# RYDE HOSPITAL REDEVELOPMENT

CONCEPT AND STAGE 1 EARLY WORKS STATE SIGNIFICANT DEVELOPMENT APPLICATION

PREPARED FOR HEALTH INFRASTRUCTURE | 28 JULY 2022 301400290



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# **Executive Summary**

Stantec was commissioned by Health Infrastructure to undertake a transport and accessibility impact assessment of the internal road operations and the surrounding road network to identify the potential impact and mitigation measures associated with the proposed Ryde Hospital Redevelopment. This report sets out an assessment of the anticipated transport implications of the Concept Proposal and Stage 1 Early Works for the redevelopment. This transport assessment has considered the transport conditions at the proposed year of opening and ten-year horizon to ensure the transport networks can accommodate the operation of the proposed redevelopment.

#### **Summary of Existing Assets**

The Ryde Hospital site is located at 1 Denistone Road, Denistone and comprises Lots 10-11 DP 1183279 and Lots A-B DP 323458. The site is bounded by Denistone Road, Fourth Avenue, Ryedale Road and Florence Avenue, and occupies approximately 7.69 hectares. Blue Gum High Forest, located in the sites southwest corner, occupies approximately 56 per cent of the existing site area.

Access to Ryde Hospital is currently provided from Denistone Road, Fourth Avenue and Ryedale Road. The main visitor, staff parking, logistics and emergency access are provided from multiple access points along Denistone Road, with access to restricted staff/ fleet parking (car park 5) provided along Ryedale Road.

Parking occupancy surveys were completed for the hospital campus in October 2021. The surveys indicate there is currently approximately 271 on-site parking spaces. Parking demand for the hospital was observed to be high, with peak parking demand for all campus users of around 272 spaces (100 per cent occupied). Staff and general parking areas are generally operating at or over capacity between 8:00am and 2:00pm.

Traffic surveys were also completed at key intersections surrounding the hospital in June 2021. The results indicate that the site currently generates approximately 142 vehicles per hour in the AM peak (8:15 am to 9:15 am) and 122 vehicles per hour in the PM peak (3:45pm to 4:45pm).

#### **Concept Proposal Assessment**

In 2019 the NSW Government announced a \$479 million dollar investment to redevelop Ryde Hospital to provide modern and enhanced emergency, critical care, inpatient, community and ambulatory care services.

The redevelopment considers developing on the area through the centre of the campus, proposing to retain the existing structures fronting Fourth Avenue comprising Community Mental Health Services, as well as the childcare centre and NSW Ambulance Ryde along Denistone Road.

The proposal will facilitate the future construction of a multi-deck car park on the western edge of the site (to be completed during the main construction works), near Ryedale Road, with additional public car

parking provided along the eastern frontage of the site near Denistone Road (subject to a future detailed DA). The proposal includes revised emergency vehicle parking and loading dock, as well as short term public parking to accommodate drop off/ pick up activity.

A draft Parking Demand Study Report was prepared by Stantec in May 2022 to understand the parking requirements of the Ryde Hospital Redevelopment. The study was completed using a first principles analysis based on the relationship between current and future staffing levels, as well as student, visitor and patient demands. The parking demand study identified that the proposed redevelopment should provide for an additional 257 parking spaces on site, therefore resulting in a total of 515 spaces on site, comprising 325 staff parking spaces, seven VMO parking spaces (in an additional to the seven VMO parking spaces retained along Denistone Road), 27 fleet parking spaces and 155 public parking spaces. Additional on-site parking spaces will be provided in accordance with the uplift identified in the final Parking Demand Study as part of the detailed design Stage 2 SSDA.

The redevelopment will provide ambulance parking bays which are to be designed in accordance with NSW Ambulance Specifications for Hospitals, an Emergency Department (ED) drop off and pick up area and main entrance drop off and pick up area, to be included as part of the detailed design Stage 2 SSDA.

No public bus stops are proposed to be provided within the hospital site, given existing provision of bus stops along Denistone Road. DDA compliant pedestrian paths will be provided between the bus stop and key pedestrian entries to the hospital. This will be included as part of the detailed design Stage 2 SSDA.

The traffic generation rates for hospitals referenced in the Transport for NSW Guide 2002 have been applied to the redevelopment, with the AM peak factored up based on the existing traffic generation of the site. Based on an increase in clinical services, the proposed development could generate 365 and 289 trips respectively in the 2036 AM and PM peak hours, resulting in an increase in 160 and 113 vehicle trips respectively in the 2036 AM and PM peak hours compared to the existing development. Note staff increase is indicative at this stage and to be confirmed as part of the detailed design Stage 2 SSDA.

Analysis of the redevelopment traffic shows that key intersections surrounding the site are expected to continue operating well and at a similar level to the 2036 without development condition, with minor increases to degree of saturation, delays and queues (if at all). The Blaxland Road/ First Avenue is expected to operate satisfactorily in both peak periods with and without development at year of opening (2026) and in the 10 year growth scenario (2036) during the AM peak period. Due to background traffic growth, the intersection is expected to operate over capacity in the 10 year growth scenario (2036) PM peak period, with relatively minor increase in queueing and delays post development. It is clear that the capacity constraints in the 2036 PM peak scenario are a result of background traffic growth rather than the addition of traffic as a result of the development, noting the redevelopment contributes around 1.4 per cent to the total intersection volume in 2036.

As such, no road network mitigations are proposed with exception of extending the existing median along Ryedale Road to ensure the proposed access positioned at the northern boundary of the site operates as left in, left out only.

#### Stage 1 Early Works

The early works consist of site establishment, site preparation, earthworks and shoring walls, establishment of construction access roads and relocation and upgrades to in-ground building services.

Works propose to partially demolish the existing internal road, just north of the loading dock. Revised access to the loading dock will be provided along the internal road and through car park 1 via the southern driveway access to Denistone Road. The revised access should operate okay for vehicles up to 10.5 metre long provided 4.5 metre height clearance is provided along the route. Revised vehicle access to the maternity ward will be provided via the ambulance/ emergency services parking area for ambulance access and through the Emergency Department for public access.

The early works include implementation of a construction access road from Ryedale Road via the existing driveway crossover to car ark 5.

To accommodate the demolition of existing structure within the Enabling Works site and facilitate the temporary decant of services from the Chattery, a temporary structure will be built within car park 4 (P4) throughout works, resulting in the temporary loss of up to 14 parking spaces. Construction site access will also be provided from Ryedale Road, through car park 5, resulting in the loss of 28 restricted staff and fleet parking spaces. An additional two VMO parking spaces will be removed along the internal road.

Considering significant constraints on-site associated with gradients, existing structures, functioning of the existing hospital etc., these parking spaces are not proposed to be relocated on site. The Northern Sydney Local Health District (NSLHD) will need to work with staff on promoting public transport and carpooling during this time to assist in alleviating staff parking impacts on the surrounding road network during construction. Notwithstanding, off site parking options will be explored as part of main works, subject to a future detailed DA.

#### **Construction Traffic Management**

The Stage 1 Early Works is estimated to generate up to 20 heavy vehicles per day during the peak construction of the early works. These movements would likely be spread across the day and would include vehicles such as bogie trucks (typically less than 12.5 metre Heavy Rigid Vehicles).

As part of the CTMP to be prepared by the contractor, it is recommended that if vehicles larger than 8.8 metre MRVs are required, the existing central median on Ryedale Road should be replaced with a temporary median that can be removed during approved construction hours. Accredited traffic controllers will be required to temporarily hold traffic during construction vehicle movements into/ out of site (with the exception of vehicles up to 8.8 metre MRVs turning left in/ left out of site). Considering the low traffic volumes along Ryedale Road outside of peak periods, this arrangement is considered appropriate.

A detailed Construction Traffic Management Plan (CTMP) would need to be prepared by the nominated contractor prior to early works commencing.

#### Summary

This traffic assessment concludes that key intersections surrounding the site are expected to continue operating well following the redevelopment. The construction assessment concludes that provided construction vehicle movements are managed by accredited traffic controllers along Ryedale Road, the Stage 1 Early Works will have an acceptable impact on the capacity of the surrounding road network. It is noted that onsite parking will be impacted for the duration of the works and the NSLHD will work on initiatives to assist in alleviating parking impacts during this time.

# 1 Introduction

# 1.1 Background & Proposal

A traffic and accessibility impact assessment is required to inform the Concept and Stage 1 Early Works State Significant Development Application (SSDA) for the Ryde Hospital Redevelopment, located at 1 Denistone Road, Denistone and comprises Lots 10-11 DP 1183279 and Lots A-B DP 323458.

Health Infrastructure commissioned Stantec to undertake a transport and accessibility impact assessment of the internal road operations and the surrounding road network to identify the potential impact and mitigation measures associated with the proposed Ryde Hospital Redevelopment.

# 1.2 **Project Description**

The Ryde Hospital site is located at 1 Denistone Road, Denistone and comprises Lots 10-11 DP 1183279 and Lots A-B DP 323458. It has an area of approximately 7.69Ha and currently accommodates the existing Ryde Hospital Campus.

This report accompanies a Concept State Significant Development Application that seeks approval for the establishment of a maximum building envelope and gross floor area to facilitate the development of a new hospital services development, car-park and refurbishment works.

This SSDA also seeks approval for the physical Stage 1 Early Works to prepare the site for the future development. The Stage 1 Early Works application includes the following relevant to the Early works construction zone as shown on the architectural drawings:

- Establishing access to the Project site and general establishment
- Site preparation including environmental clearing
- Bulk earthworks, including, cut and fill, associated with stage 1 footprint and proposed stage 1 internal roads
- Shoring associated with bulk earthworks
- Establishment of construction access roads
- Relocation and upgrades of in-ground building services works and utility adjustments to facilitate bulk earthworks.

For a detailed project description refer to the Environmental Impact Statement prepared by Ethos Urban.



# 1.3 Scope of this Assessment

This report sets out an assessment of the anticipated transport implications of the proposed Ryde Hospital Redevelopment and has considered the transport conditions on the surrounding road network in the proposed year of opening and future 10-year horizon to ensure the surrounding road network can accommodate the operation of the proposed Ryde Hospital Redevelopment.

This report addresses the Department of Planning and Environment - NSW Government (DPE) requirements for transport and accessibility impacts (construction and operational) that will be included in Secretary's Environmental Assessment Requirements (SEARs) – Schedule 2 of the Environmental Planning and Assessment Regulation 2021, as referenced in Table 1. The report also addresses key issues identified by City of Ryde and Transport for NSW, as referenced in Table 2 and Table 3 respectively.

SEARS Requirement		
Concept Proposal		
Traffic, Transpol	rt and Accessibility	
Provide	e a transport and accessibility impact assessment, which includes:	Section 2
0	analysis of the existing transport network, including the road hierarchy and any pedestrian, bicycle or public transport infrastructure, current daily and peak hour vehicle movements, and existing performance levels of nearby intersections.	
0	outline of the proposed concept development, including pedestrian and vehicular access arrangements (including swept path analysis of the largest vehicle and height clearances), parking arrangements and rates (including bicycle and end-of-trip facilities), drop-off/pick-up-zone(s) and bus bays (if applicable), and provisions for servicing and loading/unloading.	Section 3, 4, and 5
0	analysis of the impacts of the proposed concept development (including justification for the methodology used), including predicted modal split, a forecast of additional daily and peak hour multimodal network flowsas a result of the development (using industry standard modelling), identification of potential traffic impacts on road capacity, intersection performance and road safety (including pedestrian and cyclist conflict) and any cumulative impact from surrounding approved developments.	Section 6
0	measures to mitigate any traffic impacts, including details of any new or upgraded infrastructure to achieve acceptable performance and safety, and the timing, viability and mechanisms of delivery (including proposed arrangements with local councils or government agencies) of any infrastructure improvements in accordance with the relevant standards.	Section 6
0	measures to promote sustainable travel choices for employees and visitors, such as connections into existing walking and cycling networks, minimising car parking provision, encouraging car share and public transport, providing adequate bicycle parking and high quality end-of-trip facilities, and implementing a Green Travel Plan.	Section 5.5 and 7

#### Table 1: Secretary's Environmental Assessment Requirements



SEARS Requirement	
Stage 1	
Traffic, Transport and Accessibility	
<ul> <li>Provide a transport and accessibility impact assessment, which includes:         <ul> <li>assessment of cumulative impacts associated with other construction activities;</li> <li>an assessment of road safety at key intersection and locations subject to heavy vehicle construction traffic movements and high pedestrian activity;</li> <li>details of construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process; and</li> <li>how traffic and transport impacts during construction will be mitigated for any associated traffic, pedestrian, cyclists, parking and public transport impacts, including the preparation of a draft Construction Traffic Management Plan to demonstrate the proposed management of the impact (which must include vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures for all demolition/construction activities, details of temporary cycling and pedestrian access during construction).</li> </ul> </li> </ul>	
Construction, Operation and Staging	
<ul> <li>If staging is proposed, provide details of how construction and operation would be managed and any impacts mitigated.</li> </ul>	
Construction Hours	
<ul> <li>Identify proposed construction hours associated with Stage 1 development and provide details of the instances where it is expected that works will be required to be carried out outside the standard construction hours.</li> </ul>	Section 11

## Table 2: City of Ryde Key Issues

Description		City of Ryde Requirement	Relevant Report Section
Re	view of Traffic Ir	mpact	
a)	Background Traffic Growth Rate:	• If the STFM model does account for traffic generated by the hospital (Transport for NSW to confirm), a potential way to estimate the traffic growth without the development could be to compare the average daily traffic generated by the hospital with respect to the overall average daily traffic generated within the adjoining local roads (Denistone Road and Ryedale Road), which provide direct vehicular access into the hospital site. For instance, if the hospital traffic represents 10% of the total traffic on the adjoining local road network, then the background traffic growth rate without the hospital could be in the order of 1.8% (90% x 2% growth rate).	Section 2, 6
b)	Preliminary Construction Traffic Management Plan (CTMP)	• At the time of writing this response, Council is not aware of any construction works that are currently being undertaken in the immediate vicinity of the site. However, the CTMP will need to be updated closer to the commencement of the construction works (subject to approval of the development), whereby there could be a change in the traffic conditions due to nearby construction activity.	Section 11
c)	Intersection Analysis:	• The following intersections should be assessed in the modelling analysis as these intersections are expected to be most affected by the proposed redevelopment of the hospital being in its immediate vicinity:	Section 2, 6

Descript	tion	City of Ryde Requirement	Relevant Report Section
		<ul> <li>Blaxland Rd and Florence Avenue;</li> <li>Denistone Rd and Florence Avenue;</li> <li>Ryedale Rd and Florence Avenue;</li> <li>Ryedale Rd and Fourth Avenue; and</li> <li>Denistone Rd and Fourth Avenue.</li> </ul>	
d) Inter Upg requ	rsection rade uirements	<ul> <li>Identify any potential improvements to the abovementioned intersections and/or the adjoining road network to mitigate the additional traffic demands generated by the proposed development as well as improve accessibility and reducing travel time for ambulances travelling to/from the site.</li> </ul>	Section 6
e) Park	king	<ul> <li>Ensure adequate parking (with consideration of active/public transport modes) is provided on site to minimise parking spillover onto the adjoining residential roads. Details of parking, maneuvering and parking management details to be included.</li> </ul>	Section 4, 5
Public Domain			1
b) Put Dom Fool Upg	olic nain tpath rade	<ul> <li>In order to improve the existing public footpath capacity/storage around the development site on Fourth Ave, Denistone Road and Ryedale Road, the existing and future new footpath need to be upgraded from 1.2m to 1.8m in accordance with Council's specifications and DCP. The footpath level shall achieve 2% crossfall toward the kerb and any required adjustments to the public utilities' mains and services as a consequence of the development and any associated construction works shall be carried out by the Applicant. The applicant is to provide a concept civil engineering plans providing details that demonstrate a smooth connection with the remaining street scape.</li> </ul>	Section 5
e) Bus Upg	Stop rade	<ul> <li>Any bus stop along the frontage of the development site shall be upgraded as part of the public domain improvement works. Any bus stop shall be reinstated/upgraded in accordance with the requirements of the Disability Standards for Accessible Public Transport 2002.</li> </ul>	Section 5

## Table 3: Transport for NSW Key Issues

Transport for NSW Requirement		
•	Details of all traffic types and volumes likely to be generated during construction and operation, including a description of haul routes and vehicle types. Traffic flows are to be shown diagrammatically to a level of detail sufficient for easy interpretation;	Section 6, 11
•	An assessment of the predicted impacts of this traffic on road safety and the capacity of the road network, including consideration of cumulative traffic impacts at key intersections using SIDRA or similar traffic model. This is to include the identification and consideration of approved and proposed developments/planning proposals/road upgrades in the vicinity;	Section 6
•	Plans demonstrating how all vehicles likely to be generated during construction and operation and awaiting loading, unloading or servicing can be accommodated on the site to avoid queuing in the street network;	Section 11



Transp	ort for NSW Requirement	Relevant Report Section
•	Detailed plans of the site access and proposed layout of the internal road and pedestrian network and parking on site in accordance with the relevant Australian Standards and Council's DCP;	Section 4, 5
•	Swept path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site;	Appendix B
•	Details of road upgrades, infrastructure works, or new roads or access points required for the development;	Section 5, 6
•	Details of travel demand management measures to minimise the impact on general traffic and bus operations, including details of a location-specific sustainable travel plan (Green Travel Plan and specific Workplace Travel Plan) and the provision of facilities to increase the non-car mode share for travel to and from the site;	Section 7
•	Details of the adequacy of existing public transport or any future public transport infrastructure within the vicinity of the site, pedestrian and bicycle networks and associated infrastructure to meet the likely future demand for the proposed development;	Section 6
•	Measures to integrate the development with the existing/future public transport network.	Section 6

# 1.4 References

In preparing this report, reference has been made to the following:

- an assessment of the site and its surrounds
- Ryde Local Environmental Plan 2014 (LEP 2014)
- Ryde Development Control Plan 2014 (DCP 2014)
- Transport for NSW Guide to Traffic Generating Developments 2002 (Guide 2002)
- Australian Standard/ New Zealand Standard, Parking Facilities, Part 1: Off-Street Car Parking AS/NZS 2890.1:2004
- Australian Standard, Parking Facilities, Part 2: Off-Street Commercial Vehicle Facilities AS 2890.2:2018
- Australian Standard/ New Zealand Standard, Parking Facilities, Part 6: Off-Street Parking for People with Disabilities AS/NZS 2890.6:2009
- Health Infrastructure Sustainable Hospital Car Park Investment Program (SHCPIP) Volume 3 -Hospital Car Park Guidelines V1.2 – May 2019
- Traffic and car parking surveys as referenced in the context of this report
- other documents and data as referenced in this report.



# 2 Existing Conditions

# 2.1 Site Overview

The existing Ryde Hospital is located in Denistone and comprises Lot 10 DP1183279, Lot 11 DP1183279, Lot A DP323458 and Lot B DP323458. The subject site is bounded by Denistone Road, Fourth Avenue, Ryedale Road and Florence Avenue, and occupies approximately 72,333 square metres. Blue Gum High Forest, located in the sites southwest corner, occupies approximately 56 per cent of the existing site area. The subject site currently has a land use classification of SP2 – Infrastructure Health Services Facilities and is primarily surrounded by low density residential dwellings.

The location of Ryde Hospital and its surrounding environs is shown in Figure 1 and land zoning map is shown in Figure 2.



Figure 1: Subject site and surrounding environs

Base image source: https://www.street-directory.com.au/, accessed 8 June 2021



Figure 2: Land zoning map



Source: City of Ryde LEP 2014, Land Zoning Map - Sheet LZN\_002

# 2.2 Road Network

# 2.2.1 ROAD HIERARCHY

Roads are classified according to the functions they perform. The main purpose of defining a road's functional class is to provide a basis for establishing the policies which guide the management of the road according to their intended service or qualities.

In terms of functional road classification, State roads are strategically important as they form the primary network used for the movement of people and goods between regions, and throughout the State. Transport for NSW is responsible for funding, prioritising and carrying out works on State roads. State roads generally include roads classified as freeways, state highways, and main roads under the Roads Act 1993, and the regulation to manage the road system is stated in the Australian Road Rules, most recently amended on 22 November 2019.

Transport for NSW defines four levels in a typical functional road hierarchy, ranking from high mobility and low accessibility, to high accessibility and low mobility. These road classes are:

**Arterial Roads** – Controlled by Transport for NSW, typically no limit in flow and designed to carry vehicles long distance between regional centres.



**Sub-Arterial Roads** – Managed by either Council or Transport for NSW under a joint agreement. Typically, their operating capacity ranges between 10,000 and 20,000 vehicles per day, and their aim is to carry through traffic between specific areas in a sub region or provide connectivity from arterial road routes (regional links).

**Collector Roads** – Provide connectivity between local sites and the sub-arterial road network, and typically carry between 2,000 and 10,000 vehicles per day.

**Local Roads** – Provide direct access to properties and the collector road system and typically carry between 500 and 4,000 vehicles per day.

Key roads surrounding the site are discussed in Section 2.2.2 through to 2.2.7 and illustrated in Figure 1.

## 2.2.2 DENISTONE ROAD

Denistone Road functions as a collector road, aligned in a north south direction bounding the eastern side of the hospital. Near the site, Denistone Road is around 12 metres wide and configured with one travel lane in each direction separated by a 1.5-metre-wide painted median strip. Denistone Road provides primary access to Ryde Hospital, including main entrance/ emergency pick up and drop off area, public and staff on-site parking and emergency services and logistics access.

Parking is generally unrestricted on both sides of the road, with the exception of parking restrictions along the site frontage including 2P, loading zone and Visiting Medical Officer (VMO) parking only. Denistone Road has a posted speed limit of 50 kilometres per hour, reduced to 40 kilometres per hour "hospital zone" between Florence Avenue and Fourth Avenue.

Denistone Road is shown in Figure 3.

# 2.2.3 RYEDALE ROAD

Ryedale Road functions as a collector road, aligned in a north south direction bounding the western side of the hospital. The road provides access between West Ryde and Eastwood and is around 10.5 metres wide, configured with one travel lane in each direction separated by double dividing lines. Parking is generally unrestricted on both sides of the road, with the exception of two spaces subject to 3P restrictions and two spaces subject to five-minute parking restrictions on the eastern side of the road north of Fifth Avenue. Ryedale Road has a posted speed limit of 50 kilometres per hour.

Ryedale Road is shown in Figure 4. The road has a steep decline south of Fifth Avenue in the southbound direction, with reduced sight distance at the crest of the hill near Fifth Avenue as shown in Figure 5 and Figure 6.

# 2.2.4 BLAXLAND ROAD

Blaxland Road is a classified State Road functioning as an arterial road aligned in a general north south direction. It has two travel lanes in either direction. Blaxland Road is a key road used to access Ryde



Hospital providing connection to the M2 Motorway in the north and Lane Cove Road in the south. Blaxland Road has a posted speed limit of 60 kilometres per hour.

Blaxland Road is shown at Figure 7.

## 2.2.5 FOURTH AVENUE

Fourth Avenue functions as a local road aligned in an east west direction with one travel lane in each direction. Parking is unrestricted on the northern side and subject to 3P restrictions along the hospital frontage on the southern side. Fourth Avenue has a posted speed limit of 50 kilometres per hour.

Fourth Avenue is shown at Figure 8.

## 2.2.6 FLORENCE AVENUE

Florence Avenue functions as a local road aligned in an east west direction with one travel lane in each direction. The road intersects with Blaxland Road in the east and Ryedale Road in the west. Parking is unrestricted on both sides of the road. Florence Avenue has a posted speed limit of 50 kilometres per hour.

## 2.2.7 FIRST AVENUE

First Avenue is a classified State Road functioning as an arterial road aligned in an east west direction. It has two travel lanes in each direction. The road travels through Eastwood town centre intersecting with Blaxland Road to the east and transitioning into Rutledge Street to the west. First Avenue has a posted speed limit of 60 kilometres per hour.



Figure 3: Denistone Road (looking south)

Figure 5: Ryedale Road (looking south at crest, near Fifth Avenue)

est, near r nur Avenue)

Figure 4: Ryedale Road (looking north, near Fourth Avenue)



Figure 6: Ryedale Road (looking north at crest, near Florence Avenue)



Figure 8: Fourth Avenue (looking west)



Figure 7: Blaxland Road (looking north)

### 2.2.8 SURROUNDING INTERSECTIONS

Key intersections surrounding the site include:

- Blaxland Road/ Florence Avenue (signalised)
- Blaxland Road/ Dalton Avenue (priority controlled)





- Fourth Avenue/ Denistone Road (priority controlled)
- Ryedale Road/ Fourth Avenue (roundabout)
- Ryedale Road/ Florence Avenue (roundabout)
- Ryedale Road/ First Avenue (priority controlled).

#### 2.2.9 TRAFFIC VOLUMES

Stantec commissioned traffic movement counts on key roads near the site on Thursday 24 June 2021, during the following peak periods:

- 7:00am and 10:00am
- 3:00pm and 6:00pm.

Following consultation with Transport for NSW, it was concluded that traffic surveys of Blaxland Road/ First Avenue should be completed. As such, Stantec commissioned additional traffic movement counts during the same peak periods on Thursday 23 June 2022 at both the Blaxland Road/ First Avenue intersection (new) and Blaxland Road/ Ryedale Road intersection.

The AM peak hour was found to occur from 8:00am to 9:00am along First Avenue, and 8:15 am to 9:15 am elsewhere, with the PM peak hour occurring at 3:45 pm to 4:45 pm. Existing traffic volumes are summarised in Figure 9.





#### Figure 9: Existing AM (PM) peak hour traffic volumes

# 2.3 Road Network Performance

# 2.3.1 SITE OBSERVATIONS

A site inspection was undertaken on 14 June 2021, traffic conditions on the surrounding road network during staff shift changeover and peak afternoon period<sup>1</sup> (2:30pm to 5:00pm) were observed.

All intersections surrounding the site were noted to operate well with spare capacity, with the exception of Blaxland Road/ First Avenue which was observed to operate close to capacity.



<sup>&</sup>lt;sup>1</sup> Transport for NSW Traffic Volume Viewer counter 51250 along Rutledge Street indicates afternoon peak period of 4:00pm to 5:00pm

Key travel routes for general vehicles on the road network were observed as being between Blaxland Avenue (north of First Avenue) and First Avenue and Blaxland Avenue (north of First Avenue) and Lovell Road. As such, less traffic was observed to travel along Blaxland Avenue south of Lovell Road and critical intersections providing access to the Hospital. The intersections of Blaxland Avenue/ Dalton Avenue and Blaxland Avenue/ Florence Avenue were observed to operate well, with minimal queuing or delays on any approach. Further, minimal queueing or delays were observed for vehicles egressing Ryedale Road onto First Avenue, noting this intersection is restricted to left in, left out movements only.

## 2.3.2 PERFORMANCE

The operation of the key intersections within the study area have been assessed using SIDRA INTERSECTION<sup>2</sup> (SIDRA), a computer-based modelling package which calculates intersection performance.

The commonly used measure of intersection performance, as defined by the Transport for NSW, is vehicle delay. SIDRA determines the average delay that vehicles encounter and provides a measure of the level of service.

Table 4 shows the criteria that SIDRA adopts in assessing the level of service.

Level of service (LOS)	Average delay per vehicle (secs/ veh)	Traffic signals, roundabout	Give way & stop sign		
А	Less than 14	Good operation	Good operation		
В	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity		
С	29 to 42	Satisfactory	Satisfactory, but accident study required		
D	43 to 56	Near capacity	Near capacity, accident study required		
E	57 to 70	At capacity, at signals incidents will cause excessive delays	At capacity, requires other control mode		
F	Greater than 70	Extra capacity required	Extreme delay, major treatment required		

#### Table 4: SIDRA level of service criteria

Table 5 presents a summary of the existing operation of the intersection, with full results presented in Appendix A of this report.

<sup>&</sup>lt;sup>2</sup> Program used under license from Akcelik & Associates Pty Ltd.

Intersection	Peak	Degree of saturation (DOS)	Average delay (sec)	Average/ 95th percentile queue (m) [1]	Level of service (LOS)
Blaxland Road/ First	AM	0.73	28	85	LOS B
Avenue	PM	0.79	31	108	LOS C
First Avenue/	AM	0.06	14	0	LOS A
Ryedale Road	PM	0.14	12	2	LOS A
Blaxland Road/ Florence Avenue	AM	0.53	11	43	LOS A
	PM	0.53	13	63	LOS A
Ryedale Road/	AM	0.11	8	4	LOS A
Florence Avenue	PM	0.09	9	3	LOS A
Ryedale Road/	AM	0.06	9	2	LOS A
Fourth Avenue	PM	0.09	9	3	LOS A
Blaxland Road/	AM	0.12	33	3	LOS C
Dalton Avenue	PM	0.16	44	4	LOS D
Denistone Road/	AM	0.05	5	1	LOS A
Fourth Avenue	PM	0.06	5	1	LOS A
Florence Avenue/	AM	0.06	6	1	LOS A
Denistone Road	PM	0.06	6	1	LOS A

#### Table 5: Existing operating conditions

[1] Blaxland Road/ First Avenue and First Avenue/ Ryedale Road modelled in network and therefore reports on average rather than 95 percentile queues

Table 5 indicates that the surveyed intersections currently have good operation during peak periods at a level of service of A, with exception of Blaxland Road/ First Avenue which operates satisfactorily with level of service B/C in both peak periods, as well as with the exception of Blaxland Road/ Dalton Avenue due to the right turning movement from Dalton Avenue. Given the low traffic volumes on Dalton Avenue, such delays result in minimal queues, which was observed on site and therefore is considered satisfactory.

# 2.4 Site Access

Access to Ryde Hospital is currently provided from Denistone Road, Fourth Avenue and Ryedale Road, as illustrated in Figure 10. The main visitor, staff parking, logistics and emergency access are provided from multiple access points along Denistone Road, with access to restricted staff/ fleet parking (car park 5) provided along Ryedale Road.





Figure 10: Aerial view of subject site and access points

Base image source: Concept Proposal – Existing Site Layout Plan, Drawing No. RHR-ARC-DR-SSD1\_005 Rev 4, STH, dated 3 March 2022

# 2.5 Car Parking Supply

# 2.5.1 ON-SITE SUPPLY

Stantec compiled an inventory of all on-site car parking in October 2021. The existing Ryde Hospital car parking areas are shown indicatively in Figure 11.





Figure 11: Ryde Hospital parking facilities

Base image source: Nearmap

### 2.5.1.1 Ryde Hospital

Overall, the existing Ryde Hospital accommodates 271 parking spaces including the Community Mental Health Services building. Majority of parking spaces (60 per cent) are unallocated, hence can be used by either staff or public. There are currently 16 parking spaces near the existing childcare centre, excluding two staff only spaces, that were observed to be used by staff/ public visiting the hospital as there is no existing signage allocating these spaces to the centre. As such, these spaces are assumed to be part of the hospitals existing supply. The existing on-site parking supply is summarised in Table 6. This excludes any informal parking areas.



Area	Description	Staff/ Fleet	Staff/ Public	Accessible	VMOs	Outpatients	Other <sup>[1]</sup>	Total Supply
P1	General	-	82	8	-	6	-	96
	Undercroft	-	31	-	-	-	-	31
	Near Child Care <sup>[2]</sup>	-	16	-	-	-	-	16
P4		-	13	1	-	-	-	14
P5		28 <sup>[3]</sup>	-	-	-	-	-	28
P6 <sup>[4]</sup>		53	-	-	-	-	-	53
Community	Mental Health	8 <sup>[5]</sup>	-	-	-	-	-	8
Internal	Aged Care	-	3	1	-	-	-	4
Road	General	5	-	-	2	-	9	11
Emergency Restricted Access		3	-	-	-	-	1 <sup>[6]</sup>	4
Main Entry/ Pick up/ ED Drop off		-	-	3	-	-	3	6
	Total	<b>84</b> <sup>[3]</sup>	145	13	2	6	13	271

#### Table 6: Existing (October 2021) Ryde Hospital parking supply

[1] Includes service vehicles, patient transfer space, three drop off and pick up bays (excluding accessible) and restricted parking bays (chaplain parking, engineering etc.)

[2] Excludes dedicated child care staff parking spaces/ drop off and pick up area

[3] Includes nine fleet parking spaces, two family care centre (camelia cottage) spaces and one restricted space

[4] A total of 26 spaces in P6 are restricted during the AM period in P6 to provide on-site parking for staff working afternoon/ evening shifts. Therefore, during the AM period only 58 spaces are available to staff

[5] Includes eight fleet parking spaces

[6] One patient transfer parking bay is designated, with the remaining ambulances observed to informally park in a restricted parking area with capacity for up to four ambulances.

The review indicates that 92 staff only spaces, 145 general spaces, 13 accessible, six outpatient and two VMO spaces are provided on-site. A further 13 spaces are allocated to service vehicles, ambulance parking, drop off and pick up activity (excluding accessible) and restricted parking (chaplain parking etc.).

## 2.5.1.2 Ambulance Parking

The hospital is currently supported by an informal<sup>3</sup> ambulance/ emergency services parking area, shown in Figure 11. One patient transfer parking bay is designated, with the remaining ambulances observed to informally park in a restricted parking area with capacity for up to four ambulances as shown in Figure 12. Informal<sup>3</sup> ambulance parking is also provided along an ambulance only loop road providing accessing to the Birthing Unit accessed along the internal road as shown in Figure 13.

<sup>&</sup>lt;sup>3</sup> No line marked parking bays



Figure 13: Informal ambulance parking along

internal road (birthing unit access)

# Figure 12: Informal ambulance parking in restricted parking area

## 2.5.1.3 Engineering, Contractors and Maintenance Staff Parking

The hospital is currently supported by an informal<sup>4</sup> contractors and maintenance staff parking area along the internal road, shown in Figure 11. The area has informal<sup>4</sup> capacity for up to three parking spaces and up to an additional two tandem parking bays as shown in Figure 14.



#### Figure 14: Engineering, contractors and maintenance staff parking

## 2.5.1.4 Child Care

A child care is currently provided at the south-eastern corner of the hospital accessed through P1 from Denistone Road, shown in Figure 11. The child care has one staff parking space and at adjacent drop off/ pick up zone as shown in Figure 15. These spaces have been excluded from the Ryde Hospital parking inventory.

<sup>&</sup>lt;sup>4</sup> No line marked parking bays



#### **Ryde Hospital Redevelopment**



Figure 15: Child Care parking (excluded from Ryde Hospital parking supply)

## 2.5.2 ON-STREET SUPPLY

Stantec completed a review of all on-street car parking near the site on October 2021 that was observed to be within the hospitals "zone of influence" i.e. where staff and/ or public parking demand for the hospital may be accommodated on street. Overall, there are approximately 295 car parking spaces available in the zone of influence, with majority of spaces (90 per cent, or 263 spaces) being unrestricted. A further 12 motorcycle spaces are also available.

The on-street parking inventory is summarised in Table 7 and shown in Figure 16. It is noted that seven VMO only and three service vehicle parking spaces are provided at Denistone Road along the site frontage.



Restriction	Florence Avenue	Denistone Road	Fourth Avenue	Fifth Avenue	Ryedale Road	Total Supply
Unrestricted	54	55	49	27	78	263
3P	-	-	10	-	2	12
Accessible only	-	-	4	-	-	4
2P	-	3	-	-	-	3
VMO only	-	7	-	-	-	7
5min	-	-	-	-	2	2
Loading Zone	-	3	-	-	-	3
No Stopping 6am to 10am & 3pm to 7pm)	-	1	-	-	-	1
Total	54	72	63	27	82	295
Motorcycle only (following width of 1m per motorcycle space)	-	12	-	-	-	12

Table 7: Relevant on-street parking inventory

#### Figure 16: Relevant on-street parking area



Base image source: Near map

# 2.6 Car Parking Demand

## 2.6.1 RYDE HOSPITAL

The observed on-site parking demand at Ryde Hospital during the surveyed period is summarised in Table 8 and Table 9 and shown in Figure 17 for staff, fleet, public and accessible.

Time	Staff/ Fleet	General	Drop off/ Pick Up <sup>[1]</sup>	Accessible	VMOs	Outpatients	Other <sup>[2]</sup>	Total <sup>[3]</sup>
7:00 AM	53	100	0	2	1	2	8	166
8:00 AM	74	125	0	4	1	1	8	213
9:00 AM	74	141	1	5	1	6	10	238
10:00 AM	69	142	2	8	1	5	10	237
11:00 AM	67	143	2	6	1	6	11	236
12:00 PM	79	142	2	4	1	6	10	244
1:00 PM	78	142	2	6	1	6	10	245
2:00 PM	100	146	1	7	2	6	10	272
3:00 PM	96	141	0	8	1	4	5	255
4:00 PM	86	102	0	7	1	4	2	202
5:00 PM	73	75	0	5	1	2	4	160

Table 8: Existing Ryde Hospital parking demand (vehicles)

[1] Includes three designated public spaces available at the pick up/ drop off bay

[2] Excludes three designated public spaces available at the pick up/ drop off bay

[3] Total supply 245 spaces between 7:00am to 11:00am and 271 spaces between 12:00pm and 5:00pm.



