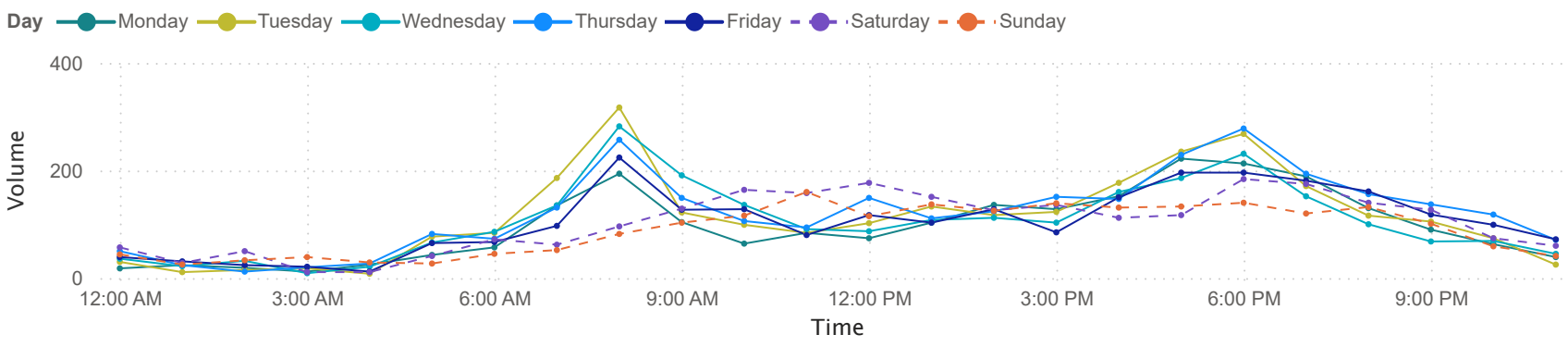


Day	Buses	Cyclists	Heavy Vehicles	Light Vehicles
Weekday	3%	2%	4%	91%
Weekend	2%	3%	1%	94%

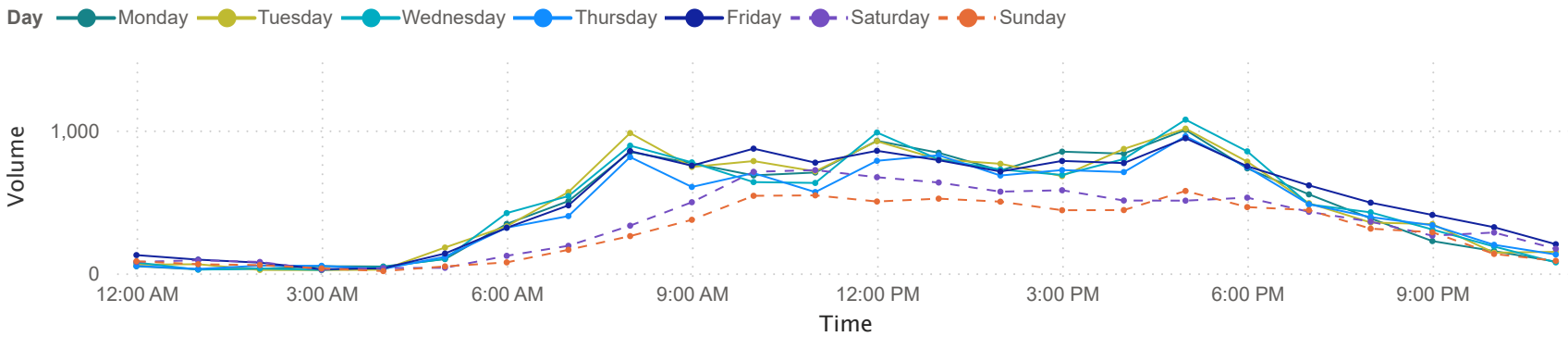
Average daily vehicles for weekday and weekend across the station



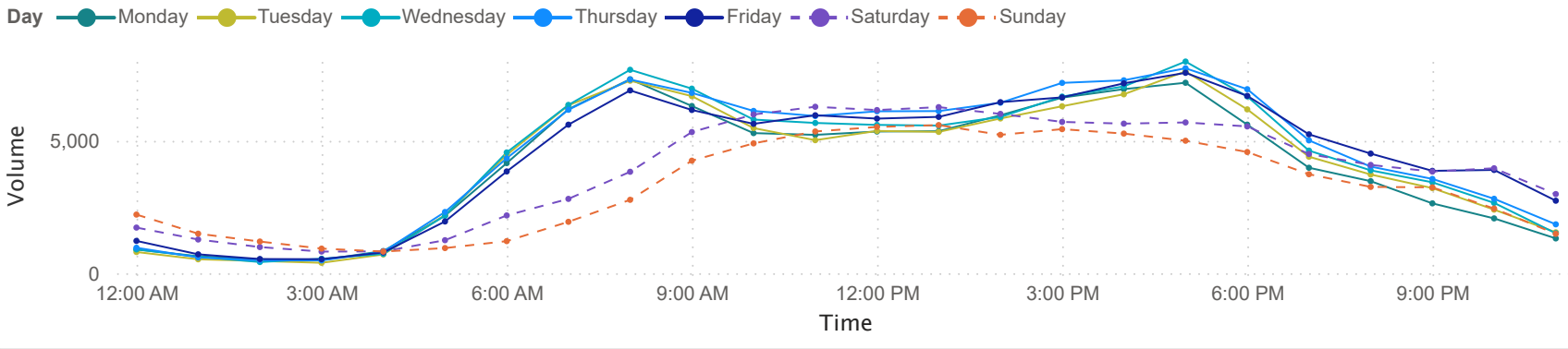
Cyclists volumes



Pedestrian volumes



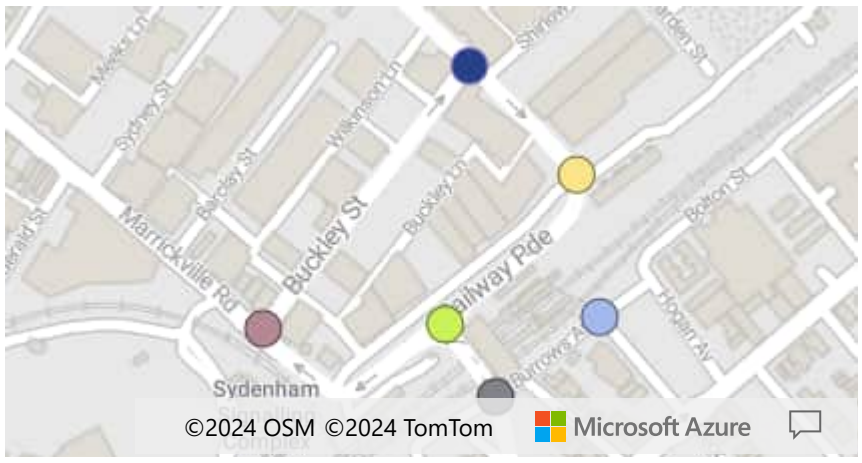
Vehicle volumes



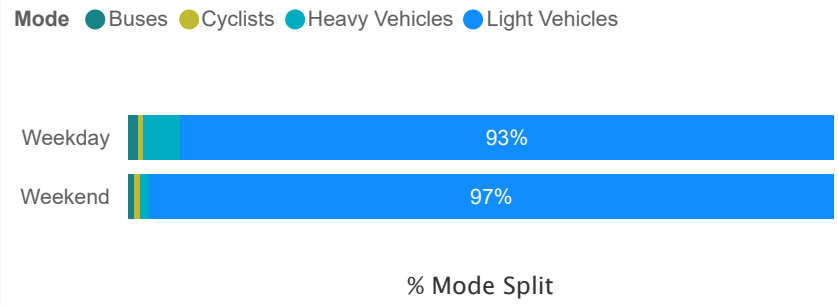
Station Report

> **Sydenham Station** | **6** | **Intersections**

Map

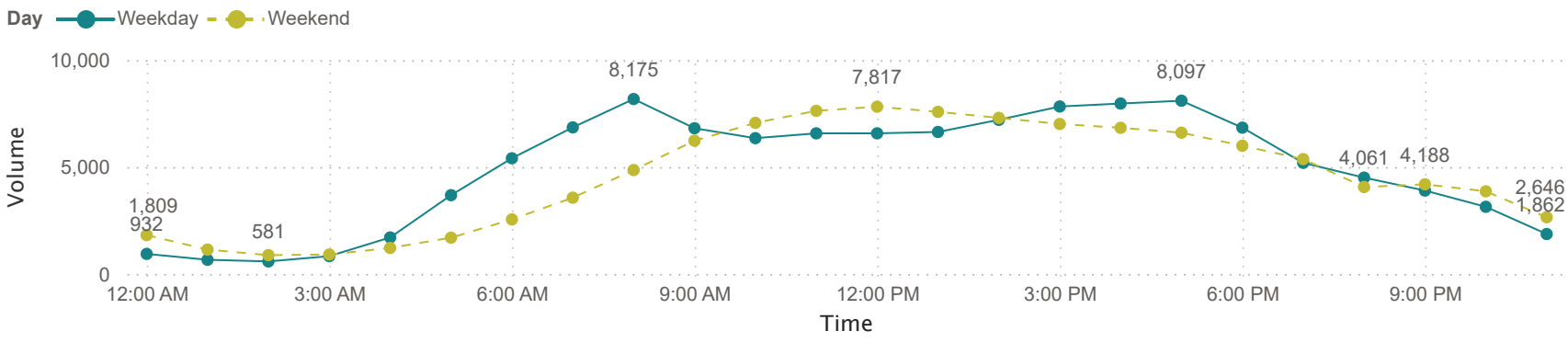


Total Mode Split

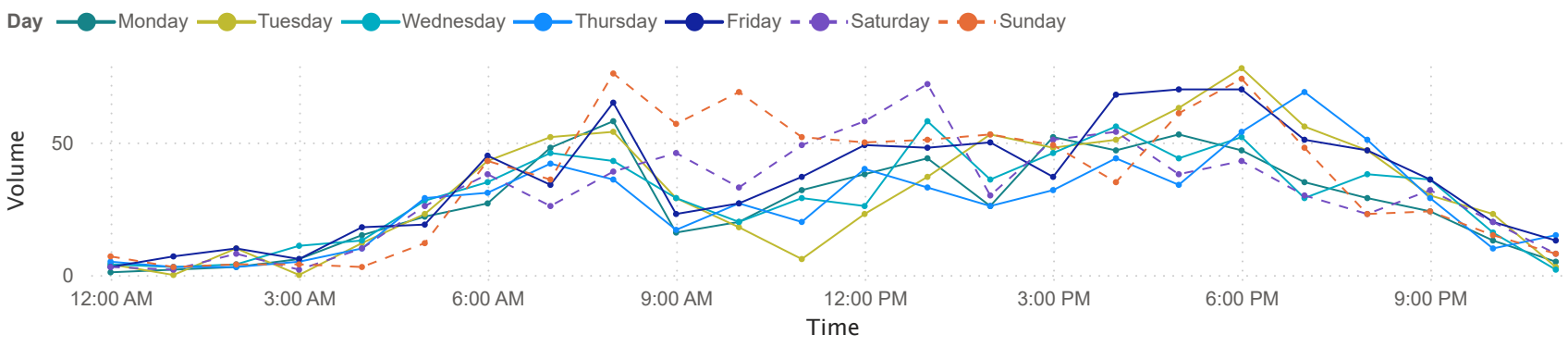


Day	Buses	Cyclists	Heavy Vehicles	Light Vehicles
Weekday	2%	1%	5%	93%
Weekend	1%	1%	1%	97%

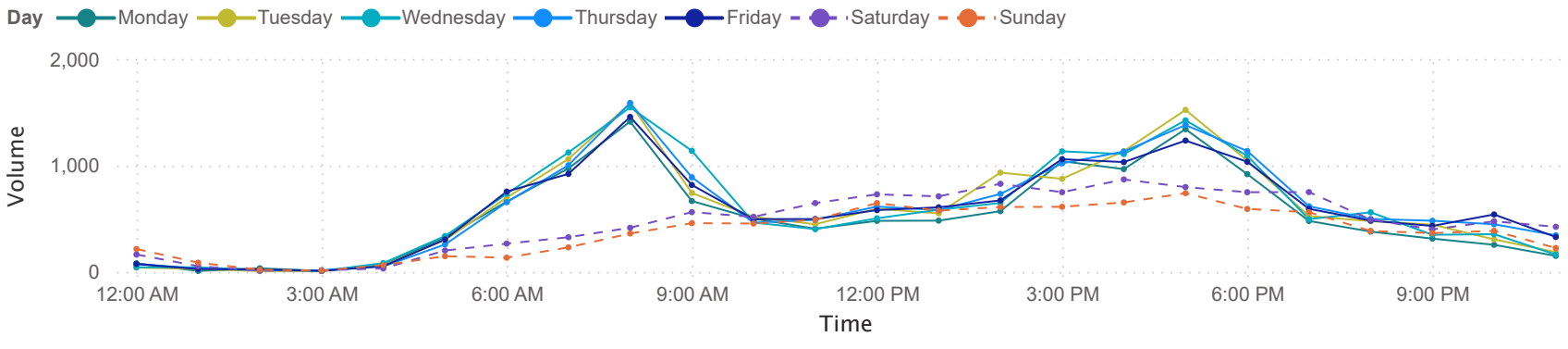
Average daily vehicles for weekday and weekend across the station



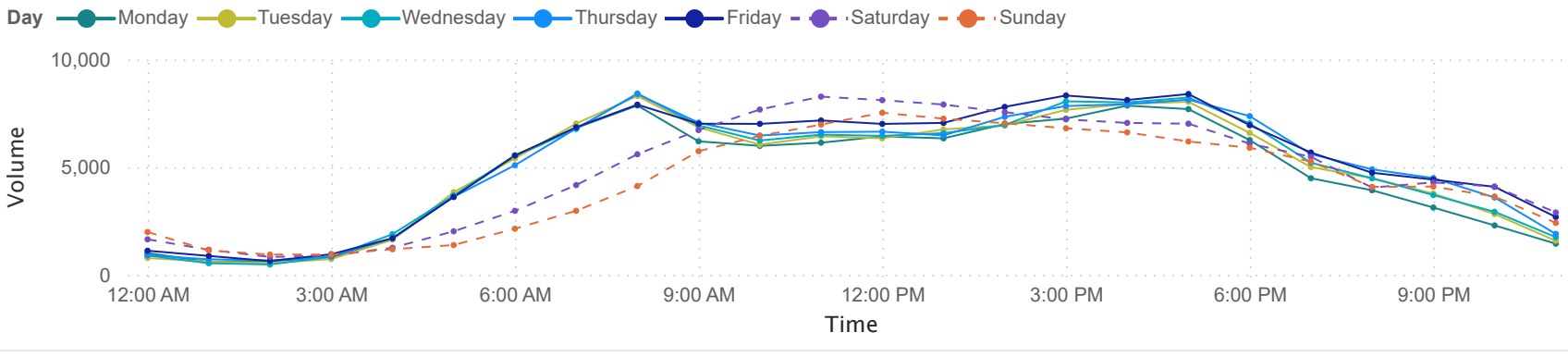
Cyclists volumes



Pedestrian volumes



Vehicle volumes



Appendix E

Movement summary outputs

Appendix E Movement summary outputs

MOVEMENT SUMMARY

Site: CWD01 [CWD01 Mowbray Rd / Hampden Rd (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

TCS 3037
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 150 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Hampden Rd (SE)															
21	L2	All MCs	215	3.4	215	3.4	0.473	55.6	LOS D	13.3	95.9	0.90	0.81	0.90	18.8
Approach			215	3.4	215	3.4	0.473	55.6	LOS D	13.3	95.9	0.90	0.81	0.90	18.8
NorthEast: Mowbray Rd (NE)															
24	L2	All MCs	148	0.7	148	0.7	0.500	23.1	LOS B	23.0	164.7	0.62	0.62	0.62	31.3
25	T1	All MCs	965	3.6	965	3.6	* 0.500	18.6	LOS B	23.1	166.7	0.62	0.59	0.62	25.0
Approach			1114	3.2	1114	3.2	0.500	19.2	LOS B	23.1	166.7	0.62	0.59	0.62	26.2
NorthWest: Dive Site Access (NW)															
27	L2	All MCs	1	0.0	1	0.0	0.001	3.2	LOS A	0.0	0.1	0.12	0.43	0.12	35.4
29	R2	All MCs	1	0.0	1	0.0	* 0.011	76.0	LOS F	0.1	0.5	0.96	0.59	0.96	6.2
Approach			2	0.0	2	0.0	0.011	39.6	LOS C	0.1	0.5	0.54	0.51	0.54	11.3
SouthWest: Mowbray Rd (SW)															
31	T1	All MCs	926	3.5	926	3.5	0.307	6.7	LOS A	8.7	62.9	0.29	0.26	0.29	41.1
32	R2	All MCs	421	1.0	421	1.0	* 0.505	28.8	LOS C	22.5	159.0	0.83	0.87	0.83	28.7
Approach			1347	2.7	1347	2.7	0.505	13.6	LOS A	22.5	159.0	0.46	0.45	0.46	31.3
All Vehicles			2678	3.0	2678	3.0	0.505	19.3	LOS B	23.1	166.7	0.56	0.54	0.56	27.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Hampden Rd (SE)												
P5	Full	4	4	68.2	LOS F	0.0	0.0	0.95	0.95	234.8	200.0	0.85
NorthEast: Mowbray Rd (NE)												
P6	Full	19	20	68.2	LOS F	0.1	0.1	0.95	0.95	234.9	200.0	0.85
NorthWest: Dive Site Access (NW)												
P7	Full	1	1	70.1	LOS F	0.0	0.0	0.97	0.97	236.8	200.0	0.84
All Pedestrians		24	25	68.3	LOS F	0.1	0.1	0.95	0.95	235.0	200.0	0.85

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:\Users\WanJ2\Documents\Sydney Metro C&SW\BLOCK 3\Models with volume input\01 SM C&SW_CWD (Block 3).sip9

MOVEMENT SUMMARY

Site: CWD01 [CWD01 Mowbray Rd / Hampden Rd (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

TCS 3037
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 150 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Hampden Rd (SE)															
21	L2	All MCs	233	2.3	233	2.3	0.458	52.3	LOS D	14.0	99.8	0.88	0.81	0.88	19.5
Approach			233	2.3	233	2.3	0.458	52.3	LOS D	14.0	99.8	0.88	0.81	0.88	19.5
NorthEast: Mowbray Rd (NE)															
24	L2	All MCs	27	0.0	27	0.0	0.588	26.8	LOS B	29.2	210.3	0.70	0.65	0.70	29.9
25	T1	All MCs	1227	3.5	1227	3.5	* 0.588	22.3	LOS B	29.2	210.7	0.70	0.64	0.70	23.0
Approach			1255	3.4	1255	3.4	0.588	22.4	LOS B	29.2	210.7	0.70	0.64	0.70	23.2
NorthWest: Dive Site Access (NW)															
27	L2	All MCs	1	0.0	1	0.0	0.001	3.1	LOS A	0.0	0.0	0.11	0.43	0.11	35.6
29	R2	All MCs	1	0.0	1	0.0	* 0.009	74.6	LOS F	0.1	0.5	0.96	0.59	0.96	6.3
Approach			2	0.0	2	0.0	0.009	38.9	LOS C	0.1	0.5	0.53	0.51	0.53	11.5
SouthWest: Mowbray Rd (SW)															
31	T1	All MCs	892	3.4	892	3.4	0.293	3.8	LOS A	8.0	57.7	0.27	0.25	0.27	41.6
32	R2	All MCs	283	0.7	283	0.7	* 0.411	26.5	LOS B	14.9	105.3	0.80	0.86	0.80	27.4
Approach			1175	2.8	1175	2.8	0.411	9.3	LOS A	14.9	105.3	0.40	0.39	0.40	35.0
All Vehicles			2664	3.0	2664	3.0	0.588	19.2	LOS B	29.2	210.7	0.58	0.55	0.58	26.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Hampden Rd (SE)												
P5	Full	3	3	68.2	LOS F	0.0	0.0	0.95	0.95	234.8	200.0	0.85
NorthEast: Mowbray Rd (NE)												
P6	Full	10	11	68.2	LOS F	0.0	0.0	0.95	0.95	234.9	200.0	0.85
NorthWest: Dive Site Access (NW)												
P7	Full	1	1	70.1	LOS F	0.0	0.0	0.97	0.97	236.8	200.0	0.84
All Pedestrians		14	15	68.3	LOS F	0.0	0.0	0.95	0.95	235.0	200.0	0.85

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:\Users\WanJ2\Documents\Sydney Metro C&SW\BLOCK 3\Models with volume input\01 SM C&SW_CWD (Block 3).sip9

MOVEMENT SUMMARY

Site: CWD01 [CWD01 Mowbray Rd / Hampden Rd (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

TCS 3037
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 150 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Hampden Rd (SE)															
21	L2	All MCs	240	0.4	240	0.4	0.453	51.5	LOS D	14.3	100.5	0.87	0.81	0.87	19.7
Approach			240	0.4	240	0.4	0.453	51.5	LOS D	14.3	100.5	0.87	0.81	0.87	19.7
NorthEast: Mowbray Rd (NE)															
24	L2	All MCs	28	3.7	28	3.7	0.547	26.6	LOS B	26.5	188.8	0.69	0.63	0.69	29.9
25	T1	All MCs	1142	1.8	1142	1.8	* 0.547	22.0	LOS B	26.6	189.3	0.69	0.62	0.69	23.1
Approach			1171	1.9	1171	1.9	0.547	22.2	LOS B	26.6	189.3	0.69	0.62	0.69	23.4
NorthWest: Dive Site Access (NW)															
27	L2	All MCs	1	0.0	1	0.0	0.001	3.2	LOS A	0.0	0.1	0.12	0.43	0.12	35.4
29	R2	All MCs	1	0.0	1	0.0	* 0.009	74.6	LOS F	0.1	0.5	0.96	0.59	0.96	6.3
Approach			2	0.0	2	0.0	0.009	38.9	LOS C	0.1	0.5	0.54	0.51	0.54	11.5
SouthWest: Mowbray Rd (SW)															
31	T1	All MCs	1019	1.2	1019	1.2	0.323	3.4	LOS A	8.8	62.6	0.26	0.24	0.26	42.4
32	R2	All MCs	302	0.0	302	0.0	* 0.414	23.1	LOS B	15.7	109.6	0.78	0.83	0.78	28.9
Approach			1321	1.0	1321	1.0	0.414	7.9	LOS A	15.7	109.6	0.38	0.37	0.38	36.5
All Vehicles			2734	1.3	2734	1.3	0.547	17.9	LOS B	26.6	189.3	0.56	0.52	0.56	27.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Hampden Rd (SE)												
P5	Full	2	2	68.2	LOS F	0.0	0.0	0.95	0.95	234.8	200.0	0.85
NorthEast: Mowbray Rd (NE)												
P6	Full	4	4	68.2	LOS F	0.0	0.0	0.95	0.95	234.8	200.0	0.85
NorthWest: Dive Site Access (NW)												
P7	Full	1	1	70.1	LOS F	0.0	0.0	0.97	0.97	236.8	200.0	0.84
All Pedestrians		7	7	68.4	LOS F	0.0	0.0	0.96	0.96	235.1	200.0	0.85

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:\Users\WanJ2\Documents\Sydney Metro C&SW\BLOCK 3\Models with volume input\01 SM C&SW_CWD (Block 3).sip9

MOVEMENT SUMMARY

Site: CST01 [CST01 Pacific Hwy / Albany St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 768
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 135 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Pacific Hwy (SE)															
22	T1	All MCs	1265	5.0	1265	5.0	0.479	1.2	LOS A	3.9	28.3	0.10	0.09	0.10	56.4
23b	R3	All MCs	122	0.9	122	0.9	* 0.731	79.5	LOS F	8.4	59.6	1.00	0.86	1.06	6.7
Approach			1387	4.6	1387	4.6	0.731	8.1	LOS A	8.4	59.6	0.18	0.16	0.19	41.4
East: Albany St (E)															
4b	L3	All MCs	29	3.6	29	3.6	* 0.696	67.8	LOS E	6.8	49.0	0.99	0.85	1.01	2.6
6a	R1	All MCs	445	3.8	445	3.8	0.696	57.9	LOS E	6.8	49.0	0.99	0.84	1.01	9.8
Approach			475	3.8	475	3.8	0.696	58.6	LOS E	6.8	49.0	0.99	0.84	1.01	9.4
NorthWest: Pacific Hwy (NW)															
27a	L1	All MCs	376	2.5	376	2.5	0.402	14.6	LOS B	9.9	71.2	0.41	0.67	0.41	24.3
28	T1	All MCs	1383	7.2	1383	7.2	* 0.662	11.2	LOS A	21.8	161.8	0.53	0.49	0.53	28.4
Approach			1759	6.2	1759	6.2	0.662	11.9	LOS A	21.8	161.8	0.51	0.53	0.51	27.4
All Vehicles			3621	5.3	3621	5.3	0.731	16.6	LOS B	21.8	161.8	0.45	0.43	0.45	26.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Pacific Hwy (SE)											
P5	Full	248	61.3	LOS F	0.9	0.9	0.96	0.96	228.0	200.0	0.88
East: Albany St (E)											
P2	Full	260	61.3	LOS F	1.0	1.0	0.96	0.96	78.0	20.0	0.26
All Pedestrians		508	61.3	LOS F	1.0	1.0	0.96	0.96	151.3	108.0	0.71

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

MOVEMENT SUMMARY

Site: CST02 [CST02 Pacific Hwy / Oxley St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 767
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 135 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Pacific Hwy (SE)															
1	L2	All MCs	164	0.6	164	0.6	0.209	17.9	LOS B	2.9	20.3	0.29	0.65	0.29	27.5
2	T1	All MCs	1243	4.9	1243	4.9	0.532	6.4	LOS A	11.9	86.6	0.24	0.22	0.24	40.9
Approach			1407	4.4	1407	4.4	0.532	7.7	LOS A	11.9	86.6	0.25	0.27	0.25	30.7
NorthEast: Oxley St (NE)															
4	L2	All MCs	91	3.5	91	3.5	0.657	58.3	LOS E	6.8	49.0	0.98	0.82	0.98	3.0
5	T1	All MCs	113	1.9	113	1.9	0.657	56.4	LOS D	6.8	49.0	0.98	0.82	0.99	6.8
Approach			203	2.6	203	2.6	0.657	57.2	LOS E	6.8	49.0	0.98	0.82	0.98	5.2
NorthWest: Pacific Hwy (NW)															
7	L2	All MCs	63	1.7	63	1.7	0.052	6.7	LOS A	0.2	1.4	0.05	0.59	0.05	35.5
8	T1	All MCs	1352	7.3	1352	7.3	* 0.534	0.8	LOS A	4.1	30.6	0.07	0.07	0.07	55.5
Approach			1415	7.1	1415	7.1	0.534	1.0	LOS A	4.1	30.6	0.07	0.09	0.07	54.2
SouthWest: Oxley St (SW)															
10	L2	All MCs	146	2.2	146	2.2	0.389	55.1	LOS D	8.4	59.6	0.91	0.79	0.91	5.4
11	T1	All MCs	156	0.7	156	0.7	0.393	50.5	LOS D	8.9	62.6	0.91	0.74	0.91	6.3
12	R2	All MCs	93	3.4	93	3.4	* 0.617	71.0	LOS F	6.2	44.5	1.00	0.81	1.04	4.3
Approach			395	1.9	395	1.9	0.617	57.0	LOS E	8.9	62.6	0.93	0.78	0.94	5.3
All Vehicles			3420	5.1	3420	5.1	0.657	13.6	LOS A	11.9	86.6	0.30	0.29	0.30	22.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Pacific Hwy (SE)											
P1	Full	102	60.9	LOS F	0.4	0.4	0.95	0.95	77.6	20.0	0.26
NorthEast: Oxley St (NE)											

P2 Full	119	61.0	LOS F	0.4	0.4	0.95	0.95	77.7	20.0	0.26
SouthWest: Oxley St (SW)										
P4 Full	159	61.1	LOS F	0.6	0.6	0.95	0.95	77.8	20.0	0.26
All Pedestrians	380	61.0	LOS F	0.6	0.6	0.95	0.95	77.7	20.0	0.26

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

MOVEMENT SUMMARY

Site: CST03 [CST03 Pacific Hwy / Hume St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 766
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 135 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Pacific Hwy (SE)															
1	L2	All MCs	36	5.9	36	5.9	0.458	6.1	LOS A	1.9	13.7	0.05	0.08	0.05	36.7
2	T1	All MCs	1315	4.5	1315	4.5	0.458	0.3	LOS A	1.9	13.7	0.04	0.05	0.04	57.8
Approach			1351	4.5	1351	4.5	0.458	0.5	LOS A	1.9	13.7	0.04	0.05	0.04	56.7
NorthWest: Pacific Hwy (NW)															
8	T1	All MCs	1535	6.9	1535	6.9	0.811	5.0	LOS A	25.1	185.9	0.45	0.43	0.46	36.8
9	R2	All MCs	1	100.0	1	100.0	* 0.811	13.5	LOS A	17.6	130.9	0.43	0.41	0.44	22.0
Approach			1536	6.9	1536	6.9	0.811	5.0	LOS A	25.1	185.9	0.45	0.43	0.46	36.8
SouthWest: Hume St (SW)															
10	L2	All MCs	94	3.4	94	3.4	* 0.713	69.9	LOS E	8.7	62.8	1.00	0.86	1.09	4.1
12	R2	All MCs	37	2.9	37	2.9	0.713	71.1	LOS F	8.7	62.8	1.00	0.86	1.09	4.1
Approach			131	3.2	131	3.2	0.713	70.3	LOS E	8.7	62.8	1.00	0.86	1.09	4.1
All Vehicles			3017	5.7	3017	5.7	0.811	5.8	LOS A	25.1	185.9	0.29	0.28	0.30	37.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Pacific Hwy (SE)											
P1	Full	26	60.7	LOS F	0.1	0.1	0.95	0.95	77.4	20.0	0.26
NorthWest: Pacific Hwy (NW)											
P3	Full	1	60.7	LOS F	0.0	0.0	0.95	0.95	77.4	20.0	0.26
SouthWest: Hume St (SW)											
P4	Full	173	61.1	LOS F	0.6	0.6	0.96	0.96	77.8	20.0	0.26
All Pedestrians		200	61.1	LOS F	0.6	0.6	0.95	0.95	77.7	20.0	0.26

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

MOVEMENT SUMMARY

Site: CST04 [CST04 Pacific Hwy / Falcon St / Shirley Rd (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 765
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 135 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Pacific Hwy (SE)															
1	L2	All MCs	240	3.5	240	3.5	0.203	14.3	LOS A	5.7	40.9	0.39	0.69	0.39	31.4
2	T1	All MCs	929	3.7	929	3.7	0.618	30.7	LOS C	23.5	169.9	0.81	0.72	0.81	12.7
Approach			1169	3.7	1169	3.7	0.618	27.3	LOS B	23.5	169.9	0.73	0.71	0.73	16.6
East: Falcon St (E)															
21b	L3	All MCs	5	20.0	5	20.0	0.960	50.3	LOS D	18.1	130.6	1.00	1.06	1.29	4.0
21a	L1	All MCs	237	2.7	237	2.7	* 0.960	84.1	LOS F	18.1	130.6	1.00	1.06	1.29	10.5
23a	R1	All MCs	388	4.9	388	4.9	0.960	70.9	LOS F	18.1	130.6	1.00	1.03	1.26	4.6
Approach			631	4.2	631	4.2	0.960	75.7	LOS F	18.1	130.6	1.00	1.05	1.27	7.2
North: Willoughby Rd (N)															
7	L2	All MCs	1	0.0	1	0.0	0.001	3.8	LOS A	0.0	0.0	0.08	0.47	0.08	37.0
Approach			1	0.0	1	0.0	0.001	3.8	LOS A	0.0	0.0	0.08	0.47	0.08	37.0
NorthWest: Pacific Hwy (NW)															
7a	L1	All MCs	382	10.2	382	10.2	0.507	27.7	LOS B	11.7	89.1	0.79	0.80	0.79	22.3
8	T1	All MCs	1188	5.7	1188	5.7	* 0.866	39.0	LOS C	39.1	286.9	0.92	0.88	0.99	15.7
Approach			1571	6.8	1571	6.8	0.866	36.3	LOS C	39.1	286.9	0.88	0.86	0.94	15.5
SouthWest: Shirley Rd (SW)															
10	L2	All MCs	32	23.3	32	23.3	* 0.891	74.9	LOS F	26.8	196.6	1.00	1.04	1.21	9.9
12a	R1	All MCs	432	4.1	432	4.1	0.891	68.2	LOS E	27.2	196.6	1.00	1.03	1.21	9.8
12	R2	All MCs	277	3.0	277	3.0	0.891	70.2	LOS E	27.2	196.0	1.00	1.01	1.20	9.5
Approach			740	4.6	740	4.6	0.891	69.2	LOS E	27.2	196.6	1.00	1.03	1.21	9.7
All Vehicles			4112	5.1	4112	5.1	0.960	45.7	LOS D	39.1	286.9	0.88	0.88	0.98	12.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE [Ped	Dist]	Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed

	ped/h	sec		ped	m			sec	m	m/sec
SouthEast: Pacific Hwy (SE)										
P1 Full	146	61.1	LOS F	0.5	0.5	0.95	0.95	77.7	20.0	0.26
East: Falcon St (E)										
P5 Full	217	61.2	LOS F	0.8	0.8	0.96	0.96	77.9	20.0	0.26
NorthWest: Pacific Hwy (NW)										
P3 Full	251	61.3	LOS F	0.9	0.9	0.96	0.96	78.0	20.0	0.26
SouthWest: Shirley Rd (SW)										
P4 Full	178	61.1	LOS F	0.7	0.7	0.96	0.96	77.8	20.0	0.26
All Pedestrians	792	61.2	LOS F	0.9	0.9	0.96	0.96	77.9	20.0	0.26

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

MOVEMENT SUMMARY

Site: CST05 [CST05 Clarke St / Oxley St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Clarke St (SE)															
1	L2	All MCs	40	2.6	40	2.6	0.072	5.1	LOS A	0.3	1.8	0.32	0.55	0.32	32.5
3a	R1	All MCs	38	0.0	38	0.0	0.072	5.8	LOS A	0.3	1.8	0.32	0.55	0.32	32.5
Approach			78	1.4	78	1.4	0.072	5.4	LOS A	0.3	1.8	0.32	0.55	0.32	32.5
North: Oxley St (N)															
24a	L1	All MCs	73	7.2	73	7.2	0.127	4.5	LOS A	0.0	0.0	0.00	0.53	0.00	29.7
26a	R1	All MCs	159	3.3	159	3.3	0.127	4.1	LOS A	0.0	0.0	0.00	0.53	0.00	29.7
Approach			232	4.5	232	4.5	0.127	4.2	NA	0.0	0.0	0.00	0.53	0.00	29.7
SouthWest: Oxley St (SW)															
10a	L1	All MCs	129	0.0	129	0.0	0.131	3.3	LOS A	0.6	3.9	0.28	0.54	0.28	22.4
12	R2	All MCs	88	2.4	88	2.4	0.131	3.7	LOS A	0.6	3.9	0.28	0.54	0.28	22.4
Approach			218	1.0	218	1.0	0.131	3.5	NA	0.6	3.9	0.28	0.54	0.28	22.4
All Vehicles			527	2.6	527	2.6	0.131	4.1	NA	0.6	3.9	0.16	0.54	0.16	28.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CST06 [CST06 Clarke St / Hume St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Clarke St (SE)															
1	L2	All MCs	1	0.0	1	0.0	0.067	4.9	LOS A	0.1	1.0	0.05	0.07	0.05	23.8
2	T1	All MCs	144	0.7	144	0.7	0.067	0.1	LOS A	0.1	1.0	0.05	0.07	0.05	47.2
23a	R1	All MCs	16	40.0	16	40.0	0.067	4.3	LOS A	0.1	1.0	0.05	0.07	0.05	43.9
Approach			161	4.6	161	4.6	0.067	0.5	NA	0.1	1.0	0.05	0.07	0.05	46.1
NorthWest: Clarke St (NW)															
8	T1	All MCs	78	1.4	78	1.4	0.025	0.0	LOS A	0.0	0.1	0.02	0.03	0.02	49.2
9	R2	All MCs	3	0.0	3	0.0	0.025	4.8	LOS A	0.0	0.1	0.02	0.03	0.02	28.6
Approach			81	1.3	81	1.3	0.025	0.2	NA	0.0	0.1	0.02	0.03	0.02	48.2
SouthWest: Hume St (SW)															
10	L2	All MCs	1	0.0	1	0.0	0.005	3.6	LOS A	0.0	0.1	0.28	0.48	0.28	24.0
30a	L1	All MCs	1	0.0	1	0.0	0.005	3.0	LOS A	0.0	0.1	0.28	0.48	0.28	38.1
12	R2	All MCs	1	0.0	1	0.0	0.005	4.2	LOS A	0.0	0.1	0.28	0.48	0.28	32.2
Approach			3	0.0	3	0.0	0.005	3.6	LOS A	0.0	0.1	0.28	0.48	0.28	33.8
All Vehicles			245	3.4	245	3.4	0.067	0.4	NA	0.1	1.0	0.05	0.06	0.05	46.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CST07 [CST07 Clarke St / Willoughby Rd (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Willoughby Rd (S)															
1	L2	All MCs	77	5.5	77	5.5	0.253	4.1	LOS A	1.3	10.0	0.39	0.32	0.39	31.8
2	T1	All MCs	165	14.0	165	14.0	0.253	1.9	LOS A	1.3	10.0	0.39	0.32	0.39	36.4
Approach			242	11.3	242	11.3	0.253	2.6	NA	1.3	10.0	0.39	0.32	0.39	35.3
North: Willoughby Rd (N)															
8	T1	All MCs	141	9.0	141	9.0	0.208	1.6	LOS A	0.9	6.7	0.38	0.33	0.38	36.0
9	R2	All MCs	43	7.3	43	7.3	0.208	7.3	LOS A	0.9	6.7	0.38	0.33	0.38	35.0
Approach			184	8.6	184	8.6	0.208	3.0	NA	0.9	6.7	0.38	0.33	0.38	35.7
West: Clarke St (W)															
10	L2	All MCs	35	6.1	35	6.1	0.141	5.7	LOS A	0.5	3.7	0.48	0.68	0.48	32.5
12	R2	All MCs	77	8.2	77	8.2	0.141	6.3	LOS A	0.5	3.7	0.48	0.68	0.48	26.2
Approach			112	7.5	112	7.5	0.141	6.2	LOS A	0.5	3.7	0.48	0.68	0.48	29.0
All Vehicles			538	9.6	538	9.6	0.253	3.5	NA	1.3	10.0	0.40	0.40	0.40	34.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CST08 [CST08 Albany St / Willoughby Rd (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

TCS 516
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Willoughby Rd (S)															
1	L2	All MCs	40	31.6	40	31.6	0.078	23.8	LOS B	0.9	8.0	0.68	0.66	0.68	26.3
2	T1	All MCs	165	8.9	165	8.9	0.256	19.0	LOS B	3.8	28.5	0.68	0.57	0.68	30.7
3	R2	All MCs	6	0.0	6	0.0	0.256	25.7	LOS B	3.8	28.5	0.68	0.57	0.68	29.0
Approach			212	12.9	212	12.9	0.256	20.1	LOS B	3.8	28.5	0.68	0.58	0.68	27.1
East: Albany St (E)															
4	L2	All MCs	4	25.0	4	25.0	0.355	23.9	LOS B	6.4	46.3	0.74	0.63	0.74	28.5
5	T1	All MCs	367	2.9	367	2.9	0.710	17.9	LOS B	8.3	58.8	0.81	0.72	0.84	26.5
6	R2	All MCs	151	0.7	151	0.7	* 0.710	37.5	LOS C	8.3	58.8	0.98	0.94	1.08	21.2
Approach			522	2.4	522	2.4	0.710	23.6	LOS B	8.3	58.8	0.86	0.78	0.91	24.6
North: Willoughby Rd (N)															
7	L2	All MCs	116	0.9	116	0.9	0.105	10.9	LOS A	1.7	11.8	0.45	0.66	0.45	32.6
8	T1	All MCs	154	4.8	154	4.8	0.342	16.1	LOS B	5.3	38.0	0.74	0.70	0.74	28.5
9	R2	All MCs	64	1.6	64	1.6	* 0.342	23.3	LOS B	5.3	38.0	0.74	0.70	0.74	27.3
Approach			334	2.8	334	2.8	0.342	15.7	LOS B	5.3	38.0	0.64	0.69	0.64	29.5
West: Albany St (W)															
10	L2	All MCs	85	3.7	85	3.7	0.257	32.2	LOS C	2.6	18.7	0.89	0.75	0.89	20.9
11	T1	All MCs	317	2.3	317	2.3	* 0.731	29.9	LOS C	10.8	77.2	0.98	0.89	1.08	21.8
Approach			402	2.6	402	2.6	0.731	30.4	LOS C	10.8	77.2	0.96	0.86	1.04	21.4
All Vehicles			1469	4.1	1469	4.1	0.731	23.2	LOS B	10.8	77.2	0.81	0.75	0.85	25.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Willoughby Rd (S)												
P1	Full	125	132	28.5	LOS C	0.2	0.2	0.90	0.90	45.2	20.0	0.44
East: Albany St (E)												
P2	Full	182	192	28.6	LOS C	0.3	0.3	0.91	0.91	45.2	20.0	0.44

North: Willoughby Rd (N)											
P3	Full	78	82	28.4	LOS C	0.1	0.1	0.90	0.90	45.1	20.0	0.44
West: Albany St (W)											
P4	Full	100	105	28.5	LOS C	0.2	0.2	0.90	0.90	45.1	20.0	0.44
All Pedestrians		485	511	28.5	LOS C	0.3	0.3	0.91	0.91	45.2	20.0	0.44

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

MOVEMENT SUMMARY

Site: CST09 [CST09 Albany St / Oxley St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

NA
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Oxley St (S)															
1	L2	All MCs	33	0.0	33	0.0	0.223	7.5	LOS A	1.5	10.4	0.68	0.64	0.68	22.4
2	T1	All MCs	84	1.3	84	1.3	0.223	7.3	LOS A	1.5	10.4	0.68	0.64	0.68	33.3
3	R2	All MCs	56	1.9	56	1.9	0.223	10.2	LOS A	1.5	10.4	0.68	0.64	0.68	31.3
3u	U	All MCs	1	0.0	1	0.0	0.223	11.5	LOS A	1.5	10.4	0.68	0.64	0.68	22.4
Approach			174	1.2	174	1.2	0.223	8.3	LOS A	1.5	10.4	0.68	0.64	0.68	31.4
East: Albany St (E)															
4	L2	All MCs	41	2.6	41	2.6	0.445	6.9	LOS A	2.9	21.1	0.54	0.64	0.54	32.1
5	T1	All MCs	324	4.9	324	4.9	0.445	6.7	LOS A	2.9	21.1	0.54	0.64	0.54	32.1
6	R2	All MCs	27	0.0	27	0.0	0.445	9.4	LOS A	2.9	21.1	0.54	0.64	0.54	36.6
6u	U	All MCs	1	0.0	1	0.0	0.445	10.8	LOS A	2.9	21.1	0.54	0.64	0.54	36.0
Approach			394	4.3	394	4.3	0.445	6.9	LOS A	2.9	21.1	0.54	0.64	0.54	32.6
North: Oxley St (N)															
7	L2	All MCs	46	2.3	46	2.3	0.339	7.8	LOS A	2.2	16.1	0.73	0.67	0.73	35.2
8	T1	All MCs	126	4.2	126	4.2	0.339	7.7	LOS A	2.2	16.1	0.73	0.67	0.73	30.9
9	R2	All MCs	80	2.6	80	2.6	0.339	10.6	LOS A	2.2	16.1	0.73	0.67	0.73	30.9
9u	U	All MCs	1	0.0	1	0.0	0.339	11.8	LOS A	2.2	16.1	0.73	0.67	0.73	35.5
Approach			254	3.3	254	3.3	0.339	8.7	LOS A	2.2	16.1	0.73	0.67	0.73	32.0
West: Albany St (W)															
10	L2	All MCs	113	0.0	113	0.0	0.494	5.7	LOS A	4.0	28.6	0.60	0.53	0.60	35.2
11	T1	All MCs	295	2.5	295	2.5	0.494	5.5	LOS A	4.0	28.6	0.60	0.53	0.60	35.1
12	R2	All MCs	80	3.9	80	3.9	0.494	8.4	LOS A	4.0	28.6	0.60	0.53	0.60	27.1
12u	U	All MCs	1	0.0	1	0.0	0.494	9.7	LOS A	4.0	28.6	0.60	0.53	0.60	27.1
Approach			488	2.2	488	2.2	0.494	6.0	LOS A	4.0	28.6	0.60	0.53	0.60	34.3
All Vehicles			1309	2.9	1309	2.9	0.494	7.1	LOS A	4.0	28.6	0.62	0.61	0.62	33.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CST10 [CST10 Albany St / Clarke Ln (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Clarke Ln (SE)															
21a	L1	All MCs	27	0.0	27	0.0	0.040	4.2	LOS A	4.7	32.8	0.13	0.49	0.13	34.0
23b	R3	All MCs	1	0.0	1	0.0	0.040	13.9	LOS A	4.7	32.8	0.13	0.49	0.13	34.0
Approach			28	0.0	28	0.0	0.040	4.5	LOS A	4.7	32.8	0.13	0.49	0.13	34.0
East: Albany St (E)															
5	T1	All MCs	447	4.0	447	4.0	0.217	0.0	LOS A	8.6	62.5	0.00	0.00	0.00	49.9
Approach			447	4.0	447	4.0	0.217	0.0	NA	8.6	62.5	0.00	0.00	0.00	49.9
West: Albany St (W)															
11	T1	All MCs	498	2.1	498	2.1	0.261	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach			498	2.1	498	2.1	0.261	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
All Vehicles			974	2.9	974	2.9	0.261	0.1	NA	8.6	62.5	0.00	0.01	0.00	48.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CST11 [CST11 Oxley St / Clarke Ln (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Clarke Ln (SE)															
1	L2	All MCs	2	0.0	2	0.0	0.011	5.1	LOS A	0.0	0.2	0.38	0.55	0.38	31.1
2	T1	All MCs	1	0.0	1	0.0	0.011	5.0	LOS A	0.0	0.2	0.38	0.55	0.38	31.1
3	R2	All MCs	3	33.3	3	33.3	0.011	7.8	LOS A	0.0	0.2	0.38	0.55	0.38	31.1
Approach			6	16.7	6	16.7	0.011	6.4	LOS A	0.0	0.2	0.38	0.55	0.38	31.1
NorthEast: Oxley St (NE)															
4	L2	All MCs	6	16.7	6	16.7	0.106	3.0	LOS A	0.0	0.1	0.01	0.02	0.01	39.6
5	T1	All MCs	193	2.7	193	2.7	0.106	0.0	LOS A	0.0	0.1	0.01	0.02	0.01	48.2
6	R2	All MCs	1	0.0	1	0.0	0.106	3.0	LOS A	0.0	0.1	0.01	0.02	0.01	48.2
Approach			200	3.2	200	3.2	0.106	0.1	NA	0.0	0.1	0.01	0.02	0.01	46.9
NorthWest: Clarke Ln (NW)															
7	L2	All MCs	13	0.0	13	0.0	0.027	5.1	LOS A	0.1	0.5	0.33	0.53	0.33	24.8
8	T1	All MCs	1	0.0	1	0.0	0.027	4.9	LOS A	0.1	0.5	0.33	0.53	0.33	34.0
9	R2	All MCs	7	0.0	7	0.0	0.027	6.6	LOS A	0.1	0.5	0.33	0.53	0.33	24.8
Approach			21	0.0	21	0.0	0.027	5.6	LOS A	0.1	0.5	0.33	0.53	0.33	25.7
SouthWest: Oxley St (SW)															
10	L2	All MCs	12	0.0	12	0.0	0.116	3.1	LOS A	0.0	0.2	0.01	0.04	0.01	46.8
11	T1	All MCs	205	0.5	205	0.5	0.116	0.0	LOS A	0.0	0.2	0.01	0.04	0.01	46.8
12	R2	All MCs	2	50.0	2	50.0	0.116	3.3	LOS A	0.0	0.2	0.01	0.04	0.01	33.6
Approach			219	1.0	219	1.0	0.116	0.2	NA	0.0	0.2	0.01	0.04	0.01	46.1
All Vehicles			446	2.1	446	2.1	0.116	0.5	NA	0.1	0.5	0.03	0.06	0.03	42.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CST13 [CST13 Pacific Hwy / Alexander St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 763
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 135 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Pacific Hwy (SE)															
2	T1	All MCs	1078	3.6	1078	3.6	0.477	8.3	LOS A	10.4	74.9	0.60	0.53	0.60	35.7
3a	R1	All MCs	283	5.9	283	5.9	0.506	22.7	LOS B	8.6	63.2	0.70	0.78	0.70	21.4
Approach			1361	4.1	1361	4.1	0.506	11.3	LOS A	10.4	74.9	0.62	0.58	0.62	31.2
North: Alexander St (N)															
24a	L1	All MCs	284	3.3	284	3.3	* 0.483	28.1	LOS B	10.9	78.2	0.89	0.80	0.89	21.3
26b	R3	All MCs	92	4.6	92	4.6	0.612	59.1	LOS E	5.6	40.5	0.92	0.77	0.93	5.7
Approach			376	3.6	376	3.6	0.612	35.7	LOS C	10.9	78.2	0.90	0.79	0.90	16.5
NorthWest: Pacific Hwy (NW)															
7b	L3	All MCs	11	0.0	11	0.0	0.113	17.9	LOS B	0.3	3.3	0.12	0.21	0.12	42.3
8	T1	All MCs	1460	5.3	1460	5.3	* 0.804	14.2	LOS A	22.7	161.8	0.60	0.61	0.60	39.6
Approach			1471	5.2	1471	5.2	0.804	14.3	LOS A	22.7	161.8	0.60	0.61	0.60	34.7
All Vehicles			3207	4.6	3207	4.6	0.804	15.5	LOS B	22.7	161.8	0.64	0.62	0.64	30.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
North: Alexander St (N)											
P6	Full	315	28.2	LOS C	0.6	0.6	0.91	0.91	44.8	20.0	0.45
NorthWest: Pacific Hwy (NW)											
P3	Full	2	60.7	LOS F	0.0	0.0	0.95	0.95	77.4	20.0	0.26
All Pedestrians		317	28.4	LOS C	0.6	0.6	0.91	0.91	45.0	20.0	0.44

