88 Newton Road, Wetherill Park

Development Application

Transport Assessment

28/05/2024

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01	04/04/2024	Final	J. Wu	R. Hazell
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03	28/05/2024	Final – updated to include minor amendments	J. Wu	R. Hazell

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1 Introduction

1.1 Overview

Centuria Capital Limited engaged Ason Group to prepare a Transport Impact Assessment as part of a Development Application for a proposed heavy industrial development at 88 Newton Road, Wetherill Park.

The site is within Fairfield City Council Local Government Area (LGA) and subject to Fairfield City Wide Development Control Plan (DCP 2013) and Fairfield Local Environmental Plan (LEP 2013). This report has been prepared to provide a detailed assessment of the anticipated transport implications of the proposed development with a focus on site access and internal layout together with the traffic impacts on the surrounding road network.

1.2 Key References

In preparing this transport assessment, the following key documents and transport standards and guidelines have been referenced:

- Fairfield Local Environmental Plan 2013.
- Fairfield City Wide Development Control Plan 2013.
- Mamre Road Precinct Development Control Plan 2021.
- Integrated Public Transport Service Planning Guidelines, Sydney Metropolitan Area, 2013 TfNSW.
- Transport for NSW Guide to Traffic Generating Developments.
- Transport for NSW Guide to Traffic Generating Developments: Updated Traffic Surveys (TDT2013/04a).
- Australian Standard 2890.1:2004 Parking Facilities – Off Street Car Parking AS2890.1:2004.
- Australian Standard 2890.2:2018 Parking Facilities – Off Street Commercial Vehicle Facilities AS2890.2:2018.
- Australian Standard / New Zealand Standard, Parking Facilities, Part 6: Off-Street Parking for People with Disabilities AS2890.6:2022.
- Architectural plans, drawings DA100(A), DA202(A), DA500(A), prepared by SBA Architects, dated 03/04/2024.

2 Existing Conditions

2.1 Subject Site

The site is at 88 Newton Road, Wetherill Park and has a frontage of approximately 420 metres to Newton Road along the southern and eastern boundaries. It covers an area of 5.19 hectares and located within the Wetherill Park Industrial Area setback and south of the Newton Road and Victoria Street roundabout. An existing drainage channel bounds the site to the north-west, with Newton Road to the east and south. It is broadly flat, with a minor fall in levels from south to north and west to east. The surrounding properties include a range of heavy industrial and warehouse land uses.

The site is zoned E4 – General Industrial and is occupied by a warehouse facility with a total gross floor area (GFA) of 17,100m^2, including ancillary office space. Two separate access driveways are provided on Newton Road to service the existing warehouse and include a 20-metre-wide two-way access in the north-east corner and a 25-metre-wide heavy vehicle entry only driveway in the south-west corner.

The site location is shown in **Figure 1**.

Figure 1: Site Location

2.2 Road Network

The road network surrounding the site includes a mix of state, regional and local roads with the key roads within the vicinity described in **Table 1**.

TABLE 1: ROAD HIERARCHY

Road	Classification	Description
The Horsley Drive	State Road (MR 609)	▪ Aligned in an east-west direction south of the site. Connects with the Cumberland Highway at its eastern end. ▪ Two-way road generally providing two traffic lanes in each direction with variable carriageway widths. ▪ No kerbside parking permitted. ▪ Posted 70km/h speed limit.
Victoria Street	Partial Transit Way (TW 80020) and partial classified reginal road (7480)	▪ Aligned in an east-west direction south of the site. Connects with the Cumberland Highway at its eastern end, a key arterial road through Western Sydney. ▪ Two-way road with two traffic lanes with dedicated turning bays at key intersections. ▪ 24-hour kerbside bus lanes in each direction further to the east within an overall approximate 22m wide carriageway. ▪ No kerbside parking permitted. ▪ Posted 60km/h speed limit.
Newton Road	Local Road	▪ Aligned in an east-west direction along the south-east boundary of the site. ▪ Two-way road with one traffic lane in each direction and 13m carriageway. ▪ Unrestricted kerbside parking permitted on both sides of the road. ▪ Posted 60km/h speed limit.

2.3 Public Transport

The *Integrated Public Transport Service Planning Guidelines* states that bus services influence the travel mode choice of areas within a 400-metre walk (about 5-minutes) of a bus stop. The site is located well within 400 metres of several bus stops on Victoria Street and Newton Road and therefore have access to several bus stops. **Table 2** and **Figure 2** detail the availability of public transport services near the site.