Time	Staff/ Fleet	General	Drop off/ Pick Up <sup>[1]</sup>	Accessible	VMOs	Outpatients	Other <sup>[2]</sup>	Total <sup>[3]</sup>
7:00 AM	80% <sup>[3]</sup>	69%	0%	15%	50%	33%	80%	68%
8:00 AM	112% <sup>[3]</sup>	86%	0%	31%	50%	17%	80%	87%
9:00 AM	112% <sup>[3]</sup>	97%	33%	38%	50%	100%	100%	97%
10:00 AM	105% <sup>[3]</sup>	98%	67%	62%	50%	83%	100%	97%
11:00 AM	102% <sup>[3]</sup>	99%	67%	46%	50%	100%	110%	96%
12:00 PM	86%	98%	67%	31%	50%	100%	100%	90%
1:00 PM	85%	98%	67%	46%	50%	100%	100%	90%
2:00 PM	109%	101%	33%	54%	100%	100%	100%	100%
3:00 PM	104%	97%	0%	62%	50%	67%	50%	94%
4:00 PM	93%	70%	0%	54%	50%	67%	20%	75%
5:00 PM	79%	52%	0%	38%	50%	33%	40%	59%

Table 9: Existing Ryde Hospital parking demand (percentage occupancy)

[1] Includes three designated public spaces available at the pick up/ drop off bay

[2] Excludes three designated public spaces available at the pick up/ drop off bay

[3] Total supply 245 spaces between 7:00am to 11:00am and 271 spaces between 12:00pm and 5:00pm.



#### Figure 17: Ryde Hospital on-site parking demand profile

[1] Staff/ fleet parking supply increases by 26 spaces at 12:00pm and 5:00pm, with spaces reserved for afternoon shift staff released in P6.

Results indicates that the existing hospital car park is operating at or near capacity between 8:00am to 3:00pm, reaching a peak occupancy of around 100 per cent at 2:00pm. Staff and general parking areas are generally operating at or over capacity within that period due to staff/ public parking in informal/



undesignated parking areas on site within the various car parks and along the internal access road. Notwithstanding, at 12:00pm to 1:00pm there is some spare capacity for staff parking on site associated with parking reserved in P6 being opened for afternoon staff (33 spaces).

During the parking demand surveys the drop off and pick up loop for the Main Entry and Emergency Department Entry was partially closed due to the installation of a tent to provide an external waiting area for the Emergency Department. Notwithstanding, vehicles were observed to use the loop in an informal manor with entry/ exit movements accommodated through the entry driveway. Under normal circumstances it is assumed that this car park would experience higher demands for short term parking.

Low parking demand was observed in car park P4, however this is likely due to it be designated as the COVID testing car park on the day of the survey. As such, under normal circumstances it is assumed that this car park would experience similar high demands for parking as seen on the balance of the site.

As discussed, as a result of the on site car parks remaining near or at capacity throughout the day, particularly between 9:00am and 3:00pm, staff/ visitors were observed to park on street or in informal/ undesignated parking areas on site. Observations of informal/ illegal parking are shown in Figure 18 and Figure 19.

# Figure 18: Informal/ illegal parking (public car park)

Figure 19: Informal/ illegal parking (staff car park)





# 2.6.2 ON-STREET DEMAND

The observed on-street parking demand at Ryde Hospital during the surveyed period is summarised in Table 10, and shown in Figure 20 and Figure 21.



Street Name	Restriction	No.	7:00 am	8:00 am	9:00 am	10:00 am	11:00 am	12:00 pm	1:00 pm	2:00 pm	3:00 pm	4:00 pm	5:00 pm
Florence Ave	Unrestricted	54	12	18	18	23	26	23	24	27	25	21	18
Denistone	Unrestricted	55	43	37	55	55	54	55	57	55	54	48	37
Road	2P	3	2	3	3	3	3	3	3	3	2	2	1
	Motorcycle only	12	0	0	0	0	0	0	0	0	5	9	0
	VMO only	7	3	3	5	4	3	5	4	7	6	7	6
	Loading Zone	3	2	1	2	1	1	1	1	1	1	1	1
	No Stopping 6- 10, 3-7	1	0	0	0	0	1	1	0	0	0	0	0
Fourth	Unrestricted	49	21	29	29	30	30	32	31	35	29	33	24
Ave	3P	10	0	7	9	9	8	8	9	8	9	8	5
	Accessible only	4	0	1	2	1	3	2	2	3	2	2	2
Fifth Ave	Unrestricted	27	16	16	21	19	19	20	19	18	18	17	17
Ryedale	Unrestricted	78	16	27	31	36	38	37	37	37	38	28	25
Road	3P	2	1	2	2	1	1	1	2	1	0	0	1
	5min	2	0	0	0	0	1	0	1	2	0	0	0

#### Table 10: On-street parking demand

Figure 20: Ryde Hospital relevant on-street parking occupancy<sup>[1]</sup>



[1] Includes 12 motorcycle parking spaces.





Figure 21: Denistone Rd, Ryedale Rd and Fifth Avenue on-street parking occupancy

[1] Includes 12 motorcycle parking spaces.

Results indicate that peak on-street parking demand occurred at 2:00pm with 64 per cent of surrounding on-street parking supply occupied.

Demand for unrestricted parking along Denistone Road (55 spaces) was observed to reach or exceed capacity between 9:00am and 3:00pm, indicating that staff park along Denistone Road following on-site car parks reaching capacity. Demand for unrestricted parking along Ryedale Road, Fourth Avenue and Florence Avenue was observed to reach around 50 per cent of available capacity.

Between 11:00am and 3:00pm, approximately 117 vehicles observed on-street were presumed to be associated with the Hospital, including seven on-street VMO parking spaces.

# 2.6.3 TOTAL RYDE HOSPITAL PARKING DEMAND

Based on the analysis set out in this section, Ryde Hospital currently generates demand for around 380 spaces, comprising 261 on-site parking spaces (excluding demand from pick up/ drop off and other parking spaces) and 117 on-street parking spaces.

# 2.7 Public Transport

A bus stop is provided at the main hospital entrance on Denistone Road, serviced by route 515 travelling from Eastwood Station to Top Ryde City Shopping Centre operating at a 15 minute frequency during the peaks, and 60 minutes during off-peak periods.


Denistone railway station and Eastwood railway station are respectively located around 500 metres (seven-minute walk) and 1.1 kilometres (13 minute walk) from the site. While Denistone railway station is closer, the route to Eastwood involves significantly less grades and the station is co-located with retail and food and beverage outlets hence both stations are likely used by existing staff. Both stations are on the T9 Northern Line, connecting to northern and central Sydney as well as Sydney CBD. Services generally operate at a frequency of 15 minutes.

The surrounding public transport network is shown in Figure 22.





Base image source: R7NetworkMap260422.indd (transportnsw.info), accessed 26 April 2022

The "Shop Ryder" is a free community bus service provided by the City of Ryde Council. It operates from Wednesday to Saturday between 8:30am to 2:00pm at a frequency or 60 minutes. The route stops on Denistone Road at the existing bus stop located near the hospital entrance and travels through Gladesville, Meadowbank and West Ryde. Stops include Top Ryde City Shopping Centre, Meadowbank Station, West Ryde Station and Eastwood Station.

# 2.8 Active Transport

Pedestrian footpaths are generally provided on both sides of surrounding roads. Key routes include towards Denistone railway station, notwithstanding the steep gradient to/ from the hospital, and Eastwood railway station and surrounding retail precinct. Pedestrian crossings are provided on the eastern, northern and southern legs of the First Avenue/ Rutledge Street signalised intersection, facilitating pedestrian movements to/ from the station.



On road cycle routes are provided along Florence Avenue, Fourth Avenue and Ryedale Road. These routes provide connection to nearby stations including Eastwood, West Ryde and Denistone as well as surrounding suburbs.

Bicycle parking racks are provided on site located in P1 and P4. Three shower facilities are also provided on-site located in Denistone House and the staff accommodation/ dining building.

The surrounding cycle network is shown in Figure 23.



Figure 23: Surrounding cycle network

Base image source: City of Ryde Bike Map, accessed 21 April 2022

# 2.9 Loading and Servicing Areas

The hospital is currently supported by a loading dock along its internal road near car park 6, as shown in Figure 24 and Figure 25.





# Figure 24: Internal road, looking towards loading dock on right

#### Figure 25: Existing loading dock



The loading dock is able to accommodate two vehicles that typically include vehicles up to 8.8 metre Medium Rigid Vehicles. Notwithstanding, vehicles up to 10 metres have been observed to use the dock.

Bulk oxygen is located along the internal road, between Denistone Road and car park 4, and is serviced monthly by a 13 to 14 metre tandem axel vehicle.

# 2.10 Existing Travel Patterns

### 2.10.1 JOURNEY TO WORK

Journey to Work (JTW) data has been sourced from the Australian Bureau of Statistics (ABS) 2016 census and provides an idea of existing travel patterns to the hospital and surrounding area. Figure 26 details the catchment of census data analysed which corresponds to the ABS 2016 Destination Zone (DZN) 114973467.





#### Figure 26: Destination Zone containing Ryde Hospital (DZN 114973467)

Base image source: ABS Maps, accessed 9 June 2021

The JTW data indicates that 214 people work within the selected Destination Zone, in which the main source of employment is Ryde Hospital. Hence, the JTW data can be used as an indicative representation of the Ryde Hospital mode share.

Table 11 shows the distribution of travel modes by workers employed in the Destination Zone, adjusted for those that did not work, worked from home or who were not applicable. Data indicates that 83 per cent of workers travel to the area via private car, as driver or passenger. Public transport accounts for only 10 per cent.

Mode of Travel	Mode Share (%) <sup>[1]</sup>
Car, as driver	79
Car, as passenger	4
Train	6
Bus	4
Bicycle	0
Walked only	3
Other Mode	4

#### Table 11: Existing travel mode share to the local area surrounding Ryde Hospital

[1] Does not include residents who worked at home, did not go to work or who were not applicable.





#### Figure 27: Existing travel mode share to the local area surrounding Ryde Hospital

JTW data also indicates that approximately 38 per cent of staff reside in Ryde, 13 per cent in Parramatta, seven per cent in North Sydney/ Hornsby and seven per cent in Sydney Inner West. The remainder are distributed throughout Sydney.

### 2.10.2 STAFF TRAVEL SURVEYS

An online staff questionnaire was distributed to all hospital staff in November 2021 to understand existing staff travel patterns, and a total of 265 responses were received.

To better understand the impact of COVID-19 to staff travel patterns, staff were separated into two categories based on whether they worked at Ryde Hospital in 2019 (prior to COVID-19) or not. Staff that worked in 2019 were requested to respond to the survey based on their travel patterns in 2019 (rather than their current travel patterns). Staff that did not work in 2019 were requested to both respond based on both their current travel patterns and whether they expect to have different travel patterns post COVID-19.

The results of the survey indicate that car travel was generally the main mode of travel to/from the hospital, with over 90 per cent of responses travelling by private vehicle (including car passengers and motorcyclists) with an average vehicle occupancy of 1.2 persons per vehicle according to those surveyed.

The mode of travel for hospital staff was generally higher than the 2016 JTW data. Further, staff that worked at Ryde Hospital in 2019 recorded a higher private vehicle mode share than those that only worked after 2019, indicating that COVID-19 did not necessarily increase the private vehicle mode share of staff, likely due to staff already having a high private vehicle mode share regardless of the pandemic.

The results of the surveys relating to mode of travel are summarised in Table 12 and Figure 28.

	Staff Percentage <sup>[1]</sup>			
Mode	2019 (Prior to COVID)	2021 (During COVID)	Post-Covid	
Car	96%	94%	92%	
Train	2%	1%	4%	
Bus	1%	0%	0%	
Walk	2%	3%	3%	
Motorbike	0%	1%	1%	

#### Table 12: Staff survey – method of travel

[1] Does not include those that did not respond



#### Figure 28: Staff survey – method of travel

A summary of typical staff parking locations for staff is outlined in Figure 29, indicating that the primary parking location on site is P1. Around 30 per cent of staff currently park on street, indicating that a notable quantum of existing staff are unable to find a parking space on site.





Figure 29: Staff survey – staff parking locations

### 2.10.3 SITE CATCHMENT

Ryde Hospital's nominal catchment includes the Ryde and Hunters Hill Local Government Areas, as shown in Figure 30. Due to the hospital's location near the western border of the local health district, patients from parts of Western Sydney local health district (predominantly Parramatta local government area) access care at Ryde Hospital, accounting for 29 per cent of surgical and procedural episodes of care<sup>5</sup>. Further, a large share of activity from the Ryde-Hunters Hill catchment has shifted to Royal North Shore Hospital.

<sup>&</sup>lt;sup>5</sup> Page 126, Ryde Hospital Clinical Services Plan Version 4, Northern Sydney Local Health District, December 2021



Figure 30: Ryde Hospital patient catchment

Source: Map 3, page 28, Ryde Hospital Clinical Services Plan Version 3, Northern Sydney Local Health District, 16 April 2021

North Sydney Local Health District provided Stantec with Ryde Hospital staff home post code data. Detailed GIS analysis was completed for the post code data set identifying key staff origins, as shown in Figure 31.





Figure 31: Ryde Hospital staff origin heat map

The majority of staff (60 per cent), reside in post codes with one per cent or less of total staff. A summary of the most common staff origins (the remaining 40 per cent of staff, based on postcodes with at least two per cent of total staff residing in them) is provided in Table 13.



Postcode	Staff origin (based on postcodes)	% Staff
2122	Eastwood, Marsfield	6%
2121	North Epping	6%
2112	Ryde, Denistone East, Putney	4%
2114	Denistone, West Ryde, Meadowbank, Melrose Park, Lidcombe	3%
2117	Telopea, Dundas Valley, Oatland	3%
2118	Carlingford	2%
2066	Longueville, Riverview, Lane Cove, Lane Cove North	2%
2119	Beecroft, Cheltenham	2%
2145	Westmead, Girraween, Pendle Hill, South Wentworthville, Wentworthville, Greystanes	2%
2155	Beaumont Hills, Kellyville Ridge, North Kellyville, Rouse Hill	2%
2153	Winston Hills, Norwest	2%
2065	Greenwich, St Leonards, Wollstonecraft	2%
2067	Chatswood West	2%
2115	Ermington	2%
	% Total	40%

Table 42. Ctaff				-1-11	
Table 13: Stan	post code da	ata – most (	common	Starr	origins

### 2.10.4 ACCESSIBILITY REVIEW

#### Patients

A review of Figure 30 illustrates that the heavy rail and metro lines provide limited benefit at servicing the nominal catchment. A review of bus services indicates that staff/ visitors typically require at least one interchange along the journey to/ from site.

#### Staff

A high-level review of the public transport accessibility of site against the most common post codes has been prepared, considering:

- whether any public transport service was available within a reasonable walking distance of resident houses within a post code area
- did available services require one or more interchanges
- what was the required "last mile journey" from a public transport service to the front door of the site.

A weighted average of the review indicates that from a public transport perspective, Ryde Hospital provides access to resident housing within 38 per cent of the most common post codes. This likely contributes to the higher private vehicle mode share of staff.



# 2.11 Crash History

Analysis of the most recent five-year period of available crash data (2015-2019) has been undertaken based on crash data provided by Transport for NSW for the roads surrounding the site. The locations of the crash data for the five-year period is shown in Figure 32 and detailed in Table 14.



Figure 32: Crash map from 2016 to 2020

Base image source: Transport for NSW Centre for Road Safety Crashes Map, accessed 21 April 2022

Table 14: Recorded crashes from 2016 to 2020

Road/ Location	Number of Crashes	Number of People Injured
Blaxland Road/ First Avenue Intersection	7	10
Blaxland Road/ Florence Avenue Intersection	2	2
Blaxland Road/ Lovell Road Intersection	14	14
Second Avenue/ East Parade		
Blaxland Road (between Florence Avenue and Lovell Road)	10	10
First Avenue	3	1
Ryedale Road	5	3
Denistone Road	3	3
Florence Avenue	1	1
Total	37	32

The following key statistics can be drawn from the crash data:

- No fatalities were recorded during the five-year period surrounding Ryde Hospital.
- 37 incidents occurred during the reporting period, resulting in 32 people injured.
- Blaxland Road and its intersections recorded the highest number of incidents surrounding Ryde Hospital recording 18 crashes, three resulting in non-casualty, five resulting in minor injury, nine resulting in moderate injury and one resulting in serious injury. These crashes primarily involved rear end crashes (56 per cent) and vehicles veering off the carriageway into an object (22 per cent).
- One incident involved a vehicle colliding with a pedestrian at the Blaxland Road slip lane to First Avenue, resulting in serious injury.

The local road network immediately surrounding Ryde Hospital experienced a small number of crashes and does not appear to have any identifiable safety concerns.



# 3 Concept Proposal

### 3.1 Overview

The concept proposal seeks approval for the establishment of a maximum building envelope and gross floor area to facilitate the development of a new hospital services development, carpark and refurbishment works.

The proposal considers developing on the area through the centre of the campus, proposing to retain the existing structures fronting Fourth Avenue comprising Community Mental Health Services, as well as the childcare centre and NSW Ambulance Ryde along Denistone Road. The proposal will facilitate the future construction of a multi-deck car park on the western edge of the site (to be completed during the main construction works), near Ryedale Road, with additional public car parking provided along the eastern frontage of the site near Denistone Road (subject to a future detailed DA). The proposal includes revised emergency vehicle parking and loading dock, as well as short term public parking to accommodate drop off/ pick up activity (subject to a future detailed DA).

A summary of the concept proposal site layout is provided in Figure 33.





Source: Concept Proposal - Proposed Site Layout Plan, Ryde Hospital Redevelopment, Drawing No. RHR-ARC-DR-SSD1\_008 Rev 5, prepared by STH dated 7 April 2022



# 4 Concept Proposal – Parking

# 4.1 Car Parking Requirements

A Parking Demand Study Report was prepared by Stantec in May 2022 to understand the parking requirements of the Ryde Hospital Redevelopment. The study was completed using a first principles analysis based on the relationship between current and future staffing levels, as well as student, visitor and patient demands. Section 4.4 and 5.1 of the Parking Demand Study also considered parking requirements set out in the City of Ryde Development Control Plan (DCP) 2014. The study found that the DCP significantly underestimate existing demand for parking on site and hence may not be a good representation of future parking requirements. This is largely contributed to the DCP parking rate assuming a lower rate of car travel than is experienced at Ryde Hospital, including around 50 per cent mode share for majority of staff.

The projected parking requirements for the Ryde Hospital Redevelopment, as outlined in the Parking Demand Study, are summarised in Table 15.

Tupo	Existing Hospital	Design Year	
гуре	2021	2026	2031
Staff	160	271	325
VMO	2	5	7
Public (general access)	79	124	155
Fleet	17	24	27
Total Parking Supply	258 [1]	425	515
Additional parking supply from existing		167	257

#### Table 15: Future car parking supply requirements

[1] Excludes service vehicles, patient transfer space, drop off and pick up bays (excluding accessible) and restricted parking bays (chaplain parking etc.)

As shown, the draft parking demand study identified that the proposed redevelopment should provide for an additional 257 parking spaces on site, resulting in a total of 515 spaces on site, comprising 325 staff parking spaces, seven VMO parking spaces (in an additional to the seven VMO parking spaces retained along Denistone Road), 27 fleet parking spaces and 155 public parking spaces.

Additional on-site parking spaces will be provided in accordance with the uplift identified in Table 15 as part of the detailed design Stage 2 SSDA.

### 4.1.1 ACCESSIBLE SPACES

Accessible car parking requirements for different development types are set out in the Building Code of Australia (BCA), 2014.



Class 9a <sup>[1]</sup>	No. of car parking spaces required
(a) Hospital (non-outpatient area)	1 space for every 100 car parking spaces or part thereof
(b) Hospital (or	utpatient area)
(i) up to 1000 car parking spaces; and	1 space for every 50 car parking spaces or part thereof
(ii) for each additional 100 car parking spaces or part thereof in excess of 1000 car parking spaces	1 space
(c) Nursing home	1 space for every 100 car parking spaces or part thereof
(d) Clinic of day surgery not forming part of a hospital	1 space for every 100 car parking spaces or part thereof

#### Table 16: Accessible parking requirement (BCA 2019 Amendment 1)

[1] Class 9a is defined in the BDA 2004 as a health care building

Accessible spaces will be provided in accordance with the BCA requirementTable 15 as part of the detailed design Stage 2 SSDA. Accessible spaces are also required to be 2.5 metres wide and 5.4 metres long with an adjacent shared area of 2.5 metres wide by 5.4 metres next to the parking space in accordance with the SHCPIP Hospital Car Park Guidelines, noting this exceeds the minimum requirements set out in the Australian Standard for Off Street Car Parking for People with Disabilities (AS/NZS 2890.6:2009).

### 4.1.2 MOTORCYCLE PARKING

DCP 2014 does not stipulate a motorcycle parking requirement. It is recommended that a rate of one space per 20 car parking spaces be adopted for the development (five per cent total spaces).

Motorcycle parking spaces will be provided as part of the detailed design Stage 2 SSDA. Motorcycle spaces should be 1.2 metres wide and 2.5 metres long. These will be included as part of the detailed design Stage 2 SSDA.



# 5 Concept Proposal – Design Review

### 5.1 Drop off areas

### 5.1.1 AMBULANCE AREA

The redevelopment will provide ambulance parking bays which are to be designed in accordance with NSW Ambulance Specifications for Hospitals. Ambulances will reverse into the parking bays which will provide the adequate spatial requirements for each ambulance to load/ unload from either the rear or side doors. This will be included as part of the detailed design Stage 2 SSDA.

### 5.1.2 ED DROP- OFF/ PICK UP AREA

The redevelopment will provide an Emergency Department (ED) drop off and pick up area, to be included as part of the detailed design Stage 2 SSDA. The drop off area is intended to be accessed from Denistone Road. Once the drop off has occurred it is intended that vehicles can proceed to parking located in proximity to the drop off area.

### 5.1.3 MAIN HOPSITAL ENTRANCE DROP OFF/ PICK UP AREA

The redevelopment will provide a main entrance drop off and pick up area, to be included as part of the detailed design Stage 2 SSDA. The drop off area is intended to be accessed from Denistone Road. Once the drop off has occurred it is intended that vehicles can proceed to parking located in proximity to the drop off area.

### 5.1.4 BUS STOPS

No public bus stops are proposed to be provided within the hospital site, given existing provision of bus stops along Denistone Road. DDA compliant pedestrian paths will be provided between the bus stop and key pedestrian entries to the hospital.

# 5.2 Multi-Deck Car Park Access

The redevelopment will provide a Multi-Deck Car Park, to be included as part of the detailed design Stage 2 SSDA. The car park is intended to be accessed from Ryedale Road.



# 5.3 Logistics

A Logistics Review was prepared by PwC to understand potential loading requirements of the redevelopment<sup>6</sup>. The review concluded that the proposed loading dock should accommodate:

- two bays suitable to accommodate vehicles up to 12.5 metre HRV's
- two bays suitable to accommodate courier vehicles
- two compactors.

This will be included as part of the detailed design Stage 2 SSDA. The loading dock is intended to be accessed from Ryedale Road

# 5.4 Sight Distance Review

In assessing the desirable sight distance requirements of proposed access along Ryedale Road, reference has been made to both the Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections*, relating the access to an unsignalised intersection arrangement, and Australia/ New Zealand Standard Parking Facilities Part 1 Off Street Car Parking (AS2890.1:2004), relating the access to a typical driveway.

Ryedale Road is currently signposted at 50 kilometres per hour. The recommended Safe Intersection Sight Distance (Austroads, 2017) an unsignalised intersection arrangement based on a driver reaction time of 2.0 sec is 123 metres. The desirable and minimum sight distance for a typical driveway in accordance with AS2890.1 are respectively 69 and 45 metres.

An access positioned at the northern boundary of the site along Ryedale Road that operates as left in, left out only are compliant in terms of access driveways (Australian Standards requirements). This will be further addressed as part of Stage 2 SSDA.

# 5.5 Walking and Cycling Network

The concept proposal will ensure pedestrians and cyclists remain a key consideration, noting this will be subject to the detailed design Stage 2 SSDA. The design will include a high level of pedestrian amenity that will ensure good activation of the public domain.

DCP 2014 outlines that for developments where the floor space exceeds 600 square metres gross floor area (GFA), bicycle parking should be provided at a rate of 10 per cent of the required car spaces or part thereof. DCP 2014 also requires all commercial, industrial and retail developments to provide end of trip facilities accessible to staff, including at least one shower and change room. Further, to comply with minimum requirements of the Environmental Sustainable Design framework, bicycle parking should be provided at a rate of 7.5 per cent of staff and five per cent of visitors.



<sup>&</sup>lt;sup>6</sup> Ryde Hospital Redevelopment – Future State Vehicle Profile, PwC, December 2021 and Addendum, March 2022

These will be included as part of Stage 2 SSDA. All bicycle parking will be consistent with the dimensional requirements as set out in the Australian Standard 2890.3 Parking facilities, Part 3: Bicycle parking (AS 2890.3).



# 6 Concept Proposal – Traffic Impact

# 6.1 Traffic Generation

### 6.1.1 EXISTING SITE

As detailed in Section 2.2.8, traffic surveys were undertaken at key intersections surrounding the hospital and site accesses on Denistone Road and Ryedale Road. Based on these surveys, 142 and 122 vehicles were generated during the AM and PM peak periods, respectively. Approximately 263 on-site parking spaces are serviced by these access points, corresponding to a traffic generation rate of 0.54 and 0.46 vehicle trips per parking space during the AM and PM peak periods, respectively. Applying this rate to the existing demand for on-street parking supply (117 spaces) results in a total traffic generation for the existing Hospital of 205 and 176 vehicles during the AM and PM peaks, respectively.

Traffic generation rates have also been taken from Transport for NSW's *Guide to Traffic Generating Developments* 2002. The rate considered to be the most appropriate for this site is the rate provided for private hospitals.

The following trip generation rates based on the number of beds and the average number of staff per weekday shift:

- Peak Vehicle Trips (PVT) = -14.69 + 0.69B + 0.31ASDS
- Morning Vehicle Trips (MVT) = -10.21 + 0.47B + 0.06ASDS
- Evening Vehicle Trips (EVT) = -2.84 + 0.25B + 0.40ASDS.

where 'B' represents the number of beds and 'ASDS' is the average staff per day shift.

The trip generation rates were developed using survey data collected by Roads and Maritime in 1994 from 19 private hospitals across the Sydney region. The hospitals surveyed had between 30 to 99 beds and an average day shift workforce of between 10 and 102 employees.

Of the 19 hospitals surveyed, the majority recorded their respective daily traffic peak (PVT) between 3:00pm and 4:00pm. This time period generally coincided with a staff shift change at the surveyed hospitals and partially coincides with the start of the on-road peak in the vicinity of the site. Therefore, the PVT has been utilised as the design traffic generation rate to overlap with the network peak.

Traffic generation for the existing hospital has been estimated based on existing bed and staff numbers provided by NSLHD, including 132 beds and 519 Full Time Equivalent (FTE) staff. The average staff per day shift (ASDS) has been calculated as 60 per cent of the FTE staff based on data provided by NSLHD, resulting in 311 ASDS staff. Based on this, a summary of the existing trip generation estimates for Ryde Hospital based on the Guide 2002 traffic generation rates is provided in Table 17.



Method	Morning Vehicle Trips	Peak Vehicle Trips
Guide 2002 (based on number of beds and staff)	71	173
Guide 2002 (based on indicative number of beds only)	63	115
Traffic surveys	212	176

#### Table 17: Existing traffic generation estimates

As shown, using the Guide 2002 traffic generation rates based on staff and bed numbers on the existing hospital results in a traffic generation estimate of 70 and 175 vehicle trips in the AM and PM peak hours respectively. The traffic surveys completed at the hospital indicate that the hospital generates 2.9 times more traffic than the Guide 2002 traffic generation estimates in the AM peak hour and equivalent in the PM peak hour.

### 6.1.2 FUTURE SITE

Traffic generation for the redevelopment has been based on information provided by NSLHD which indicates an approximate increase of around 98 beds from 132 to 230 in 2031/32, to be confirmed as part of Stage 2 SSDA. Existing staff data has also been provided by the NSLHD and future staff projections have been based on the indicative growth in clinical services provided by NSLHD, also to be confirmed as part of Stage 2 SSDA. As such and for the purpose of our assessment, FTE staff are proposed to increase indicatively by 258 from 519 to 777 in 2031/ 32. Further, the average staff per day shift (ASDS) has been calculated as 60 per cent of the FTE staff based on data provided by NSLHD. This results in up to 466 staff on site during a weekday (morning or afternoon) shift in 2031.

A summary of the future trip generation estimates for Ryde Hospital based on the Guide 2002 traffic generation rates and adjusted to reflect Ryde Hospital is provided in Table 18.

	Year of Opening (2026)		10 year horizon (2036)		
Method	Morning Vehicle Trips	Peak Vehicle Trips <sup>[1]</sup>	Morning Vehicle Trips	Peak Vehicle Trips <sup>[1]</sup>	
Guide 2002 (based on number of beds and staff)	123	274	126	289	
Adjustment Factor based on surveys	2.9	1.0	2.9	1.0	
Traffic Generation	357	274	365	289	

#### Table 18: Future traffic generation estimates

Table 17 and Table 18 indicates that the concept development could generate 365 and 289 trips respectively in the 2036 AM and PM peak hours, resulting in an increase in 160 and 113 vehicle trips respectively in the 2036 AM and PM peak hours compared to the existing development.



As discussed, currently the site generates around 63 and 54 vehicle movements on-street during the AM and PM peak periods respectively. A summary of the future trip generation estimates for Ryde Hospital separated into traffic generated on street (existing traffic volumes) and on site (existing volumes plus uplift associated with redevelopment) is provided in Table 19.

	Year of Opening (2026)		10 year horizon (2036)	
Traffic Generation	Morning Vehicle Trips Peak Vehicle Trips		Morning Vehicle Trips	Peak Vehicle Trips
Total	357	274	365	289
On-Street	63	54	63	54
On Site	294	220	302	235

 Table 19: Future traffic generation estimates – on site

Based on the traffic surveys completed at the hospital, the on-site traffic assignment between entering and exiting vehicles is detailed at Table 20.

Table 20: Traffic generation estimates – on site traffic assignment

Design Year Peak Period	Deals Daried	Traffic As	Traffic Assignment		Traffic Generation		
	Peak Period	IN	OUT	IN	OUT	TOTAL	
0000	Weekday AM	77%	23%	226	68	294	
2026	Weekday PM	34%	66%	75	145	220	
0000	Weekday AM	77%	23%	233	69	302	
2036	Weekday PM	34%	66%	80	155	235	

### 6.2 Distribution and Assignment

The directional distribution and assignment of traffic generated by the proposed development will be influenced by a number of factors, including the:

- configuration of the existing and future arterial road network in the immediate vicinity of the site
- existing operation of intersections providing access between the local and arterial road network
- likely distribution of staff and patient/ visitor residences in relation to the site
- configuration of access points to the site.

Having consideration to the above and for the purposes of estimating vehicle movements, existing traffic movements within the hospital precinct have been broadly redistributed, assuming 25 per cent of vehicles travel to/ from the north, 30 per cent travel to/ from the south-east, 30 per cent travel to/ from the south-west and 15 per cent travel west.



Based on the above, Figure 34 shows the future AM and PM peak hour traffic volumes including the additional traffic generated from the redevelopment.



Figure 34: 2036 AM and PM peak hour development traffic volumes - on site volumes



# 6.3 Background Growth

Transport for NSW provided Stantec with outputs for the local area from their Strategic Traffic Forecasting Model (STFM)<sup>7</sup>. These outputs included forecasted mid-block traffic volumes for 2021, 2026, and 2036, accounting for the growth in traffic volumes as result of the development of the surrounding areas. Using these volumes, the growth rates for the individual links near the site were calculated and applied to the Stantec surveyed 2021 and 2022 traffic volumes.

It is noted that this assessment is ultimately considered to be conservative given review of publicly available traffic volume data accessed from the Transport for NSW Traffic Volume Viewer as outlined below.

A permanent traffic counter station is located nearby on Rutledge Street. The location is illustrated in Figure 35 with details summarised in Table 21.



#### Figure 35: Location of permanent traffic counter

Base image source: Transport for NSW Traffic Volume Viewer

#### Table 21: Traffic counter details

Station Id	Road	Location	Year(s) of Data Collection
51210	Rutledge Street	20 metres west of West Parade	2009-2014 & 2017-2022

<sup>7</sup> TZP19 STM V3.8 FMM V7.1



Review of traffic volumes across the entire survey period, reproduced in Figure 36 and Figure 37 respectively for the AM peak period (7:00am to 10:00am) and PM peak period (3:00pm to 7:00pm), indicates there has been <u>no discernible traffic volume growth</u> between 2009 and 2022 during the morning and evening peak periods.









# 6.4 Intersection Operation

This section provides a brief overview of road network performance results for the year of opening (2026), with and without development, and ten year design scenario (2036), with and without development. Full results are presented in Appendix A of this report.

Table 22 presents a summary of the future operation of the intersections at the year of opening (2026), without the development.



Intersection	Peak	Degree of saturation (DOS)	Average delay (sec)	Average/ 95th percentile queue (m) [1]	Level of service (LOS)
Blaxland Road/ First Avenue	AM	0.78	32	107	LOS C
	PM	0.88	38	158	LOS C
First Avenue/ Ryedale Road	AM	0.07	15	1	LOS B
	PM	0.18	12	2	LOS A
Blaxland Road/ Florence Avenue	AM	0.49	13	57	LOS A
	PM	0.58	13	69	LOS A
Ryedale Road/ Florence Avenue	AM	0.14	8	5	LOS A
	PM	0.11	9	4	LOS A
Ryedale Road/ Fourth Avenue	AM	0.07	9	2	LOS A
	PM	0.10	9	4	LOS A
Blaxland Road/ Dalton Avenue	AM	0.18	48	4	LOS D
	PM	0.21	57	5	LOS E
Denistone Road/ Fourth Avenue	AM	0.06	5	1	LOS A
	PM	0.06	5	1	LOS A
Florence Avenue/ Denistone Road	AM	0.09	6	2	LOS A
	PM	0.06	6	1	LOS A

#### Table 22: Year of opening (2026) operating conditions - without development

[1] Blaxland Road/ First Avenue and First Avenue/ Ryedale Road modelled in network and therefore reports on average rather than 95 percentile queues

Table 22 indicates that key intersections surrounding the site are expected to continue operating well, with minimal delay and queueing during peak periods, with the exception of Blaxland Road/ First Avenue that is expected to operate satisfactorily in both peak periods and Blaxland Road/ Dalton Avenue due to the right turning movement from Dalton Avenue. Given the low traffic volumes on Dalton Avenue, such delays result in minimal queues, which was observed on site and therefore is considered satisfactory.

Table 23 presents a summary of the future operation of the intersections at the year of opening (2026), with the development. It is noted that turning movements in and out of the existing site have been deducted from the background volumes and replaced with traffic generated by the proposal.



Intersection	Peak	Degree of saturation (DOS)	Average delay (sec)	Average/ 95th percentile queue (m) [1]	Level of service (LOS)
Blaxland Road/ First Avenue	AM	0.78	32	107	LOS C
	PM	0.88	38	158	LOS C
First Avenue/ Ryedale Road	AM	0.07	15	1	LOS B
	PM	0.18	12	2	LOS A
Blaxland Road/ Florence Avenue	AM	0.54	14	62	LOS A
	PM	0.58	14	73	LOS A
Ryedale Road/ Florence Avenue	AM	0.17	8	6	LOS A
	PM	0.11	9	4	LOS A
Ryedale Road/ Fourth Avenue	AM	0.11	10	4	LOS A
	PM	0.11	9	4	LOS A
Blaxland Road/ Dalton Avenue	AM	0.18	49	4	LOS D
	PM	0.20	60	4	LOS E
Denistone Road/ Fourth Avenue	AM	0.05	5	1	LOS A
	PM	0.06	5	1	LOS A
Florence Avenue/ Denistone Road	AM	0.19	6	5	LOS A
	PM	0.11	6	3	LOS A

#### Table 23: Year of opening (2026) operating conditions - with development

[1] Blaxland Road/ First Avenue and First Avenue/ Ryedale Road modelled in network and therefore reports on average rather than 95 percentile queues

Table 23 indicates that following development of site, key intersections surrounding the site are expected to continue operating well and at a similar level to the 2026 without development condition, with minor increases to degree of saturation, delays and queues (if at all).