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

MOVEMENT SUMMARY

Site: CST14 [CST14 Falcon St / Alexander St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 764
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 135 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Alexander St (S)															
1	L2	All MCs	3	0.0	3	0.0	0.567	73.8	LOS F	12.6	92.2	1.00	0.87	1.00	5.0
2	T1	All MCs	241	5.2	241	5.2	0.630	65.4	LOS E	12.6	92.2	1.00	0.86	1.00	8.5
3	R2	All MCs	48	6.5	48	6.5	* 0.630	83.5	LOS F	7.0	51.3	1.00	0.84	1.02	16.8
Approach			293	5.4	293	5.4	0.630	68.5	LOS E	12.6	92.2	1.00	0.86	1.01	10.2
East: Falcon St (E)															
4	L2	All MCs	31	0.0	31	0.0	0.433	24.9	LOS B	13.1	94.8	0.59	0.54	0.59	33.4
5	T1	All MCs	638	4.3	638	4.3	0.433	19.2	LOS B	13.1	94.8	0.59	0.53	0.59	33.7
6	R2	All MCs	7	100.0	7	100.0	0.433	25.6	LOS B	11.0	81.3	0.58	0.51	0.58	34.1
Approach			676	5.1	676	5.1	0.433	19.5	LOS B	13.1	94.8	0.59	0.53	0.59	33.7
North: Alexander St (N)															
7	L2	All MCs	31	6.9	31	6.9	0.558	62.5	LOS E	11.1	81.1	0.96	0.80	0.96	20.3
8	T1	All MCs	346	4.3	346	4.3	0.558	54.2	LOS D	11.7	84.9	0.96	0.80	0.96	6.1
Approach			377	4.5	377	4.5	0.558	54.8	LOS D	11.7	84.9	0.96	0.80	0.96	7.7
West: Falcon St (W)															
10	L2	All MCs	173	4.9	173	4.9	* 0.355	7.2	LOS A	3.2	23.5	0.12	0.35	0.12	34.6
11	T1	All MCs	757	6.4	757	6.4	0.355	1.0	LOS A	3.2	23.5	0.08	0.16	0.08	55.7
Approach			929	6.1	929	6.1	0.355	2.1	LOS A	3.2	23.5	0.08	0.19	0.08	53.1
All Vehicles			2275	5.5	2275	5.5	0.630	24.6	LOS B	13.1	94.8	0.50	0.48	0.50	27.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Alexander St (S)											
P1	Full	159	61.1	LOS F	0.6	0.6	0.95	0.95	77.8	20.0	0.26

East: Falcon St (E)										
P2 Full	118	61.0	LOS F	0.4	0.4	0.95	0.95	77.6	20.0	0.26
North: Alexander St (N)										
P3 Full	116	61.0	LOS F	0.4	0.4	0.95	0.95	77.6	20.0	0.26
West: Falcon St (W)										
P4 Full	193	61.2	LOS F	0.7	0.7	0.96	0.96	77.8	20.0	0.26
All Pedestrians	585	61.1	LOS F	0.7	0.7	0.95	0.95	77.7	20.0	0.26

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

MOVEMENT SUMMARY

Site: CST01 [CST01 Pacific Hwy / Albany St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 768
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 130 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Pacific Hwy (SE)															
22	T1	All MCs	1129	4.7	1129	4.7	0.449	13.7	LOS A	20.4	148.6	0.57	0.45	0.57	36.9
23b	R3	All MCs	116	0.0	116	0.0	* 0.713	76.2	LOS F	7.6	53.3	1.00	0.85	1.11	7.3
Approach			1245	4.2	1245	4.2	0.713	19.6	LOS B	20.4	148.6	0.61	0.48	0.62	28.7
East: Albany St (E)															
4b	L3	All MCs	21	0.0	21	0.0	* 0.671	62.2	LOS E	6.8	49.0	0.98	0.83	0.98	2.8
6a	R1	All MCs	479	4.0	479	4.0	0.671	53.5	LOS D	6.8	49.0	0.98	0.83	0.98	10.5
Approach			500	3.8	500	3.8	0.671	53.9	LOS D	6.8	49.0	0.98	0.83	0.98	10.2
NorthWest: Pacific Hwy (NW)															
27a	L1	All MCs	397	0.5	397	0.5	0.327	8.7	LOS A	5.1	35.7	0.22	0.63	0.22	31.9
28	T1	All MCs	1044	3.8	1044	3.8	* 0.509	10.7	LOS A	14.1	101.7	0.47	0.42	0.47	28.9
Approach			1441	2.9	1441	2.9	0.509	10.2	LOS A	14.1	101.7	0.40	0.48	0.40	29.7
All Vehicles			3186	3.6	3186	3.6	0.713	20.7	LOS B	20.4	148.6	0.57	0.53	0.58	23.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Pacific Hwy (SE)											
P5	Full	251	58.8	LOS E	0.9	0.9	0.96	0.96	225.5	200.0	0.89
East: Albany St (E)											
P2	Full	223	58.7	LOS E	0.8	0.8	0.96	0.96	75.4	20.0	0.27
All Pedestrians		474	58.8	LOS E	0.9	0.9	0.96	0.96	154.8	115.2	0.74

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

MOVEMENT SUMMARY

Site: CST02 [CST02 Pacific Hwy / Oxley St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 767
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 130 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Pacific Hwy (SE)															
1	L2	All MCs	121	0.9	121	0.9	0.121	9.5	LOS A	1.6	11.2	0.19	0.55	0.19	23.1
2	T1	All MCs	1004	5.2	1004	5.2	0.396	4.1	LOS A	7.5	54.7	0.26	0.24	0.26	39.1
Approach			1125	4.8	1125	4.8	0.396	4.7	LOS A	7.5	54.7	0.25	0.27	0.25	35.2
NorthEast: Oxley St (NE)															
4	L2	All MCs	97	1.1	97	1.1	0.286	52.5	LOS D	5.3	37.7	0.90	0.76	0.90	2.9
5	T1	All MCs	94	0.0	94	0.0	0.284	51.2	LOS D	5.2	36.6	0.92	0.72	0.92	7.7
Approach			191	0.6	191	0.6	0.286	51.8	LOS D	5.3	37.7	0.91	0.74	0.91	5.4
NorthWest: Pacific Hwy (NW)															
7	L2	All MCs	54	2.0	54	2.0	0.045	21.7	LOS B	1.5	10.4	0.47	0.66	0.47	22.8
8	T1	All MCs	1012	3.9	1012	3.9	* 0.401	14.6	LOS B	17.3	125.4	0.57	0.43	0.57	27.2
Approach			1065	3.8	1065	3.8	0.401	14.9	LOS B	17.3	125.4	0.57	0.44	0.57	23.6
SouthWest: Oxley St (SW)															
10	L2	All MCs	241	0.0	241	0.0	* 0.825	83.0	LOS F	16.0	112.0	1.00	0.93	1.17	4.6
11	T1	All MCs	177	0.6	177	0.6	0.519	67.7	LOS E	10.0	70.5	0.94	0.77	0.94	6.3
12	R2	All MCs	114	0.0	114	0.0	0.512	60.6	LOS E	6.8	47.8	0.97	0.80	0.97	4.9
Approach			532	0.2	532	0.2	0.825	73.1	LOS F	16.0	112.0	0.97	0.85	1.05	4.2
All Vehicles			2913	3.3	2913	3.3	0.825	24.0	LOS B	17.3	125.4	0.54	0.47	0.55	14.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Pacific Hwy (SE)											
P1	Full	140	58.5	LOS E	0.5	0.5	0.95	0.95	75.2	20.0	0.27
NorthEast: Oxley St (NE)											

P2 Full	57	58.3	LOS E	0.2	0.2	0.95	0.95	75.0	20.0	0.27
SouthWest: Oxley St (SW)										
P4 Full	196	58.7	LOS E	0.7	0.7	0.95	0.95	75.3	20.0	0.27
All Pedestrians	393	58.6	LOS E	0.7	0.7	0.95	0.95	75.2	20.0	0.27

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

MOVEMENT SUMMARY

Site: CST03 [CST03 Pacific Hwy / Hume St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 766
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 130 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Pacific Hwy (SE)															
1	L2	All MCs	54	0.0	54	0.0	0.254	6.0	LOS A	0.6	4.3	0.03	0.11	0.03	36.7
2	T1	All MCs	1041	5.1	1041	5.1	0.254	2.0	LOS A	4.5	32.8	0.16	0.16	0.16	50.9
Approach			1095	4.8	1095	4.8	0.254	2.2	LOS A	4.5	32.8	0.15	0.16	0.15	49.7
NorthWest: Pacific Hwy (NW)															
8	T1	All MCs	1223	3.3	1223	3.3	0.420	5.0	LOS A	12.6	90.9	0.36	0.33	0.36	36.6
9	R2	All MCs	1	100.0	1	100.0	* 0.420	13.3	LOS A	12.4	89.6	0.36	0.33	0.36	22.6
Approach			1224	3.4	1224	3.4	0.420	5.0	LOS A	12.6	90.9	0.36	0.33	0.36	36.6
SouthWest: Hume St (SW)															
10	L2	All MCs	84	1.3	84	1.3	* 0.373	62.4	LOS E	5.0	35.6	0.96	0.77	0.96	4.5
12	R2	All MCs	18	0.0	18	0.0	0.074	58.3	LOS E	1.0	7.0	0.91	0.69	0.91	5.0
Approach			102	1.0	102	1.0	0.373	61.7	LOS E	5.0	35.6	0.95	0.76	0.95	4.6
All Vehicles			2421	3.9	2421	3.9	0.420	6.1	LOS A	12.6	90.9	0.29	0.27	0.29	36.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Pacific Hwy (SE)											
P1	Full	9	58.2	LOS E	0.0	0.0	0.95	0.95	74.9	20.0	0.27
NorthWest: Pacific Hwy (NW)											
P3	Full	29	58.3	LOS E	0.1	0.1	0.95	0.95	74.9	20.0	0.27
SouthWest: Hume St (SW)											
P4	Full	169	58.6	LOS E	0.6	0.6	0.95	0.95	75.3	20.0	0.27
All Pedestrians		208	58.5	LOS E	0.6	0.6	0.95	0.95	75.2	20.0	0.27

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

MOVEMENT SUMMARY

Site: CST04 [CST04 Pacific Hwy / Falcon St / Shirley Rd (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 765
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 130 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Pacific Hwy (SE)															
1	L2	All MCs	404	1.6	404	1.6	0.411	19.0	LOS B	11.9	84.3	0.51	0.73	0.51	28.1
2	T1	All MCs	678	5.9	678	5.9	0.647	37.0	LOS C	17.9	131.8	0.87	0.75	0.87	10.9
Approach			1082	4.3	1082	4.3	0.647	30.3	LOS C	17.9	131.8	0.73	0.74	0.73	17.2
East: Falcon St (E)															
21b	L3	All MCs	9	33.3	9	33.3	0.952	31.7	LOS C	18.5	130.6	1.00	1.03	1.21	5.8
21a	L1	All MCs	461	0.2	461	0.2	* 0.952	56.8	LOS E	18.5	130.6	1.00	1.03	1.21	14.1
23a	R1	All MCs	376	3.4	376	3.4	0.645	31.4	LOS C	17.1	123.0	0.77	0.78	0.77	9.4
Approach			846	2.0	846	2.0	0.952	45.2	LOS D	18.5	130.6	0.90	0.92	1.02	12.7
North: Willoughby Rd (N)															
7	L2	All MCs	1	0.0	1	0.0	0.001	3.9	LOS A	0.0	0.0	0.09	0.47	0.09	36.9
Approach			1	0.0	1	0.0	0.001	3.9	LOS A	0.0	0.0	0.09	0.47	0.09	36.9
NorthWest: Pacific Hwy (NW)															
7a	L1	All MCs	444	2.8	444	2.8	* 0.556	20.8	LOS B	13.0	93.2	0.81	0.81	0.81	22.4
8	T1	All MCs	796	3.4	796	3.4	0.742	29.8	LOS C	19.9	143.7	0.83	0.73	0.84	18.0
Approach			1240	3.2	1240	3.2	0.742	26.6	LOS B	19.9	143.7	0.83	0.76	0.83	19.3
SouthWest: Shirley Rd (SW)															
10	L2	All MCs	41	0.0	41	0.0	* 0.548	54.2	LOS D	18.7	131.5	0.93	0.81	0.93	12.7
12a	R1	All MCs	443	0.5	443	0.5	0.548	48.7	LOS D	18.7	132.4	0.93	0.82	0.93	12.6
12	R2	All MCs	192	3.3	192	3.3	0.548	50.9	LOS D	18.6	132.4	0.93	0.82	0.93	12.4
Approach			676	1.2	676	1.2	0.548	49.7	LOS D	18.7	132.4	0.93	0.82	0.93	12.6
All Vehicles			3845	2.9	3845	2.9	0.952	35.8	LOS C	19.9	143.7	0.83	0.80	0.86	15.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE [Ped	Dist]	Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed

	ped/h	sec		ped	m			sec	m	m/sec
SouthEast: Pacific Hwy (SE)										
P1 Full	113	58.5	LOS E	0.4	0.4	0.95	0.95	75.1	20.0	0.27
East: Falcon St (E)										
P5 Full	181	58.6	LOS E	0.6	0.6	0.95	0.95	75.3	20.0	0.27
NorthWest: Pacific Hwy (NW)										
P3 Full	312	59.0	LOS E	1.1	1.1	0.96	0.96	75.6	20.0	0.26
SouthWest: Shirley Rd (SW)										
P4 Full	161	58.6	LOS E	0.6	0.6	0.95	0.95	75.2	20.0	0.27
All Pedestrians	766	58.7	LOS E	1.1	1.1	0.95	0.95	75.4	20.0	0.27

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

MOVEMENT SUMMARY

Site: CST05 [CST05 Clarke St / Oxley St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Clarke St (SE)															
1	L2	All MCs	29	0.0	29	0.0	0.087	5.0	LOS A	0.3	2.1	0.35	0.57	0.35	32.1
3a	R1	All MCs	57	0.0	57	0.0	0.087	6.0	LOS A	0.3	2.1	0.35	0.57	0.35	32.1
Approach			86	0.0	86	0.0	0.087	5.7	LOS A	0.3	2.1	0.35	0.57	0.35	32.1
North: Oxley St (N)															
24a	L1	All MCs	125	0.0	125	0.0	0.148	4.4	LOS A	0.0	0.0	0.00	0.53	0.00	29.6
26a	R1	All MCs	156	0.7	156	0.7	0.148	4.1	LOS A	0.0	0.0	0.00	0.53	0.00	29.6
Approach			281	0.4	281	0.4	0.148	4.2	NA	0.0	0.0	0.00	0.53	0.00	29.6
SouthWest: Oxley St (SW)															
10a	L1	All MCs	135	0.8	135	0.8	0.142	3.4	LOS A	0.6	4.4	0.31	0.56	0.31	22.1
12	R2	All MCs	96	1.1	96	1.1	0.142	3.9	LOS A	0.6	4.4	0.31	0.56	0.31	22.1
Approach			231	0.9	231	0.9	0.142	3.6	NA	0.6	4.4	0.31	0.56	0.31	22.1
All Vehicles			598	0.5	598	0.5	0.148	4.2	NA	0.6	4.4	0.17	0.55	0.17	28.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CST06 [CST06 Clarke St / Hume St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Clarke St (SE)															
1	L2	All MCs	1	0.0	1	0.0	0.116	4.8	LOS A	0.3	1.8	0.08	0.11	0.08	23.3
2	T1	All MCs	179	0.0	179	0.0	0.116	0.1	LOS A	0.3	1.8	0.08	0.11	0.08	44.4
23a	R1	All MCs	40	0.0	40	0.0	0.116	3.9	LOS A	0.3	1.8	0.08	0.11	0.08	44.5
Approach			220	0.0	220	0.0	0.116	0.8	NA	0.3	1.8	0.08	0.11	0.08	44.3
NorthWest: Clarke St (NW)															
8	T1	All MCs	77	2.7	77	2.7	0.041	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	49.7
9	R2	All MCs	1	0.0	1	0.0	0.041	4.7	LOS A	0.0	0.1	0.01	0.01	0.01	28.8
Approach			78	2.7	78	2.7	0.041	0.1	NA	0.0	0.1	0.01	0.01	0.01	49.4
SouthWest: Hume St (SW)															
10	L2	All MCs	11	0.0	11	0.0	0.023	3.7	LOS A	0.0	0.3	0.29	0.51	0.29	23.5
30a	L1	All MCs	1	100.0	1	100.0	0.023	4.5	LOS A	0.0	0.3	0.29	0.51	0.29	34.4
12	R2	All MCs	2	0.0	2	0.0	0.023	4.6	LOS A	0.0	0.3	0.29	0.51	0.29	31.7
Approach			14	7.7	14	7.7	0.023	3.9	LOS A	0.0	0.3	0.29	0.51	0.29	27.6
All Vehicles			312	1.0	312	1.0	0.116	0.7	NA	0.3	1.8	0.07	0.10	0.07	45.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CST07 [CST07 Clarke St / Willoughby Rd (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Willoughby Rd (S)															
1	L2	All MCs	92	0.0	92	0.0	0.301	5.2	LOS A	1.5	10.9	0.55	0.51	0.55	29.1
2	T1	All MCs	151	7.0	151	7.0	0.301	3.8	LOS A	1.5	10.9	0.55	0.51	0.55	34.4
Approach			242	4.3	242	4.3	0.301	4.3	NA	1.5	10.9	0.55	0.51	0.55	32.9
North: Willoughby Rd (N)															
8	T1	All MCs	216	2.4	216	2.4	0.399	4.5	LOS A	2.2	16.0	0.56	0.64	0.71	32.3
9	R2	All MCs	56	0.0	56	0.0	0.399	13.1	LOS A	2.2	16.0	0.56	0.64	0.71	32.0
Approach			272	1.9	272	1.9	0.399	6.3	NA	2.2	16.0	0.56	0.64	0.71	32.2
West: Clarke St (W)															
10	L2	All MCs	105	2.0	105	2.0	0.349	10.6	LOS A	1.5	10.5	0.70	0.92	0.89	29.5
12	R2	All MCs	92	0.0	92	0.0	0.349	9.4	LOS A	1.5	10.5	0.70	0.92	0.89	22.5
Approach			197	1.1	197	1.1	0.349	10.0	LOS A	1.5	10.5	0.70	0.92	0.89	27.1
All Vehicles			711	2.5	711	2.5	0.399	6.7	NA	2.2	16.0	0.59	0.67	0.70	30.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CST08 [CST08 Albany St / Willoughby Rd (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

TCS 516
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Willoughby Rd (S)															
1	L2	All MCs	59	17.9	59	17.9	0.126	28.5	LOS C	1.5	12.0	0.76	0.70	0.76	24.5
2	T1	All MCs	144	2.9	144	2.9	0.281	23.2	LOS B	3.8	27.4	0.75	0.62	0.75	28.5
3	R2	All MCs	11	0.0	11	0.0	0.281	30.2	LOS C	3.8	27.4	0.75	0.62	0.75	26.9
Approach			214	6.9	214	6.9	0.281	25.0	LOS B	3.8	27.4	0.76	0.64	0.76	24.7
East: Albany St (E)															
4	L2	All MCs	21	5.0	21	5.0	0.272	19.2	LOS B	5.0	35.5	0.64	0.56	0.64	30.8
5	T1	All MCs	298	0.4	298	0.4	0.544	12.9	LOS A	6.9	48.0	0.71	0.62	0.71	29.7
6	R2	All MCs	160	0.0	160	0.0	* 0.544	28.9	LOS C	6.9	48.0	0.92	0.79	0.92	23.9
Approach			479	0.4	479	0.4	0.544	18.5	LOS B	6.9	48.0	0.78	0.67	0.78	27.5
North: Willoughby Rd (N)															
7	L2	All MCs	134	0.0	134	0.0	0.133	13.0	LOS A	2.2	15.6	0.52	0.68	0.52	31.0
8	T1	All MCs	164	2.6	164	2.6	* 0.360	19.4	LOS B	5.4	38.2	0.79	0.72	0.79	27.2
9	R2	All MCs	41	0.0	41	0.0	0.360	26.9	LOS B	5.4	38.2	0.79	0.72	0.79	25.8
Approach			339	1.2	339	1.2	0.360	17.8	LOS B	5.4	38.2	0.69	0.70	0.69	28.2
West: Albany St (W)															
10	L2	All MCs	99	1.1	99	1.1	0.236	29.0	LOS C	2.8	20.0	0.85	0.75	0.85	22.0
11	T1	All MCs	340	0.3	340	0.3	* 0.613	24.0	LOS B	10.3	72.3	0.92	0.78	0.92	24.4
Approach			439	0.5	439	0.5	0.613	25.1	LOS B	10.3	72.3	0.91	0.77	0.91	23.8
All Vehicles			1471	1.6	1471	1.6	0.613	21.2	LOS B	10.3	72.3	0.79	0.71	0.79	26.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Willoughby Rd (S)												
P1	Full	126	133	28.5	LOS C	0.2	0.2	0.91	0.91	45.2	20.0	0.44
East: Albany St (E)												
P2	Full	230	242	28.6	LOS C	0.4	0.4	0.91	0.91	45.3	20.0	0.44

North: Willoughby Rd (N)											
P3	Full	103	108	28.5	LOS C	0.2	0.2	0.90	0.90	45.1	20.0	0.44
West: Albany St (W)											
P4	Full	169	178	28.6	LOS C	0.3	0.3	0.91	0.91	45.2	20.0	0.44
All Pedestrians		628	661	28.6	LOS C	0.4	0.4	0.91	0.91	45.2	20.0	0.44

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

MOVEMENT SUMMARY

Site: CST09 [CST09 Albany St / Oxley St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

NA
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Oxley St (S)															
1	L2	All MCs	62	0.0	62	0.0	0.400	8.0	LOS A	2.6	18.3	0.77	0.67	0.77	22.0
2	T1	All MCs	142	0.7	142	0.7	0.400	7.8	LOS A	2.6	18.3	0.77	0.67	0.77	33.0
3	R2	All MCs	66	0.0	66	0.0	0.400	10.6	LOS A	2.6	18.3	0.77	0.67	0.77	31.2
3u	U	All MCs	1	0.0	1	0.0	0.400	12.0	LOS A	2.6	18.3	0.77	0.67	0.77	22.0
Approach			272	0.4	272	0.4	0.400	8.5	LOS A	2.6	18.3	0.77	0.67	0.77	31.0
East: Albany St (E)															
4	L2	All MCs	60	0.0	60	0.0	0.775	11.4	LOS A	5.6	40.3	0.81	0.90	1.03	25.8
5	T1	All MCs	302	5.6	302	5.6	0.775	11.5	LOS A	5.6	40.3	0.81	0.90	1.03	25.8
6	R2	All MCs	24	0.0	24	0.0	0.775	14.1	LOS A	5.6	40.3	0.81	0.90	1.03	32.1
6u	U	All MCs	1	0.0	1	0.0	0.775	15.5	LOS B	5.6	40.3	0.81	0.90	1.03	31.5
Approach			387	4.3	387	4.3	0.775	11.7	LOS A	5.6	40.3	0.81	0.90	1.03	26.4
North: Oxley St (N)															
7	L2	All MCs	23	0.0	23	0.0	0.351	8.3	LOS A	2.4	17.2	0.77	0.70	0.77	34.6
8	T1	All MCs	125	0.8	125	0.8	0.351	8.1	LOS A	2.4	17.2	0.77	0.70	0.77	30.0
9	R2	All MCs	105	1.0	105	1.0	0.351	11.0	LOS A	2.4	17.2	0.77	0.70	0.77	30.0
9u	U	All MCs	1	0.0	1	0.0	0.351	12.4	LOS A	2.4	17.2	0.77	0.70	0.77	34.9
Approach			255	0.8	255	0.8	0.351	9.4	LOS A	2.4	17.2	0.77	0.70	0.77	30.7
West: Albany St (W)															
10	L2	All MCs	82	0.0	82	0.0	0.549	6.4	LOS A	4.7	32.7	0.72	0.59	0.72	34.5
11	T1	All MCs	333	0.3	333	0.3	0.549	6.2	LOS A	4.7	32.7	0.72	0.59	0.72	34.3
12	R2	All MCs	95	0.0	95	0.0	0.549	9.1	LOS A	4.7	32.7	0.72	0.59	0.72	26.1
12u	U	All MCs	1	0.0	1	0.0	0.549	10.5	LOS A	4.7	32.7	0.72	0.59	0.72	26.1
Approach			511	0.2	511	0.2	0.549	6.8	LOS A	4.7	32.7	0.72	0.59	0.72	33.4
All Vehicles			1424	1.5	1424	1.5	0.775	8.9	LOS A	5.6	40.3	0.76	0.71	0.82	30.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CST10 [CST10 Albany St / Clarke Ln (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Clarke Ln (SE)															
21a	L1	All MCs	26	0.0	26	0.0	0.045	4.8	LOS A	1.2	8.2	0.34	0.54	0.34	32.2
23b	R3	All MCs	1	0.0	1	0.0	0.045	14.6	LOS B	1.2	8.2	0.34	0.54	0.34	32.2
Approach			27	0.0	27	0.0	0.045	5.2	LOS A	1.2	8.2	0.34	0.54	0.34	32.2
East: Albany St (E)															
5	T1	All MCs	474	4.0	474	4.0	0.126	0.0	LOS A	8.3	60.4	0.00	0.00	0.00	50.0
Approach			474	4.0	474	4.0	0.126	0.0	NA	8.3	60.4	0.00	0.00	0.00	50.0
West: Albany St (W)															
11	T1	All MCs	513	0.4	513	0.4	0.264	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach			513	0.4	513	0.4	0.264	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
All Vehicles			1014	2.1	1014	2.1	0.264	0.1	NA	8.3	60.4	0.01	0.01	0.01	48.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CST11 [CST11 Oxley St / Clarke Ln (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Clarke Ln (SE)															
1	L2	All MCs	3	0.0	3	0.0	0.006	4.8	LOS A	0.0	0.1	0.24	0.49	0.24	33.1
2	T1	All MCs	1	0.0	1	0.0	0.006	4.9	LOS A	0.0	0.1	0.24	0.49	0.24	33.1
3	R2	All MCs	1	0.0	1	0.0	0.006	6.5	LOS A	0.0	0.1	0.24	0.49	0.24	33.1
Approach			5	0.0	5	0.0	0.006	5.2	LOS A	0.0	0.1	0.24	0.49	0.24	33.1
NorthEast: Oxley St (NE)															
4	L2	All MCs	2	0.0	2	0.0	0.127	3.3	LOS A	0.0	0.3	0.02	0.03	0.02	43.0
5	T1	All MCs	180	0.6	180	0.6	0.127	0.0	LOS A	0.0	0.3	0.02	0.03	0.02	47.4
6	R2	All MCs	4	0.0	4	0.0	0.127	3.3	LOS A	0.0	0.3	0.02	0.03	0.02	47.4
Approach			186	0.6	186	0.6	0.127	0.1	NA	0.0	0.3	0.02	0.03	0.02	47.2
NorthWest: Clarke Ln (NW)															
7	L2	All MCs	8	0.0	8	0.0	0.014	5.2	LOS A	0.1	0.4	0.33	0.52	0.33	24.9
8	T1	All MCs	1	0.0	1	0.0	0.014	4.8	LOS A	0.1	0.4	0.33	0.52	0.33	34.0
9	R2	All MCs	4	0.0	4	0.0	0.014	6.5	LOS A	0.1	0.4	0.33	0.52	0.33	24.9
Approach			14	0.0	14	0.0	0.014	5.6	LOS A	0.1	0.4	0.33	0.52	0.33	26.1
SouthWest: Oxley St (SW)															
10	L2	All MCs	4	0.0	4	0.0	0.119	3.0	LOS A	0.0	0.1	0.00	0.01	0.00	48.7
11	T1	All MCs	223	0.9	223	0.9	0.119	0.0	LOS A	0.0	0.1	0.00	0.01	0.00	48.7
12	R2	All MCs	1	0.0	1	0.0	0.119	3.0	LOS A	0.0	0.1	0.00	0.01	0.00	42.8
Approach			228	0.9	228	0.9	0.119	0.1	NA	0.0	0.1	0.00	0.01	0.00	48.6
All Vehicles			434	0.7	434	0.7	0.127	0.3	NA	0.1	0.4	0.03	0.04	0.03	44.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CST13 [CST13 Pacific Hwy / Alexander St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 763
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 130 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Pacific Hwy (SE)															
2	T1	All MCs	977	4.7	977	4.7	*0.432	7.4	LOS A	8.5	61.8	0.57	0.50	0.57	37.2
3a	R1	All MCs	281	3.0	281	3.0	0.420	13.6	LOS A	6.1	43.7	0.49	0.69	0.49	28.8
Approach			1258	4.4	1258	4.4	0.432	8.8	LOS A	8.5	61.8	0.55	0.54	0.55	34.9
North: Alexander St (N)															
24a	L1	All MCs	247	5.1	247	5.1	*0.412	33.2	LOS C	10.6	77.1	1.00	0.76	1.00	19.3
26b	R3	All MCs	105	0.0	105	0.0	*0.885	83.1	LOS F	7.5	52.2	1.00	0.94	1.24	4.2
Approach			353	3.6	353	3.6	0.885	48.1	LOS D	10.6	77.1	1.00	0.81	1.07	13.0
NorthWest: Pacific Hwy (NW)															
7b	L3	All MCs	19	5.6	19	5.6	0.092	10.4	LOS A	0.3	3.4	0.18	0.37	0.18	34.4
8	T1	All MCs	976	3.7	976	3.7	*0.525	5.0	LOS A	9.9	69.8	0.35	0.31	0.35	47.7
Approach			995	3.7	995	3.7	0.525	5.1	LOS A	9.9	69.8	0.34	0.31	0.34	47.6
All Vehicles			2605	4.0	2605	4.0	0.885	12.7	LOS A	10.6	77.1	0.53	0.49	0.54	32.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
North: Alexander St (N)											
P6	Full	83	26.5	LOS C	0.2	0.2	0.90	0.90	43.1	20.0	0.46
NorthWest: Pacific Hwy (NW)											
P3	Full	1	58.2	LOS E	0.0	0.0	0.95	0.95	74.9	20.0	0.27
All Pedestrians		84	26.9	LOS C	0.2	0.2	0.90	0.90	43.5	20.0	0.46

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

MOVEMENT SUMMARY

Site: CST14 [CST14 Falcon St / Alexander St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 764
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 130 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Alexander St (S)															
1	L2	All MCs	9	0.0	9	0.0	0.599	71.2	LOS F	12.5	90.6	1.00	0.87	1.00	5.2
2	T1	All MCs	241	4.8	241	4.8	0.666	62.9	LOS E	12.5	90.6	1.00	0.86	1.01	8.7
3	R2	All MCs	52	0.0	52	0.0	* 0.666	81.6	LOS F	7.1	50.6	1.00	0.85	1.04	17.1
Approach			302	3.8	302	3.8	0.666	66.4	LOS E	12.5	90.6	1.00	0.86	1.01	10.4
East: Falcon St (E)															
4	L2	All MCs	31	0.0	31	0.0	0.497	22.5	LOS B	15.4	109.3	0.58	0.53	0.58	35.4
5	T1	All MCs	805	2.0	805	2.0	0.497	16.8	LOS B	15.4	109.3	0.58	0.52	0.58	35.7
6	R2	All MCs	7	100.0	7	100.0	0.497	23.2	LOS B	13.2	95.2	0.58	0.51	0.58	35.8
Approach			843	2.7	843	2.7	0.497	17.1	LOS B	15.4	109.3	0.58	0.52	0.58	35.7
North: Alexander St (N)															
7	L2	All MCs	52	0.0	52	0.0	0.558	60.8	LOS E	10.6	76.0	0.96	0.80	0.96	20.5
8	T1	All MCs	322	3.9	322	3.9	0.558	52.4	LOS D	11.3	81.8	0.96	0.80	0.96	6.3
Approach			374	3.4	374	3.4	0.558	53.6	LOS D	11.3	81.8	0.96	0.80	0.96	9.0
West: Falcon St (W)															
10	L2	All MCs	214	0.0	214	0.0	* 0.365	7.1	LOS A	3.3	23.2	0.12	0.35	0.12	36.3
11	T1	All MCs	778	2.0	778	2.0	0.365	1.0	LOS A	3.3	23.2	0.08	0.16	0.08	56.2
Approach			992	1.6	992	1.6	0.365	2.3	LOS A	3.3	23.2	0.09	0.20	0.09	53.5
All Vehicles			2511	2.5	2511	2.5	0.666	22.6	LOS B	15.4	109.3	0.49	0.48	0.50	28.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Alexander St (S)											
P1	Full	115	58.5	LOS E	0.4	0.4	0.95	0.95	75.1	20.0	0.27

East: Falcon St (E)										
P2 Full	108	58.5	LOS E	0.4	0.4	0.95	0.95	75.1	20.0	0.27
North: Alexander St (N)										
P3 Full	129	58.5	LOS E	0.5	0.5	0.95	0.95	75.2	20.0	0.27
West: Falcon St (W)										
P4 Full	217	58.7	LOS E	0.8	0.8	0.95	0.95	75.4	20.0	0.27
All Pedestrians	569	58.6	LOS E	0.8	0.8	0.95	0.95	75.2	20.0	0.27

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

MOVEMENT SUMMARY

Site: CST01 [CST01 Pacific Hwy / Albany St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 768
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 125 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Pacific Hwy (SE)															
22	T1	All MCs	1003	2.8	1003	2.8	0.380	1.6	LOS A	3.3	23.9	0.12	0.11	0.12	55.3
23b	R3	All MCs	151	0.7	151	0.7	* 0.833	69.8	LOS E	9.8	69.1	1.00	0.91	1.20	7.5
Approach			1154	2.6	1154	2.6	0.833	10.5	LOS A	9.8	69.1	0.24	0.21	0.26	37.6
East: Albany St (E)															
4b	L3	All MCs	36	0.0	36	0.0	* 0.626	60.4	LOS E	6.9	49.0	0.97	0.82	0.97	2.9
6a	R1	All MCs	416	1.0	416	1.0	0.626	51.8	LOS D	6.9	49.0	0.97	0.82	0.97	10.7
Approach			452	0.9	452	0.9	0.626	52.5	LOS D	6.9	49.0	0.97	0.82	0.97	10.2
NorthWest: Pacific Hwy (NW)															
27a	L1	All MCs	327	0.3	327	0.3	0.279	9.6	LOS A	4.5	31.8	0.25	0.63	0.25	30.5
28	T1	All MCs	822	4.6	822	4.6	* 0.411	10.4	LOS A	10.0	72.5	0.43	0.38	0.43	29.4
Approach			1149	3.4	1149	3.4	0.411	10.2	LOS A	10.0	72.5	0.38	0.45	0.38	29.7
All Vehicles			2755	2.6	2755	2.6	0.833	17.3	LOS B	10.0	72.5	0.42	0.41	0.43	25.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Pacific Hwy (SE)											
P5	Full	257	56.3	LOS E	0.9	0.9	0.95	0.95	223.0	200.0	0.90
East: Albany St (E)											
P2	Full	174	56.1	LOS E	0.6	0.6	0.95	0.95	72.8	20.0	0.27
All Pedestrians		431	56.2	LOS E	0.9	0.9	0.95	0.95	162.4	127.4	0.78

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

MOVEMENT SUMMARY

Site: CST02 [CST02 Pacific Hwy / Oxley St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 767
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 125 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Pacific Hwy (SE)															
1	L2	All MCs	86	1.2	86	1.2	0.071	12.8	LOS A	1.1	7.7	0.22	0.63	0.22	29.5
2	T1	All MCs	983	2.7	983	2.7	* 0.393	4.4	LOS A	6.0	42.9	0.22	0.19	0.22	42.8
Approach			1069	2.6	1069	2.6	0.393	5.1	LOS A	6.0	42.9	0.22	0.23	0.22	36.4
NorthEast: Oxley St (NE)															
4	L2	All MCs	93	1.1	93	1.1	0.514	53.5	LOS D	7.0	49.0	0.95	0.79	0.95	3.2
5	T1	All MCs	76	0.0	76	0.0	0.514	51.6	LOS D	7.0	49.0	0.96	0.79	0.96	7.3
Approach			168	0.6	168	0.6	0.514	52.6	LOS D	7.0	49.0	0.96	0.79	0.96	5.1
NorthWest: Pacific Hwy (NW)															
7	L2	All MCs	63	0.0	63	0.0	0.051	18.1	LOS B	1.6	11.1	0.45	0.67	0.45	23.6
8	T1	All MCs	796	4.8	796	4.8	0.315	11.5	LOS A	12.1	88.5	0.52	0.39	0.52	29.6
Approach			859	4.4	859	4.4	0.315	12.0	LOS A	12.1	88.5	0.51	0.41	0.51	26.8
SouthWest: Oxley St (SW)															
10	L2	All MCs	171	1.9	171	1.9	* 0.487	55.4	LOS D	9.3	66.3	0.94	0.80	0.94	5.5
11	T1	All MCs	115	0.9	115	0.9	0.297	48.6	LOS D	6.0	42.2	0.89	0.72	0.89	6.7
12	R2	All MCs	88	1.2	88	1.2	0.475	61.9	LOS E	5.2	37.0	0.98	0.78	0.98	4.8
Approach			374	1.4	374	1.4	0.487	54.9	LOS D	9.3	66.3	0.93	0.77	0.93	5.5
All Vehicles			2471	2.9	2471	2.9	0.514	18.3	LOS B	12.1	88.5	0.48	0.41	0.48	18.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Pacific Hwy (SE)											
P1	Full	121	56.0	LOS E	0.4	0.4	0.95	0.95	72.6	20.0	0.28
NorthEast: Oxley St (NE)											

P2 Full	116	56.0	LOS E	0.4	0.4	0.95	0.95	72.6	20.0	0.28
SouthWest: Oxley St (SW)										
P4 Full	101	55.9	LOS E	0.3	0.3	0.95	0.95	72.6	20.0	0.28
All Pedestrians	338	56.0	LOS E	0.4	0.4	0.95	0.95	72.6	20.0	0.28

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

MOVEMENT SUMMARY

Site: CST03 [CST03 Pacific Hwy / Hume St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 766
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 125 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Pacific Hwy (SE)															
1	L2	All MCs	42	5.0	42	5.0	0.084	6.7	LOS A	0.5	3.3	0.07	0.25	0.07	34.5
2	T1	All MCs	1005	2.7	1005	2.7	0.315	1.0	LOS A	2.7	19.6	0.09	0.10	0.09	55.1
Approach			1047	2.8	1047	2.8	0.315	1.3	LOS A	2.7	19.6	0.09	0.10	0.09	53.4
NorthWest: Pacific Hwy (NW)															
8	T1	All MCs	977	4.1	977	4.1	0.339	4.5	LOS A	8.9	64.6	0.33	0.30	0.33	38.3
9	R2	All MCs	1	100.0	1	100.0	* 0.339	11.9	LOS A	8.7	63.5	0.33	0.30	0.33	22.9
Approach			978	4.2	978	4.2	0.339	4.5	LOS A	8.9	64.6	0.33	0.30	0.33	38.2
SouthWest: Hume St (SW)															
10	L2	All MCs	64	0.0	64	0.0	* 0.288	60.1	LOS E	3.7	25.6	0.95	0.75	0.95	4.7
12	R2	All MCs	18	0.0	18	0.0	0.080	57.8	LOS E	1.0	6.9	0.92	0.69	0.92	5.0
Approach			82	0.0	82	0.0	0.288	59.6	LOS E	3.7	25.6	0.94	0.74	0.94	4.7
All Vehicles			2107	3.3	2107	3.3	0.339	5.0	LOS A	8.9	64.6	0.23	0.22	0.23	39.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Pacific Hwy (SE)											
P1	Full	26	55.8	LOS E	0.1	0.1	0.95	0.95	72.4	20.0	0.28
NorthWest: Pacific Hwy (NW)											
P3	Full	34	55.8	LOS E	0.1	0.1	0.95	0.95	72.4	20.0	0.28
SouthWest: Hume St (SW)											
P4	Full	82	55.9	LOS E	0.3	0.3	0.95	0.95	72.6	20.0	0.28
All Pedestrians		142	55.8	LOS E	0.3	0.3	0.95	0.95	72.5	20.0	0.28

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

MOVEMENT SUMMARY

Site: CST04 [CST04 Pacific Hwy / Falcon St / Shirley Rd (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 765
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 125 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Pacific Hwy (SE)															
1	L2	All MCs	272	0.8	272	0.8	0.267	17.1	LOS B	6.8	47.7	0.45	0.70	0.45	29.3
2	T1	All MCs	604	2.1	604	2.1	0.599	35.5	LOS C	15.2	108.1	0.85	0.72	0.85	11.3
Approach			876	1.7	876	1.7	0.599	29.8	LOS C	15.2	108.1	0.72	0.72	0.72	16.7
East: Falcon St (E)															
21b	L3	All MCs	15	14.3	15	14.3	0.907	24.1	LOS B	18.4	130.6	0.98	0.97	1.14	6.4
21a	L1	All MCs	349	1.2	349	1.2	* 0.907	51.6	LOS D	18.4	130.6	0.98	0.97	1.14	15.3
23a	R1	All MCs	396	4.3	396	4.3	0.751	35.6	LOS C	18.0	130.6	0.87	0.83	0.88	8.4
Approach			760	3.0	760	3.0	0.907	42.7	LOS D	18.4	130.6	0.92	0.90	1.01	12.5
North: Willoughby Rd (N)															
7	L2	All MCs	1	0.0	1	0.0	0.001	3.8	LOS A	0.0	0.0	0.08	0.47	0.08	37.0
Approach			1	0.0	1	0.0	0.001	3.8	LOS A	0.0	0.0	0.08	0.47	0.08	37.0
NorthWest: Pacific Hwy (NW)															
7a	L1	All MCs	396	2.4	396	2.4	* 0.565	25.3	LOS B	13.0	92.8	0.91	0.83	0.91	19.7
8	T1	All MCs	598	5.1	598	5.1	0.678	28.1	LOS B	15.2	111.0	0.76	0.65	0.76	18.7
Approach			994	4.0	994	4.0	0.678	27.0	LOS B	15.2	111.0	0.82	0.72	0.82	19.1
SouthWest: Shirley Rd (SW)															
10	L2	All MCs	47	0.0	47	0.0	* 0.757	61.6	LOS E	22.0	155.0	0.98	0.88	1.02	12.5
12a	R1	All MCs	533	0.8	533	0.8	0.757	48.6	LOS D	23.6	166.1	0.98	0.88	1.01	12.5
12	R2	All MCs	217	1.0	217	1.0	0.757	49.9	LOS D	23.6	166.1	0.98	0.87	1.00	12.6
Approach			797	0.8	797	0.8	0.757	49.7	LOS D	23.6	166.1	0.98	0.88	1.01	12.6
All Vehicles			3427	2.5	3427	2.5	0.907	36.5	LOS C	23.6	166.1	0.85	0.80	0.88	14.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE [Ped	Dist]	Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed

	ped/h	sec		ped	m			sec	m	m/sec
SouthEast: Pacific Hwy (SE)										
P1 Full	68	55.9	LOS E	0.2	0.2	0.95	0.95	72.5	20.0	0.28
East: Falcon St (E)										
P5 Full	157	56.1	LOS E	0.5	0.5	0.95	0.95	72.7	20.0	0.27
NorthWest: Pacific Hwy (NW)										
P3 Full	283	56.4	LOS E	1.0	1.0	0.96	0.96	73.0	20.0	0.27
SouthWest: Shirley Rd (SW)										
P4 Full	85	55.9	LOS E	0.3	0.3	0.95	0.95	72.6	20.0	0.28
All Pedestrians	594	56.2	LOS E	1.0	1.0	0.95	0.95	72.8	20.0	0.27

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

MOVEMENT SUMMARY

Site: CST05 [CST05 Clarke St / Oxley St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Clarke St (SE)															
1	L2	All MCs	36	2.9	36	2.9	0.080	5.0	LOS A	0.3	2.0	0.31	0.55	0.31	32.6
3a	R1	All MCs	51	0.0	51	0.0	0.080	5.6	LOS A	0.3	2.0	0.31	0.55	0.31	32.6
Approach			86	1.2	86	1.2	0.080	5.4	LOS A	0.3	2.0	0.31	0.55	0.31	32.6
North: Oxley St (N)															
24a	L1	All MCs	126	0.0	126	0.0	0.135	4.4	LOS A	0.0	0.0	0.00	0.53	0.00	29.5
26a	R1	All MCs	133	0.0	133	0.0	0.135	4.1	LOS A	0.0	0.0	0.00	0.53	0.00	29.5
Approach			259	0.0	259	0.0	0.135	4.2	NA	0.0	0.0	0.00	0.53	0.00	29.5
SouthWest: Oxley St (SW)															
10a	L1	All MCs	123	0.9	123	0.9	0.113	3.3	LOS A	0.4	3.1	0.26	0.54	0.26	22.6
12	R2	All MCs	66	1.6	66	1.6	0.113	3.8	LOS A	0.4	3.1	0.26	0.54	0.26	22.6
Approach			189	1.1	189	1.1	0.113	3.5	NA	0.4	3.1	0.26	0.54	0.26	22.6
All Vehicles			535	0.6	535	0.6	0.135	4.1	NA	0.4	3.1	0.14	0.54	0.14	28.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CST06 [CST06 Clarke St / Hume St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Clarke St (SE)															
1	L2	All MCs	1	0.0	1	0.0	0.103	4.8	LOS A	0.2	1.7	0.09	0.12	0.09	23.2
2	T1	All MCs	155	0.7	155	0.7	0.103	0.1	LOS A	0.2	1.7	0.09	0.12	0.09	44.0
23a	R1	All MCs	38	0.0	38	0.0	0.103	3.9	LOS A	0.2	1.7	0.09	0.12	0.09	44.4
Approach			194	0.5	194	0.5	0.103	0.8	NA	0.2	1.7	0.09	0.12	0.09	43.9
NorthWest: Clarke St (NW)															
8	T1	All MCs	86	1.2	86	1.2	0.045	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	49.7
9	R2	All MCs	1	0.0	1	0.0	0.045	4.6	LOS A	0.0	0.1	0.01	0.01	0.01	28.8
Approach			87	1.2	87	1.2	0.045	0.1	NA	0.0	0.1	0.01	0.01	0.01	49.4
SouthWest: Hume St (SW)															
10	L2	All MCs	1	0.0	1	0.0	0.006	3.6	LOS A	0.0	0.1	0.30	0.49	0.30	23.8
30a	L1	All MCs	1	0.0	1	0.0	0.006	3.1	LOS A	0.0	0.1	0.30	0.49	0.30	38.0
12	R2	All MCs	1	0.0	1	0.0	0.006	4.4	LOS A	0.0	0.1	0.30	0.49	0.30	32.0
Approach			3	0.0	3	0.0	0.006	3.7	LOS A	0.0	0.1	0.30	0.49	0.30	33.6
All Vehicles			284	0.7	284	0.7	0.103	0.6	NA	0.2	1.7	0.06	0.09	0.06	45.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CST07 [CST07 Clarke St / Willoughby Rd (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Willoughby Rd (S)															
1	L2	All MCs	89	0.0	89	0.0	0.248	4.9	LOS A	1.2	8.6	0.51	0.48	0.51	29.6
2	T1	All MCs	121	6.1	121	6.1	0.248	3.3	LOS A	1.2	8.6	0.51	0.48	0.51	34.7
Approach			211	3.5	211	3.5	0.248	4.0	NA	1.2	8.6	0.51	0.48	0.51	33.1
North: Willoughby Rd (N)															
8	T1	All MCs	227	2.3	227	2.3	0.374	4.0	LOS A	2.0	14.5	0.53	0.56	0.63	33.4
9	R2	All MCs	45	0.0	45	0.0	0.374	11.3	LOS A	2.0	14.5	0.53	0.56	0.63	33.0
Approach			273	1.9	273	1.9	0.374	5.2	NA	2.0	14.5	0.53	0.56	0.63	33.3
West: Clarke St (W)															
10	L2	All MCs	57	0.0	57	0.0	0.233	8.2	LOS A	0.9	6.1	0.61	0.81	0.65	31.0
12	R2	All MCs	92	0.0	92	0.0	0.233	7.9	LOS A	0.9	6.1	0.61	0.81	0.65	24.3
Approach			148	0.0	148	0.0	0.233	8.0	LOS A	0.9	6.1	0.61	0.81	0.65	27.7
All Vehicles			632	2.0	632	2.0	0.374	5.5	NA	2.0	14.5	0.54	0.59	0.59	31.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CST08 [CST08 Albany St / Willoughby Rd (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