TABLE 2: BUS SERVICES

Bus Route	Route Description	Service Frequency
814	Fairfield to Smithfield and Wetherill Park Industrial Area (Loop Service)	30–60 minutes
835	WSU Penrith to Prairiewood	30 minutes
T80	Liverpool to Parramatta	10 minutes

2.4 Active Transport

Pedestrian footpaths are provided on the southern side of Newton Road in the vicinity of the site, which functions as the main pedestrian route to and from the key Victoria Street bus stops. Formal pedestrian crossing facilities are provided at the Victoria Street/ Canley Vale Road traffic signals.

Given the location of the site within a heavy industrial precinct, there is limited cycling infrastructure in the local area, with the closest shared path located on Victoria Street about 400 metres to the east. The surrounding cycling infrastructure is shown in **Figure 3**.

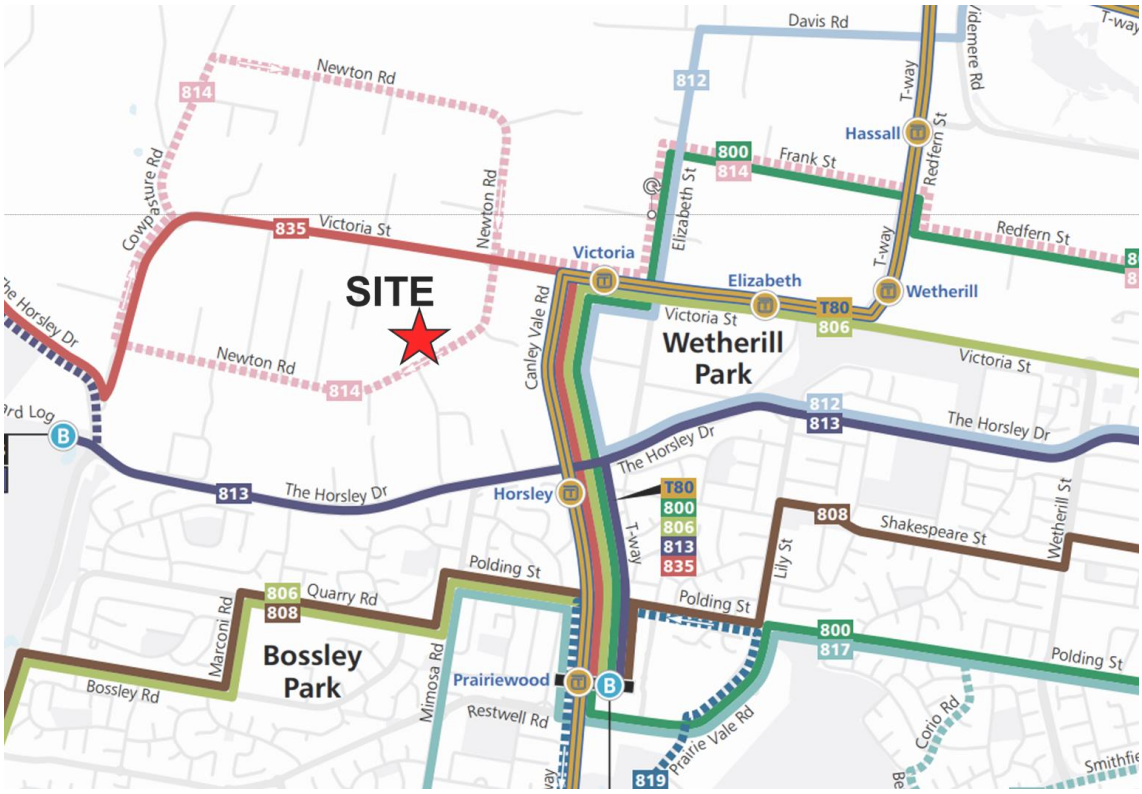


Figure 2: Public Transport Network

Figure 3: Cycling Infrastructure

2.5 Traffic Volumes

Traffic survey data has been collected as part of a State Significant Development Application (SSD-61383966) recently submitted on the subject site. For consistency, this same data has been referenced for the purposes of this DA. The surveys were completed in mid to late June 2023 during the weekday road network peak periods and included the following intersections:

- Cowpasture Road/ The Horsley Drive (signalised intersection).
- Cowpasture Road/ Newton Road (roundabout).
- Victoria Street/ Newton Road (roundabout).
- Canley Vale Road/ Victoria Street (signalised intersection).
- Elizabeth Street/ Victoria Street (signalised intersection).