Table 24 presents a summary of the future operation of the intersections at 10 years post opening (2036), without the development.



Intersection	Peak	Degree of saturation (DOS)	Average delay (sec)	Average/ 95th percentile queue (m) [1]	Level of service (LOS)
Blaxland Road/ First	AM	0.90	38	130	LOS C
Avenue	PM	1.04	79	278	LOS F
First Avenue/ Ryedale Road	AM	0.07	15	2	LOS B
	PM	0.21	14	3	LOS A
Blaxland Road/ Florence Avenue	AM	0.53	13	64	LOS A
	PM	0.63	13	80	LOS A
Rvedale Road/ Florence	AM	0.18	9	7	LOS A
Avenue	PM	0.14	9	5	LOS A
Ryedale Road/ Fourth Avenue	AM	0.08	9	3	LOS A
	PM	0.12	9	5	LOS A
Blaxland Road/ Dalton Avenue	AM	0.21	55	5	LOS D
	PM	0.32	90	8	LOS F
Denistone Road/ Fourth Avenue	AM	0.08	6	2	LOS A
	PM	0.08	6	2	LOS A
Florence Avenue/	AM	0.16	6	4	LOS A
Denistone Road	PM	0.07	6	2	LOS A

#### Table 24: Year of opening (2036) operating conditions – without development

[1] Blaxland Road/ First Avenue and First Avenue/ Ryedale Road modelled in network and therefore reports on average rather than 95 percentile queues

Table 24 indicates that key intersections surrounding the site are expected to continue operating well, with minimal delay and queueing during peak periods, with the exception of Blaxland Road/ First Avenue that is expected to operate satisfactorily in the AM peak and overcapacity in the PM peak. During the PM peak period, the south through movement, north right turn and west right turn all operating with degree of saturations between 1.03 and 1.04, average delays of between 120 and 125 seconds and level of service F.

The right turning movement from Dalton Avenue onto Blaxland Road at the Dalton Avenue/ Blaxland Road intersection is also expected to operate at or over capacity. Given the low traffic volumes on Dalton Avenue, such delays result in minimal queues, which was observed on site and therefore is considered satisfactory.

Table 25 presents a summary of the future operation of the intersections at 10 years post opening (2036), with the development. It is noted that turning movements in and out of the existing site have been deducted from the background volumes and replaced with traffic generated by the proposal.



Intersection	Peak	Degree of saturation (DOS)	Average delay (sec)	Average/ 95th percentile queue (m) [1]	Level of service (LOS)
Blaxland Road/ First Avenue	AM	0.90	41	140	LOS C
	PM	1.06	85	300	LOS F
First Avenue/ Ryedale Road	AM	0.07	15	3	LOS B
	PM	0.23	13	3	LOS A
Blaxland Road/ Florence Avenue	AM	0.58	14	70	LOS A
	PM	0.71	14	81	LOS A
Ryedale Road/ Florence Avenue	AM	0.22	9	9	LOS A
	PM	0.13	9	5	LOS A
Ryedale Road/ Fourth Avenue	AM	0.13	10	5	LOS A
	PM	0.14	9	5	LOS A
Blaxland Road/ Dalton Avenue	AM	0.21	55	5	LOS D
	PM	0.32	94	8	LOS F
Denistone Road/ Fourth Avenue	AM	0.08	6	2	LOS A
	PM	0.07	6	2	LOS A
Florence Avenue/ Denistone Road	AM	0.19	6	5	LOS A
	PM	0.13	6	3	LOS A

#### Table 25: Year of opening (2036) operating conditions – with development

[1] Blaxland Road/ First Avenue and First Avenue/ Ryedale Road modelled in network and therefore reports on average rather than 95 percentile queues

Table 25 indicates that following development of site, key intersections surrounding the site are expected to continue operating well and at a similar level to the 2036 without development condition, with minor increases to degree of saturation, delays and queues (if at all).

The Blaxland Road/ First Avenue intersection is expected to continue operating over capacity in the PM peak period following full development of the site, with the south through movement, north right turn and west right turn all operating with degree of saturations between 1.04 and 1.06, average delays of between 125 and 135 seconds and level of service F. It is clear that the capacity constraints are a result of background traffic growth rather than the addition of traffic as a result of the redevelopment. Further, the development is expected to generate around 61 vehicle movements (one vehicle per minute) at this intersection in the PM peak period, representing just 1.4 per cent of total intersection volume of 4,267 vehicles, noting the 61 vehicles also includes allowance for existing traffic generated by the current Ryde Development and hence the uplift in traffic volumes is lower.



#### Ryde Hospital Redevelopment

As such, no road network mitigations are proposed with exception of extending the existing median along Ryedale Road to ensure the proposed access positioned at the northern boundary of the site operates as left in, left out only.



# 7 Overview Green Travel Plan – Concept Proposal

### 7.1 Introduction

### 7.1.1 TRAVEL PLAN FRAMEWORK

Transport is a necessary part of life, but it has economic, public health and environmental consequences. The transport sector is one of the fastest growing emissions sectors in Australia, and therefore is one of the key opportunities for reducing greenhouse gases. As well as delivering better environmental outcomes, providing a range of travel choices with a focus on walking, cycling and public transport will have major public health benefits and will ensure a strong and prosperous community.

The physical infrastructure being provided as part of the development is only part of the solution. A green travel plan (GTP) will ensure that the transport infrastructure, services and policies both within and external to the site are tailored to the users and coordinated to achieve the most sustainable outcome possible.

### 7.1.2 WHAT IS A GTP?

A GTP is a package of measures aimed at promoting sustainable travel and reducing reliance on the private car. It is not designed to be 'anti-car' however it will encourage and support people's aspirations for carrying out their daily business in a more sustainable way. Travel plans can provide both:

- measures which restrict car use (disincentives or 'sticks')
- measures which encourage or support sustainable travel, reduce the need to travel or make travelling more efficient (incentives or 'carrots').

The travel plan would promote the use of transport, other than the private car, provide choice for staff to travel to and from the site, which is more sustainable and environmentally friendly.

Indeed, there are a range of "non-car" transport options that are available at the site which have been described in this report.

Given the developments aim to reduce private travel to the site, the implementation of a GTP would be beneficial.

# 7.2 Key Objectives

The aim of the GTP is to bring about better transport arrangements for living and working at the site. The key objectives of the Travel Plan are:

- To encourage walking.
- To encourage cycling.



- To encourage the use of public transport.
- To reduce the use of the car, in particular single car occupancy.
- Where it is necessary to use the car, encourage more efficient use.

It is the intention therefore that the travel plan will deliver the following benefits:

- Enable higher public and active travel mode share targets to be achieved.
- Contribute to greenhouse gas emission reductions and carbon footprint minimisation.
- Contribute to healthy living for all.
- Contribute to social equity and reduction in social exclusion.
- Improve knowledge and contribute to learning.

# 7.3 Site Specific Measures

Several opportunities exist to provide the Ryde Hospital staff and visitors with incentives to consider alternative modes of travel to and from site.

The following potential measures and initiatives could be implemented to encourage more sustainable travel modes:

#### **Active Travel**

- Provide high quality and prominent bicycle parking and change/ shower facilities.
- Provide clear pedestrian and cyclist wayfinding.
- Provide shelters along walkways or near bus stops and street lighting.
- Encourage cultural change through:
  - o creating a bike user group (targeting staff living within five kilometres of the hospital)
  - o events such as annual 'ride to work' day
  - providing information detailing opportunities and facilities available to staff. This may include providing maps of the available cycling routes to and within the hospital.

#### **Promote Car-Pooling**

- Provide prioritised carpool parking spaces on-site, including consideration for incentives such as prices, location and proximity to services.
- Limiting on-site parking allocation to staff.

• Encouraging staff that drive to work and park on surrounding roads to carpool through creation of a carpooling club or registry/ forum.

#### **Public Transport**

- Update the existing Travel Access Guide (TAG) following redevelopment
   (<u>https://www.nslhd.health.nsw.gov.au/Ryde/Documents/RydeHospitalTAG.pdf</u>) to be provided to
   all staff and publicly available to all visitors. The document would be based on facilities available
   at the site and include detail on the surrounding public transport services and active transport
   initiatives. The TAG would be updated as the surrounding transport environment changes.
- Providing public transport information boards/ apps to inform staff and visitors of alternative transport options (the format of such information boards would be based upon the TAG).

### 7.3.1 TRAVEL ACCESS GUIDE

A TAG provides information to staff and visitors on how to travel to the site using sustainable transport modes such as walking and public transport. The information is presented visually in the format of a map (or app) showing the site location and nearby transport modes highlighting available pedestrian and cycle routes. The information is usually presented as a brochure (or app) to be included in a welcome pack or on the back of company stationery and business cards.

The existing Ryde Hospital TAG is found here

https://www.nslhd.health.nsw.gov.au/Ryde/Documents/RydeHospitalTAG.pdf.

#### 7.3.2 INFORMATION AND COMMUNICATION

Several opportunities exist to provide staff and visitors with information about nearby transport options. Connecting staff and visitors with information would help to facilitate journey planning and increase their awareness of convenient and inexpensive transport options which support change in travel behaviour.

These include:

- Transport NSW provides bus, train and ferry routes, timetables and journey planning through their Transport Info website: <u>http://www.transportnsw.info</u>.
- Council provides a number of services and a range of information and events to encourage people of all levels of experience to travel by bicycle: <u>https://www.ryde.nsw.gov.au/Recreation/Cycling</u>.

In addition, connecting staff and visitors via social media may provide a platform to informally pilot new programs or create travel-buddy networks and communication.



### 7.3.3 MONITORING OF THE GTP

There is no standard methodology for monitoring the GTP, but it is suggested that it be monitored to ensure that it is achieving the desired benefits and modify it if required. It will not be possible at this stage to state what additional modifications might be made as this will be dependent upon the particular circumstances prevailing at that time.

The GTP should be monitored on a regular basis, e.g. yearly, by carrying out travel surveys. Travel surveys will allow the most effective initiatives of the GTP to be identified, and conversely less effective initiatives can be modified or replaced to ensure the best outcomes are achieved. It will clearly be important to understand people's reasons for travelling the way they do; any barriers to changing their behaviour, and their propensity to change.

To ensure the successful implementation of the GTP, a Travel Plan Coordinator (TPC) should be appointed to ensure the successful implementation of the GTP. This could be the building manager or a member of the body corporate.

# 7.4 Summary

The concept proposal would be able to develop and utilise a travel plan to actively promote increased use of sustainable transport modes. Although it is difficult to predict what measures might be achievable, the above measures provide a framework for the site and implementation of a future travel plan.



# 8 Early Works – Proposal

Early works proposed as part of this development application include:

- Establishing access to the Project site and general establishment
- Site preparation including environmental clearing
- Bulk earthworks, including, cut and fill, associated with stage 1 footprint and proposed stage 1 internal roads
- Shoring associated with bulk earthworks
- Establishment of construction access roads
- Relocation and upgrades of in-ground building services works and utility adjustments to facilitate bulk earthworks
- Partial removal of Lantana undergrowth.

The Early Works site layout is illustrated in Figure 38.



Figure 38: Early Works site layout



Source: SSDA Stage 1 – Proposed Site Plan, Drawing No. RHR-ARC-DR-SSDA\_S1\_006, Rev 6, prepared by STH dated 25 July 2022



# 9 Early Works – Parking

### 9.1.1 CAR PARK REQUIREMENTS

Considering the existing high demand for parking on site, it is recommended that Early Works minimise where possible net loss of parking on site.

To accommodate the demolition of existing structure within the Early Works site and facilitate the temporary decant of services from the Chattery, a temporary structure will be built within car park 4 (P4) throughout works, resulting in the temporary loss of up to 14 parking spaces. It is noted that this car park has been operating as the COVID clinic parking area since 2020, with minimal parking demand associated with typical hospital activities. As such, the removal of this car park is not expected to have a significant impact to current parking supply at the hospital.

Construction site access will be provided from Ryedale Road, through car park 5, resulting in the loss of 28 staff and fleet parking spaces. Considering the relatively short works programme, and significant constraints on-site associated with gradients, existing structures, functioning of the existing hospital etc., these parking spaces are not proposed to be relocated on site. The NSLHD will need to work with staff on promoting public transport and car-pooling during this time to assist in alleviating staff parking impacts on the surrounding road network during construction. Notwithstanding, off site parking options will be explored as part of main works, subject to a future detailed DA.

An additional two VMO parking spaces will be removed along the internal road. It is recommended the two VMO parking spaces and nine fleet parking spaces in car park 5 are relocated on site through conversion of general staff/ visitor parking spaces to VMO/ fleet parking.


# 10 Early Works – Design Review

## 10.1.1.1 Internal Road Network

Early works propose to partially demolish the existing internal road, just north of the existing loading dock. Considering the existing location of parking close to the internal road and each Denistone Road access, demolishing the road should generally have limited impact to site operation with the exception of access to the existing loading dock and maternity ward.

Currently, access to the loading dock is provided along the internal road via the northern intersection with Denistone Road. Following demolition of the road, access will temporarily be provided along the internal road and through P1 via the southern driveway access to Denistone Road. Currently, public and emergency access to the maternity ward is provided via an informal parking area along the internal road as shown in Figure 13. Following demolition of the road, emergency access will be provided from the informal ambulance/ emergency services parking area and public access will be provided through the Emergency Department, as shown in Figure 11.

A stage 1 early works site construction access road is proposed from Ryedale Road through car park 5.

Figure 39 provides an overview of the proposed new construction access road and revised access strategy within the hospital proposed as part of Early works





Figure 39: Early Works planned internal road network

Source: SSDA Stage 1 – Proposed Site Plan, Drawing No. RHR-ARC-DR-SSDA\_S1\_006, Rev 6, prepared by STH dated 25 July 2022

## 10.1.1.2 Temporary Loading Dock Access

The temporary loading dock access during early works requires vehicles to travel through the P1 via the existing driveway entry and exit onto Denistone Road. A swept path assessment has been completed, contained in Appendix B of this report, indicating the revised access should operate okay for vehicles up to 10.5 metres long. The access does not strictly meet Australian Standard requirements in regard to road width through P1, however is appropriate given the temporary nature of the access.

To accommodate the 4.5 metre height clearance for service vehicles, existing tree branches across the driveway entry will be removed, height clearance bars along the driveway entry will be relocated and a temporary barrier will be provided along the entry road to ensure service vehicles do not travel under an existing area of reduced height clearance along the access road. Service vehicles will also be limited to up to 10.5 metres to access the dock, noting that currently vehicles up to 10 metres access the dock.



# 11 Early Works - Overview Construction Traffic Management Plan

# 11.1 Overview

This section seeks to provide an overview of the Construction Traffic Management Plan (CTMP) initiatives to be implemented as part of the construction works associated with the proposed development.

Specifically, this overview CTMP considers the following:

- construction site access arrangements
- anticipated truck volumes during construction stages
- truck routes to/ from the site
- requirements for works zones
- pedestrian and cyclist access
- site personnel parking
- traffic control measures
- overview of CTMP requirements.

# 11.2 Principles of Traffic Management

The general principles of traffic management during construction activities are as follows:

- minimise the impact on pedestrian and cyclist movements
- maintain appropriate public transport access
- minimise the loss of on-street parking
- minimise the impact on adjacent and surrounding buildings
- maintain access to/ from adjacent buildings
- restrict construction vehicle movements to designated routes to/ from the site
- manage and control construction vehicle activity near the site
- carry out construction activity in accordance with approved hours of works.

# 11.3 Works Programme

The expected duration of the works is January 2023 through to November 2023. Anticipated staging and peak construction periods will be outlined in the Construction Traffic Management Plan.

# 11.4 Anticipated Work Hours

Construction work would be undertaken in accordance with development consent conditions. The typical work hours are expected to be:

- Weekdays: 7:00am 6:00pm
- Saturdays: 8:00am 1:00pm
- Sundays and public holidays: no work permitted.

Workers would be advised of the approved work hours during induction. Any works outside of the approved work hours would be subject to specific prior approval from the appropriate authorities. Such works may include delivery of cranes, large plant or equipment required on the site that require oversize vehicle access.

# 11.5 Site Access and Loading

The main access to Ryde Hospital is provided along Denistone Road. To minimise impact to the hospital access and operations, construction access for the Early works will be via the existing driveway cross over along Ryedale Road to car park 5, illustrated in Figure 39. Due to the crest in the hill near this access compromising sight lines, the access is currently restricted to left in, left out movements only through a central median along Ryedale Road.

As part of the CTMP to be prepared by the contractor it is recommended that if vehicles larger than 8.8 metre MRVs are required, the existing central median should be replaced with a temporary median that can be removed during approved construction hours. Accredited traffic controllers will be required to temporarily hold traffic during construction vehicle movements into/ out of site (with the exception of vehicles up to 8.8 metre MRVs turning left in/ left out of site).

All loading is expected to take place within the bounds of the site. Should a works zone be required, an application will be made to the relevant authorities prior to commencement of works.

# 11.6 Traffic Guidance Schemes

As part of the detailed CTMP, Traffic Guidance Schemes (previously referred to as Traffic Control Plans) will be prepared in accordance with the principles of the Traffic Control at Work Sites manual (Transport for NSW, 2020). The Traffic Guidance Schemes primarily show where construction signs will be located at specific locations (such as uncontrolled intersections) along the approved truck routes to warn other



road users of the increase in construction vehicle movements. Traffic controllers will be employed to manage construction vehicle movements in and out of the site.

# 11.7 Construction Staff Parking

It is anticipated that there will be a maximum of 35 workers on-site at any given time during the construction activities.

Some construction parking will be provided on site within the existing car park 5. Given the site's proximity to a range of high frequency public transport services, workers will be encouraged to use public transport to access the site. Workers will be encouraged to operate a car pool system to/ from surrounding train stations to encourage uptake of available public transport services, with vehicles parked on site used to pick up/ drop off workers. During site induction, workers will be informed of the existing train/ bus network servicing the site. Appropriate arrangements will be made for any equipment/ tool storage and drop-off requirements.

# 11.8 On-street Works Zone

It is not anticipated that an on-street Works Zone would be required during the early works.

If a Works Zone is required, the contractor would be required to obtain approval from the relevant authority (Council, Transport for NSW).

# 11.9 Light and Heavy Vehicle Traffic Generation

It is expected a total of 20 heavy vehicles could access the site per day during peak activity across a three month period, with marginal construction vehicles per day expected for the remaining construction programme. These movements would likely be spread across the day and would include vehicles such as bogie trucks (typically less than 12.5 metre Heavy Rigid Vehicles). Construction vehicle movements will be minimised/ avoided during peak hours where possible.

Light vehicle traffic generation would be largely generated by construction worker traffic movements to and from the site. Some parking will be provided on-site, with workers to be encouraged to use public transport to access the site. As such, light vehicle traffic generation associated with construction workers will be minor. Further to this, any construction worker traffic movements will generally be outside of peak periods.

# 11.10 Heavy Vehicle Access Routes

Truck movements will be restricted to designated routes and confined to the State and Regional Roads. Truck routes to/ from the site, as indicated below, have been identified with the aim of minimising the impact of construction traffic on roads near the site. Truck drivers will be advised of the designated truck routes to/ from the site.



The directional distribution and assignment of traffic generated by the development will be influenced by a number of factors, most notably the origin/ destination of materials, configuration of access points to the site and the configuration of the arterial road network in the immediate vicinity of the site.

Figure 40 provides a summary of the anticipated construction vehicle routes to/ from the site. Truck drivers will be advised of the designated truck routes to/ from the site.



## Figure 40: Construction vehicle routes

Base image source: http://www.street-directory.com.au/

# 11.11 Pedestrian and Cyclist Access

Where required, B-Class hoardings will be installed along the perimeter of the site where overhead works are occurring to maintain and ensure safe pedestrian passage adjacent to the site. Where B-Class hoarding is not required, A-Class hoarding and fencing will be provided.

Footpath closures are not expected, however should this be required by the contractor the impact would be managed through the CTMP. Should pedestrian facilities be impacted, alternative pedestrian access complete with signage will be provided, and pedestrian/ traffic movements will be managed by an accredited traffic controller if required. Should any unforeseen activities require the temporary closure of any pedestrian thoroughfares, a TGS will need to be developed and submitted for approval by Council.

Truck movements will be avoided during peak hours where possible to minimise the impact on pedestrians and cyclists.

The construction activities are not expected to impact existing public transport services near the site.



# 11.12 Traffic Impacts

Some minor increase in average delay to vehicles at surrounding key intersections can be expected at times during the construction period as is typical for construction projects. Truck movements will be minimised as much as possible during road network peak hours.

As discussed, traffic controllers will be required to temporarily hold traffic during construction vehicle movements into/ out of site (with the exception of vehicles up to 8.8 metre MRVs turning left in/ left out of site). Considering the low traffic volumes along Ryedale Road outside of peak periods, this arrangement is considered appropriate.

There are currently no known construction works proposed in the immediate vicinity of the site. As part of the detailed CTMP, a revised review of the cumulative impact of concurrent construction activities in the local area will need to be completed.

# 11.13 Overview of CTMP Requirements

This letter provides an overview of the CTMP initiatives that would be implemented for the stage 1 Early Works. A detailed CTMP would cover the following additional information:

- Description of construction activities and duration.
- Construction work hours.
- Detailed assessment of construction traffic impacts including any cumulative impacts.
- Details regarding any one-off activities for installation of cranes and other equipment.
- Swept path analysis of heavy vehicle access to the site and Works Zone.
- Detailed assessment of on-street parking impacts.
- Emergency vehicle access.
- Impacts to public transport services.
- Traffic Guidance Scheme(s).
- Contact details of key project personnel.



# 12 Conclusion

Based on the analysis and discussions presented within this report, the following conclusions are made:

- Ryde Hospital is reasonably well serviced by public transport, in proximity to two railway stations and with a bus stop provided at the main hospital entrance providing convenient connections with key local and regional destinations.
- The traffic assessment indicates that the surrounding road network currently operates well and with spare capacity during peak periods.
- The key transport elements of the concept proposal are:
  - o a new hospital building to be located central to the site
  - construction of a multi-deck car park on the western edge of the site, near Ryedale Road, with additional public car parking provided along the eastern frontage of the site near Denistone Road (subject to a future detailed DA)
  - revised emergency vehicle parking and loading dock, as well as short term public parking to accommodate drop off/ pick up activity (subject to a future detailed DA).
- The draft parking demand study identified that the proposed redevelopment should provide for an additional 257 parking spaces on site, resulting in a total of 515 spaces onsite, comprising 325 staff parking spaces, seven VMO parking spaces (in an additional to the seven VMO parking spaces retained along Denistone Road), 27 fleet parking spaces and 155 public parking spaces. Additional on-site parking spaces will be provided in accordance with the uplift identified in the final Parking Demand Study as part of the detailed design Stage 2 SSDA.
- The concept development could generate 365 and 289 trips respectively in the 2036 AM and PM peak hours, resulting in an increase in 160 and 113 vehicle trips respectively in the 2036 AM and PM peak hours compared to the existing development.
- To assess the adequacy of the internal road network and capacity of the external road network to support the development, analysis has been undertaken to include background traffic growth and the proposed redevelopment at year of opening (2026) and 10 years post opening (2036).
- Key intersections surrounding the site are expected to continue operating well post development and at a similar level to the 2026 and 2036 without development condition, with minor increases to degree of saturation, delays and queues (if at all).
- The Blaxland Road/ First Avenue intersection is expected to continue operating satisfactorily with and without the development during year of opening (2026) however is expected to operate over capacity in the 10 year growth scenario (2036) PM peak period without the development, with relatively minor increases to degree of saturation, delays and queues post development. It is clear the capacity constraints in 2036 PM peak period are a result of background traffic growth rather than

the addition of traffic as a result of the development, noting the redevelopment contributes around 1.4 per cent to the total intersection volume.

- As such, no road network mitigations are proposed with exception of extending the existing median along Ryedale Road to ensure the proposed access positioned at the northern boundary of the site operates as left in, left out only.
- The early works consist of site establishment, site preparation, earthworks and shoring walls, establishment of construction access roads and relocation and upgrades to in-ground building services.
- Works propose to partially demolish the existing internal road, just north of the loading dock. Revised
  access to the loading dock will be provided along the internal road and through car park 1 via the
  southern driveway access to Denistone Road, restricted for use by vehicles up to 10.5 metre long
  vehicles.
- To accommodate the proposed early works, some existing parking spaces will be removed. Considering current site constraints, additional car parking will not be provided on site. Notwithstanding, off-site parking options will be explored as part of main works, subject to a future detailed DA.
- The early works include implementation of a construction access road from Ryedale Road via the
  existing driveway crossover to car park 5. Accredited traffic controllers will be required to temporarily
  hold traffic during construction vehicle movements into/ out of site (with the exception of vehicles up
  to 8.8 metre MRVs turning left in/ left out of site).



Ryde Hospital Redevelopment

# **APPENDICES**



# Appendix A SIDRA Outputs

# **USER REPORT FOR SITE**

## All Movement Classes

Project: 220704-N211310 Ryde Hospital SIDRA

## **Template: Movement, Phasing**

## Site: 1 [1 Blaxland Road/Florence Avenue\_EX\_AM (Site Folder: Existing)]

Site Category: -

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 55 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, B\*, C (\* Variable Phase)

Vehi	Vehicle Movement Performance													
Mov	Turn	INF	TUT	DEM	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
ID				FLO Totol	WS LIV1	Satn	Delay	Service		EUE	Que	Stop	NO.	Speed
		veh/h	rvj veh/h	veh/h	пvј %	v/c	sec		ven.	m Dist		Nale	Cycles	km/h
South	n: Blaxl	and Roa	d											
1	L2	123	3	129	2.4	0.323	13.3	LOS A	3.5	24.9	0.65	0.67	0.65	42.9
2	T1	447	20	471	4.5	*0.323	8.3	LOS A	5.0	36.1	0.63	0.58	0.63	49.4
Appro	bach	570	23	600	4.0	0.323	9.4	LOS A	5.0	36.1	0.64	0.60	0.64	47.8
North	: Blaxla	and Road	ł											
8	T1	644	24	678	3.7	0.389	7.8	LOS A	6.0	43.0	0.57	0.50	0.57	50.6
9	R2	24	0	25	0.0	*0.389	22.9	LOS B	4.5	32.6	0.84	0.71	0.84	42.6
Appro	bach	668	24	703	3.6	0.389	8.3	LOS A	6.0	43.0	0.58	0.50	0.58	50.1
West	: Florer	nce Aven	ue											
10	L2	25	0	26	0.0	0.052	20.7	LOS B	0.5	3.7	0.76	0.68	0.76	40.8
12	R2	100	3	105	3.0	* 0.531	31.9	LOS C	2.9	21.0	0.99	0.78	1.01	30.9
Appro	bach	125	3	132	2.4	0.531	29.6	LOS C	2.9	21.0	0.94	0.76	0.96	33.0
All Ve	hicles	1363	50	1435	3.7	0.531	10.7	LOS A	6.0	43.0	0.64	0.57	0.64	46.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

Queue Model: SIDRA Standard.

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

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

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance													
Mov	Input	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Ef	fective	Travel	Travel	Aver.		
ID Crossing	Vol.	Flow	Delay	Service	ce QUEUE		Que	Stop Rate	Time	Dist.	Speed		
	ped/h	ped/h	sec		ped	m			sec	m	m/sec		
North: Blaxlan	d Road												

P3 Full	50	53	19.3	LOS B	0.1	0.1	0.84	0.84	46.4	35.2	0.76
West: Florence	Avenue										
P4 Full	50	53	20.1	LOS C	0.1	0.1	0.86	0.86	44.7	31.9	0.71
All Pedestrians	100	105	19.7	LOS B	0.1	0.1	0.85	0.85	45.5	33.6	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.

#### **Output Phase Sequence** Phase A REF Phase C Phase B VAR Blaxland Road Blaxland Road Blaxland Road ١L Florence Avenue Florence Avenue Florence Avenue H ╡ ר Blaxland Road Blaxland Road Blaxland Road

REF: Reference Phase VAR: Variable Phase

Normal Movement	Permitted/Opposed
Slip/Bypass-Lane Movement	Opposed Slip/Bypass-Lane
Stopped Movement	Turn On Red
Cther Movement Class (MC) Running	Undetected Movement
Mixed Running & Stopped MCs	Continuous Movement
Other Movement Class (MC) Stopped	Phase Transition Applied

Phase Timing Summary	1		
Phase	Α	В	С
Phase Change Time (sec)	0	34	43
Green Time (sec)	28	3	6
Phase Time (sec)	34	9	12
Phase Split	62%	16%	22%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Site: 1 [1 Blaxland Road/Florence Avenue\_EX\_PM (Site Folder: Existing)]

Site Category: -

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 55 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, B\*, C (\* Variable Phase)

Vehi	Vehicle Movement Performance													
Mov ID	Turn	INF VOLU	PUT JMES	DEM/ FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUE	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		[ Total veh/h	HV ] veh/h	[ Total veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist ] m		Rate	Cycles	km/h
South	n: Blaxl	and Roa	d											
1	L2	129	1	136	0.8	<b>*</b> 0.510	17.6	LOS B	7.4	52.9	0.77	0.74	0.77	40.5
2	T1	708	15	745	2.1	0.510	11.4	LOS A	8.8	62.6	0.75	0.68	0.75	46.8
Appro	bach	837	16	881	1.9	0.510	12.3	LOS A	8.8	62.6	0.76	0.69	0.76	45.7
North	: Blaxla	and Road	t											
8	T1	525	9	553	1.7	0.364	8.3	LOS A	5.7	40.4	0.58	0.50	0.58	50.1
9	R2	25	1	26	4.0	*0.364	27.0	LOS B	3.2	23.0	0.91	0.73	0.91	40.5
Appro	bach	550	10	579	1.8	0.364	9.1	LOS A	5.7	40.4	0.60	0.51	0.60	49.3
West	Florer	nce Aven	ue											
10	L2	29	0	31	0.0	0.053	19.1	LOS B	0.6	4.1	0.73	0.68	0.73	41.6
12	R2	132	5	139	3.8	*0.528	29.7	LOS C	3.7	26.8	0.97	0.79	0.97	31.7
Appro	bach	161	5	169	3.1	0.528	27.8	LOS B	3.7	26.8	0.93	0.77	0.93	33.6
All Ve	hicles	1548	31	1629	2.0	0.528	12.8	LOS A	8.8	62.6	0.72	0.63	0.72	45.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

Queue Model: SIDRA Standard.

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

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

\* Critical Movement (Signal Timing)

Pedestrian M	Pedestrian Movement Performance													
Mov D Crossing	Input	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Et	ffective	Travel	Travel	Aver.			
	VOI.	FIOW	Delay	Service	QUE [Ped	Dist ]	Que	Stop Rate	Time	Dist.	Speed			
	ped/h	ped/h	sec		ped	m			sec	m	m/sec			
North: Blaxland	d Road													
P3 Full	50	53	18.4	LOS B	0.1	0.1	0.82	0.82	45.5	35.2	0.77			
West: Florence	Avenue													
P4 Full	50	53	20.1	LOS C	0.1	0.1	0.86	0.86	44.7	31.9	0.71			
All Pedestrians	100	105	19.3	LOS B	0.1	0.1	0.84	0.84	45.1	33.6	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.