TCS 516
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Willoughby Rd (S)															
1	L2	All MCs	63	6.7	63	6.7	0.102	21.7	LOS B	1.4	10.7	0.70	0.68	0.70	26.0
2	T1	All MCs	115	2.8	115	2.8	0.198	16.9	LOS B	2.9	20.9	0.69	0.58	0.69	29.9
3	R2	All MCs	16	0.0	16	0.0	0.198	23.6	LOS B	2.9	20.9	0.69	0.58	0.69	28.3
Approach			194	3.8	194	3.8	0.198	19.0	LOS B	2.9	20.9	0.69	0.61	0.69	27.4
East: Albany St (E)															
4	L2	All MCs	17	0.0	17	0.0	0.160	20.8	LOS B	2.7	18.7	0.66	0.56	0.66	29.5
5	T1	All MCs	326	0.3	326	0.3	0.798	21.4	LOS B	12.8	89.6	0.88	0.89	1.00	23.5
6	R2	All MCs	171	0.0	171	0.0	* 0.798	38.9	LOS C	12.8	89.6	0.99	1.05	1.16	21.2
Approach			514	0.2	514	0.2	0.798	27.2	LOS B	12.8	89.6	0.91	0.93	1.04	22.8
North: Willoughby Rd (N)															
7	L2	All MCs	98	1.1	98	1.1	0.087	10.4	LOS A	1.3	9.5	0.43	0.65	0.43	33.1
8	T1	All MCs	169	2.5	169	2.5	0.358	16.5	LOS B	5.7	40.5	0.74	0.71	0.74	28.5
9	R2	All MCs	64	1.6	64	1.6	* 0.358	22.9	LOS B	5.7	40.5	0.74	0.71	0.74	27.3
Approach			332	1.9	332	1.9	0.358	15.9	LOS B	5.7	40.5	0.65	0.69	0.65	29.4
West: Albany St (W)															
10	L2	All MCs	91	0.0	91	0.0	0.310	33.9	LOS C	2.9	20.0	0.93	0.76	0.93	20.2
11	T1	All MCs	261	0.0	261	0.0	* 0.625	27.9	LOS B	8.4	58.9	0.96	0.81	0.97	22.5
Approach			352	0.0	352	0.0	0.625	29.5	LOS C	8.4	58.9	0.95	0.79	0.96	21.8
All Vehicles			1391	1.1	1391	1.1	0.798	24.0	LOS B	12.8	89.6	0.83	0.79	0.88	24.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Willoughby Rd (S)												
P1	Full	120	126	28.5	LOS C	0.2	0.2	0.90	0.90	45.2	20.0	0.44
East: Albany St (E)												
P2	Full	291	306	28.7	LOS C	0.6	0.6	0.91	0.91	45.4	20.0	0.44

North: Willoughby Rd (N)											
P3	Full	101	106	28.5	LOS C	0.2	0.2	0.90	0.90	45.1	20.0	0.44
West: Albany St (W)											
P4	Full	200	211	28.6	LOS C	0.4	0.4	0.91	0.91	45.3	20.0	0.44
All Pedestrians		712	749	28.6	LOS C	0.6	0.6	0.91	0.91	45.3	20.0	0.44

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

MOVEMENT SUMMARY

Site: CST09 [CST09 Albany St / Oxley St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

NA
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Oxley St (S)															
1	L2	All MCs	66	1.6	66	1.6	0.325	7.5	LOS A	2.2	15.7	0.70	0.63	0.70	22.5
2	T1	All MCs	116	0.0	116	0.0	0.325	7.3	LOS A	2.2	15.7	0.70	0.63	0.70	33.5
3	R2	All MCs	72	0.0	72	0.0	0.325	10.1	LOS A	2.2	15.7	0.70	0.63	0.70	31.6
3u	U	All MCs	1	0.0	1	0.0	0.325	11.5	LOS A	2.2	15.7	0.70	0.63	0.70	22.5
Approach			255	0.4	255	0.4	0.325	8.1	LOS A	2.2	15.7	0.70	0.63	0.70	31.2
East: Albany St (E)															
4	L2	All MCs	52	2.0	52	2.0	0.413	6.0	LOS A	2.6	18.7	0.47	0.59	0.47	33.1
5	T1	All MCs	302	1.0	302	1.0	0.413	5.8	LOS A	2.6	18.7	0.47	0.59	0.47	33.1
6	R2	All MCs	51	2.1	51	2.1	0.413	8.7	LOS A	2.6	18.7	0.47	0.59	0.47	37.2
6u	U	All MCs	1	0.0	1	0.0	0.413	10.1	LOS A	2.6	18.7	0.47	0.59	0.47	36.7
Approach			405	1.3	405	1.3	0.413	6.2	LOS A	2.6	18.7	0.47	0.59	0.47	34.0
North: Oxley St (N)															
7	L2	All MCs	36	0.0	36	0.0	0.218	7.3	LOS A	1.4	9.8	0.67	0.65	0.67	35.9
8	T1	All MCs	87	0.0	87	0.0	0.218	7.1	LOS A	1.4	9.8	0.67	0.65	0.67	31.7
9	R2	All MCs	48	0.0	48	0.0	0.218	10.0	LOS A	1.4	9.8	0.67	0.65	0.67	31.7
9u	U	All MCs	1	0.0	1	0.0	0.218	11.4	LOS A	1.4	9.8	0.67	0.65	0.67	36.1
Approach			173	0.0	173	0.0	0.218	8.0	LOS A	1.4	9.8	0.67	0.65	0.67	33.0
West: Albany St (W)															
10	L2	All MCs	109	1.0	109	1.0	0.490	6.4	LOS A	4.0	28.0	0.67	0.58	0.67	34.7
11	T1	All MCs	275	0.8	275	0.8	0.490	6.2	LOS A	4.0	28.0	0.67	0.58	0.67	34.6
12	R2	All MCs	82	0.0	82	0.0	0.490	9.0	LOS A	4.0	28.0	0.67	0.58	0.67	26.4
12u	U	All MCs	1	0.0	1	0.0	0.490	10.4	LOS A	4.0	28.0	0.67	0.58	0.67	26.4
Approach			467	0.7	467	0.7	0.490	6.7	LOS A	4.0	28.0	0.67	0.58	0.67	33.8
All Vehicles			1300	0.7	1300	0.7	0.490	7.0	LOS A	4.0	28.0	0.61	0.60	0.61	33.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CST10 [CST10 Albany St / Clarke Ln (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Clarke Ln (SE)															
21a	L1	All MCs	20	0.0	20	0.0	0.047	4.2	LOS A	2.7	19.7	0.17	0.49	0.17	30.7
23b	R3	All MCs	3	33.3	3	33.3	0.047	19.2	LOS B	2.7	19.7	0.17	0.49	0.17	30.7
Approach			23	4.5	23	4.5	0.047	6.2	LOS A	2.7	19.7	0.17	0.49	0.17	30.7
East: Albany St (E)															
5	T1	All MCs	432	1.0	432	1.0	0.203	0.0	LOS A	6.4	45.5	0.00	0.00	0.00	49.9
Approach			432	1.0	432	1.0	0.203	0.0	NA	6.4	45.5	0.00	0.00	0.00	49.9
West: Albany St (W)															
11	T1	All MCs	478	0.4	478	0.4	0.246	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach			478	0.4	478	0.4	0.246	0.0	NA	0.0	0.0	0.00	0.00	0.00	49.9
All Vehicles			933	0.8	933	0.8	0.246	0.2	NA	6.4	45.5	0.00	0.01	0.00	48.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CST11 [CST11 Oxley St / Clarke Ln (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Clarke Ln (SE)															
1	L2	All MCs	1	0.0	1	0.0	0.006	5.0	LOS A	0.6	5.6	0.36	0.52	0.36	31.0
2	T1	All MCs	1	0.0	1	0.0	0.006	4.6	LOS A	0.6	5.6	0.36	0.52	0.36	31.0
3	R2	All MCs	1	100.0	1	100.0	0.006	9.4	LOS A	0.6	5.6	0.36	0.52	0.36	31.0
Approach			3	33.3	3	33.3	0.006	6.3	LOS A	0.6	5.6	0.36	0.52	0.36	31.0
NorthEast: Oxley St (NE)															
4	L2	All MCs	1	0.0	1	0.0	0.089	3.5	LOS A	0.1	0.5	0.04	0.05	0.04	42.7
5	T1	All MCs	161	0.7	161	0.7	0.089	0.0	LOS A	0.1	0.5	0.04	0.05	0.04	46.0
6	R2	All MCs	8	0.0	8	0.0	0.089	3.4	LOS A	0.1	0.5	0.04	0.05	0.04	46.0
Approach			171	0.6	171	0.6	0.089	0.2	NA	0.1	0.5	0.04	0.05	0.04	45.9
NorthWest: Clarke Ln (NW)															
7	L2	All MCs	17	0.0	17	0.0	0.024	5.0	LOS A	3.1	21.7	0.28	0.51	0.28	25.3
8	T1	All MCs	1	0.0	1	0.0	0.024	4.6	LOS A	3.1	21.7	0.28	0.51	0.28	34.3
9	R2	All MCs	5	0.0	5	0.0	0.024	6.2	LOS A	3.1	21.7	0.28	0.51	0.28	25.3
Approach			23	0.0	23	0.0	0.024	5.3	LOS A	3.1	21.7	0.28	0.51	0.28	26.0
SouthWest: Oxley St (SW)															
10	L2	All MCs	3	0.0	3	0.0	0.092	3.0	LOS A	0.0	0.1	0.00	0.01	0.00	48.7
11	T1	All MCs	174	0.6	174	0.6	0.092	0.0	LOS A	0.0	0.1	0.00	0.01	0.00	48.7
12	R2	All MCs	1	0.0	1	0.0	0.092	3.0	LOS A	0.0	0.1	0.00	0.01	0.00	42.8
Approach			178	0.6	178	0.6	0.092	0.1	NA	0.0	0.1	0.00	0.01	0.00	48.5
All Vehicles			375	0.8	375	0.8	0.092	0.5	NA	3.1	21.7	0.04	0.06	0.04	42.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CST13 [CST13 Pacific Hwy / Alexander St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 763
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 125 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Pacific Hwy (SE)															
2	T1	All MCs	763	1.9	763	1.9	*0.356	8.4	LOS A	6.9	48.9	0.59	0.51	0.59	35.5
3a	R1	All MCs	226	3.7	226	3.7	0.292	10.5	LOS A	4.4	31.6	0.41	0.62	0.41	32.9
Approach			989	2.3	989	2.3	0.356	8.8	LOS A	6.9	48.9	0.55	0.53	0.55	34.9
North: Alexander St (N)															
24a	L1	All MCs	174	1.2	174	1.2	*0.274	32.1	LOS C	7.5	53.1	1.00	0.71	1.00	19.7
26b	R3	All MCs	113	0.0	113	0.0	*0.788	75.4	LOS F	7.4	51.6	1.00	0.88	1.12	4.6
Approach			286	0.7	286	0.7	0.788	49.2	LOS D	7.5	53.1	1.00	0.78	1.05	12.1
NorthWest: Pacific Hwy (NW)															
7b	L3	All MCs	22	0.0	22	0.0	0.074	16.5	LOS B	0.3	3.0	0.23	0.47	0.23	30.1
8	T1	All MCs	807	4.3	807	4.3	*0.476	9.1	LOS A	6.3	45.2	0.44	0.39	0.44	44.7
Approach			829	4.2	829	4.2	0.476	9.3	LOS A	6.3	45.2	0.43	0.39	0.43	40.4
All Vehicles			2105	2.9	2105	2.9	0.788	14.5	LOS A	7.5	53.1	0.56	0.51	0.57	30.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
North: Alexander St (N)											
P6	Full	81	26.2	LOS C	0.2	0.2	0.89	0.89	42.9	20.0	0.47
NorthWest: Pacific Hwy (NW)											
P3	Full	2	55.7	LOS E	0.0	0.0	0.94	0.94	72.4	20.0	0.28
All Pedestrians		83	26.9	LOS C	0.2	0.2	0.89	0.89	43.6	20.0	0.46

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

MOVEMENT SUMMARY

Site: CST14 [CST14 Falcon St / Alexander St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CST-N1 [CST Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 764
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 125 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Alexander St (S)															
1	L2	All MCs	15	0.0	15	0.0	0.554	68.5	LOS E	11.3	80.9	1.00	0.87	1.00	5.3
2	T1	All MCs	184	2.9	184	2.9	0.615	60.2	LOS E	11.3	80.9	1.00	0.86	1.00	9.1
3	R2	All MCs	46	0.0	46	0.0	* 0.615	78.6	LOS F	4.0	28.1	1.00	0.80	1.04	16.9
Approach			245	2.1	245	2.1	0.615	64.1	LOS E	11.3	80.9	1.00	0.85	1.01	10.9
East: Falcon St (E)															
4	L2	All MCs	35	0.0	35	0.0	0.701	31.6	LOS C	24.1	173.2	0.81	0.73	0.81	29.3
5	T1	All MCs	755	3.2	755	3.2	0.701	26.2	LOS B	24.1	173.2	0.81	0.72	0.81	29.1
6	R2	All MCs	3	100.0	3	100.0	0.701	33.5	LOS C	12.4	90.3	0.80	0.72	0.82	29.6
Approach			793	3.5	793	3.5	0.701	26.5	LOS B	24.1	173.2	0.81	0.72	0.81	29.1
North: Alexander St (N)															
7	L2	All MCs	49	2.1	49	2.1	0.170	83.7	LOS F	2.6	18.8	0.90	0.74	0.90	20.6
8	T1	All MCs	252	0.8	252	0.8	0.758	81.3	LOS F	15.2	107.2	1.00	0.90	1.08	6.2
Approach			301	1.0	301	1.0	0.758	81.7	LOS F	15.2	107.2	0.98	0.87	1.05	6.6
West: Falcon St (W)															
10	L2	All MCs	212	0.5	212	0.5	0.156	12.1	LOS A	5.0	34.8	0.42	0.63	0.42	25.6
11	T1	All MCs	905	1.4	905	1.4	* 0.619	0.3	LOS A	2.7	19.5	0.06	0.05	0.06	59.3
Approach			1117	1.2	1117	1.2	0.619	2.6	LOS A	5.0	34.8	0.12	0.16	0.12	53.6
All Vehicles			2456	2.0	2456	2.0	0.758	26.1	LOS B	24.1	173.2	0.54	0.50	0.55	27.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Alexander St (S)											
P1	Full	77	55.9	LOS E	0.3	0.3	0.95	0.95	72.5	20.0	0.28

East: Falcon St (E)										
P2 Full	100	55.9	LOS E	0.3	0.3	0.95	0.95	72.6	20.0	0.28
North: Alexander St (N)										
P3 Full	122	56.0	LOS E	0.4	0.4	0.95	0.95	72.6	20.0	0.28
West: Falcon St (W)										
P4 Full	166	56.1	LOS E	0.6	0.6	0.95	0.95	72.8	20.0	0.27
All Pedestrians	465	56.0	LOS E	0.6	0.6	0.95	0.95	72.7	20.0	0.28

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

MOVEMENT SUMMARY

Site: VIC01 [VIC01 Pacific Hwy / Berry St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: VIC-N1 [VIC Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 1206
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 115 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Pacific Hwy (SE)															
1	L2	All MCs	98	1.1	98	1.1	0.247	6.9	LOS A	4.8	34.9	0.27	0.33	0.27	39.6
2	T1	All MCs	951	5.5	951	5.5	0.247	1.9	LOS A	4.8	34.9	0.16	0.17	0.16	54.0
23b	R3	All MCs	268	2.0	268	2.0	* 0.880	36.5	LOS C	9.5	67.8	1.00	0.89	1.16	17.5
Approach			1317	4.5	1317	4.5	0.880	9.3	LOS A	9.5	67.8	0.34	0.33	0.37	41.4
NorthWest: Pacific Hwy (NW)															
27a	L1	All MCs	819	7.1	819	7.1	0.368	8.0	LOS A	6.2	46.3	0.28	0.66	0.28	34.7
8	T1	All MCs	507	4.6	507	4.6	* 0.639	20.9	LOS B	14.1	102.4	0.84	0.80	0.84	20.4
Approach			1326	6.1	1326	6.1	0.639	12.9	LOS A	14.1	102.4	0.50	0.72	0.50	27.4
SouthWest: Berry St (SW)															
10	L2	All MCs	44	7.1	44	7.1	0.107	6.2	LOS A	0.5	4.1	0.23	0.54	0.23	35.1
Approach			44	7.1	44	7.1	0.107	6.2	LOS A	0.5	4.1	0.23	0.54	0.23	35.1
All Vehicles			2687	5.3	2687	5.3	0.880	11.1	LOS A	14.1	102.4	0.42	0.52	0.43	35.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Pacific Hwy (SE)											
P1	Full	333	51.4	LOS E	1.0	1.0	0.95	0.95	68.1	20.0	0.29
East: Berry St (E)											
P2	Full	403	51.6	LOS E	1.3	1.3	0.96	0.96	218.2	200.0	0.92
NorthWest: Pacific Hwy (NW)											
P3B	Slip/ Bypass	1	50.7	LOS E	0.0	0.0	0.94	0.94	67.4	20.0	0.30
SouthWest: Berry St (SW)											
P4	Full	369	24.8	LOS C	0.7	0.7	0.91	0.91	41.5	20.0	0.48

All Pedestrians	1106	42.6	LOS E	1.3	1.3	0.94	0.94	113.9	85.6	0.75

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

MOVEMENT SUMMARY

Site: VIC02 [VIC02 Miller St / Berry St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: VIC-N1 [VIC Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 874
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 115 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Miller St (S)															
2	T1	All MCs	314	13.8	314	13.8	0.928	24.0	LOS B	17.7	133.7	0.71	0.67	0.77	16.0
3	R2	All MCs	260	8.1	260	8.1	* 0.928	68.4	LOS E	17.7	133.7	1.00	1.17	1.30	13.1
Approach			574	11.2	574	11.2	0.928	44.1	LOS D	17.7	133.7	0.84	0.90	1.01	14.1
North: Miller St (N)															
7	L2	All MCs	232	5.0	232	5.0	* 0.889	67.5	LOS E	14.8	108.3	1.00	1.04	1.32	13.2
8	T1	All MCs	282	18.7	282	18.7	0.705	44.2	LOS D	14.9	120.9	0.97	0.85	1.00	12.1
Approach			514	12.5	514	12.5	0.889	54.7	LOS D	14.9	120.9	0.98	0.94	1.14	12.7
West: Berry St (W)															
10	L2	All MCs	153	3.4	153	3.4	0.680	43.3	LOS D	16.1	115.5	0.86	0.77	0.86	10.4
11	T1	All MCs	949	2.7	949	2.7	0.680	31.2	LOS C	18.4	141.4	0.86	0.76	0.86	18.4
12	R2	All MCs	63	58.3	63	58.3	* 0.680	38.9	LOS C	18.4	141.4	0.86	0.76	0.86	11.1
Approach			1165	5.8	1165	5.8	0.680	33.2	LOS C	18.4	141.4	0.86	0.76	0.86	16.5
All Vehicles			2253	8.7	2253	8.7	0.928	40.9	LOS C	18.4	141.4	0.88	0.83	0.96	14.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Miller St (S)											
P1	Full	396	51.6	LOS E	1.2	1.2	0.95	0.95	68.2	20.0	0.29
East: Berry St (E)											
P2	Full	333	51.4	LOS E	1.0	1.0	0.95	0.95	68.1	20.0	0.29
North: Miller St (N)											
P3	Full	457	51.7	LOS E	1.4	1.4	0.96	0.96	68.4	20.0	0.29
West: Berry St (W)											
P4	Full	911	52.7	LOS E	2.9	2.9	0.98	0.98	69.4	20.0	0.29

All Pedestrians	2096	52.1	LOS E	2.9	2.9	0.96	0.96	68.7	20.0	0.29

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

MOVEMENT SUMMARY

Site: VIC03 [VIC03 Miller St / McLaren St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: VIC-N1 [VIC Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 1156
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 110 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Miller St (S)															
1	L2	All MCs	97	3.3	97	3.3	0.076	8.9	LOS A	1.6	11.2	0.32	0.57	0.32	34.6
2	T1	All MCs	343	12.6	343	12.6	0.344	8.1	LOS A	8.5	65.9	0.47	0.43	0.47	34.9
3	R2	All MCs	26	8.0	26	8.0	* 0.344	18.0	LOS B	8.5	65.9	0.47	0.43	0.47	29.2
Approach			466	10.4	466	10.4	0.344	8.8	LOS A	8.5	65.9	0.44	0.46	0.44	34.6
East: McLaren St (E)															
4	L2	All MCs	52	4.1	52	4.1	0.532	63.6	LOS E	2.9	21.1	1.00	0.76	1.03	8.3
5	T1	All MCs	73	0.0	73	0.0	0.241	44.7	LOS D	3.5	24.4	0.92	0.71	0.92	19.9
Approach			124	1.7	124	1.7	0.532	52.5	LOS D	3.5	24.4	0.95	0.73	0.96	15.0
North: Miller St (N)															
7	L2	All MCs	56	5.7	56	5.7	0.313	17.5	LOS B	8.3	62.7	0.47	0.55	0.47	20.2
8	T1	All MCs	389	9.7	389	9.7	0.313	9.3	LOS A	8.3	62.7	0.48	0.57	0.48	28.8
9	R2	All MCs	126	2.5	126	2.5	0.313	18.6	LOS B	5.5	40.4	0.53	0.65	0.53	32.9
Approach			572	7.7	572	7.7	0.313	12.2	LOS A	8.3	62.7	0.49	0.59	0.49	28.9
West: McLaren St (W)															
10	L2	All MCs	113	1.9	113	1.9	0.358	48.5	LOS D	5.4	38.4	0.92	0.78	0.92	19.8
11	T1	All MCs	91	1.2	91	1.2	0.758	47.4	LOS D	7.9	56.0	1.00	0.88	1.17	14.8
12	R2	All MCs	51	4.2	51	4.2	* 0.758	68.5	LOS E	7.9	56.0	1.00	0.88	1.17	12.4
Approach			254	2.1	254	2.1	0.758	52.1	LOS D	7.9	56.0	0.96	0.84	1.06	16.7
All Vehicles			1416	7.1	1416	7.1	0.758	21.8	LOS B	8.5	65.9	0.60	0.60	0.62	25.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Miller St (S)											
P1	Full	363	49.0	LOS E	1.1	1.1	0.95	0.95	65.6	20.0	0.30

East: McLaren St (E)										
P2	Full	254	48.7	LOS E	0.8	0.8	0.95	0.95	65.4	20.0	0.31
North: Miller St (N)										
P3	Full	95	48.4	LOS E	0.3	0.3	0.94	0.94	65.1	20.0	0.31
West: McLaren St (W)										
P4	Full	262	48.8	LOS E	0.8	0.8	0.95	0.95	65.4	20.0	0.31
All Pedestrians		974	48.8	LOS E	1.1	1.1	0.95	0.95	65.5	20.0	0.31

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

MOVEMENT SUMMARY

Site: VIC04 [VIC04 Pacific Hwy / Miller St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: VIC-N1 [VIC Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 630
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 115 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Miller St (S)															
1	L2	All MCs	3	33.3	3	33.3	0.289	24.7	LOS B	5.9	50.0	0.78	0.70	0.78	23.0
1a	L1	All MCs	105	25.0	105	25.0	0.289	28.3	LOS B	5.9	50.0	0.78	0.70	0.78	14.6
2	T1	All MCs	148	18.4	148	18.4	0.482	39.0	LOS C	8.8	68.4	0.86	0.75	0.86	13.4
3b	R3	All MCs	72	2.9	72	2.9	* 0.482	43.6	LOS D	8.8	68.4	0.88	0.76	0.88	20.8
Approach			328	17.3	328	17.3	0.482	36.4	LOS C	8.8	68.4	0.84	0.74	0.84	15.9
SouthEast: Pacific Hwy (SE)															
21b	L3	All MCs	189	3.3	189	3.3	0.834	28.5	LOS C	14.2	102.4	0.92	0.94	1.11	23.0
21a	L1	All MCs	85	4.9	85	4.9	* 0.834	65.4	LOS E	14.2	102.4	0.92	0.94	1.11	25.2
22	T1	All MCs	1034	2.6	1034	2.6	0.834	45.3	LOS D	28.0	200.4	0.99	0.96	1.10	14.3
23a	R1	All MCs	424	8.7	424	8.7	* 0.929	48.0	LOS D	20.4	153.1	1.00	1.04	1.32	13.8
Approach			1733	4.3	1733	4.3	0.929	45.1	LOS D	28.0	200.4	0.98	0.97	1.15	15.9
North: Miller St (N)															
7a	L1	All MCs	94	34.8	94	34.8	0.093	6.0	LOS A	1.1	10.4	0.24	0.46	0.24	38.2
8	T1	All MCs	236	22.8	236	22.8	0.277	7.6	LOS A	1.7	14.2	0.23	0.21	0.23	32.7
9	R2	All MCs	7	0.0	7	0.0	0.277	12.8	LOS A	1.4	12.1	0.23	0.24	0.23	33.2
9b	R3	All MCs	8	37.5	8	37.5	0.277	13.4	LOS A	1.4	12.1	0.23	0.24	0.23	27.8
Approach			345	25.9	345	25.9	0.277	7.4	LOS A	1.7	14.2	0.23	0.28	0.23	34.0
NorthWest: Pacific Hwy (NW)															
28	T1	All MCs	307	4.5	307	4.5	0.631	42.6	LOS D	7.7	56.2	0.91	0.74	0.92	23.6
29a	R1	All MCs	262	2.0	262	2.0	0.947	64.2	LOS E	16.9	120.3	1.00	1.04	1.30	16.6
Approach			569	3.3	569	3.3	0.947	52.5	LOS D	16.9	120.3	0.95	0.88	1.09	19.8
All Vehicles			2976	8.1	2976	8.1	0.947	41.2	LOS C	28.0	200.4	0.87	0.85	1.00	18.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE [Ped	Dist]	Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed

	ped/h	sec		ped	m			sec	m	m/sec
South: Miller St (S)										
P1 Full	1345	53.7	LOS E	4.4	4.4	0.99	0.99	70.4	20.0	0.28
SouthEast: Pacific Hwy (SE)										
P5 Full	344	51.5	LOS E	1.1	1.1	0.95	0.95	68.1	20.0	0.29
North: Miller St (N)										
P3 Full	1940	55.2	LOS E	6.5	6.5	1.02	1.02	71.8	20.0	0.28
NorthWest: Pacific Hwy (NW)										
P7 Full	695	52.2	LOS E	2.2	2.2	0.97	0.97	68.9	20.0	0.29
All Pedestrians	4324	54.0	LOS E	6.5	6.5	1.00	1.00	70.6	20.0	0.28

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

MOVEMENT SUMMARY

Site: VIC01 [VIC01 Pacific Hwy / Berry St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [VIC Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 1206
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Pacific Hwy (SE)															
1	L2	All MCs	26	0.0	26	0.0	0.054	9.8	LOS A	1.7	12.1	0.45	0.36	0.45	35.9
2	T1	All MCs	795	5.6	795	5.6	0.271	3.4	LOS A	6.8	49.9	0.25	0.22	0.25	52.3
23b	R3	All MCs	211	1.0	211	1.0	* 0.685	35.6	LOS C	6.4	45.2	1.00	0.83	1.02	17.7
Approach			1032	4.5	1032	4.5	0.685	10.1	LOS A	6.8	49.9	0.41	0.34	0.42	41.2
NorthWest: Pacific Hwy (NW)															
27a	L1	All MCs	551	8.2	551	8.2	0.197	7.3	LOS A	3.2	24.1	0.23	0.64	0.23	35.9
8	T1	All MCs	353	3.0	353	3.0	* 0.455	16.3	LOS B	9.8	70.3	0.77	0.67	0.77	23.9
Approach			903	6.2	903	6.2	0.455	10.8	LOS A	9.8	70.3	0.44	0.65	0.44	30.0
SouthWest: Berry St (SW)															
10	L2	All MCs	27	0.0	27	0.0	0.054	5.7	LOS A	0.3	2.0	0.21	0.52	0.21	36.3
Approach			27	0.0	27	0.0	0.054	5.7	LOS A	0.3	2.0	0.21	0.52	0.21	36.3
All Vehicles			1962	5.2	1962	5.2	0.685	10.4	LOS A	9.8	70.3	0.42	0.49	0.43	37.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Pacific Hwy (SE)											
P1	Full	161	48.5	LOS E	0.5	0.5	0.94	0.94	65.2	20.0	0.31
East: Berry St (E)											
P2	Full	112	48.4	LOS E	0.3	0.3	0.94	0.94	215.1	200.0	0.93
NorthWest: Pacific Hwy (NW)											
P3B	Slip/ Bypass	1	48.2	LOS E	0.0	0.0	0.94	0.94	64.9	20.0	0.31
SouthWest: Berry St (SW)											
P4	Full	226	23.8	LOS C	0.4	0.4	0.90	0.90	40.5	20.0	0.49

All Pedestrians	500	37.3	LOS D	0.5	0.5	0.92	0.92	87.5	60.2	0.69

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:\Users\WanJ2\OneDrive - AECOM\General - ANZ-NAC-Sydney Metro-Sydney Metro C&SW Operational Monitoring\400_Technical\432_Traffic Analysis\SIDRA Modelling\03 Block 3\02 SIDRA Models with volumes\03 SM C&SW_VIC (Block 3).sip9

MOVEMENT SUMMARY

Site: VIC02 [VIC02 Miller St / Berry St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [VIC Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 874
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Miller St (S)															
2	T1	All MCs	415	15.7	415	15.7	0.404	11.7	LOS A	11.3	89.6	0.55	0.49	0.55	24.2
3	R2	All MCs	301	3.5	301	3.5	*0.653	23.9	LOS B	8.2	59.2	0.84	0.85	0.84	22.4
Approach			716	10.6	716	10.6	0.653	16.8	LOS B	11.3	89.6	0.67	0.64	0.67	23.2
North: Miller St (N)															
7	L2	All MCs	214	4.4	214	4.4	*0.827	59.3	LOS E	12.4	90.1	1.00	0.97	1.22	14.4
8	T1	All MCs	180	8.8	180	8.8	0.425	38.8	LOS C	8.3	62.4	0.90	0.74	0.90	13.2
Approach			394	6.4	394	6.4	0.827	49.9	LOS D	12.4	90.1	0.95	0.87	1.07	14.0
West: Berry St (W)															
10	L2	All MCs	107	7.8	107	7.8	0.619	55.6	LOS D	12.5	90.9	0.98	0.83	0.98	8.0
11	T1	All MCs	679	2.2	679	2.2	0.619	41.1	LOS C	15.6	111.2	0.97	0.82	0.97	15.2
12	R2	All MCs	57	44.4	57	44.4	*0.619	53.9	LOS D	13.5	103.7	0.97	0.83	0.97	8.4
Approach			843	5.7	843	5.7	0.619	43.8	LOS D	15.6	111.2	0.97	0.82	0.97	13.8
All Vehicles			1953	7.7	1953	7.7	0.827	35.1	LOS C	15.6	111.2	0.86	0.77	0.88	16.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Miller St (S)											
P1	Full	289	48.8	LOS E	0.9	0.9	0.95	0.95	65.5	20.0	0.31
East: Berry St (E)											
P2	Full	212	48.7	LOS E	0.6	0.6	0.94	0.94	65.3	20.0	0.31
North: Miller St (N)											
P3	Full	265	48.8	LOS E	0.8	0.8	0.95	0.95	65.4	20.0	0.31
West: Berry St (W)											
P4	Full	841	50.0	LOS E	2.6	2.6	0.97	0.97	66.6	20.0	0.30

All Pedestrians	1607	49.4	LOS E	2.6	2.6	0.96	0.96	66.1	20.0	0.30

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:\Users\WanJ2\OneDrive - AECOM\General - ANZ-NAC-Sydney Metro-Sydney Metro C&SW Operational Monitoring\400_Technical\432_Traffic Analysis\SIDRA Modelling\03 Block 3\02 SIDRA Models with volumes\03 SM C&SW_VIC (Block 3).sip9

MOVEMENT SUMMARY

Site: VIC03 [VIC03 Miller St / McLaren St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [VIC Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 1156
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Miller St (S)															
1	L2	All MCs	163	0.0	163	0.0	0.255	10.9	LOS A	5.7	43.3	0.44	0.52	0.44	34.1
2	T1	All MCs	323	21.5	323	21.5	0.255	7.6	LOS A	5.7	43.3	0.45	0.47	0.45	34.7
3	R2	All MCs	36	11.8	36	11.8	0.255	16.3	LOS B	4.8	39.2	0.46	0.43	0.46	29.2
Approach			522	14.1	522	14.1	0.255	9.2	LOS A	5.7	43.3	0.45	0.48	0.45	34.2
East: McLaren St (E)															
4	L2	All MCs	41	2.6	41	2.6	0.284	70.9	LOS F	2.0	14.2	0.98	0.73	0.98	9.5
5	T1	All MCs	149	1.4	149	1.4	* 0.516	58.0	LOS E	6.8	48.2	0.96	0.77	0.96	20.8
Approach			191	1.7	191	1.7	0.516	60.8	LOS E	6.8	48.2	0.96	0.76	0.96	15.0
North: Miller St (N)															
7	L2	All MCs	109	1.0	109	1.0	0.205	17.9	LOS B	4.7	35.4	0.49	0.61	0.49	19.4
8	T1	All MCs	354	18.2	354	18.2	0.496	11.9	LOS A	9.6	75.1	0.55	0.64	0.55	27.2
9	R2	All MCs	117	3.6	117	3.6	* 0.496	19.7	LOS B	9.6	75.1	0.58	0.65	0.58	34.2
Approach			580	12.0	580	12.0	0.496	14.6	LOS B	9.6	75.1	0.54	0.64	0.54	25.8
West: McLaren St (W)															
10	L2	All MCs	125	2.5	125	2.5	0.364	42.5	LOS D	5.4	38.5	0.91	0.78	0.91	21.1
11	T1	All MCs	63	0.0	63	0.0	0.452	36.4	LOS C	4.6	32.3	0.97	0.76	0.97	17.5
12	R2	All MCs	39	0.0	39	0.0	* 0.452	53.0	LOS D	4.6	32.3	0.97	0.76	0.97	14.8
Approach			227	1.4	227	1.4	0.452	42.6	LOS D	5.4	38.5	0.93	0.77	0.93	19.3
All Vehicles			1520	9.8	1520	9.8	0.516	22.7	LOS B	9.6	75.1	0.62	0.62	0.62	24.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Miller St (S)											
P1	Full	121	43.5	LOS E	0.3	0.3	0.93	0.93	60.1	20.0	0.33
East: McLaren St (E)											

P2 Full	188	43.6	LOS E	0.5	0.5	0.94	0.94	60.3	20.0	0.33
North: Miller St (N)										
P3 Full	132	43.5	LOS E	0.3	0.3	0.94	0.94	60.2	20.0	0.33
West: McLaren St (W)										
P4 Full	122	43.5	LOS E	0.3	0.3	0.93	0.93	60.1	20.0	0.33
All Pedestrians	563	43.5	LOS E	0.5	0.5	0.94	0.94	60.2	20.0	0.33

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

MOVEMENT SUMMARY

Site: VIC04 [VIC04 Pacific Hwy / Miller St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [VIC Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 630
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Miller St (S)															
1	L2	All MCs	5	0.0	5	0.0	0.404	21.8	LOS B	8.6	69.5	0.83	0.73	0.83	22.9
1a	L1	All MCs	124	19.5	124	19.5	0.404	25.6	LOS B	8.6	69.5	0.83	0.73	0.83	14.4
2	T1	All MCs	360	16.4	360	16.4	0.673	38.5	LOS C	15.1	120.4	0.92	0.80	0.92	13.6
3b	R3	All MCs	29	14.3	29	14.3	* 0.673	53.0	LOS D	15.1	120.4	0.94	0.81	0.94	21.2
Approach			519	16.8	519	16.8	0.673	36.1	LOS C	15.1	120.4	0.90	0.78	0.90	14.4
SouthEast: Pacific Hwy (SE)															
21b	L3	All MCs	162	3.9	162	3.9	0.508	10.7	LOS A	9.6	69.3	0.84	0.78	0.84	27.9
21a	L1	All MCs	49	2.1	49	2.1	0.508	43.9	LOS D	9.6	69.3	0.84	0.78	0.84	29.8
22	T1	All MCs	668	3.3	668	3.3	0.508	35.0	LOS C	12.8	92.1	0.87	0.75	0.87	17.9
23a	R1	All MCs	356	4.7	356	4.7	* 0.860	42.8	LOS D	15.5	112.8	1.00	0.99	1.20	15.1
Approach			1236	3.7	1236	3.7	0.860	34.4	LOS C	15.5	112.8	0.90	0.83	0.96	19.0
North: Miller St (N)															
7a	L1	All MCs	73	36.2	73	36.2	0.078	7.8	LOS A	1.1	10.1	0.30	0.49	0.30	36.5
8	T1	All MCs	144	8.8	144	8.8	0.187	10.5	LOS A	1.7	12.7	0.31	0.28	0.31	30.4
9	R2	All MCs	6	0.0	6	0.0	0.187	19.0	LOS B	0.9	7.0	0.31	0.36	0.31	30.2
9b	R3	All MCs	14	15.4	14	15.4	0.187	19.7	LOS B	0.9	7.0	0.31	0.36	0.31	23.0
Approach			237	17.3	237	17.3	0.187	10.4	LOS A	1.7	12.7	0.31	0.35	0.31	31.8
NorthWest: Pacific Hwy (NW)															
28	T1	All MCs	179	2.9	179	2.9	0.273	39.4	LOS C	4.0	28.4	0.85	0.67	0.85	24.7
29a	R1	All MCs	182	2.9	182	2.9	0.568	58.6	LOS E	9.9	71.1	1.00	0.86	1.00	17.6
Approach			361	2.9	361	2.9	0.568	49.1	LOS D	9.9	71.1	0.93	0.76	0.93	20.6
All Vehicles			2353	7.9	2353	7.9	0.860	34.6	LOS C	15.5	120.4	0.85	0.76	0.88	19.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec

South: Miller St (S)										
P1	Full	560	49.4	LOS E	1.7	1.7	0.96	0.96	66.0	20.0	0.30
SouthEast: Pacific Hwy (SE)										
P5	Full	218	48.7	LOS E	0.6	0.6	0.94	0.94	65.3	20.0	0.31
North: Miller St (N)										
P3	Full	1193	50.7	LOS E	3.7	3.7	0.99	0.99	67.4	20.0	0.30
NorthWest: Pacific Hwy (NW)										
P7	Full	376	49.0	LOS E	1.1	1.1	0.95	0.95	65.7	20.0	0.30
All Pedestrians		2346	49.9	LOS E	3.7	3.7	0.97	0.97	66.6	20.0	0.30

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

MOVEMENT SUMMARY

Site: VIC01 [VIC01 Pacific Hwy / Berry St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [VIC Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 1206
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 100 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Pacific Hwy (SE)															
1	L2	All MCs	23	0.0	23	0.0	0.064	6.3	LOS A	1.0	6.8	0.23	0.28	0.23	40.6
2	T1	All MCs	937	1.7	937	1.7	0.302	2.7	LOS A	5.8	41.1	0.23	0.21	0.23	53.9
23b	R3	All MCs	117	2.7	117	2.7	* 0.527	32.1	LOS C	3.1	21.9	1.00	0.79	1.00	19.0
Approach			1077	1.8	1077	1.8	0.527	5.9	LOS A	5.8	41.1	0.31	0.27	0.31	47.6
NorthWest: Pacific Hwy (NW)															
27a	L1	All MCs	464	3.9	464	3.9	0.160	7.7	LOS A	2.7	19.2	0.26	0.64	0.26	35.2
8	T1	All MCs	369	0.9	369	0.9	* 0.415	13.0	LOS A	9.7	68.6	0.71	0.60	0.71	27.2
Approach			834	2.5	834	2.5	0.415	10.0	LOS A	9.7	68.6	0.46	0.62	0.46	31.1
SouthWest: Berry St (SW)															
10	L2	All MCs	41	0.0	41	0.0	0.063	9.7	LOS A	0.6	4.5	0.34	0.57	0.34	33.2
Approach			41	0.0	41	0.0	0.063	9.7	LOS A	0.6	4.5	0.34	0.57	0.34	33.2
All Vehicles			1952	2.0	1952	2.0	0.527	7.8	LOS A	9.7	68.6	0.38	0.43	0.38	41.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Pacific Hwy (SE)											
P1	Full	109	43.4	LOS E	0.3	0.3	0.93	0.93	60.1	20.0	0.33
East: Berry St (E)											
P2	Full	129	43.5	LOS E	0.3	0.3	0.94	0.94	210.1	200.0	0.95
NorthWest: Pacific Hwy (NW)											
P3B	Slip/ Bypass	1	43.2	LOS E	0.0	0.0	0.93	0.93	59.9	20.0	0.33
SouthWest: Berry St (SW)											
P4	Full	167	1.1	LOS A	0.1	0.1	0.21	0.21	17.8	20.0	1.12

All Pedestrians	407	26.1	LOS C	0.3	0.3	0.64	0.64	90.4	77.2	0.85

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

MOVEMENT SUMMARY

Site: VIC02 [VIC02 Miller St / Berry St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [VIC Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 874
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 100 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Miller St (S)															
2	T1	All MCs	259	4.9	259	4.9	0.793	29.4	LOS C	11.0	78.4	0.95	0.70	0.97	14.4
3	R2	All MCs	223	1.4	223	1.4	*0.793	50.5	LOS D	11.0	78.4	1.00	1.06	1.11	15.9
Approach			482	3.3	482	3.3	0.793	39.2	LOS C	11.0	78.4	0.97	0.87	1.04	15.3
North: Miller St (N)															
7	L2	All MCs	113	2.8	113	2.8	*0.694	58.6	LOS E	5.8	41.4	1.00	0.87	1.12	15.0
8	T1	All MCs	176	6.0	176	6.0	0.554	44.2	LOS D	8.0	59.0	0.96	0.79	0.96	12.7
Approach			288	4.7	288	4.7	0.694	49.8	LOS D	8.0	59.0	0.98	0.82	1.02	13.3
West: Berry St (W)															
10	L2	All MCs	88	1.2	88	1.2	0.142	33.3	LOS C	3.6	25.1	0.87	0.75	0.87	10.1
11	T1	All MCs	528	1.2	528	1.2	0.345	21.8	LOS B	10.3	72.8	0.75	0.65	0.75	21.6
12	R2	All MCs	23	59.1	23	59.1	*0.345	28.9	LOS C	8.6	63.6	0.71	0.62	0.71	14.3
Approach			640	3.3	640	3.3	0.345	23.7	LOS B	10.3	72.8	0.77	0.66	0.77	19.9
All Vehicles			1411	3.6	1411	3.6	0.793	34.3	LOS C	11.0	78.4	0.88	0.76	0.91	16.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Miller St (S)											
P1	Full	141	43.5	LOS E	0.4	0.4	0.94	0.94	60.2	20.0	0.33
East: Berry St (E)											
P2	Full	113	43.4	LOS E	0.3	0.3	0.93	0.93	60.1	20.0	0.33
North: Miller St (N)											
P3	Full	91	43.4	LOS E	0.2	0.2	0.93	0.93	60.1	20.0	0.33
West: Berry St (W)											
P4	Full	251	43.7	LOS E	0.7	0.7	0.94	0.94	60.4	20.0	0.33

All Pedestrians	595	43.6	LOS E	0.7	0.7	0.94	0.94	60.2	20.0	0.33

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

MOVEMENT SUMMARY

Site: VIC03 [VIC03 Miller St / McLaren St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [VIC Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 1156
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Miller St (S)															
1	L2	All MCs	93	1.1	93	1.1	0.087	9.5	LOS A	1.2	8.4	0.46	0.61	0.46	34.2
2	T1	All MCs	232	5.0	232	5.0	0.273	7.9	LOS A	4.1	29.9	0.58	0.51	0.58	35.1
3	R2	All MCs	23	4.5	23	4.5	0.273	15.9	LOS B	4.1	29.9	0.58	0.51	0.58	29.5
Approach			347	3.9	347	3.9	0.273	8.8	LOS A	4.1	29.9	0.55	0.54	0.55	34.5
East: McLaren St (E)															
4	L2	All MCs	34	0.0	34	0.0	0.272	36.6	LOS C	1.0	7.2	0.98	0.71	0.98	13.0
5	T1	All MCs	66	0.0	66	0.0	* 0.185	23.1	LOS B	1.7	11.9	0.88	0.67	0.88	28.1
Approach			100	0.0	100	0.0	0.272	27.7	LOS B	1.7	11.9	0.92	0.69	0.92	23.2
North: Miller St (N)															
7	L2	All MCs	39	0.0	39	0.0	0.065	15.9	LOS B	0.9	6.4	0.59	0.64	0.59	19.0
8	T1	All MCs	215	5.4	215	5.4	0.327	10.1	LOS A	4.6	33.7	0.63	0.65	0.63	28.2
9	R2	All MCs	62	0.0	62	0.0	* 0.327	17.1	LOS B	4.6	33.7	0.64	0.65	0.64	35.1
Approach			316	3.7	316	3.7	0.327	12.2	LOS A	4.6	33.7	0.63	0.65	0.63	28.3
West: McLaren St (W)															
10	L2	All MCs	57	0.0	57	0.0	0.141	26.0	LOS B	1.4	9.7	0.84	0.72	0.84	27.1
11	T1	All MCs	53	6.0	53	6.0	0.352	18.6	LOS B	2.4	17.4	0.92	0.72	0.92	24.3
12	R2	All MCs	39	2.7	39	2.7	* 0.352	31.7	LOS C	2.4	17.4	0.92	0.72	0.92	21.3
Approach			148	2.8	148	2.8	0.352	24.9	LOS B	2.4	17.4	0.89	0.72	0.89	24.9
All Vehicles			912	3.2	912	3.2	0.352	14.7	LOS B	4.6	33.7	0.67	0.62	0.67	29.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Miller St (S)											
P1	Full	80	23.5	LOS C	0.1	0.1	0.89	0.89	40.2	20.0	0.50
East: McLaren St (E)											

P2 Full	168	23.6	LOS C	0.3	0.3	0.89	0.89	40.2	20.0	0.50
North: Miller St (N)										
P3 Full	89	23.5	LOS C	0.1	0.1	0.89	0.89	40.2	20.0	0.50
West: McLaren St (W)										
P4 Full	124	23.5	LOS C	0.2	0.2	0.89	0.89	40.2	20.0	0.50
All Pedestrians	462	23.5	LOS C	0.3	0.3	0.89	0.89	40.2	20.0	0.50

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

MOVEMENT SUMMARY

Site: VIC04 [VIC04 Pacific Hwy / Miller St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [VIC Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 630
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 100 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Miller St (S)															
1	L2	All MCs	2	0.0	2	0.0	0.376	29.2	LOS C	5.4	40.9	0.91	0.75	0.91	21.1
1a	L1	All MCs	87	12.0	87	12.0	0.376	33.6	LOS C	5.4	40.9	0.91	0.75	0.91	12.8
2	T1	All MCs	205	6.2	205	6.2	* 0.627	44.6	LOS D	8.9	65.4	0.96	0.80	0.97	12.4
3b	R3	All MCs	20	5.3	20	5.3	0.627	48.2	LOS D	8.9	65.4	0.98	0.81	0.99	19.9
Approach			315	7.7	315	7.7	0.627	41.7	LOS C	8.9	65.4	0.95	0.79	0.96	13.2
SouthEast: Pacific Hwy (SE)															
21b	L3	All MCs	146	2.9	146	2.9	0.148	9.0	LOS A	2.1	15.0	0.34	0.67	0.34	37.0
21a	L1	All MCs	22	4.8	22	4.8	0.148	26.2	LOS B	2.1	15.0	0.34	0.67	0.34	37.6
22	T1	All MCs	675	0.9	675	0.9	0.416	21.8	LOS B	11.5	81.2	0.75	0.65	0.75	23.3
23a	R1	All MCs	277	1.1	277	1.1	* 0.666	35.9	LOS C	9.0	63.3	0.97	0.90	0.98	17.1
Approach			1120	1.3	1120	1.3	0.666	23.7	LOS B	11.5	81.2	0.74	0.71	0.74	23.6
North: Miller St (N)															
7a	L1	All MCs	46	34.1	46	34.1	0.062	6.6	LOS A	0.4	3.6	0.19	0.43	0.19	37.5
8	T1	All MCs	144	5.1	144	5.1	0.405	4.8	LOS A	0.9	6.8	0.15	0.14	0.15	35.2
9	R2	All MCs	2	0.0	2	0.0	0.405	9.3	LOS A	0.9	6.8	0.17	0.16	0.17	35.2
9b	R3	All MCs	6	16.7	6	16.7	0.405	10.0	LOS A	0.9	6.8	0.17	0.16	0.17	31.5
Approach			199	12.2	199	12.2	0.405	5.4	LOS A	0.9	6.8	0.16	0.21	0.16	35.7
NorthWest: Pacific Hwy (NW)															
28	T1	All MCs	153	2.8	153	2.8	0.134	13.1	LOS A	1.4	10.0	0.39	0.31	0.39	40.6
29a	R1	All MCs	238	0.4	238	0.4	* 0.695	55.3	LOS D	11.9	83.9	1.00	0.89	1.02	18.2
Approach			391	1.3	391	1.3	0.695	38.8	LOS C	11.9	83.9	0.76	0.66	0.78	23.4
All Vehicles			2024	3.4	2024	3.4	0.695	27.6	LOS B	11.9	83.9	0.72	0.67	0.73	22.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec

South: Miller St (S)											
P1	Full	268	43.7	LOS E	0.7	0.7	0.94	0.94	60.4	20.0	0.33
SouthEast: Pacific Hwy (SE)											
P5	Full	145	43.5	LOS E	0.4	0.4	0.94	0.94	60.2	20.0	0.33
North: Miller St (N)											
P3	Full	504	44.2	LOS E	1.4	1.4	0.95	0.95	60.8	20.0	0.33
NorthWest: Pacific Hwy (NW)											
P7	Full	195	43.6	LOS E	0.5	0.5	0.94	0.94	60.3	20.0	0.33
All Pedestrians		1113	43.9	LOS E	1.4	1.4	0.94	0.94	60.5	20.0	0.33