The road network weekday AM and PM peak hours occur between 7:00am and 8:00am and between 3:30pm and 4:30pm. These peak hours are both common and expected in such precincts dominated by industrial land uses in western Sydney.

2.5.1 Intersection Performance

SIDRA INTERSECTION modelling has been completed to establish the baseline operation of the key study intersections. In this regard, the SIDRA modelling outputs include a range of performance measures relevant to this assessment, including:

- *Degree of Saturation (DOS)* – The DOS is used to measure the performance of intersections where a value of 1.0 represents an intersection at theoretical capacity. As the performance of and intersection approaches DOS of 1.0, queue lengths and delays increase rapidly. It is recommended that DOS to be less than 0.9, with satisfactory intersection operation generally achieved with a DOS below 0.8.
- *Average Vehicle Delay (AVD)* – The AVD (or average delay per vehicle in seconds) for intersections also provides a measure of the operational performance and is used to determine an intersection's Level of Service (see below). For signalised intersections, the AVD reported relates to the average of all vehicle movements through the intersection. For priority (Give Way, Stop & Roundabout controlled) intersections, the AVD reported is that for the movement with the highest AVD.
- *Level of Service (LOS)* – This is a comparative measure that provides an indication of the operating performance, based on AVD.

Table 3 shows the criteria that SIDRA adopts in assessing level of service.

TABLE 3: LEVEL OF SERVICE CRITERIA FOR INTERSECTIONS

Level of Service	Average Delay per Vehicle (sec/veh)	Traffic Signals, Roundabout	Give Way and Stop Signs
A	Less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays & spare capacity	Acceptable delays & spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity & accident study required
E	57 to 70	At capacity, at signals, incidents will cause excessive delays. Roundabouts require other control mode	At capacity, requires other control mode
F	More than 70	Unsatisfactory and requires additional capacity.	Unsatisfactory and requires other control mode or major treatment.

The results of the SIDRA analysis for the critical intersections are shown **Table 4** and detailed intersection operation outputs are included in **Appendix A**.

TABLE 4: BASELINE INTERSECTION OPERATION

Intersection	Period	DOS	AVD	LOS
Victoria Street/ Newton Road	AM	0.36	23	B
	PM	0.55	23	B
Cowpasture Road/ Newton Road	AM	0.18	14	B
	PM	0.84	25	B
Cowpasture Road/ The Horsley Drive	AM	0.70	24	B
	PM	0.86	32	C
Canley Vale Road/ Victoria Street	AM	0.63	32	C
	PM	0.58	23	B
Elizabeth Street/ Victoria Street	AM	0.96	68	E
	PM	0.87	60	E

The results show that the key study intersections are currently operating at satisfactory levels or better during the respective peak hours, with an overall LOS B/C. The Elizabeth Street/ Victoria Street intersection does experience some level of congestion and operates at a LOS E in both peaks with this operation generally consistent with site observations during the PM peak period.

3 Development Proposal

The proposal seeks consent for demolition of existing buildings and structures on the site and construction of a single-level warehouse and ancillary office space, on-site parking, landscaping and access driveways. The proposed warehouse covers a total of 30,250m^2 GFA comprising:

- 28,850m^2 of warehouse GFA and 1,400m^2 ancillary office.
- Retention of the two existing driveways on Newton Road and addition of a separate 6.5-metre-wide light vehicle access driveway along the eastern site boundary.
- 18 dedicated loading bays, including 17 for 20-metre-long semi-trailers and one for 12.5-metre-long heavy rigid vehicles (HRV).
- 213 on-site car parking spaces.

The proposed site layout plan is shown in **Figure 4**.