REF: Reference Phase VAR: Variable Phase

$ \longrightarrow $	Normal Movement	$ \longrightarrow $	Permitted/Opposed
$ \longrightarrow $	Slip/Bypass-Lane Movement	$ \longrightarrow $	Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
$\implies$	Other Movement Class (MC) Running	$ \longrightarrow $	Undetected Movement
	Mixed Running & Stopped MCs	$ \longrightarrow $	Continuous Movement
	Other Movement Class (MC) Stopped	•	Phase Transition Applied

### Phase Timing Summary

Phase	Α	В	С
Phase Change Time (sec)	0	32	41
Green Time (sec)	26	3	8
Phase Time (sec)	32	9	14
Phase Split	58%	16%	25%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Vehi	Vehicle Movement Performance													
Mov ID	Turn	INP VOLU [ Total	UT IMES HV]	DEM/ FLO [ Total	AND WS HV]	Deg. Satn	Aver. Delay	Level of Service	95% BA QUE [ Veh.	CK OF EUE Dist ]	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
South	: Ryed	veh/h ale Road	veh/h	veh/h	%	v/c	sec	_	veh	m	_	_	_	km/h
2	T1	77	0	81	0.0	0.090	3.9	LOS A	0.5	3.3	0.10	0.52	0.10	46.3
3	R2	41	0	43	0.0	0.090	6.6	LOS A	0.5	3.3	0.10	0.52	0.10	45.7
3u	U	1	0	1	0.0	0.090	7.9	LOS A	0.5	3.3	0.10	0.52	0.10	46.6
Appro	bach	119	0	125	0.0	0.090	4.9	LOS A	0.5	3.3	0.10	0.52	0.10	46.1
East:	Floren	ce Avenu	le											
4	L2	47	0	49	0.0	0.059	4.9	LOS A	0.3	2.0	0.28	0.54	0.28	44.8
6	R2	14	1	15	7.1	0.059	7.2	LOS A	0.3	2.0	0.28	0.54	0.28	44.7
6u	U	1	0	1	0.0	0.059	8.5	LOS A	0.3	2.0	0.28	0.54	0.28	44.8
Appro	bach	62	1	65	1.6	0.059	5.5	LOS A	0.3	2.0	0.28	0.54	0.28	44.8
North	: Ryeda	ale Road												
7	L2	21	1	22	4.8	0.111	4.6	LOS A	0.6	3.9	0.17	0.45	0.17	45.2
8	T1	112	1	118	0.9	0.111	4.1	LOS A	0.6	3.9	0.17	0.45	0.17	46.6
9u	U	1	0	1	0.0	0.111	8.1	LOS A	0.6	3.9	0.17	0.45	0.17	46.5
Appro	bach	134	2	141	1.5	0.111	4.2	LOS A	0.6	3.9	0.17	0.45	0.17	46.4
All Ve	hicles	315	3	332	1.0	0.111	4.7	LOS A	0.6	3.9	0.16	0.50	0.16	46.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

Vehi	Vehicle Movement Performance													
Mov ID	Turn	INP VOLU [ Total	UT IMES HV]	لDEM FLO [ Total	AND WS HV]	Deg. Satn	Aver. Delay	Level of Service	95% BA QUE [ Veh.	CK OF EUE Dist ]	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
South	n: Ryed	veh/h ale Road	veh/h	veh/h	%	V/C	sec	_	veh	m	_	_	_	km/h
2	T1	70	3	74	4.3	0.087	4.0	LOS A	0.4	3.2	0.15	0.51	0.15	46.1
3	R2	32	0	34	0.0	0.087	6.7	LOS A	0.4	3.2	0.15	0.51	0.15	45.5
3u	U	2	0	2	0.0	0.087	8.0	LOS A	0.4	3.2	0.15	0.51	0.15	46.5
Appro	bach	104	3	109	2.9	0.087	4.9	LOS A	0.4	3.2	0.15	0.51	0.15	45.9
East:	Floren	ce Avenu	le											
4	L2	61	1	64	1.6	0.087	5.0	LOS A	0.4	3.0	0.30	0.56	0.30	44.6
6	R2	29	0	31	0.0	0.087	7.2	LOS A	0.4	3.0	0.30	0.56	0.30	44.6
6u	U	1	0	1	0.0	0.087	8.5	LOS A	0.4	3.0	0.30	0.56	0.30	44.6
Appro	bach	91	1	96	1.1	0.087	5.8	LOS A	0.4	3.0	0.30	0.56	0.30	44.6
North	: Ryeda	ale Road												
7	L2	24	0	25	0.0	0.114	4.5	LOS A	0.6	4.1	0.15	0.46	0.15	45.2
8	T1	111	2	117	1.8	0.114	4.0	LOS A	0.6	4.1	0.15	0.46	0.15	46.5
9u	U	6	0	6	0.0	0.114	8.0	LOS A	0.6	4.1	0.15	0.46	0.15	46.4
Appro	bach	141	2	148	1.4	0.114	4.3	LOS A	0.6	4.1	0.15	0.46	0.15	46.3
All Ve	hicles	336	6	354	1.8	0.114	4.9	LOS A	0.6	4.1	0.19	0.50	0.19	45.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

Vehicle Movement Performance														
Mov ID	Turn	INP VOLU	UT IMES	DEM, FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUE	CK OF	Prop. E Que	Effective Stop	Aver. No.	Aver. Speed
		[ Total	HV]	[ Total	HV ]	vlo			[Veh.	Dist ]		Rate	Cycles	km/b
South	. Rved	ale Road		ven/n	70	V/C	Sec		Ven	111	_	_	_	K111/11
J	i. ityeu			4	0.0	0.070		100.4	0.4	0.5	0.44	0.50	0.4.4	40.0
1	L2	1	0	1	0.0	0.072	3.9	LOSA	0.4	2.5	0.14	0.52	0.14	42.8
2	11	46	0	48	0.0	0.072	3.7	LOSA	0.4	2.5	0.14	0.52	0.14	45.6
3	R2	37	0	39	0.0	0.072	6.9	LOSA	0.4	2.5	0.14	0.52	0.14	44.2
3u	U	5	0	5	0.0	0.072	8.4	LOS A	0.4	2.5	0.14	0.52	0.14	46.3
Appro	bach	89	0	94	0.0	0.072	5.3	LOS A	0.4	2.5	0.14	0.52	0.14	45.1
East:	Fourth	Avenue												
4	L2	36	0	38	0.0	0.059	4.3	LOS A	0.3	2.1	0.26	0.53	0.26	43.4
5	T1	5	0	5	0.0	0.059	4.1	LOS A	0.3	2.1	0.26	0.53	0.26	39.3
6	R2	22	2	23	9.1	0.059	7.4	LOS A	0.3	2.1	0.26	0.53	0.26	43.1
6u	U	1	0	1	0.0	0.059	8.8	LOS A	0.3	2.1	0.26	0.53	0.26	41.7
Appro	bach	64	2	67	3.1	0.059	5.4	LOS A	0.3	2.1	0.26	0.53	0.26	43.1
North	: Ryeda	ale Road												
7	L2	41	2	43	4.9	0.111	4.1	LOS A	0.6	3.9	0.18	0.44	0.18	43.7
8	T1	89	1	94	1.1	0.111	3.8	LOS A	0.6	3.9	0.18	0.44	0.18	46.4
9	R2	3	0	3	0.0	0.111	7.0	LOS A	0.6	3.9	0.18	0.44	0.18	43.9
Appro	bach	133	3	140	2.3	0.111	4.0	LOS A	0.6	3.9	0.18	0.44	0.18	45.7
West	Fourth	n Avenue												
10	L2	2	0	2	0.0	0.008	4.3	LOS A	0.0	0.3	0.26	0.48	0.26	42.0
11	T1	5	0	5	0.0	0.008	4.1	LOS A	0.0	0.3	0.26	0.48	0.26	39.9
12	R2	2	0	2	0.0	0.008	7.3	LOS A	0.0	0.3	0.26	0.48	0.26	43.8
Appro	bach	9	0	9	0.0	0.008	4.9	LOS A	0.0	0.3	0.26	0.48	0.26	41.6
All Ve	hicles	295	5	311	1.7	0.111	4.7	LOS A	0.6	3.9	0.19	0.49	0.19	45.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

Vehic	Vehicle Movement Performance													
Mov ID	Turn	INP VOLU [ Total	PUT JMES HV]	DEM FLC [ Total	AND WS HV]	Deg. Satn	Aver. Delay	Level of Service	95% BA QUE [ Veh.	CK OF EUE Dist ]	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m				km/h
South	: Ryed	ale Road	ł											
1	L2	1	0	1	0.0	0.079	4.1	LOS A	0.4	2.8	0.21	0.50	0.21	42.9
2	T1	57	2	60	3.5	0.079	3.9	LOS A	0.4	2.8	0.21	0.50	0.21	45.6
3	R2	27	0	28	0.0	0.079	7.1	LOS A	0.4	2.8	0.21	0.50	0.21	44.3
3u	U	4	0	4	0.0	0.079	8.6	LOS A	0.4	2.8	0.21	0.50	0.21	46.4
Appro	ach	89	2	94	2.2	0.079	5.1	LOS A	0.4	2.8	0.21	0.50	0.21	45.3
East:	Fourth	Avenue												
4	L2	39	0	41	0.0	0.090	4.2	LOS A	0.4	3.2	0.24	0.56	0.24	42.9
5	T1	1	0	1	0.0	0.090	4.0	LOS A	0.4	3.2	0.24	0.56	0.24	38.4
6	R2	54	3	57	5.6	0.090	7.3	LOS A	0.4	3.2	0.24	0.56	0.24	42.6
6u	U	5	0	5	0.0	0.090	8.7	LOS A	0.4	3.2	0.24	0.56	0.24	40.9
Appro	ach	99	3	104	3.0	0.090	6.1	LOS A	0.4	3.2	0.24	0.56	0.24	42.6
North	Ryed	ale Road												
7	L2	37	4	39	10.8	0.095	4.1	LOS A	0.5	3.5	0.16	0.44	0.16	43.6
8	T1	74	2	78	2.7	0.095	3.8	LOS A	0.5	3.5	0.16	0.44	0.16	46.5
9	R2	1	1	1	100.0	0.095	8.1	LOS A	0.5	3.5	0.16	0.44	0.16	27.7
9u	U	2	0	2	0.0	0.095	8.4	LOS A	0.5	3.5	0.16	0.44	0.16	46.6
Appro	ach	114	7	120	6.1	0.095	4.0	LOS A	0.5	3.5	0.16	0.44	0.16	45.6
West:	Fourth	n Avenue												
10	L2	1	1	1	100.0	0.003	6.3	LOS A	0.0	0.1	0.33	0.50	0.33	38.9
11	T1	1	0	1	0.0	0.003	4.3	LOS A	0.0	0.1	0.33	0.50	0.33	38.5
12	R2	1	0	1	0.0	0.003	7.5	LOS A	0.0	0.1	0.33	0.50	0.33	42.9
Appro	ach	3	1	3	33.3	0.003	6.0	LOS A	0.0	0.1	0.33	0.50	0.33	40.4
All Ve	hicles	305	13	321	4.3	0.095	5.0	LOS A	0.5	3.5	0.20	0.50	0.20	44.6

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

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

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

Site Category: -Stop (Two-Way)

Vehi	cle Mc	vemen	t Perforr	nance										
Mov	Turn	INF	DT	DEM	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
ID		VOLU	JMES	FLO	WS	Satn	Delay	Service	QUI	EUE	Que	Stop	No.	Speed
			HV J		HVJ				[ Ven.	Dist J		Rate	Cycles	l con /le
South	a Dlavi	ven/n	ven/n	ven/n	%	V/C	sec	_	ven	m	_	_	_	Km/n
South	I. DIAXI	апи коа	u											
1	L2	12	0	13	0.0	0.128	5.6	LOS A	0.0	0.0	0.00	0.03	0.00	47.5
2	T1	447	21	471	4.7	0.128	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	59.7
Appro	oach	459	21	483	4.6	0.128	0.2	NA	0.0	0.0	0.00	0.02	0.00	59.3
North	n: Blaxla	and Road	b											
8	T1	612	25	644	4.1	0.199	0.4	LOS A	0.7	4.8	0.09	0.05	0.09	58.5
9	R2	49	0	52	0.0	0.199	8.3	LOS A	0.7	4.8	0.23	0.11	0.23	44.6
Appro	oach	661	25	696	3.8	0.199	1.0	NA	0.7	4.8	0.10	0.05	0.10	58.0
West	: Daltor	n Avenue	•											
10	L2	39	0	41	0.0	0.117	8.6	LOS A	0.4	2.8	0.49	0.88	0.49	15.2
12	R2	10	0	11	0.0	0.117	33.3	LOS C	0.4	2.8	0.49	0.88	0.49	41.0
Appro	oach	49	0	52	0.0	0.117	13.7	LOS A	0.4	2.8	0.49	0.88	0.49	20.4
All Ve	ehicles	1169	46	1231	3.9	0.199	1.2	NA	0.7	4.8	0.08	0.07	0.08	56.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

Site Category: -Stop (Two-Way)

Vehi	cle Mc	ovemen	t Perforn	nance										
Mov	Turn	INF	PUT	DEM	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
ID		VOLU	JMES	FLO	WS	Satn	Delay	Service	QUE	EUE	Que	Stop	No.	Speed
		[ lotal	HV J	[ lotal	HVJ				[Veh.	Dist ]		Rate	Cycles	
		veh/h	veh/h	veh/h	%	V/C	sec		veh	m				km/h
South	n: Blaxl	and Roa	d											
1	L2	10	0	11	0.0	0.191	5.6	LOS A	0.0	0.0	0.00	0.02	0.00	47.7
2	T1	687	14	723	2.0	0.191	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.8
Appro	oach	697	14	734	2.0	0.191	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.5
North	: Blaxla	and Road	d											
8	T1	559	10	588	1.8	0.185	0.7	LOS A	0.8	5.6	0.12	0.04	0.12	57.9
9	R2	41	0	43	0.0	0.185	10.5	LOS A	0.8	5.6	0.30	0.11	0.30	42.1
Appro	oach	600	10	632	1.7	0.185	1.4	NA	0.8	5.6	0.13	0.05	0.13	57.3
West	: Daltor	n Avenue	;											
10	L2	56	0	59	0.0	0.155	9.5	LOS A	0.5	3.6	0.57	0.92	0.57	15.2
12	R2	8	0	8	0.0	0.155	44.0	LOS D	0.5	3.6	0.57	0.92	0.57	40.9
Appro	oach	64	0	67	0.0	0.155	13.9	LOS A	0.5	3.6	0.57	0.92	0.57	18.4
All Ve	ehicles	1361	24	1433	1.8	0.191	1.3	NA	0.8	5.6	0.08	0.07	0.08	55.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

Site Category: -Give-Way (Two-Way)

Vehi	cle Mo	ovemen	t Perfori	mance										
Mov ID	Turn	INF VOLU [ Total	PUT JMES HV ]	DEM/ FLO [ Total	AND WS HV ]	Deg. Satn	Aver. Delay	Level of Service	95% B/ QU [ Veh.	ACK OF EUE Dist ]	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m				km/h
South	n: Denis	stone Ro	ad											
1	L2	38	1	40	2.6	0.046	3.4	LOS A	0.0	0.0	0.00	0.21	0.00	39.2
2	T1	45	0	47	0.0	0.046	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	39.2
Appro	bach	83	1	87	1.2	0.046	1.6	NA	0.0	0.0	0.00	0.21	0.00	39.2
North	: Denis	stone Ro	ad											
8	T1	68	0	72	0.0	0.056	1.3	LOS A	0.2	1.2	0.12	0.30	0.12	42.2
9	R2	29	0	31	0.0	0.056	4.8	LOS A	0.2	1.2	0.12	0.30	0.12	45.6
Appro	bach	97	0	102	0.0	0.056	2.4	NA	0.2	1.2	0.12	0.30	0.12	42.9
West	: Fourth	n Avenue	•											
10	L2	23	0	24	0.0	0.015	4.7	LOS A	0.1	0.4	0.12	0.50	0.12	43.5
12	R2	54	2	57	3.7	0.052	5.2	LOS A	0.2	1.2	0.24	0.56	0.24	38.2
Appro	bach	77	2	81	2.6	0.052	5.1	LOS A	0.2	1.2	0.20	0.54	0.20	39.5
All Ve	hicles	257	3	271	1.2	0.056	2.9	NA	0.2	1.2	0.10	0.34	0.10	40.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

Site Category: -Give-Way (Two-Way)

Vehi	cle Mo	vemen	t Perforr	mance										
Mov ID	Turn	INF VOLI	PUT JMES	DEM/ FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% B <i>i</i> QUI	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		[ Total veh/h	HV ] veh/h	[ Total veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist ] m		Rate	Cycles	km/h
South	n: Denis	stone Ro	ad											
1	L2	51	3	54	5.9	0.072	3.5	LOS A	0.0	0.0	0.00	0.18	0.00	39.3
2	T1	77	0	81	0.0	0.072	0.0	LOS A	0.0	0.0	0.00	0.18	0.00	39.3
Appro	oach	128	3	135	2.3	0.072	1.4	NA	0.0	0.0	0.00	0.18	0.00	39.3
North	n: Denis	tone Ro	ad											
8	T1	47	0	49	0.0	0.037	1.4	LOS A	0.1	0.7	0.14	0.29	0.14	42.2
9	R2	17	0	18	0.0	0.037	5.0	LOS A	0.1	0.7	0.14	0.29	0.14	45.6
Appro	oach	64	0	67	0.0	0.037	2.3	NA	0.1	0.7	0.14	0.29	0.14	42.8
West	: Fourth	n Avenue	•											
10	L2	31	0	33	0.0	0.021	4.8	LOS A	0.1	0.6	0.16	0.50	0.16	43.3
12	R2	56	4	59	7.1	0.055	5.3	LOS A	0.2	1.3	0.25	0.56	0.25	38.2
Appro	oach	87	4	92	4.6	0.055	5.1	LOS A	0.2	1.3	0.22	0.54	0.22	39.7
All Ve	ehicles	279	7	294	2.5	0.072	2.8	NA	0.2	1.3	0.10	0.32	0.10	40.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

## V Site: 101 [7 Florence Avenue/ Denistone Road\_EX\_AM (Site Folder: Existing)]

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

Vehi	cle Mo	ovemen	t Perforr	nance										
Mov ID	Turn	INF VOLL	PUT JMES	DEM. FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUI	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		[ Total veh/h	HV ] veh/h	[ Total veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist ] m		Rate	Cycles	km/h
South	nEast: I	Florence	Avenue											
21	L2	37	1	39	2.7	0.081	4.6	LOS A	0.0	0.0	0.00	0.14	0.00	48.7
22	T1	110	2	116	1.8	0.081	0.0	LOS A	0.0	0.0	0.00	0.14	0.00	49.2
Appro	oach	147	3	155	2.0	0.081	1.2	NA	0.0	0.0	0.00	0.14	0.00	49.1
North	West:	Deniston	e Road											
28	T1	70	2	74	2.9	0.056	0.2	LOS A	0.2	1.1	0.15	0.15	0.15	48.8
29	R2	25	0	26	0.0	0.056	5.0	LOS A	0.2	1.1	0.15	0.15	0.15	47.8
Appro	oach	95	2	100	2.1	0.056	1.5	NA	0.2	1.1	0.15	0.15	0.15	48.5
South	nWest:	Florence	Avenue											
30	L2	8	0	8	0.0	0.061	4.9	LOS A	0.2	1.4	0.27	0.57	0.27	46.0
32	R2	54	1	57	1.9	0.061	5.5	LOS A	0.2	1.4	0.27	0.57	0.27	45.6
Appro	oach	62	1	65	1.6	0.061	5.4	LOS A	0.2	1.4	0.27	0.57	0.27	45.6
All Ve	ehicles	304	6	320	2.0	0.081	2.1	NA	0.2	1.4	0.10	0.23	0.10	48.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

## V Site: 101 [7 Florence Avenue/ Denistone Road\_EX\_PM (Site Folder: Existing)]

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

Vehi	cle Mo	ovemen	t Perforr	nance										
Mov ID	Turn	INF VOLU	DUT JMES	DEM FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUI	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m		Tale	Cycles	km/h
South	hEast: I	Florence	Avenue											
21	L2	55	1	58	1.8	0.085	4.6	LOS A	0.0	0.0	0.00	0.19	0.00	48.4
22	T1	99	1	104	1.0	0.085	0.0	LOS A	0.0	0.0	0.00	0.19	0.00	48.9
Appro	oach	154	2	162	1.3	0.085	1.7	NA	0.0	0.0	0.00	0.19	0.00	48.7
North	West:	Deniston	e Road											
28	T1	100	5	105	5.0	0.074	0.2	LOS A	0.2	1.3	0.13	0.12	0.13	49.0
29	R2	27	0	28	0.0	0.074	5.1	LOS A	0.2	1.3	0.13	0.12	0.13	48.0
Appro	oach	127	5	134	3.9	0.074	1.2	NA	0.2	1.3	0.13	0.12	0.13	48.8
Sout	hWest:	Florence	Avenue											
30	L2	4	0	4	0.0	0.058	4.9	LOS A	0.2	1.3	0.29	0.58	0.29	46.0
32	R2	53	0	56	0.0	0.058	5.6	LOS A	0.2	1.3	0.29	0.58	0.29	45.6
Appro	oach	57	0	60	0.0	0.058	5.5	LOS A	0.2	1.3	0.29	0.58	0.29	45.6
All Ve	ehicles	338	7	356	2.1	0.085	2.1	NA	0.2	1.3	0.10	0.23	0.10	48.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

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

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# **USER REPORT FOR NETWORK SITE**

## All Movement Classes

Project: 220704-N211310 Ryde Hospital SIDRA

**Template: Movement, Phasing** 

Site: 4 [4 First Avenue/Ryedale Road\_EX\_AM ■ Network: 1 [First\_Ave\_AM (Network Folder: (Site Folder: Existing)]

Site Category: -Stop (Two-Way)

Vehi	cle Mo	vement l	Perfor	mance	e									
Mov ID	Turn	DEMA FLOV [ Total veh/h	ND VS HV] %	ARRI FLO [ Total veh/h	VAL WS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF ( [ Veh. veh	GE BACK QUEUE Dist] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Ryeda	ale Road												
1	L2	59	0.0	59	0.0	0.073	9.6	LOS A	0.1	0.8	0.44	0.88	0.44	44.6
Appro	bach	59	0.0	59	0.0	0.073	9.6	LOS A	0.1	0.8	0.44	0.88	0.44	44.6
East:	First Av	venue												
4	L2	84	1.3	84	1.3	0.250	4.1	LOS A	0.0	0.0	0.00	0.10	0.00	54.4
5	T1	872	2.5	872	2.5	0.250	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	59.1
Appro	bach	956	2.4	956	2.4	0.250	0.4	NA	0.0	0.0	0.00	0.05	0.00	58.6
North	: Ryeda	ale Road												
7	L2	13	0.0	13	0.0	0.057	13.5	LOS A	0.1	0.4	0.63	1.00	0.63	16.9
Appro	bach	13	0.0	13	0.0	0.057	13.5	LOS A	0.1	0.4	0.63	1.00	0.63	16.9
West	First A	venue												
10	L2	25	0.0	25	0.0	0.014	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	45.8
11	T1	1435	4.2	1435	4.2	0.394	0.1	LOS A	4.3	30.9	0.00	0.00	0.00	59.7
Appro	bach	1460	4.1	1460	4.1	0.394	0.2	NA	4.3	30.9	0.00	0.01	0.00	59.3
All Ve	hicles	2487	3.3	2487	3.3	0.394	0.6	NA	4.3	30.9	0.01	0.05	0.01	58.1

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

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

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

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

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

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

## Site: 101 [8 Blaxland Road/ First Avenue EX AM (Site Folder: Existing)]

New Site Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Downstream lane blockage effects included in determining phase times Phase Sequence: Leading Right Turn Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Vehio	cle Mo	vement	Perfor	mance	e									
Mov ID	Turn	DEMA FLOV [ Total veh/h	AND NS HV] %	ARRI FLO [ Total veh/h	VAL WS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF ( [ Veh. veh	GE BACK QUEUE Dist ] m	Prop. Que	Effective A Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South	: Blaxla	and Rd												
1 2	L2 T1	391 576	3.0 2.9	391 576	3.0 2.9	0.328 <b>*</b> 0.466	9.4 32.0	LOS A LOS C	3.7 8.5	26.5 61.1	0.38 0.82	0.68 0.70	0.38 0.82	46.3 39.4
Appro	bach	966	2.9	966	2.9	0.466	22.9	LOS B	8.5	61.1	0.64	0.69	0.64	41.0
North	: Blaxla	ind Rd												
8	T1	612	2.1	612	2.1	0.519	13.2	LOS A	12.0	85.2	0.60	0.54	0.60	49.4
9	R2	564	2.1	564	2.1	*0.714	53.3	LOS D	9.6	68.5	0.98	0.86	1.01	22.1
Appro	bach	1176	2.1	1176	2.1	0.714	32.4	LOS C	12.0	85.2	0.78	0.69	0.80	35.4
West:	First A	ve												
10	L2	731	4.6	731	4.6	0.652	9.2	LOS A	7.6	55.0	0.54	0.74	0.54	46.4
12	R2	712	3.8	712	3.8	*0.734	47.9	LOS D	7.6	55.0	0.97	0.87	1.00	24.6
Appro	bach	1442	4.2	1442	4.2	0.734	28.3	LOS B	7.6	55.0	0.75	0.80	0.76	32.3
All Ve	hicles	3584	3.2	3584	3.2	0.734	28.2	LOS B	12.0	85.2	0.73	0.74	0.74	35.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

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

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. E	Effective	Travel	Travel	Aver.		
ID Crossing	Flow	Delay	Service	QUE [ Ped	EUE Dist ]	Que	Stop Rate	Time	Dist.	Speed		
	ped/h	sec		ped	m			sec	m	m/sec		
North: Blaxland Ro	d											
P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.7	217.7	0.98		
West: First Ave												
P4 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.9	217.9	0.98		
All Pedestrians	105	54.3	LOS E	0.2	0.2	0.95	0.95	221.8	217.8	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.



REF: Reference Phase VAR: Variable Phase

Normal Movement	Permitted/Opposed
Slip/Bypass-Lane Movement	Opposed Slip/Bypass-Lane
Stopped Movement	Turn On Red
Other Movement Class (MC) Running	Undetected Movement
Mixed Running & Stopped MCs	Continuous Movement
Other Movement Class (MC) Stopped	Phase Transition Applied

## Phase Timing Summary

Phase	Α	В	С
Phase Change Time (sec)	0	48	81
Green Time (sec)	42	27	33
Phase Time (sec)	48	33	39
Phase Split	40%	28%	33%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

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# **USER REPORT FOR NETWORK SITE**

## All Movement Classes

Project: 220704-N211310 Ryde Hospital SIDRA

**Template: Movement, Phasing** 

# Site: 4 [4 First Avenue/Ryedale Road\_EX\_PM (Site Folder: Existing)]

■ Network: 2 [First\_Ave\_PM (Network Folder: Existing)]

Site Category: -Stop (Two-Way)

Vehio	Vehicle Movement Performance													
Mov ID	Turn	DEMA FLOV [ Total veh/h	ND VS HV] %	ARRI FLO [ Total veh/h	VAL WS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF C [ Veh. veh	GE BACK QUEUE Dist] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Ryeda	ale Road												
1	L2	88	3.6	88	3.6	0.142	11.9	LOS A	0.2	1.7	0.57	0.95	0.57	43.2
Appro	ach	88	3.6	88	3.6	0.142	11.9	LOS A	0.2	1.7	0.57	0.95	0.57	43.2
East:	First Av	/enue												
4	L2	49	0.0	49	0.0	0.335	4.1	LOS A	0.0	0.0	0.00	0.04	0.00	55.4
5	T1	1241	1.8	1241	1.8	0.335	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	59.4
Appro	ach	1291	1.7	1291	1.7	0.335	0.2	NA	0.0	0.0	0.00	0.02	0.00	59.3
North	: Ryeda	ale Road												
7	L2	15	0.0	15	0.0	0.033	9.5	LOS A	0.0	0.2	0.43	0.89	0.43	20.8
Appro	ach	15	0.0	15	0.0	0.033	9.5	LOS A	0.0	0.2	0.43	0.89	0.43	20.8
West:	First A	venue												
10	L2	11	0.0	11	0.0	0.006	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	45.8
11	T1	1031	2.0	1031	2.0	0.353	0.1	LOS A	1.6	11.4	0.00	0.00	0.00	59.7
Appro	ach	1041	2.0	1041	2.0	0.353	0.2	NA	1.6	11.4	0.00	0.01	0.00	59.5
All Ve	hicles	2435	1.9	2435	1.9	0.353	0.6	NA	1.6	11.4	0.02	0.05	0.02	57.8

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

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

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

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

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

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

## Site: 101 [8 Blaxland Road/ First Avenue EX PM (Site Folder: Existing)]

New Site Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Downstream lane blockage effects included in determining phase times Phase Sequence: Leading Right Turn Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Vehio	cle Mo	vement	Perfor	mance	;									
Mov ID	Turn	DEMA FLOV [ Total veh/h	AND WS HV] %	ARRI FLO\ [ Total veh/h	VAL NS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF ( [ Veh. veh	GE BACK QUEUE Dist] m	Prop. Que	Effective A Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South	: Blaxla	and Rd												
1 2	L2 T1	597 832	3.2 1.4	597 832	3.2 1.4	0.571 <b>*</b> 0.695	12.9 31.7	LOS A LOS C	9.2 15.2	65.8 107.7	0.57 0.86	0.75 0.75	0.57 0.86	42.6 39.5
Appro	bach	1428	2.1	1428	2.1	0.695	23.9	LOS B	15.2	107.7	0.74	0.75	0.74	40.3
North	: Blaxla	nd Rd												
8	T1	446	2.1	446	2.1	0.334	7.0	LOS A	6.0	42.6	0.41	0.37	0.41	53.8
9	R2	736	3.9	736	3.9	*0.792	52.5	LOS D	12.9	93.4	0.98	0.90	1.07	22.4
Appro	bach	1182	3.2	1182	3.2	0.792	35.3	LOS C	12.9	93.4	0.77	0.70	0.82	32.8
West:	First A	ve												
10	L2	465	2.7	465	2.7	0.481	11.7	LOS A	7.0	50.4	0.53	0.72	0.53	44.0
12	R2	514	3.7	514	3.7	*0.760	56.9	LOS E	7.6	55.0	1.00	0.88	1.09	22.2
Appro	bach	979	3.2	979	3.2	0.760	35.5	LOS C	7.6	55.0	0.77	0.81	0.82	29.1
All Ve	hicles	3589	2.8	3589	2.8	0.792	30.8	LOS C	15.2	107.7	0.76	0.75	0.79	34.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

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

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. E	Effective	Travel	Travel	Aver.	
ID Crossing	Flow	Delay	Service	QUE [ Ped	EUE Dist ]	Que	Stop Rate	Time	Dist.	Speed	
	ped/h	sec		ped	m			sec	m	m/sec	
North: Blaxland Ro	d										
P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.7	217.7	0.98	
West: First Ave											
P4 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.9	217.9	0.98	
All Pedestrians	105	54.3	LOS E	0.2	0.2	0.95	0.95	221.8	217.8	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.



REF: Reference Phase VAR: Variable Phase

Normal Movement	Permitted/Opposed
Slip/Bypass-Lane Movement	Opposed Slip/Bypass-Lane
Stopped Movement	Turn On Red
Other Movement Class (MC) Running	Undetected Movement
Mixed Running & Stopped MCs	Continuous Movement
Other Movement Class (MC) Stopped	Phase Transition Applied

## Phase Timing Summary

Phase	Α	В	С
Phase Change Time (sec)	0	52	91
Green Time (sec)	46	33	23
Phase Time (sec)	52	39	29
Phase Split	43%	33%	24%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

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# **USER REPORT FOR SITE**

## All Movement Classes

Project: 220704-N211310 Ryde Hospital SIDRA

## **Template: Movement, Phasing**

## Site: 1 [1 Blaxland Road/Florence Avenue\_AM (Site Folder: 2026 without dev)]

Site Category: -

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 55 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, B\*, C (\* Variable Phase)

Vehio	ehicle Movement Performance													
Mov ID	Turn	INF VOLL	PUT JMES	DEM/ FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUE	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		[ Total veh/h	HV ] veh/h	[ Total veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South	: Blaxl	and Roa	d											
1	L2	136	3	143	2.2	*0.491	17.9	LOS B	6.1	44.1	0.79	0.76	0.79	40.0
2	T1	573	26	603	4.5	0.491	12.7	LOS A	7.8	56.7	0.78	0.70	0.78	45.6
Appro	bach	709	29	746	4.1	0.491	13.7	LOS A	7.8	56.7	0.78	0.72	0.78	44.4
North	: Blaxla	and Road	d											
8	T1	711	27	748	3.8	0.430	9.0	LOS A	7.1	51.4	0.64	0.56	0.64	49.4
9	R2	27	0	28	0.0	*0.430	20.9	LOS B	5.7	41.3	0.81	0.70	0.81	43.7
Appro	bach	738	27	777	3.7	0.430	9.4	LOS A	7.1	51.4	0.65	0.56	0.65	49.1
West:	Florer	nce Aven	ue											
10	L2	32	0	34	0.0	0.050	16.9	LOS B	0.6	4.1	0.67	0.67	0.67	42.7
12	R2	128	4	135	3.1	*0.453	28.4	LOS B	3.5	25.0	0.95	0.78	0.95	32.2
Appro	bach	160	4	168	2.5	0.453	26.1	LOS B	3.5	25.0	0.89	0.76	0.89	34.4
All Ve	hicles	1607	60	1692	3.7	0.491	13.0	LOS A	7.8	56.7	0.73	0.65	0.73	45.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

Queue Model: SIDRA Standard.

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

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

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov	Input	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Ef	fective	Travel	Travel	Aver.
ID Crossing	Vol.	Flow	Delay	Service	QUE	UE	Que	Stop	Time	Dist.	Speed
					[Ped	Dist ]		Rate			
	ped/h	ped/h	sec		ped	m			sec	m	m/sec
North: Blaxlan	d Road										

P3 Full	50	53	18.4	LOS B	0.1	0.1	0.82	0.82	45.5	35.2	0.77
West: Florence	Avenue										
P4 Full	50	53	20.1	LOS C	0.1	0.1	0.86	0.86	44.7	31.9	0.71
All Pedestrians	100	105	19.3	LOS B	0.1	0.1	0.84	0.84	45.1	33.6	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.

#### **Output Phase Sequence** Phase A REF Phase C Phase B VAR Blaxland Road Blaxland Road Blaxland Road ١L Florence Avenue Florence Avenue Florence Avenue H ╡ ר Blaxland Road Blaxland Road Blaxland Road

REF: Reference Phase VAR: Variable Phase

Normal Movement	Permitted/Opposed
Slip/Bypass-Lane Movement	Opposed Slip/Bypass-Lane
Stopped Movement	Turn On Red
Other Movement Class (MC) Running	Undetected Movement
Mixed Running & Stopped MCs	Continuous Movement
Other Movement Class (MC) Stopped	Phase Transition Applied

Phase Timing Summary											
Phase	Α	В	С								
Phase Change Time (sec)	0	29	40								
Green Time (sec)	23	5	9								
Phase Time (sec)	29	11	15								
Phase Split	53%	20%	27%								

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

## Site: 1 [1 Blaxland Road/Florence Avenue\_PM (Site Folder: 2026 without dev)]

Site Category: -

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 55 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, B\*, C (\* Variable Phase)

Vehi	Vehicle Movement Performance													
Mov ID	Turn	INF VOLU	PUT JMES	DEM. FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUE	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		[ Total veh/h	HV ] veh/h	[ Total veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South	n: Blaxl	and Roa	d											
1	L2	142	1	149	0.7	*0.548	17.4	LOS B	8.4	59.5	0.78	0.75	0.78	40.6
2	T1	772	16	813	2.1	0.548	11.5	LOS A	9.7	69.0	0.77	0.70	0.77	46.7
Appro	bach	914	17	962	1.9	0.548	12.4	LOS A	9.7	69.0	0.77	0.71	0.77	45.6
North	: Blaxla	and Road	t											
8	T1	582	10	613	1.7	0.406	8.4	LOS A	6.6	46.8	0.60	0.51	0.60	50.0
9	R2	28	1	29	3.6	*0.406	27.3	LOS B	3.5	25.2	0.91	0.74	0.91	40.3
Appro	bach	610	11	642	1.8	0.406	9.2	LOS A	6.6	46.8	0.61	0.53	0.61	49.2
West	Florer	nce Aven	ue											
10	L2	32	0	34	0.0	0.059	19.1	LOS B	0.6	4.5	0.73	0.68	0.73	41.6
12	R2	144	5	152	3.5	*0.575	30.1	LOS C	4.1	29.6	0.98	0.81	1.02	31.5
Appro	bach	176	5	185	2.8	0.575	28.1	LOS B	4.1	29.6	0.93	0.79	0.97	33.5
All Ve	hicles	1700	33	1789	1.9	0.575	12.9	LOS A	9.7	69.0	0.73	0.65	0.73	45.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

Queue Model: SIDRA Standard.

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

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

\* Critical Movement (Signal Timing)

Pedestrian M	Pedestrian Movement Performance											
Mov D Crossing	Input	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Et	ffective	Travel	Travel	Aver.	
	VOI.	FIOW	Delay	Service	QUE [Ped	Dist ]	Que	Stop Rate	Time	Dist.	Speed	
	ped/h	ped/h	sec		ped	m			sec	m	m/sec	
North: Blaxland	d Road											
P3 Full	50	53	18.4	LOS B	0.1	0.1	0.82	0.82	45.5	35.2	0.77	
West: Florence	Avenue											
P4 Full	50	53	20.1	LOS C	0.1	0.1	0.86	0.86	44.7	31.9	0.71	
All Pedestrians	100	105	19.3	LOS B	0.1	0.1	0.84	0.84	45.1	33.6	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.