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

MOVEMENT SUMMARY

Site: BGU01 [BGU01 Hickson Rd / Towns Pl (Site Folder: Block 3 - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N1 [BGU Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Hickson Rd (E)															
4a	L1	All MCs	141	11.2	141	11.2	0.207	4.9	LOS A	0.9	6.9	0.46	0.59	0.46	37.1
6a	R1	All MCs	56	9.4	56	9.4	0.207	7.3	LOS A	0.9	6.9	0.46	0.59	0.46	34.3
Approach			197	10.7	197	10.7	0.207	5.6	NA	0.9	6.9	0.46	0.59	0.46	36.7
NorthWest: Towns Pl (NW)															
27a	L1	All MCs	122	8.6	122	8.6	0.303	6.1	LOS A	1.3	9.4	0.60	0.82	0.71	33.3
29	R2	All MCs	80	5.3	80	5.3	0.303	10.2	LOS A	1.3	9.4	0.60	0.82	0.71	35.0
Approach			202	7.3	202	7.3	0.303	7.7	LOS A	1.3	9.4	0.60	0.82	0.71	34.2
SouthWest: Hickson Rd (SW)															
30	L2	All MCs	104	13.1	104	13.1	0.287	5.4	LOS A	1.5	11.4	0.44	0.52	0.44	37.0
32a	R1	All MCs	239	12.3	239	12.3	0.287	3.6	LOS A	1.5	11.4	0.44	0.52	0.44	37.8
Approach			343	12.6	343	12.6	0.287	4.2	NA	1.5	11.4	0.44	0.52	0.44	37.6
All Vehicles			742	10.6	742	10.6	0.303	5.5	NA	1.5	11.4	0.49	0.62	0.52	36.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: BGU02 [BGU02 Dalgety Rd / Towns Pl (Site Folder: Block 3 - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N1 [BGU Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Dalgety Rd (S)															
30	L2	All MCs	18	0.0	18	0.0	0.148	6.2	LOS A	0.9	6.4	0.17	0.56	0.17	24.4
3b	R3	All MCs	183	7.5	183	7.5	0.148	6.5	LOS A	0.9	6.4	0.17	0.56	0.17	32.0
32u	U	All MCs	1	0.0	1	0.0	0.148	7.1	LOS A	0.9	6.4	0.17	0.56	0.17	34.6
Approach			202	6.8	202	6.8	0.148	6.4	LOS A	0.9	6.4	0.17	0.56	0.17	31.0
SouthEast: Towns Pl (SE)															
21b	L3	All MCs	124	14.4	124	14.4	0.103	2.7	LOS A	0.6	4.8	0.04	0.50	0.04	35.0
21a	L1	All MCs	17	0.0	17	0.0	0.103	8.2	LOS A	0.6	4.8	0.04	0.50	0.04	18.8
23u	U	All MCs	19	5.6	19	5.6	0.103	6.9	LOS A	0.6	4.8	0.04	0.50	0.04	29.4
Approach			160	11.8	160	11.8	0.103	3.7	LOS A	0.6	4.8	0.04	0.50	0.04	33.2
West: Parking Access (W)															
12a	R1	All MCs	1	100.0	1	100.0	0.004	2.3	LOS A	0.0	0.2	0.42	0.19	0.42	9.5
29	R2	All MCs	1	0.0	1	0.0	0.004	1.1	LOS A	0.0	0.2	0.42	0.19	0.42	21.1
29u	U	All MCs	1	0.0	1	0.0	0.004	1.1	LOS A	0.0	0.2	0.42	0.19	0.42	9.7
Approach			3	33.3	3	33.3	0.004	1.5	LOS A	0.0	0.2	0.42	0.19	0.42	14.3
All Vehicles			365	9.2	365	9.2	0.148	5.2	LOS A	0.9	6.4	0.11	0.53	0.11	31.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: BGU03 [BGU03 Kent St / Argyle St (Site Folder: Block 3 - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kent St (S)															
1	L2	All MCs	94	7.9	94	7.9	0.674	8.1	LOS A	7.8	57.6	0.74	0.99	1.40	32.4
2	T1	All MCs	31	6.9	31	6.9	0.674	9.4	LOS A	7.8	57.6	0.74	0.99	1.40	30.5
3	R2	All MCs	313	5.7	313	5.7	0.674	16.1	LOS B	7.8	57.6	0.74	0.99	1.40	31.0
Approach			437	6.3	437	6.3	0.674	13.9	LOS A	7.8	57.6	0.74	0.99	1.40	31.3
East: Argyle St (E)															
4	L2	All MCs	201	3.1	201	3.1	0.281	4.6	LOS A	1.4	10.2	0.42	0.47	0.42	36.4
5	T1	All MCs	85	7.4	85	7.4	0.281	2.4	LOS A	1.4	10.2	0.42	0.47	0.42	36.0
6	R2	All MCs	3	0.0	3	0.0	0.281	5.0	LOS A	1.4	10.2	0.42	0.47	0.42	31.3
Approach			289	4.4	289	4.4	0.281	4.0	NA	1.4	10.2	0.42	0.47	0.42	36.3
North: Kent St (N)															
7	L2	All MCs	5	0.0	5	0.0	0.036	8.1	LOS A	0.1	0.9	0.45	0.94	0.45	27.4
8	T1	All MCs	18	5.9	18	5.9	0.036	9.5	LOS A	0.1	0.9	0.45	0.94	0.45	33.5
9	R2	All MCs	3	0.0	3	0.0	0.036	8.6	LOS A	0.1	0.9	0.45	0.94	0.45	30.7
Approach			26	4.0	26	4.0	0.036	9.1	LOS A	0.1	0.9	0.45	0.94	0.45	32.5
West: Argyle Pl (W)															
10	L2	All MCs	3	33.3	3	33.3	0.143	5.2	LOS A	0.7	5.0	0.43	0.41	0.43	33.9
11	T1	All MCs	83	8.9	83	8.9	0.143	2.0	LOS A	0.7	5.0	0.43	0.41	0.43	36.8
12	R2	All MCs	56	1.9	56	1.9	0.143	4.6	LOS A	0.7	5.0	0.43	0.41	0.43	37.3
Approach			142	6.7	142	6.7	0.143	3.1	NA	0.7	5.0	0.43	0.41	0.43	37.0
All Vehicles			895	5.6	895	5.6	0.674	8.8	NA	7.8	57.6	0.58	0.73	0.90	33.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [TCS 4272]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 2 (Network Folder: Block 3 Network - 2024 AM Peak)]

EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 85 seconds (CCG User-Given Phase Times)

Vehicle Movement Performance (CCG)

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
Site: BGU04 [BGU04 Pedestrian Mid-block Crossing at Kent St near Gas Ln]															
South: Kent St															
2	T1	All MCs	544	7.5	544	7.5	0.500	4.6	LOS A	7.5	55.8	0.36	0.32	0.36	36.3
Approach			544	7.5	544	7.5	0.500	4.6	LOS A	7.5	55.8	0.36	0.32	0.36	36.3
North: Kent St															
8	T1	All MCs	374	3.7	374	3.7	0.596	35.3	LOS C	8.3	59.7	0.96	0.80	0.97	21.4
Approach			374	3.7	374	3.7	0.596	35.3	LOS C	8.3	59.7	0.96	0.80	0.97	21.4
All Vehicles			918	6.0	918	6.0	0.596	17.1	LOS B	8.3	59.7	0.61	0.51	0.61	28.7
Site: BGU05 [BGU05 Kent St / Sydney Harbour Bridge (SHB) On-ramp]															
South: Kent St (S)															
2	T1	All MCs	363	4.6	363	4.6	0.382	5.9	LOS A	5.6	40.5	0.40	0.35	0.40	31.0
3a	R1	All MCs	429	5.6	429	5.6	* 0.673	20.7	LOS B	12.0	88.2	0.78	0.72	0.78	24.8
Approach			793	5.2	793	5.2	0.673	13.9	LOS A	12.0	88.2	0.60	0.55	0.60	26.7
East: Clarence St (E)															
4	L2	All MCs	72	0.0	72	0.0	0.218	36.5	LOS C	2.6	18.3	0.89	0.74	0.89	12.3
6	R2	All MCs	183	6.3	183	6.3	0.526	35.0	LOS C	6.9	50.6	0.92	0.80	0.92	12.7
Approach			255	4.5	255	4.5	0.526	35.5	LOS C	6.9	50.6	0.91	0.78	0.91	12.6
NorthEast: SHB On-ramp (NE)															
24a	L1	All MCs	58	0.0	58	0.0	0.048	30.4	LOS C	1.9	5.2	0.85	0.64	0.85	20.1
Approach			58	0.0	58	0.0	0.048	30.4	LOS C	1.9	5.2	0.85	0.64	0.85	20.1
North: Kent St (N)															
7b	L3	All MCs	200	3.2	200	3.2	* 0.540	44.4	LOS D	8.5	60.9	1.00	0.87	1.00	12.0
8	T1	All MCs	171	4.9	171	4.9	* 0.650	17.3	LOS B	4.8	35.1	0.68	0.56	0.69	10.3
Approach			371	4.0	371	4.0	0.650	31.9	LOS C	8.5	60.9	0.85	0.73	0.86	11.6
All Vehicles			1476	4.6	1476	4.6	0.673	22.8	LOS B	12.0	88.2	0.73	0.64	0.73	19.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance (CCG)

Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE	Prop. Que	Eff. Stop	Travel Time	Travel Dist.	Aver. Speed

	ped/h	sec		[Ped ped	Dist] m		Rate	sec	m	m/sec
Site: BGU04 [BGU04 Pedestrian Mid-block Crossing at Kent St near Gas Ln]										
South: Kent St										
P1 Full	344	36.3	LOS D	0.8	0.8	0.93	0.93	203.0	200.0	0.99
All Pedestrians	344	36.3	LOS D	0.8	0.8	0.93	0.93	203.0	200.0	0.99
Site: BGU05 [BGU05 Kent St / Sydney Harbour Bridge (SHB) On-ramp]										
South: Kent St (S)										
P1 Full	289	36.2	LOS D	0.6	0.6	0.93	0.93	52.9	20.0	0.38
All Pedestrians	289	36.2	LOS D	0.6	0.6	0.93	0.93	52.9	20.0	0.38

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

MOVEMENT SUMMARY

Site: BGU06 [BGU06 Hickson Rd / Napoleon St / Sussex St (Site Folder: Block 3 - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 3 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 4625
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 75 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Sussex St (S)															
2	T1	All MCs	304	8.7	304	8.7	0.318	10.6	LOS A	6.2	47.0	0.60	0.51	0.60	24.9
3	R2	All MCs	142	2.2	142	2.2	* 0.332	18.8	LOS B	3.4	24.5	0.79	0.74	0.79	22.1
Approach			446	6.6	446	6.6	0.332	13.2	LOS A	6.2	47.0	0.66	0.58	0.66	23.7
East: Napolean St (E)															
4	L2	All MCs	141	17.9	141	17.9	0.261	22.8	LOS B	3.8	30.4	0.76	0.73	0.76	15.0
6	R2	All MCs	184	10.3	184	10.3	* 0.551	33.5	LOS C	6.3	48.1	0.95	0.80	0.95	14.4
Approach			325	13.6	325	13.6	0.551	28.9	LOS C	6.3	48.1	0.87	0.77	0.87	14.6
North: Hickson Rd (N)															
7	L2	All MCs	78	10.8	78	10.8	0.135	21.8	LOS B	2.0	15.1	0.72	0.69	0.72	18.2
8	T1	All MCs	227	13.4	227	13.4	* 0.342	17.9	LOS B	5.9	46.4	0.75	0.63	0.75	11.5
Approach			305	12.8	305	12.8	0.342	18.9	LOS B	5.9	46.4	0.74	0.65	0.74	14.0
West: Car Park Access (W)															
10	L2	All MCs	1	0.0	1	0.0	0.043	42.6	LOS D	0.1	0.6	0.99	0.60	0.99	5.5
11	T1	All MCs	4	0.0	4	0.0	* 0.208	43.7	LOS D	0.4	3.0	1.00	0.64	1.00	8.7
12	R2	All MCs	7	0.0	7	0.0	0.208	44.0	LOS D	0.4	3.0	1.00	0.66	1.00	2.2
Approach			13	0.0	13	0.0	0.208	43.8	LOS D	0.4	3.0	1.00	0.65	1.00	5.0
All Vehicles			1089	10.3	1089	10.3	0.551	19.8	LOS B	6.3	48.1	0.75	0.66	0.75	17.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Sussex St (S)											
P1	Full	100	31.0	LOS D	0.2	0.2	0.91	0.91	47.6	20.0	0.42
East: Napolean St (E)											
P2	Full	185	31.1	LOS D	0.4	0.4	0.91	0.91	47.7	20.0	0.42

North: Hickson Rd (N)										
P3	Full	131	31.0	LOS D	0.3	0.3	0.91	0.91	47.7	20.0	0.42
West: Car Park Access (W)										
P4	Full	155	31.0	LOS D	0.3	0.3	0.91	0.91	47.7	20.0	0.42
All Pedestrians		571	31.0	LOS D	0.4	0.4	0.91	0.91	47.7	20.0	0.42

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

MOVEMENT SUMMARY

Site: BGU07 [BGU07 Margaret St / Kent St / Napoleon St (Site Folder: Block 3 - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 2 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 308

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 85 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kent St (S)															
1a	L1	All MCs	83	21.5	83	21.5	0.461	23.8	LOS B	10.7	81.6	0.71	0.65	0.71	20.4
2	T1	All MCs	623	5.4	623	5.4	* 0.461	21.4	LOS B	10.7	81.6	0.81	0.69	0.81	8.1
3	R2	All MCs	31	0.0	31	0.0	* 0.461	55.2	LOS D	7.5	55.2	0.87	0.74	0.87	7.2
Approach			737	7.0	737	7.0	0.461	23.1	LOS B	10.7	81.6	0.80	0.68	0.80	9.6
East: Margaret St (E)															
4	L2	All MCs	81	1.3	81	1.3	0.198	38.3	LOS C	3.2	22.8	0.99	0.78	0.99	8.1
6a	R1	All MCs	252	8.4	252	8.4	0.748	37.2	LOS C	8.8	65.3	1.00	0.92	1.06	12.9
6	R2	All MCs	98	2.2	98	2.2	* 0.748	39.2	LOS C	8.8	65.3	1.00	0.92	1.06	5.4
Approach			431	5.6	431	5.6	0.748	37.8	LOS C	8.8	65.3	1.00	0.89	1.05	10.6
North: Kent St (N)															
7	L2	All MCs	44	0.0	44	0.0	0.297	19.6	LOS B	2.6	18.5	0.40	0.40	0.40	25.9
8	T1	All MCs	234	1.8	234	1.8	0.297	22.1	LOS B	4.3	18.5	0.68	0.56	0.68	19.0
9b	R3	All MCs	76	4.2	76	4.2	0.258	13.1	LOS A	1.1	7.8	0.34	0.62	0.34	27.8
Approach			354	2.1	354	2.1	0.297	19.8	LOS B	4.3	18.5	0.57	0.55	0.57	21.4
NorthWest: Napoleon St (NW)															
27b	L3	All MCs	172	3.1	172	3.1	0.379	11.0	LOS A	3.9	28.2	0.58	0.68	0.58	24.2
27a	L1	All MCs	53	12.0	53	12.0	0.379	21.8	LOS B	3.9	28.2	0.58	0.68	0.58	24.2
Approach			224	5.2	224	5.2	0.379	13.5	LOS A	3.9	28.2	0.58	0.68	0.58	24.2
All Vehicles			1745	5.4	1745	5.4	0.748	24.8	LOS B	10.7	81.6	0.77	0.71	0.79	14.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Kent St (S)											

P1 Full	1469	36.2	LOS D	3.4	3.4	0.95	0.95	52.9	20.0	0.38
East: Margaret St (E)										
P2 Full	232	34.3	LOS D	0.5	0.5	0.90	0.90	51.0	20.0	0.39
North: Kent St (N)										
P3 Full	315	34.4	LOS D	0.7	0.7	0.91	0.91	51.1	20.0	0.39
NorthWest: Napoleon St (NW)										
P7 Full	1132	35.7	LOS D	2.6	2.6	0.94	0.94	202.3	200.0	0.99
All Pedestrians	3147	35.7	LOS D	3.4	3.4	0.94	0.94	106.3	84.7	0.80

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

MOVEMENT SUMMARY

Site: BGU08 [BGU08 Margaret St / Clarence St (Site Folder: Block 3 - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 2 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 319
Site Category: NA
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 85 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Clarence St (S)															
1	L2	All MCs	64	4.9	64	4.9	0.363	29.9	LOS C	7.0	50.6	0.80	0.69	0.80	15.3
2	T1	All MCs	583	32.7	583	32.7	0.363	21.3	LOS B	7.6	54.9	0.77	0.66	0.77	19.0
3	R2	All MCs	22	0.0	22	0.0	0.274	29.1	LOS C	3.1	35.8	0.75	0.64	0.75	15.8
Approach			669	28.9	669	28.9	0.363	22.3	LOS B	7.6	54.9	0.78	0.66	0.78	18.6
East: Margaret St (E)															
5	T1	All MCs	371	5.7	371	5.7	0.482	15.6	LOS B	7.3	53.3	0.73	0.64	0.73	10.3
6	R2	All MCs	55	84.6	55	84.6	* 0.482	20.7	LOS B	4.6	41.0	0.79	0.70	0.79	14.2
Approach			425	15.8	425	15.8	0.482	16.3	LOS B	7.3	53.3	0.74	0.65	0.74	11.0
West: Margaret St (W)															
10	L2	All MCs	76	8.3	76	8.3	* 0.494	46.1	LOS D	5.6	42.5	1.00	0.81	1.00	7.8
11	T1	All MCs	60	10.5	60	10.5	0.494	36.2	LOS C	5.6	42.5	1.00	0.81	1.00	4.3
Approach			136	9.3	136	9.3	0.494	41.7	LOS C	5.6	42.5	1.00	0.81	1.00	6.4
All Vehicles			1231	22.2	1231	22.2	0.494	22.4	LOS B	7.6	54.9	0.79	0.67	0.79	15.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Clarence St (S)											
P1	Full	2747	40.4	LOS E	6.9	6.9	1.04	1.04	57.1	20.0	0.35
East: Margaret St (E)											
P2	Full	525	36.6	LOS D	1.2	1.2	0.94	0.94	53.3	20.0	0.38
North: Clarence St (N)											
P3	Full	783	37.0	LOS D	1.8	1.8	0.95	0.95	53.7	20.0	0.37
West: Margaret St (W)											
P4	Full	1614	38.4	LOS D	3.8	3.8	0.98	0.98	55.0	20.0	0.36

All Pedestrians	5669	39.0	LOS D	6.9	6.9	1.00	1.00	55.7	20.0	0.36

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

MOVEMENT SUMMARY

Site: BGU09 [BGU09 Margaret St / York St (Site Folder: Block 3 - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 2 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 3042
Site Category: NA
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Margaret St (E)															
4	L2	All MCs	66	12.7	66	12.7	0.208	35.9	LOS C	2.5	19.6	0.86	0.73	0.86	14.2
5	T1	All MCs	71	68.7	71	68.7	0.208	26.7	LOS B	2.5	26.3	0.79	0.63	0.79	8.4
Approach			137	41.5	137	41.5	0.208	31.2	LOS C	2.5	26.3	0.83	0.68	0.83	12.0
North: York St (N)															
7	L2	All MCs	1	0.0	1	0.0	0.000	14.5	LOS A	0.0	0.1	0.53	0.47	0.53	16.2
8	T1	All MCs	814	26.5	814	26.5	0.311	11.0	LOS A	6.2	53.6	0.56	0.48	0.56	26.3
9	R2	All MCs	284	7.8	284	7.8	* 0.362	18.1	LOS B	7.5	55.9	0.64	0.75	0.64	11.4
Approach			1099	21.6	1099	21.6	0.362	12.8	LOS A	7.5	55.9	0.58	0.55	0.58	23.0
West: Margaret St (W)															
12	R2	All MCs	72	8.8	72	8.8	0.288	39.2	LOS C	2.8	21.3	0.91	0.75	0.91	12.4
Approach			72	8.8	72	8.8	0.288	39.2	LOS C	2.8	21.3	0.91	0.75	0.91	12.4
All Vehicles			1307	23.0	1307	23.0	0.362	16.2	LOS B	7.5	55.9	0.63	0.58	0.63	20.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: York St (S)											
P1	Full	1808	39.4	LOS D	4.5	4.5	0.97	0.97	56.1	20.0	0.36
East: Margaret St (E)											
P2	Full	2147	40.0	LOS E	5.4	5.4	0.99	0.99	56.7	20.0	0.35
North: York St (N)											
P3	Full	1175	38.3	LOS D	2.8	2.8	0.95	0.95	55.0	20.0	0.36
West: Margaret St (W)											
P4	Full	779	37.7	LOS D	1.9	1.9	0.93	0.93	54.3	20.0	0.37
All Pedestrians		5909	39.2	LOS D	5.4	5.4	0.97	0.97	55.9	20.0	0.36

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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MOVEMENT SUMMARY

Site: BGU10 [BGU10 Pedestrian Mid-block Crossing at Sussex St under Exchange Pl (Site Folder: Block 3 - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 3 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 3939 (?)
Site Category: (None)
Pedestrian Crossing (Signalised) - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Sussex St (S)															
2	T1	All MCs	446	6.6	446	6.6	* 0.208	7.3	LOS A	3.6	26.5	0.50	0.42	0.50	25.9
Approach			446	6.6	446	6.6	0.208	7.3	LOS A	3.6	26.5	0.50	0.42	0.50	25.9
North: Sussex St (N)															
8	T1	All MCs	376	14.8	376	14.8	0.189	7.2	LOS A	3.0	23.5	0.49	0.41	0.49	24.3
Approach			376	14.8	376	14.8	0.189	7.2	LOS A	3.0	23.5	0.49	0.41	0.49	24.3
All Vehicles			822	10.4	822	10.4	0.208	7.3	LOS A	3.6	26.5	0.50	0.42	0.50	25.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Sussex St (S)											
P1	Full	651	29.1	LOS C	1.2	1.2	0.93	0.93	45.8	20.0	0.44
All Pedestrians		651	29.1	LOS C	1.2	1.2	0.93	0.93	45.8	20.0	0.44

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

MOVEMENT SUMMARY

Site: BGU11 [BGU11 Pedestrian Mid-block Crossing at Kent St near Margaret St (Site Folder: Block 3 - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 3 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 4109
Site Category: (None)
Pedestrian Crossing (Signalised) - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 45 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kent St (S)															
2	T1	All MCs	751	7.4	751	7.4	* 0.426	10.5	LOS A	5.0	37.8	0.74	0.62	0.74	21.5
Approach			751	7.4	751	7.4	0.426	10.5	LOS A	5.0	37.8	0.74	0.62	0.74	21.5
North: Kent St (N)															
8	T1	All MCs	317	1.7	317	1.7	0.287	9.6	LOS A	3.1	22.2	0.69	0.55	0.69	14.5
Approach			317	1.7	317	1.7	0.287	9.6	LOS A	3.1	22.2	0.69	0.55	0.69	14.5
All Vehicles			1067	5.7	1067	5.7	0.426	10.2	LOS A	5.0	37.8	0.73	0.60	0.73	19.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Kent St (S)											
P1	Full	2392	16.0	LOS B	2.7	2.7	0.89	0.89	32.7	20.0	0.61
All Pedestrians		2392	16.0	LOS B	2.7	2.7	0.89	0.89	32.7	20.0	0.61

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

MOVEMENT SUMMARY

Site: BGU12 [BGU12 Sussex St / Erskine St (Site Folder: Block 3 - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 3 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 310
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Sussex St (S)															
1	L2	All MCs	53	2.0	53	2.0	0.413	37.1	LOS C	5.4	39.4	0.87	0.74	0.87	15.1
2	T1	All MCs	319	6.6	319	6.6	* 0.413	27.6	LOS B	8.0	59.4	0.85	0.72	0.85	16.0
Approach			372	5.9	372	5.9	0.413	28.9	LOS C	8.0	59.4	0.86	0.72	0.86	15.9
East: Erskine St (E)															
4	L2	All MCs	394	1.6	394	1.6	0.431	15.6	LOS B	9.4	67.0	0.59	0.70	0.59	23.9
5	T1	All MCs	249	12.7	249	12.7	0.621	4.6	LOS A	4.2	32.4	0.36	0.35	0.36	24.3
6	R2	All MCs	24	0.0	24	0.0	* 0.621	9.8	LOS A	4.2	32.4	0.36	0.35	0.36	24.3
Approach			667	5.7	667	5.7	0.621	11.3	LOS A	9.4	67.0	0.50	0.56	0.50	24.0
North: Sussex St (N)															
7	L2	All MCs	33	41.9	33	41.9	0.075	25.1	LOS B	1.0	9.2	0.70	0.66	0.70	14.4
8	T1	All MCs	326	12.3	326	12.3	0.249	20.7	LOS B	4.9	38.1	0.73	0.60	0.73	24.2
9	R2	All MCs	17	12.5	17	12.5	* 0.150	34.0	LOS C	0.6	4.8	0.87	0.70	0.87	11.7
Approach			376	14.8	376	14.8	0.249	21.7	LOS B	4.9	38.1	0.73	0.61	0.73	23.0
West: Erskine St (W)															
10	L2	All MCs	103	8.2	103	8.2	0.356	14.9	LOS B	8.5	62.9	0.60	0.58	0.60	12.3
11	T1	All MCs	240	7.0	240	7.0	0.356	12.7	LOS A	8.5	62.9	0.60	0.58	0.60	12.3
12	R2	All MCs	122	7.8	122	7.8	0.377	24.8	LOS B	3.9	29.3	0.75	0.75	0.75	18.7
Approach			465	7.5	465	7.5	0.377	16.4	LOS B	8.5	62.9	0.64	0.62	0.64	15.3
All Vehicles			1880	8.0	1880	8.0	0.621	18.1	LOS B	9.4	67.0	0.65	0.62	0.65	20.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Sussex St (S)											
P1	Full	275	38.7	LOS D	0.7	0.7	0.93	0.93	55.4	20.0	0.36

East: Erskine St (E)										
P2	Full	255	38.7	LOS D	0.6	0.6	0.93	0.93	55.3	20.0	0.36
North: Sussex St (N)										
P3	Full	377	38.9	LOS D	0.9	0.9	0.94	0.94	55.5	20.0	0.36
West: Erskine St (W)										
P4	Full	372	38.9	LOS D	0.9	0.9	0.94	0.94	55.5	20.0	0.36
All Pedestrians		1278	38.8	LOS D	0.9	0.9	0.94	0.94	55.5	20.0	0.36

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

MOVEMENT SUMMARY

Site: BGU13 [BGU13 Kent St / Erskine St (Site Folder: Block 3 - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 3 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 307
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kent St (S)															
1	L2	All MCs	220	5.7	220	5.7	0.273	18.0	LOS B	5.7	41.7	0.63	0.70	0.63	20.8
2	T1	All MCs	621	8.3	621	8.3	* 0.278	12.3	LOS A	6.2	47.3	0.56	0.48	0.56	23.4
3	R2	All MCs	12	0.0	12	0.0	0.045	6.7	LOS A	2.1	5.6	0.34	0.29	0.34	25.6
Approach			853	7.5	853	7.5	0.278	13.7	LOS A	6.2	47.3	0.58	0.53	0.58	22.7
East: Erskine St (E)															
5	T1	All MCs	245	8.2	245	8.2	* 0.459	36.9	LOS C	5.5	41.4	0.94	0.76	0.94	5.0
6	R2	All MCs	17	6.3	17	6.3	0.459	46.4	LOS D	5.2	38.9	0.95	0.76	0.95	4.9
Approach			262	8.0	262	8.0	0.459	37.6	LOS C	5.5	41.4	0.94	0.76	0.94	5.0
North: Kent St (N)															
7	L2	All MCs	3	0.0	3	0.0	0.029	6.5	LOS A	1.7	4.6	0.33	0.27	0.33	23.0
8	T1	All MCs	126	0.0	126	0.0	0.029	4.6	LOS A	1.7	4.6	0.33	0.27	0.33	26.6
9	R2	All MCs	202	2.6	202	2.6	* 0.941	65.9	LOS E	11.5	82.2	1.00	1.22	1.60	4.8
Approach			332	1.6	332	1.6	0.941	42.0	LOS C	11.5	82.2	0.74	0.85	1.11	10.3
West: Erskine St (W)															
10	L2	All MCs	111	0.0	111	0.0	0.445	36.5	LOS C	5.4	39.4	0.88	0.75	0.88	6.8
11	T1	All MCs	162	18.8	162	18.8	0.445	34.6	LOS C	5.4	41.6	0.91	0.74	0.91	9.7
Approach			273	11.2	273	11.2	0.445	35.4	LOS C	5.4	41.6	0.90	0.74	0.90	8.6
All Vehicles			1719	7.0	1719	7.0	0.941	26.2	LOS B	11.5	82.2	0.71	0.66	0.79	14.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Kent St (S)											
P1	Full	440	39.0	LOS D	1.1	1.1	0.94	0.94	55.7	20.0	0.36
East: Erskine St (E)											

P2	Full	516	39.1	LOS D	1.2	1.2	0.94	0.94	55.8	20.0	0.36
North: Kent St (N)											
P3	Full	586	39.2	LOS D	1.4	1.4	0.95	0.95	55.9	20.0	0.36
West: Erskine St (W)											
P4	Full	559	39.2	LOS D	1.3	1.3	0.94	0.94	55.9	20.0	0.36
All Pedestrians		2101	39.1	LOS D	1.4	1.4	0.94	0.94	55.8	20.0	0.36

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

MOVEMENT SUMMARY

Site: BGU14 [BGU14 Sussex St / King St (Site Folder: Block 3 - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 4 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 284
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: King St (E)															
4a	L1	All MCs	48	0.0	48	0.0	0.062	41.7	LOS C	2.0	5.5	1.00	0.72	1.00	18.8
Approach			48	0.0	48	0.0	0.062	41.7	LOS C	2.0	5.5	1.00	0.72	1.00	18.8
North: Sussex St (N)															
7	L2	All MCs	79	12.0	79	12.0	* 0.751	39.7	LOS C	16.0	119.2	0.97	0.89	1.04	14.3
8	T1	All MCs	697	6.3	697	6.3	0.751	33.4	LOS C	16.7	123.6	0.97	0.89	1.03	21.5
Approach			776	6.9	776	6.9	0.751	34.0	LOS C	16.7	123.6	0.97	0.89	1.03	20.9
SouthWest: King St (SW)															
30a	L1	All MCs	384	4.7	384	4.7	0.542	29.5	LOS C	13.1	95.6	0.83	0.80	0.83	31.0
32a	R1	All MCs	1703	4.2	1703	4.2	* 0.757	23.1	LOS B	23.8	173.6	0.83	0.81	0.83	29.8
32b	R3	All MCs	481	7.4	481	7.4	0.550	18.4	LOS B	13.1	97.4	0.67	0.80	0.67	34.6
Approach			2568	4.9	2568	4.9	0.757	23.2	LOS B	23.8	173.6	0.80	0.81	0.80	30.4
All Vehicles			3393	5.3	3393	5.3	0.757	25.9	LOS B	23.8	173.6	0.84	0.82	0.86	27.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Sussex St (S)											
P1	Full	217	40.5	LOS E	0.5	0.5	0.95	0.95	57.2	20.0	0.35
East: King St (E)											
P2	Full	181	38.6	LOS D	0.4	0.4	0.93	0.93	55.2	20.0	0.36
North: Sussex St (N)											
P3	Full	488	39.1	LOS D	1.2	1.2	0.94	0.94	55.7	20.0	0.36
SouthWest: King St (SW)											
P8	Full	483	39.1	LOS D	1.2	1.2	0.94	0.94	205.7	200.0	0.97

P8B	Slip/ Bypass	294	40.6	LOS E	0.7	0.7	0.96	0.96	207.3	200.0	0.96
All Pedestrians		1663	39.5	LOS D	1.2	1.2	0.94	0.94	126.2	104.1	0.82

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

MOVEMENT SUMMARY

Site: BGU15 [BGU15 Kent St / King St (Site Folder: Block 3 - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 4 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 283
Site Category: NA
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kent St (S)															
1	L2	All MCs	6	0.0	6	0.0	0.230	44.3	LOS D	5.4	14.6	0.97	0.73	0.97	13.6
2	T1	All MCs	601	8.2	601	8.2	* 0.712	39.7	LOS C	10.4	79.1	0.99	0.85	1.05	19.8
3	R2	All MCs	149	4.9	149	4.9	0.490	42.7	LOS D	5.6	40.9	0.96	0.78	0.96	14.1
Approach			757	7.5	757	7.5	0.712	40.4	LOS C	10.4	79.1	0.98	0.84	1.03	18.8
East: King St (E)															
5	T1	All MCs	16	0.0	16	0.0	0.082	43.0	LOS D	0.9	2.4	0.98	0.66	0.98	4.5
6	R2	All MCs	5	0.0	5	0.0	0.082	50.2	LOS D	0.9	2.4	0.98	0.66	0.98	13.7
Approach			21	0.0	21	0.0	0.082	44.8	LOS D	0.9	2.4	0.98	0.66	0.98	7.4
North: Kent St (N)															
7	L2	All MCs	24	0.0	24	0.0	0.172	44.0	LOS D	4.0	10.7	0.96	0.71	0.96	11.0
8	T1	All MCs	74	0.0	74	0.0	0.172	40.6	LOS C	4.0	10.7	0.96	0.71	0.96	19.4
9	R2	All MCs	37	0.0	37	0.0	0.149	45.8	LOS D	1.5	4.2	0.97	0.70	0.97	12.2
Approach			135	0.0	135	0.0	0.172	42.6	LOS D	4.0	10.7	0.96	0.71	0.96	16.1
West: King St (W)															
10	L2	All MCs	276	5.3	276	5.3	* 0.627	18.7	LOS B	8.9	65.5	0.58	0.59	0.58	24.9
11	T1	All MCs	1453	4.6	1453	4.6	0.627	6.8	LOS A	8.9	65.5	0.40	0.37	0.40	24.5
Approach			1728	4.7	1728	4.7	0.627	8.7	LOS A	8.9	65.5	0.43	0.40	0.43	24.6
All Vehicles			2641	5.2	2641	5.2	0.712	19.8	LOS B	10.4	79.1	0.62	0.54	0.63	20.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Kent St (S)											
P1	Full	439	39.0	LOS D	1.1	1.1	0.94	0.94	55.7	20.0	0.36
East: King St (E)											

P2 Full	291	38.7	LOS D	0.7	0.7	0.93	0.93	55.4	20.0	0.36
North: Kent St (N)										
P3 Full	578	39.2	LOS D	1.4	1.4	0.94	0.94	55.9	20.0	0.36
West: King St (W)										
P4 Full	426	39.0	LOS D	1.0	1.0	0.94	0.94	55.6	20.0	0.36
All Pedestrians	1734	39.0	LOS D	1.4	1.4	0.94	0.94	55.7	20.0	0.36

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

MOVEMENT SUMMARY

Site: BGU18 [BGU18 Shelley St / Erskine St (Site Folder: Block 3 - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 3 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 305
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Shelley St (S)															
1	L2	All MCs	16	6.7	16	6.7	0.092	11.7	LOS A	1.8	12.9	0.41	0.37	0.41	20.0
2	T1	All MCs	94	0.0	94	0.0	0.092	6.5	LOS A	1.8	12.9	0.41	0.37	0.41	28.2
3	R2	All MCs	301	2.8	301	2.8	* 0.397	15.3	LOS B	7.4	53.1	0.60	0.71	0.60	16.0
Approach			411	2.3	411	2.3	0.397	13.1	LOS A	7.4	53.1	0.55	0.62	0.55	18.9
East: Erskine St (E)															
4	L2	All MCs	47	15.6	47	15.6	0.171	52.5	LOS D	2.0	15.5	0.86	0.72	0.86	11.2
5	T1	All MCs	198	13.3	198	13.3	0.844	59.7	LOS E	9.7	73.4	1.00	1.05	1.26	7.2
6	R2	All MCs	74	1.4	74	1.4	* 0.844	66.7	LOS E	9.7	73.4	1.00	1.05	1.27	8.2
Approach			319	10.9	319	10.9	0.844	60.2	LOS E	9.7	73.4	0.98	1.00	1.20	6.2
North: Shelley St (N)															
7	L2	All MCs	86	3.7	86	3.7	0.127	12.3	LOS A	1.7	12.1	0.47	0.62	0.47	16.0
8	T1	All MCs	7	28.6	7	28.6	0.012	6.6	LOS A	0.2	1.4	0.39	0.37	0.39	27.2
9	R2	All MCs	3	0.0	3	0.0	0.012	10.8	LOS A	0.2	1.4	0.39	0.37	0.39	16.5
Approach			97	5.4	97	5.4	0.127	11.8	LOS A	1.7	12.1	0.46	0.60	0.46	17.0
West: Erskine St (W)															
10	L2	All MCs	4	25.0	4	25.0	0.160	37.5	LOS C	1.3	11.6	0.83	0.64	0.83	11.3
11	T1	All MCs	78	29.7	78	29.7	0.160	30.3	LOS C	1.8	15.6	0.84	0.65	0.84	6.4
12	R2	All MCs	4	0.0	4	0.0	0.160	43.2	LOS D	1.8	15.6	0.84	0.65	0.84	12.6
Approach			86	28.0	86	28.0	0.160	31.3	LOS C	1.8	15.6	0.84	0.65	0.84	7.1
All Vehicles			913	8.1	913	8.1	0.844	31.2	LOS C	9.7	73.4	0.72	0.75	0.79	10.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Shelley St (S)											
P1	Full	186	38.6	LOS D	0.4	0.4	0.93	0.93	205.2	200.0	0.97

East: Erskine St (E)										
P2 Full	87	38.4	LOS D	0.2	0.2	0.93	0.93	205.1	200.0	0.98
North: Shelley St (N)										
P3 Full	172	38.5	LOS D	0.4	0.4	0.93	0.93	205.2	200.0	0.97
West: Erskine St (W)										
P4 Full	183	38.6	LOS D	0.4	0.4	0.93	0.93	205.2	200.0	0.97
All Pedestrians	628	38.5	LOS D	0.4	0.4	0.93	0.93	205.2	200.0	0.97

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

MOVEMENT SUMMARY

Site: BUG01 [BGU01 Hickson Rd / Towns Pl (Site Folder: Block 3 - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N1 [BGU Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Hickson Rd (E)															
4a	L1	All MCs	135	9.4	135	9.4	0.253	4.8	LOS A	1.1	8.3	0.52	0.61	0.52	36.8
6a	R1	All MCs	89	2.4	89	2.4	0.253	8.2	LOS A	1.1	8.3	0.52	0.61	0.52	33.8
Approach			224	6.6	224	6.6	0.253	6.2	NA	1.1	8.3	0.52	0.61	0.52	36.2
NorthWest: Towns Pl (NW)															
27a	L1	All MCs	143	2.2	143	2.2	0.371	7.0	LOS A	1.7	11.9	0.66	0.90	0.87	32.6
29	R2	All MCs	87	4.8	87	4.8	0.371	11.7	LOS A	1.7	11.9	0.66	0.90	0.87	34.5
Approach			231	3.2	231	3.2	0.371	8.8	LOS A	1.7	11.9	0.66	0.90	0.87	33.5
SouthWest: Hickson Rd (SW)															
30	L2	All MCs	131	3.2	131	3.2	0.362	4.8	LOS A	2.0	14.6	0.43	0.51	0.43	37.1
32a	R1	All MCs	348	3.3	348	3.3	0.362	3.5	LOS A	2.0	14.6	0.43	0.51	0.43	37.8
Approach			479	3.3	479	3.3	0.362	3.9	NA	2.0	14.6	0.43	0.51	0.43	37.6
All Vehicles			934	4.1	934	4.1	0.371	5.6	NA	2.0	14.6	0.51	0.63	0.56	36.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: BGU02 [BGU02 Dalgety Rd / Towns Pl (Site Folder: Block 3 - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N1 [BGU Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Dalgety Rd (S)															
30	L2	All MCs	2	0.0	2	0.0	0.147	6.2	LOS A	0.9	6.3	0.18	0.55	0.18	24.4
3b	R3	All MCs	195	3.8	195	3.8	0.147	6.4	LOS A	0.9	6.3	0.18	0.55	0.18	32.0
32u	U	All MCs	5	0.0	5	0.0	0.147	7.1	LOS A	0.9	6.3	0.18	0.55	0.18	34.6
Approach			202	3.6	202	3.6	0.147	6.5	LOS A	0.9	6.3	0.18	0.55	0.18	32.0
SouthEast: Towns Pl (SE)															
21b	L3	All MCs	181	3.5	181	3.5	0.149	2.7	LOS A	1.0	6.8	0.12	0.45	0.12	35.1
21a	L1	All MCs	15	0.0	15	0.0	0.149	8.3	LOS A	1.0	6.8	0.12	0.45	0.12	18.8
23u	U	All MCs	24	0.0	24	0.0	0.149	7.0	LOS A	1.0	6.8	0.12	0.45	0.12	29.5
Approach			220	2.9	220	2.9	0.149	3.5	LOS A	1.0	6.8	0.12	0.45	0.12	33.8
West: Parking Access (W)															
12a	R1	All MCs	12	0.0	12	0.0	0.024	1.3	LOS A	0.1	0.9	0.42	0.22	0.42	9.6
29	R2	All MCs	13	0.0	13	0.0	0.024	1.3	LOS A	0.1	0.9	0.42	0.22	0.42	21.6
29u	U	All MCs	1	0.0	1	0.0	0.024	1.3	LOS A	0.1	0.9	0.42	0.22	0.42	9.7
Approach			25	0.0	25	0.0	0.024	1.3	LOS A	0.1	0.9	0.42	0.22	0.42	17.2
All Vehicles			447	3.1	447	3.1	0.149	4.7	LOS A	1.0	6.8	0.16	0.48	0.16	31.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: BGU03 [BGU03 Kent St / Argyle St (Site Folder: Block 3 - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kent St (S)															
1	L2	All MCs	75	2.8	75	2.8	0.437	5.3	LOS A	2.8	19.7	0.62	0.74	0.85	33.9
2	T1	All MCs	25	0.0	25	0.0	0.437	6.2	LOS A	2.8	19.7	0.62	0.74	0.85	32.3
3	R2	All MCs	161	0.7	161	0.7	0.437	13.6	LOS A	2.8	19.7	0.62	0.74	0.85	32.7
Approach			261	1.2	261	1.2	0.437	10.5	LOS A	2.8	19.7	0.62	0.74	0.85	33.0
East: Argyle St (E)															
4	L2	All MCs	216	2.0	216	2.0	0.353	5.5	LOS A	2.0	14.0	0.53	0.58	0.57	35.9
5	T1	All MCs	102	3.1	102	3.1	0.353	3.8	LOS A	2.0	14.0	0.53	0.58	0.57	35.2
6	R2	All MCs	9	0.0	9	0.0	0.353	6.0	LOS A	2.0	14.0	0.53	0.58	0.57	30.2
Approach			327	2.3	327	2.3	0.353	5.0	NA	2.0	14.0	0.53	0.58	0.57	35.6
North: Kent St (N)															
7	L2	All MCs	7	0.0	7	0.0	0.026	8.8	LOS A	0.1	0.6	0.48	0.92	0.48	27.1
8	T1	All MCs	9	0.0	9	0.0	0.026	9.7	LOS A	0.1	0.6	0.48	0.92	0.48	33.4
9	R2	All MCs	2	0.0	2	0.0	0.026	8.9	LOS A	0.1	0.6	0.48	0.92	0.48	30.5
Approach			19	0.0	19	0.0	0.026	9.3	LOS A	0.1	0.6	0.48	0.92	0.48	31.5
West: Argyle Pl (W)															
10	L2	All MCs	1	0.0	1	0.0	0.209	5.7	LOS A	1.0	7.2	0.50	0.50	0.50	34.3
11	T1	All MCs	102	6.2	102	6.2	0.209	3.2	LOS A	1.0	7.2	0.50	0.50	0.50	36.0
12	R2	All MCs	92	0.0	92	0.0	0.209	4.8	LOS A	1.0	7.2	0.50	0.50	0.50	36.9
Approach			195	3.2	195	3.2	0.209	4.0	NA	1.0	7.2	0.50	0.50	0.50	36.5
All Vehicles			802	2.1	802	2.1	0.437	6.6	NA	2.8	19.7	0.55	0.62	0.64	34.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [TCS 4272]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 2 (Network Folder: Block 3 Network - 2024 PM Peak)]

EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 80 seconds (CCG User-Given Phase Times)

Vehicle Movement Performance (CCG)

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
Site: BGU04 [BGU04 Pedestrian Mid-block Crossing at Kent St near Gas Ln]															
South: Kent St															
2	T1	All MCs	354	9.5	353	9.5	0.311	2.6	LOS A	2.8	21.1	0.22	0.19	0.22	37.8
Approach			354	9.5	353	9.5	0.311	2.6	LOS A	2.8	21.1	0.22	0.19	0.22	37.8
North: Kent St															
8	T1	All MCs	349	8.7	349	8.7	0.728	39.4	LOS C	7.2	53.8	1.00	0.92	1.15	20.3
Approach			349	8.7	349	8.7	0.728	39.4	LOS C	7.2	53.8	1.00	0.92	1.15	20.3
All Vehicles			703	9.1	702	9.1	0.728	20.9	LOS B	7.2	53.8	0.61	0.55	0.68	26.9
Site: BGU05 [BGU05 Kent St / Sydney Harbour Bridge (SHB) On-ramp]															
South: Kent St (S)															
2	T1	All MCs	214	1.5	213	1.5	0.174	3.5	LOS A	2.0	14.1	0.26	0.22	0.26	34.2
3a	R1	All MCs	554	2.9	552	2.9	* 0.677	13.7	LOS A	11.8	84.8	0.65	0.65	0.65	28.8
Approach			767	2.5	764	2.5	0.677	10.8	LOS A	11.8	84.8	0.54	0.53	0.54	29.8
East: Clarence St (E)															
4	L2	All MCs	69	1.5	69	1.5	0.304	39.3	LOS C	2.6	18.3	0.95	0.75	0.95	11.7
6	R2	All MCs	123	1.7	123	1.7	0.360	34.9	LOS C	4.3	30.7	0.91	0.77	0.91	12.7
Approach			193	1.6	193	1.6	0.360	36.5	LOS C	4.3	30.7	0.93	0.76	0.93	12.3
NorthEast: SHB On-ramp (NE)															
24a	L1	All MCs	20	0.0	20	0.0	0.023	32.2	LOS C	0.7	1.8	0.89	0.62	0.89	19.7
Approach			20	0.0	20	0.0	0.023	32.2	LOS C	0.7	1.8	0.89	0.62	0.89	19.7
North: Kent St (N)															
7b	L3	All MCs	171	1.2	171	1.2	* 0.567	43.9	LOS D	6.9	48.7	1.00	0.85	1.00	12.1
8	T1	All MCs	154	1.4	154	1.4	* 0.913	45.8	LOS D	6.9	48.7	1.00	1.03	1.36	4.6
Approach			324	1.3	324	1.3	0.913	44.8	LOS D	6.9	48.7	1.00	0.94	1.17	8.9
All Vehicles			1304	2.0	1301	2.0	0.913	23.4	LOS B	11.8	84.8	0.72	0.67	0.76	20.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance (CCG)

Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE	Prop. Que	Eff. Stop	Travel Time	Travel Dist.	Aver. Speed

	ped/h	sec		[Ped ped	Dist] m		Rate	sec	m	m/sec
Site: BGU04 [BGU04 Pedestrian Mid-block Crossing at Kent St near Gas Ln]										
South: Kent St										
P1 Full	194	33.6	LOS D	0.4	0.4	0.92	0.92	200.2	200.0	1.00
All Pedestrians	194	33.6	LOS D	0.4	0.4	0.92	0.92	200.2	200.0	1.00
Site: BGU05 [BGU05 Kent St / Sydney Harbour Bridge (SHB) On-ramp]										
South: Kent St (S)										
P1 Full	306	33.7	LOS D	0.6	0.6	0.92	0.92	50.4	20.0	0.40
All Pedestrians	306	33.7	LOS D	0.6	0.6	0.92	0.92	50.4	20.0	0.40

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

MOVEMENT SUMMARY

Site: BGU06 [BGU06 Hickson Rd / Napoleon St / Sussex St (Site Folder: Block 3 - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 3 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 4625
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 75 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Sussex St (S)															
2	T1	All MCs	345	3.0	345	3.0	0.380	13.4	LOS A	8.0	57.8	0.68	0.58	0.68	22.7
3	R2	All MCs	111	1.0	111	1.0	* 0.332	22.2	LOS B	2.9	20.7	0.85	0.74	0.85	20.5
Approach			456	2.5	456	2.5	0.380	15.5	LOS B	8.0	57.8	0.72	0.62	0.72	22.0
East: Napolean St (E)															
4	L2	All MCs	101	10.4	101	10.4	0.206	25.3	LOS B	2.8	21.6	0.79	0.72	0.79	14.0
6	R2	All MCs	157	9.4	157	9.4	* 0.498	34.0	LOS C	5.4	40.6	0.94	0.79	0.94	14.3
Approach			258	9.8	258	9.8	0.498	30.6	LOS C	5.4	40.6	0.88	0.76	0.88	14.2
North: Hickson Rd (N)															
7	L2	All MCs	92	0.0	92	0.0	0.154	23.2	LOS B	2.4	16.9	0.75	0.71	0.75	17.6
8	T1	All MCs	277	6.5	277	6.5	* 0.436	20.6	LOS B	7.9	58.4	0.82	0.69	0.82	10.3
Approach			368	4.9	368	4.9	0.436	21.2	LOS B	7.9	58.4	0.80	0.70	0.80	12.8
West: Car Park Access (W)															
10	L2	All MCs	1	0.0	1	0.0	0.087	37.6	LOS C	0.4	2.9	0.96	0.65	0.96	6.0
11	T1	All MCs	33	0.0	33	0.0	* 0.419	38.9	LOS C	2.0	14.2	0.99	0.71	0.99	9.3
12	R2	All MCs	31	0.0	31	0.0	0.419	39.4	LOS C	2.0	14.2	1.00	0.74	1.00	2.5
Approach			64	0.0	64	0.0	0.419	39.1	LOS C	2.0	14.2	0.99	0.72	0.99	6.4
All Vehicles			1146	4.8	1146	4.8	0.498	22.1	LOS B	8.0	58.4	0.80	0.68	0.80	16.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Sussex St (S)											
P1	Full	72	30.9	LOS D	0.1	0.1	0.91	0.91	47.6	20.0	0.42
East: Napolean St (E)											
P2	Full	131	31.0	LOS D	0.3	0.3	0.91	0.91	47.7	20.0	0.42

North: Hickson Rd (N)										
P3	Full	78	30.9	LOS D	0.2	0.2	0.91	0.91	47.6	20.0	0.42
West: Car Park Access (W)										
P4	Full	245	31.1	LOS D	0.5	0.5	0.92	0.92	47.8	20.0	0.42
All Pedestrians		525	31.0	LOS D	0.5	0.5	0.91	0.91	47.7	20.0	0.42

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

MOVEMENT SUMMARY

Site: BGU07 [BGU07 Margaret St / Kent St / Napoleon St (Site Folder: Block 3 - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 2 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 308