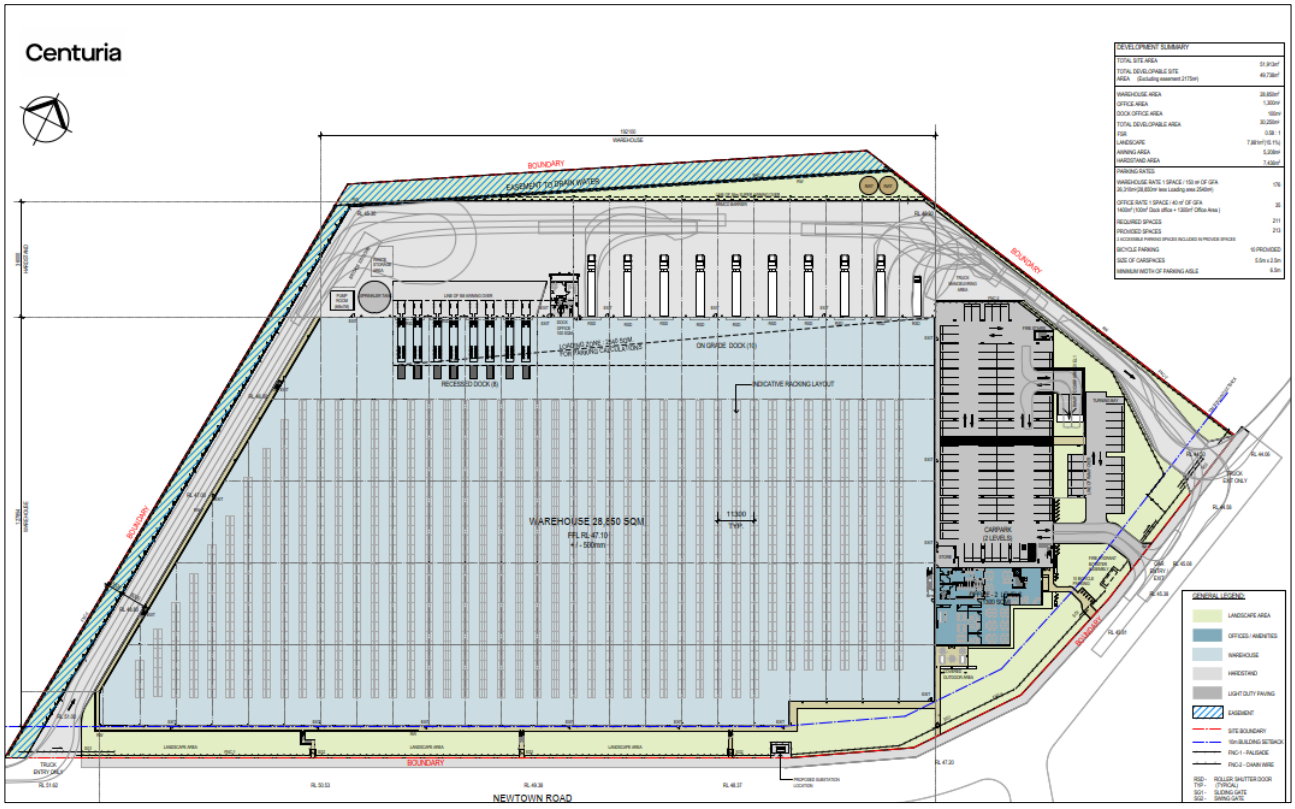


Figure 4: Proposed Site Layout Plan

4 Parking and Loading Requirements

4.1 Car Parking

Reference has been made to the Fairfield City Wide DCP 2013 (DCP 2013) to assess the car parking requirements of the proposed development, with **Table 5** presenting the required parking provision.

TABLE 5: MINIMUM CAR PARKING REQUIREMENTS

Land Use	GFA	Planning Document	Car Parking Rate	Car Parking Requirement
Warehouse	30,250m^2	DCP 2013	1 space per 150m^2 GFA	202

The proposed development includes 213 on-site parking spaces and exceeds the minimum 202 spaces required under DCP 2013. This is considered appropriate, with the estimated peak parking demand able to be wholly accommodated on-site.

4.2 Accessible Parking

DCP 2013 stipulates that accessible parking is to be provided in accordance with the Building Code of Australia. Reference has therefore been made to the National Construction Code (NCC) 2022, which stipulates that a Class 7 building is required to provide accessible car parking at a rate of one accessible space for every 100 car parking spaces or part thereof.

With a car parking provision of 213 car spaces on-site, the proposed development is required to provide two accessible spaces. These have been provided on the ground level and upper level of the car park close to the main entrances.

4.3 Bicycle Parking

DCP 2013 does not define bicycle parking requirements, with reference to the *Planning Guidelines for Walking and Cycling 2004* important in this regard.

The Guidelines state the need for bicycle parking in industrial sites be provided for 3-5 per cent of staff and 5-10 per cent of customers/ visitors. Based on the proposed land uses, visitor demand is expected to be minor with this assessment focusing on the staff bicycle parking requirements. With about 175 staff expected to be on-site during any weekday peak period, the proposal is expected to generate a bicycle parking demand of between five and nine spaces.