REF: Reference Phase VAR: Variable Phase

$ \longrightarrow $	Normal Movement	$ \longrightarrow $	Permitted/Opposed
$ \longrightarrow $	Slip/Bypass-Lane Movement	$ \longrightarrow $	Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
$\implies$	Other Movement Class (MC) Running	$ \longrightarrow $	Undetected Movement
	Mixed Running & Stopped MCs	$ \longrightarrow $	Continuous Movement
	Other Movement Class (MC) Stopped	•	Phase Transition Applied

### Phase Timing Summary

Phase	Α	В	С		
Phase Change Time (sec)	0	32	41		
Green Time (sec)	26	3	8		
Phase Time (sec)	32	9	14		
Phase Split	58%	16%	25%		

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Vehicle Movement Performance														
Mov ID	Turn	INP VOLU		DEM FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUE	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		veh/h	⊓vj veh/h	veh/h	⊓vj %	v/c	sec		ven. veh	m Dist		Rale	Cycles	km/h
South: Ryedale Road		1												
2	T1	107	0	113	0.0	0.123	3.9	LOS A	0.7	4.6	0.10	0.52	0.10	46.3
3	R2	57	0	60	0.0	0.123	6.6	LOS A	0.7	4.6	0.10	0.52	0.10	45.7
3u	U	1	0	1	0.0	0.123	7.9	LOS A	0.7	4.6	0.10	0.52	0.10	46.6
Appro	bach	165	0	174	0.0	0.123	4.9	LOS A	0.7	4.6	0.10	0.52	0.10	46.1
East: Florence Avenue														
4	L2	58	0	61	0.0	0.072	5.1	LOS A	0.4	2.5	0.32	0.55	0.32	44.8
6	R2	15	1	16	6.7	0.072	7.4	LOS A	0.4	2.5	0.32	0.55	0.32	44.6
6u	U	1	0	1	0.0	0.072	8.6	LOS A	0.4	2.5	0.32	0.55	0.32	44.7
Appro	bach	74	1	78	1.4	0.072	5.6	LOS A	0.4	2.5	0.32	0.55	0.32	44.7
North: Ryedale Road														
7	L2	23	1	24	4.3	0.136	4.7	LOS A	0.7	4.9	0.20	0.46	0.20	45.1
8	T1	137	1	144	0.7	0.136	4.2	LOS A	0.7	4.9	0.20	0.46	0.20	46.5
9u	U	1	0	1	0.0	0.136	8.2	LOS A	0.7	4.9	0.20	0.46	0.20	46.4
Appro	bach	161	2	169	1.2	0.136	4.3	LOS A	0.7	4.9	0.20	0.46	0.20	46.3
All Ve	hicles	400	3	421	0.8	0.136	4.8	LOS A	0.7	4.9	0.18	0.50	0.18	45.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
Vehi	cle Mo	vement	Perfor	mance										
Mov ID	Turn	INP VOLU	UT IMES	DEM FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUE	ACK OF EUE Dist 1	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m		Nate	Cycles	km/h
South	n: Ryed	ale Roac	ł											
2	T1	70	3	74	4.3	0.087	4.1	LOS A	0.4	3.2	0.16	0.51	0.16	46.1
3	R2	32	0	34	0.0	0.087	6.7	LOS A	0.4	3.2	0.16	0.51	0.16	45.5
3u	U	2	0	2	0.0	0.087	8.0	LOS A	0.4	3.2	0.16	0.51	0.16	46.5
Appro	bach	104	3	109	2.9	0.087	5.0	LOS A	0.4	3.2	0.16	0.51	0.16	45.9
East:	Floren	ce Avenu	ie											
4	L2	77	1	81	1.3	0.108	5.2	LOS A	0.5	3.8	0.34	0.57	0.34	44.6
6	R2	32	0	34	0.0	0.108	7.4	LOS A	0.5	3.8	0.34	0.57	0.34	44.6
6u	U	1	0	1	0.0	0.108	8.8	LOS A	0.5	3.8	0.34	0.57	0.34	44.5
Appro	bach	110	1	116	0.9	0.108	5.9	LOS A	0.5	3.8	0.34	0.57	0.34	44.6
North	: Ryeda	ale Road												
7	L2	26	0	27	0.0	0.138	4.5	LOS A	0.7	5.1	0.15	0.46	0.15	45.3
8	T1	141	3	148	2.1	0.138	4.0	LOS A	0.7	5.1	0.15	0.46	0.15	46.5
9u	U	6	0	6	0.0	0.138	8.0	LOS A	0.7	5.1	0.15	0.46	0.15	46.4
Appro	bach	173	3	182	1.7	0.138	4.2	LOS A	0.7	5.1	0.15	0.46	0.15	46.4
All Ve	hicles	387	7	407	1.8	0.138	4.9	LOS A	0.7	5.1	0.21	0.50	0.21	45.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

# V Site: 3 [3 Ryedale Road/Fourth Avenue\_AM (Site Folder: 2026 without dev)]

Site Category: -Roundabout

Vehi	cle Mo	vement	t Perfori	mance										
Mov ID	Turn	INP VOLL	UT JMES	DEM FLO	AND WS HV 1	Deg. Satn	Aver. Delay	Level of Service	95% BA QUE	ACK OF EUE Dist 1	Prop. Que	Effective Stop Rate	Aver. No.	Aver. Speed
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m		Trate	Cycles	km/h
South	: Ryed	ale Road	ł											
1	L2	1	0	1	0.0	0.097	3.9	LOS A	0.5	3.5	0.15	0.52	0.15	42.8
2	T1	64	0	67	0.0	0.097	3.7	LOS A	0.5	3.5	0.15	0.52	0.15	45.6
3	R2	51	0	54	0.0	0.097	6.9	LOS A	0.5	3.5	0.15	0.52	0.15	44.2
3u	U	5	0	5	0.0	0.097	8.4	LOS A	0.5	3.5	0.15	0.52	0.15	46.3
Appro	bach	121	0	127	0.0	0.097	5.3	LOS A	0.5	3.5	0.15	0.52	0.15	45.1
East:	Fourth	Avenue												
4	L2	40	0	42	0.0	0.067	4.4	LOS A	0.3	2.4	0.29	0.54	0.29	43.3
5	T1	6	0	6	0.0	0.067	4.2	LOS A	0.3	2.4	0.29	0.54	0.29	39.2
6	R2	24	2	25	8.3	0.067	7.5	LOS A	0.3	2.4	0.29	0.54	0.29	43.1
6u	U	1	0	1	0.0	0.067	8.9	LOS A	0.3	2.4	0.29	0.54	0.29	41.6
Appro	bach	71	2	75	2.8	0.067	5.5	LOS A	0.3	2.4	0.29	0.54	0.29	43.0
North	: Ryed	ale Road												
7	L2	45	2	47	4.4	0.133	4.2	LOS A	0.7	4.8	0.21	0.45	0.21	43.5
8	T1	109	1	115	0.9	0.133	3.9	LOS A	0.7	4.8	0.21	0.45	0.21	46.3
9	R2	3	0	3	0.0	0.133	7.1	LOS A	0.7	4.8	0.21	0.45	0.21	43.8
Appro	ach	157	3	165	1.9	0.133	4.1	LOS A	0.7	4.8	0.21	0.45	0.21	45.7
West:	Fourth	n Avenue												
10	L2	2	0	2	0.0	0.010	4.5	LOS A	0.0	0.3	0.30	0.48	0.30	41.9
11	T1	6	0	6	0.0	0.010	4.3	LOS A	0.0	0.3	0.30	0.48	0.30	39.7
12	R2	2	0	2	0.0	0.010	7.5	LOS A	0.0	0.3	0.30	0.48	0.30	43.7
Appro	ach	10	0	11	0.0	0.010	5.0	LOS A	0.0	0.3	0.30	0.48	0.30	41.4
All Ve	hicles	359	5	378	1.4	0.133	4.8	LOS A	0.7	4.8	0.21	0.49	0.21	45.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

# V Site: 3 [3 Ryedale Road/Fourth Avenue\_PM (Site Folder: 2026 without dev)]

Site Category: -Roundabout

Vehic	cle Mo	vement	t Perfori	mance										
Mov ID	Turn	INP VOLL [ Total	PUT JMES HV ]	DEM FLC [ Total	AND WS HV ]	Deg. Satn	Aver. Delay	Level of Service	95% BA QUE [ Veh.	ACK OF EUE Dist ]	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m				km/h
South	: Ryed	lale Road	ł											
1	L2	1	0	1	0.0	0.080	4.2	LOS A	0.4	2.9	0.23	0.50	0.23	42.8
2	T1	57	2	60	3.5	0.080	4.0	LOS A	0.4	2.9	0.23	0.50	0.23	45.6
3	R2	27	0	28	0.0	0.080	7.1	LOS A	0.4	2.9	0.23	0.50	0.23	44.2
3u	U	4	0	4	0.0	0.080	8.6	LOS A	0.4	2.9	0.23	0.50	0.23	46.3
Appro	ach	89	2	94	2.2	0.080	5.2	LOS A	0.4	2.9	0.23	0.50	0.23	45.2
East:	Fourth	Avenue												
4	L2	43	0	45	0.0	0.101	4.4	LOS A	0.5	3.6	0.28	0.57	0.28	42.8
5	T1	1	0	1	0.0	0.101	4.2	LOS A	0.5	3.6	0.28	0.57	0.28	38.2
6	R2	60	3	63	5.0	0.101	7.4	LOS A	0.5	3.6	0.28	0.57	0.28	42.5
6u	U	5	0	5	0.0	0.101	8.8	LOS A	0.5	3.6	0.28	0.57	0.28	40.7
Appro	ach	109	3	115	2.8	0.101	6.3	LOS A	0.5	3.6	0.28	0.57	0.28	42.5
North	Ryed	ale Road												
7	L2	41	4	43	9.8	0.113	4.1	LOS A	0.6	4.2	0.16	0.44	0.16	43.6
8	T1	94	3	99	3.2	0.113	3.8	LOS A	0.6	4.2	0.16	0.44	0.16	46.5
9	R2	1	1	1	100.0	0.113	8.1	LOS A	0.6	4.2	0.16	0.44	0.16	27.7
9u	U	2	0	2	0.0	0.113	8.4	LOS A	0.6	4.2	0.16	0.44	0.16	46.6
Appro	ach	138	8	145	5.8	0.113	4.0	LOS A	0.6	4.2	0.16	0.44	0.16	45.7
West:	Fourth	n Avenue												
10	L2	1	1	1	100.0	0.003	6.3	LOS A	0.0	0.1	0.34	0.50	0.34	38.8
11	T1	1	0	1	0.0	0.003	4.3	LOS A	0.0	0.1	0.34	0.50	0.34	38.4
12	R2	1	0	1	0.0	0.003	7.5	LOS A	0.0	0.1	0.34	0.50	0.34	42.9
Appro	ach	3	1	3	33.3	0.003	6.1	LOS A	0.0	0.1	0.34	0.50	0.34	40.4
All Ve	hicles	339	14	357	4.1	0.113	5.0	LOS A	0.6	4.2	0.22	0.50	0.22	44.6

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

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

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

Site Category: -Stop (Two-Way)

Vehi	cle Mo	vemen	t Perforr	nance										
Mov	Turn	INF	PUT	DEM	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
ID		VOLU	JMES	FLO	WS	Satn	Delay	Service	QUI	EUE	Que	Stop	No.	Speed
		[ lotal	HV J	[ lotal	HV J				[Veh.	Dist J		Rate	Cycles	1 //
<b>a</b>		ven/h	veh/h	ven/n	%	V/C	sec		ven	m				km/h
South	n: Blaxia	and Roa	d											
1	L2	15	0	16	0.0	0.163	5.6	LOS A	0.0	0.0	0.00	0.03	0.00	47.5
2	T1	569	27	599	4.7	0.163	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.7
Appro	oach	584	27	615	4.6	0.163	0.2	NA	0.0	0.0	0.00	0.02	0.00	59.3
North	: Blaxla	and Road	d											
8	T1	679	28	715	4.1	0.223	0.5	LOS A	0.8	6.1	0.11	0.04	0.11	58.2
9	R2	50	0	53	0.0	0.223	9.6	LOS A	0.8	6.1	0.26	0.11	0.26	43.4
Appro	oach	729	28	767	3.8	0.223	1.2	NA	0.8	6.1	0.12	0.05	0.12	57.7
West	: Daltor	n Avenue	)											
10	L2	50	0	53	0.0	0.183	9.1	LOS A	0.6	4.2	0.59	0.90	0.59	14.5
12	R2	11	0	12	0.0	0.183	48.4	LOS D	0.6	4.2	0.59	0.90	0.59	39.2
Appro	oach	61	0	64	0.0	0.183	16.2	LOS B	0.6	4.2	0.59	0.90	0.59	18.9
All Ve	ehicles	1374	55	1446	4.0	0.223	1.4	NA	0.8	6.1	0.09	0.07	0.09	55.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

Site Category: -Stop (Two-Way)

Vehi	cle Mo	vemen	t Perforr	nance										
Mov	Turn	INF	PUT	DEM	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
ID		VOLU	JMES	FLO	WS	Satn	Delay	Service	QUE	EUE	Que	Stop	No.	Speed
		[ Iotal	HV J	[ Iotal	HV J	vic	200		[ Veh.	Dist j		Rate	Cycles	km/h
South	n: Blaxla	and Roa	d	Ven/m	70	v/c	360		VEIT	111				K111/11
1	L2	11	0	12	0.0	0.209	5.6	LOS A	0.0	0.0	0.00	0.02	0.00	47.7
2	T1	753	15	793	2.0	0.209	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	59.8
Appro	bach	764	15	804	2.0	0.209	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.5
North	: Blaxla	and Road	d											
8	T1	619	11	652	1.8	0.208	0.9	LOS A	1.0	7.1	0.13	0.05	0.13	57.6
9	R2	45	0	47	0.0	0.208	11.5	LOS A	1.0	7.1	0.34	0.12	0.34	40.8
Appro	bach	664	11	699	1.7	0.208	1.6	NA	1.0	7.1	0.14	0.05	0.14	57.0
West	: Daltor	n Avenue	)											
10	L2	61	0	64	0.0	0.206	9.8	LOS A	0.7	4.7	0.62	0.94	0.62	14.6
12	R2	9	0	9	0.0	0.206	57.0	LOS E	0.7	4.7	0.62	0.94	0.62	39.4
Appro	bach	70	0	74	0.0	0.206	15.9	LOS B	0.7	4.7	0.62	0.94	0.62	17.8
All Ve	ehicles	1498	26	1577	1.7	0.209	1.5	NA	1.0	7.1	0.09	0.07	0.09	55.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

Site Category: -Give-Way (Two-Way)

Vehi	cle Mo	vemen	t Perforn	nance										
Mov ID	Turn	INF VOLI	PUT JMES	DEM/ FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUI	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		[ Total veh/h	HV ] veh/h	[ Total veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South	n: Denis	stone Ro	ad											
1	L2	42	1	44	2.4	0.051	3.4	LOS A	0.0	0.0	0.00	0.21	0.00	39.2
2	T1	50	0	53	0.0	0.051	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	39.2
Appro	oach	92	1	97	1.1	0.051	1.6	NA	0.0	0.0	0.00	0.21	0.00	39.2
North	n: Denis	tone Ro	ad											
8	T1	75	0	79	0.0	0.061	1.3	LOS A	0.2	1.3	0.12	0.30	0.12	42.2
9	R2	32	0	34	0.0	0.061	4.9	LOS A	0.2	1.3	0.12	0.30	0.12	45.5
Appro	oach	107	0	113	0.0	0.061	2.4	NA	0.2	1.3	0.12	0.30	0.12	42.9
West	: Fourth	n Avenue	;											
10	L2	25	0	26	0.0	0.017	4.7	LOS A	0.1	0.5	0.13	0.50	0.13	43.5
12	R2	60	0	63	0.0	0.058	5.2	LOS A	0.2	1.3	0.25	0.56	0.25	38.2
Appro	oach	85	0	89	0.0	0.058	5.1	LOS A	0.2	1.3	0.22	0.54	0.22	39.5
All Ve	ehicles	284	1	299	0.4	0.061	2.9	NA	0.2	1.3	0.11	0.34	0.11	40.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

Site Category: -Give-Way (Two-Way)

Vehi	cle Mo	vemen	t Perforr	mance										
Mov ID	Turn	INF VOLI	PUT JMES	DEM/ FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% B <i>i</i> QUI	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		[ Total veh/h	HV ] veh/h	[ Total veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
Sout	n: Denis	stone Ro	ad											
1	L2	55	3	58	5.5	0.077	3.5	LOS A	0.0	0.0	0.00	0.18	0.00	39.3
2	T1	83	0	87	0.0	0.077	0.0	LOS A	0.0	0.0	0.00	0.18	0.00	39.3
Appro	oach	138	3	145	2.2	0.077	1.4	NA	0.0	0.0	0.00	0.18	0.00	39.3
North	n: Denis	tone Ro	ad											
8	T1	51	0	54	0.0	0.040	1.4	LOS A	0.1	0.8	0.14	0.28	0.14	42.2
9	R2	18	0	19	0.0	0.040	5.0	LOS A	0.1	0.8	0.14	0.28	0.14	45.6
Appro	oach	69	0	73	0.0	0.040	2.3	NA	0.1	0.8	0.14	0.28	0.14	42.8
West	: Fourth	n Avenue	•											
10	L2	33	0	35	0.0	0.023	4.8	LOS A	0.1	0.6	0.17	0.50	0.17	43.3
12	R2	60	4	63	6.7	0.060	5.3	LOS A	0.2	1.4	0.26	0.56	0.26	38.2
Appro	oach	93	4	98	4.3	0.060	5.2	LOS A	0.2	1.4	0.23	0.54	0.23	39.6
All Ve	ehicles	300	7	316	2.3	0.077	2.8	NA	0.2	1.4	0.10	0.32	0.10	40.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

# V Site: 101 [7 Florence Avenue/ Denistone Road\_AM (Site Folder: 2026 without dev)]

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

Vehi	cle Mo	ovemen	t Perforr	nance										
Mov ID	Turn	INF Volu	PUT IMES	DEM. FLO	AND WS	Deg. Satn	Aver. Delav	Level of Service	95% B/	ACK OF	Prop.	Effective Stop	Aver.	Aver. Sneed
		[ Total veh/h	HV ] veh/h	[ Total veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist ] m	Quo	Rate	Cycles	km/h
Sout	nEast:	Florence	Avenue											
21	L2	48	1	51	2.1	0.094	4.6	LOS A	0.0	0.0	0.00	0.15	0.00	48.6
22	T1	121	3	127	2.5	0.094	0.0	LOS A	0.0	0.0	0.00	0.15	0.00	49.1
Appro	oach	169	4	178	2.4	0.094	1.3	NA	0.0	0.0	0.00	0.15	0.00	48.9
North	West:	Deniston	e Road											
28	T1	78	2	82	2.6	0.062	0.2	LOS A	0.2	1.3	0.16	0.14	0.16	48.8
29	R2	27	0	28	0.0	0.062	5.1	LOS A	0.2	1.3	0.16	0.14	0.16	47.8
Appro	oach	105	2	111	1.9	0.062	1.5	NA	0.2	1.3	0.16	0.14	0.16	48.5
South	nWest:	Florence	Avenue											
30	L2	9	0	9	0.0	0.085	5.0	LOS A	0.3	2.0	0.30	0.58	0.30	46.0
32	R2	75	1	79	1.3	0.085	5.6	LOS A	0.3	2.0	0.30	0.58	0.30	45.5
Appro	oach	84	1	88	1.2	0.085	5.5	LOS A	0.3	2.0	0.30	0.58	0.30	45.6
All Ve	ehicles	358	7	377	2.0	0.094	2.4	NA	0.3	2.0	0.12	0.25	0.12	48.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

## V Site: 101 [7 Florence Avenue/ Denistone Road\_PM (Site Folder: 2026 without dev)]

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

Vehi	cle Mo	ovemen	t Perforr	nance										
Mov	Turn	INF		DEM	AND	Deg. Sata	Aver.	Level of	95% BA		Prop.	Effective	Aver.	Aver.
		[ Total	HV ]	[ Total	HV ]	Jain	Delay	OEIVICE	[ Veh.	Dist ]	Que	Rate	Cycles	Opeeu
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m				km/h
Sout	hEast: I	Florence	Avenue											
21	L2	60	1	63	1.7	0.094	4.6	LOS A	0.0	0.0	0.00	0.19	0.00	48.4
22	T1	110	2	116	1.8	0.094	0.0	LOS A	0.0	0.0	0.00	0.19	0.00	48.9
Appr	oach	170	3	179	1.8	0.094	1.6	NA	0.0	0.0	0.00	0.19	0.00	48.7
North	nWest:	Deniston	e Road											
28	T1	110	5	116	4.5	0.082	0.2	LOS A	0.2	1.5	0.14	0.12	0.14	48.9
29	R2	30	0	32	0.0	0.082	5.1	LOS A	0.2	1.5	0.14	0.12	0.14	48.0
Appr	oach	140	5	147	3.6	0.082	1.2	NA	0.2	1.5	0.14	0.12	0.14	48.7
Sout	hWest:	Florence	Avenue											
30	L2	4	0	4	0.0	0.059	4.9	LOS A	0.2	1.4	0.31	0.59	0.31	46.0
32	R2	53	0	56	0.0	0.059	5.7	LOS A	0.2	1.4	0.31	0.59	0.31	45.5
Appr	oach	57	0	60	0.0	0.059	5.6	LOS A	0.2	1.4	0.31	0.59	0.31	45.6
All Ve	ehicles	367	8	386	2.2	0.094	2.1	NA	0.2	1.5	0.10	0.23	0.10	48.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

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

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Project: \\Corp.ads\gtadata\ProjectFilesSyd\N21100-21199\N211310 Ryde Hospital Redevelopment\Modelling\220704-N211310 Ryde Hospital SIDRA.sip9

# **USER REPORT FOR NETWORK SITE**

### All Movement Classes

Project: 220704-N211310 Ryde Hospital SIDRA

**Template: Movement, Phasing** 

Site: 4 [4 First Avenue/Ryedale Road\_AM (Site ■ Network: 9 [First\_Ave\_AM (Network Folder: Folder: 2026 without dev)]

Site Category: -Stop (Two-Way)

Vehi	cle Mo	vement l	Perfor	mance	;									
Mov ID	Turn	DEMA FLOV [ Total veh/h	ND VS HV] %	ARRI FLO [ Total veh/h	VAL WS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF ( [ Veh. veh	GE BACK QUEUE Dist] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Ryeda	ale Road												
1	L2	71	0.0	71	0.0	0.094	10.3	LOS A	0.2	1.1	0.49	0.90	0.49	44.2
Appro	bach	71	0.0	71	0.0	0.094	10.3	LOS A	0.2	1.1	0.49	0.90	0.49	44.2
East:	First Av	/enue												
4	L2	99	1.1	99	1.1	0.296	4.1	LOS A	0.0	0.0	0.00	0.10	0.00	54.4
5	T1	1034	2.5	1034	2.5	0.296	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	59.0
Appro	bach	1133	2.4	1133	2.4	0.296	0.4	NA	0.0	0.0	0.00	0.05	0.00	58.6
North	: Ryeda	ale Road												
7	L2	14	0.0	14	0.0	0.071	14.9	LOS B	0.2	1.4	0.69	1.00	0.69	15.7
Appro	bach	14	0.0	14	0.0	0.071	14.9	LOS B	0.2	1.4	0.69	1.00	0.69	15.7
West	First A	venue												
10	L2	27	0.0	27	0.0	0.015	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	45.8
11	T1	1583	4.2	1583	4.2	0.434	0.1	LOS A	11.5	83.2	0.00	0.00	0.00	59.7
Appro	bach	1611	4.1	1611	4.1	0.434	0.2	NA	11.5	83.2	0.00	0.01	0.00	59.3
All Ve	hicles	2827	3.3	2827	3.3	0.434	0.6	NA	11.5	83.2	0.02	0.05	0.02	57.9

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

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

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

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

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

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

# Site: 101 [8 Blaxland Road/ First Avenue\_AM (Site Folder: 2026 without dev)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Downstream lane blockage effects included in determining phase times Phase Sequence: Leading Right Turn Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Vehio	cle Mo	vement	Perfor	mance	e									
Mov ID	Turn	DEMA FLOV [ Total veh/h	AND WS HV] %	ARRI FLO [ Total veh/h	VAL WS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF [ Veh. veh	AGE BACK QUEUE Dist] m	Prop. Que	Effective A Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South	: Blaxla	and Rd												
1 2	L2 T1	463 699	3.0 2.9	463 699	3.0 2.9	0.414 <b>*</b> 0.750	10.7 41.8	LOS A LOS C	5.4 13.7	38.5 98.2	0.45 0.94	0.70 0.84	0.45 0.98	44.8 35.7
Appro	bach	1162	2.9	1162	2.9	0.750	29.4	LOS C	13.7	98.2	0.74	0.78	0.77	37.6
North	: Blaxla	ind Rd												
8 9	T1 R2	697 669	2.1 2.0	697 669	2.1 2.0	0.616 * 0.738	16.1 51.1	LOS B	15.6 11.3	111.2 80.8	0.69 0.98	0.63 0.87	0.69 1.01	47.5 22.7
Appro	ach	1366	2.1	1366	2.1	0.738	33.3	LOS C	15.6	111.2	0.83	0.75	0.85	35.0
West:	First A	ve												
10	L2	845	4.6	845	4.6	0.777	14.5	LOS A	7.6	55.0	0.78	0.84	0.78	41.5
12	R2	785	3.9	785	3.9	*0.743	46.0	LOS D	7.6	55.0	0.96	0.87	0.99	25.2
Appro	bach	1631	4.3	1631	4.3	0.777	29.7	LOS C	7.6	55.0	0.87	0.85	0.88	31.7
All Ve	hicles	4159	3.2	4159	3.2	0.777	30.8	LOS C	15.6	111.2	0.82	0.80	0.84	34.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

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

\* Critical Movement (Signal Timing)

Pedestrian Mov	ement	Perform	nance							
Mov	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. E	Effective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	EUE Dist ]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m			sec	m	m/sec
North: Blaxland Ro	d									
P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.7	217.7	0.98
West: First Ave										
P4 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.9	217.9	0.98
All Pedestrians	105	54.3	LOS E	0.2	0.2	0.95	0.95	221.8	217.8	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.



REF: Reference Phase VAR: Variable Phase

Normal Movement	Permitted/Opposed
Slip/Bypass-Lane Movement	Opposed Slip/Bypass-Lane
Stopped Movement	Turn On Red
Other Movement Class (MC) Running	Undetected Movement
Mixed Running & Stopped MCs	Continuous Movement
Other Movement Class (MC) Stopped	Phase Transition Applied

#### Phase Timing Summary

Phase	Α	В	С
Phase Change Time (sec)	0	41	78
Green Time (sec)	35	31	36
Phase Time (sec)	41	37	42
Phase Split	34%	31%	35%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

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# **USER REPORT FOR NETWORK SITE**

### All Movement Classes

Project: 220704-N211310 Ryde Hospital SIDRA

**Template: Movement, Phasing** 

Site: 4 [4 First Avenue/Ryedale Road\_PM (Site ■■ Network: 10 [First\_Ave\_PM (Network Folder: Folder: 2026 without dev)]

Site Category: -Stop (Two-Way)

Vehi	Vehicle Movement Performance													
Mov ID	Turn	DEMA FLO\ [ Total veh/h	ND NS HV] %	ARRI FLO [ Total veh/h	VAL NS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF ( [ Veh. veh	AGE BACK QUEUE Dist] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Ryeda	ale Road												
1	L2	97	0.0	97	0.0	0.163	12.3	LOS A	0.3	1.9	0.59	0.97	0.59	42.9
Appro	bach	97	0.0	97	0.0	0.163	12.3	LOS A	0.3	1.9	0.59	0.97	0.59	42.9
East:	First Av	venue												
4	L2	92	1.1	92	1.1	0.390	4.1	LOS A	0.0	0.0	0.00	0.07	0.00	54.8
5	T1	1391	3.6	1391	3.6	0.390	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	59.2
Appro	bach	1482	3.5	1482	3.5	0.390	0.3	NA	0.0	0.0	0.00	0.04	0.00	58.9
North	: Ryeda	le Road												
7	L2	27	3.8	27	3.8	0.093	11.4	LOS A	0.1	0.7	0.53	0.97	0.53	18.8
Appro	bach	27	3.8	27	3.8	0.093	11.4	LOS A	0.1	0.7	0.53	0.97	0.53	18.8
West	: First A	venue												
10	L2	16	6.7	16	6.7	0.009	5.5	LOS A	0.0	0.0	0.00	0.57	0.00	45.6
11	T1	1083	3.3	1083	3.3	0.296	0.1	LOS A	3.6	25.8	0.00	0.00	0.00	59.8
Appro	bach	1099	3.4	1099	3.4	0.296	0.1	NA	3.6	25.8	0.00	0.01	0.00	59.5
All Ve	hicles	2705	3.3	2705	3.3	0.390	0.8	NA	3.6	25.8	0.03	0.07	0.03	57.5

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

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

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

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

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

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

# Site: 101 [8 Blaxland Road/ First Avenue\_PM (Site Folder: 2026 without dev)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Downstream lane blockage effects included in determining phase times Phase Sequence: Leading Right Turn Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Vehio	Vehicle Movement Performance														
Mov ID	Turn	DEMA FLOV [ Total veh/h	AND NS HV] %	ARRI FLO [ Total veh/h	VAL WS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF ( [ Veh. veh	GE BACK QUEUE Dist] m	Prop. Que	Effective A Stop Rate	Aver. No. Cycles	Aver. Speed km/h	
South	: Blaxla	and Rd													
1 2	L2 T1	653 896	3.2 1.4	653 896	3.2 1.4	0.654 <b>*</b> 0.856	14.6 45.6	LOS B LOS D	11.7 20.9	84.1 148.2	0.66 0.94	0.78 0.94	0.66 1.09	41.0 34.4	
Appro	ach	1548	2.2	1548	2.2	0.856	32.5	LOS C	20.9	148.2	0.82	0.87	0.91	36.0	
North	: Blaxla	nd Rd													
8 9	T1 R2	492 804	2.1 3.9	492 804	2.1 3.9	0.373 <b>*</b> 0.874	7.7 58.6	LOS A LOS E	7.0 15.4	49.9 111.2	0.44 0.97	0.39 0.96	0.44 1.19	53.3 20.8	
Appro	ach	1296	3.2	1296	3.2	0.874	39.3	LOS C	15.4	111.2	0.77	0.74	0.90	31.2	
West:	First A	ve													
10 12	L2 R2	526 588	2.8 3.8	526 588	2.8 3.8	0.551 <b>*</b> 0.834	15.4 60.9	LOS B LOS E	7.7 7.6	55.0 55.0	0.63 1.00	0.76 0.93	0.63 1.18	40.8 21.3	
Appro	ach	1115	3.3	1115	3.3	0.834	39.4	LOS C	7.7	55.0	0.83	0.85	0.92	27.5	
All Ve	hicles	3959	2.8	3959	2.8	0.874	36.7	LOS C	20.9	148.2	0.81	0.82	0.91	32.1	

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

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

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance													
Mov	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. E	Effective	Travel	Travel	Aver.			
ID Crossing	Flow	Delay	Service	QUE [ Ped	EUE Dist ]	Que	Stop Rate	Time	Dist.	Speed			
	ped/h	sec		ped	m			sec	m	m/sec			
North: Blaxland Re	d												
P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.7	217.7	0.98			
West: First Ave													
P4 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.9	217.9	0.98			
All Pedestrians	105	54.3	LOS E	0.2	0.2	0.95	0.95	221.8	217.8	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.



REF: Reference Phase VAR: Variable Phase

Normal Movement	Permitted/Opposed
Slip/Bypass-Lane Movement	Opposed Slip/Bypass-Lane
Stopped Movement	Turn On Red
Other Movement Class (MC) Running	Undetected Movement
Mixed Running & Stopped MCs	Continuous Movement
Other Movement Class (MC) Stopped	Phase Transition Applied

#### Phase Timing Summary

Phase	Α	В	С
Phase Change Time (sec)	0	48	90
Green Time (sec)	42	36	24
Phase Time (sec)	48	42	30
Phase Split	40%	35%	25%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

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# **USER REPORT FOR SITE**

### All Movement Classes

Project: 220704-N211310 Ryde Hospital SIDRA

**Template: Movement, Phasing** 

#### Site: 1 [1 Blaxland Road/Florence Avenue\_AM (Site Folder: 2026 Post dev)]

Site Category: -

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 55 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, B\*, C (\* Variable Phase)

Vehi	Vehicle Movement Performance													
Mov D	Turn	INF Volu	PUT IMES	DEM/	AND WS	Deg. Satn	Aver. Delav	Level of Service	95% BA		Prop.	Effective Stop	Aver.	Aver. Speed
		[ Total	HV ]	[ Total	HV ]		Dolay	0011100	[Veh.	Dist ]	Que	Rate	Cycles	
		veh/h	veh/h	veh/h	%	V/C	sec		veh	m				km/h
South	n: Blaxia	and Roa	d											
1	L2	168	3	177	1.8	*0.538	18.5	LOS B	6.5	46.5	0.83	0.80	0.83	39.4
2	T1	573	26	603	4.5	0.538	13.6	LOS A	8.5	62.1	0.82	0.73	0.82	44.9
Appro	bach	741	29	780	3.9	0.538	14.7	LOS B	8.5	62.1	0.82	0.75	0.82	43.5
North	: Blaxla	and Road	b											
8	T1	711	27	748	3.8	0.467	9.4	LOS A	8.0	57.7	0.66	0.57	0.66	48.9
9	R2	38	0	40	0.0	*0.467	24.2	LOS B	5.5	39.8	0.88	0.74	0.88	41.9
Appro	bach	749	27	788	3.6	0.467	10.2	LOS A	8.0	57.7	0.67	0.58	0.67	48.4
West	Florer	ice Aven	ue											
10	L2	45	0	47	0.0	0.067	16.3	LOS B	0.8	5.7	0.66	0.68	0.66	43.0
12	R2	134	4	141	3.0	*0.474	28.5	LOS B	3.7	26.2	0.95	0.78	0.95	32.2
Appro	bach	179	4	188	2.2	0.474	25.4	LOS B	3.7	26.2	0.88	0.76	0.88	35.0
All Ve	hicles	1669	60	1757	3.6	0.538	13.8	LOS A	8.5	62.1	0.76	0.67	0.76	44.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

Queue Model: SIDRA Standard.

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

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

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov	Input	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Ef	fective	Travel	Travel	Aver.
ID Crossing	Vol.	Flow	Delay	Service QUEUE		Que	Stop	Time	Dist.	Speed	
					[Ped	Dist ]		Rate			
	ped/h	ped/h	sec		ped	m			sec	m	m/sec
North: Blaxlan	d Road										

P3 Full	50	53	18.4	LOS B	0.1	0.1	0.82	0.82	45.5	35.2	0.77
West: Florence	Avenue										
P4 Full	50	53	20.1	LOS C	0.1	0.1	0.86	0.86	44.7	31.9	0.71
All Pedestrians	100	105	19.3	LOS B	0.1	0.1	0.84	0.84	45.1	33.6	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.

#### **Output Phase Sequence** Phase A REF Phase C Phase B VAR Blaxland Road Blaxland Road Blaxland Road JI Florence Avenue Florence Avenue Florence Avenue H ╡ ר Blaxland Road Blaxland Road Blaxland Road

REF: Reference Phase VAR: Variable Phase

Normal Movement	Permitted/Opposed
Slip/Bypass-Lane Movement	Opposed Slip/Bypass-Lane
Stopped Movement	Turn On Red
Cther Movement Class (MC) Running	Undetected Movement
Mixed Running & Stopped MCs	Continuous Movement
Other Movement Class (MC) Stopped	Phase Transition Applied

Phase Timing Summary											
Phase	Α	В	С								
Phase Change Time (sec)	0	28	40								
Green Time (sec)	22	6	9								
Phase Time (sec)	28	12	15								
Phase Split	51%	22%	27%								

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

### Site: 1 [1 Blaxland Road/Florence Avenue\_PM (Site Folder: 2026 Post dev)]

Site Category: -

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 55 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, B\*, C (\* Variable Phase)

Vehi	/ehicle Movement Performance													
Mov ID	Turn	INF VOLL	PUT JMES	DEM/ FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUI	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		[ Total	HV]	[ Total	HV ] %	NIC	-		[Veh.	Dist ]		Rate	Cycles	km/b
South	n: Blaxl	and Roa	d	VEII/II	70	v/C	360		Ven	111	_		_	K111/11
1	L2	150	1	158	0.7	*0.576	18.0	LOS B	8.7	61.9	0.80	0.77	0.80	40.2
2	T1	772	16	813	2.1	0.576	12.3	LOS A	10.2	72.5	0.80	0.72	0.80	46.0
Appro	bach	922	17	971	1.8	0.576	13.2	LOS A	10.2	72.5	0.80	0.73	0.80	45.0
North	: Blaxla	and Road	ł											
8	T1	582	10	613	1.7	0.451	8.3	LOS A	7.7	54.5	0.62	0.53	0.62	50.0
9	R2	33	1	35	3.0	*0.451	30.5	LOS C	2.9	20.7	0.96	0.76	0.96	38.7
Appro	bach	615	11	647	1.8	0.451	9.5	LOS A	7.7	54.5	0.63	0.55	0.63	48.9
West	Florer	ice Aven	ue											
10	L2	66	0	69	0.0	0.114	18.7	LOS B	1.3	9.3	0.73	0.71	0.73	41.8
12	R2	161	5	169	3.1	*0.570	29.1	LOS C	4.5	32.3	0.97	0.81	0.99	31.9
Appro	bach	227	5	239	2.2	0.570	26.1	LOS B	4.5	32.3	0.90	0.78	0.92	35.0
All Ve	hicles	1764	33	1857	1.9	0.576	13.6	LOS A	10.2	72.5	0.75	0.67	0.76	44.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

Queue Model: SIDRA Standard.

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

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

\* Critical Movement (Signal Timing)

Pedestrian M	Pedestrian Movement Performance													
Mov D Crossing	Input	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Et	ffective	Travel	Travel	Aver.			
	VOI.	FIOW	Delay	Service	QUEUE [Ped Dist]		Que	Stop Rate	Time	Dist.	Speed			
	ped/h	ped/h	sec		ped	m			sec	m	m/sec			
North: Blaxland Road														
P3 Full	50	53	19.3	LOS B	0.1	0.1	0.84	0.84	46.4	35.2	0.76			
West: Florence	Avenue													
P4 Full	50	53	20.1	LOS C	0.1	0.1	0.86	0.86	44.7	31.9	0.71			
All Pedestrians	100	105	19.7	LOS B	0.1	0.1	0.85	0.85	45.5	33.6	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.