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 80 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kent St (S)															
1a	L1	All MCs	65	14.5	65	14.5	0.400	20.0	LOS B	8.9	64.9	0.64	0.59	0.64	22.7
2	T1	All MCs	599	3.0	599	3.0	* 0.400	17.1	LOS B	8.9	64.9	0.74	0.64	0.74	9.7
3	R2	All MCs	26	0.0	26	0.0	* 0.400	48.1	LOS D	7.0	50.0	0.82	0.70	0.82	8.4
Approach			691	4.0	691	4.0	0.400	18.5	LOS B	8.9	64.9	0.73	0.63	0.73	11.1
East: Margaret St (E)															
4	L2	All MCs	34	0.0	31	0.0	0.096	33.6	LOS C	1.0	7.3	0.87	0.70	0.87	8.9
6a	R1	All MCs	161	8.5	151	9.1	0.457	29.3	LOS C	6.4	47.9	0.90	0.76	0.90	15.1
6	R2	All MCs	42	0.0	39	0.0	0.457	31.3	LOS C	6.4	47.9	0.90	0.76	0.90	6.7
Approach			237	5.8	221	6.2	0.457	30.2	LOS C	6.4	47.9	0.89	0.75	0.89	13.1
North: Kent St (N)															
7	L2	All MCs	57	0.0	57	0.0	0.308	4.4	LOS A	0.2	1.5	0.03	0.16	0.03	37.0
8	T1	All MCs	203	0.0	203	0.0	0.308	11.7	LOS A	2.4	6.5	0.34	0.34	0.34	24.9
9b	R3	All MCs	32	6.7	32	6.7	0.090	4.7	LOS A	0.0	0.2	0.02	0.52	0.02	33.9
Approach			292	0.7	292	0.7	0.308	9.5	LOS A	2.4	6.5	0.25	0.32	0.25	27.3
NorthWest: Napoleon St (NW)															
27b	L3	All MCs	176	0.6	176	0.6	0.384	11.5	LOS A	4.6	32.6	0.70	0.72	0.70	21.6
27a	L1	All MCs	59	0.0	59	0.0	* 0.384	23.9	LOS B	4.6	32.6	0.70	0.72	0.70	21.6
Approach			235	0.4	235	0.4	0.384	14.7	LOS B	4.6	32.6	0.70	0.72	0.70	21.6
All Vehicles			1454	3.0	1438	3.1	0.457	17.9	LOS B	8.9	64.9	0.65	0.60	0.65	16.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Kent St (S)											

P1	Full	765	32.5	LOS D	1.6	1.6	0.92	0.92	49.2	20.0	0.41
East: Margaret St (E)											
P2	Full	187	31.8	LOS D	0.4	0.4	0.89	0.89	48.4	20.0	0.41
North: Kent St (N)											
P3	Full	347	32.0	LOS D	0.7	0.7	0.90	0.90	48.6	20.0	0.41
NorthWest: Napoleon St (NW)											
P7	Full	673	32.4	LOS D	1.4	1.4	0.91	0.91	199.1	200.0	1.00
All Pedestrians		1973	32.3	LOS D	1.6	1.6	0.91	0.91	100.1	81.4	0.81

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

MOVEMENT SUMMARY

Site: BGU08 [BGU08 Margaret St / Clarence St (Site Folder: Block 3 - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 2 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 319
Site Category: NA
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 80 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Clarence St (S)															
1	L2	All MCs	17	6.3	17	6.3	0.582	31.2	LOS C	12.8	90.4	0.86	0.75	0.86	15.8
2	T1	All MCs	829	15.6	829	15.6	* 0.582	21.7	LOS B	12.8	90.4	0.83	0.72	0.83	19.0
3	R2	All MCs	32	0.0	32	0.0	0.582	30.9	LOS C	10.9	76.8	0.85	0.73	0.85	15.7
Approach			878	14.9	878	14.9	0.582	22.2	LOS B	12.8	90.4	0.84	0.72	0.84	18.9
East: Margaret St (E)															
5	T1	All MCs	220	5.7	220	5.7	0.274	13.1	LOS A	4.8	35.2	0.64	0.54	0.64	11.7
6	R2	All MCs	100	57.9	100	57.9	* 0.274	18.3	LOS B	2.7	27.0	0.76	0.72	0.76	13.7
Approach			320	22.0	320	22.0	0.274	14.7	LOS B	4.8	35.2	0.67	0.60	0.67	12.5
West: Margaret St (W)															
10	L2	All MCs	89	0.0	89	0.0	* 0.471	41.7	LOS C	5.5	39.1	0.99	0.80	0.99	8.4
11	T1	All MCs	55	3.8	55	3.8	0.471	32.0	LOS C	5.5	39.1	0.99	0.80	0.99	4.7
Approach			144	1.5	144	1.5	0.471	38.0	LOS C	5.5	39.1	0.99	0.80	0.99	7.1
All Vehicles			1342	15.1	1342	15.1	0.582	22.1	LOS B	12.8	90.4	0.81	0.70	0.81	16.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Clarence St (S)											
P1	Full	1179	35.0	LOS D	2.6	2.6	0.96	0.96	51.7	20.0	0.39
East: Margaret St (E)											
P2	Full	513	34.0	LOS D	1.1	1.1	0.93	0.93	50.7	20.0	0.39
North: Clarence St (N)											
P3	Full	678	34.3	LOS D	1.4	1.4	0.94	0.94	50.9	20.0	0.39
West: Margaret St (W)											
P4	Full	678	34.3	LOS D	1.4	1.4	0.94	0.94	50.9	20.0	0.39

All Pedestrians	3047	34.5	LOS D	2.6	2.6	0.95	0.95	51.2	20.0	0.39

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

MOVEMENT SUMMARY

Site: BGU09 [BGU09 Margaret St / York St (Site Folder: Block 3 - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 2 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 3042
Site Category: NA
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Margaret St (E)															
4	L2	All MCs	96	5.5	96	5.5	0.202	28.6	LOS C	3.4	25.6	0.77	0.72	0.77	16.5
5	T1	All MCs	112	49.1	112	49.1	* 0.202	19.8	LOS B	3.4	30.1	0.71	0.58	0.71	10.4
Approach			207	28.9	207	28.9	0.202	23.9	LOS B	3.4	30.1	0.74	0.64	0.74	14.1
North: York St (N)															
7	L2	All MCs	1	0.0	1	0.0	0.000	19.8	LOS B	0.0	0.1	0.63	0.49	0.63	13.9
8	T1	All MCs	724	23.5	724	23.5	0.328	16.3	LOS B	6.7	56.2	0.67	0.57	0.67	22.5
9	R2	All MCs	192	6.6	192	6.6	* 0.269	22.8	LOS B	5.6	41.2	0.70	0.75	0.70	9.6
Approach			917	20.0	917	20.0	0.328	17.6	LOS B	6.7	56.2	0.68	0.61	0.68	20.3
West: Margaret St (W)															
12	R2	All MCs	95	2.2	95	2.2	0.270	32.1	LOS C	3.4	24.1	0.83	0.75	0.83	14.1
Approach			95	2.2	95	2.2	0.270	32.1	LOS C	3.4	24.1	0.83	0.75	0.83	14.1
All Vehicles			1219	20.1	1219	20.1	0.328	19.8	LOS B	6.7	56.2	0.70	0.62	0.70	18.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: York St (S)											
P1	Full	897	37.9	LOS D	2.1	2.1	0.93	0.93	54.5	20.0	0.37
East: Margaret St (E)											
P2	Full	755	37.6	LOS D	1.8	1.8	0.93	0.93	54.3	20.0	0.37
North: York St (N)											
P3	Full	578	37.3	LOS D	1.4	1.4	0.92	0.92	54.0	20.0	0.37
West: Margaret St (W)											
P4	Full	506	37.2	LOS D	1.2	1.2	0.92	0.92	53.9	20.0	0.37
All Pedestrians		2736	37.6	LOS D	2.1	2.1	0.93	0.93	54.2	20.0	0.37

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:\Users\WanJ2\Documents\Sydney Metro C&SW\BLOCK 3\Models with volume input\04 SM C&SW_BGU (Block 3).sip9

MOVEMENT SUMMARY

Site: BGU10 [BGU10 Pedestrian Mid-block Crossing at Sussex St under Exchange Pl (Site Folder: Block 3 - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 3 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 3939 (?)
Site Category: (None)
Pedestrian Crossing (Signalised) - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 65 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Sussex St (S)															
2	T1	All MCs	458	2.5	458	2.5	* 0.206	6.8	LOS A	3.4	24.4	0.50	0.42	0.50	26.6
Approach			458	2.5	458	2.5	0.206	6.8	LOS A	3.4	24.4	0.50	0.42	0.50	26.6
North: Sussex St (N)															
8	T1	All MCs	411	6.9	411	6.9	0.193	6.8	LOS A	3.0	22.5	0.50	0.42	0.50	25.0
Approach			411	6.9	411	6.9	0.193	6.8	LOS A	3.0	22.5	0.50	0.42	0.50	25.0
All Vehicles			868	4.6	868	4.6	0.206	6.8	LOS A	3.4	24.4	0.50	0.42	0.50	25.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Sussex St (S)											
P1	Full	314	26.2	LOS C	0.5	0.5	0.90	0.90	42.9	20.0	0.47
All Pedestrians		314	26.2	LOS C	0.5	0.5	0.90	0.90	42.9	20.0	0.47

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

MOVEMENT SUMMARY

Site: BGU11 [BGU11 Pedestrian Mid-block Crossing at Kent St near Margaret St (Site Folder: Block 3 - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 3 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 4109
Site Category: (None)
Pedestrian Crossing (Signalised) - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 45 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kent St (S)															
2	T1	All MCs	700	4.2	700	4.2	* 0.409	10.5	LOS A	4.9	36.0	0.74	0.62	0.74	21.7
Approach			700	4.2	700	4.2	0.409	10.5	LOS A	4.9	36.0	0.74	0.62	0.74	21.7
North: Kent St (N)															
8	T1	All MCs	266	0.0	266	0.0	0.215	9.3	LOS A	2.5	17.3	0.67	0.53	0.67	14.7
Approach			266	0.0	266	0.0	0.215	9.3	LOS A	2.5	17.3	0.67	0.53	0.67	14.7
All Vehicles			966	3.1	966	3.1	0.409	10.1	LOS A	4.9	36.0	0.72	0.60	0.72	20.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Kent St (S)											
P1	Full	1024	15.0	LOS B	1.1	1.1	0.84	0.84	31.7	20.0	0.63
All Pedestrians		1024	15.0	LOS B	1.1	1.1	0.84	0.84	31.7	20.0	0.63

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

MOVEMENT SUMMARY

Site: BGU12 [BGU12 Sussex St / Erskine St (Site Folder: Block 3 - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 3 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 310
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Sussex St (S)															
1	L2	All MCs	71	3.0	71	3.0	0.441	38.0	LOS C	7.4	52.9	0.90	0.76	0.90	14.7
2	T1	All MCs	347	2.7	347	2.7	* 0.441	29.9	LOS C	8.3	59.1	0.89	0.74	0.89	15.2
Approach			418	2.8	418	2.8	0.441	31.3	LOS C	8.3	59.1	0.89	0.74	0.89	15.1
East: Erskine St (E)															
4	L2	All MCs	436	0.7	436	0.7	0.453	8.2	LOS A	5.5	38.6	0.31	0.59	0.31	29.1
5	T1	All MCs	72	17.6	72	17.6	0.193	2.1	LOS A	0.7	5.1	0.13	0.27	0.13	26.4
6	R2	All MCs	55	0.0	55	0.0	0.193	6.2	LOS A	0.7	5.1	0.13	0.27	0.13	26.4
Approach			562	2.8	562	2.8	0.453	7.2	LOS A	5.5	38.6	0.27	0.51	0.27	28.9
North: Sussex St (N)															
7	L2	All MCs	40	23.7	40	23.7	0.081	25.7	LOS B	1.2	10.2	0.72	0.67	0.72	14.2
8	T1	All MCs	352	5.4	352	5.4	0.267	22.3	LOS B	5.5	40.3	0.75	0.62	0.75	23.5
9	R2	All MCs	19	0.0	19	0.0	* 0.080	32.8	LOS C	0.7	4.6	0.86	0.68	0.86	11.9
Approach			411	6.9	411	6.9	0.267	23.1	LOS B	5.5	40.3	0.75	0.63	0.75	22.3
West: Erskine St (W)															
10	L2	All MCs	56	3.8	56	3.8	0.334	13.1	LOS A	8.2	58.5	0.57	0.53	0.57	13.6
11	T1	All MCs	296	2.5	296	2.5	0.334	11.4	LOS A	8.2	58.5	0.57	0.53	0.57	13.6
12	R2	All MCs	207	6.6	207	6.6	* 0.449	20.1	LOS B	6.1	45.1	0.70	0.74	0.70	20.7
Approach			559	4.1	559	4.1	0.449	14.8	LOS B	8.2	58.5	0.62	0.61	0.62	17.8
All Vehicles			1949	4.0	1949	4.0	0.453	17.9	LOS B	8.3	59.1	0.60	0.62	0.60	20.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Sussex St (S)											
P1	Full	292	38.7	LOS D	0.7	0.7	0.93	0.93	55.4	20.0	0.36

East: Erskine St (E)										
P2 Full	115	38.5	LOS D	0.3	0.3	0.93	0.93	55.1	20.0	0.36
North: Sussex St (N)										
P3 Full	335	38.8	LOS D	0.8	0.8	0.94	0.94	55.5	20.0	0.36
West: Erskine St (W)										
P4 Full	222	38.6	LOS D	0.5	0.5	0.93	0.93	55.3	20.0	0.36
All Pedestrians	963	38.7	LOS D	0.8	0.8	0.93	0.93	55.4	20.0	0.36

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

MOVEMENT SUMMARY

Site: BGU13 [BGU13 Kent St / Erskine St (Site Folder: Block 3 - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 3 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 307
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kent St (S)															
1	L2	All MCs	92	8.0	92	8.0	0.118	18.5	LOS B	2.3	17.2	0.61	0.66	0.61	20.5
2	T1	All MCs	562	5.1	562	5.1	* 0.286	14.8	LOS B	6.6	48.3	0.62	0.52	0.62	22.1
3	R2	All MCs	4	0.0	4	0.0	0.024	7.7	LOS A	1.3	3.4	0.37	0.29	0.37	25.0
Approach			658	5.4	658	5.4	0.286	15.3	LOS B	6.6	48.3	0.62	0.54	0.62	21.9
East: Erskine St (E)															
5	T1	All MCs	303	2.8	303	2.8	0.406	33.5	LOS C	6.3	45.1	0.91	0.74	0.91	5.5
6	R2	All MCs	9	0.0	9	0.0	0.406	42.5	LOS C	5.8	41.7	0.91	0.74	0.91	5.5
Approach			313	2.7	313	2.7	0.406	33.8	LOS C	6.3	45.1	0.91	0.74	0.91	5.5
North: Kent St (N)															
7	L2	All MCs	1	0.0	1	0.0	0.023	7.5	LOS A	1.4	3.9	0.37	0.28	0.37	22.0
8	T1	All MCs	97	0.0	97	0.0	0.023	5.6	LOS A	1.4	3.9	0.37	0.28	0.37	25.9
9	R2	All MCs	167	0.0	167	0.0	* 0.756	48.5	LOS D	7.8	54.6	1.00	0.93	1.18	6.2
Approach			265	0.0	265	0.0	0.756	32.7	LOS C	7.8	54.6	0.77	0.69	0.88	12.0
West: Erskine St (W)															
10	L2	All MCs	118	0.0	118	0.0	0.435	34.3	LOS C	6.2	44.6	0.87	0.75	0.87	7.3
11	T1	All MCs	218	7.7	218	7.7	* 0.435	32.1	LOS C	6.3	47.2	0.89	0.73	0.89	10.2
Approach			336	5.0	336	5.0	0.435	32.8	LOS C	6.3	47.2	0.88	0.74	0.88	9.2
All Vehicles			1572	3.9	1572	3.9	0.756	25.7	LOS B	7.8	54.6	0.76	0.65	0.78	13.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Kent St (S)											
P1	Full	246	38.7	LOS D	0.6	0.6	0.93	0.93	55.3	20.0	0.36
East: Erskine St (E)											

P2 Full	87	38.4	LOS D	0.2	0.2	0.93	0.93	55.1	20.0	0.36
North: Kent St (N)										
P3 Full	436	39.0	LOS D	1.0	1.0	0.94	0.94	55.6	20.0	0.36
West: Erskine St (W)										
P4 Full	240	38.7	LOS D	0.6	0.6	0.93	0.93	55.3	20.0	0.36
All Pedestrians	1009	38.8	LOS D	1.0	1.0	0.93	0.93	55.4	20.0	0.36

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

MOVEMENT SUMMARY

Site: BGU14 [BGU14 Sussex St / King St (Site Folder: Block 3 - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 4 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 284
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: King St (E)															
4a	L1	All MCs	123	0.0	123	0.0	0.158	41.4	LOS C	5.1	13.9	1.00	0.76	1.00	18.9
Approach			123	0.0	123	0.0	0.158	41.4	LOS C	5.1	13.9	1.00	0.76	1.00	18.9
North: Sussex St (N)															
7	L2	All MCs	117	11.7	117	11.7	* 0.687	28.4	LOS B	18.7	135.3	0.88	0.79	0.88	17.6
8	T1	All MCs	944	1.3	944	1.3	0.687	23.3	LOS B	19.6	139.0	0.88	0.78	0.88	24.9
Approach			1061	2.5	1061	2.5	0.687	23.9	LOS B	19.6	139.0	0.88	0.79	0.88	24.4
SouthWest: King St (SW)															
30a	L1	All MCs	413	1.5	413	1.5	0.506	14.1	LOS A	7.5	53.4	0.77	0.78	0.77	36.6
32a	R1	All MCs	1092	2.0	1092	2.0	* 0.611	23.9	LOS B	17.2	122.9	0.81	0.79	0.81	29.9
32b	R3	All MCs	243	10.4	243	10.4	0.363	22.5	LOS B	7.0	53.3	0.69	0.78	0.69	32.7
Approach			1747	3.1	1747	3.1	0.611	21.4	LOS B	17.2	122.9	0.79	0.79	0.79	32.0
All Vehicles			2932	2.7	2932	2.7	0.687	23.1	LOS B	19.6	139.0	0.83	0.79	0.83	28.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Sussex St (S)											
P1	Full	249	40.6	LOS E	0.6	0.6	0.95	0.95	57.2	20.0	0.35
East: King St (E)											
P2	Full	147	38.5	LOS D	0.3	0.3	0.93	0.93	55.2	20.0	0.36
North: Sussex St (N)											
P3	Full	749	39.5	LOS D	1.8	1.8	0.95	0.95	56.2	20.0	0.36
SouthWest: King St (SW)											
P8	Full	560	39.2	LOS D	1.4	1.4	0.94	0.94	205.9	200.0	0.97

P8B	Slip/ Bypass	403	40.8	LOS E	1.0	1.0	0.96	0.96	207.5	200.0	0.96
All Pedestrians		2109	39.7	LOS D	1.8	1.8	0.95	0.95	124.9	102.2	0.82

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

MOVEMENT SUMMARY

Site: BGU15 [BGU15 Kent St / King St (Site Folder: Block 3 - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 4 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 283
Site Category: NA
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kent St (S)															
1	L2	All MCs	14	0.0	14	0.0	0.162	45.0	LOS D	3.3	8.9	0.97	0.71	0.97	13.3
2	T1	All MCs	488	6.9	488	6.9	0.456	32.4	LOS C	7.9	59.3	0.90	0.74	0.90	21.9
3	R2	All MCs	176	0.6	176	0.6	*0.406	36.9	LOS C	6.4	44.8	0.90	0.78	0.90	15.4
Approach			678	5.1	678	5.1	0.456	33.8	LOS C	7.9	59.3	0.90	0.75	0.90	20.2
East: King St (E)															
5	T1	All MCs	34	0.0	34	0.0	*0.158	43.8	LOS D	1.8	4.8	0.98	0.69	0.98	4.5
6	R2	All MCs	8	0.0	8	0.0	0.158	49.9	LOS D	1.8	4.8	0.98	0.69	0.98	13.6
Approach			42	0.0	42	0.0	0.158	45.0	LOS D	1.8	4.8	0.98	0.69	0.98	6.8
North: Kent St (N)															
7	L2	All MCs	35	0.0	35	0.0	0.185	45.1	LOS D	3.8	10.1	0.97	0.72	0.97	10.7
8	T1	All MCs	57	0.0	57	0.0	*0.185	41.7	LOS C	3.8	10.1	0.97	0.72	0.97	19.0
9	R2	All MCs	32	0.0	32	0.0	0.130	46.7	LOS D	1.3	3.6	0.97	0.69	0.97	12.1
Approach			123	0.0	123	0.0	0.185	43.9	LOS D	3.8	10.1	0.97	0.71	0.97	15.0
West: King St (W)															
10	L2	All MCs	155	1.4	155	1.4	*0.478	14.0	LOS A	5.5	39.4	0.41	0.48	0.41	27.9
11	T1	All MCs	1039	3.2	1039	3.2	0.478	4.7	LOS A	5.5	39.4	0.29	0.27	0.29	27.7
Approach			1194	3.0	1194	3.0	0.478	5.9	LOS A	5.5	39.4	0.31	0.30	0.31	27.8
All Vehicles			2037	3.5	2037	3.5	0.478	18.3	LOS B	7.9	59.3	0.56	0.48	0.56	21.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Kent St (S)											
P1	Full	474	39.0	LOS D	1.1	1.1	0.94	0.94	55.7	20.0	0.36
East: King St (E)											

P2 Full	232	38.6	LOS D	0.6	0.6	0.93	0.93	55.3	20.0	0.36
North: Kent St (N)										
P3 Full	628	39.3	LOS D	1.5	1.5	0.95	0.95	56.0	20.0	0.36
West: King St (W)										
P4 Full	388	38.9	LOS D	0.9	0.9	0.94	0.94	55.6	20.0	0.36
All Pedestrians	1722	39.1	LOS D	1.5	1.5	0.94	0.94	55.7	20.0	0.36

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

MOVEMENT SUMMARY

Site: BGU18 [BGU18 Shelley St / Erskine St (Site Folder: Block 3 - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 3 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 305
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Shelley St (S)															
1	L2	All MCs	24	8.7	24	8.7	0.095	12.0	LOS A	1.9	13.7	0.42	0.40	0.42	19.5
2	T1	All MCs	87	0.0	87	0.0	0.095	6.8	LOS A	1.9	13.7	0.42	0.40	0.42	27.4
3	R2	All MCs	156	1.4	156	1.4	* 0.245	14.6	LOS B	3.5	25.1	0.55	0.68	0.55	16.4
Approach			267	1.6	267	1.6	0.245	11.8	LOS A	3.5	25.1	0.50	0.56	0.50	20.3
East: Erskine St (E)															
4	L2	All MCs	39	13.5	39	13.5	0.135	37.8	LOS C	1.5	11.5	0.88	0.71	0.88	10.8
5	T1	All MCs	77	12.3	77	12.3	* 0.413	32.8	LOS C	4.8	36.1	0.92	0.75	0.92	8.6
6	R2	All MCs	45	0.0	45	0.0	0.413	42.1	LOS C	4.8	36.1	0.92	0.75	0.92	9.9
Approach			161	9.2	161	9.2	0.413	36.6	LOS C	4.8	36.1	0.91	0.74	0.91	9.6
North: Shelley St (N)															
7	L2	All MCs	195	0.5	195	0.5	0.254	14.8	LOS B	3.9	27.6	0.49	0.65	0.49	16.1
8	T1	All MCs	22	4.8	22	4.8	0.030	9.4	LOS A	0.5	3.6	0.40	0.38	0.40	27.5
9	R2	All MCs	8	0.0	8	0.0	0.030	13.7	LOS A	0.5	3.6	0.40	0.38	0.40	16.6
Approach			225	0.9	225	0.9	0.254	14.2	LOS A	3.9	27.6	0.48	0.61	0.48	15.5
West: Erskine St (W)															
10	L2	All MCs	16	0.0	16	0.0	0.345	41.2	LOS C	3.8	28.3	0.89	0.72	0.89	10.8
11	T1	All MCs	208	9.6	208	9.6	0.345	31.7	LOS C	4.9	37.5	0.88	0.72	0.88	6.2
12	R2	All MCs	5	40.0	5	40.0	0.345	37.9	LOS C	4.9	37.5	0.88	0.71	0.88	12.5
Approach			229	9.6	229	9.6	0.345	32.5	LOS C	4.9	37.5	0.88	0.72	0.88	6.8
All Vehicles			883	4.9	883	4.9	0.413	22.3	LOS B	4.9	37.5	0.67	0.65	0.67	12.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Shelley St (S)											
P1	Full	233	38.6	LOS D	0.6	0.6	0.93	0.93	205.3	200.0	0.97

East: Erskine St (E)										
P2 Full	38	38.3	LOS D	0.1	0.1	0.92	0.92	205.0	200.0	0.98
North: Shelley St (N)										
P3 Full	313	38.8	LOS D	0.7	0.7	0.93	0.93	205.4	200.0	0.97
West: Erskine St (W)										
P4 Full	176	38.6	LOS D	0.4	0.4	0.93	0.93	205.2	200.0	0.97
All Pedestrians	759	38.7	LOS D	0.7	0.7	0.93	0.93	205.3	200.0	0.97

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

MOVEMENT SUMMARY

Site: BUG01 [BGU01 Hickson Rd / Towns Pl (Site Folder: Block 3 - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N1 [BGU Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Hickson Rd (E)															
4a	L1	All MCs	145	5.1	145	5.1	0.234	4.3	LOS A	1.1	7.8	0.43	0.55	0.43	37.2
6a	R1	All MCs	100	3.2	100	3.2	0.234	6.5	LOS A	1.1	7.8	0.43	0.55	0.43	34.6
Approach			245	4.3	245	4.3	0.234	5.2	NA	1.1	7.8	0.43	0.55	0.43	36.6
NorthWest: Towns Pl (NW)															
27a	L1	All MCs	196	0.5	196	0.5	0.350	5.6	LOS A	1.7	11.8	0.60	0.80	0.74	33.8
29	R2	All MCs	77	4.1	77	4.1	0.350	10.3	LOS A	1.7	11.8	0.60	0.80	0.74	35.4
Approach			273	1.5	273	1.5	0.350	6.9	LOS A	1.7	11.8	0.60	0.80	0.74	34.4
SouthWest: Hickson Rd (SW)															
30	L2	All MCs	95	3.3	95	3.3	0.289	4.5	LOS A	1.6	11.3	0.34	0.45	0.34	37.3
32a	R1	All MCs	316	4.3	316	4.3	0.289	3.1	LOS A	1.6	11.3	0.34	0.45	0.34	37.9
Approach			411	4.1	411	4.1	0.289	3.4	NA	1.6	11.3	0.34	0.45	0.34	37.8
All Vehicles			928	3.4	928	3.4	0.350	4.9	NA	1.7	11.8	0.44	0.58	0.48	36.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: BGU02 [BGU02 Dalgety Rd / Towns Pl (Site Folder: Block 3 - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N1 [BGU Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Dalgety Rd (S)															
30	L2	All MCs	32	0.0	32	0.0	0.213	6.3	LOS A	1.4	9.6	0.22	0.56	0.22	24.3
3b	R3	All MCs	253	1.7	253	1.7	0.213	6.5	LOS A	1.4	9.6	0.22	0.56	0.22	31.7
32u	U	All MCs	9	0.0	9	0.0	0.213	7.2	LOS A	1.4	9.6	0.22	0.56	0.22	34.4
Approach			294	1.4	294	1.4	0.213	6.5	LOS A	1.4	9.6	0.22	0.56	0.22	30.7
SouthEast: Towns Pl (SE)															
21b	L3	All MCs	145	4.3	145	4.3	0.135	2.7	LOS A	0.8	5.9	0.11	0.51	0.11	34.7
21a	L1	All MCs	33	0.0	33	0.0	0.135	8.3	LOS A	0.8	5.9	0.11	0.51	0.11	18.5
23u	U	All MCs	20	0.0	20	0.0	0.135	7.0	LOS A	0.8	5.9	0.11	0.51	0.11	28.6
Approach			198	3.2	198	3.2	0.135	4.0	LOS A	0.8	5.9	0.11	0.51	0.11	32.0
West: Parking Access (W)															
12a	R1	All MCs	3	0.0	3	0.0	0.011	1.6	LOS A	0.1	0.4	0.46	0.24	0.46	9.5
29	R2	All MCs	7	0.0	7	0.0	0.011	1.6	LOS A	0.1	0.4	0.46	0.24	0.46	21.3
29u	U	All MCs	1	0.0	1	0.0	0.011	1.6	LOS A	0.1	0.4	0.46	0.24	0.46	9.7
Approach			12	0.0	12	0.0	0.011	1.6	LOS A	0.1	0.4	0.46	0.24	0.46	18.2
All Vehicles			503	2.1	503	2.1	0.213	5.4	LOS A	1.4	9.6	0.18	0.53	0.18	30.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: BGU03 [BGU03 Kent St / Argyle St (Site Folder: Block 3 - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kent St (S)															
1	L2	All MCs	138	2.3	138	2.3	0.545	5.9	LOS A	4.6	32.7	0.61	0.79	0.93	34.3
2	T1	All MCs	29	0.0	29	0.0	0.545	6.9	LOS A	4.6	32.7	0.61	0.79	0.93	32.9
3	R2	All MCs	240	1.3	240	1.3	0.545	11.9	LOS A	4.6	32.7	0.61	0.79	0.93	33.1
Approach			407	1.6	407	1.6	0.545	9.5	LOS A	4.6	32.7	0.61	0.79	0.93	33.6
East: Argyle St (E)															
4	L2	All MCs	166	1.3	166	1.3	0.282	4.3	LOS A	1.5	10.4	0.37	0.39	0.37	36.8
5	T1	All MCs	131	0.8	131	0.8	0.282	1.5	LOS A	1.5	10.4	0.37	0.39	0.37	36.6
6	R2	All MCs	14	0.0	14	0.0	0.282	4.6	LOS A	1.5	10.4	0.37	0.39	0.37	32.1
Approach			311	1.0	311	1.0	0.282	3.1	NA	1.5	10.4	0.37	0.39	0.37	36.6
North: Kent St (N)															
7	L2	All MCs	4	0.0	4	0.0	0.025	7.7	LOS A	0.1	0.6	0.45	0.92	0.45	27.3
8	T1	All MCs	14	0.0	14	0.0	0.025	9.3	LOS A	0.1	0.6	0.45	0.92	0.45	33.5
9	R2	All MCs	1	0.0	1	0.0	0.025	8.7	LOS A	0.1	0.6	0.45	0.92	0.45	26.1
Approach			19	0.0	19	0.0	0.025	8.9	LOS A	0.1	0.6	0.45	0.92	0.45	32.3
West: Argyle Pl (W)															
10	L2	All MCs	6	0.0	6	0.0	0.152	4.7	LOS A	0.7	5.4	0.39	0.42	0.39	34.9
11	T1	All MCs	75	5.6	75	5.6	0.152	1.4	LOS A	0.7	5.4	0.39	0.42	0.39	36.6
12	R2	All MCs	87	7.2	87	7.2	0.152	4.8	LOS A	0.7	5.4	0.39	0.42	0.39	37.2
Approach			168	6.3	168	6.3	0.152	3.3	NA	0.7	5.4	0.39	0.42	0.39	36.9
All Vehicles			905	2.2	905	2.2	0.545	6.2	NA	4.6	32.7	0.49	0.59	0.63	35.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [TCS 4272]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 2 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (CCG User-Given Phase Times)

Vehicle Movement Performance (CCG)

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
Site: BGU04 [BGU04 Pedestrian Mid-block Crossing at Kent St near Gas Ln]															
South: Kent St															
2	T1	All MCs	389	1.6	388	1.6	0.309	2.3	LOS A	2.9	20.6	0.19	0.16	0.19	38.1
Approach			389	1.6	388	1.6	0.309	2.3	LOS A	2.9	20.6	0.19	0.16	0.19	38.1
North: Kent St															
8	T1	All MCs	253	1.7	253	1.7	0.456	39.3	LOS C	5.3	37.4	0.96	0.76	0.96	20.3
Approach			253	1.7	253	1.7	0.456	39.3	LOS C	5.3	37.4	0.96	0.76	0.96	20.3
All Vehicles			642	1.6	641	1.6	0.456	16.9	LOS B	5.3	37.4	0.49	0.40	0.49	28.8
Site: BGU05 [BGU05 Kent St / Sydney Harbour Bridge (SHB) On-ramp]															
South: Kent St (S)															
2	T1	All MCs	278	0.4	277	0.4	0.217	8.4	LOS A	5.9	41.8	0.53	0.40	0.53	28.4
3a	R1	All MCs	265	1.2	264	1.2	* 0.308	26.6	LOS B	9.0	63.7	0.88	0.69	0.88	22.4
Approach			543	0.8	541	0.8	0.308	17.2	LOS B	9.0	63.7	0.70	0.54	0.70	24.5
East: Clarence St (E)															
4	L2	All MCs	40	5.3	40	5.3	0.171	41.9	LOS C	1.6	11.8	0.92	0.72	0.92	11.2
6	R2	All MCs	138	3.1	138	3.1	* 0.406	38.9	LOS C	5.5	39.3	0.92	0.78	0.92	11.8
Approach			178	3.6	178	3.6	0.406	39.6	LOS C	5.5	39.3	0.92	0.77	0.92	11.6
NorthEast: SHB On-ramp (NE)															
24a	L1	All MCs	11	0.0	11	0.0	0.011	35.3	LOS C	0.4	1.0	0.88	0.59	0.88	19.1
Approach			11	0.0	11	0.0	0.011	35.3	LOS C	0.4	1.0	0.88	0.59	0.88	19.1
North: Kent St (N)															
7b	L3	All MCs	105	8.0	105	8.0	0.370	46.8	LOS D	4.7	35.4	1.00	0.83	1.00	11.6
8	T1	All MCs	159	2.0	159	2.0	* 0.831	28.7	LOS C	6.6	47.2	0.92	0.80	1.01	6.9
Approach			264	4.4	264	4.4	0.831	35.9	LOS C	6.6	47.2	0.95	0.81	1.01	9.5
All Vehicles			996	2.2	994	2.2	0.831	26.4	LOS B	9.0	63.7	0.81	0.65	0.82	17.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance (CCG)

Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE	Prop. Que	Eff. Stop	Travel Time	Travel Dist.	Aver. Speed

	ped/h	sec		[Ped ped	Dist] m		Rate	sec	m	m/sec
Site: BGU04 [BGU04 Pedestrian Mid-block Crossing at Kent St near Gas Ln]										
South: Kent St										
P1 Full	199	38.6	LOS D	0.5	0.5	0.93	0.93	205.3	200.0	0.97
All Pedestrians	199	38.6	LOS D	0.5	0.5	0.93	0.93	205.3	200.0	0.97
Site: BGU05 [BGU05 Kent St / Sydney Harbour Bridge (SHB) On-ramp]										
South: Kent St (S)										
P1 Full	223	38.6	LOS D	0.5	0.5	0.93	0.93	55.3	20.0	0.36
All Pedestrians	223	38.6	LOS D	0.5	0.5	0.93	0.93	55.3	20.0	0.36

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

MOVEMENT SUMMARY

Site: BGU06 [BGU06 Hickson Rd / Napoleon St / Sussex St (Site Folder: Block 3 - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 3 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 4625
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 75 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Sussex St (S)															
2	T1	All MCs	338	0.0	338	0.0	0.333	11.2	LOS A	7.2	50.1	0.62	0.53	0.62	24.4
3	R2	All MCs	106	1.0	106	1.0	* 0.340	23.2	LOS B	2.9	20.6	0.86	0.75	0.86	20.1
Approach			444	0.2	444	0.2	0.340	14.1	LOS A	7.2	50.1	0.68	0.59	0.68	22.9
East: Napolean St (E)															
4	L2	All MCs	102	5.2	102	5.2	0.155	20.4	LOS B	2.5	18.3	0.70	0.70	0.70	16.0
6	R2	All MCs	216	3.9	216	3.9	* 0.534	31.6	LOS C	7.2	51.9	0.93	0.80	0.93	15.0
Approach			318	4.3	318	4.3	0.534	28.0	LOS B	7.2	51.9	0.86	0.77	0.86	15.2
North: Hickson Rd (N)															
7	L2	All MCs	157	2.0	157	2.0	0.240	24.8	LOS B	4.1	28.9	0.74	0.72	0.74	18.2
8	T1	All MCs	365	2.0	365	2.0	* 0.554	23.5	LOS B	10.7	76.0	0.84	0.72	0.84	10.5
Approach			522	2.0	522	2.0	0.554	23.9	LOS B	10.7	76.0	0.81	0.72	0.81	12.3
West: Car Park Access (W)															
10	L2	All MCs	1	0.0	1	0.0	0.045	46.2	LOS D	0.0	0.3	1.00	0.57	1.00	5.2
11	T1	All MCs	1	0.0	1	0.0	* 0.215	51.2	LOS D	0.1	1.6	1.00	0.62	1.00	7.6
12	R2	All MCs	2	100.0	2	100.0	0.215	51.5	LOS D	0.1	1.6	1.00	0.62	1.00	2.0
Approach			4	50.0	4	50.0	0.215	50.1	LOS D	0.1	1.6	1.00	0.61	1.00	4.4
All Vehicles			1288	2.1	1288	2.1	0.554	21.6	LOS B	10.7	76.0	0.78	0.69	0.78	16.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Sussex St (S)											
P1	Full	75	30.9	LOS D	0.1	0.1	0.91	0.91	47.6	20.0	0.42
East: Napolean St (E)											
P2	Full	49	30.9	LOS D	0.1	0.1	0.91	0.91	47.6	20.0	0.42

North: Hickson Rd (N)										
P3	Full	146	31.0	LOS D	0.3	0.3	0.91	0.91	47.7	20.0	0.42
West: Car Park Access (W)										
P4	Full	80	30.9	LOS D	0.2	0.2	0.91	0.91	47.6	20.0	0.42
All Pedestrians		351	31.0	LOS D	0.3	0.3	0.91	0.91	47.6	20.0	0.42

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

MOVEMENT SUMMARY

Site: BGU07 [BGU07 Margaret St / Kent St / Napoleon St (Site Folder: Block 3 - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 2 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 308

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kent St (S)															
1a	L1	All MCs	77	5.5	77	5.5	0.286	16.5	LOS B	6.9	49.4	0.56	0.53	0.56	23.2
2	T1	All MCs	332	1.0	332	1.0	0.286	14.0	LOS A	6.9	49.4	0.65	0.58	0.65	10.2
3	R2	All MCs	39	0.0	39	0.0	0.286	51.2	LOS D	4.1	28.9	0.82	0.69	0.82	7.3
Approach			447	1.6	447	1.6	0.286	17.7	LOS B	6.9	49.4	0.65	0.58	0.65	12.5
East: Margaret St (E)															
4	L2	All MCs	29	0.0	25	0.0	0.068	34.9	LOS C	0.9	6.4	0.84	0.68	0.84	8.7
6a	R1	All MCs	318	3.0	276	3.4	0.604	32.8	LOS C	9.1	65.3	0.93	0.80	0.93	14.3
6	R2	All MCs	16	0.0	14	0.0	0.604	35.7	LOS C	9.1	65.3	0.93	0.80	0.93	6.3
Approach			363	2.6	315	3.0	0.604	33.1	LOS C	9.1	65.3	0.92	0.79	0.92	13.6
North: Kent St (N)															
7	L2	All MCs	52	0.0	52	0.0	0.245	55.7	LOS D	6.6	46.7	1.00	0.70	1.00	14.8
8	T1	All MCs	133	1.6	133	1.6	0.245	26.7	LOS B	6.6	46.7	0.99	0.69	0.99	16.1
9b	R3	All MCs	47	6.7	47	6.7	* 0.154	12.4	LOS A	0.6	4.1	0.27	0.59	0.27	28.3
Approach			232	2.3	232	2.3	0.245	30.2	LOS C	6.6	46.7	0.84	0.67	0.84	17.9
NorthWest: Napoleon St (NW)															
27b	L3	All MCs	209	0.5	209	0.5	0.476	9.6	LOS A	6.7	47.3	0.74	0.74	0.74	20.8
27a	L1	All MCs	94	2.2	94	2.2	* 0.476	24.6	LOS B	6.7	47.3	0.74	0.74	0.74	20.8
Approach			303	1.0	303	1.0	0.476	14.2	LOS A	6.7	47.3	0.74	0.74	0.74	20.8
All Vehicles			1345	1.9	1297	1.9	0.604	22.8	LOS B	9.1	65.3	0.77	0.69	0.77	15.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Kent St (S)											

P1 Full	234	36.8	LOS D	0.5	0.5	0.91	0.91	53.5	20.0	0.37
East: Margaret St (E)										
P2 Full	40	36.5	LOS D	0.1	0.1	0.90	0.90	53.2	20.0	0.38
North: Kent St (N)										
P3 Full	68	36.6	LOS D	0.2	0.2	0.90	0.90	53.2	20.0	0.38
NorthWest: Napoleon St (NW)										
P7 Full	143	36.7	LOS D	0.3	0.3	0.91	0.91	203.3	200.0	0.98
All Pedestrians	485	36.7	LOS D	0.5	0.5	0.91	0.91	97.6	73.1	0.75

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

MOVEMENT SUMMARY

Site: BGU08 [BGU08 Margaret St / Clarence St (Site Folder: Block 3 - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 2 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 319
Site Category: NA
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Clarence St (S)															
1	L2	All MCs	49	2.1	1	100.0	0.267	28.6	LOS C	6.0	41.9	0.72	0.60	0.72	16.9
2	T1	All MCs	446	11.8	446	11.8	* 0.267	20.0	LOS B	6.0	42.0	0.72	0.60	0.72	20.0
3	R2	All MCs	22	0.0	22	0.0	0.086	24.8	LOS B	1.1	10.7	0.68	0.61	0.68	15.9
Approach			518	10.4	469	11.4	0.267	20.2	LOS B	6.0	42.0	0.71	0.60	0.71	19.8
East: Margaret St (E)															
5	T1	All MCs	314	2.7	314	2.7	0.289	15.3	LOS B	6.9	49.5	0.66	0.57	0.66	10.4
6	R2	All MCs	56	24.5	56	24.5	* 0.289	20.8	LOS B	2.9	22.7	0.75	0.68	0.75	13.8
Approach			369	6.0	369	6.0	0.289	16.1	LOS B	6.9	49.5	0.68	0.59	0.68	11.1
West: Margaret St (W)															
10	L2	All MCs	88	4.8	88	4.8	* 0.439	40.6	LOS C	7.1	50.7	0.94	0.78	0.94	8.7
11	T1	All MCs	88	1.2	88	1.2	0.439	32.4	LOS C	7.1	50.7	0.94	0.78	0.94	4.9
Approach			177	3.0	177	3.0	0.439	36.5	LOS C	7.1	50.7	0.94	0.78	0.94	6.9
All Vehicles			1064	7.6	1064	7.6	0.439	20.6	LOS B	7.1	50.7	0.71	0.60	0.71	14.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Clarence St (S)											
P1	Full	551	39.2	LOS D	1.3	1.3	0.94	0.94	55.8	20.0	0.36
East: Margaret St (E)											
P2	Full	178	38.6	LOS D	0.4	0.4	0.93	0.93	55.2	20.0	0.36
North: Clarence St (N)											
P3	Full	239	38.7	LOS D	0.6	0.6	0.93	0.93	55.3	20.0	0.36
West: Margaret St (W)											

P4 Full	311	38.8	LOS D	0.7	0.7	0.93	0.93	55.4	20.0	0.36
All Pedestrians	1278	38.9	LOS D	1.3	1.3	0.94	0.94	55.6	20.0	0.36

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

MOVEMENT SUMMARY

Site: BGU09 [BGU09 Margaret St / York St (Site Folder: Block 3 - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 2 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 3042
Site Category: NA
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Margaret St (E)															
4	L2	All MCs	52	2.0	52	2.0	0.090	19.1	LOS B	1.1	7.7	0.73	0.68	0.73	20.0
5	T1	All MCs	52	12.2	52	12.2	0.069	10.7	LOS A	0.9	6.8	0.61	0.47	0.61	16.1
Approach			103	7.1	103	7.1	0.090	14.9	LOS B	1.1	7.7	0.67	0.57	0.67	18.8
North: York St (N)															
7	L2	All MCs	1	0.0	1	0.0	0.001	20.2	LOS B	0.0	0.1	0.78	0.52	0.78	13.8
8	T1	All MCs	700	7.5	700	7.5	0.368	16.0	LOS B	5.2	38.8	0.79	0.66	0.79	22.7
9	R2	All MCs	318	5.0	318	5.0	* 0.641	24.6	LOS B	8.5	61.8	0.92	0.84	0.94	9.1
Approach			1019	6.7	1019	6.7	0.641	18.7	LOS B	8.5	61.8	0.83	0.71	0.84	18.9
West: Margaret St (W)															
12	R2	All MCs	103	1.0	103	1.0	* 0.232	20.9	LOS B	2.3	16.6	0.79	0.73	0.79	18.0
Approach			103	1.0	103	1.0	0.232	20.9	LOS B	2.3	16.6	0.79	0.73	0.79	18.0
All Vehicles			1225	6.3	1225	6.3	0.641	18.5	LOS B	8.5	61.8	0.81	0.70	0.82	18.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: York St (S)											
P1	Full	538	22.2	LOS C	0.8	0.8	0.87	0.87	38.8	20.0	0.51
East: Margaret St (E)											
P2	Full	626	22.3	LOS C	0.9	0.9	0.87	0.87	38.9	20.0	0.51
North: York St (N)											
P3	Full	321	22.0	LOS C	0.5	0.5	0.86	0.86	38.6	20.0	0.52
West: Margaret St (W)											
P4	Full	312	22.0	LOS C	0.5	0.5	0.86	0.86	38.6	20.0	0.52
All Pedestrians		1797	22.1	LOS C	0.9	0.9	0.87	0.87	38.8	20.0	0.52

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:\Users\WanJ2\Documents\Sydney Metro C&SW\BLOCK 3\Models with volume input\04 SM C&SW_BGU (Block 3).sip9

MOVEMENT SUMMARY

Site: BGU10 [BGU10 Pedestrian Mid-block Crossing at Sussex St under Exchange Pl (Site Folder: Block 3 - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 3 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 3939 (?)
Site Category: (None)
Pedestrian Crossing (Signalised) - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 65 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Sussex St (S)															
2	T1	All MCs	445	0.2	445	0.2	0.201	7.3	LOS A	3.4	24.0	0.52	0.43	0.52	26.0
Approach			445	0.2	445	0.2	0.201	7.3	LOS A	3.4	24.0	0.52	0.43	0.52	26.0
North: Sussex St (N)															
8	T1	All MCs	469	2.9	469	2.9	* 0.218	7.4	LOS A	3.7	26.2	0.52	0.44	0.52	24.1
Approach			469	2.9	469	2.9	0.218	7.4	LOS A	3.7	26.2	0.52	0.44	0.52	24.1
All Vehicles			915	1.6	915	1.6	0.218	7.3	LOS A	3.7	26.2	0.52	0.44	0.52	25.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Sussex St (S)											
P1	Full	147	26.0	LOS C	0.2	0.2	0.90	0.90	42.7	20.0	0.47
All Pedestrians		147	26.0	LOS C	0.2	0.2	0.90	0.90	42.7	20.0	0.47

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

MOVEMENT SUMMARY

Site: BGU11 [BGU11 Pedestrian Mid-block Crossing at Kent St near Margaret St (Site Folder: Block 3 - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 3 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 4109
Site Category: (None)
Pedestrian Crossing (Signalised) - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 45 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kent St (S)															
2	T1	All MCs	479	1.5	479	1.5	* 0.301	10.1	LOS A	3.6	25.2	0.72	0.59	0.72	22.4
Approach			479	1.5	479	1.5	0.301	10.1	LOS A	3.6	25.2	0.72	0.59	0.72	22.4
North: Kent St (N)															
8	T1	All MCs	148	0.0	148	0.0	0.166	9.4	LOS A	1.9	13.0	0.67	0.53	0.67	15.1
Approach			148	0.0	148	0.0	0.166	9.4	LOS A	1.9	13.0	0.67	0.53	0.67	15.1
All Vehicles			627	1.2	627	1.2	0.301	9.9	LOS A	3.6	25.2	0.71	0.58	0.71	21.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Kent St (S)											
P1	Full	23	14.4	LOS B	0.0	0.0	0.80	0.80	31.1	20.0	0.64
All Pedestrians		23	14.4	LOS B	0.0	0.0	0.80	0.80	31.1	20.0	0.64

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

MOVEMENT SUMMARY

Site: BGU12 [BGU12 Sussex St / Erskine St (Site Folder: Block 3 - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 3 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 310
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Sussex St (S)															
1	L2	All MCs	115	1.8	115	1.8	* 0.494	35.7	LOS C	7.2	50.6	0.89	0.78	0.89	14.6
2	T1	All MCs	351	0.3	351	0.3	0.494	28.8	LOS C	10.2	71.8	0.88	0.75	0.88	15.6
Approach			465	0.7	465	0.7	0.494	30.5	LOS C	10.2	71.8	0.89	0.76	0.89	15.4
East: Erskine St (E)															
4	L2	All MCs	291	0.4	291	0.4	0.337	19.0	LOS B	7.8	54.8	0.65	0.72	0.65	22.1
5	T1	All MCs	178	2.4	178	2.4	0.400	5.8	LOS A	3.1	21.9	0.34	0.34	0.34	21.0
6	R2	All MCs	40	0.0	40	0.0	0.400	13.0	LOS A	3.1	21.9	0.34	0.34	0.34	21.0
Approach			508	1.0	508	1.0	0.400	13.9	LOS A	7.8	54.8	0.52	0.56	0.52	21.9
North: Sussex St (N)															
7	L2	All MCs	44	14.3	44	14.3	0.076	23.6	LOS B	1.3	9.9	0.68	0.67	0.68	15.0
8	T1	All MCs	392	1.9	392	1.9	0.263	20.1	LOS B	5.8	41.5	0.72	0.60	0.72	24.5
9	R2	All MCs	34	0.0	34	0.0	* 0.188	33.7	LOS C	1.2	8.6	0.88	0.72	0.88	11.7
Approach			469	2.9	469	2.9	0.263	21.4	LOS B	5.8	41.5	0.73	0.61	0.73	22.9
West: Erskine St (W)															
10	L2	All MCs	55	0.0	55	0.0	0.190	13.6	LOS A	4.3	30.5	0.56	0.53	0.56	12.5
11	T1	All MCs	289	1.1	289	1.1	* 0.920	29.3	LOS C	10.4	73.4	0.80	0.86	1.00	5.8
12	R2	All MCs	329	1.0	329	1.0	0.920	54.8	LOS D	10.4	73.4	1.00	1.14	1.37	12.3
Approach			674	0.9	674	0.9	0.920	40.5	LOS C	10.4	73.4	0.88	0.97	1.14	10.3
All Vehicles			2117	1.3	2117	1.3	0.920	27.7	LOS B	10.4	73.4	0.76	0.74	0.84	16.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Sussex St (S)											
P1	Full	462	39.0	LOS D	1.1	1.1	0.94	0.94	55.7	20.0	0.36

East: Erskine St (E)										
P2 Full	66	38.4	LOS D	0.2	0.2	0.92	0.92	55.0	20.0	0.36
North: Sussex St (N)										
P3 Full	423	39.0	LOS D	1.0	1.0	0.94	0.94	55.6	20.0	0.36
West: Erskine St (W)										
P4 Full	117	38.5	LOS D	0.3	0.3	0.93	0.93	55.1	20.0	0.36
All Pedestrians	1068	38.9	LOS D	1.1	1.1	0.94	0.94	55.6	20.0	0.36

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

MOVEMENT SUMMARY

Site: BGU13 [BGU13 Kent St / Erskine St (Site Folder: Block 3 - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 3 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 307
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kent St (S)															
1	L2	All MCs	176	1.8	176	1.8	0.255	24.2	LOS B	5.3	37.8	0.73	0.73	0.73	17.8
2	T1	All MCs	412	2.3	412	2.3	* 0.271	20.2	LOS B	5.9	42.3	0.72	0.60	0.72	19.5
3	R2	All MCs	5	0.0	5	0.0	0.012	10.4	LOS A	0.5	1.3	0.43	0.35	0.43	23.3
Approach			593	2.1	593	2.1	0.271	21.3	LOS B	5.9	42.3	0.72	0.63	0.72	19.0
East: Erskine St (E)															
5	T1	All MCs	204	1.0	204	1.0	0.264	35.5	LOS C	3.7	26.1	0.82	0.66	0.82	6.5
6	R2	All MCs	4	0.0	4	0.0	0.264	48.1	LOS D	3.5	24.9	0.83	0.66	0.83	6.4
Approach			208	1.0	208	1.0	0.264	35.7	LOS C	3.7	26.1	0.82	0.66	0.82	5.3
North: Kent St (N)															
7	L2	All MCs	1	0.0	1	0.0	0.014	10.2	LOS A	0.9	2.6	0.43	0.32	0.43	19.9
8	T1	All MCs	54	0.0	54	0.0	0.014	7.9	LOS A	0.9	2.6	0.43	0.32	0.43	24.5
9	R2	All MCs	128	0.0	128	0.0	* 0.534	43.5	LOS D	5.5	38.3	0.97	0.79	0.97	6.8
Approach			183	0.0	183	0.0	0.534	32.9	LOS C	5.5	38.3	0.81	0.65	0.81	11.4
West: Erskine St (W)															
10	L2	All MCs	71	0.0	71	0.0	0.137	38.8	LOS C	1.9	13.1	0.63	0.66	0.63	9.3
11	T1	All MCs	263	3.6	263	3.6	* 0.583	38.8	LOS C	8.8	63.4	0.80	0.67	0.80	12.8
Approach			334	2.8	334	2.8	0.583	38.8	LOS C	8.8	63.4	0.76	0.67	0.76	8.5
All Vehicles			1318	1.8	1318	1.8	0.583	29.6	LOS C	8.8	63.4	0.76	0.65	0.76	12.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Kent St (S)											
P1	Full	237	38.7	LOS D	0.6	0.6	0.93	0.93	55.3	20.0	0.36
East: Erskine St (E)											

P2 Full	92	38.4	LOS D	0.2	0.2	0.93	0.93	55.1	20.0	0.36
North: Kent St (N)										
P3 Full	420	39.0	LOS D	1.0	1.0	0.94	0.94	55.6	20.0	0.36
West: Erskine St (W)										
P4 Full	84	38.4	LOS D	0.2	0.2	0.93	0.93	55.1	20.0	0.36
All Pedestrians	833	38.8	LOS D	1.0	1.0	0.93	0.93	55.4	20.0	0.36

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

MOVEMENT SUMMARY

Site: BGU14 [BGU14 Sussex St / King St (Site Folder: Block 3 - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 4 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 284
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: King St (E)															
4a	L1	All MCs	20	0.0	20	0.0	0.026	41.3	LOS C	0.8	2.3	1.00	0.68	1.00	18.9
Approach			20	0.0	20	0.0	0.026	41.3	LOS C	0.8	2.3	1.00	0.68	1.00	18.9
North: Sussex St (N)															
7	L2	All MCs	107	5.9	107	5.9	0.659	30.6	LOS C	16.6	119.0	0.89	0.79	0.89	17.0
8	T1	All MCs	821	2.1	821	2.1	0.659	24.9	LOS B	17.4	124.0	0.89	0.78	0.89	24.3
Approach			928	2.5	928	2.5	0.659	25.5	LOS B	17.4	124.0	0.89	0.78	0.89	23.7
SouthWest: King St (SW)															
30a	L1	All MCs	462	1.1	462	1.1	* 0.550	14.0	LOS A	8.5	60.0	0.78	0.79	0.78	36.7
32a	R1	All MCs	1063	1.0	1063	1.0	* 0.568	21.2	LOS B	16.3	115.0	0.76	0.77	0.76	31.5
32b	R3	All MCs	339	7.5	339	7.5	0.458	21.6	LOS B	9.8	73.3	0.70	0.79	0.70	33.0
Approach			1864	2.2	1864	2.2	0.568	19.5	LOS B	16.3	115.0	0.76	0.78	0.76	33.2
All Vehicles			2813	2.3	2813	2.3	0.659	21.7	LOS B	17.4	124.0	0.80	0.78	0.80	30.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Sussex St (S)											
P1	Full	364	40.8	LOS E	0.9	0.9	0.96	0.96	57.4	20.0	0.35
East: King St (E)											
P2	Full	186	38.6	LOS D	0.4	0.4	0.93	0.93	55.2	20.0	0.36
North: Sussex St (N)											
P3	Full	578	39.2	LOS D	1.4	1.4	0.94	0.94	55.9	20.0	0.36
SouthWest: King St (SW)											
P8	Full	626	39.3	LOS D	1.5	1.5	0.95	0.95	206.0	200.0	0.97

P8B	Slip/ Bypass	412	40.8	LOS E	1.0	1.0	0.96	0.96	207.5	200.0	0.96
All Pedestrians		2166	39.8	LOS D	1.5	1.5	0.95	0.95	128.3	106.2	0.83

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

MOVEMENT SUMMARY

Site: BGU15 [BGU15 Kent St / King St (Site Folder: Block 3 - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 4 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 283
Site Category: NA
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Kent St (S)															
1	L2	All MCs	5	0.0	5	0.0	0.098	45.8	LOS D	1.7	4.7	0.97	0.68	0.97	13.2
2	T1	All MCs	374	1.7	374	1.7	* 0.357	30.3	LOS C	6.6	46.6	0.87	0.70	0.87	22.4
3	R2	All MCs	176	0.6	176	0.6	* 0.357	36.4	LOS C	6.3	45.0	0.89	0.76	0.89	15.7
Approach			555	1.3	555	1.3	0.357	32.4	LOS C	6.6	46.6	0.88	0.72	0.88	20.4
East: King St (E)															
5	T1	All MCs	11	0.0	11	0.0	0.054	43.1	LOS D	0.6	1.6	0.97	0.64	0.97	4.5
6	R2	All MCs	3	0.0	3	0.0	0.054	49.2	LOS D	0.6	1.6	0.97	0.64	0.97	13.7
Approach			14	0.0	14	0.0	0.054	44.5	LOS D	0.6	1.6	0.97	0.64	0.97	7.2
North: Kent St (N)															
7	L2	All MCs	5	0.0	5	0.0	0.076	45.6	LOS D	1.3	3.6	0.97	0.67	0.97	10.8
8	T1	All MCs	27	0.0	27	0.0	0.076	42.2	LOS C	1.3	3.6	0.97	0.67	0.97	19.1
9	R2	All MCs	12	0.0	12	0.0	0.047	46.0	LOS D	0.5	1.3	0.96	0.65	0.96	12.2
Approach			44	0.0	44	0.0	0.076	43.6	LOS D	1.3	3.6	0.97	0.66	0.97	16.5
West: King St (W)															
10	L2	All MCs	249	0.0	249	0.0	* 0.473	28.0	LOS B	9.7	68.2	0.79	0.75	0.79	19.6
11	T1	All MCs	921	1.8	921	1.8	* 0.473	7.3	LOS A	9.7	68.2	0.39	0.34	0.39	24.1
Approach			1171	1.4	1171	1.4	0.473	11.7	LOS A	9.7	68.2	0.47	0.43	0.47	22.2
All Vehicles			1783	1.4	1783	1.4	0.473	19.2	LOS B	9.7	68.2	0.61	0.53	0.61	20.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Kent St (S)											
P1	Full	320	38.8	LOS D	0.8	0.8	0.93	0.93	55.5	20.0	0.36
East: King St (E)											

P2 Full	131	38.5	LOS D	0.3	0.3	0.93	0.93	55.1	20.0	0.36
North: Kent St (N)										
P3 Full	404	38.9	LOS D	1.0	1.0	0.94	0.94	55.6	20.0	0.36
West: King St (W)										
P4 Full	152	38.5	LOS D	0.4	0.4	0.93	0.93	55.2	20.0	0.36
All Pedestrians	1006	38.8	LOS D	1.0	1.0	0.93	0.93	55.4	20.0	0.36

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

MOVEMENT SUMMARY

Site: BGU18 [BGU18 Shelley St / Erskine St (Site Folder: Block 3 - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: BGU-N2 [BGU Network 3 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 305
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 85 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Shelley St (S)															
1	L2	All MCs	32	0.0	32	0.0	0.145	14.9	LOS B	3.1	21.4	0.51	0.47	0.51	18.0
2	T1	All MCs	122	0.0	122	0.0	0.145	9.4	LOS A	3.1	21.4	0.51	0.47	0.51	24.8
3	R2	All MCs	225	0.5	225	0.5	* 0.718	26.1	LOS B	12.3	86.4	0.83	0.88	0.95	11.2
Approach			379	0.3	379	0.3	0.718	19.8	LOS B	12.3	86.4	0.70	0.71	0.77	15.4
East: Erskine St (E)															
4	L2	All MCs	93	1.1	93	1.1	0.226	39.0	LOS C	3.2	22.6	0.86	0.74	0.86	11.9
5	T1	All MCs	205	2.6	205	2.6	0.521	33.3	LOS C	8.3	59.3	0.89	0.75	0.89	10.4
6	R2	All MCs	28	0.0	28	0.0	* 0.521	43.5	LOS D	8.3	59.3	0.89	0.75	0.89	11.7
Approach			326	1.9	326	1.9	0.521	35.8	LOS C	8.3	59.3	0.88	0.75	0.88	9.6
North: Shelley St (N)															
7	L2	All MCs	201	0.5	201	0.5	0.210	17.5	LOS B	4.2	29.4	0.54	0.66	0.54	15.0
8	T1	All MCs	18	0.0	18	0.0	0.034	12.9	LOS A	0.6	3.9	0.49	0.46	0.49	24.4
9	R2	All MCs	12	0.0	12	0.0	0.034	17.9	LOS B	0.6	3.9	0.49	0.46	0.49	15.1
Approach			231	0.5	231	0.5	0.210	17.2	LOS B	4.2	29.4	0.53	0.64	0.53	13.6
West: Erskine St (W)															
10	L2	All MCs	32	0.0	32	0.0	0.371	35.0	LOS C	6.4	45.3	0.85	0.71	0.85	12.4
11	T1	All MCs	247	1.7	247	1.7	0.371	26.6	LOS B	6.4	45.3	0.85	0.71	0.85	7.1
12	R2	All MCs	8	0.0	8	0.0	0.371	38.4	LOS C	4.9	34.5	0.84	0.69	0.84	13.6
Approach			287	1.5	287	1.5	0.371	27.8	LOS B	6.4	45.3	0.85	0.71	0.85	8.0
All Vehicles			1223	1.0	1223	1.0	0.718	25.5	LOS B	12.3	86.4	0.75	0.71	0.77	11.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Shelley St (S)											
P1	Full	460	36.5	LOS D	1.0	1.0	0.94	0.94	203.2	200.0	0.98

East: Erskine St (E)										
P2 Full	17	35.8	LOS D	0.0	0.0	0.92	0.92	202.5	200.0	0.99
North: Shelley St (N)										
P3 Full	408	36.4	LOS D	0.9	0.9	0.93	0.93	203.1	200.0	0.98
West: Erskine St (W)										
P4 Full	107	35.9	LOS D	0.2	0.2	0.92	0.92	202.6	200.0	0.99
All Pedestrians	993	36.4	LOS D	1.0	1.0	0.93	0.93	203.1	200.0	0.98

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

MOVEMENT SUMMARY

Site: MPL01 [MPL01 Hunter St / Castlereagh St / Bligh St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: MPL-N1 [MPL Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 244
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Hunter St (E)															
4	L2	All MCs	275	13.0	275	13.0	* 0.370	13.8	LOS A	5.6	43.6	0.49	0.65	0.49	21.4
6a	R1	All MCs	292	6.1	292	6.1	0.311	7.1	LOS A	3.6	26.6	0.30	0.46	0.30	26.5
Approach			566	9.5	566	9.5	0.370	10.4	LOS A	5.6	43.6	0.40	0.55	0.40	23.5
North: Bligh St (N)															
7	L2	All MCs	92	31.0	92	31.0	* 0.511	59.4	LOS E	4.1	29.8	1.00	0.80	1.00	10.7
8	T1	All MCs	123	5.1	123	5.1	0.181	43.1	LOS D	2.7	14.3	0.94	0.72	0.94	17.7
9b	R3	All MCs	6	0.0	6	0.0	0.181	46.4	LOS D	2.5	13.8	0.94	0.73	0.94	16.2
Approach			221	15.7	221	15.7	0.511	50.0	LOS D	4.1	29.8	0.96	0.75	0.96	12.9
NorthWest: Hunter St (NW)															
27a	L1	All MCs	283	11.9	283	11.9	0.273	11.0	LOS A	4.2	33.1	0.50	0.60	0.50	20.6
29a	R1	All MCs	79	20.0	79	20.0	* 0.273	13.2	LOS A	4.2	33.1	0.55	0.63	0.55	26.3
Approach			362	13.7	362	13.7	0.273	11.5	LOS A	4.2	33.1	0.51	0.61	0.51	21.2
All Vehicles			1149	12.0	1149	12.0	0.511	18.3	LOS B	5.6	43.6	0.54	0.61	0.54	18.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh St (S)											
P1	Full	796	39.6	LOS D	1.9	1.9	0.95	0.95	206.3	200.0	0.97
East: Hunter St (E)											
P2	Full	139	38.5	LOS D	0.3	0.3	0.93	0.93	205.2	200.0	0.97
North: Bligh St (N)											
P3	Full	768	39.5	LOS D	1.9	1.9	0.95	0.95	206.2	200.0	0.97
NorthWest: Hunter St (NW)											
P7	Full	589	39.2	LOS D	1.4	1.4	0.95	0.95	205.9	200.0	0.97

All Pedestrians	2293	39.4	LOS D	1.9	1.9	0.95	0.95	206.1	200.0	0.97

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

MOVEMENT SUMMARY

Site: MPL02 [MPL02 Hunter St / Elizabeth St / Chifley Square (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: MPL-N1 [MPL Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 302
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Elizabeth St (S)															
1	L2	All MCs	198	19.1	198	19.1	0.207	16.7	LOS B	3.7	23.4	0.46	0.63	0.46	21.5
3a	R1	All MCs	542	20.2	542	20.2	* 0.716	27.2	LOS B	18.9	155.5	0.85	0.80	0.85	15.5
3	R2	All MCs	221	3.8	221	3.8	0.558	27.3	LOS B	7.7	40.4	0.90	0.80	0.90	18.4
Approach			961	16.2	961	16.2	0.716	25.1	LOS B	18.9	155.5	0.78	0.76	0.78	15.5
East: Hunter St (E)															
4	L2	All MCs	116	7.3	116	7.3	0.601	29.7	LOS C	9.7	51.8	0.94	0.80	0.94	16.1
5	T1	All MCs	377	4.2	377	4.2	* 0.601	36.3	LOS C	10.1	53.1	0.95	0.80	0.95	10.8
Approach			493	4.9	493	4.9	0.601	34.7	LOS C	10.1	53.1	0.94	0.80	0.94	12.3
NorthEast: Chifley Square (NE)															
24b	L3	All MCs	47	0.0	47	0.0	0.293	27.6	LOS B	2.9	29.6	0.68	0.68	0.68	19.7
24a	L1	All MCs	301	27.6	301	27.6	0.442	12.9	LOS A	4.2	32.3	0.45	0.55	0.45	26.0
Approach			348	23.9	348	23.9	0.442	14.9	LOS B	4.2	32.3	0.48	0.57	0.48	24.9
West: Hunter St (W)															
10a	L1	All MCs	116	10.0	116	10.0	0.471	35.0	LOS C	10.4	65.3	0.91	0.79	0.91	5.9
11	T1	All MCs	165	5.7	165	5.7	0.471	26.6	LOS B	10.4	65.3	0.91	0.79	0.91	13.8
12	R2	All MCs	94	43.8	94	43.8	* 0.471	37.3	LOS C	4.0	33.2	0.96	0.78	0.96	12.5
Approach			375	16.6	375	16.6	0.471	31.9	LOS C	10.4	65.3	0.92	0.79	0.92	11.5
All Vehicles			2177	14.9	2177	14.9	0.716	26.8	LOS B	18.9	155.5	0.80	0.74	0.80	15.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth St (S)											
P1	Full	1109	40.1	LOS E	2.7	2.7	0.97	0.97	206.8	200.0	0.97
East: Hunter St (E)											

P2	Full	1255	40.4	LOS E	3.1	3.1	0.97	0.97	207.1	200.0	0.97
NorthEast: Chifley Square (NE)											
P6	Full	524	39.1	LOS D	1.3	1.3	0.94	0.94	205.8	200.0	0.97
West: Hunter St (W)											
P4	Full	562	39.2	LOS D	1.4	1.4	0.94	0.94	205.9	200.0	0.97
All Pedestrians		3451	39.9	LOS D	3.1	3.1	0.96	0.96	206.6	200.0	0.97

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

MOVEMENT SUMMARY

Site: MPL03 [MPL03 Bent St / Bligh St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: MPL-N1 [MPL Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 1412
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Bent St (SE)															
21	L2	All MCs	154	17.8	154	17.8	* 0.266	13.3	LOS A	6.9	54.0	0.57	0.49	0.57	12.0
22	T1	All MCs	484	10.2	484	10.2	0.266	3.4	LOS A	6.9	54.0	0.30	0.26	0.30	26.1
Approach			638	12.0	638	12.0	0.266	5.8	LOS A	6.9	54.0	0.36	0.32	0.36	22.3
NorthWest: Bent St (NW)															
28	T1	All MCs	124	3.4	124	3.4	0.091	3.9	LOS A	1.6	11.4	0.31	0.26	0.31	22.3
29	R2	All MCs	67	10.9	67	10.9	0.161	12.7	LOS A	1.4	10.5	0.48	0.64	0.48	11.4
Approach			192	6.0	192	6.0	0.161	7.0	LOS A	1.6	11.4	0.37	0.39	0.37	16.6
All Vehicles			829	10.7	829	10.7	0.266	6.0	LOS A	6.9	54.0	0.37	0.33	0.37	21.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Bent St (SE)											
P5	Full	206	38.6	LOS D	0.5	0.5	0.93	0.93	205.3	200.0	0.97
NorthWest: Bent St (NW)											
P7	Full	711	39.4	LOS D	1.7	1.7	0.95	0.95	206.1	200.0	0.97
SouthWest: Bligh St (SW)											
P8	Full	349	23.9	LOS C	0.6	0.6	0.86	0.86	190.6	200.0	1.05
All Pedestrians		1266	35.0	LOS D	1.7	1.7	0.92	0.92	201.7	200.0	0.99

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

MOVEMENT SUMMARY

Site: MPL04 [MPL04 Bent St / Phillip St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: MPL-N1 [MPL Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 242
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Bent St (SE)															
21	L2	All MCs	99	38.3	99	38.3	0.586	30.5	LOS C	1.0	9.6	0.05	0.44	0.10	26.7
22	T1	All MCs	423	3.2	423	3.2	0.424	19.7	LOS B	11.7	84.3	0.72	0.62	0.72	12.8
23a	R1	All MCs	145	2.9	145	2.9	* 0.424	27.0	LOS B	5.6	39.9	0.78	0.71	0.78	18.7
Approach			667	8.4	667	8.4	0.586	22.9	LOS B	11.7	84.3	0.63	0.61	0.64	15.8
North: Phillip St (N)															
7a	L1	All MCs	117	10.8	117	10.8	* 0.266	24.4	LOS B	4.5	39.0	0.73	0.70	0.73	19.6
9a	R1	All MCs	234	18.9	234	18.9	0.266	19.5	LOS B	5.7	42.8	0.69	0.67	0.69	17.8
Approach			351	16.2	351	16.2	0.266	21.1	LOS B	5.7	42.8	0.70	0.68	0.70	18.5
NorthWest: Bent St (NW)															
27b	L3	All MCs	8	0.0	8	0.0	0.120	23.8	LOS B	1.7	12.5	0.57	0.47	0.57	20.5
28	T1	All MCs	98	3.2	98	3.2	0.120	16.6	LOS B	1.7	12.5	0.57	0.48	0.57	16.4
29	R2	All MCs	18	5.9	18	5.9	0.120	24.3	LOS B	1.2	8.9	0.57	0.50	0.57	8.1
Approach			124	3.4	124	3.4	0.120	18.2	LOS B	1.7	12.5	0.57	0.49	0.57	15.8
SouthWest: Phillip St (SW)															
30	L2	All MCs	208	27.3	208	27.3	0.503	16.7	LOS B	5.6	48.0	0.63	0.71	0.63	18.0
30a	L1	All MCs	333	18.7	333	18.7	0.336	12.3	LOS A	6.3	51.1	0.54	0.60	0.54	27.1
32	R2	All MCs	116	0.9	116	0.9	* 0.336	20.0	LOS B	3.9	28.8	0.66	0.68	0.66	21.2
Approach			657	18.3	657	18.3	0.503	15.0	LOS B	6.3	51.1	0.59	0.65	0.59	23.7
All Vehicles			1799	13.2	1799	13.2	0.586	19.4	LOS B	11.7	84.3	0.63	0.63	0.63	19.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Bent St (SE)											
P5	Full	1111	40.1	LOS E	2.7	2.7	0.97	0.97	206.8	200.0	0.97

North: Phillip St (N)										
P3 Full	691	39.4	LOS D	1.7	1.7	0.95	0.95	206.1	200.0	0.97
NorthWest: Bent St (NW)										
P7 Full	49	38.4	LOS D	0.1	0.1	0.92	0.92	205.0	200.0	0.98
SouthWest: Phillip St (SW)										
P8 Full	1018	40.0	LOS D	2.5	2.5	0.96	0.96	206.6	200.0	0.97
All Pedestrians	2868	39.9	LOS D	2.7	2.7	0.96	0.96	206.5	200.0	0.97

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

MOVEMENT SUMMARY

Site: MPL05 [MPL05 Pedestrian Mid-block Crossing at Castlereagh St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

TCS 245
Site Category: (None)
Pedestrian Crossing (Signalised) - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 45 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
North: Castlereagh St (N)															
8	T1	All MCs	365	16.4	365	16.4	* 0.412	8.1	LOS A	5.0	39.0	0.67	0.57	0.67	30.0
Approach			365	16.4	365	16.4	0.412	8.1	LOS A	5.0	39.0	0.67	0.57	0.67	30.0
All Vehicles			365	16.4	365	16.4	0.412	8.1	LOS A	5.0	39.0	0.67	0.57	0.67	30.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh St (S)												
P1	Full	3267	3439	18.7	LOS B	4.3	4.3	0.99	0.99	185.4	200.0	1.08
All Pedestrians		3267	3439	18.7	LOS B	4.3	4.3	0.99	0.99	185.4	200.0	1.08

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

MOVEMENT SUMMARY

Site: MPL06 [MPL06 Pedestrian Mid-block Crossing at Elizabeth St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

TCS 287
Site Category: (None)
Pedestrian Crossing (Signalised) - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Elizabeth St (S)															
2	T1	All MCs	909	17.5	909	17.5	* 0.454	11.4	LOS A	8.5	68.8	0.59	0.51	0.59	29.5
Approach			909	17.5	909	17.5	0.454	9.3	LOS A	8.5	68.8	0.59	0.51	0.59	27.3
North: Elizabeth St (N)															
8	T1	All MCs	537	24.1	537	24.1	0.390	8.2	LOS A	7.8	56.7	0.56	0.48	0.56	29.9
Approach			537	24.1	537	24.1	0.390	8.2	LOS A	7.8	56.7	0.56	0.48	0.56	29.9
All Vehicles			1446	19.9	1446	19.9	0.454	10.2	LOS A	8.5	68.8	0.58	0.50	0.58	28.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth St (S)												
P1	Full	4224	4446	34.8	LOS D	9.8	9.8	1.10	1.10	201.5	200.0	0.99
All Pedestrians		4224	4446	34.8	LOS D	9.8	9.8	1.10	1.10	201.5	200.0	0.99

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

MOVEMENT SUMMARY

Site: MPL01 [MPL01 Hunter St / Castlereagh St / Bligh St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: MPL-N1 [MPL Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 244
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Hunter St (E)															
4	L2	All MCs	188	21.2	188	21.2	* 0.288	15.1	LOS B	4.0	32.8	0.51	0.64	0.51	20.5
6a	R1	All MCs	192	0.5	192	0.5	0.202	8.7	LOS A	2.7	18.6	0.34	0.47	0.34	24.8
Approach			380	10.8	380	10.8	0.288	11.9	LOS A	4.0	32.8	0.42	0.56	0.42	22.3
North: Bligh St (N)															
7	L2	All MCs	119	18.6	119	18.6	* 0.605	60.5	LOS E	5.2	33.6	0.98	0.82	1.03	10.9
8	T1	All MCs	64	19.7	64	19.7	0.124	43.9	LOS D	1.5	9.6	0.89	0.67	0.89	18.0
9b	R3	All MCs	7	0.0	7	0.0	0.124	44.5	LOS D	1.3	8.6	0.90	0.68	0.90	16.2
Approach			191	18.2	191	18.2	0.605	54.3	LOS D	5.2	33.6	0.95	0.76	0.98	11.2
NorthWest: Hunter St (NW)															
27a	L1	All MCs	292	8.3	292	8.3	0.266	9.1	LOS A	4.2	31.3	0.48	0.60	0.48	21.3
29a	R1	All MCs	95	7.8	95	7.8	* 0.266	10.7	LOS A	4.2	31.3	0.53	0.62	0.53	27.0
Approach			386	8.2	386	8.2	0.266	9.5	LOS A	4.2	31.3	0.49	0.60	0.49	23.3
All Vehicles			957	11.2	957	11.2	0.605	19.4	LOS B	5.2	33.6	0.55	0.62	0.56	17.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh St (S)											
P1	Full	894	39.8	LOS D	2.2	2.2	0.96	0.96	206.4	200.0	0.97
East: Hunter St (E)											
P2	Full	165	38.5	LOS D	0.4	0.4	0.93	0.93	205.2	200.0	0.97
North: Bligh St (N)											
P3	Full	736	39.5	LOS D	1.8	1.8	0.95	0.95	206.1	200.0	0.97
NorthWest: Hunter St (NW)											
P7	Full	671	39.4	LOS D	1.6	1.6	0.95	0.95	206.0	200.0	0.97

All Pedestrians	2465	39.5	LOS D	2.2	2.2	0.95	0.95	206.2	200.0	0.97

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

MOVEMENT SUMMARY

Site: MPL02 [MPL02 Hunter St / Elizabeth St / Chifley Square (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: MPL-N1 [MPL Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 302
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Elizabeth St (S)															
1	L2	All MCs	152	6.3	152	6.3	0.138	16.6	LOS B	2.6	14.2	0.43	0.61	0.43	22.3
3a	R1	All MCs	619	13.3	619	13.3	* 0.719	26.7	LOS B	21.2	165.1	0.84	0.79	0.84	16.0
3	R2	All MCs	176	1.2	176	1.2	0.391	22.5	LOS B	5.3	26.9	0.80	0.75	0.80	20.3
Approach			946	9.9	946	9.9	0.719	24.3	LOS B	21.2	165.1	0.77	0.76	0.77	15.6
East: Hunter St (E)															
4	L2	All MCs	121	4.3	121	4.3	0.385	28.8	LOS C	6.7	37.5	0.85	0.75	0.85	17.4
5	T1	All MCs	228	13.8	228	13.8	* 0.385	31.6	LOS C	6.7	37.5	0.87	0.73	0.87	11.7
Approach			349	10.5	349	10.5	0.385	30.6	LOS C	6.7	37.5	0.86	0.74	0.86	14.0
NorthEast: Chifley Square (NE)															
24b	L3	All MCs	31	0.0	31	0.0	0.179	29.3	LOS C	2.2	22.4	0.73	0.69	0.73	19.2
24a	L1	All MCs	229	18.8	229	18.8	0.270	24.5	LOS B	6.2	44.4	0.78	0.71	0.78	20.0
Approach			260	16.6	260	16.6	0.270	25.0	LOS B	6.2	44.4	0.77	0.71	0.77	19.9
West: Hunter St (W)															
10a	L1	All MCs	178	0.0	178	0.0	0.428	34.2	LOS C	10.3	65.3	0.92	0.80	0.92	5.4
11	T1	All MCs	137	1.5	137	1.5	0.428	25.2	LOS B	10.3	65.3	0.92	0.79	0.92	13.6
12	R2	All MCs	96	46.2	96	46.2	* 0.428	33.6	LOS C	5.1	38.5	0.92	0.77	0.92	14.1
Approach			411	11.3	411	11.3	0.428	31.0	LOS C	10.3	65.3	0.92	0.79	0.92	10.7
All Vehicles			1966	11.2	1966	11.2	0.719	26.9	LOS B	21.2	165.1	0.82	0.75	0.82	14.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth St (S)											
P1	Full	1063	40.0	LOS E	2.6	2.6	0.96	0.96	206.7	200.0	0.97
East: Hunter St (E)											

P2	Full	1423	40.7	LOS E	3.6	3.6	0.98	0.98	207.4	200.0	0.96
NorthEast: Chifley Square (NE)											
P6	Full	506	39.1	LOS D	1.2	1.2	0.94	0.94	205.8	200.0	0.97
West: Hunter St (W)											
P4	Full	451	39.0	LOS D	1.1	1.1	0.94	0.94	205.7	200.0	0.97
All Pedestrians		3443	40.0	LOS E	3.6	3.6	0.96	0.96	206.7	200.0	0.97

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

MOVEMENT SUMMARY

Site: MPL03 [MPL03 Bent St / Bligh St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: MPL-N1 [MPL Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 1412
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Bent St (SE)															
21	L2	All MCs	122	25.9	122	25.9	0.230	6.7	LOS A	3.0	24.0	0.28	0.39	0.28	18.9
22	T1	All MCs	439	5.8	439	5.8	* 0.230	3.1	LOS A	3.0	24.0	0.25	0.27	0.25	28.0
Approach			561	10.1	561	10.1	0.230	3.9	LOS A	3.0	24.0	0.26	0.29	0.26	26.4
NorthWest: Bent St (NW)															
28	T1	All MCs	182	0.6	182	0.6	0.121	2.6	LOS A	1.9	13.5	0.26	0.22	0.26	26.3
29	R2	All MCs	68	4.6	68	4.6	* 0.123	7.3	LOS A	0.8	6.2	0.37	0.60	0.37	16.5
Approach			251	1.7	251	1.7	0.123	3.9	LOS A	1.9	13.5	0.29	0.32	0.29	22.5
All Vehicles			812	7.5	812	7.5	0.230	3.9	LOS A	3.0	24.0	0.27	0.30	0.27	25.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Bent St (SE)											
P5	Full	216	38.6	LOS D	0.5	0.5	0.93	0.93	205.3	200.0	0.97
NorthWest: Bent St (NW)											
P7	Full	754	39.5	LOS D	1.8	1.8	0.95	0.95	206.2	200.0	0.97
SouthWest: Bligh St (SW)											
P8	Full	248	38.7	LOS D	0.6	0.6	0.93	0.93	205.3	200.0	0.97
All Pedestrians		1218	39.2	LOS D	1.8	1.8	0.94	0.94	205.9	200.0	0.97

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

MOVEMENT SUMMARY

Site: MPL04 [MPL04 Bent St / Phillip St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: MPL-N1 [MPL Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 242
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Bent St (SE)															
21	L2	All MCs	52	0.0	52	0.0	0.106	10.7	LOS A	0.3	2.4	0.21	0.49	0.21	27.6
22	T1	All MCs	358	2.9	358	2.9	0.615	35.9	LOS C	10.0	72.0	0.97	0.80	0.97	8.1
23a	R1	All MCs	59	5.4	59	5.4	* 0.615	46.3	LOS D	7.3	52.7	0.98	0.81	1.00	14.8
Approach			468	2.9	468	2.9	0.615	34.4	LOS C	10.0	72.0	0.88	0.77	0.89	10.0
North: Phillip St (N)															
7a	L1	All MCs	146	0.0	146	0.0	* 0.182	15.4	LOS B	3.8	28.3	0.57	0.63	0.57	23.8
9a	R1	All MCs	180	24.0	180	24.0	0.182	12.0	LOS A	3.8	28.3	0.52	0.57	0.52	22.7
Approach			326	13.2	326	13.2	0.182	13.5	LOS A	3.8	28.3	0.54	0.60	0.54	23.3
NorthWest: Bent St (NW)															
27b	L3	All MCs	18	0.0	18	0.0	0.320	37.4	LOS C	4.0	28.4	0.81	0.66	0.81	15.4
28	T1	All MCs	136	0.8	135	0.8	0.320	28.6	LOS C	4.0	28.4	0.81	0.66	0.81	11.6
29	R2	All MCs	28	0.0	28	0.0	0.320	39.7	LOS C	2.3	16.4	0.81	0.66	0.81	5.1
Approach			182	0.6	181	0.6	0.320	31.2	LOS C	4.0	28.4	0.81	0.66	0.81	11.1
SouthWest: Phillip St (SW)															
30	L2	All MCs	203	22.8	203	22.8	0.201	8.2	LOS A	2.8	23.3	0.34	0.58	0.34	25.0
30a	L1	All MCs	364	9.5	364	9.5	0.309	6.6	LOS A	5.1	38.6	0.35	0.49	0.35	32.1
32	R2	All MCs	229	0.5	229	0.5	* 0.388	17.1	LOS B	6.2	43.9	0.76	0.72	0.76	21.7
Approach			797	10.3	797	10.3	0.388	10.0	LOS A	6.2	43.9	0.46	0.58	0.46	27.3
All Vehicles			1774	7.9	1773	7.9	0.615	19.3	LOS B	10.0	72.0	0.62	0.64	0.63	19.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Bent St (SE)											
P5	Full	1063	40.0	LOS E	2.6	2.6	0.96	0.96	206.7	200.0	0.97

North: Phillip St (N)										
P3 Full	828	39.6	LOS D	2.0	2.0	0.96	0.96	206.3	200.0	0.97
NorthWest: Bent St (NW)										
P7 Full	18	38.3	LOS D	0.0	0.0	0.92	0.92	205.0	200.0	0.98
SouthWest: Phillip St (SW)										
P8 Full	568	39.2	LOS D	1.4	1.4	0.94	0.94	205.9	200.0	0.97
All Pedestrians	2478	39.7	LOS D	2.6	2.6	0.96	0.96	206.4	200.0	0.97

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

MOVEMENT SUMMARY

Site: MPL05 [MPL05 Pedestrian Mid-block Crossing at Castlereagh St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

TCS 245
Site Category: (None)
Pedestrian Crossing (Signalised) - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 45 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
North: Castlereagh St (N)															
8	T1	All MCs	377	14.5	377	14.5	* 0.370	7.8	LOS A	4.7	34.3	0.65	0.55	0.65	30.3
Approach			377	14.5	377	14.5	0.370	7.8	LOS A	4.7	34.3	0.65	0.55	0.65	30.3
All Vehicles			377	14.5	377	14.5	0.370	7.8	LOS A	4.7	34.3	0.65	0.55	0.65	30.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh St (S)												
P1	Full	2782	2928	18.3	LOS B	3.6	3.6	0.96	0.96	184.9	200.0	1.08
All Pedestrians		2782	2928	18.3	LOS B	3.6	3.6	0.96	0.96	184.9	200.0	1.08

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

MOVEMENT SUMMARY

Site: MPL06 [MPL06 Pedestrian Mid-block Crossing at Elizabeth St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

TCS 287
Site Category: (None)
Pedestrian Crossing (Signalised) - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Elizabeth St (S)															
2	T1	All MCs	1051	8.9	1051	8.9	* 0.444	11.2	LOS A	11.1	83.7	0.52	0.46	0.52	29.8
Approach			1051	8.9	1051	8.9	0.444	9.0	LOS A	11.1	83.7	0.52	0.46	0.52	27.4
North: Elizabeth St (N)															
8	T1	All MCs	565	16.4	565	16.4	0.381	7.8	LOS A	9.7	68.4	0.49	0.43	0.49	30.3
Approach			565	16.4	565	16.4	0.381	7.8	LOS A	9.7	68.4	0.49	0.43	0.49	30.3
All Vehicles			1616	11.5	1616	11.5	0.444	10.0	LOS A	11.1	83.7	0.51	0.45	0.51	28.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth St (S)												
P1	Full	5157	5428	49.5	LOS E	16.5	16.5	1.19	1.19	216.1	200.0	0.93
All Pedestrians		5157	5428	49.5	LOS E	16.5	16.5	1.19	1.19	216.1	200.0	0.93

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

MOVEMENT SUMMARY

Site: MPL01 [MPL01 Hunter St / Castlereagh St / Bligh St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: MPL-N1 [MPL Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 244
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 85 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Hunter St (E)															
4	L2	All MCs	94	4.5	94	4.5	0.115	23.2	LOS B	2.0	14.9	0.56	0.65	0.56	20.0
6a	R1	All MCs	243	0.0	243	0.0	* 0.319	22.1	LOS B	5.8	40.9	0.62	0.63	0.62	19.6
Approach			337	1.3	337	1.3	0.319	22.4	LOS B	5.8	40.9	0.60	0.64	0.60	16.1
North: Bligh St (N)															
7	L2	All MCs	72	30.9	72	30.9	* 0.278	43.7	LOS D	2.9	21.3	0.97	0.77	0.97	12.0
8	T1	All MCs	54	9.8	54	9.8	0.079	33.5	LOS C	1.3	7.3	0.92	0.68	0.92	19.1
9b	R3	All MCs	11	0.0	11	0.0	0.079	39.6	LOS C	1.1	6.9	0.92	0.70	0.92	17.0
Approach			136	20.2	136	20.2	0.278	39.3	LOS C	2.9	21.3	0.94	0.73	0.94	14.4
NorthWest: Hunter St (NW)															
27a	L1	All MCs	216	2.9	216	2.9	0.142	10.5	LOS A	2.6	18.6	0.48	0.58	0.48	20.0
29a	R1	All MCs	57	1.9	57	1.9	* 0.142	11.6	LOS A	2.5	17.7	0.50	0.59	0.50	25.9
Approach			273	2.7	273	2.7	0.142	10.7	LOS A	2.6	18.6	0.48	0.58	0.48	21.8
All Vehicles			745	5.2	745	5.2	0.319	21.2	LOS B	5.8	40.9	0.62	0.63	0.62	16.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh St (S)											
P1	Full	65	35.9	LOS D	0.1	0.1	0.92	0.92	202.6	200.0	0.99
East: Hunter St (E)											
P2	Full	71	35.9	LOS D	0.2	0.2	0.92	0.92	202.6	200.0	0.99
North: Bligh St (N)											
P3	Full	266	36.2	LOS D	0.6	0.6	0.93	0.93	202.9	200.0	0.99
NorthWest: Hunter St (NW)											
P7	Full	221	36.1	LOS D	0.5	0.5	0.93	0.93	202.8	200.0	0.99

All Pedestrians	623	36.1	LOS D	0.6	0.6	0.93	0.93	202.8	200.0	0.99

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

MOVEMENT SUMMARY

Site: MPL02 [MPL02 Hunter St / Elizabeth St / Chifley Square (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: MPL-N1 [MPL Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 302
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 85 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Elizabeth St (S)															
1	L2	All MCs	196	0.5	196	0.5	0.206	13.7	LOS A	4.1	20.5	0.54	0.66	0.54	19.6
3a	R1	All MCs	494	14.7	494	14.7	* 0.619	19.3	LOS B	15.2	119.7	0.79	0.75	0.79	16.7
3	R2	All MCs	146	0.7	146	0.7	0.318	21.4	LOS B	4.1	20.6	0.78	0.74	0.78	20.8
Approach			836	8.9	836	8.9	0.619	18.3	LOS B	15.2	119.7	0.73	0.73	0.73	18.2
East: Hunter St (E)															
4	L2	All MCs	63	0.0	63	0.0	0.083	25.1	LOS B	1.6	7.9	0.64	0.66	0.64	21.4
5	T1	All MCs	141	2.2	141	2.2	* 0.299	30.8	LOS C	4.6	23.5	0.82	0.66	0.82	13.5
Approach			204	1.5	204	1.5	0.299	29.0	LOS C	4.6	23.5	0.76	0.66	0.76	14.3
NorthEast: Chifley Square (NE)															
24b	L3	All MCs	9	0.0	9	0.0	0.116	12.1	LOS A	0.4	4.9	0.26	0.46	0.26	27.8
24a	L1	All MCs	185	17.0	185	17.0	0.231	11.1	LOS A	2.3	16.5	0.36	0.49	0.36	27.4
Approach			195	16.2	195	16.2	0.231	11.2	LOS A	2.3	16.5	0.36	0.49	0.36	27.4
West: Hunter St (W)															
10a	L1	All MCs	124	0.0	124	0.0	0.266	28.2	LOS B	6.4	41.7	0.87	0.73	0.87	6.3
11	T1	All MCs	91	5.8	91	5.8	0.266	21.7	LOS B	6.4	41.7	0.88	0.73	0.88	15.1
12	R2	All MCs	73	31.9	73	31.9	* 0.266	28.5	LOS C	3.3	22.8	0.90	0.75	0.90	15.4
Approach			287	9.9	287	9.9	0.266	26.2	LOS B	6.4	41.7	0.88	0.74	0.88	12.1
All Vehicles			1522	9.1	1522	9.1	0.619	20.3	LOS B	15.2	119.7	0.72	0.69	0.72	17.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth St (S)											
P1	Full	75	35.9	LOS D	0.2	0.2	0.92	0.92	202.6	200.0	0.99
East: Hunter St (E)											

P2	Full	282	36.2	LOS D	0.6	0.6	0.93	0.93	202.9	200.0	0.99
NorthEast: Chifley Square (NE)											
P6	Full	140	36.0	LOS D	0.3	0.3	0.92	0.92	202.7	200.0	0.99
West: Hunter St (W)											
P4	Full	216	36.1	LOS D	0.5	0.5	0.93	0.93	202.8	200.0	0.99
All Pedestrians		713	36.1	LOS D	0.6	0.6	0.93	0.93	202.8	200.0	0.99

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

MOVEMENT SUMMARY

Site: MPL03 [MPL03 Bent St / Bligh St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: MPL-N1 [MPL Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 1412
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 85 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Bent St (SE)															
21	L2	All MCs	105	25.0	105	25.0	0.107	11.8	LOS A	1.8	15.2	0.44	0.60	0.44	13.3
22	T1	All MCs	527	1.0	527	1.0	* 0.453	6.1	LOS A	6.6	46.9	0.33	0.30	0.33	27.8
Approach			633	5.0	633	5.0	0.453	7.0	LOS A	6.6	46.9	0.35	0.35	0.35	20.7
NorthWest: Bent St (NW)															
28	T1	All MCs	154	1.4	154	1.4	0.090	4.3	LOS A	1.6	11.1	0.35	0.31	0.35	20.0
29	R2	All MCs	31	3.4	31	3.4	0.090	11.7	LOS A	1.0	7.1	0.41	0.47	0.41	15.2
Approach			184	1.7	184	1.7	0.090	5.5	LOS A	1.6	11.1	0.36	0.34	0.36	19.0
All Vehicles			817	4.3	817	4.3	0.453	6.7	LOS A	6.6	46.9	0.35	0.34	0.35	20.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Bent St (SE)											
P5	Full	56	35.9	LOS D	0.1	0.1	0.92	0.92	202.5	200.0	0.99
NorthWest: Bent St (NW)											
P7	Full	165	36.0	LOS D	0.4	0.4	0.92	0.92	202.7	200.0	0.99
SouthWest: Bligh St (SW)											
P8	Full	65	21.4	LOS C	0.1	0.1	0.84	0.84	188.0	200.0	1.06
All Pedestrians		286	32.7	LOS D	0.4	0.4	0.90	0.90	199.3	200.0	1.00

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

MOVEMENT SUMMARY

Site: MPL04 [MPL04 Bent St / Phillip St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: MPL-N1 [MPL Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 242
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 85 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Bent St (SE)															
21	L2	All MCs	35	3.0	35	3.0	0.028	13.0	LOS A	0.2	1.5	0.15	0.46	0.15	28.2
22	T1	All MCs	429	0.2	429	0.2	0.500	31.3	LOS C	10.1	71.1	0.86	0.73	0.86	10.7
23a	R1	All MCs	59	3.6	59	3.6	* 0.500	33.6	LOS C	6.6	46.8	0.88	0.75	0.88	18.1
Approach			523	0.8	523	0.8	0.500	30.3	LOS C	10.1	71.1	0.82	0.72	0.82	10.7
North: Phillip St (N)															
7a	L1	All MCs	96	1.1	96	1.1	0.159	18.8	LOS B	3.1	22.7	0.64	0.65	0.64	22.2
9a	R1	All MCs	148	20.6	148	20.6	* 0.159	15.2	LOS B	3.1	23.0	0.60	0.61	0.60	20.2
Approach			244	12.9	244	12.9	0.159	16.6	LOS B	3.1	23.0	0.62	0.63	0.62	21.1
NorthWest: Bent St (NW)															
27b	L3	All MCs	4	0.0	4	0.0	0.141	22.4	LOS B	2.0	14.3	0.58	0.47	0.58	20.9
28	T1	All MCs	138	1.5	138	1.5	0.141	16.5	LOS B	2.0	14.3	0.58	0.48	0.58	16.8
29	R2	All MCs	12	0.0	12	0.0	0.141	26.7	LOS B	1.5	10.9	0.58	0.48	0.58	8.4
Approach			154	1.4	154	1.4	0.141	17.4	LOS B	2.0	14.3	0.58	0.48	0.58	16.4
SouthWest: Phillip St (SW)															
30	L2	All MCs	202	15.1	202	15.1	0.239	13.6	LOS A	4.0	31.3	0.50	0.65	0.50	20.2
30a	L1	All MCs	283	14.5	283	14.5	0.280	10.3	LOS A	5.0	39.2	0.49	0.57	0.49	28.8
32	R2	All MCs	134	0.8	134	0.8	* 0.280	14.8	LOS B	3.1	22.1	0.60	0.66	0.60	23.3
Approach			619	11.7	619	11.7	0.280	12.4	LOS A	5.0	39.2	0.52	0.62	0.52	25.4
All Vehicles			1540	7.2	1540	7.2	0.500	19.7	LOS B	10.1	71.1	0.64	0.64	0.64	18.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Bent St (SE)											
P5	Full	214	36.1	LOS D	0.5	0.5	0.93	0.93	202.8	200.0	0.99

North: Phillip St (N)										
P3 Full	84	35.9	LOS D	0.2	0.2	0.92	0.92	202.6	200.0	0.99
NorthWest: Bent St (NW)										
P7 Full	138	36.0	LOS D	0.3	0.3	0.92	0.92	202.7	200.0	0.99
SouthWest: Phillip St (SW)										
P8 Full	81	35.9	LOS D	0.2	0.2	0.92	0.92	202.6	200.0	0.99
All Pedestrians	517	36.0	LOS D	0.5	0.5	0.92	0.92	202.7	200.0	0.99

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

MOVEMENT SUMMARY

Site: MPL05 [MPL05 Pedestrian Mid-block Crossing at Castlereagh St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

TCS 245
Site Category: (None)
Pedestrian Crossing (Signalised) - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 55 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
North: Castlereagh St (N)															
8	T1	All MCs	202	3.1	202	3.1	* 0.189	6.3	LOS A	2.6	19.0	0.52	0.43	0.52	31.7
Approach			202	3.1	202	3.1	0.189	6.3	LOS A	2.6	19.0	0.52	0.43	0.52	31.7
All Vehicles			202	3.1	202	3.1	0.189	6.3	LOS A	2.6	19.0	0.52	0.43	0.52	31.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh St (S)												
P1	Full	742	781	21.7	LOS C	1.1	1.1	0.90	0.90	188.3	200.0	1.06
All Pedestrians		742	781	21.7	LOS C	1.1	1.1	0.90	0.90	188.3	200.0	1.06

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

MOVEMENT SUMMARY

Site: MPL06 [MPL06 Pedestrian Mid-block Crossing at Elizabeth St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

TCS 287
Site Category: (None)
Pedestrian Crossing (Signalised) - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Elizabeth St (S)															
2	T1	All MCs	788	8.8	788	8.8	* 0.330	9.8	LOS A	7.5	56.2	0.47	0.41	0.47	30.5
Approach			788	8.8	788	8.8	0.330	8.1	LOS A	7.5	56.2	0.47	0.41	0.47	28.6
North: Elizabeth St (N)															
8	T1	All MCs	376	16.8	376	16.8	0.254	7.1	LOS A	5.8	41.0	0.45	0.38	0.45	31.0
Approach			376	16.8	376	16.8	0.254	7.1	LOS A	5.8	41.0	0.45	0.38	0.45	31.0
All Vehicles			1164	11.4	1164	11.4	0.330	8.9	LOS A	7.5	56.2	0.47	0.40	0.47	29.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth St (S)												
P1	Full	968	1019	40.0	LOS D	2.5	2.5	0.96	0.96	206.6	200.0	0.97
All Pedestrians		968	1019	40.0	LOS D	2.5	2.5	0.96	0.96	206.6	200.0	0.97