REF: Reference Phase VAR: Variable Phase

$ \longrightarrow $	Normal Movement	$ \longrightarrow $	Permitted/Opposed
$ \longrightarrow $	Slip/Bypass-Lane Movement	$ \longrightarrow $	Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
$\implies$	Other Movement Class (MC) Running	$ \longrightarrow $	Undetected Movement
	Mixed Running & Stopped MCs	$ \longrightarrow $	Continuous Movement
	Other Movement Class (MC) Stopped	•	Phase Transition Applied

#### Phase Timing Summary

Phase	Α	В	С
Phase Change Time (sec)	0	31	40
Green Time (sec)	25	3	9
Phase Time (sec)	31	9	15
Phase Split	56%	16%	27%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Vehi	cle Mo	vement	Perfori	mance										
Mov ID	Turn	INP VOLU	UT IMES	DEM FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUI	ACK OF EUE Dict 1	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m		Itale	Cycles	km/h
South	n: Ryed	ale Roac	ł											
2	T1	145	0	153	0.0	0.149	3.9	LOS A	0.8	5.6	0.13	0.50	0.13	46.3
3	R2	50	0	53	0.0	0.149	6.7	LOS A	0.8	5.6	0.13	0.50	0.13	45.7
3u	U	1	0	1	0.0	0.149	8.0	LOS A	0.8	5.6	0.13	0.50	0.13	46.7
Appro	bach	196	0	206	0.0	0.149	4.7	LOS A	0.8	5.6	0.13	0.50	0.13	46.2
East: Floren		ce Avenu	ie											
4	L2	53	0	56	0.0	0.069	5.2	LOS A	0.3	2.4	0.34	0.56	0.34	44.7
6	R2	15	1	16	6.7	0.069	7.5	LOS A	0.3	2.4	0.34	0.56	0.34	44.5
6u	U	1	0	1	0.0	0.069	8.8	LOS A	0.3	2.4	0.34	0.56	0.34	44.6
Appro	bach	69	1	73	1.4	0.069	5.7	LOS A	0.3	2.4	0.34	0.56	0.34	44.7
North	: Ryeda	ale Road												
7	L2	47	1	49	2.1	0.168	4.6	LOS A	0.9	6.3	0.19	0.47	0.19	45.1
8	T1	148	1	156	0.7	0.168	4.1	LOS A	0.9	6.3	0.19	0.47	0.19	46.4
9u	U	9	0	9	0.0	0.168	8.1	LOS A	0.9	6.3	0.19	0.47	0.19	46.3
Appro	bach	204	2	215	1.0	0.168	4.4	LOS A	0.9	6.3	0.19	0.47	0.19	46.1
All Ve	ehicles	469	3	494	0.6	0.168	4.7	LOS A	0.9	6.3	0.19	0.49	0.19	45.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

Vehi	cle Mo	ovement	Perfori	mance										
Mov ID	Turn	INP VOLL	UT IMES	DEM FLO	AND WS HV 1	Deg. Satn	Aver. Delay	Level of Service	95% BA QUI	ACK OF EUE Dist 1	Prop. Que	Effective Stop Rate	Aver. No.	Aver. Speed
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m		T Cato	Cycles	km/h
South	n: Ryed	lale Road	1											
2	T1	82	3	86	3.7	0.097	4.2	LOS A	0.5	3.5	0.20	0.50	0.20	46.1
3	R2	27	0	28	0.0	0.097	6.8	LOS A	0.5	3.5	0.20	0.50	0.20	45.5
3u	U	2	0	2	0.0	0.097	8.2	LOS A	0.5	3.5	0.20	0.50	0.20	46.5
Appro	bach	111	3	117	2.7	0.097	4.9	LOS A	0.5	3.5	0.20	0.50	0.20	46.0
East: Floren		ce Avenu	ie											
4	L2	71	1	75	1.4	0.106	5.5	LOS A	0.5	3.7	0.38	0.59	0.38	44.5
6	R2	32	0	34	0.0	0.106	7.7	LOS A	0.5	3.7	0.38	0.59	0.38	44.4
6u	U	1	0	1	0.0	0.106	9.0	LOS A	0.5	3.7	0.38	0.59	0.38	44.4
Appro	bach	104	1	109	1.0	0.106	6.2	LOS A	0.5	3.7	0.38	0.59	0.38	44.5
North	: Ryeda	ale Road												
7	L2	78	0	82	0.0	0.202	4.4	LOS A	1.1	8.1	0.15	0.48	0.15	45.1
8	T1	164	3	173	1.8	0.202	4.0	LOS A	1.1	8.1	0.15	0.48	0.15	46.4
9u	U	24	0	25	0.0	0.202	8.0	LOS A	1.1	8.1	0.15	0.48	0.15	46.3
Appro	bach	266	3	280	1.1	0.202	4.5	LOS A	1.1	8.1	0.15	0.48	0.15	46.0
All Ve	hicles	481	7	506	1.5	0.202	4.9	LOS A	1.1	8.1	0.21	0.51	0.21	45.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

Vehi	hicle Movement Performance													
Mov	Turn	INP	UT		AND	Deg.	Aver.	Level of	95% BA		Prop. E	Effective	Aver.	Aver.
טו		Total	HV1	FLO [ Total	VVS HV 1	Sam	Delay	Service	[ Veh.	Dist 1	Que	Stop Rate	Cvcles	Speed
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m				km/h
South	i: Ryed	ale Road	I											
1	L2	1	0	1	0.0	0.131	3.9	LOS A	0.7	5.1	0.15	0.55	0.15	42.3
2	T1	72	0	76	0.0	0.131	3.7	LOS A	0.7	5.1	0.15	0.55	0.15	45.2
3	R2	51	0	54	0.0	0.131	6.9	LOS A	0.7	5.1	0.15	0.55	0.15	43.7
3u	U	44	0	46	0.0	0.131	8.4	LOS A	0.7	5.1	0.15	0.55	0.15	45.9
Appro	bach	168	0	177	0.0	0.131	5.9	LOS A	0.7	5.1	0.15	0.55	0.15	45.0
East:	Fourth	Avenue												
4	L2	78	0	82	0.0	0.111	5.1	LOS A	0.6	4.0	0.42	0.58	0.42	43.2
5	T1	6	0	6	0.0	0.111	4.9	LOS A	0.6	4.0	0.42	0.58	0.42	39.0
6	R2	22	2	23	9.1	0.111	8.3	LOS A	0.6	4.0	0.42	0.58	0.42	42.9
6u	U	1	0	1	0.0	0.111	9.5	LOS A	0.6	4.0	0.42	0.58	0.42	41.4
Appro	bach	107	2	113	1.9	0.111	5.8	LOS A	0.6	4.0	0.42	0.58	0.42	43.1
North	: Ryed	ale Road												
7	L2	34	2	36	5.9	0.188	4.5	LOS A	1.0	7.2	0.29	0.46	0.29	43.2
8	T1	174	1	183	0.6	0.188	4.2	LOS A	1.0	7.2	0.29	0.46	0.29	46.1
9	R2	3	0	3	0.0	0.188	7.4	LOS A	1.0	7.2	0.29	0.46	0.29	43.4
Appro	bach	211	3	222	1.4	0.188	4.3	LOS A	1.0	7.2	0.29	0.46	0.29	45.7
West	Fourth	n Avenue												
10	L2	2	0	2	0.0	0.010	4.7	LOS A	0.0	0.3	0.35	0.49	0.35	41.7
11	T1	6	0	6	0.0	0.010	4.5	LOS A	0.0	0.3	0.35	0.49	0.35	39.4
12	R2	2	0	2	0.0	0.010	7.7	LOS A	0.0	0.3	0.35	0.49	0.35	43.5
Appro	bach	10	0	11	0.0	0.010	5.2	LOS A	0.0	0.3	0.35	0.49	0.35	41.1
All Ve	hicles	496	5	522	1.0	0.188	5.2	LOS A	1.0	7.2	0.27	0.52	0.27	44.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

Vehio	cle Mo	vement	t Perfori	mance										
Mov ID	Turn	INP VOLL [ Total	PUT JMES HV]	DEM FLC [ Total	AND WS HV ]	Deg. Satn	Aver. Delay	Level of Service	95% BA QUI [ Veh.	ACK OF EUE Dist ]	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m				km/h
South	: Ryed	ale Road	ł											
1	L2	1	0	1	0.0	0.104	4.1	LOS A	0.5	3.8	0.22	0.51	0.22	42.7
2	T1	75	2	79	2.7	0.104	3.9	LOS A	0.5	3.8	0.22	0.51	0.22	45.5
3	R2	27	0	28	0.0	0.104	7.1	LOS A	0.5	3.8	0.22	0.51	0.22	44.1
3u	U	16	0	17	0.0	0.104	8.6	LOS A	0.5	3.8	0.22	0.51	0.22	46.2
Appro	ach	119	2	125	1.7	0.104	5.3	LOS A	0.5	3.8	0.22	0.51	0.22	45.3
East:	Fourth	Avenue												
4	L2	55	0	58	0.0	0.113	4.6	LOS A	0.6	4.1	0.33	0.58	0.33	42.8
5	T1	1	0	1	0.0	0.113	4.4	LOS A	0.6	4.1	0.33	0.58	0.33	38.3
6	R2	56	3	59	5.4	0.113	7.7	LOS A	0.6	4.1	0.33	0.58	0.33	42.5
6u	U	5	0	5	0.0	0.113	9.0	LOS A	0.6	4.1	0.33	0.58	0.33	40.7
Appro	ach	117	3	123	2.6	0.113	6.3	LOS A	0.6	4.1	0.33	0.58	0.33	42.6
North	: Ryed	ale Road												
7	L2	37	4	39	10.8	0.133	4.2	LOS A	0.7	5.1	0.19	0.44	0.19	43.5
8	T1	120	3	126	2.5	0.133	3.8	LOS A	0.7	5.1	0.19	0.44	0.19	46.4
9	R2	1	1	1	100.0	0.133	8.3	LOS A	0.7	5.1	0.19	0.44	0.19	27.6
9u	U	2	0	2	0.0	0.133	8.5	LOS A	0.7	5.1	0.19	0.44	0.19	46.5
Appro	ach	160	8	168	5.0	0.133	4.0	LOS A	0.7	5.1	0.19	0.44	0.19	45.8
West:	Fourth	n Avenue												
10	L2	1	1	1	100.0	0.004	6.6	LOS A	0.0	0.1	0.37	0.51	0.37	38.7
11	T1	1	0	1	0.0	0.004	4.5	LOS A	0.0	0.1	0.37	0.51	0.37	38.2
12	R2	1	0	1	0.0	0.004	7.7	LOS A	0.0	0.1	0.37	0.51	0.37	42.8
Appro	bach	3	1	3	33.3	0.004	6.2	LOS A	0.0	0.1	0.37	0.51	0.37	40.2
All Ve	hicles	399	14	420	3.5	0.133	5.1	LOS A	0.7	5.1	0.24	0.50	0.24	44.8

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

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

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

Site Category: -Stop (Two-Way)

Vehi	cle Mo	vemen	t Perforr	nance										
Mov	Turn	INF	PUT	DEM	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
ID		VOLU	JMES	FLO	WS	Satn	Delay	Service	QUI	EUE	Que	Stop	No.	Speed
		[ lotal	HV J	[ lotal	HV J				[Veh.	Dist ]		Rate	Cycles	
		veh/h	veh/h	veh/h	%	V/C	sec		veh	m				km/h
South	n: Blaxla	and Roa	d											
1	L2	15	0	16	0.0	0.166	5.6	LOS A	0.0	0.0	0.00	0.03	0.00	47.5
2	T1	582	27	613	4.6	0.166	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.7
Appro	bach	597	27	628	4.5	0.166	0.2	NA	0.0	0.0	0.00	0.02	0.00	59.3
North	: Blaxla	and Road	b											
8	T1	688	28	724	4.1	0.218	0.4	LOS A	0.7	4.9	0.09	0.03	0.09	58.5
9	R2	38	0	40	0.0	0.218	9.7	LOS A	0.7	4.9	0.20	0.08	0.20	44.8
Appro	bach	726	28	764	3.9	0.218	0.9	NA	0.7	4.9	0.09	0.04	0.09	58.1
West	: Daltor	n Avenue	)											
10	L2	43	0	45	0.0	0.177	9.1	LOS A	0.6	4.0	0.61	0.90	0.61	14.3
12	R2	11	0	12	0.0	0.177	48.6	LOS D	0.6	4.0	0.61	0.90	0.61	38.5
Appro	bach	54	0	57	0.0	0.177	17.2	LOS B	0.6	4.0	0.61	0.90	0.61	19.2
All Ve	hicles	1377	55	1449	4.0	0.218	1.2	NA	0.7	4.9	0.07	0.06	0.07	56.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

Site Category: -Stop (Two-Way)

Vehi	cle Mo	vemen	t Perforr	nance										
Mov	Turn	INF	PUT	DEM	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
ID		VOLU	JMES	FLO	WS	Satn	Delay	Service	QUI	EUE	Que	Stop	No.	Speed
		[ lotal	HV J	[ lotal	HV J	vla			[ Veh.	Dist J		Rate	Cycles	km/b
South	n: Blaxla	and Roa	d ven/n	ven/n	70	V/C	sec		ven	111	_		_	KIII/II
1	L2	11	0	12	0.0	0.218	5.6	LOS A	0.0	0.0	0.00	0.02	0.00	47.7
2	T1	787	15	828	1.9	0.218	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	59.8
Appro	oach	798	15	840	1.9	0.218	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.5
North	: Blaxla	and Road	d											
8	T1	625	11	658	1.8	0.203	0.8	LOS A	0.9	6.2	0.12	0.04	0.12	57.8
9	R2	36	0	38	0.0	0.203	12.0	LOS A	0.9	6.2	0.29	0.09	0.29	41.9
Appro	oach	661	11	696	1.7	0.203	1.4	NA	0.9	6.2	0.13	0.04	0.13	57.3
West	: Daltor	n Avenue	•											
10	L2	47	0	49	0.0	0.199	9.9	LOS A	0.6	4.4	0.66	0.95	0.66	14.1
12	R2	9	0	9	0.0	0.199	60.2	LOS E	0.6	4.4	0.66	0.95	0.66	37.9
Appro	bach	56	0	59	0.0	0.199	18.0	LOS B	0.6	4.4	0.66	0.95	0.66	17.9
All Ve	ehicles	1515	26	1595	1.7	0.218	1.3	NA	0.9	6.2	0.08	0.06	0.08	56.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

Site Category: -Give-Way (Two-Way)

Vehi	ehicle Movement Performance													
Mov ID	Turn	INF VOLI	PUT JMES	DEM/ FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUI	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		[ Total veh/h	HV ] veh/h	[ Total veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist ] m		Rate	Cycles	km/h
South	n: Denis	stone Ro	ad											
1	L2	78	1	82	1.3	0.067	3.4	LOS A	0.0	0.0	0.00	0.30	0.00	38.7
2	T1	42	0	44	0.0	0.067	0.0	LOS A	0.0	0.0	0.00	0.30	0.00	38.8
Appro	oach	120	1	126	0.8	0.067	2.2	NA	0.0	0.0	0.00	0.30	0.00	38.8
North	n: Denis	tone Ro	ad											
8	T1	59	0	62	0.0	0.053	1.4	LOS A	0.2	1.3	0.16	0.31	0.16	42.0
9	R2	32	0	34	0.0	0.053	4.9	LOS A	0.2	1.3	0.16	0.31	0.16	45.2
Appro	oach	91	0	96	0.0	0.053	2.7	NA	0.2	1.3	0.16	0.31	0.16	42.8
West	: Fourth	n Avenue	•											
10	L2	25	0	26	0.0	0.017	4.7	LOS A	0.1	0.5	0.11	0.50	0.11	43.5
12	R2	50	2	53	4.0	0.049	5.3	LOS A	0.2	1.1	0.25	0.56	0.25	38.2
Appro	oach	75	2	79	2.7	0.049	5.1	LOS A	0.2	1.1	0.20	0.54	0.20	39.6
All Ve	ehicles	286	3	301	1.0	0.067	3.1	NA	0.2	1.3	0.11	0.36	0.11	40.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

Site Category: -Give-Way (Two-Way)

Vehi	ehicle Movement Performance													
Mov	Turn	INF	UT	DEM	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
ID		VOLU	JMES	FLO	WS	Satn	Delay	Service	QUI	EUE	Que	Stop	No.	Speed
			HV J		HVJ				[Veh.	Dist J		Rate	Cycles	1
0 11	<b>.</b>	ven/n	ven/n	ven/n	%	V/C	sec	_	ven	m	_	_	_	Km/n
South	n: Denis	stone Ro	ad											
1	L2	65	3	68	4.6	0.075	3.5	LOS A	0.0	0.0	0.00	0.23	0.00	39.1
2	T1	68	0	72	0.0	0.075	0.0	LOS A	0.0	0.0	0.00	0.23	0.00	39.1
Appro	oach	133	3	140	2.3	0.075	1.7	NA	0.0	0.0	0.00	0.23	0.00	39.1
North	: Denis	tone Ro	ad											
8	T1	42	0	44	0.0	0.036	1.4	LOS A	0.1	0.8	0.16	0.30	0.16	42.1
9	R2	19	0	20	0.0	0.036	5.0	LOS A	0.1	0.8	0.16	0.30	0.16	45.3
Appro	oach	61	0	64	0.0	0.036	2.5	NA	0.1	0.8	0.16	0.30	0.16	42.8
West	: Fourth	n Avenue	•											
10	L2	34	0	36	0.0	0.023	4.8	LOS A	0.1	0.6	0.15	0.50	0.15	43.4
12	R2	58	4	61	6.9	0.057	5.3	LOS A	0.2	1.4	0.24	0.56	0.24	38.2
Appro	oach	92	4	97	4.3	0.057	5.1	LOS A	0.2	1.4	0.21	0.54	0.21	39.8
All Ve	ehicles	286	7	301	2.4	0.075	3.0	NA	0.2	1.4	0.10	0.34	0.10	40.1

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

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

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

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

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

Queue Model: SIDRA Standard.

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

## V Site: 101 [7 Florence Avenue/ Denistone Road\_AM (Site Folder: 2026 Post dev)]

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

Vehi	Vehicle Movement Performance													
Mov ID	Turn	INF VOLI	PUT JMES	DEM/ FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUI	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		[ Total veh/h	HV ] veh/h	[ Total veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist ] m		Rate	Cycles	km/h
Sout	hEast: I	lorence	Avenue											
21	L2	53	1	56	1.9	0.136	4.6	LOS A	0.0	0.0	0.00	0.12	0.00	48.8
22	T1	194	3	204	1.5	0.136	0.0	LOS A	0.0	0.0	0.00	0.12	0.00	49.3
Appr	oach	247	4	260	1.6	0.136	1.0	NA	0.0	0.0	0.00	0.12	0.00	49.2
North	nWest: I	Deniston	e Road											
28	T1	90	2	95	2.2	0.071	0.3	LOS A	0.2	1.5	0.19	0.14	0.19	48.7
29	R2	29	0	31	0.0	0.071	5.4	LOS A	0.2	1.5	0.19	0.14	0.19	47.8
Appr	oach	119	2	125	1.7	0.071	1.6	NA	0.2	1.5	0.19	0.14	0.19	48.5
Sout	hWest:	Florence	Avenue											
30	L2	5	0	5	0.0	0.185	5.3	LOS A	0.7	4.6	0.40	0.66	0.40	45.7
32	R2	159	1	167	0.6	0.185	6.2	LOS A	0.7	4.6	0.40	0.66	0.40	45.3
Appr	oach	164	1	173	0.6	0.185	6.2	LOS A	0.7	4.6	0.40	0.66	0.40	45.3
All Ve	ehicles	530	7	558	1.3	0.185	2.7	NA	0.7	4.6	0.17	0.29	0.17	47.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

## V Site: 101 [7 Florence Avenue/ Denistone Road\_PM (Site Folder: 2026 Post dev)]

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

Vehi	/ehicle Movement Performance													
Mov ID	Turn	INF VOLU	PUT JMES	DEM/ FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% B/ QU	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		veh/h	veh/h	veh/h	HV J %	v/c	sec		ven. veh	m Dist		Rale	Cycles	km/h
South	nEast: I	Florence	Avenue											
21	L2	60	1	63	1.7	0.102	4.6	LOS A	0.0	0.0	0.00	0.18	0.00	48.5
22	T1	123	2	129	1.6	0.102	0.0	LOS A	0.0	0.0	0.00	0.18	0.00	49.0
Appro	bach	183	3	193	1.6	0.102	1.5	NA	0.0	0.0	0.00	0.18	0.00	48.8
North	West:	Deniston	e Road											
28	T1	109	5	115	4.6	0.078	0.2	LOS A	0.2	1.2	0.12	0.10	0.12	49.1
29	R2	24	0	25	0.0	0.078	5.2	LOS A	0.2	1.2	0.12	0.10	0.12	48.1
Appro	bach	133	5	140	3.8	0.078	1.1	NA	0.2	1.2	0.12	0.10	0.12	48.9
South	nWest:	Florence	Avenue											
30	L2	1	0	1	0.0	0.113	5.0	LOS A	0.4	2.7	0.34	0.62	0.34	45.9
32	R2	105	0	111	0.0	0.113	5.8	LOS A	0.4	2.7	0.34	0.62	0.34	45.5
Appro	bach	106	0	112	0.0	0.113	5.8	LOS A	0.4	2.7	0.34	0.62	0.34	45.5
All Ve	ehicles	422	8	444	1.9	0.113	2.5	NA	0.4	2.7	0.13	0.26	0.13	48.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

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

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Project: \\Corp.ads\gtadata\ProjectFilesSyd\N21100-21199\N211310 Ryde Hospital Redevelopment\Modelling\220704-N211310 Ryde Hospital SIDRA.sip9

# **USER REPORT FOR NETWORK SITE**

### All Movement Classes

Project: 220704-N211310 Ryde Hospital SIDRA

**Template: Movement, Phasing** 

Site: 4 [4 First Avenue/Ryedale Road\_AM (Site ■ Network: 7 [First\_Ave\_AM (Network Folder: Folder: 2026 Post dev)]

Site Category: -Stop (Two-Way)

Vehi	Vehicle Movement Performance													
Mov ID	Turn	DEMA FLOV [ Total veh/h	ND NS HV] %	ARRI FLO [ Total veh/h	VAL WS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF ( [ Veh. veh	GE BACK QUEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Ryeda	ale Road												
1	L2	75	0.0	75	0.0	0.097	10.1	LOS A	0.2	1.1	0.48	0.89	0.48	44.3
Appro	bach	75	0.0	75	0.0	0.097	10.1	LOS A	0.2	1.1	0.48	0.89	0.48	44.3
East:	First Av	venue												
4	L2	148	0.7	148	0.7	0.310	4.1	LOS A	0.0	0.0	0.00	0.15	0.00	53.9
5	T1	1034	2.5	1034	2.5	0.310	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	58.8
Appro	bach	1182	2.3	1182	2.3	0.310	0.5	NA	0.0	0.0	0.00	0.07	0.00	58.1
North	: Ryeda	ale Road												
7	L2	14	0.0	14	0.0	0.071	14.9	LOS B	0.2	1.4	0.69	1.00	0.69	15.7
Appro	bach	14	0.0	14	0.0	0.071	14.9	LOS B	0.2	1.4	0.69	1.00	0.69	15.7
West	First A	venue												
10	L2	27	0.0	27	0.0	0.015	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	45.8
11	T1	1587	4.2	1587	4.2	0.435	0.1	LOS A	11.6	84.0	0.00	0.00	0.00	59.7
Appro	bach	1615	4.1	1615	4.1	0.435	0.2	NA	11.6	84.0	0.00	0.01	0.00	59.3
All Ve	hicles	2885	3.2	2885	3.2	0.435	0.7	NA	11.6	84.0	0.02	0.06	0.02	57.7

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

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

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

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

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

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

# Site: 101 [8 Blaxland Road/ First Avenue\_AM (Site Folder: 2026 Post dev)]

# Network: 7 [First\_Ave\_AM (Network Folder: 2026 Post Development)]

New Site Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Downstream lane blockage effects included in determining phase times Phase Sequence: Leading Right Turn Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Vehicle Movement Performance														
Mov ID	Turn	DEMA FLOV [ Total veh/h	AND NS HV] %	ARRI FLO [ Total veh/h	VAL WS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF [ Veh. veh	AGE BACK QUEUE Dist] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Blaxla	and Rd												
1	L2	463	3.0	463	3.0	0.422	11.4	LOS A	5.8	41.4	0.48	0.71	0.48	44.1
2	T1	706	2.8	706	2.8	*0.762	42.4	LOS C	14.1	100.8	0.94	0.85	0.99	35.5
Appro	bach	1169	2.9	1169	2.9	0.762	30.1	LOS C	14.1	100.8	0.76	0.79	0.79	37.3
North	: Blaxla	nd Rd												
8	T1	687	2.1	687	2.1	0.599	15.3	LOS B	15.0	106.6	0.67	0.61	0.67	48.0
9	R2	719	1.9	719	1.9	*0.767	51.8	LOS D	12.4	88.3	0.98	0.88	1.04	22.5
Appro	bach	1406	2.0	1406	2.0	0.767	34.0	LOS C	15.0	106.6	0.83	0.75	0.86	34.5
West	First A	ve												
10	L2	845	4.6	845	4.6	0.781	14.9	LOS B	7.6	55.0	0.79	0.84	0.79	41.2
12	R2	789	3.9	789	3.9	*0.768	48.1	LOS D	7.6	55.0	0.98	0.88	1.02	24.5
Appro	bach	1635	4.2	1635	4.2	0.781	30.9	LOS C	7.6	55.0	0.88	0.86	0.90	31.1
All Ve	hicles	4211	3.1	4211	3.1	0.781	31.7	LOS C	15.0	106.6	0.83	0.81	0.86	34.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

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

\* Critical Movement (Signal Timing)

Pedestrian Mov	ement	Perform	nance							
Mov	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. E	Effective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	EUE Dist ]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m			sec	m	m/sec
North: Blaxland Ro	d									
P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.7	217.7	0.98
West: First Ave										
P4 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.9	217.9	0.98
All Pedestrians	105	54.3	LOS E	0.2	0.2	0.95	0.95	221.8	217.8	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.



REF: Reference Phase VAR: Variable Phase

Normal Movement	Permitted/Opposed
Slip/Bypass-Lane Movement	Opposed Slip/Bypass-Lane
Stopped Movement	Turn On Red
Other Movement Class (MC) Running	Undetected Movement
Mixed Running & Stopped MCs	Continuous Movement
Other Movement Class (MC) Stopped	Phase Transition Applied

#### Phase Timing Summary

Phase	Α	В	С
Phase Change Time (sec)	0	41	79
Green Time (sec)	35	32	35
Phase Time (sec)	41	38	41
Phase Split	34%	32%	34%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

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# **USER REPORT FOR NETWORK SITE**

### All Movement Classes

Project: 220704-N211310 Ryde Hospital SIDRA

**Template: Movement, Phasing** 

Site: 4 [4 First Avenue/Ryedale Road\_PM (Site Folder: 2026 Post dev)]

■ Network: 8 [First\_Ave\_PM (Network Folder: 2026 Post Development)]

Site Category: -Stop (Two-Way)

Vehi	Vehicle Movement Performance													
Mov ID	Turn	DEMA FLOV [ Total veh/h	ND VS HV] %	ARRI FLO [ Total veh/h	VAL WS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF [ Veh. veh	AGE BACK QUEUE Dist ] m	Prop. Que	Effective A Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South	n: Ryeda	ale Road												
1	L2	109	0.0	109	0.0	0.182	12.2	LOS A	0.3	2.1	0.59	0.97	0.59	42.9
Appro	bach	109	0.0	109	0.0	0.182	12.2	LOS A	0.3	2.1	0.59	0.97	0.59	42.9
East:	First Av	/enue												
4	L2	108	1.0	108	1.0	0.394	4.1	LOS A	0.0	0.0	0.00	0.08	0.00	54.6
5	T1	1391	3.6	1391	3.6	0.394	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.1
Appro	bach	1499	3.4	1499	3.4	0.394	0.3	NA	0.0	0.0	0.00	0.04	0.00	58.7
North	: Ryeda	ale Road												
7	L2	27	3.8	27	3.8	0.093	11.4	LOS A	0.1	0.8	0.53	0.97	0.53	18.8
Appro	bach	27	3.8	27	3.8	0.093	11.4	LOS A	0.1	0.8	0.53	0.97	0.53	18.8
West	: First A	venue												
10	L2	16	6.7	16	6.7	0.009	5.5	LOS A	0.0	0.0	0.00	0.57	0.00	45.6
11	T1	1084	3.3	1084	3.3	0.296	0.1	LOS A	4.1	29.5	0.00	0.00	0.00	59.8
Appro	bach	1100	3.3	1100	3.3	0.296	0.1	NA	4.1	29.5	0.00	0.01	0.00	59.5
All Ve	hicles	2736	3.3	2736	3.3	0.394	0.8	NA	4.1	29.5	0.03	0.07	0.03	57.2

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

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

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

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

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

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

# Site: 101 [8 Blaxland Road/ First Avenue\_PM (Site Folder: 2026 Post dev)]

# ■ Network: 8 [First\_Ave\_PM (Network Folder: 2026 Post Development)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Downstream lane blockage effects included in determining phase times Phase Sequence: Leading Right Turn Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Vehic	Vehicle Movement Performance													
Mov ID	Turn	DEMA FLOV [ Total veh/h	AND NS HV] %	ARRI FLO [ Total veh/h	VAL WS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF ( [ Veh. veh	GE BACK QUEUE Dist] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Blaxla	and Rd												
1 2	L2 T1	653 916	3.2 1.4	653 916	3.2 1.4	0.658 <b>*</b> 0.878	14.7 48.9	LOS B LOS D	11.9 22.3	85.8 158.2	0.67 0.94	0.79 0.97	0.67 1.14	40.9 33.4
Appro	ach	1568	2.1	1568	2.1	0.878	34.7	LOS C	22.3	158.2	0.83	0.89	0.94	35.1
North	: Blaxla	nd Rd												
8	T1	486	2.2	486	2.2	0.364	7.2	LOS A	6.7	47.8	0.42	0.38	0.42	53.7
9	R2	821	3.8	821	3.8	*0.882	59.2	LOS E	15.8	114.4	0.97	0.96	1.20	20.7
Appro	ach	1307	3.2	1307	3.2	0.882	39.9	LOS C	15.8	114.4	0.77	0.75	0.91	30.9
West:	First A	ve												
10	L2	526	2.8	526	2.8	0.557	15.9	LOS B	7.7	55.0	0.65	0.77	0.65	40.4
12	R2	588	3.8	588	3.8	*0.870	65.4	LOS E	7.6	55.0	1.00	0.96	1.25	20.4
Appro	ach	1115	3.3	1115	3.3	0.870	42.0	LOS C	7.7	55.0	0.83	0.87	0.97	26.6
All Ve	hicles	3991	2.8	3991	2.8	0.882	38.4	LOS C	22.3	158.2	0.81	0.84	0.94	31.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

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

\* Critical Movement (Signal Timing)

Pedestrian Mov	ement	Perform	nance							
Mov	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. E	Effective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	EUE Dist ]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m			sec	m	m/sec
North: Blaxland Re	d									
P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.7	217.7	0.98
West: First Ave										
P4 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.9	217.9	0.98
All Pedestrians	105	54.3	LOS E	0.2	0.2	0.95	0.95	221.8	217.8	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.



REF: Reference Phase VAR: Variable Phase

Normal Movement	Permitted/Opposed
Slip/Bypass-Lane Movement	Opposed Slip/Bypass-Lane
Stopped Movement	Turn On Red
Other Movement Class (MC) Running	Undetected Movement
Mixed Running & Stopped MCs	Continuous Movement
Other Movement Class (MC) Stopped	Phase Transition Applied

#### Phase Timing Summary

Phase	Α	В	С
Phase Change Time (sec)	0	48	91
Green Time (sec)	42	37	23
Phase Time (sec)	48	43	29
Phase Split	40%	36%	24%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

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# **USER REPORT FOR SITE**

### All Movement Classes

Project: 220704-N211310 Ryde Hospital SIDRA

#### **Template: Movement, Phasing**

#### Site: 1 [1 Blaxland Road/Florence Avenue\_2036\_AM (Site Folder: 2036 without Dev)]

Site Category: -

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 55 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, B\*, C (\* Variable Phase)

Vehicle Movement Performance														
Mov	Turn	INPUT		DEMAND		Deg.	Aver.	Level of	95% BACK OF		Prop.	Effective	Aver.	Aver.
ID		VOLU [ Total		FLO Total	WS LIVI	Satn	Delay	Service		EUE Diet 1	Que	Stop	NO.	Speed
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m		Trate	Cycles	km/h
South	n: Blaxl	and Roa	d											
1	L2	166	4	175	2.4	*0.529	17.8	LOS B	7.0	50.4	0.80	0.78	0.80	40.0
2	T1	632	28	665	4.4	0.529	12.4	LOS A	8.8	63.8	0.79	0.71	0.79	45.9
Appro	bach	798	32	840	4.0	0.529	13.5	LOS A	8.8	63.8	0.79	0.73	0.79	44.5
North: Blaxland Road														
8	T1	705	26	742	3.7	0.433	9.1	LOS A	7.2	51.9	0.64	0.56	0.64	49.3
9	R2	26	0	27	0.0	*0.433	21.6	LOS B	5.6	40.5	0.83	0.71	0.83	43.3
Appro	bach	731	26	769	3.6	0.433	9.5	LOS A	7.2	51.9	0.65	0.56	0.65	49.0
West: Florence Avenue														
10	L2	36	0	38	0.0	0.059	17.6	LOS B	0.7	4.8	0.70	0.68	0.70	42.3
12	R2	141	4	148	2.8	*0.498	28.6	LOS C	3.9	27.7	0.96	0.79	0.96	32.1
Appro	bach	177	4	186	2.3	0.498	26.4	LOS B	3.9	27.7	0.90	0.76	0.90	34.3
All Ve	hicles	1706	62	1796	3.6	0.529	13.1	LOS A	8.8	63.8	0.74	0.66	0.74	44.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

Queue Model: SIDRA Standard.

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

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

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov	Input	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Et	ffective	Travel	Travel	Aver.
ID Crossing	Vol.	Flow	Delay	Service	QUE [ Ped	EUE Dist 1	Que	Stop Rate	Time	Dist.	Speed
	ped/h	ped/h	sec		ped	m			sec	m	m/sec
North: Blaxland Road											
P3 Full	50	53	18.4	LOS B	0.1	0.1	0.82	0.82	45.5	35.2	0.77
--------------------	--------	-----	------	-------	-----	-----	------	------	------	------	------
West: Florence	Avenue										
P4 Full	50	53	20.1	LOS C	0.1	0.1	0.86	0.86	44.7	31.9	0.71
All Pedestrians	100	105	19.3	LOS B	0.1	0.1	0.84	0.84	45.1	33.6	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.

#### **Output Phase Sequence** Phase A REF Phase C Phase B VAR Blaxland Road Blaxland Road Blaxland Road 11 Florence Avenue Florence Avenue Florence Avenue H ╡ ר Blaxland Road Blaxland Road Blaxland Road

REF: Reference Phase VAR: Variable Phase

Normal Movement	Permitted/Opposed
Slip/Bypass-Lane Movement	Opposed Slip/Bypass-Lane
Stopped Movement	Turn On Red
Other Movement Class (MC) Running	Undetected Movement
Mixed Running & Stopped MCs	Continuous Movement
Other Movement Class (MC) Stopped	Phase Transition Applied

Phase Timing Summary			
Phase	Α	В	С
Phase Change Time (sec)	0	30	40
Green Time (sec)	24	4	9
Phase Time (sec)	30	10	15
Phase Split	55%	18%	27%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

#### Site: 1 [1 Blaxland Road/Florence Avenue\_2036\_PM (Site Folder: 2036 without Dev)]

Site Category: -

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 55 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, B\*, C (\* Variable Phase)

Vehi	Vehicle Movement Performance													
Mov ID	Turn	INF VOLL	PUT JMES	DEM. FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUI	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		[ Total veh/h	HV ] veh/h	[ Total veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist ] m		Rate	Cycles	km/h
South	n: Blaxl	and Roa	d											
1	L2	174	1	183	0.6	<b>*</b> 0.613	17.9	LOS B	9.7	68.8	0.81	0.79	0.81	40.2
2	T1	845	18	889	2.1	0.613	12.0	LOS A	11.3	80.4	0.80	0.73	0.80	46.2
Appro	bach	1019	19	1073	1.9	0.613	13.0	LOS A	11.3	80.4	0.80	0.74	0.80	45.1
North	: Blaxla	and Road	b											
8	T1	675	12	711	1.8	0.466	8.8	LOS A	8.0	56.7	0.63	0.54	0.63	49.6
9	R2	32	1	34	3.1	*0.466	27.6	LOS B	4.3	30.5	0.93	0.76	0.93	40.2
Appro	bach	707	13	744	1.8	0.466	9.6	LOS A	8.0	56.7	0.64	0.55	0.64	48.9
West	: Florer	nce Aven	ue											
10	L2	35	0	37	0.0	0.064	19.2	LOS B	0.7	4.9	0.73	0.69	0.73	41.5
12	R2	158	6	166	3.8	*0.632	30.8	LOS C	4.6	33.2	0.99	0.84	1.08	31.3
Appro	bach	193	6	203	3.1	0.632	28.7	LOS C	4.6	33.2	0.94	0.81	1.02	33.2
All Ve	hicles	1919	38	2020	2.0	0.632	13.3	LOS A	11.3	80.4	0.76	0.68	0.76	44.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

Queue Model: SIDRA Standard.

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

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

\* Critical Movement (Signal Timing)

Pedestrian M	Pedestrian Movement Performance												
Mov D Crossing	ov Input Dem. A				AVERAGE	BACK OF	Prop. Et	ffective	Travel	Travel	Aver.		
	VOI.	FIOW	Delay	Service	QUE [Ped	Dist ]	Que	Stop Rate	Time	Dist.	Speed		
	ped/h	ped/h	sec		ped	m			sec	m	m/sec		
North: Blaxland	d Road												
P3 Full	50	53	18.4	LOS B	0.1	0.1	0.82	0.82	45.5	35.2	0.77		
West: Florence	Avenue												
P4 Full	50	53	20.1	LOS C	0.1	0.1	0.86	0.86	44.7	31.9	0.71		
All Pedestrians	100	105	19.3	LOS B	0.1	0.1	0.84	0.84	45.1	33.6	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.