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

MOVEMENT SUMMARY

Site: PIT01 [PIT01 Pitt St / Bathurst St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: PIT-N1 [PIT Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 2312
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Pitt St (S)															
2	T1	All MCs	258	7.3	258	7.3	0.394	40.4	LOS C	6.3	46.9	0.89	0.72	0.89	16.0
3	R2	All MCs	138	9.2	138	9.2	* 0.659	67.6	LOS E	6.0	45.1	0.98	0.84	1.07	12.9
Approach			396	8.0	396	8.0	0.659	49.9	LOS D	6.3	46.9	0.92	0.76	0.95	11.9
West: Bathurst St (W)															
10	L2	All MCs	238	4.9	238	4.9	* 0.313	16.7	LOS B	5.3	38.9	0.55	0.69	0.55	15.3
11	T1	All MCs	935	3.7	935	3.7	0.282	8.6	LOS A	6.5	47.0	0.48	0.42	0.48	20.7
Approach			1173	3.9	1173	3.9	0.313	10.3	LOS A	6.5	47.0	0.49	0.47	0.49	18.0
All Vehicles			1568	5.0	1568	5.0	0.659	20.3	LOS B	6.5	47.0	0.60	0.54	0.61	14.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Pitt St (S)											
P1	Full	1246	41.3	LOS E	3.1	3.1	0.98	0.98	58.0	20.0	0.34
East: Bathurst St (E)											
P2	Full	308	39.7	LOS D	0.7	0.7	0.95	0.95	56.4	20.0	0.35
North: Pitt St (N)											
P3	Full	882	40.7	LOS E	2.2	2.2	0.97	0.97	57.4	20.0	0.35
West: Bathurst St (W)											
P4	Full	599	39.3	LOS D	1.4	1.4	0.95	0.95	55.9	20.0	0.36
All Pedestrians		3036	40.6	LOS E	3.1	3.1	0.97	0.97	57.2	20.0	0.35

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

MOVEMENT SUMMARY

Site: PIT02 [PIT02 Castlereagh St / Bathurst St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: PIT-N1 [PIT Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 2281
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
North: Castlereagh St (N)															
7	L2	All MCs	16	0.0	16	0.0	0.080	28.8	LOS C	1.0	9.8	0.73	0.61	0.73	10.4
8	T1	All MCs	232	18.2	232	18.2	* 0.348	22.9	LOS B	7.0	53.9	0.78	0.65	0.78	23.5
Approach			247	17.0	247	17.0	0.348	23.3	LOS B	7.0	53.9	0.77	0.65	0.77	22.6
West: Bathurst St (W)															
11	T1	All MCs	947	4.2	947	4.2	0.290	10.4	LOS A	7.4	54.3	0.50	0.43	0.50	20.1
12	R2	All MCs	125	5.9	125	5.9	* 0.290	24.9	LOS B	7.4	54.3	0.75	0.69	0.75	22.1
Approach			1073	4.4	1073	4.4	0.290	12.1	LOS A	7.4	54.3	0.53	0.46	0.53	20.6
All Vehicles			1320	6.8	1320	6.8	0.348	14.2	LOS A	7.4	54.3	0.57	0.50	0.57	21.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh St (S)											
P1	Full	876	39.7	LOS D	2.1	2.1	0.96	0.96	56.4	20.0	0.35
East: Bathurst St (E)											
P2	Full	300	38.8	LOS D	0.7	0.7	0.93	0.93	55.4	20.0	0.36
North: Castlereagh St (N)											
P3	Full	772	39.5	LOS D	1.9	1.9	0.95	0.95	56.2	20.0	0.36
West: Bathurst St (W)											
P4	Full	332	38.8	LOS D	0.8	0.8	0.94	0.94	55.5	20.0	0.36
All Pedestrians		2279	39.4	LOS D	2.1	2.1	0.95	0.95	56.1	20.0	0.36

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

MOVEMENT SUMMARY

Site: PIT03 [PIT03 Park St / Castlereagh St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: PIT-N1 [PIT Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 250
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Park St (E)															
4	L2	All MCs	82	5.1	82	5.1	0.091	15.2	LOS B	1.8	13.3	0.54	0.64	0.54	9.4
5	T1	All MCs	421	15.0	421	15.0	* 0.353	10.6	LOS A	8.7	63.8	0.56	0.48	0.56	12.2
Approach			503	13.4	503	13.4	0.353	11.3	LOS A	8.7	63.8	0.55	0.51	0.55	11.6
North: Castlereagh St (N)															
7	L2	All MCs	119	8.0	119	8.0	0.241	30.0	LOS C	4.0	30.2	0.80	0.74	0.80	18.6
8	T1	All MCs	161	14.4	161	14.4	* 0.578	54.6	LOS D	6.4	49.6	0.94	0.77	0.94	16.5
9	R2	All MCs	75	18.3	75	18.3	0.512	63.5	LOS E	3.2	25.7	0.97	0.77	0.97	14.0
Approach			355	13.1	355	13.1	0.578	48.3	LOS D	6.4	49.6	0.90	0.76	0.90	13.7
West: Park St (W)															
11	T1	All MCs	145	39.1	145	39.1	0.292	12.0	LOS A	4.4	40.6	0.60	0.53	0.60	18.3
12	R2	All MCs	39	29.7	39	29.7	* 0.292	15.9	LOS B	4.4	40.6	0.60	0.53	0.60	15.0
Approach			184	37.1	184	37.1	0.292	12.8	LOS A	4.4	40.6	0.60	0.53	0.60	17.7
All Vehicles			1042	17.5	1042	17.5	0.578	24.2	LOS B	8.7	63.8	0.68	0.60	0.68	13.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh St (S)											
P1	Full	787	39.6	LOS D	1.9	1.9	0.95	0.95	56.2	20.0	0.36
East: Park St (E)											
P2	Full	318	38.8	LOS D	0.8	0.8	0.93	0.93	55.5	20.0	0.36
North: Castlereagh St (N)											
P3	Full	771	39.5	LOS D	1.9	1.9	0.95	0.95	56.2	20.0	0.36
West: Park St (W)											
P4	Full	311	38.8	LOS D	0.7	0.7	0.93	0.93	55.4	20.0	0.36

All Pedestrians	2186	39.3	LOS D	1.9	1.9	0.95	0.95	56.0	20.0	0.36

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

MOVEMENT SUMMARY

Site: PIT04 [PIT04 Park St / Pitt St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: PIT-N1 [PIT Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 235
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Pitt St (S)															
1	L2	All MCs	125	6.7	125	6.7	0.465	23.9	LOS B	3.0	22.2	0.95	0.77	0.95	17.3
2	T1	All MCs	284	7.0	284	7.0	* 0.634	25.7	LOS B	6.4	47.8	0.92	0.77	0.92	27.1
3	R2	All MCs	87	3.6	87	3.6	0.314	33.0	LOS C	2.0	14.6	0.93	0.75	0.93	14.1
Approach			497	6.4	497	6.4	0.634	26.5	LOS B	6.4	47.8	0.93	0.77	0.93	19.8
East: Park St (E)															
5	T1	All MCs	401	17.1	401	17.1	0.667	11.8	LOS A	8.5	62.7	0.84	0.73	0.84	20.9
6	R2	All MCs	88	10.7	88	10.7	* 0.667	16.8	LOS B	8.5	62.7	0.87	0.77	0.87	26.4
Approach			489	15.9	489	15.9	0.667	12.7	LOS A	8.5	62.7	0.85	0.74	0.85	22.3
West: Park St (W)															
10	L2	All MCs	1	100.0	1	100.0	0.159	16.4	LOS B	1.0	12.4	0.65	0.52	0.65	29.0
11	T1	All MCs	64	100.0	64	100.0	0.159	9.1	LOS A	1.0	12.4	0.65	0.52	0.65	17.9
Approach			65	100.0	65	100.0	0.159	9.2	LOS A	1.0	12.4	0.65	0.52	0.65	18.3
All Vehicles			1052	16.6	1052	16.6	0.667	19.0	LOS B	8.5	62.7	0.87	0.74	0.87	20.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Pitt St (S)											
P1	Full	1344	17.2	LOS B	1.7	1.7	0.89	0.89	33.9	20.0	0.59
East: Park St (E)											
P2	Full	418	16.5	LOS B	0.5	0.5	0.86	0.86	33.2	20.0	0.60
North: Pitt St (N)											
P3	Full	851	18.6	LOS B	1.1	1.1	0.92	0.92	35.3	20.0	0.57

West: Park St (W)										
P4 Full	861	16.8	LOS B	1.1	1.1	0.88	0.88	33.5	20.0	0.60
All Pedestrians	3474	17.4	LOS B	1.7	1.7	0.89	0.89	34.0	20.0	0.59

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

MOVEMENT SUMMARY

Site: PIT01 [PIT01 Pitt St / Bathurst St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: PIT-N1 [PIT Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 2312
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Pitt St (S)															
2	T1	All MCs	284	3.0	284	3.0	0.419	40.7	LOS C	7.0	50.5	0.90	0.73	0.90	16.0
3	R2	All MCs	149	4.9	149	4.9	* 0.690	68.9	LOS E	6.6	47.9	0.99	0.86	1.10	12.8
Approach			434	3.6	434	3.6	0.690	50.4	LOS D	7.0	50.5	0.93	0.77	0.97	11.8
West: Bathurst St (W)															
10	L2	All MCs	147	2.1	147	2.1	0.141	15.1	LOS B	2.9	20.9	0.49	0.64	0.49	16.2
11	T1	All MCs	971	2.3	971	2.3	* 0.283	8.5	LOS A	6.6	47.1	0.48	0.41	0.48	20.7
Approach			1118	2.3	1118	2.3	0.283	9.4	LOS A	6.6	47.1	0.48	0.44	0.48	18.9
All Vehicles			1552	2.6	1552	2.6	0.690	20.8	LOS B	7.0	50.5	0.60	0.53	0.61	14.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Pitt St (S)											
P1	Full	2058	42.9	LOS E	5.4	5.4	1.02	1.02	59.5	20.0	0.34
East: Bathurst St (E)											
P2	Full	774	40.5	LOS E	1.9	1.9	0.96	0.96	57.2	20.0	0.35
North: Pitt St (N)											
P3	Full	1169	41.2	LOS E	2.9	2.9	0.98	0.98	57.9	20.0	0.35
West: Bathurst St (W)											
P4	Full	1161	40.2	LOS E	2.9	2.9	0.97	0.97	56.9	20.0	0.35
All Pedestrians		5162	41.5	LOS E	5.4	5.4	0.99	0.99	58.2	20.0	0.34

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

MOVEMENT SUMMARY

Site: PIT02 [PIT02 Castlereagh St / Bathurst St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: PIT-N1 [PIT Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 2281
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
North: Castlereagh St (N)															
7	L2	All MCs	29	0.0	29	0.0	0.230	29.0	LOS C	2.9	31.9	0.74	0.64	0.74	10.7
8	T1	All MCs	300	24.9	300	24.9	* 0.339	21.4	LOS B	7.4	54.4	0.75	0.64	0.75	24.0
Approach			329	22.7	329	22.7	0.339	22.1	LOS B	7.4	54.4	0.75	0.64	0.75	22.7
West: Bathurst St (W)															
11	T1	All MCs	999	1.7	999	1.7	0.311	13.9	LOS A	8.1	59.9	0.62	0.53	0.62	17.3
12	R2	All MCs	121	10.4	121	10.4	* 0.311	27.8	LOS B	8.1	59.9	0.80	0.70	0.80	21.1
Approach			1120	2.6	1120	2.6	0.311	15.4	LOS B	8.1	59.9	0.64	0.55	0.64	18.1
All Vehicles			1449	7.2	1449	7.2	0.339	16.9	LOS B	8.1	59.9	0.66	0.57	0.66	19.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh St (S)											
P1	Full	952	39.9	LOS D	2.3	2.3	0.96	0.96	56.5	20.0	0.35
East: Bathurst St (E)											
P2	Full	456	39.0	LOS D	1.1	1.1	0.94	0.94	55.7	20.0	0.36
North: Castlereagh St (N)											
P3	Full	976	39.9	LOS D	2.4	2.4	0.96	0.96	56.6	20.0	0.35
West: Bathurst St (W)											
P4	Full	441	39.0	LOS D	1.1	1.1	0.94	0.94	55.7	20.0	0.36
All Pedestrians		2824	39.6	LOS D	2.4	2.4	0.95	0.95	56.3	20.0	0.36

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

MOVEMENT SUMMARY

Site: PIT03 [PIT03 Park St / Castlereagh St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: PIT-N1 [PIT Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 250
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Park St (E)															
4	L2	All MCs	47	4.4	47	4.4	0.086	14.7	LOS B	1.4	12.2	0.51	0.57	0.51	10.4
5	T1	All MCs	476	15.0	476	15.0	* 0.371	10.6	LOS A	9.6	67.7	0.56	0.49	0.56	12.0
Approach			523	14.1	523	14.1	0.371	11.0	LOS A	9.6	67.7	0.56	0.50	0.56	11.9
North: Castlereagh St (N)															
7	L2	All MCs	168	1.9	168	1.9	0.308	29.8	LOS C	5.8	40.9	0.81	0.75	0.81	18.7
8	T1	All MCs	223	23.1	223	23.1	* 0.593	49.7	LOS D	7.1	50.9	0.93	0.75	0.93	16.8
9	R2	All MCs	101	7.3	101	7.3	0.640	64.3	LOS E	4.4	32.8	0.98	0.83	1.08	13.9
Approach			493	12.6	493	12.6	0.640	45.9	LOS D	7.1	50.9	0.90	0.77	0.92	14.1
West: Park St (W)															
11	T1	All MCs	158	30.7	158	30.7	0.300	12.0	LOS A	4.8	41.9	0.60	0.53	0.60	18.3
12	R2	All MCs	41	25.6	41	25.6	* 0.300	16.0	LOS B	4.8	41.9	0.60	0.54	0.60	15.0
Approach			199	29.6	199	29.6	0.300	12.8	LOS A	4.8	41.9	0.60	0.53	0.60	17.7
All Vehicles			1215	16.0	1215	16.0	0.640	25.4	LOS B	9.6	67.7	0.70	0.61	0.71	14.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh St (S)											
P1	Full	2161	42.1	LOS E	5.6	5.6	1.01	1.01	58.7	20.0	0.34
East: Park St (E)											
P2	Full	397	38.9	LOS D	1.0	1.0	0.94	0.94	55.6	20.0	0.36
North: Castlereagh St (N)											
P3	Full	1380	40.6	LOS E	3.5	3.5	0.98	0.98	57.3	20.0	0.35
West: Park St (W)											
P4	Full	658	39.4	LOS D	1.6	1.6	0.95	0.95	56.0	20.0	0.36

All Pedestrians	4596	41.0	LOS E	5.6	5.6	0.99	0.99	57.6	20.0	0.35

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

MOVEMENT SUMMARY

Site: PIT04 [PIT04 Park St / Pitt St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: PIT-N1 [PIT Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 235
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Pitt St (S)															
1	L2	All MCs	136	2.3	136	2.3	0.482	23.7	LOS B	3.2	22.7	0.96	0.78	0.96	17.3
2	T1	All MCs	197	3.7	197	3.7	0.416	19.8	LOS B	4.0	28.9	0.85	0.70	0.85	27.9
3	R2	All MCs	99	1.1	99	1.1	0.346	28.3	LOS B	2.3	15.9	0.93	0.75	0.93	14.1
Approach			432	2.7	432	2.7	0.482	23.0	LOS B	4.0	28.9	0.90	0.73	0.90	20.4
East: Park St (E)															
5	T1	All MCs	545	13.9	545	13.9	0.664	11.3	LOS A	9.4	66.8	0.83	0.72	0.83	21.8
6	R2	All MCs	32	10.0	32	10.0	* 0.664	16.1	LOS B	9.4	66.8	0.86	0.75	0.86	27.2
Approach			577	13.7	577	13.7	0.664	11.5	LOS A	9.4	66.8	0.83	0.72	0.83	22.3
West: Park St (W)															
10	L2	All MCs	1	100.0	1	100.0	0.142	16.7	LOS B	0.8	10.8	0.64	0.51	0.64	29.1
11	T1	All MCs	57	100.0	57	100.0	0.142	9.0	LOS A	0.8	10.8	0.64	0.51	0.64	18.0
Approach			58	100.0	58	100.0	0.142	9.1	LOS A	0.8	10.8	0.64	0.51	0.64	18.5
All Vehicles			1066	13.9	1066	13.9	0.664	16.0	LOS B	9.4	66.8	0.85	0.71	0.85	21.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Pitt St (S)											
P1	Full	1936	17.6	LOS B	2.5	2.5	0.92	0.92	34.2	20.0	0.58
East: Park St (E)											
P2	Full	1168	17.0	LOS B	1.4	1.4	0.89	0.89	33.6	20.0	0.59
North: Pitt St (N)											
P3	Full	1449	19.0	LOS B	1.9	1.9	0.95	0.95	35.7	20.0	0.56

West: Park St (W)										
P4 Full	1735	17.4	LOS B	2.2	2.2	0.91	0.91	34.1	20.0	0.59
All Pedestrians	6288	17.7	LOS B	2.5	2.5	0.92	0.92	34.4	20.0	0.58

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

MOVEMENT SUMMARY

Site: PIT01 [PIT01 Pitt St / Bathurst St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: PIT-N1 [PIT Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 2312
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 45 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Pitt St (S)															
2	T1	All MCs	207	2.0	207	2.0	0.228	19.0	LOS B	2.0	13.9	0.84	0.66	0.84	23.3
3	R2	All MCs	147	2.1	147	2.1	* 0.672	33.4	LOS C	3.4	24.5	0.99	0.88	1.19	17.8
Approach			355	2.1	355	2.1	0.672	25.0	LOS B	3.4	24.5	0.90	0.75	0.98	18.3
West: Bathurst St (W)															
10	L2	All MCs	179	0.0	179	0.0	* 0.241	13.8	LOS A	2.7	18.7	0.70	0.71	0.70	15.7
11	T1	All MCs	942	0.9	942	0.9	0.338	7.9	LOS A	4.4	30.8	0.65	0.55	0.65	20.8
Approach			1121	0.8	1121	0.8	0.338	8.8	LOS A	4.4	30.8	0.66	0.58	0.66	19.5
All Vehicles			1476	1.1	1476	1.1	0.672	12.7	LOS A	4.4	30.8	0.72	0.62	0.74	19.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Pitt St (S)											
P1	Full	587	17.3	LOS B	0.7	0.7	0.89	0.89	34.0	20.0	0.59
East: Bathurst St (E)											
P2	Full	421	17.2	LOS B	0.5	0.5	0.88	0.88	33.9	20.0	0.59
North: Pitt St (N)											
P3	Full	409	17.2	LOS B	0.5	0.5	0.88	0.88	33.9	20.0	0.59
West: Bathurst St (W)											
P4	Full	648	16.5	LOS B	0.7	0.7	0.87	0.87	33.2	20.0	0.60
All Pedestrians		2066	17.0	LOS B	0.7	0.7	0.88	0.88	33.7	20.0	0.59

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

MOVEMENT SUMMARY

Site: PIT02 [PIT02 Castlereagh St / Bathurst St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: PIT-N1 [PIT Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 2281
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 45 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
North: Castlereagh St (N)															
7	L2	All MCs	8	12.5	8	12.5	0.043	18.5	LOS B	0.2	2.3	0.77	0.61	0.77	12.2
8	T1	All MCs	214	2.5	214	2.5	* 0.342	13.3	LOS A	3.6	25.5	0.81	0.66	0.81	28.5
Approach			222	2.8	222	2.8	0.342	13.5	LOS A	3.6	25.5	0.81	0.66	0.81	27.7
West: Bathurst St (W)															
11	T1	All MCs	969	0.8	969	0.8	* 0.353	4.0	LOS A	3.4	23.7	0.36	0.32	0.36	28.6
12	R2	All MCs	120	3.5	120	3.5	0.353	12.5	LOS A	2.7	19.0	0.55	0.59	0.55	28.6
Approach			1089	1.1	1089	1.1	0.353	5.0	LOS A	3.4	23.7	0.38	0.35	0.38	28.6
All Vehicles			1312	1.4	1312	1.4	0.353	6.4	LOS A	3.6	25.5	0.46	0.40	0.46	28.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh St (S)											
P1	Full	456	16.4	LOS B	0.5	0.5	0.86	0.86	33.0	20.0	0.61
East: Bathurst St (E)											
P2	Full	156	16.1	LOS B	0.2	0.2	0.85	0.85	32.8	20.0	0.61
North: Castlereagh St (N)											
P3	Full	297	16.2	LOS B	0.3	0.3	0.86	0.86	32.9	20.0	0.61
West: Bathurst St (W)											
P4	Full	225	16.2	LOS B	0.2	0.2	0.85	0.85	32.9	20.0	0.61
All Pedestrians		1134	16.3	LOS B	0.5	0.5	0.86	0.86	32.9	20.0	0.61

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

MOVEMENT SUMMARY

Site: PIT03 [PIT03 Park St / Castlereagh St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: PIT-N1 [PIT Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 250
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Park St (E)															
4	L2	All MCs	46	0.0	46	0.0	0.046	12.4	LOS A	0.9	6.3	0.47	0.60	0.47	11.0
5	T1	All MCs	519	6.3	519	6.3	* 0.462	9.5	LOS A	11.3	79.9	0.56	0.50	0.56	13.1
Approach			565	5.8	565	5.8	0.462	9.7	LOS A	11.3	79.9	0.55	0.51	0.55	12.9
North: Castlereagh St (N)															
7	L2	All MCs	99	0.0	99	0.0	0.184	29.4	LOS C	3.3	23.0	0.79	0.72	0.79	18.8
8	T1	All MCs	145	1.4	145	1.4	* 0.467	51.7	LOS D	5.7	39.6	0.93	0.74	0.93	16.5
9	R2	All MCs	60	0.0	60	0.0	0.253	58.8	LOS E	2.4	17.0	0.93	0.74	0.93	14.4
Approach			304	0.7	304	0.7	0.467	45.8	LOS D	5.7	39.6	0.88	0.74	0.88	14.1
West: Park St (W)															
11	T1	All MCs	107	22.5	107	22.5	0.185	8.9	LOS A	2.7	22.7	0.52	0.47	0.52	20.8
12	R2	All MCs	29	14.3	29	14.3	* 0.185	13.8	LOS A	2.7	22.7	0.52	0.47	0.52	17.3
Approach			137	20.8	137	20.8	0.185	10.0	LOS A	2.7	22.7	0.52	0.47	0.52	20.1
All Vehicles			1006	6.3	1006	6.3	0.467	20.7	LOS B	11.3	79.9	0.65	0.57	0.65	14.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh St (S)											
P1	Full	584	39.2	LOS D	1.4	1.4	0.95	0.95	55.9	20.0	0.36
East: Park St (E)											
P2	Full	136	38.5	LOS D	0.3	0.3	0.93	0.93	55.2	20.0	0.36
North: Castlereagh St (N)											
P3	Full	602	39.3	LOS D	1.5	1.5	0.95	0.95	55.9	20.0	0.36
West: Park St (W)											
P4	Full	262	38.7	LOS D	0.6	0.6	0.93	0.93	55.4	20.0	0.36

All Pedestrians	1584	39.1	LOS D	1.5	1.5	0.94	0.94	55.8	20.0	0.36

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

MOVEMENT SUMMARY

Site: PIT04 [PIT04 Park St / Pitt St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: PIT-N1 [PIT Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 235
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Pitt St (S)															
1	L2	All MCs	124	1.7	124	1.7	0.438	23.8	LOS B	3.0	21.4	0.95	0.77	0.95	17.3
2	T1	All MCs	188	1.1	188	1.1	* 0.367	19.9	LOS B	4.0	28.2	0.84	0.68	0.84	27.9
3	R2	All MCs	74	0.0	74	0.0	0.255	28.3	LOS B	1.7	12.1	0.92	0.74	0.92	14.1
Approach			386	1.1	386	1.1	0.438	22.7	LOS B	4.0	28.2	0.89	0.72	0.89	20.8
East: Park St (E)															
5	T1	All MCs	529	6.2	529	6.2	0.723	12.0	LOS A	10.7	75.3	0.88	0.77	0.88	21.2
6	R2	All MCs	49	0.0	49	0.0	* 0.723	15.7	LOS B	10.7	75.3	0.89	0.79	0.89	26.9
Approach			579	5.6	579	5.6	0.723	12.3	LOS A	10.7	75.3	0.88	0.77	0.88	21.9
West: Park St (W)															
10	L2	All MCs	1	100.0	1	100.0	0.072	15.8	LOS B	0.4	5.3	0.62	0.47	0.62	29.3
11	T1	All MCs	28	100.0	28	100.0	0.072	8.6	LOS A	0.4	5.3	0.62	0.47	0.62	18.3
Approach			29	100.0	29	100.0	0.072	8.9	LOS A	0.4	5.3	0.62	0.47	0.62	19.2
All Vehicles			995	6.7	995	6.7	0.723	16.2	LOS B	10.7	75.3	0.87	0.74	0.87	21.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Pitt St (S)											
P1	Full	1285	17.2	LOS B	1.7	1.7	0.89	0.89	33.9	20.0	0.59
East: Park St (E)											
P2	Full	551	16.7	LOS B	0.7	0.7	0.86	0.86	33.4	20.0	0.60
North: Pitt St (N)											
P3	Full	662	18.6	LOS B	0.9	0.9	0.91	0.91	35.2	20.0	0.57

West: Park St (W)										
P4 Full	1248	17.2	LOS B	1.6	1.6	0.89	0.89	33.9	20.0	0.59
All Pedestrians	3746	17.4	LOS B	1.7	1.7	0.89	0.89	34.1	20.0	0.59

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.

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [CEN-N1]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CEN-N1 [CEN Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 110 seconds (CCG User-Given Phase Times)

Vehicle Movement Performance (CCG)

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
Site: CEN01 [CEN01 Elizabeth St / Eddy Ave]															
South: Elizabeth St (S)															
1a	L1	All MCs	285	6.6	285	6.6	0.267	6.1	LOS A	0.9	7.1	0.08	0.35	0.08	30.6
2	T1	All MCs	1320	5.3	1320	5.3	* 0.818	16.5	LOS B	8.0	57.1	0.74	0.78	0.78	19.6
Approach			1605	5.6	1605	5.6	0.818	14.7	LOS B	8.0	57.1	0.62	0.70	0.65	18.9
North: Elizabeth St (N)															
8	T1	All MCs	458	9.9	458	9.9	* 0.763	33.6	LOS C	21.6	160.3	0.93	0.85	0.97	9.9
9b	R3	All MCs	188	17.9	188	17.9	0.396	49.1	LOS D	4.6	37.5	0.93	0.78	0.93	10.2
Approach			646	12.2	646	12.2	0.763	38.1	LOS C	21.6	160.3	0.93	0.83	0.96	10.0
NorthWest: Eddy Ave (NW)															
27b	L3	All MCs	669	4.6	669	4.6	* 0.764	22.5	LOS B	11.3	82.5	0.88	0.83	0.92	17.2
29a	R1	All MCs	133	9.5	133	9.5	* 0.700	51.7	LOS D	7.1	53.5	0.98	0.83	1.04	4.4
Approach			802	5.4	802	5.4	0.764	27.3	LOS B	11.3	82.5	0.90	0.83	0.94	14.4
All Vehicles			3054	6.9	3054	6.9	0.818	23.0	LOS B	21.6	160.3	0.76	0.76	0.79	14.9
Site: CEN02 [CEN02 Elizabeth St / Foveaux St]															
South: Elizabeth St (S)															
2	T1	All MCs	1008	6.7	1008	6.7	0.722	31.2	LOS C	23.1	170.9	0.92	0.81	0.92	12.1
Approach			1008	6.7	1008	6.7	0.722	31.2	LOS C	23.1	170.9	0.92	0.81	0.92	12.1
SouthEast: Foveaux St (SE)															
21b	L3	All MCs	144	7.3	144	7.3	0.228	26.2	LOS B	5.0	36.9	0.68	0.72	0.68	19.3
23a	R1	All MCs	597	3.7	597	3.7	0.661	25.5	LOS B	12.3	88.8	0.81	0.79	0.81	12.7
Approach			741	4.4	741	4.4	0.661	25.7	LOS B	12.3	88.8	0.78	0.78	0.78	14.4
North: Elizabeth St (N)															
8	T1	All MCs	591	9.8	591	9.8	0.402	11.0	LOS A	7.8	57.1	0.37	0.31	0.37	24.1
Approach			591	9.8	591	9.8	0.402	11.0	LOS A	7.8	57.1	0.37	0.31	0.37	24.1
All Vehicles			2340	6.7	2340	6.7	0.722	24.4	LOS B	23.1	170.9	0.74	0.67	0.74	15.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

MOVEMENT SUMMARY

Site: CEN03 [CEN03 Elizabeth St / Cooper St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CEN-N2 [CEN Network 2 (Network Folder: Block 3 Network - 2024 AM Peak)]

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Cooper St (SE)															
21b	L3	All MCs	69	3.0	69	3.0	0.076	6.6	LOS A	0.3	2.1	0.52	0.67	0.52	33.4
Approach			69	3.0	69	3.0	0.076	6.6	LOS A	0.3	2.1	0.52	0.67	0.52	33.4
North: Elizabeth St (N)															
7a	L1	All MCs	75	2.8	75	2.8	0.209	3.4	LOS A	0.6	4.9	0.21	0.22	0.21	36.8
8	T1	All MCs	689	11.1	689	11.1	0.209	0.2	LOS A	0.6	4.9	0.08	0.08	0.08	38.5
Approach			764	10.3	764	10.3	0.209	0.5	NA	0.6	4.9	0.09	0.09	0.09	38.1
All Vehicles			834	9.7	834	9.7	0.209	1.0	NA	0.6	4.9	0.12	0.14	0.12	37.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CEN05 [CEN05 Elizabeth St / Randle St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CEN-N2 [CEN Network 2 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 2916
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 110 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
North: Elizabeth St (N)															
8	T1	All MCs	699	10.5	699	10.5	0.245	2.6	LOS A	4.4	33.3	0.26	0.23	0.26	33.5
Approach			699	10.5	699	10.5	0.245	2.6	LOS A	4.4	33.3	0.26	0.23	0.26	33.5
SouthWest: Randle St (SW)															
30a	L1	All MCs	1031	8.1	1031	8.1	* 0.437	7.6	LOS A	8.0	60.0	0.24	0.54	0.24	29.2
32b	R3	All MCs	65	8.1	65	8.1	0.437	4.2	LOS A	0.0	0.0	0.00	0.43	0.00	31.9
Approach			1096	8.1	1096	8.1	0.437	7.4	LOS A	8.0	60.0	0.23	0.54	0.23	29.3
All Vehicles			1795	9.0	1795	9.0	0.437	5.6	LOS A	8.0	60.0	0.24	0.41	0.24	30.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth St (S)											
P1	Full	282	48.8	LOS E	0.8	0.8	0.95	0.95	215.5	200.0	0.93
SouthWest: Randle St (SW)											
P8	Full	557	23.1	LOS C	1.1	1.1	0.86	0.86	189.7	200.0	1.05
All Pedestrians		839	31.7	LOS D	1.1	1.1	0.89	0.89	198.4	200.0	1.01

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.

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [CCGName]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CEN-N1 [CEN Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 110 seconds (CCG User-Given Phase Times)

Vehicle Movement Performance (CCG)

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
Site: CEN01 [CEN01 Elizabeth St / Eddy Ave]															
South: Elizabeth St (S)															
1a	L1	All MCs	442	2.1	442	2.1	0.389	2.8	LOS A	3.3	25.3	0.19	0.43	0.19	28.6
2	T1	All MCs	927	4.4	927	4.4	* 0.533	8.8	LOS A	8.1	57.1	0.62	0.55	0.62	24.7
Approach			1369	3.7	1369	3.7	0.533	6.9	LOS A	8.1	57.1	0.48	0.51	0.48	25.6
North: Elizabeth St (N)															
8	T1	All MCs	584	5.8	584	5.8	* 0.852	41.6	LOS C	30.8	219.6	0.98	0.96	1.09	8.4
9b	R3	All MCs	341	10.5	341	10.5	0.671	52.4	LOS D	9.0	68.8	0.99	0.85	1.04	9.7
Approach			925	7.5	925	7.5	0.852	45.6	LOS D	30.8	219.6	0.99	0.92	1.07	9.0
NorthWest: Eddy Ave (NW)															
27b	L3	All MCs	673	4.2	673	4.2	* 0.698	18.6	LOS B	9.8	70.9	0.80	0.78	0.81	19.1
29a	R1	All MCs	226	8.4	226	8.4	* 0.859	52.0	LOS D	12.6	94.9	1.00	0.94	1.15	4.3
Approach			899	5.3	899	5.3	0.859	27.0	LOS B	12.6	94.9	0.85	0.82	0.89	13.9
All Vehicles			3194	5.2	3194	5.2	0.859	23.8	LOS B	30.8	219.6	0.73	0.72	0.77	14.3
Site: CEN02 [CEN02 Elizabeth St / Foveaux St]															
South: Elizabeth St (S)															
2	T1	All MCs	702	5.4	702	5.4	0.549	31.3	LOS C	15.2	111.5	0.86	0.75	0.86	12.1
Approach			702	5.4	702	5.4	0.549	31.3	LOS C	15.2	111.5	0.86	0.75	0.86	12.1
SouthEast: Foveaux St (SE)															
21b	L3	All MCs	194	1.6	194	1.6	0.266	24.0	LOS B	6.4	45.5	0.66	0.73	0.66	20.2
23a	R1	All MCs	667	1.9	667	1.9	0.736	27.2	LOS B	15.9	112.8	0.84	0.84	0.89	12.2
Approach			861	1.8	861	1.8	0.736	26.5	LOS B	15.9	112.8	0.80	0.81	0.84	14.4
North: Elizabeth St (N)															
8	T1	All MCs	811	6.5	811	6.5	0.580	15.0	LOS B	8.1	57.1	0.47	0.41	0.47	21.2
Approach			811	6.5	811	6.5	0.580	15.0	LOS B	8.1	57.1	0.47	0.41	0.47	21.2
All Vehicles			2374	4.5	2374	4.5	0.736	24.0	LOS B	15.9	112.8	0.71	0.66	0.72	15.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

MOVEMENT SUMMARY

Site: CEN03 [CEN03 Elizabeth St / Cooper St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CEN-N2 [CEN Network 2 (Network Folder: Block 3 Network - 2024 PM Peak)]

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Cooper St (SE)															
21b	L3	All MCs	108	1.9	108	1.9	0.175	9.3	LOS A	0.7	4.7	0.66	0.83	0.66	31.6
Approach			108	1.9	108	1.9	0.175	9.3	LOS A	0.7	4.7	0.66	0.83	0.66	31.6
North: Elizabeth St (N)															
7a	L1	All MCs	48	2.2	48	2.2	0.294	4.0	LOS A	0.5	3.8	0.12	0.12	0.12	37.4
8	T1	All MCs	1055	5.3	1055	5.3	0.294	0.2	LOS A	0.5	3.8	0.05	0.05	0.05	38.9
Approach			1103	5.2	1103	5.2	0.294	0.3	NA	0.5	3.8	0.05	0.06	0.05	38.8
All Vehicles			1212	4.9	1212	4.9	0.294	1.1	NA	0.7	4.7	0.11	0.13	0.11	36.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CEN05 [CEN05 Elizabeth St / Randle St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CEN-N2 [CEN Network 2 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 2916
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 110 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
North: Elizabeth St (N)															
8	T1	All MCs	1043	5.2	1043	5.2	0.348	2.9	LOS A	7.3	53.2	0.29	0.26	0.29	32.9
Approach			1043	5.2	1043	5.2	0.348	2.9	LOS A	7.3	53.2	0.29	0.26	0.29	32.9
SouthWest: Randle St (SW)															
30a	L1	All MCs	693	5.3	693	5.3	* 0.292	6.3	LOS A	4.5	32.8	0.23	0.52	0.23	30.5
32b	R3	All MCs	60	3.5	60	3.5	0.292	4.2	LOS A	0.0	0.0	0.00	0.43	0.00	31.8
Approach			753	5.2	753	5.2	0.292	6.1	LOS A	4.5	32.8	0.21	0.51	0.21	30.5
All Vehicles			1796	5.2	1796	5.2	0.348	4.3	LOS A	7.3	53.2	0.25	0.37	0.25	31.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth St (S)											
P1	Full	283	48.8	LOS E	0.8	0.8	0.95	0.95	215.5	200.0	0.93
SouthWest: Randle St (SW)											
P8	Full	520	23.0	LOS C	1.0	1.0	0.85	0.85	189.7	200.0	1.05
All Pedestrians		803	32.1	LOS D	1.0	1.0	0.89	0.89	198.8	200.0	1.01

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.

CCG MOVEMENT SUMMARY

Common Control Group: CCG1 [CCGName]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CEN-N1 [CEN Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 105 seconds (CCG User-Given Phase Times)

Vehicle Movement Performance (CCG)

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
Site: CEN01 [CEN01 Elizabeth St / Eddy Ave]															
South: Elizabeth St (S)															
1a	L1	All MCs	313	0.7	313	0.7	0.402	2.8	LOS A	5.3	37.5	0.34	0.45	0.34	27.4
2	T1	All MCs	901	3.9	901	3.9	* 0.402	7.5	LOS A	6.0	43.4	0.52	0.48	0.52	26.6
Approach			1214	3.0	1214	3.0	0.402	6.2	LOS A	6.0	43.4	0.47	0.47	0.47	26.7
North: Elizabeth St (N)															
8	T1	All MCs	560	3.0	560	3.0	0.361	23.0	LOS B	9.9	70.9	0.74	0.63	0.74	13.0
9b	R3	All MCs	239	8.8	239	8.8	0.494	48.8	LOS D	5.8	43.6	0.96	0.79	0.96	10.2
Approach			799	4.7	799	4.7	0.494	30.7	LOS C	9.9	70.9	0.80	0.68	0.80	11.7
NorthWest: Eddy Ave (NW)															
27b	L3	All MCs	581	3.4	581	3.4	* 0.719	23.0	LOS B	9.6	68.8	0.88	0.81	0.90	17.0
29a	R1	All MCs	128	5.7	128	5.7	* 0.748	52.1	LOS D	6.7	49.5	1.00	0.85	1.09	4.3
Approach			709	3.9	709	3.9	0.748	28.2	LOS B	9.6	68.8	0.90	0.82	0.93	14.0
All Vehicles			2722	3.8	2722	3.8	0.748	19.2	LOS B	9.9	70.9	0.68	0.62	0.69	16.4
Site: CEN02 [CEN02 Elizabeth St / Foveaux St]															
South: Elizabeth St (S)															
2	T1	All MCs	720	4.2	720	4.2	* 0.470	24.3	LOS B	13.4	97.4	0.78	0.68	0.78	14.3
Approach			720	4.2	720	4.2	0.470	24.3	LOS B	13.4	97.4	0.78	0.68	0.78	14.3
SouthEast: Foveaux St (SE)															
21b	L3	All MCs	143	0.0	143	0.0	0.231	27.8	LOS B	5.0	34.8	0.72	0.73	0.72	18.8
23a	R1	All MCs	494	1.3	494	1.3	0.379	22.5	LOS B	8.3	58.8	0.70	0.71	0.70	13.8
Approach			637	1.0	637	1.0	0.379	23.7	LOS B	8.3	58.8	0.70	0.72	0.70	15.4
North: Elizabeth St (N)															
8	T1	All MCs	688	3.5	688	3.5	0.381	8.8	LOS A	8.1	57.1	0.33	0.28	0.33	26.3
Approach			688	3.5	688	3.5	0.381	8.8	LOS A	8.1	57.1	0.33	0.28	0.33	26.3
All Vehicles			2045	3.0	2045	3.0	0.470	18.9	LOS B	13.4	97.4	0.60	0.56	0.60	17.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

MOVEMENT SUMMARY

Site: CEN03 [CEN03 Elizabeth St / Cooper St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CEN-N2 [CEN Network 2 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Cooper St (SE)															
21b	L3	All MCs	59	1.8	59	1.8	0.060	6.2	LOS A	0.2	1.7	0.48	0.63	0.48	33.7
Approach			59	1.8	59	1.8	0.060	6.2	LOS A	0.2	1.7	0.48	0.63	0.48	33.7
North: Elizabeth St (N)															
7a	L1	All MCs	60	0.0	60	0.0	0.218	2.8	LOS A	0.5	3.5	0.12	0.13	0.12	37.5
8	T1	All MCs	812	3.4	812	3.4	0.218	0.1	LOS A	0.5	3.5	0.05	0.05	0.05	39.1
Approach			872	3.1	872	3.1	0.218	0.3	NA	0.5	3.5	0.05	0.06	0.05	38.9
All Vehicles			931	3.1	931	3.1	0.218	0.6	NA	0.5	3.5	0.08	0.09	0.08	37.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: CEN05 [CEN05 Elizabeth St / Randle St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: CEN-N2 [CEN Network 2 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 2916
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 105 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
North: Elizabeth St (N)															
8	T1	All MCs	801	3.4	801	3.4	* 0.251	1.6	LOS A	3.9	27.9	0.21	0.18	0.21	35.7
Approach			801	3.4	801	3.4	0.251	1.6	LOS A	3.9	27.9	0.21	0.18	0.21	35.7
SouthWest: Randle St (SW)															
30a	L1	All MCs	666	3.6	666	3.6	* 0.287	6.3	LOS A	4.1	29.8	0.23	0.52	0.23	30.4
32b	R3	All MCs	71	0.0	71	0.0	0.287	4.1	LOS A	0.0	0.0	0.00	0.44	0.00	31.7
Approach			737	3.3	737	3.3	0.287	6.1	LOS A	4.1	29.8	0.21	0.51	0.21	30.5
All Vehicles			1538	3.4	1538	3.4	0.287	3.8	LOS A	4.1	29.8	0.21	0.34	0.21	32.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth St (S)											
P1	Full	115	46.0	LOS E	0.3	0.3	0.94	0.94	212.6	200.0	0.94
SouthWest: Randle St (SW)											
P8	Full	3	20.6	LOS C	0.0	0.0	0.83	0.83	187.3	200.0	1.07
All Pedestrians		118	45.3	LOS E	0.3	0.3	0.93	0.93	211.9	200.0	0.94

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

MOVEMENT SUMMARY

Site: WLO01 [WLO01 Botany Rd / Raglan St / Henderson Rd (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: WLO-N1 [WLO Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 47
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Botany Rd (S)															
1	L2	All MCs	774	7.2	774	7.2	* 0.709	34.8	LOS C	18.2	135.4	0.86	0.82	0.86	16.4
Approach			774	7.2	774	7.2	0.709	34.8	LOS C	18.2	135.4	0.86	0.82	0.86	16.4
East: Raglan St (E)															
4	L2	All MCs	54	13.7	54	13.7	0.827	94.3	LOS F	8.8	66.3	1.00	0.98	1.28	4.2
5	T1	All MCs	228	6.5	228	6.5	0.827	88.7	LOS F	9.1	67.4	1.00	0.98	1.27	4.3
Approach			282	7.8	282	7.8	0.827	89.8	LOS F	9.1	67.4	1.00	0.98	1.27	3.1
North: Botany Rd (N)															
7	L2	All MCs	75	12.7	75	12.7	0.360	10.4	LOS A	9.4	70.7	0.37	0.39	0.37	35.2
8	T1	All MCs	887	8.7	887	8.7	0.360	5.4	LOS A	9.5	71.5	0.37	0.36	0.37	35.9
9	R2	All MCs	568	2.4	568	2.4	* 0.754	55.3	LOS D	16.4	116.9	1.00	0.88	1.06	10.2
Approach			1531	6.5	1531	6.5	0.754	24.2	LOS B	16.4	116.9	0.60	0.55	0.63	18.7
West: Henderson Rd (W)															
11	T1	All MCs	225	1.9	225	1.9	0.661	12.9	LOS A	3.9	27.8	0.43	0.36	0.44	15.1
12	R2	All MCs	27	7.7	27	7.7	* 0.661	48.0	LOS D	3.1	22.8	0.82	0.68	0.85	6.4
Approach			253	2.5	253	2.5	0.661	16.7	LOS B	3.9	27.8	0.47	0.39	0.49	13.2
All Vehicles			2839	6.5	2839	6.5	0.827	32.9	LOS C	18.2	135.4	0.70	0.65	0.74	14.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Botany Rd (S)											
P1	Full	33	53.3	LOS E	0.1	0.1	0.94	0.94	69.9	20.0	0.29
East: Raglan St (E)											
P2	Full	18	53.2	LOS E	0.1	0.1	0.94	0.94	69.9	20.0	0.29

North: Botany Rd (N)										
P3	Full	95	53.4	LOS E	0.3	0.3	0.95	0.95	70.1	20.0	0.29
West: Henderson Rd (W)										
P4	Full	83	53.4	LOS E	0.3	0.3	0.94	0.94	70.1	20.0	0.29
All Pedestrians		228	53.4	LOS E	0.3	0.3	0.94	0.94	70.0	20.0	0.29

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

MOVEMENT SUMMARY

Site: WLO02 [WLO02 Raglan St / Cope St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: WLO-N1 [WLO Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

NA
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Raglan St (E)															
5	T1	All MCs	241	7.9	241	7.9	0.219	4.0	LOS A	1.4	10.4	0.22	0.43	0.22	40.9
6	R2	All MCs	19	0.0	19	0.0	0.219	7.0	LOS A	1.4	10.4	0.22	0.43	0.22	42.4
6u	U	All MCs	2	0.0	2	0.0	0.219	8.5	LOS A	1.4	10.4	0.22	0.43	0.22	42.9
Approach			262	7.2	262	7.2	0.219	4.3	LOS A	1.4	10.4	0.22	0.43	0.22	41.1
North: Cope St (N)															
7	L2	All MCs	18	0.0	18	0.0	0.061	5.2	LOS A	0.3	2.4	0.44	0.59	0.44	40.8
9	R2	All MCs	37	5.7	37	5.7	0.061	8.4	LOS A	0.3	2.4	0.44	0.59	0.44	36.1
9u	U	All MCs	2	0.0	2	0.0	0.061	9.7	LOS A	0.3	2.4	0.44	0.59	0.44	39.7
Approach			57	3.7	57	3.7	0.061	7.4	LOS A	0.3	2.4	0.44	0.59	0.44	38.4
West: Raglan St (W)															
10	L2	All MCs	76	2.8	76	2.8	0.211	3.8	LOS A	1.2	8.9	0.12	0.43	0.12	40.0
11	T1	All MCs	220	4.8	220	4.8	0.211	3.7	LOS A	1.2	8.9	0.12	0.43	0.12	41.5
12u	U	All MCs	4	25.0	4	25.0	0.211	8.3	LOS A	1.2	8.9	0.12	0.43	0.12	29.3
Approach			300	4.6	300	4.6	0.211	3.8	LOS A	1.2	8.9	0.12	0.43	0.12	41.1
All Vehicles			619	5.6	619	5.6	0.219	4.3	LOS A	1.4	10.4	0.19	0.44	0.19	40.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: WLO03 [WLO03 Botany Rd / Wellington St / Buckland St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: WLO-N1 [WLO Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 137
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Botany Rd (S)															
2	T1	All MCs	751	6.7	751	6.7	0.267	4.0	LOS A	6.1	45.2	0.30	0.27	0.30	42.3
3	R2	All MCs	1	0.0	1	0.0	0.267	11.3	LOS A	6.1	44.9	0.30	0.27	0.30	40.9
Approach			752	6.7	752	6.7	0.267	4.0	LOS A	6.1	45.2	0.30	0.27	0.30	42.3
East: Wellington St (E)															
4	L2	All MCs	1	0.0	1	0.0	0.006	57.8	LOS E	0.1	0.4	0.93	0.59	0.93	15.5
6	R2	All MCs	2	100.0	2	100.0	0.018	57.2	LOS E	0.1	1.5	0.91	0.63	0.91	4.2
Approach			3	66.7	3	66.7	0.018	57.4	LOS E	0.1	1.5	0.92	0.61	0.92	8.8
North: Botany Rd (N)															
7	L2	All MCs	1	0.0	1	0.0	* 0.349	8.4	LOS A	7.3	55.1	0.29	0.26	0.29	22.1
8	T1	All MCs	967	8.8	967	8.8	0.349	3.6	LOS A	7.4	55.8	0.29	0.26	0.29	45.7
Approach			968	8.8	968	8.8	0.349	3.6	LOS A	7.4	55.8	0.29	0.26	0.29	45.7
West: Buckland St (W)															
10	L2	All MCs	21	15.0	21	15.0	0.117	55.0	LOS D	1.2	9.3	0.92	0.70	0.92	4.9
11	T1	All MCs	1	0.0	1	0.0	0.117	50.6	LOS D	1.2	9.3	0.92	0.70	0.92	7.8
12	R2	All MCs	64	3.3	64	3.3	* 0.412	61.5	LOS E	3.7	26.7	0.98	0.76	0.98	14.7
Approach			86	6.1	86	6.1	0.412	59.8	LOS E	3.7	26.7	0.97	0.74	0.97	12.9
All Vehicles			1809	7.9	1809	7.9	0.412	6.5	LOS A	7.4	55.8	0.33	0.29	0.33	41.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Botany Rd (S)											
P1	Full	115	53.5	LOS E	0.4	0.4	0.95	0.95	70.1	20.0	0.29
East: Wellington St (E)											

P2	Full	22	53.3	LOS E	0.1	0.1	0.94	0.94	69.9	20.0	0.29
North: Botany Rd (N)											
P3	Full	37	53.3	LOS E	0.1	0.1	0.94	0.94	70.0	20.0	0.29
West: Buckland St (W)											
P4	Full	51	53.3	LOS E	0.2	0.2	0.94	0.94	70.0	20.0	0.29
All Pedestrians		224	53.4	LOS E	0.4	0.4	0.94	0.94	70.0	20.0	0.29

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

MOVEMENT SUMMARY

Site: WLO05 [WLO05 Wyndham St / Henderson Rd (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: WLO-N1 [WLO Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 55
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Wyndham St (S)															
1	L2	All MCs	23	4.5	23	4.5	* 0.730	70.9	LOS F	12.5	91.0	0.99	0.88	1.06	11.9
2	T1	All MCs	402	5.0	402	5.0	0.730	61.3	LOS E	12.6	92.2	0.99	0.88	1.06	19.1
3	R2	All MCs	16	6.7	16	6.7	0.730	68.0	LOS E	12.6	92.2	0.99	0.87	1.06	12.6
Approach			441	5.0	441	5.0	0.730	62.0	LOS E	12.6	92.2	0.99	0.88	1.06	16.1
East: Henderson Rd (E)															
4	L2	All MCs	175	3.6	175	3.6	0.324	6.7	LOS A	3.1	22.0	0.14	0.33	0.14	39.0
5	T1	All MCs	651	2.8	651	2.8	0.324	1.9	LOS A	3.1	22.0	0.14	0.19	0.14	39.4
6	R2	All MCs	745	8.1	745	8.1	* 0.569	12.9	LOS A	6.5	48.7	0.58	0.73	0.58	28.3
Approach			1571	5.4	1571	5.4	0.569	7.7	LOS A	6.5	48.7	0.35	0.46	0.35	31.9
West: Henderson Rd (W)															
10	L2	All MCs	317	5.0	317	5.0	* 0.746	78.8	LOS F	9.4	68.4	1.00	0.88	1.13	12.0
11	T1	All MCs	237	2.2	237	2.2	0.621	47.8	LOS D	12.8	91.6	0.97	0.81	0.97	4.9
Approach			554	3.8	554	3.8	0.746	65.6	LOS E	12.8	91.6	0.99	0.85	1.06	8.2
All Vehicles			2565	5.0	2565	5.0	0.746	29.5	LOS C	12.8	92.2	0.59	0.62	0.62	18.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Wyndham St (S)											
P1	Full	40	53.3	LOS E	0.1	0.1	0.94	0.94	70.0	20.0	0.29
East: Henderson Rd (E)											
P2	Full	66	53.4	LOS E	0.2	0.2	0.94	0.94	70.0	20.0	0.29
North: Wyndham St (N)											
P3	Full	46	53.3	LOS E	0.1	0.1	0.94	0.94	70.0	20.0	0.29
West: Henderson Rd (W)											

P4 Full	184	53.6	LOS E	0.6	0.6	0.95	0.95	70.3	20.0	0.28
All Pedestrians	337	53.5	LOS E	0.6	0.6	0.95	0.95	70.1	20.0	0.29

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

MOVEMENT SUMMARY

Site: WLO01 [WLO01 Botany Rd / Raglan St / Henderson Rd (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: WLO-N1 [WLO Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 47
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Botany Rd (S)															
1	L2	All MCs	656	4.7	656	4.7	* 0.770	55.0	LOS D	19.6	142.4	1.00	0.89	1.05	11.8
Approach			656	4.7	656	4.7	0.770	55.0	LOS D	19.6	142.4	1.00	0.89	1.05	11.8
East: Raglan St (E)															
4	L2	All MCs	66	3.2	66	3.2	0.944	116.5	LOS F	14.4	103.5	1.00	1.17	1.51	3.4
5	T1	All MCs	327	2.6	327	2.6	* 0.944	110.7	LOS F	14.8	106.1	1.00	1.17	1.50	3.4
Approach			394	2.7	394	2.7	0.944	111.7	LOS F	14.8	106.1	1.00	1.17	1.50	2.5
North: Botany Rd (N)															
7	L2	All MCs	72	10.3	72	10.3	0.399	13.7	LOS A	11.9	87.7	0.44	0.44	0.44	32.1
8	T1	All MCs	959	5.8	959	5.8	0.399	7.4	LOS A	12.1	89.3	0.44	0.41	0.44	32.6
9	R2	All MCs	608	2.4	608	2.4	* 0.776	55.1	LOS D	18.3	130.8	1.00	0.89	1.08	10.3
Approach			1639	4.8	1639	4.8	0.776	25.4	LOS B	18.3	130.8	0.65	0.59	0.68	18.1
West: Henderson Rd (W)															
11	T1	All MCs	332	1.6	332	1.6	0.896	19.5	LOS B	15.0	106.1	0.82	0.76	0.90	11.7
12	R2	All MCs	45	2.3	45	2.3	0.896	67.8	LOS E	3.1	22.0	1.00	0.81	1.21	4.0
Approach			377	1.7	377	1.7	0.896	25.3	LOS B	15.0	106.1	0.84	0.77	0.94	9.5
All Vehicles			3065	4.1	3065	4.1	0.944	42.8	LOS D	19.6	142.4	0.79	0.75	0.90	11.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Botany Rd (S)											
P1	Full	34	53.3	LOS E	0.1	0.1	0.94	0.94	69.9	20.0	0.29
East: Raglan St (E)											
P2	Full	59	53.3	LOS E	0.2	0.2	0.94	0.94	70.0	20.0	0.29

North: Botany Rd (N)										
P3	Full	118	53.5	LOS E	0.4	0.4	0.95	0.95	70.1	20.0	0.29
West: Henderson Rd (W)										
P4	Full	95	53.4	LOS E	0.3	0.3	0.95	0.95	70.1	20.0	0.29
All Pedestrians		305	53.4	LOS E	0.4	0.4	0.95	0.95	70.1	20.0	0.29

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

MOVEMENT SUMMARY

Site: WLO02 [WLO02 Raglan St / Cope St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: WLO-N1 [WLO Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

NA
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Raglan St (E)															
5	T1	All MCs	299	3.5	299	3.5	0.513	4.7	LOS A	2.7	19.6	0.50	0.44	0.50	39.1
6	R2	All MCs	20	0.0	20	0.0	0.513	7.7	LOS A	2.7	19.6	0.50	0.44	0.50	41.3
6u	U	All MCs	1	0.0	1	0.0	0.513	9.2	LOS A	2.7	19.6	0.50	0.44	0.50	41.9
Approach			320	3.3	320	3.3	0.513	4.9	LOS A	2.7	19.6	0.50	0.44	0.50	39.3
North: Cope St (N)															
7	L2	All MCs	19	0.0	19	0.0	0.201	6.4	LOS A	0.8	5.8	0.59	0.59	0.59	39.6
9	R2	All MCs	84	0.0	84	0.0	0.201	9.4	LOS A	0.8	5.8	0.59	0.59	0.59	34.3
9u	U	All MCs	1	0.0	1	0.0	0.201	10.9	LOS A	0.8	5.8	0.59	0.59	0.59	38.5
Approach			104	0.0	104	0.0	0.201	8.9	LOS A	0.8	5.8	0.59	0.59	0.59	35.8
West: Raglan St (W)															
10	L2	All MCs	67	0.0	67	0.0	0.281	3.8	LOS A	1.8	13.0	0.11	0.43	0.11	40.0
11	T1	All MCs	326	3.9	326	3.9	0.281	3.7	LOS A	1.8	13.0	0.11	0.43	0.11	41.5
12u	U	All MCs	9	0.0	9	0.0	0.281	8.3	LOS A	1.8	13.0	0.11	0.43	0.11	29.4
Approach			403	3.1	403	3.1	0.281	3.8	LOS A	1.8	13.0	0.11	0.43	0.11	41.2
All Vehicles			827	2.8	827	2.8	0.513	4.9	LOS A	2.7	19.6	0.32	0.46	0.32	39.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: WLO03 [WLO03 Botany Rd / Wellington St / Buckland St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: WLO-N1 [WLO Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 137
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Botany Rd (S)															
2	T1	All MCs	642	4.8	642	4.8	0.224	3.9	LOS A	5.0	36.6	0.29	0.26	0.29	42.6
3	R2	All MCs	1	0.0	1	0.0	0.224	9.3	LOS A	5.0	36.2	0.29	0.26	0.29	41.1
Approach			643	4.7	643	4.7	0.224	3.9	LOS A	5.0	36.6	0.29	0.26	0.29	42.6
East: Wellington St (E)															
4	L2	All MCs	1	100.0	1	100.0	0.013	59.9	LOS E	0.1	0.8	0.93	0.60	0.93	14.7
6	R2	All MCs	1	0.0	1	0.0	0.006	56.0	LOS D	0.1	0.4	0.91	0.60	0.91	4.3
Approach			2	50.0	2	50.0	0.013	57.9	LOS E	0.1	0.8	0.92	0.60	0.92	10.5
North: Botany Rd (N)															
7	L2	All MCs	2	50.0	2	50.0	* 0.373	6.4	LOS A	3.4	24.6	0.12	0.11	0.12	23.1
8	T1	All MCs	1067	5.3	1067	5.3	0.373	1.1	LOS A	3.4	24.6	0.11	0.10	0.11	48.6
Approach			1069	5.4	1069	5.4	0.373	1.1	LOS A	3.4	24.6	0.11	0.10	0.11	48.5
West: Buckland St (W)															
10	L2	All MCs	14	0.0	14	0.0	0.067	54.1	LOS D	0.8	5.4	0.91	0.68	0.91	5.0
11	T1	All MCs	1	0.0	1	0.0	0.067	49.7	LOS D	0.8	5.4	0.91	0.68	0.91	7.9
12	R2	All MCs	58	1.8	58	1.8	* 0.370	61.2	LOS E	3.3	23.7	0.98	0.75	0.98	14.7
Approach			73	1.4	73	1.4	0.370	59.7	LOS E	3.3	23.7	0.97	0.74	0.97	13.4
All Vehicles			1787	5.1	1787	5.1	0.373	4.5	LOS A	5.0	36.6	0.21	0.18	0.21	43.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Botany Rd (S)											
P1	Full	75	53.4	LOS E	0.2	0.2	0.94	0.94	70.0	20.0	0.29
East: Wellington St (E)											

P2	Full	46	53.3	LOS E	0.1	0.1	0.94	0.94	70.0	20.0	0.29
North: Botany Rd (N)											
P3	Full	26	53.3	LOS E	0.1	0.1	0.94	0.94	69.9	20.0	0.29
West: Buckland St (W)											
P4	Full	69	53.4	LOS E	0.2	0.2	0.94	0.94	70.0	20.0	0.29
All Pedestrians		217	53.3	LOS E	0.2	0.2	0.94	0.94	70.0	20.0	0.29

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

MOVEMENT SUMMARY

Site: WLO05 [WLO05 Wyndham St / Henderson Rd (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: WLO-N1 [WLO Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 55
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Wyndham St (S)															
1	L2	All MCs	15	0.0	15	0.0	* 0.777	73.3	LOS F	15.3	107.8	0.99	0.91	1.09	12.1
2	T1	All MCs	497	0.6	497	0.6	0.777	63.7	LOS E	15.3	107.8	0.99	0.91	1.09	19.2
3	R2	All MCs	14	15.4	14	15.4	0.777	70.5	LOS F	15.1	107.2	0.99	0.91	1.10	12.7
Approach			525	1.0	525	1.0	0.777	64.1	LOS E	15.3	107.8	0.99	0.91	1.09	15.9
East: Henderson Rd (E)															
4	L2	All MCs	146	3.6	146	3.6	0.391	12.1	LOS A	9.4	66.7	0.37	0.44	0.37	33.7
5	T1	All MCs	814	1.3	814	1.3	0.391	6.1	LOS A	9.4	66.7	0.35	0.35	0.35	29.6
6	R2	All MCs	632	6.0	632	6.0	* 0.530	16.3	LOS B	6.6	48.8	0.68	0.75	0.68	25.8
Approach			1592	3.4	1592	3.4	0.530	10.7	LOS A	9.4	66.7	0.48	0.52	0.48	27.9
West: Henderson Rd (W)															
10	L2	All MCs	256	0.8	256	0.8	* 0.773	80.1	LOS F	9.7	68.2	1.00	0.91	1.17	11.9
11	T1	All MCs	363	1.2	363	1.2	0.773	54.5	LOS D	18.0	127.5	1.00	0.91	1.09	4.5
Approach			619	1.0	619	1.0	0.773	65.1	LOS E	18.0	127.5	1.00	0.91	1.12	7.1
All Vehicles			2736	2.4	2736	2.4	0.777	33.3	LOS C	18.0	127.5	0.70	0.68	0.74	16.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Wyndham St (S)											
P1	Full	52	53.3	LOS E	0.2	0.2	0.94	0.94	70.0	20.0	0.29
East: Henderson Rd (E)											
P2	Full	76	53.4	LOS E	0.2	0.2	0.94	0.94	70.0	20.0	0.29
North: Wyndham St (N)											
P3	Full	97	53.4	LOS E	0.3	0.3	0.95	0.95	70.1	20.0	0.29
West: Henderson Rd (W)											

P4 Full	157	53.6	LOS E	0.5	0.5	0.95	0.95	70.2	20.0	0.28
All Pedestrians	381	53.5	LOS E	0.5	0.5	0.95	0.95	70.1	20.0	0.29

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

MOVEMENT SUMMARY

Site: WLO01 [WLO01 Botany Rd / Raglan St / Henderson Rd (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: WLO-N1 [WLO Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 47
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Botany Rd (S)															
1	L2	All MCs	501	4.6	501	4.6	* 0.515	41.8	LOS C	12.0	87.5	0.87	0.80	0.87	14.4
Approach			501	4.6	501	4.6	0.515	41.8	LOS C	12.0	87.5	0.87	0.80	0.87	14.4
East: Raglan St (E)															
4	L2	All MCs	39	0.0	39	0.0	0.593	77.7	LOS F	6.9	49.6	0.97	0.79	0.97	5.1
5	T1	All MCs	212	4.5	212	4.5	0.593	71.2	LOS F	6.9	50.2	0.97	0.78	0.97	5.2
Approach			251	3.8	251	3.8	0.593	72.2	LOS F	6.9	50.2	0.97	0.78	0.97	3.8
North: Botany Rd (N)															
7	L2	All MCs	87	6.0	87	6.0	0.119	12.7	LOS A	2.6	19.2	0.32	0.48	0.32	32.4
8	T1	All MCs	798	7.4	798	7.4	0.594	10.4	LOS A	19.9	148.1	0.50	0.47	0.50	32.3
9	R2	All MCs	477	4.6	477	4.6	* 0.522	46.0	LOS D	12.1	87.7	0.91	0.82	0.91	11.8
Approach			1362	6.3	1362	6.3	0.594	23.0	LOS B	19.9	148.1	0.63	0.59	0.63	19.4
West: Henderson Rd (W)															
11	T1	All MCs	204	1.0	204	1.0	0.572	10.6	LOS A	3.4	24.2	0.35	0.29	0.35	17.3
12	R2	All MCs	55	1.9	55	1.9	* 0.572	42.4	LOS C	3.4	24.2	0.76	0.69	0.77	6.6
Approach			259	1.2	259	1.2	0.572	17.3	LOS B	3.4	24.2	0.43	0.37	0.44	12.9
All Vehicles			2373	5.1	2373	5.1	0.594	31.5	LOS C	19.9	148.1	0.70	0.63	0.70	14.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Botany Rd (S)											
P1	Full	27	53.3	LOS E	0.1	0.1	0.94	0.94	69.9	20.0	0.29
East: Raglan St (E)											
P2	Full	44	53.3	LOS E	0.1	0.1	0.94	0.94	70.0	20.0	0.29
North: Botany Rd (N)											

P3 Full	64	53.3	LOS E	0.2	0.2	0.94	0.94	70.0	20.0	0.29
West: Henderson Rd (W)										
P4 Full	53	53.3	LOS E	0.2	0.2	0.94	0.94	70.0	20.0	0.29
All Pedestrians	188	53.3	LOS E	0.2	0.2	0.94	0.94	70.0	20.0	0.29

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

MOVEMENT SUMMARY

Site: WLO02 [WLO02 Raglan St / Cope St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: WLO-N1 [WLO Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

NA
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Raglan St (E)															
5	T1	All MCs	192	4.9	192	4.9	0.173	4.1	LOS A	1.1	8.2	0.25	0.44	0.25	40.6
6	R2	All MCs	24	0.0	24	0.0	0.173	7.1	LOS A	1.1	8.2	0.25	0.44	0.25	42.2
6u	U	All MCs	1	0.0	1	0.0	0.173	8.6	LOS A	1.1	8.2	0.25	0.44	0.25	42.7
Approach			217	4.4	217	4.4	0.173	4.5	LOS A	1.1	8.2	0.25	0.44	0.25	40.9
North: Cope St (N)															
7	L2	All MCs	29	0.0	29	0.0	0.082	5.2	LOS A	0.5	3.3	0.44	0.59	0.44	40.9
9	R2	All MCs	53	0.0	53	0.0	0.082	8.2	LOS A	0.5	3.3	0.44	0.59	0.44	36.3
9u	U	All MCs	1	0.0	1	0.0	0.082	9.7	LOS A	0.5	3.3	0.44	0.59	0.44	39.8
Approach			83	0.0	83	0.0	0.082	7.2	LOS A	0.5	3.3	0.44	0.59	0.44	38.6
West: Raglan St (W)															
10	L2	All MCs	71	0.0	71	0.0	0.206	3.8	LOS A	1.2	8.8	0.13	0.43	0.13	39.9
11	T1	All MCs	215	3.4	215	3.4	0.206	3.7	LOS A	1.2	8.8	0.13	0.43	0.13	41.4
12u	U	All MCs	6	0.0	6	0.0	0.206	8.3	LOS A	1.2	8.8	0.13	0.43	0.13	29.1
Approach			292	2.5	292	2.5	0.206	3.8	LOS A	1.2	8.8	0.13	0.43	0.13	41.0
All Vehicles			592	2.8	592	2.8	0.206	4.5	LOS A	1.2	8.8	0.22	0.46	0.22	40.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: WLO03 [WLO03 Botany Rd / Wellington St / Buckland St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: WLO-N1 [WLO Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 137
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Botany Rd (S)															
2	T1	All MCs	473	4.7	473	4.7	0.270	3.5	LOS A	6.0	43.4	0.28	0.24	0.28	43.4
3	R2	All MCs	1	0.0	1	0.0	0.270	13.0	LOS A	6.0	43.4	0.28	0.25	0.28	41.6
Approach			474	4.7	474	4.7	0.270	3.5	LOS A	6.0	43.4	0.28	0.24	0.28	43.4
East: Wellington St (E)															
4	L2	All MCs	1	0.0	1	0.0	0.006	60.3	LOS E	0.1	0.4	0.93	0.59	0.93	15.5
6	R2	All MCs	1	0.0	1	0.0	0.007	57.0	LOS E	0.1	0.4	0.92	0.59	0.92	4.2
Approach			2	0.0	2	0.0	0.007	58.6	LOS E	0.1	0.4	0.92	0.59	0.92	10.8
North: Botany Rd (N)															
7	L2	All MCs	1	0.0	1	0.0	0.118	9.8	LOS A	1.3	9.4	0.15	0.13	0.15	23.0
8	T1	All MCs	892	6.7	892	6.7	* 0.591	6.3	LOS A	10.4	77.3	0.25	0.23	0.25	47.0
Approach			893	6.7	893	6.7	0.591	6.3	LOS A	10.4	77.3	0.25	0.23	0.25	43.3
West: Buckland St (W)															
10	L2	All MCs	28	3.7	28	3.7	0.152	57.4	LOS E	1.6	11.6	0.94	0.71	0.94	4.8
11	T1	All MCs	1	0.0	1	0.0	0.152	53.6	LOS D	1.6	11.6	0.94	0.71	0.94	7.6
12	R2	All MCs	47	0.0	47	0.0	* 0.300	60.6	LOS E	2.7	18.9	0.97	0.74	0.97	14.8
Approach			77	1.4	77	1.4	0.300	59.3	LOS E	2.7	18.9	0.96	0.73	0.96	11.8
All Vehicles			1445	5.8	1445	5.8	0.591	8.3	LOS A	10.4	77.3	0.30	0.26	0.30	39.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Botany Rd (S)											
P1	Full	37	53.3	LOS E	0.1	0.1	0.94	0.94	70.0	20.0	0.29
East: Wellington St (E)											
P2	Full	14	53.2	LOS E	0.0	0.0	0.94	0.94	69.9	20.0	0.29

North: Botany Rd (N)										
P3	Full	9	53.2	LOS E	0.0	0.0	0.94	0.94	69.9	20.0	0.29
West: Buckland St (W)										
P4	Full	35	53.3	LOS E	0.1	0.1	0.94	0.94	69.9	20.0	0.29
All Pedestrians		95	53.3	LOS E	0.1	0.1	0.94	0.94	69.9	20.0	0.29

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

MOVEMENT SUMMARY

Site: WLO05 [WLO05 Wyndham St / Henderson Rd (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: WLO-N1 [WLO Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 55
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Wyndham St (S)															
1	L2	All MCs	11	0.0	11	0.0	* 0.580	56.2	LOS D	12.5	88.9	0.90	0.76	0.90	13.8
2	T1	All MCs	480	2.0	480	2.0	0.580	48.0	LOS D	12.5	89.1	0.90	0.76	0.90	22.2
3	R2	All MCs	14	7.7	14	7.7	0.580	53.6	LOS D	12.5	89.1	0.90	0.76	0.90	15.2
Approach			504	2.1	504	2.1	0.580	48.3	LOS D	12.5	89.1	0.90	0.76	0.90	19.2
East: Henderson Rd (E)															
4	L2	All MCs	148	5.7	148	5.7	0.291	10.8	LOS A	4.9	35.8	0.29	0.44	0.29	33.8
5	T1	All MCs	493	3.8	493	3.8	0.291	5.7	LOS A	4.9	35.8	0.28	0.31	0.28	30.1
6	R2	All MCs	547	4.8	547	4.8	* 0.581	16.8	LOS B	5.9	42.7	0.69	0.75	0.69	25.4
Approach			1188	4.5	1188	4.5	0.581	11.5	LOS A	5.9	42.7	0.47	0.53	0.47	27.7
West: Henderson Rd (W)															
10	L2	All MCs	325	1.9	325	1.9	* 0.587	66.7	LOS E	8.6	61.4	0.95	0.80	0.95	13.5
11	T1	All MCs	244	0.4	244	0.4	0.539	43.7	LOS D	12.6	88.7	0.93	0.78	0.93	5.3
Approach			569	1.3	569	1.3	0.587	56.8	LOS E	12.6	88.7	0.94	0.79	0.94	9.2
All Vehicles			2262	3.2	2262	3.2	0.587	31.1	LOS C	12.6	89.1	0.68	0.65	0.68	18.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Wyndham St (S)											
P1	Full	38	53.3	LOS E	0.1	0.1	0.94	0.94	70.0	20.0	0.29
East: Henderson Rd (E)											
P2	Full	25	53.3	LOS E	0.1	0.1	0.94	0.94	69.9	20.0	0.29
North: Wyndham St (N)											
P3	Full	40	53.3	LOS E	0.1	0.1	0.94	0.94	70.0	20.0	0.29
West: Henderson Rd (W)											

P4 Full	62	53.3	LOS E	0.2	0.2	0.94	0.94	70.0	20.0	0.29
All Pedestrians	165	53.3	LOS E	0.2	0.2	0.94	0.94	70.0	20.0	0.29

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

MOVEMENT SUMMARY

Site: SYD01 [SYD01 Railway Pde / Gleeson Ave (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: SYD-N1 [SYD Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 3320
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 85 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Gleeson Ave (SE)															
1	L2	All MCs	964	6.8	964	6.8	0.420	4.9	LOS A	0.0	0.0	0.00	0.51	0.00	42.2
Approach			964	6.8	964	6.8	0.420	4.9	LOS A	0.0	0.0	0.00	0.51	0.00	42.2
NorthEast: Railway Pde (NE)															
4	L2	All MCs	1052	7.1	1052	7.1	* 0.487	12.9	LOS A	9.9	73.6	0.47	0.70	0.47	32.6
5	T1	All MCs	52	16.3	52	16.3	* 0.046	10.3	LOS A	0.4	3.1	0.35	0.27	0.35	54.0
Approach			1103	7.5	1103	7.5	0.487	12.8	LOS A	9.9	73.6	0.46	0.68	0.46	31.4
All Vehicles			2067	7.2	2067	7.2	0.487	9.1	LOS A	9.9	73.6	0.25	0.60	0.25	36.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthEast: Railway Pde (NE)											
P2	Full	248	20.0	LOS B	0.4	0.4	0.84	0.84	36.6	20.0	0.55
P2S	Slip/ Bypass	248	36.2	LOS D	0.6	0.6	0.93	0.93	52.8	20.0	0.38
All Pedestrians		497	28.1	LOS C	0.6	0.6	0.89	0.89	44.7	20.0	0.45

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

MOVEMENT SUMMARY

Site: SYD02 [SYD02 Burrows Ave / Gleeson Ave (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: SYD-N1 [SYD Network 1 (Network Folder: Block 3 Network - 2024 AM Peak)]

TCS 1152
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 110 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Gleeson Ave (SE)															
2	T1	All MCs	717	5.6	717	5.6	0.356	15.0	LOS B	10.7	78.5	0.60	0.53	0.60	21.2
Approach			717	5.6	717	5.6	0.356	15.0	LOS B	10.7	78.5	0.60	0.53	0.60	21.2
NorthEast: Burrows Ave (NE)															
4	L2	All MCs	41	12.8	41	12.8	0.213	58.1	LOS E	2.1	16.0	0.94	0.73	0.94	13.9
6	R2	All MCs	218	5.8	218	5.8	* 0.500	56.8	LOS E	5.8	42.4	0.98	0.79	0.98	9.3
Approach			259	6.9	259	6.9	0.500	57.0	LOS E	5.8	42.4	0.97	0.78	0.97	9.8
NorthWest: Gleeson Ave (NW)															
7	L2	All MCs	221	6.7	221	6.7	0.539	7.0	LOS A	7.7	56.9	0.30	0.44	0.30	34.2
8	T1	All MCs	831	7.2	831	7.2	* 0.539	5.4	LOS A	8.0	59.3	0.30	0.33	0.30	40.6
Approach			1052	7.1	1052	7.1	0.539	5.7	LOS A	8.0	59.3	0.30	0.35	0.30	38.9
SouthWest: Burrows Ave (SW)															
10	L2	All MCs	29	42.9	29	42.9	0.159	59.2	LOS E	1.2	10.1	0.95	0.70	0.95	10.7
11	T1	All MCs	9	11.1	9	11.1	0.159	45.6	LOS D	1.2	10.1	0.95	0.70	0.95	16.7
12	R2	All MCs	13	41.7	13	41.7	0.060	47.6	LOS D	0.6	5.6	0.87	0.69	0.87	16.0
Approach			52	36.7	52	36.7	0.159	53.9	LOS D	1.2	10.1	0.93	0.70	0.93	13.2
All Vehicles			2079	7.3	2079	7.3	0.539	16.5	LOS B	10.7	78.5	0.51	0.48	0.51	23.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Gleeson Ave (SE)											
P1	Full	12	46.4	LOS E	0.0	0.0	0.92	0.92	63.1	20.0	0.32
NorthEast: Burrows Ave (NE)											
P2	Full	112	48.4	LOS E	0.3	0.3	0.94	0.94	65.1	20.0	0.31
NorthWest: Gleeson Ave (NW)											

P3 Full	386	45.3	LOS E	1.1	1.1	0.91	0.91	61.9	20.0	0.32
SouthWest: Burrows Ave (SW)										
P4 Full	243	48.7	LOS E	0.7	0.7	0.95	0.95	65.4	20.0	0.31
All Pedestrians	753	46.9	LOS E	1.1	1.1	0.93	0.93	63.5	20.0	0.31

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

MOVEMENT SUMMARY

Site: SYD03 [SYD03 Burrows Ave / George St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: George St (SE)															
4	L2	All MCs	9	0.0	9	0.0	0.017	8.3	LOS A	0.1	0.4	0.30	0.88	0.30	30.2
6	R2	All MCs	6	0.0	6	0.0	0.017	9.6	LOS A	0.1	0.4	0.30	0.88	0.30	26.3
Approach			16	0.0	16	0.0	0.017	8.8	LOS A	0.1	0.4	0.30	0.88	0.30	28.8
NorthEast: Burrows Ave (NE)															
7	L2	All MCs	9	11.1	9	11.1	0.215	4.1	LOS A	1.1	8.4	0.29	0.16	0.29	38.1
8	T1	All MCs	213	5.9	213	5.9	0.215	0.8	LOS A	1.1	8.4	0.29	0.16	0.29	45.6
Approach			222	6.2	222	6.2	0.215	1.0	NA	1.1	8.4	0.29	0.16	0.29	45.2
SouthWest: Burrows Ave (SW)															
2	T1	All MCs	206	5.6	206	5.6	0.207	0.8	LOS A	0.9	6.8	0.23	0.14	0.23	45.2
3	R2	All MCs	9	0.0	9	0.0	0.207	5.4	LOS A	0.9	6.8	0.23	0.14	0.23	40.9
Approach			216	5.4	216	5.4	0.207	1.0	NA	0.9	6.8	0.23	0.14	0.23	44.9
All Vehicles			454	5.6	454	5.6	0.215	1.3	NA	1.1	8.4	0.26	0.17	0.26	44.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: SYD04 [SYD04 Railway Pde / Sydenham Rd (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

TCS 4946
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
NorthWest: Sydenham Rd (NW)															
28	T1	All MCs	1113	7.4	1113	7.4	* 0.444	6.4	LOS A	8.9	66.4	0.49	0.47	0.49	44.6
29	R2	All MCs	1	0.0	1	0.0	0.444	12.1	LOS A	8.7	64.6	0.49	0.47	0.49	39.6
Approach			1114	7.4	1114	7.4	0.444	6.4	LOS A	8.9	66.4	0.49	0.47	0.49	44.6
SouthWest: Railway Pde (SW)															
32	R2	All MCs	17	25.0	17	25.0	* 0.066	32.5	LOS C	0.6	4.9	0.88	0.69	0.88	24.7
Approach			17	25.0	17	25.0	0.066	32.5	LOS C	0.6	4.9	0.88	0.69	0.88	24.7
All Vehicles			1131	7.6	1131	7.6	0.444	6.8	LOS A	8.9	66.4	0.50	0.47	0.50	43.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthWest: Sydenham Rd (NW)												
P7	Full	3	3	26.4	LOS C	0.0	0.0	0.82	0.82	193.1	200.0	1.04
All Pedestrians		3	3	26.4	LOS C	0.0	0.0	0.82	0.82	193.1	200.0	1.04

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

MOVEMENT SUMMARY

Site: SYD05 [SYD05 Marrickville Rd / Buckley St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Marrickville Rd (SE)															
2	T1	All MCs	481	6.1	481	6.1	0.262	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
3	R2	All MCs	537	8.0	537	8.0	0.715	8.0	LOS A	4.8	36.0	0.50	0.65	0.61	42.9
Approach			1018	7.1	1018	7.1	0.715	4.3	NA	4.8	36.0	0.26	0.35	0.32	50.5
NorthWest: Marrickville Rd (NW)															
7	L2	All MCs	505	6.9	505	6.9	0.845	10.4	LOS A	8.2	60.7	0.78	0.76	1.08	45.8
Approach			505	6.9	505	6.9	0.845	10.4	NA	8.2	60.7	0.78	0.76	1.08	45.8
All Vehicles			1523	7.0	1523	7.0	0.845	6.3	NA	8.2	60.7	0.43	0.48	0.57	48.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: SYD06 [SYD06 Sydenham Rd / Buckley St (Site Folder: Block 3 Model - 2024 AM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
NorthWest: Sydenham Rd (NW)															
2	T1	All MCs	681	0.0	681	0.0	0.349	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			681	0.0	681	0.0	0.349	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.8
SouthWest: Buckley St (SW)															
4	L2	All MCs	556	7.4	556	7.4	0.323	5.7	LOS A	0.0	0.0	0.00	0.52	0.00	50.9
6	R2	All MCs	448	7.0	448	7.0	0.260	5.8	LOS A	0.0	0.0	0.00	0.63	0.00	43.4
Approach			1004	7.2	1004	7.2	0.323	5.8	NA	0.0	0.0	0.00	0.57	0.00	48.3
All Vehicles			1685	4.3	1685	4.3	0.349	3.5	NA	0.0	0.0	0.00	0.34	0.00	52.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: SYD01 [SYD01 Railway Pde / Gleeson Ave (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: SYD-N1 [SYD Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 3320
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Gleeson Ave (SE)															
1	L2	All MCs	1220	2.6	1220	2.6	0.509	5.3	LOS A	0.0	0.0	0.00	0.52	0.00	43.0
Approach			1220	2.6	1220	2.6	0.509	5.3	LOS A	0.0	0.0	0.00	0.52	0.00	43.0
NorthEast: Railway Pde (NE)															
4	L2	All MCs	892	3.5	892	3.5	* 0.358	11.7	LOS A	6.8	49.1	0.41	0.68	0.41	33.7
5	T1	All MCs	37	0.0	37	0.0	* 0.029	11.1	LOS A	0.3	2.4	0.37	0.27	0.37	53.3
Approach			928	3.4	928	3.4	0.358	11.7	LOS A	6.8	49.1	0.41	0.66	0.41	32.7
All Vehicles			2148	2.9	2148	2.9	0.509	8.1	LOS A	6.8	49.1	0.18	0.58	0.18	38.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthEast: Railway Pde (NE)											
P2	Full	272	17.9	LOS B	0.4	0.4	0.83	0.83	34.5	20.0	0.58
P2S	Slip/ Bypass	275	33.7	LOS D	0.6	0.6	0.92	0.92	50.4	20.0	0.40
All Pedestrians		546	25.8	LOS C	0.6	0.6	0.88	0.88	42.5	20.0	0.47

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

MOVEMENT SUMMARY

Site: SYD02 [SYD02 Burrows Ave / Gleeson Ave (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: SYD-N1 [SYD Network 1 (Network Folder: Block 3 Network - 2024 PM Peak)]

TCS 1152
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Gleeson Ave (SE)															
2	T1	All MCs	815	1.7	815	1.7	0.380	15.7	LOS B	13.1	93.3	0.60	0.53	0.60	20.6
Approach			815	1.7	815	1.7	0.380	15.7	LOS B	13.1	93.3	0.60	0.53	0.60	20.6
NorthEast: Burrows Ave (NE)															
4	L2	All MCs	53	4.0	53	4.0	0.209	77.8	LOS F	2.8	20.1	0.92	0.74	0.92	13.8
6	R2	All MCs	372	1.4	372	1.4	* 0.725	70.8	LOS F	11.7	82.7	1.00	0.86	1.08	8.6
Approach			424	1.7	424	1.7	0.725	71.6	LOS F	11.7	82.7	0.99	0.85	1.06	7.9
NorthWest: Gleeson Ave (NW)															
7	L2	All MCs	179	0.6	179	0.6	0.431	6.7	LOS A	6.2	44.2	0.26	0.40	0.26	34.2
8	T1	All MCs	713	4.3	713	4.3	* 0.431	5.6	LOS A	6.4	46.3	0.26	0.30	0.26	40.2
Approach			892	3.5	892	3.5	0.431	5.8	LOS A	6.4	46.3	0.26	0.32	0.26	38.6
SouthWest: Burrows Ave (SW)															
10	L2	All MCs	34	37.5	34	37.5	0.171	63.1	LOS E	1.4	11.7	0.96	0.71	0.96	10.0
11	T1	All MCs	11	0.0	11	0.0	* 0.171	51.2	LOS D	1.4	11.7	0.95	0.71	0.95	15.9
12	R2	All MCs	16	13.3	16	13.3	0.069	53.4	LOS D	0.8	6.3	0.90	0.69	0.90	14.9
Approach			60	24.6	60	24.6	0.171	58.4	LOS E	1.4	11.7	0.94	0.70	0.94	12.4
All Vehicles			2191	3.1	2191	3.1	0.725	23.7	LOS B	13.1	93.3	0.55	0.51	0.56	18.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Gleeson Ave (SE)											
P1	Full	22	51.4	LOS E	0.1	0.1	0.93	0.93	68.1	20.0	0.29
NorthEast: Burrows Ave (NE)											
P2	Full	72	53.4	LOS E	0.2	0.2	0.94	0.94	70.0	20.0	0.29
NorthWest: Gleeson Ave (NW)											

P3 Full	222	50.0	LOS E	0.7	0.7	0.92	0.92	66.6	20.0	0.30
SouthWest: Burrows Ave (SW)										
P4 Full	123	53.5	LOS E	0.4	0.4	0.95	0.95	70.1	20.0	0.29
All Pedestrians	439	51.6	LOS E	0.7	0.7	0.93	0.93	68.2	20.0	0.29

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

MOVEMENT SUMMARY

Site: SYD03 [SYD03 Burrows Ave / George St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: George St (SE)															
4	L2	All MCs	21	0.0	21	0.0	0.030	8.6	LOS A	0.1	0.7	0.33	0.89	0.33	29.9
6	R2	All MCs	5	20.0	5	20.0	0.030	12.3	LOS A	0.1	0.7	0.33	0.89	0.33	25.6
Approach			26	4.0	26	4.0	0.030	9.4	LOS A	0.1	0.7	0.33	0.89	0.33	29.1
NorthEast: Burrows Ave (NE)															
7	L2	All MCs	6	16.7	6	16.7	0.288	4.3	LOS A	1.6	11.8	0.33	0.18	0.33	37.3
8	T1	All MCs	293	2.2	293	2.2	0.288	1.0	LOS A	1.6	11.8	0.33	0.18	0.33	45.4
Approach			299	2.5	299	2.5	0.288	1.0	NA	1.6	11.8	0.33	0.18	0.33	45.2
SouthWest: Burrows Ave (SW)															
2	T1	All MCs	196	3.2	196	3.2	0.205	0.9	LOS A	0.9	6.5	0.25	0.17	0.25	44.3
3	R2	All MCs	19	0.0	19	0.0	0.205	5.8	LOS A	0.9	6.5	0.25	0.17	0.25	40.3
Approach			215	2.9	215	2.9	0.205	1.3	NA	0.9	6.5	0.25	0.17	0.25	43.8
All Vehicles			540	2.7	540	2.7	0.288	1.6	NA	1.6	11.8	0.30	0.21	0.30	43.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: SYD04 [SYD04 Railway Pde / Sydenham Rd (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

TCS 4946
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 111 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
NorthWest: Sydenham Rd (NW)															
28	T1	All MCs	1091	4.0	1091	4.0	* 0.431	5.7	LOS A	9.3	68.0	0.49	0.45	0.49	45.7
29	R2	All MCs	25	8.3	25	8.3	0.431	11.5	LOS A	9.1	65.1	0.49	0.46	0.49	39.9
Approach			1116	4.1	1116	4.1	0.431	5.8	LOS A	9.3	68.0	0.49	0.45	0.49	45.5
SouthWest: Railway Pde (SW)															
32	R2	All MCs	12	27.3	12	27.3	* 0.041	34.1	LOS C	0.4	3.7	0.86	0.68	0.86	24.1
Approach			12	27.3	12	27.3	0.041	34.1	LOS C	0.4	3.7	0.86	0.68	0.86	24.1
All Vehicles			1127	4.3	1127	4.3	0.431	6.1	LOS A	9.3	68.0	0.49	0.45	0.49	44.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthWest: Sydenham Rd (NW)												
P7	Full	32	34	28.5	LOS C	0.1	0.1	0.84	0.84	195.1	200.0	1.02
All Pedestrians		32	34	28.5	LOS C	0.1	0.1	0.84	0.84	195.1	200.0	1.02

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

MOVEMENT SUMMARY

Site: SYD05 [SYD05 Marrickville Rd / Buckley St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Marrickville Rd (SE)															
2	T1	All MCs	714	3.2	714	3.2	0.378	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
3	R2	All MCs	599	4.0	599	4.0	0.738	7.4	LOS A	5.8	42.2	0.43	0.59	0.49	43.8
Approach			1313	3.6	1313	3.6	0.738	3.4	NA	5.8	42.2	0.20	0.27	0.22	52.1
NorthWest: Marrickville Rd (NW)															
7	L2	All MCs	413	6.9	413	6.9	0.813	8.5	LOS A	6.0	44.4	0.63	0.60	0.75	47.4
Approach			413	6.9	413	6.9	0.813	8.5	NA	6.0	44.4	0.63	0.60	0.75	47.4
All Vehicles			1725	4.4	1725	4.4	0.813	4.6	NA	6.0	44.4	0.30	0.35	0.35	50.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: SYD06 [SYD06 Sydenham Rd / Buckley St (Site Folder: Block 3 Model - 2024 PM Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
NorthWest: Sydenham Rd (NW)															
2	T1	All MCs	779	0.0	779	0.0	0.399	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Approach			779	0.0	779	0.0	0.399	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.7
SouthWest: Buckley St (SW)															
4	L2	All MCs	480	2.6	480	2.6	0.266	5.7	LOS A	0.0	0.0	0.00	0.53	0.00	51.1
6	R2	All MCs	380	6.1	380	6.1	0.218	5.8	LOS A	0.0	0.0	0.00	0.63	0.00	43.5
Approach			860	4.2	860	4.2	0.266	5.7	NA	0.0	0.0	0.00	0.57	0.00	48.6
All Vehicles			1639	2.2	1639	2.2	0.399	3.1	NA	0.0	0.0	0.00	0.30	0.00	53.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: SYD01 [SYD01 Railway Pde / Gleeson Ave (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: SYD-N1 [SYD Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 3320
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Gleeson Ave (SE)															
1	L2	All MCs	1025	2.8	1025	2.8	0.429	4.9	LOS A	0.0	0.0	0.00	0.52	0.00	43.0
Approach			1025	2.8	1025	2.8	0.429	4.9	LOS A	0.0	0.0	0.00	0.52	0.00	43.0
NorthEast: Railway Pde (NE)															
4	L2	All MCs	1016	2.8	1016	2.8	* 0.386	9.5	LOS A	8.7	62.4	0.29	0.64	0.29	36.2
5	T1	All MCs	53	2.0	53	2.0	* 0.036	7.3	LOS A	0.5	3.6	0.25	0.19	0.25	55.3
Approach			1068	2.8	1068	2.8	0.386	9.4	LOS A	8.7	62.4	0.29	0.61	0.29	36.0
All Vehicles			2094	2.8	2094	2.8	0.429	7.2	LOS A	8.7	62.4	0.15	0.57	0.15	39.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthEast: Railway Pde (NE)											
P2	Full	106	36.2	LOS D	0.3	0.3	0.89	0.89	52.9	20.0	0.38
P2S	Slip/ Bypass	106	53.4	LOS E	0.3	0.3	0.95	0.95	70.1	20.0	0.29
All Pedestrians		213	44.8	LOS E	0.3	0.3	0.92	0.92	61.5	20.0	0.33

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

MOVEMENT SUMMARY

Site: SYD02 [SYD02 Burrows Ave / Gleeson Ave (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: SYD-N1 [SYD Network 1 (Network Folder: Block 3 Network - 2024 Weekend Peak)]

TCS 1152
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Gleeson Ave (SE)															
2	T1	All MCs	805	2.6	805	2.6	0.353	12.9	LOS A	11.7	84.0	0.55	0.48	0.55	23.3
Approach			805	2.6	805	2.6	0.353	12.9	LOS A	11.7	84.0	0.55	0.48	0.55	23.3
NorthEast: Burrows Ave (NE)															
4	L2	All MCs	35	0.0	35	0.0	0.173	59.9	LOS E	1.9	13.3	0.94	0.72	0.94	13.2
6	R2	All MCs	201	1.0	201	1.0	* 0.552	59.8	LOS E	6.8	47.8	0.98	0.78	0.98	8.6
Approach			236	0.9	236	0.9	0.552	59.8	LOS E	6.8	47.8	0.98	0.77	0.98	9.4
NorthWest: Gleeson Ave (NW)															
7	L2	All MCs	180	0.6	180	0.6	0.402	6.6	LOS A	5.9	42.0	0.25	0.39	0.25	35.1
8	T1	All MCs	836	3.3	836	3.3	* 0.503	5.5	LOS A	8.7	62.5	0.27	0.30	0.27	41.5
Approach			1016	2.8	1016	2.8	0.503	5.7	LOS A	8.7	62.5	0.27	0.32	0.27	40.0
SouthWest: Burrows Ave (SW)															
10	L2	All MCs	19	27.8	19	27.8	* 0.136	60.9	LOS E	1.0	8.7	0.95	0.70	0.95	10.1
11	T1	All MCs	6	0.0	6	0.0	0.031	48.1	LOS D	0.4	2.8	0.90	0.61	0.90	17.5
12	R2	All MCs	14	23.1	14	23.1	0.065	53.6	LOS D	0.7	5.9	0.90	0.69	0.90	14.9
Approach			39	21.6	39	21.6	0.136	56.3	LOS D	1.0	8.7	0.92	0.68	0.92	13.0
All Vehicles			2096	2.9	2096	2.9	0.552	15.5	LOS B	11.7	84.0	0.47	0.44	0.47	23.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
SouthEast: Gleeson Ave (SE)											
P1	Full	11	51.4	LOS E	0.0	0.0	0.93	0.93	68.0	20.0	0.29
NorthEast: Burrows Ave (NE)											
P2	Full	87	53.4	LOS E	0.3	0.3	0.95	0.95	70.1	20.0	0.29
NorthWest: Gleeson Ave (NW)											

P3 Full	111	49.7	LOS E	0.3	0.3	0.91	0.91	66.4	20.0	0.30
SouthWest: Burrows Ave (SW)										
P4 Full	74	53.4	LOS E	0.2	0.2	0.94	0.94	70.0	20.0	0.29
All Pedestrians	282	51.9	LOS E	0.3	0.3	0.93	0.93	68.5	20.0	0.29

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

MOVEMENT SUMMARY

Site: SYD03 [SYD03 Burrows Ave / George St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: George St (SE)															
4	L2	All MCs	8	0.0	8	0.0	0.011	8.2	LOS A	0.0	0.2	0.26	0.89	0.26	30.5
6	R2	All MCs	2	50.0	2	50.0	0.011	12.0	LOS A	0.0	0.2	0.26	0.89	0.26	25.8
Approach			11	10.0	11	10.0	0.011	8.9	LOS A	0.0	0.2	0.26	0.89	0.26	29.6
NorthEast: Burrows Ave (NE)															
7	L2	All MCs	5	0.0	5	0.0	0.177	3.8	LOS A	0.9	6.5	0.18	0.08	0.18	40.8
8	T1	All MCs	195	1.1	195	1.1	0.177	0.3	LOS A	0.9	6.5	0.18	0.08	0.18	47.1
Approach			200	1.1	200	1.1	0.177	0.4	NA	0.9	6.5	0.18	0.08	0.18	46.9
SouthWest: Burrows Ave (SW)															
2	T1	All MCs	164	0.6	164	0.6	0.152	0.3	LOS A	0.7	4.6	0.15	0.08	0.15	46.4
3	R2	All MCs	9	0.0	9	0.0	0.152	5.3	LOS A	0.7	4.6	0.15	0.08	0.15	41.6
Approach			174	0.6	174	0.6	0.152	0.6	NA	0.7	4.6	0.15	0.08	0.15	46.0
All Vehicles			384	1.1	384	1.1	0.177	0.7	NA	0.9	6.5	0.17	0.10	0.17	45.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: SYD04 [SYD04 Railway Pde / Sydenham Rd (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

TCS 4946
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 105 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
NorthWest: Sydenham Rd (NW)															
28	T1	All MCs	1058	2.4	1058	2.4	* 0.399	5.2	LOS A	8.3	59.5	0.44	0.42	0.44	46.6
29	R2	All MCs	24	4.3	24	4.3	0.399	11.0	LOS A	8.2	58.0	0.44	0.42	0.44	40.5
Approach			1082	2.4	1082	2.4	0.399	5.4	LOS A	8.3	59.5	0.44	0.42	0.44	46.4
SouthWest: Railway Pde (SW)															
32	R2	All MCs	25	16.7	25	16.7	* 0.098	35.7	LOS C	1.0	7.6	0.90	0.71	0.90	23.9
Approach			25	16.7	25	16.7	0.098	35.7	LOS C	1.0	7.6	0.90	0.71	0.90	23.9
All Vehicles			1107	2.8	1107	2.8	0.399	6.1	LOS A	8.3	59.5	0.45	0.42	0.45	44.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
NorthWest: Sydenham Rd (NW)												
P7	Full	15	16	28.7	LOS C	0.0	0.0	0.83	0.83	195.4	200.0	1.02
All Pedestrians		15	16	28.7	LOS C	0.0	0.0	0.83	0.83	195.4	200.0	1.02

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

MOVEMENT SUMMARY

Site: SYD05 [SYD05 Marrickville Rd / Buckley St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Marrickville Rd (SE)															
2	T1	All MCs	617	2.4	617	2.4	0.324	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
3	R2	All MCs	496	3.2	496	3.2	0.298	6.1	LOS A	1.5	11.0	0.17	0.60	0.17	45.0
Approach			1113	2.7	1113	2.7	0.324	2.7	NA	1.5	11.0	0.07	0.27	0.07	53.0
NorthWest: Marrickville Rd (NW)															
7	L2	All MCs	408	4.6	408	4.6	0.311	6.0	LOS A	1.5	10.8	0.20	0.55	0.20	49.4
Approach			408	4.6	408	4.6	0.311	6.0	NA	1.5	10.8	0.20	0.55	0.20	49.4
All Vehicles			1521	3.3	1521	3.3	0.324	3.6	NA	1.5	11.0	0.11	0.34	0.11	51.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: SYD06 [SYD06 Sydenham Rd / Buckley St (Site Folder: Block 3 Model - 2024 Weekend Peak)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
NorthWest: Sydenham Rd (NW)															
2	T1	All MCs	725	0.0	725	0.0	0.371	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			725	0.0	725	0.0	0.371	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.8
SouthWest: Buckley St (SW)															
4	L2	All MCs	503	3.1	503	3.1	0.280	5.7	LOS A	0.0	0.0	0.00	0.53	0.00	51.1
6	R2	All MCs	366	5.2	366	5.2	0.208	5.8	LOS A	0.0	0.0	0.00	0.63	0.00	43.6
Approach			869	4.0	869	4.0	0.280	5.7	NA	0.0	0.0	0.00	0.57	0.00	48.7
All Vehicles			1595	2.2	1595	2.2	0.371	3.2	NA	0.0	0.0	0.00	0.31	0.00	52.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.