REF: Reference Phase VAR: Variable Phase

$ \longrightarrow $	Normal Movement	$ \longrightarrow $	Permitted/Opposed
$ \longrightarrow $	Slip/Bypass-Lane Movement	$ \longrightarrow $	Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
$\implies$	Other Movement Class (MC) Running	$ \longrightarrow $	Undetected Movement
	Mixed Running & Stopped MCs	$ \longrightarrow $	Continuous Movement
	Other Movement Class (MC) Stopped	•	Phase Transition Applied

#### Phase Timing Summary

Phase	Α	В	С
Phase Change Time (sec)	0	32	41
Green Time (sec)	26	3	8
Phase Time (sec)	32	9	14
Phase Split	58%	16%	25%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Site Category: -Roundabout

Vehi	Vehicle Movement Performance													
Mov ID	Turn	INP VOLU		DEM FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUE	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		veh/h	⊓vj veh/h	veh/h	пvј %	v/c	sec		ven. veh	m Dist		Rale	Cycles	km/h
South	n: Ryed	ale Road	1											
2	T1	191	0	201	0.0	0.214	3.9	LOS A	1.3	9.1	0.13	0.51	0.13	46.2
3	R2	102	0	107	0.0	0.214	6.6	LOS A	1.3	9.1	0.13	0.51	0.13	45.6
3u	U	1	0	1	0.0	0.214	7.9	LOS A	1.3	9.1	0.13	0.51	0.13	46.6
Appro	bach	294	0	309	0.0	0.214	4.9	LOS A	1.3	9.1	0.13	0.51	0.13	46.0
East:	Floren	ce Avenu	ie											
4	L2	71	0	75	0.0	0.092	5.3	LOS A	0.5	3.3	0.37	0.57	0.37	44.7
6	R2	19	1	20	5.3	0.092	7.6	LOS A	0.5	3.3	0.37	0.57	0.37	44.5
6u	U	1	0	1	0.0	0.092	8.9	LOS A	0.5	3.3	0.37	0.57	0.37	44.6
Appro	bach	91	1	96	1.1	0.092	5.8	LOS A	0.5	3.3	0.37	0.57	0.37	44.6
North	: Ryed	ale Road												
7	L2	28	1	29	3.6	0.180	5.0	LOS A	1.0	6.8	0.29	0.48	0.29	44.9
8	T1	169	2	178	1.2	0.180	4.5	LOS A	1.0	6.8	0.29	0.48	0.29	46.2
9u	U	1	0	1	0.0	0.180	8.5	LOS A	1.0	6.8	0.29	0.48	0.29	46.1
Appro	bach	198	3	208	1.5	0.180	4.6	LOS A	1.0	6.8	0.29	0.48	0.29	46.1
All Ve	hicles	583	4	614	0.7	0.214	4.9	LOS A	1.3	9.1	0.22	0.51	0.22	45.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

Site Category: -Roundabout

Vehi	Vehicle Movement Performance													
Mov ID	Turn	INP VOLU	UT IMES	DEM FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUI	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m		Nate	Cycles	km/h
Sout	h: Ryed	ale Roac	ł											
2	T1	74	3	78	4.1	0.094	4.1	LOS A	0.5	3.5	0.18	0.51	0.18	46.0
3	R2	34	0	36	0.0	0.094	6.8	LOS A	0.5	3.5	0.18	0.51	0.18	45.5
3u	U	2	0	2	0.0	0.094	8.1	LOS A	0.5	3.5	0.18	0.51	0.18	46.4
Appr	oach	110	3	116	2.7	0.094	5.0	LOS A	0.5	3.5	0.18	0.51	0.18	45.9
East:	Floren	ce Avenu	ie											
4	L2	93	2	98	2.2	0.135	5.4	LOS A	0.7	4.9	0.38	0.59	0.38	44.5
6	R2	39	0	41	0.0	0.135	7.6	LOS A	0.7	4.9	0.38	0.59	0.38	44.5
6u	U	1	0	1	0.0	0.135	9.0	LOS A	0.7	4.9	0.38	0.59	0.38	44.4
Appr	oach	133	2	140	1.5	0.135	6.1	LOS A	0.7	4.9	0.38	0.59	0.38	44.5
North	n: Ryed	ale Road												
7	L2	32	0	34	0.0	0.165	4.5	LOS A	0.9	6.3	0.16	0.46	0.16	45.2
8	T1	170	3	179	1.8	0.165	4.0	LOS A	0.9	6.3	0.16	0.46	0.16	46.5
9u	U	6	0	6	0.0	0.165	8.0	LOS A	0.9	6.3	0.16	0.46	0.16	46.4
Appr	oach	208	3	219	1.4	0.165	4.2	LOS A	0.9	6.3	0.16	0.46	0.16	46.4
All Ve	ehicles	451	8	475	1.8	0.165	5.0	LOS A	0.9	6.3	0.23	0.51	0.23	45.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

## W Site: 3 [3 Ryedale Road/Fourth Avenue\_2036\_AM (Site Folder: 2036 without Dev)]

Site Category: -Roundabout

Vehicle Movement Performance														
Mov	Turn	INP			AND	Deg. Sata	Aver.	Level of	95% BA		Prop. E	Effective	Aver.	Aver.
שו		[ Total	HV 1	[ Total	HV 1	Jaur	Delay		[ Veh.	Dist 1	Que	Rate	Cvcles	Speed
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m			- 5	km/h
South: Ryedale Road		I												
1	L2	1	0	1	0.0	0.167	4.0	LOS A	0.9	6.6	0.18	0.52	0.18	42.7
2	T1	114	0	120	0.0	0.167	3.8	LOS A	0.9	6.6	0.18	0.52	0.18	45.6
3	R2	92	0	97	0.0	0.167	7.0	LOS A	0.9	6.6	0.18	0.52	0.18	44.2
3u	U	5	0	5	0.0	0.167	8.4	LOS A	0.9	6.6	0.18	0.52	0.18	46.3
Appro	bach	212	0	223	0.0	0.167	5.3	LOS A	0.9	6.6	0.18	0.52	0.18	45.0
East:	Fourth	Avenue												
4	L2	48	0	51	0.0	0.084	4.6	LOS A	0.4	3.1	0.34	0.55	0.34	43.2
5	T1	7	0	7	0.0	0.084	4.4	LOS A	0.4	3.1	0.34	0.55	0.34	38.9
6	R2	30	3	32	10.0	0.084	7.8	LOS A	0.4	3.1	0.34	0.55	0.34	42.9
6u	U	1	0	1	0.0	0.084	9.0	LOS A	0.4	3.1	0.34	0.55	0.34	41.4
Appro	bach	86	3	91	3.5	0.084	5.7	LOS A	0.4	3.1	0.34	0.55	0.34	42.9
North	: Ryed	ale Road												
7	L2	55	3	58	5.5	0.174	4.5	LOS A	0.9	6.6	0.30	0.47	0.30	43.2
8	T1	134	2	141	1.5	0.174	4.2	LOS A	0.9	6.6	0.30	0.47	0.30	46.1
9	R2	3	0	3	0.0	0.174	7.4	LOS A	0.9	6.6	0.30	0.47	0.30	43.3
Appro	bach	192	5	202	2.6	0.174	4.4	LOS A	0.9	6.6	0.30	0.47	0.30	45.4
West	Fourth	n Avenue												
10	L2	3	0	3	0.0	0.014	5.0	LOS A	0.1	0.4	0.40	0.52	0.40	41.4
11	T1	7	0	7	0.0	0.014	4.8	LOS A	0.1	0.4	0.40	0.52	0.40	39.0
12	R2	3	0	3	0.0	0.014	8.0	LOS A	0.1	0.4	0.40	0.52	0.40	43.3
Appro	bach	13	0	14	0.0	0.014	5.6	LOS A	0.1	0.4	0.40	0.52	0.40	41.0
All Ve	hicles	503	8	529	1.6	0.174	5.0	LOS A	0.9	6.6	0.26	0.51	0.26	44.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

### W Site: 3 [3 Ryedale Road/Fourth Avenue\_2036\_PM (Site Folder: 2036 without Dev)]

Site Category: -Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INP VOLU [ Total	UT JMES HV 1	DEM FLC [ Total	AND WS HV 1	Deg. Satn	Aver. Delay	Level of Service	95% BA QUE [ Veh.	ACK OF EUE Dist 1	Prop. Que	Effective Stop Rate	Aver. No. Cvcles	Aver. Speed
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m			- ,	km/h
South	: Ryed	lale Roac	k											
1	L2	1	0	1	0.0	0.085	4.2	LOS A	0.4	3.1	0.25	0.51	0.25	42.7
2	T1	60	2	63	3.3	0.085	4.1	LOS A	0.4	3.1	0.25	0.51	0.25	45.5
3	R2	28	0	29	0.0	0.085	7.2	LOS A	0.4	3.1	0.25	0.51	0.25	44.2
3u	U	4	0	4	0.0	0.085	8.7	LOS A	0.4	3.1	0.25	0.51	0.25	46.3
Appro	ach	93	2	98	2.2	0.085	5.2	LOS A	0.4	3.1	0.25	0.51	0.25	45.2
East:	Fourth	Avenue												
4	L2	52	0	55	0.0	0.124	4.5	LOS A	0.6	4.5	0.31	0.58	0.31	42.7
5	T1	1	0	1	0.0	0.124	4.3	LOS A	0.6	4.5	0.31	0.58	0.31	38.1
6	R2	73	4	77	5.5	0.124	7.6	LOS A	0.6	4.5	0.31	0.58	0.31	42.4
6u	U	5	0	5	0.0	0.124	8.9	LOS A	0.6	4.5	0.31	0.58	0.31	40.6
Appro	ach	131	4	138	3.1	0.124	6.4	LOS A	0.6	4.5	0.31	0.58	0.31	42.5
North	Ryed	ale Road												
7	L2	50	5	53	10.0	0.135	4.1	LOS A	0.7	5.2	0.16	0.44	0.16	43.6
8	T1	113	3	119	2.7	0.135	3.8	LOS A	0.7	5.2	0.16	0.44	0.16	46.5
9	R2	1	1	1	100.0	0.135	8.1	LOS A	0.7	5.2	0.16	0.44	0.16	27.7
9u	U	2	0	2	0.0	0.135	8.4	LOS A	0.7	5.2	0.16	0.44	0.16	46.6
Appro	ach	166	9	175	5.4	0.135	3.9	LOS A	0.7	5.2	0.16	0.44	0.16	45.7
West:	Fourth	n Avenue												
10	L2	1	1	1	100.0	0.004	6.5	LOS A	0.0	0.1	0.36	0.51	0.36	38.8
11	T1	1	0	1	0.0	0.004	4.4	LOS A	0.0	0.1	0.36	0.51	0.36	38.3
12	R2	1	0	1	0.0	0.004	7.6	LOS A	0.0	0.1	0.36	0.51	0.36	42.8
Appro	ach	3	1	3	33.3	0.004	6.2	LOS A	0.0	0.1	0.36	0.51	0.36	40.3
All Ve	hicles	393	16	414	4.1	0.135	5.1	LOS A	0.7	5.2	0.23	0.50	0.23	44.6

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

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

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

Site Category: -Stop (Two-Way)

Vehi	Vehicle Movement Performance													
Mov	Turn	INF	PUT	DEM	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
ID		VOLU	JMES	FLO	WS	Satn	Delay	Service	QUE	EUE	Que	Stop	No.	Speed
		[ lotal	HV J	[ lotal	HV J				[Veh.	Dist ]		Rate	Cycles	
		veh/h	veh/h	veh/h	%	V/C	sec		veh	m				km/h
South	n: Blaxl	and Roa	d											
1	L2	17	0	18	0.0	0.182	5.6	LOS A	0.0	0.0	0.00	0.03	0.00	47.5
2	T1	636	30	669	4.7	0.182	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	59.7
Appro	oach	653	30	687	4.6	0.182	0.2	NA	0.0	0.0	0.00	0.02	0.00	59.3
North	n: Blaxla	and Road	d											
8	T1	670	27	705	4.0	0.227	0.7	LOS A	1.0	7.3	0.12	0.05	0.12	57.8
9	R2	54	0	57	0.0	0.227	10.4	LOS A	1.0	7.3	0.31	0.13	0.32	41.7
Appro	oach	724	27	762	3.7	0.227	1.4	NA	1.0	7.3	0.14	0.06	0.14	57.2
West	: Daltor	n Avenue	•											
10	L2	56	0	59	0.0	0.212	9.3	LOS A	0.7	4.8	0.62	0.92	0.62	14.4
12	R2	11	0	12	0.0	0.212	55.0	LOS D	0.7	4.8	0.62	0.92	0.62	38.7
Appro	oach	67	0	71	0.0	0.212	16.8	LOS B	0.7	4.8	0.62	0.92	0.62	18.3
All Ve	ehicles	1444	57	1520	3.9	0.227	1.6	NA	1.0	7.3	0.10	0.08	0.10	55.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

Site Category: -Stop (Two-Way)

Vehi	cle Mo	vemen	t Perforr	nance										
Mov	Turn	INF	PUT	DEM	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
ID			JMES	FLO	WS	Satn	Delay	Service	QUI	EUE	Que	Stop	No.	Speed
		l Iotai veh/h	⊓vj veh/h	l Iolai veh/h	нvј %	v/c	sec		ven. veh	Dist j m		Rale	Cycles	km/h
South	n: Blaxla	and Roa	d											
1	L2	12	0	13	0.0	0.233	5.6	LOS A	0.0	0.0	0.00	0.02	0.00	47.7
2	T1	838	17	882	2.0	0.233	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	59.7
Appro	bach	850	17	895	2.0	0.233	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.5
North	: Blaxla	and Road	d											
8	T1	719	13	757	1.8	0.249	1.2	LOS A	1.5	10.5	0.15	0.05	0.17	57.0
9	R2	53	0	56	0.0	0.249	13.1	LOS A	1.5	10.5	0.41	0.13	0.46	38.3
Appro	bach	772	13	813	1.7	0.249	2.0	NA	1.5	10.5	0.17	0.05	0.19	56.3
West	: Daltor	n Avenue	)											
10	L2	68	0	72	0.0	0.317	12.5	LOS A	1.2	8.1	0.71	1.04	0.86	13.1
12	R2	10	0	11	0.0	0.317	90.0	LOS F	1.2	8.1	0.71	1.04	0.86	35.2
Appro	bach	78	0	82	0.0	0.317	22.4	LOS B	1.2	8.1	0.71	1.04	0.86	15.9
All Ve	ehicles	1700	30	1789	1.8	0.317	2.0	NA	1.5	10.5	0.11	0.08	0.12	54.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

Site Category: -Give-Way (Two-Way)

Vehi	cle Mo	vemen	t Perforr	mance										
Mov	Turn	INF	PUT	DEM	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
ID		VOLL	JMES	FLO	WS	Satn	Delay	Service	QUI	EUE	Que	Stop	No.	Speed
		[ Iotal	HV J	[ Iotal	HVJ				[ ven.	Dist j		Rate	Cycles	l cues /le
South	o Donie	ven/n	ven/n	ven/n	%	V/C	sec	_	ven	m	_	_	_	Km/n
South	i. Denis	sione Ro	au											
1	L2	51	1	54	2.0	0.062	3.4	LOS A	0.0	0.0	0.00	0.21	0.00	39.2
2	T1	61	0	64	0.0	0.062	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	39.2
Appro	oach	112	1	118	0.9	0.062	1.6	NA	0.0	0.0	0.00	0.21	0.00	39.2
North	n: Denis	tone Roa	ad											
8	T1	92	0	97	0.0	0.076	1.4	LOS A	0.2	1.7	0.14	0.30	0.14	42.1
9	R2	39	0	41	0.0	0.076	4.9	LOS A	0.2	1.7	0.14	0.30	0.14	45.5
Appro	oach	131	0	138	0.0	0.076	2.4	NA	0.2	1.7	0.14	0.30	0.14	42.8
West	: Fourth	n Avenue	•											
10	L2	31	0	33	0.0	0.021	4.7	LOS A	0.1	0.6	0.14	0.50	0.14	43.4
12	R2	73	3	77	4.1	0.075	5.5	LOS A	0.2	1.8	0.29	0.58	0.29	38.1
Appro	oach	104	3	109	2.9	0.075	5.3	LOS A	0.2	1.8	0.25	0.56	0.25	39.4
All Ve	ehicles	347	4	365	1.2	0.076	3.0	NA	0.2	1.8	0.13	0.35	0.13	40.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

Site Category: -Give-Way (Two-Way)

Vehi	cle Mo	ovemen	t Perforn	nance										
Mov ID	Turn	INF VOLI	PUT JMES	DEM/ FLO	AND WS	Deg. Satn	Aver. Delav	Level of Service	95% BA QUI	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		[ Total veh/h	HV ] veh/h	[ Total veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist ] m		Rate	Cycles	km/h
Sout	n: Denis	stone Ro	ad											
1	L2	69	4	73	5.8	0.097	3.5	LOS A	0.0	0.0	0.00	0.18	0.00	39.3
2	T1	104	0	109	0.0	0.097	0.0	LOS A	0.0	0.0	0.00	0.18	0.00	39.3
Appro	oach	173	4	182	2.3	0.097	1.4	NA	0.0	0.0	0.00	0.18	0.00	39.3
North	n: Denis	tone Ro	ad											
8	T1	63	0	66	0.0	0.050	1.4	LOS A	0.2	1.1	0.17	0.28	0.17	42.1
9	R2	23	0	24	0.0	0.050	5.1	LOS A	0.2	1.1	0.17	0.28	0.17	45.5
Appro	oach	86	0	91	0.0	0.050	2.4	NA	0.2	1.1	0.17	0.28	0.17	42.7
West	: Fourth	n Avenue	•											
10	L2	42	0	44	0.0	0.030	4.9	LOS A	0.1	0.8	0.20	0.50	0.20	43.2
12	R2	75	5	79	6.7	0.078	5.6	LOS A	0.3	1.9	0.30	0.59	0.30	38.1
Appro	oach	117	5	123	4.3	0.078	5.3	LOS A	0.3	1.9	0.26	0.56	0.26	39.6
All Ve	ehicles	376	9	396	2.4	0.097	2.9	NA	0.3	1.9	0.12	0.32	0.12	40.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

### V Site: 101 [7 Florence Avenue/ Denistone Road\_2036\_AM (Site Folder: 2036 without Dev)]

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

Vehi	cle Mo	vemen	t Perfori	nance										
Mov	Turn	INF	PUT	DEM	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
ID		VOLL	JMES	FLO	WS	Satn	Delay	Service	QUI	EUE	Que	Stop	No.	Speed
		[ Iotal	HV J	[ lotal	HV J				[ Ven.	Dist J		Rate	Cycles	lum/b
Sout	hEast: I	Florence	Avenue	ven/n	70	v/C	SEC	_	ven	111	_		_	K111/11
21	L2	53	1	56	1.9	0.111	4.6	LOS A	0.0	0.0	0.00	0.14	0.00	48.6
22	T1	148	3	156	2.0	0.111	0.0	LOS A	0.0	0.0	0.00	0.14	0.00	49.1
Appro	oach	201	4	212	2.0	0.111	1.2	NA	0.0	0.0	0.00	0.14	0.00	49.0
North	West:	Deniston	e Road											
28	T1	94	2	99	2.1	0.076	0.3	LOS A	0.2	1.7	0.18	0.15	0.18	48.7
29	R2	33	1	35	3.0	0.076	5.3	LOS A	0.2	1.7	0.18	0.15	0.18	47.7
Appro	oach	127	3	134	2.4	0.076	1.6	NA	0.2	1.7	0.18	0.15	0.18	48.5
South	hWest:	Florence	Avenue											
30	L2	11	0	12	0.0	0.155	5.1	LOS A	0.5	3.9	0.35	0.63	0.35	45.8
32	R2	134	2	141	1.5	0.155	6.0	LOS A	0.5	3.9	0.35	0.63	0.35	45.4
Appro	oach	145	2	153	1.4	0.155	5.9	LOS A	0.5	3.9	0.35	0.63	0.35	45.4
All Ve	ehicles	473	9	498	1.9	0.155	2.8	NA	0.5	3.9	0.16	0.29	0.16	47.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

### V Site: 101 [7 Florence Avenue/ Denistone Road\_2036\_PM (Site Folder: 2036 without Dev)]

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

Vehi	cle Mo	ovemen	t Perforn	nance										
Mov	Turn	INF			AND	Deg. Sata	Aver.	Level of	95% B/		Prop.	Effective	Aver.	Aver.
		[ Total	HV 1	[ Total	HV 1	Jain	Delay		[Veh.	Dist ]	Que	Rate	Cycles	Opeeu
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m			,	km/h
South	nEast: I	Florence	Avenue											
21	L2	65	1	68	1.5	0.110	4.6	LOS A	0.0	0.0	0.00	0.18	0.00	48.5
22	T1	134	2	141	1.5	0.110	0.0	LOS A	0.0	0.0	0.00	0.18	0.00	49.0
Appro	oach	199	3	209	1.5	0.110	1.5	NA	0.0	0.0	0.00	0.18	0.00	48.8
North	West:	Deniston	e Road											
28	T1	134	6	141	4.5	0.102	0.2	LOS A	0.3	2.0	0.16	0.12	0.16	48.9
29	R2	37	1	39	2.7	0.102	5.3	LOS A	0.3	2.0	0.16	0.12	0.16	47.9
Appro	oach	171	7	180	4.1	0.102	1.3	NA	0.3	2.0	0.16	0.12	0.16	48.7
South	nWest:	Florence	Avenue											
30	L2	5	0	5	0.0	0.067	5.0	LOS A	0.2	1.5	0.34	0.61	0.34	45.8
32	R2	56	0	59	0.0	0.067	6.0	LOS A	0.2	1.5	0.34	0.61	0.34	45.4
Appro	oach	61	0	64	0.0	0.067	5.9	LOS A	0.2	1.5	0.34	0.61	0.34	45.4
All Ve	ehicles	431	10	454	2.3	0.110	2.1	NA	0.3	2.0	0.11	0.22	0.11	48.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

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

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Project: \\Corp.ads\gtadata\ProjectFilesSyd\N21100-21199\N211310 Ryde Hospital Redevelopment\Modelling\220704-N211310 Ryde Hospital SIDRA.sip9

## **USER REPORT FOR NETWORK SITE**

### All Movement Classes

Project: 220704-N211310 Ryde Hospital SIDRA

**Template: Movement, Phasing** 

Site: 4 [4 First Avenue/Ryedale Road\_PM (Site Folder: 2026 Post dev)]

■ Network: 8 [First\_Ave\_PM (Network Folder: 2026 Post Development)]

Site Category: -Stop (Two-Way)

Vehi	cle Mo	vement	Perfor	mance	e									
Mov ID	Turn	DEMA FLOV [ Total veh/h	ND VS HV] %	ARRI FLO [ Total veh/h	VAL WS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF [ Veh. veh	AGE BACK QUEUE Dist ] m	Prop. Que	Effective A Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South	n: Ryeda	ale Road												
1	L2	109	0.0	109	0.0	0.182	12.2	LOS A	0.3	2.1	0.59	0.97	0.59	42.9
Appro	bach	109	0.0	109	0.0	0.182	12.2	LOS A	0.3	2.1	0.59	0.97	0.59	42.9
East:	First Av	/enue												
4	L2	108	1.0	108	1.0	0.394	4.1	LOS A	0.0	0.0	0.00	0.08	0.00	54.6
5	T1	1391	3.6	1391	3.6	0.394	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.1
Appro	bach	1499	3.4	1499	3.4	0.394	0.3	NA	0.0	0.0	0.00	0.04	0.00	58.7
North	: Ryeda	ale Road												
7	L2	27	3.8	27	3.8	0.093	11.4	LOS A	0.1	0.8	0.53	0.97	0.53	18.8
Appro	bach	27	3.8	27	3.8	0.093	11.4	LOS A	0.1	0.8	0.53	0.97	0.53	18.8
West	: First A	venue												
10	L2	16	6.7	16	6.7	0.009	5.5	LOS A	0.0	0.0	0.00	0.57	0.00	45.6
11	T1	1084	3.3	1084	3.3	0.296	0.1	LOS A	4.1	29.5	0.00	0.00	0.00	59.8
Appro	bach	1100	3.3	1100	3.3	0.296	0.1	NA	4.1	29.5	0.00	0.01	0.00	59.5
All Ve	hicles	2736	3.3	2736	3.3	0.394	0.8	NA	4.1	29.5	0.03	0.07	0.03	57.2

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

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

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

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

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

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

## Site: 101 [8 Blaxland Road/ First Avenue\_PM (Site Folder: 2026 Post dev)]

# ■ Network: 8 [First\_Ave\_PM (Network Folder: 2026 Post Development)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Downstream lane blockage effects included in determining phase times Phase Sequence: Leading Right Turn Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Vehic	cle Mo	vement	Perfor	mance	e									
Mov ID	Turn	DEMA FLOV [ Total veh/h	AND NS HV] %	ARRI FLO [ Total veh/h	VAL WS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF ( [ Veh. veh	GE BACK QUEUE Dist] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Blaxla	and Rd												
1 2	L2 T1	653 916	3.2 1.4	653 916	3.2 1.4	0.658 <b>*</b> 0.878	14.7 48.9	LOS B LOS D	11.9 22.3	85.8 158.2	0.67 0.94	0.79 0.97	0.67 1.14	40.9 33.4
Appro	ach	1568	2.1	1568	2.1	0.878	34.7	LOS C	22.3	158.2	0.83	0.89	0.94	35.1
North	: Blaxla	nd Rd												
8	T1	486	2.2	486	2.2	0.364	7.2	LOS A	6.7	47.8	0.42	0.38	0.42	53.7
9	R2	821	3.8	821	3.8	*0.882	59.2	LOS E	15.8	114.4	0.97	0.96	1.20	20.7
Appro	ach	1307	3.2	1307	3.2	0.882	39.9	LOS C	15.8	114.4	0.77	0.75	0.91	30.9
West:	First A	ve												
10	L2	526	2.8	526	2.8	0.557	15.9	LOS B	7.7	55.0	0.65	0.77	0.65	40.4
12	R2	588	3.8	588	3.8	*0.870	65.4	LOS E	7.6	55.0	1.00	0.96	1.25	20.4
Appro	ach	1115	3.3	1115	3.3	0.870	42.0	LOS C	7.7	55.0	0.83	0.87	0.97	26.6
All Ve	hicles	3991	2.8	3991	2.8	0.882	38.4	LOS C	22.3	158.2	0.81	0.84	0.94	31.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

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

\* Critical Movement (Signal Timing)

Pedestrian Mov	ement	Perform	nance							
Mov	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. E	Effective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUEUE [Ped Dist]		Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m			sec	m	m/sec
North: Blaxland Re	d									
P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.7	217.7	0.98
West: First Ave										
P4 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.9	217.9	0.98
All Pedestrians	105	54.3	LOS E	0.2	0.2	0.95	0.95	221.8	217.8	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.



REF: Reference Phase VAR: Variable Phase

Normal Movement	Permitted/Opposed
Slip/Bypass-Lane Movement	Opposed Slip/Bypass-Lane
Stopped Movement	Turn On Red
Other Movement Class (MC) Running	Undetected Movement
Mixed Running & Stopped MCs	Continuous Movement
Other Movement Class (MC) Stopped	Phase Transition Applied

#### Phase Timing Summary

Phase	Α	В	С
Phase Change Time (sec)	0	48	91
Green Time (sec)	42	37	23
Phase Time (sec)	48	43	29
Phase Split	40%	36%	24%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

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## **USER REPORT FOR NETWORK SITE**

#### All Movement Classes

Project: 220704-N211310 Ryde Hospital SIDRA

**Template: Movement, Phasing** 

Site: 4 [4 First Avenue/Ryedale Road\_PM (Site ■ Network: 6 [First\_Ave\_PM (Network Folder: Folder: 2036 without Dev)]

Site Category: -Stop (Two-Way)

Vehi	cle Mo	vement	Perfor	rmance	9									
Mov ID	Turn	DEMA FLOV [ Total veh/h	ND VS HV] %	ARRI FLO [ Total veh/h	VAL WS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF ( [ Veh. veh	GE BACK QUEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Ryeda	ale Road												
1	L2	112	0.0	112	0.0	0.208	13.5	LOS A	0.4	2.5	0.64	1.00	0.64	42.1
Appro	bach	112	0.0	112	0.0	0.208	13.5	LOS A	0.4	2.5	0.64	1.00	0.64	42.1
East:	First Av	/enue												
4	L2	113	0.9	111	0.9	0.448	4.1	LOS A	0.0	0.0	0.00	0.08	0.00	54.7
5	T1	1612	3.7	1591	3.7	0.448	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.1
Appro	bach	1724	3.5	1702 <sup>N</sup>	3.5	0.448	0.3	NA	0.0	0.0	0.00	0.04	0.00	58.8
North	: Ryeda	ale Road												
7	L2	32	3.3	32	3.3	0.121	12.4	LOS A	0.2	1.6	0.57	1.00	0.57	17.9
Appro	bach	32	3.3	32	3.3	0.121	12.4	LOS A	0.2	1.6	0.57	1.00	0.57	17.9
West	First A	venue												
10	L2	18	5.9	18	5.9	0.010	5.5	LOS A	0.0	0.0	0.00	0.57	0.00	45.6
11	T1	1235	3.3	1235	3.3	0.337	0.1	LOS A	11.7	84.0	0.00	0.00	0.00	59.8
Appro	bach	1253	3.4	1253	3.4	0.337	0.2	NA	11.7	84.0	0.00	0.01	0.00	59.5
All Ve	hicles	3120	3.3	3098 <sup>N</sup>	3.3	0.448	0.8	NA	11.7	84.0	0.03	0.07	0.03	57.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

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

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

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

# Site: 101 [8 Blaxland Road/ First Avenue\_PM (Site Folder: 2036 without Dev)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Downstream lane blockage effects included in determining phase times Phase Sequence: Leading Right Turn Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Vehio	cle Mo	vement	Perfor	mance	•									
Mov ID	Turn	DEMA FLOV [ Total veh/h	AND NS HV] %	ARRI FLO [ Total veh/h	VAL WS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF ( [ Veh. veh	GE BACK QUEUE Dist] m	Prop. Que	Effective A Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South	: Blaxla	and Rd												
1 2	L2 T1	757 1001	3.2 1.4	757 1001	3.2 1.4	0.841 <b>*</b> 1.040	30.2 120.6	LOS C LOS F	18.8 39.3	135.4 278.1	0.88 1.00	0.94 1.44	0.93 1.77	30.6 20.0
Appro	ach	1758	2.2	1758	2.2	1.040	81.7	LOS F	39.3	278.1	0.95	1.23	1.41	22.2
North	: Blaxla	nd Rd												
8 9	T1 R2	560 933	2.1 3.8	560 933	2.1 3.8	0.414 <b>*</b> 1.025	7.2 118.6	LOS A LOS F	7.9 27.4	56.4 198.0	0.44 1.00	0.39 1.19	0.44 1.72	53.7 12.4
Appro	ach	1493	3.2	1493	3.2	1.025	76.8	LOS F	27.4	198.0	0.79	0.89	1.24	21.2
West:	First A	ve												
10 12	L2 R2	572 671	2.8 3.6	572 671	2.8 3.6	0.615 <b>*</b> 1.036	19.4 124.5	LOS B LOS F	7.7 7.6	55.0 55.0	0.73 1.00	0.80 1.21	0.73 1.82	37.8 12.7
Appro	ach	1242	3.2	1242	3.2	1.036	76.2	LOS F	7.7	55.0	0.87	1.02	1.32	18.3
All Ve	hicles	4493	2.8	4493	2.8	1.040	78.5	LOS F	39.3	278.1	0.88	1.06	1.33	20.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

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

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance													
Mov	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. E	Effective	Travel	Travel	Aver.			
ID Crossing	Flow	Delay	Service	QUE [ Ped	EUE Dist ]	Que	Stop Rate	Time	Dist.	Speed			
	ped/h	sec		ped	m			sec	m	m/sec			
North: Blaxland Ro	d												
P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.7	217.7	0.98			
West: First Ave													
P4 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.9	217.9	0.98			
All Pedestrians	105	54.3	LOS E	0.2	0.2	0.95	0.95	221.8	217.8	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.



REF: Reference Phase VAR: Variable Phase

Normal Movement	Permitted/Opposed
Slip/Bypass-Lane Movement	Opposed Slip/Bypass-Lane
Stopped Movement	Turn On Red
Other Movement Class (MC) Running	Undetected Movement
Mixed Running & Stopped MCs	Continuous Movement
Other Movement Class (MC) Stopped	Phase Transition Applied

#### Phase Timing Summary

Phase	Α	В	С
Phase Change Time (sec)	0	46	92
Green Time (sec)	40	40	22
Phase Time (sec)	46	46	28
Phase Split	38%	38%	23%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

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## **USER REPORT FOR SITE**

#### All Movement Classes

Project: 220704-N211310 Ryde Hospital SIDRA

#### **Template: Movement, Phasing**

#### Site: 1 [1 Blaxland Road/Florence Avenue\_2036\_AM (Site Folder: 2036 Post Dev)]

Site Category: -

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 55 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, B\*, C (\* Variable Phase)

Vehi	Vehicle Movement Performance													
Mov	Turn	INF		DEM		Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
U		Total	HV 1	FLO <sup>r</sup> [ Total	/v5 HV1	Sain	Delay	Service	[ Veh	Dist 1	Que	Stop Rate	NO. Cvcles	Speed
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m			0,0.00	km/h
South	h: Blaxl	and Roa	d											
1	L2	199	4	209	2.0	*0.575	17.9	LOS B	7.3	52.3	0.83	0.80	0.83	39.7
2	T1	632	28	665	4.4	0.575	13.1	LOS A	9.6	69.6	0.82	0.74	0.82	45.2
Appro	oach	831	32	875	3.9	0.575	14.3	LOS A	9.6	69.6	0.82	0.76	0.82	43.7
North	n: Blaxla	and Road	d											
8	T1	705	26	742	3.7	0.486	9.5	LOS A	8.4	61.0	0.66	0.57	0.66	48.9
9	R2	39	0	41	0.0	*0.486	25.9	LOS B	5.1	36.6	0.91	0.76	0.91	41.0
Appro	oach	744	26	783	3.5	0.486	10.3	LOS A	8.4	61.0	0.67	0.58	0.67	48.2
West	: Florer	nce Aven	ue											
10	L2	49	0	52	0.0	0.076	17.0	LOS B	0.9	6.4	0.68	0.69	0.68	42.6
12	R2	148	4	156	2.7	*0.523	28.7	LOS C	4.1	29.2	0.96	0.79	0.96	32.1
Appro	oach	197	4	207	2.0	0.523	25.8	LOS B	4.1	29.2	0.89	0.76	0.89	34.9
All Ve	ehicles	1772	62	1865	3.5	0.575	13.9	LOS A	9.6	69.6	0.77	0.68	0.77	44.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

Queue Model: SIDRA Standard.

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

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

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov	Input	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Ef	fective	Travel	Travel	Aver.
ID Crossing	Vol.	Flow	Delay	Service	QUE	UE	Que	Stop	Time	Dist.	Speed
					[Ped	Dist ]		Rate			
	ped/h	ped/h	sec		ped	m			sec	m	m/sec
North: Blaxlan	d Road										

P3 Full	50	53	18.4	LOS B	0.1	0.1	0.82	0.82	45.5	35.2	0.77
West: Florence	Avenue										
P4 Full	50	53	20.1	LOS C	0.1	0.1	0.86	0.86	44.7	31.9	0.71
All Pedestrians	100	105	19.3	LOS B	0.1	0.1	0.84	0.84	45.1	33.6	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.

#### **Output Phase Sequence** Phase A REF Phase C Phase B VAR Blaxland Road Blaxland Road Blaxland Road ١L Florence Avenue Florence Avenue Florence Avenue H ╡ ר Blaxland Road Blaxland Road Blaxland Road

REF: Reference Phase VAR: Variable Phase

Normal Movement	Permitted/Opposed
Slip/Bypass-Lane Movement	Opposed Slip/Bypass-Lane
Stopped Movement	Turn On Red
Cther Movement Class (MC) Running	Undetected Movement
Mixed Running & Stopped MCs	Continuous Movement
Other Movement Class (MC) Stopped	Phase Transition Applied

Phase Timing Summary											
Phase	Α	В	С								
Phase Change Time (sec)	0	29	40								
Green Time (sec)	23	5	9								
Phase Time (sec)	29	11	15								
Phase Split	53%	20%	27%								

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

### Site: 1 [1 Blaxland Road/Florence Avenue\_2036\_PM (Site Folder: 2036 Post Dev)]

Site Category: -

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 55 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, B\*, C (\* Variable Phase)

Vehi	Vehicle Movement Performance													
Mov ID	Turn	INF VOLU	PUT JMES	DEM. FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUE	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		[ Total veh/h	HV ] veh/h	[ Total veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist ] m		Rate	Cycles	km/h
South	n: Blaxl	and Roa	d											
1	L2	182	1	192	0.5	*0.618	17.8	LOS B	9.7	69.1	0.81	0.79	0.81	40.2
2	T1	845	18	889	2.1	0.618	12.0	LOS A	11.4	81.4	0.80	0.74	0.80	46.2
Appro	bach	1027	19	1081	1.9	0.618	13.0	LOS A	11.4	81.4	0.80	0.75	0.80	45.0
North	: Blaxla	and Road	b											
8	T1	675	12	711	1.8	0.511	8.2	LOS A	9.1	64.7	0.63	0.55	0.63	50.1
9	R2	38	1	40	2.6	*0.511	31.5	LOS C	3.3	23.8	0.98	0.77	0.98	38.3
Appro	bach	713	13	751	1.8	0.511	9.5	LOS A	9.1	64.7	0.64	0.56	0.64	49.0
West	: Florer	nce Aven	ue											
10	L2	72	0	76	0.0	0.132	19.6	LOS B	1.5	10.5	0.75	0.71	0.75	41.4
12	R2	177	6	186	3.4	*0.706	31.9	LOS C	5.3	38.3	1.00	0.89	1.18	30.9
Appro	bach	249	6	262	2.4	0.706	28.3	LOS B	5.3	38.3	0.93	0.84	1.06	34.0
All Ve	hicles	1989	38	2094	1.9	0.706	13.7	LOS A	11.4	81.4	0.76	0.69	0.78	44.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

Queue Model: SIDRA Standard.

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

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

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov D Crossing	Input	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Et	ffective	Travel	Travel	Aver.	
	VOI.	FIOW	Delay	Service	QUE [Ped	Dist ]	Que	Stop Rate	Time	Dist.	Speed	
	ped/h	ped/h	sec		ped	m			sec	m	m/sec	
North: Blaxland	d Road											
P3 Full	50	53	18.4	LOS B	0.1	0.1	0.82	0.82	45.5	35.2	0.77	
West: Florence	Avenue											
P4 Full	50	53	20.1	LOS C	0.1	0.1	0.86	0.86	44.7	31.9	0.71	
All Pedestrians	100	105	19.3	LOS B	0.1	0.1	0.84	0.84	45.1	33.6	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.



REF: Reference Phase VAR: Variable Phase

$ \longrightarrow $	Normal Movement	$ \longrightarrow $	Permitted/Opposed
$ \longrightarrow $	Slip/Bypass-Lane Movement	$ \longrightarrow $	Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
$\implies$	Other Movement Class (MC) Running	$ \longrightarrow $	Undetected Movement
	Mixed Running & Stopped MCs	$ \longrightarrow $	Continuous Movement
	Other Movement Class (MC) Stopped	•	Phase Transition Applied

#### Phase Timing Summary

Phase	Α	В	С
Phase Change Time (sec)	0	32	41
Green Time (sec)	26	3	8
Phase Time (sec)	32	9	14
Phase Split	58%	16%	25%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Site Category: -Roundabout

Vehi	cle Mc	vement	Perfori	mance										
Mov ID	Turn	INP VOLU	UT IMES	DEM FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUI	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m		Itale	Cycles	km/h
South	n: Ryed	ale Roac	ł											
2	T1	231	0	243	0.0	0.245	4.0	LOS A	1.5	10.4	0.16	0.50	0.16	46.2
3	R2	96	0	101	0.0	0.245	6.7	LOS A	1.5	10.4	0.16	0.50	0.16	45.6
3u	U	1	0	1	0.0	0.245	8.0	LOS A	1.5	10.4	0.16	0.50	0.16	46.6
Appro	bach	328	0	345	0.0	0.245	4.8	LOS A	1.5	10.4	0.16	0.50	0.16	46.1
East:	Floren	ce Avenu	ie											
4	L2	66	0	69	0.0	0.089	5.4	LOS A	0.4	3.2	0.39	0.58	0.39	44.6
6	R2	19	1	20	5.3	0.089	7.7	LOS A	0.4	3.2	0.39	0.58	0.39	44.4
6u	U	1	0	1	0.0	0.089	9.0	LOS A	0.4	3.2	0.39	0.58	0.39	44.5
Appro	bach	86	1	91	1.2	0.089	6.0	LOS A	0.4	3.2	0.39	0.58	0.39	44.6
North	: Ryed	ale Road												
7	L2	53	1	56	1.9	0.216	4.9	LOS A	1.2	8.5	0.29	0.50	0.29	44.8
8	T1	180	2	189	1.1	0.216	4.4	LOS A	1.2	8.5	0.29	0.50	0.29	46.1
9u	U	10	0	11	0.0	0.216	8.5	LOS A	1.2	8.5	0.29	0.50	0.29	46.0
Appro	bach	243	3	256	1.2	0.216	4.7	LOS A	1.2	8.5	0.29	0.50	0.29	45.9
All Ve	ehicles	657	4	692	0.6	0.245	4.9	LOS A	1.5	10.4	0.24	0.51	0.24	45.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

Site Category: -Roundabout

Vehi	cle Mo	vement	Perform	mance										
Mov ID	Turn	INP VOLU [ Total	UT IMES HV]	DEM/ FLO [ Total	AND WS HV]	Deg. Satn	Aver. Delay	Level of Service	95% BA QUE [ Veh.	CK OF EUE Dist ]	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
South	n: Ryed	ven/n ale Road	ven/h	ven/h	%	V/C	sec	_	ven	m	_	_	_	Km/n
2	T1	87	3	92	3.4	0.105	4.2	LOS A	0.5	3.8	0.22	0.50	0.22	46.0
3	R2	29	0	31	0.0	0.105	6.9	LOS A	0.5	3.8	0.22	0.50	0.22	45.5
3u	U	2	0	2	0.0	0.105	8.2	LOS A	0.5	3.8	0.22	0.50	0.22	46.4
Appro	bach	118	3	124	2.5	0.105	5.0	LOS A	0.5	3.8	0.22	0.50	0.22	45.9
East:	Floren	ce Avenu	е											
4	L2	87	2	92	2.3	0.134	5.7	LOS A	0.7	4.8	0.42	0.61	0.42	44.3
6	R2	39	0	41	0.0	0.134	7.9	LOS A	0.7	4.8	0.42	0.61	0.42	44.3
6u	U	1	0	1	0.0	0.134	9.2	LOS A	0.7	4.8	0.42	0.61	0.42	44.2
Appro	bach	127	2	134	1.6	0.134	6.4	LOS A	0.7	4.8	0.42	0.61	0.42	44.3
North	: Ryeda	ale Road												
7	L2	88	0	93	0.0	0.234	4.5	LOS A	1.4	9.7	0.16	0.48	0.16	45.1
8	T1	195	3	205	1.5	0.234	4.0	LOS A	1.4	9.7	0.16	0.48	0.16	46.4
9u	U	26	0	27	0.0	0.234	8.0	LOS A	1.4	9.7	0.16	0.48	0.16	46.3
Appro	bach	309	3	325	1.0	0.234	4.5	LOS A	1.4	9.7	0.16	0.48	0.16	46.0
All Ve	hicles	554	8	583	1.4	0.234	5.0	LOS A	1.4	9.7	0.23	0.51	0.23	45.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

## V Site: 3 [3 Ryedale Road/Fourth Avenue\_2036\_AM (Site Folder: 2036 Post Dev)]

Site Category: -Roundabout

Vehi	cle Mo	vement	t Perfori	mance										
Mov ID	Turn	INF VOLU	PUT JMES	DEM FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUE	ACK OF	Prop. E Que	Effective Stop	Aver. No.	Aver. Speed
		[ Total	HV]	[ Total	HV ]	vlo			[Veh.	Dist ]		Rate	Cycles	km/b
South	. Rved	ale Road	ven/n	ven/n	70	V/C	Sec	_	Ven	111	_		_	K111/11
J	i. ityeu				0.0	0.004	4.0	100.4	4.0	0.5	0.40	0.54	0.40	10.4
1	L2	1	0	1	0.0	0.201	4.0	LOSA	1.2	8.5	0.18	0.54	0.18	42.4
2	11	123	0	129	0.0	0.201	3.8	LOSA	1.2	8.5	0.18	0.54	0.18	45.3
3	R2	92	0	97	0.0	0.201	7.0	LOSA	1.2	8.5	0.18	0.54	0.18	43.8
3u	U	45	0	47	0.0	0.201	8.4	LOS A	1.2	8.5	0.18	0.54	0.18	46.0
Appro	bach	261	0	275	0.0	0.201	5.7	LOS A	1.2	8.5	0.18	0.54	0.18	45.0
East:	Fourth	Avenue												
4	L2	88	0	93	0.0	0.134	5.4	LOS A	0.7	5.1	0.47	0.61	0.47	43.0
5	T1	7	0	7	0.0	0.134	5.2	LOS A	0.7	5.1	0.47	0.61	0.47	38.6
6	R2	27	3	28	11.1	0.134	8.6	LOS A	0.7	5.1	0.47	0.61	0.47	42.7
6u	U	1	0	1	0.0	0.134	9.8	LOS A	0.7	5.1	0.47	0.61	0.47	41.1
Appro	bach	123	3	129	2.4	0.134	6.1	LOS A	0.7	5.1	0.47	0.61	0.47	42.8
North	: Ryeda	ale Road	I											
7	L2	46	3	48	6.5	0.248	4.9	LOS A	1.4	10.0	0.37	0.50	0.37	42.8
8	T1	215	2	226	0.9	0.248	4.5	LOS A	1.4	10.0	0.37	0.50	0.37	45.8
9	R2	3	0	3	0.0	0.248	7.7	LOS A	1.4	10.0	0.37	0.50	0.37	43.0
Appro	bach	264	5	278	1.9	0.248	4.6	LOS A	1.4	10.0	0.37	0.50	0.37	45.4
West	Fourth	n Avenue												
10	L2	3	0	3	0.0	0.014	5.3	LOS A	0.1	0.5	0.43	0.53	0.43	41.2
11	T1	7	0	7	0.0	0.014	5.1	LOS A	0.1	0.5	0.43	0.53	0.43	38.7
12	R2	3	0	3	0.0	0.014	8.3	LOS A	0.1	0.5	0.43	0.53	0.43	43.1
Appro	bach	13	0	14	0.0	0.014	5.9	LOS A	0.1	0.5	0.43	0.53	0.43	40.7
All Ve	hicles	661	8	696	1.2	0.248	5.4	LOS A	1.4	10.0	0.32	0.54	0.32	44.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay per movement.

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

## V Site: 3 [3 Ryedale Road/Fourth Avenue\_2036\_PM (Site Folder: 2036 Post Dev)]

Site Category: -Roundabout

Vehic	cle Mo	ovement	Perfori	mance										
Mov	Turn	INP	UT	DEM	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
טו		I Total	HV1	FLC [ Total	HV1	Sath	Delay	Service	[ Veh.	EUE Dist 1	Que	Stop Rate	NO. Cvcles	Speed
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m				km/h
South	: Ryed	lale Roac	1											
1	L2	1	0	1	0.0	0.112	4.2	LOS A	0.6	4.2	0.25	0.52	0.25	42.6
2	T1	80	2	84	2.5	0.112	4.0	LOS A	0.6	4.2	0.25	0.52	0.25	45.4
3	R2	28	0	29	0.0	0.112	7.2	LOS A	0.6	4.2	0.25	0.52	0.25	44.0
3u	U	17	0	18	0.0	0.112	8.7	LOS A	0.6	4.2	0.25	0.52	0.25	46.2
Appro	ach	126	2	133	1.6	0.112	5.4	LOS A	0.6	4.2	0.25	0.52	0.25	45.3
East:	Fourth	Avenue												
4	L2	65	0	68	0.0	0.138	4.8	LOS A	0.7	5.1	0.36	0.59	0.36	42.7
5	T1	1	0	1	0.0	0.138	4.5	LOS A	0.7	5.1	0.36	0.59	0.36	38.1
6	R2	69	4	73	5.8	0.138	7.9	LOS A	0.7	5.1	0.36	0.59	0.36	42.4
6u	U	5	0	5	0.0	0.138	9.2	LOS A	0.7	5.1	0.36	0.59	0.36	40.6
Appro	ach	140	4	147	2.9	0.138	6.4	LOS A	0.7	5.1	0.36	0.59	0.36	42.5
North	: Ryed	ale Road												
7	L2	46	5	48	10.9	0.157	4.2	LOS A	0.8	6.1	0.20	0.44	0.20	43.5
8	T1	141	3	148	2.1	0.157	3.9	LOS A	0.8	6.1	0.20	0.44	0.20	46.4
9	R2	1	1	1	100.0	0.157	8.3	LOS A	0.8	6.1	0.20	0.44	0.20	27.6
9u	U	2	0	2	0.0	0.157	8.5	LOS A	0.8	6.1	0.20	0.44	0.20	46.5
Appro	ach	190	9	200	4.7	0.157	4.0	LOS A	0.8	6.1	0.20	0.44	0.20	45.7
West:	Fourth	n Avenue												
10	L2	1	1	1	100.0	0.004	6.9	LOS A	0.0	0.1	0.39	0.51	0.39	38.6
11	T1	1	0	1	0.0	0.004	4.6	LOS A	0.0	0.1	0.39	0.51	0.39	38.1
12	R2	1	0	1	0.0	0.004	7.8	LOS A	0.0	0.1	0.39	0.51	0.39	42.7
Appro	ach	3	1	3	33.3	0.004	6.4	LOS A	0.0	0.1	0.39	0.51	0.39	40.1
All Ve	hicles	459	16	483	3.5	0.157	5.1	LOS A	0.8	6.1	0.26	0.51	0.26	44.7

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

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

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA Standard.

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

Site Category: -Stop (Two-Way)

Vehi	cle Mo	vemen	t Perforr	nance										
Mov	Turn	INF	PUT	DEM	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
ID		VOLU	JMES	FLO	WS	Satn	Delay	Service	QUI	EUE	Que	Stop	No.	Speed
		[ lotal	HV J	[ lotal	HV J				[Veh.	Dist J		Rate	Cycles	1 //
<b>0</b> 11		ven/h	ven/h	ven/n	%	V/C	sec		ven	m				km/h
South	n: Blaxla	and Roa	d											
1	L2	17	0	18	0.0	0.186	5.6	LOS A	0.0	0.0	0.00	0.03	0.00	47.5
2	T1	650	30	684	4.6	0.186	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.7
Appro	oach	667	30	702	4.5	0.186	0.2	NA	0.0	0.0	0.00	0.02	0.00	59.3
North	: Blaxla	and Road	b											
8	T1	682	27	718	4.0	0.218	0.6	LOS A	0.8	5.5	0.10	0.03	0.10	58.3
9	R2	38	0	40	0.0	0.218	10.5	LOS A	0.8	5.5	0.23	0.08	0.23	43.9
Appro	bach	720	27	758	3.8	0.218	1.1	NA	0.8	5.5	0.10	0.04	0.10	57.9
West	: Daltor	n Avenue	)											
10	L2	49	0	52	0.0	0.205	9.4	LOS A	0.7	4.6	0.63	0.92	0.63	14.1
12	R2	11	0	12	0.0	0.205	54.9	LOS D	0.7	4.6	0.63	0.92	0.63	38.1
Appro	bach	60	0	63	0.0	0.205	17.7	LOS B	0.7	4.6	0.63	0.92	0.63	18.5
All Ve	ehicles	1447	57	1523	3.9	0.218	1.4	NA	0.8	5.5	0.08	0.06	0.08	56.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

Site Category: -Stop (Two-Way)

Vehi	cle Mo	vemen	t Perforr	nance										
Mov	Turn	INF	PUT	DEM	AND	Deg.	Aver.	Level of	95% BA	ACK OF	Prop.	Effective	Aver.	Aver.
ID		VOLU	JMES	FLO	WS	Satn	Delay	Service	QUI	EUE	Que	Stop	No.	Speed
		[ lotal	HV J	[ lotal	HV J				[Veh.	Dist J		Rate	Cycles	1 //
<b>a</b>		ven/h	ven/h	veh/h	%	V/C	sec		veh	m				km/h
South	n: Blaxia	and Roa	d											
1	L2	12	0	13	0.0	0.242	5.6	LOS A	0.0	0.0	0.00	0.02	0.00	47.7
2	T1	874	17	920	1.9	0.242	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	59.7
Appro	oach	886	17	933	1.9	0.242	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.5
North	i: Blaxla	and Road	b											
8	T1	725	13	763	1.8	0.244	1.2	LOS A	1.4	9.7	0.14	0.04	0.16	57.1
9	R2	44	0	46	0.0	0.244	13.7	LOS A	1.4	9.7	0.36	0.10	0.41	39.2
Appro	oach	769	13	809	1.7	0.244	1.9	NA	1.4	9.7	0.15	0.04	0.17	56.6
West	: Daltor	n Avenue	)											
10	L2	54	0	57	0.0	0.315	13.3	LOS A	1.1	7.7	0.73	1.05	0.88	12.3
12	R2	10	0	11	0.0	0.315	94.3	LOS F	1.1	7.7	0.73	1.05	0.88	33.2
Appro	oach	64	0	67	0.0	0.315	25.9	LOS B	1.1	7.7	0.73	1.05	0.88	15.6
All Ve	ehicles	1719	30	1809	1.7	0.315	1.9	NA	1.4	9.7	0.09	0.06	0.11	55.4

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

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

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

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

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

Queue Model: SIDRA Standard.

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

Site Category: -Give-Way (Two-Way)

Vehi	cle Mc	vemen	t Perforr	nance										
Mov ID	Turn	INF VOLI	PUT JMES	DEM/ FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUI	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		[ Total veh/h	HV ] veh/h	[ Total veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
Sout	h: Denis	stone Ro	ad											
1	L2	51	1	54	2.0	0.062	3.4	LOS A	0.0	0.0	0.00	0.21	0.00	39.2
2	T1	61	0	64	0.0	0.062	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	39.2
Appro	oach	112	1	118	0.9	0.062	1.6	NA	0.0	0.0	0.00	0.21	0.00	39.2
North	n: Denis	tone Ro	ad											
8	T1	92	0	97	0.0	0.076	1.4	LOS A	0.2	1.7	0.14	0.30	0.14	42.1
9	R2	39	0	41	0.0	0.076	4.9	LOS A	0.2	1.7	0.14	0.30	0.14	45.5
Appro	oach	131	0	138	0.0	0.076	2.4	NA	0.2	1.7	0.14	0.30	0.14	42.8
West	: Fourth	n Avenue	•											
10	L2	31	0	33	0.0	0.021	4.7	LOS A	0.1	0.6	0.14	0.50	0.14	43.4
12	R2	73	3	77	4.1	0.075	5.5	LOS A	0.2	1.8	0.29	0.58	0.29	38.1
Appro	oach	104	3	109	2.9	0.075	5.3	LOS A	0.2	1.8	0.25	0.56	0.25	39.4
All Ve	ehicles	347	4	365	1.2	0.076	3.0	NA	0.2	1.8	0.13	0.35	0.13	40.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

Site Category: -Give-Way (Two-Way)

Vehi	cle Mc	ovemen	t Perforr	nance										
Mov ID	Turn	INF VOLU	PUT JMES HV 1	DEM/ FLO	AND WS HV/1	Deg. Satn	Aver. Delay	Level of Service	95% B/ QUI [ \/eh	ACK OF EUE Dist 1	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m		rtato		km/h
South	n: Denis	stone Ro	ad											
1	L2	78	4	82	5.1	0.093	3.5	LOS A	0.0	0.0	0.00	0.22	0.00	39.1
2	T1	88	0	93	0.0	0.093	0.0	LOS A	0.0	0.0	0.00	0.22	0.00	39.2
Appro	bach	166	4	175	2.4	0.093	1.6	NA	0.0	0.0	0.00	0.22	0.00	39.1
North	: Denis	stone Ro	ad											
8	T1	54	0	57	0.0	0.045	1.5	LOS A	0.1	1.0	0.18	0.29	0.18	42.0
9	R2	23	0	24	0.0	0.045	5.1	LOS A	0.1	1.0	0.18	0.29	0.18	45.3
Appro	bach	77	0	81	0.0	0.045	2.5	NA	0.1	1.0	0.18	0.29	0.18	42.7
West	: Fourth	n Avenue	•											
10	L2	42	0	44	0.0	0.029	4.8	LOS A	0.1	0.8	0.18	0.50	0.18	43.3
12	R2	72	5	76	6.9	0.074	5.5	LOS A	0.2	1.8	0.28	0.58	0.28	38.1
Appro	bach	114	5	120	4.4	0.074	5.2	LOS A	0.2	1.8	0.24	0.55	0.24	39.7
All Ve	hicles	357	9	376	2.5	0.093	3.0	NA	0.2	1.8	0.12	0.34	0.12	40.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

### V Site: 101 [7 Florence Avenue/ Denistone Road\_2036\_AM (Site Folder: 2036 Post Dev)]

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

Vehi	cle Mo	ovemen	t Perforr	nance										
Mov ID	Turn	INF VOLU	PUT JMES	DEM/ FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% BA QUI	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		[ Total veh/h	HV ] veh/h	[ Total veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist ] m		Rate	Cycles	km/h
Sout	hEast: I	Florence	Avenue											
21	L2	53	1	56	1.9	0.136	4.6	LOS A	0.0	0.0	0.00	0.12	0.00	48.8
22	T1	194	3	204	1.5	0.136	0.0	LOS A	0.0	0.0	0.00	0.12	0.00	49.3
Appr	oach	247	4	260	1.6	0.136	1.0	NA	0.0	0.0	0.00	0.12	0.00	49.2
North	West:	Deniston	e Road											
28	T1	90	2	95	2.2	0.072	0.4	LOS A	0.2	1.6	0.20	0.14	0.20	48.7
29	R2	29	1	31	3.4	0.072	5.5	LOS A	0.2	1.6	0.20	0.14	0.20	47.7
Appr	oach	119	3	125	2.5	0.072	1.6	NA	0.2	1.6	0.20	0.14	0.20	48.5
Sout	hWest:	Florence	Avenue											
30	L2	5	0	5	0.0	0.186	5.3	LOS A	0.7	4.7	0.40	0.66	0.40	45.7
32	R2	159	2	167	1.3	0.186	6.2	LOS A	0.7	4.7	0.40	0.66	0.40	45.2
Appr	oach	164	2	173	1.2	0.186	6.2	LOS A	0.7	4.7	0.40	0.66	0.40	45.2
All Ve	ehicles	530	9	558	1.7	0.186	2.8	NA	0.7	4.7	0.17	0.29	0.17	47.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

### V Site: 101 [7 Florence Avenue/ Denistone Road\_2036\_PM (Site Folder: 2036 Post Dev)]

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

Vehi	cle Mo	ovemen	t Perfori	mance										
Mov ID	Turn	INF VOLI	PUT JMES	DEM/ FLO	AND WS	Deg. Satn	Aver. Delay	Level of Service	95% B/ QU	ACK OF EUE	Prop. Que	Effective Stop	Aver. No.	Aver. Speed
		[ Total veh/h	HV ] veh/h	[ Total veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist ] m		Rate	Cycles	km/h
South	nEast: I	Florence	Avenue											
21	L2	65	1	68	1.5	0.118	4.6	LOS A	0.0	0.0	0.00	0.17	0.00	48.5
22	T1	148	2	156	1.4	0.118	0.0	LOS A	0.0	0.0	0.00	0.17	0.00	49.0
Appro	oach	213	3	224	1.4	0.118	1.4	NA	0.0	0.0	0.00	0.17	0.00	48.9
North	West:	Deniston	e Road											
28	T1	134	6	141	4.5	0.098	0.2	LOS A	0.2	1.7	0.14	0.11	0.14	49.0
29	R2	31	1	33	3.2	0.098	5.4	LOS A	0.2	1.7	0.14	0.11	0.14	48.0
Appro	oach	165	7	174	4.2	0.098	1.2	NA	0.2	1.7	0.14	0.11	0.14	48.8
South	nWest:	Florence	Avenue											
30	L2	1	0	1	0.0	0.127	5.1	LOS A	0.4	3.0	0.38	0.65	0.38	45.7
32	R2	111	0	117	0.0	0.127	6.1	LOS A	0.4	3.0	0.38	0.65	0.38	45.3
Appro	oach	112	0	118	0.0	0.127	6.1	LOS A	0.4	3.0	0.38	0.65	0.38	45.3
All Ve	ehicles	490	10	516	2.0	0.127	2.4	NA	0.4	3.0	0.14	0.26	0.14	48.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

Queue Model: SIDRA Standard.

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

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

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## **USER REPORT FOR NETWORK SITE**

### All Movement Classes

Project: 220704-N211310 Ryde Hospital SIDRA

**Template: Movement, Phasing** 

# Site: 4 [4 First Avenue/Ryedale Road\_AM (Site ■ Network: 3 [First\_Ave\_AM (Network Folder: Folder: 2036 Post Development)]

Site Category: -Stop (Two-Way)

Vehi	cle Mo	vement	Perfor	mance	<b>;</b>									
Mov ID	Turn	DEMA FLOV [ Total veh/h	ND VS HV] %	ARRI FLO [ Total veh/h	VAL WS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF ( [ Veh. veh	AGE BACK QUEUE Dist] m	Prop. Que	Effective A Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South	: Ryeda	ale Road												
1	L2	85	0.0	85	0.0	0.117	10.5	LOS A	0.2	1.4	0.51	0.91	0.51	44.0
Appro	bach	85	0.0	85	0.0	0.117	10.5	LOS A	0.2	1.4	0.51	0.91	0.51	44.0
East:	First Av	enue												
4	L2	174	0.6	174	0.6	0.350	4.1	LOS A	0.0	0.0	0.00	0.15	0.00	53.8
5	T1	1162	2.5	1162	2.5	0.350	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	58.7
Appro	bach	1336	2.3	1336	2.3	0.350	0.6	NA	0.0	0.0	0.00	0.08	0.00	58.0
North	: Ryeda	le Road												
7	L2	14	0.0	14	0.0	0.073	15.2	LOS B	0.4	2.5	0.69	1.00	0.69	15.5
Appro	bach	14	0.0	14	0.0	0.073	15.2	LOS B	0.4	2.5	0.69	1.00	0.69	15.5
West	First A	venue												
10	L2	28	0.0	28	0.0	0.016	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	45.8
11	T1	1609	4.2	1609	4.2	0.442	0.1	LOS A	20.8	150.5	0.00	0.00	0.00	59.7
Appro	bach	1638	4.1	1638	4.1	0.442	0.2	NA	20.8	150.5	0.00	0.01	0.00	59.3
All Ve	hicles	3073	3.2	3073	3.2	0.442	0.7	NA	20.8	150.5	0.02	0.07	0.02	57.5

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

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

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

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

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

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

## Site: 101 [8 Blaxland Road/ First Avenue\_AM (Site Folder: 2036 Post Dev)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Downstream lane blockage effects included in determining phase times Phase Sequence: Leading Right Turn Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Vehio	nicle Movement Performance													
Mov ID	Turn	DEMA FLOV [ Total veh/h	AND NS HV] %	ARRI FLO [ Total veh/h	VAL WS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF ( [ Veh. veh	GE BACK QUEUE Dist] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Blaxla	and Rd												
1 2	L2 T1	521 808	3.0 2.9	521 808	3.0 2.9	0.547 * 0.882	13.1 53.6	LOS A	7.7 19.5	55.4 140 2	0.55 0.96	0.74 1.00	0.55 1 18	42.4 32.0
Appro	ach	1329	2.9	1329	2.9	0.882	37.7	LOS C	19.5	140.2	0.80	0.90	0.94	34.1
North	: Blaxla	nd Rd												
8 9	T1 R2	753 802	2.1 2.0	753 802	2.1 2.0	0.622 * 0.872	13.6 58.9	LOS A	15.8 15.3	112.7 109.1	0.65 0.98	0.59 0.96	0.65 1.19	49.1 20.8
Appro	bach	1555	2.0	1555	2.0	0.872	36.9	LOS C	15.8	112.7	0.82	0.78	0.93	33.2
West:	First A	ve												
10 12	L2 R2	921 800	4.6 3.8	921 800	4.6 3.8	0.899 * 0.878	33.6 61.4	LOS C LOS E	7.6 7.6	55.0 55.0	0.95 1.00	0.99 0.96	1.06 1.22	30.1 21.2
Appro	bach	1721	4.2	1721	4.2	0.899	46.5	LOS D	7.6	55.0	0.97	0.98	1.14	25.2
All Ve	hicles	4605	3.1	4605	3.1	0.899	40.8	LOS C	19.5	140.2	0.87	0.89	1.01	30.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

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

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. E	Effective	Travel	Travel	Aver.		
ID Crossing	Flow	Delay	Service	QUE [ Ped	EUE Dist ]	Que	Stop Rate	Time	Dist.	Speed		
	ped/h	sec		ped	m			sec	m	m/sec		
North: Blaxland Rd												
P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.7	217.7	0.98		
West: First Ave												
P4 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.9	217.9	0.98		
All Pedestrians	105	54.3	LOS E	0.2	0.2	0.95	0.95	221.8	217.8	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.



REF: Reference Phase VAR: Variable Phase

Normal Movement	Permitted/Opposed
Slip/Bypass-Lane Movement	Opposed Slip/Bypass-Lane
Stopped Movement	Turn On Red
Other Movement Class (MC) Running	Undetected Movement
Mixed Running & Stopped MCs	Continuous Movement
Other Movement Class (MC) Stopped	Phase Transition Applied

#### Phase Timing Summary

Phase	Α	В	С
Phase Change Time (sec)	0	42	83
Green Time (sec)	36	35	31
Phase Time (sec)	42	41	37
Phase Split	35%	34%	31%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

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### **USER REPORT FOR NETWORK SITE**

#### All Movement Classes

Project: 220704-N211310 Ryde Hospital SIDRA

**Template: Movement, Phasing** 

Site: 4 [4 First Avenue/Ryedale Road\_PM (Site Monthead Network: 4 [First\_Ave\_PM (Network Folder: Folder: 2036 Post Development)]

Site Category: -Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMA FLOV [ Total veh/h	ND VS HV] %	ARRI FLO [ Total veh/h	VAL WS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF C [ Veh. veh	GE BACK QUEUE Dist ] m	Prop. Que	Effective A Stop Rate	ver. No. Cycles	Aver. Speed km/h
South: Ryedale Road														
1	L2	126	0.0	126	0.0	0.230	13.4	LOS A	0.4	2.8	0.64	1.00	0.64	42.2
Appro	bach	126	0.0	126	0.0	0.230	13.4	LOS A	0.4	2.8	0.64	1.00	0.64	42.2
East:	First Av	/enue												
4	L2	131	0.8	128	0.8	0.448	4.1	LOS A	0.0	0.0	0.00	0.09	0.00	54.6
5	T1	1612	3.7	1575	3.6	0.448	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.0
Appro	bach	1742	3.4	1702 <sup>N</sup> 1	3.4	0.448	0.3	NA	0.0	0.0	0.00	0.04	0.00	58.6
North	: Ryeda	ale Road												
7	L2	32	3.3	32	3.3	0.121	12.4	LOS A	0.2	1.6	0.57	1.00	0.57	17.8
Appro	bach	32	3.3	32	3.3	0.121	12.4	LOS A	0.2	1.6	0.57	1.00	0.57	17.8
West	West: First Avenue													
10	L2	18	5.9	18	5.9	0.010	5.5	LOS A	0.0	0.0	0.00	0.57	0.00	45.6
11	T1	1236	3.3	1236	3.3	0.337	0.1	LOS A	11.8	84.8	0.00	0.00	0.00	59.8
Appro	bach	1254	3.4	1254	3.4	0.337	0.2	NA	11.8	84.8	0.00	0.01	0.00	59.5
All Ve	hicles	3154	3.3	3114 <sup>N</sup>	3.3	0.448	0.9	NA	11.8	84.8	0.03	0.08	0.03	57.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

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

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

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

# Site: 101 [8 Blaxland Road/ First Avenue\_PM (Site Folder: 2036 Post Dev)]

#### Network: 4 [First\_Ave\_PM (Network Folder: 2036 Post Development)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Downstream lane blockage effects included in determining phase times Phase Sequence: Leading Right Turn Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Vehicle Movement Performance														
Mov ID	Turn	DEMA FLOV [ Total veh/h	AND WS HV] %	ARRI FLO [ Total veh/h	VAL WS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERA OF ( [ Veh. veh	GE BACK QUEUE Dist ] m	Prop. Que	Effective A Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Blaxland Rd														
1 2	L2 T1	757 1024	3.2 1.3	757 1024	3.2 1.3	0.842 <b>*</b> 1.061	30.3 134.7	LOS C LOS F	18.9 42.4	135.8 300.3	0.88 1.00	0.94 1.52	0.94 1.87	30.6 18.5
Appro	bach	1781	2.1	1781	2.1	1.061	90.3	LOS F	42.4	300.3	0.95	1.27	1.47	20.8
North	: Blaxla	nd Rd												
8	T1	556	2.1	556	2.1	0.411	7.2	LOS A	7.8	55.8	0.43	0.39	0.43	53.7
9	R2	951	3.8	951	3.8	* 1.044	130.6	LOS F	29.4	212.2	1.00	1.23	1.81	11.4
Appro	bach	1506	3.1	1506	3.1	1.044	85.1	LOS F	29.4	212.2	0.79	0.92	1.30	19.7
West:	First A	ve												
10	L2	572	2.8	572	2.8	0.615	19.4	LOS B	7.7	55.0	0.73	0.80	0.73	37.8
12	R2	672	3.6	672	3.6	* 1.038	125.5	LOS F	7.6	55.0	1.00	1.21	1.82	12.6
Appro	bach	1243	3.2	1243	3.2	1.038	76.7	LOS F	7.7	55.0	0.87	1.02	1.32	18.2
All Ve	hicles	4531	2.8	4531	2.8	1.061	84.9	LOS F	42.4	300.3	0.88	1.09	1.37	19.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

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

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

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

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

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. E	Effective	Travel	Travel	Aver.	
ID Crossing	Flow	Delay	Service	QUE [ Ped	EUE Dist ]	Que	Stop Rate	Time	Dist.	Speed	
	ped/h	sec		ped	m			sec	m	m/sec	
North: Blaxland Re	d										
P3 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.7	217.7	0.98	
West: First Ave											
P4 Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	221.9	217.9	0.98	
All Pedestrians	105	54.3	LOS E	0.2	0.2	0.95	0.95	221.8	217.8	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.



REF: Reference Phase VAR: Variable Phase

Normal Movement	Permitted/Opposed
Slip/Bypass-Lane Movement	Opposed Slip/Bypass-Lane
Stopped Movement	Turn On Red
Other Movement Class (MC) Running	Undetected Movement
Mixed Running & Stopped MCs	Continuous Movement
Other Movement Class (MC) Stopped	Phase Transition Applied

#### Phase Timing Summary

Phase	Α	В	С
Phase Change Time (sec)	0	46	92
Green Time (sec)	40	40	22
Phase Time (sec)	46	46	28
Phase Split	38%	38%	23%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

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## Appendix B Swept Path Assessment



ENSURE EXISTING GRADE OF ENTRY DRIVEWAY CAN ACCOMMODATE MEDIUM RIGID VEHICLES. MAXIMUM CHANGE IN GRADE FOR MRV'S SHOULD BE 1:16 OVER 7m.

ARCHITECTURAL BASE IN BLUE DRAWING EW-10-01-01 REVISION WORK IN PROGRESS BY SILVER THOMAS HANLEY DATED 17.01.2022

NEARMAP AERIAL IMAGE DATED 21.12.2021

RYDE HOSPITAL REDEVELOPMENT DENISTONE ROAD ACCESS

VEHICLE SWEPT PATH ASSESSMENT DRAWING NO. N211310-03-01 SHEET 01 OF 05

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ENSURE EXISTING GRADE OF EXIT DRIVEWAY CAN ACCOMMODATE MEDIUM RIGID VEHICLES. MAXIMUM CHANGE IN GRADE FOR MRV'S SHOULD BE 1:16 OVER 7m.

ARCHITECTURAL BASE IN BLUE DRAWING EW-10-01-01 REVISION WORK IN PROGRESS BY SILVER THOMAS HANLEY DATED 17.01.2022

NEARMAP AERIAL IMAGE DATED 21.12.2021

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