It is recommended that end of trip facilities be provided in-line with the requirements of the Guidelines. With up to 175 staff on any given day, the proposal is required to provide two personal lockers, six showers and two changes rooms. The proposed development includes 10 bicycle spaces, 40 personal lockers, seven showers and two changes rooms and exceeds the recommended minimum requirements.

4.4 Loading and Servicing

DCP 2013 states that loading facilities for large warehouse developments need to form part of a merits-based assessment noting that the minimum design vehicle is to be a 20 metre semi-trailer. On this basis, the proposal includes provision of 18 loading bays, including 17 bays suitable for all vehicles up to 20 metre semi-trailers and one loading bay suitable for 12.5 metre HRVs.

The site layout has also been designed to allow for 36 metre A-Doubles and 26 metre B-Doubles to enter and exit the site in a forward direction and manoeuvre as required. As typically required for such large

vehicles, they will temporarily stand adjacent to the circulation aisle, and either be de-coupled, or side loaded/ unloaded as required.

The proposed number of loading bays are considered suitable and will be able to satisfy the peak loading and servicing demands of the site.

Vehicle swept paths have been completed for a range of design vehicles to ensure appropriate site access arrangements, internal circulation and manoeuvring throughout. This includes aerial fire appliance trucks and waste vehicles. The key vehicle swept paths are included in **Appendix B**.

5 Traffic Impacts

5.1 Traffic Generation

The traffic generation estimates for the proposed development have been sourced from a detailed review of approved and proposed developments in the surrounding industrial area in combination with the applicable rates specified in TfNSW Guide and *TfNSW Technical Direction: Updated Traffic Surveys* (TDT 2013/04a). More specifically, the following traffic generation rates have been reviewed:

- TDT 2013/04a survey results were reviewed for the nominated large scale industrial sites (Eastern Creek, Erskine Park and Riverwood) and are considered comparable to the proposed development.
- The approved Horsley Drive Business Park (HDBP) located on the western side of Cowpasture Road/ Victoria Street and within 1.5km of the site. HDBP Stage 1 has been operating since late 2017 with Stage 2 (covering about 80,000m^2) recently completed.
- Keyhole Estate located north of The Horsely Drive and west of Ferrers Road and within 3.5km of the site. The planning proposal is currently at post-exhibition stage with extensive consultation with TfNSW completed over recent years.

The above reference material includes the following traffic generation rates:

- TDT 2013/04a – 0.265 trips per 100m^2 during the weekday AM and PM peaks.
- HDBP – 0.156 and 0.176 trips per 100m^2 during the respective peak hours.
- Keyhole Estate – 0.22 trips per 100m^2 during both peaks.

On the above basis, the traffic generation rate as applied to Keyhole Estate is considered comparable and appropriate for the proposed development. On this basis, the estimated traffic generation of the proposed development is summarised in **Table 6**, with the net change when considering the existing GFA also shown. Overall, the proposed development is expected to generate less than 30 additional vehicle trips during any peak hour. This represents one additional vehicle movement every two minutes and is minor in the context of the size of the site, surrounding industrial precinct and road network throughout Wetherill Park industrial area.

TABLE 6: TRIP GENERATION

Land Use	Size (GFA)	Traffic Generation Rates		Vehicle Trips	
		AM	PM	AM	PM
Existing	17,100m^2	0.22 trips/ space	0.22 trips/ space	38	38
Proposed development	30,250m^2			66	66
			Net Change	**+28**	**+28**

5.2 Trip Distribution and Assignment

The directional distribution and assignment of traffic generated by the site will be influenced by several factors, including the:

- Configuration of the future road network.
- Existing operation of the intersections providing access between the local and arterial road network.

- Configuration of access points to the site.
- Travel patterns evident from the surveyed traffic volumes through the nearby key intersections.
- Journey to Work census data.
- Existing heavy vehicle routes in the vicinity of the site.

A 70:30 split between inbound and outbound traffic has been adopted for the AM peak, reversed in the PM peak. This is typically adopted for traffic generation associated with industrial developments and consistent with TfNSW Guidelines. A 23 per cent heavy vehicle proportion has also been assumed for this assessment, in accordance with TDT 2013/04a.

Figure 5 and **Figure 6** show the trip distribution based on the above for both light and heavy vehicles.

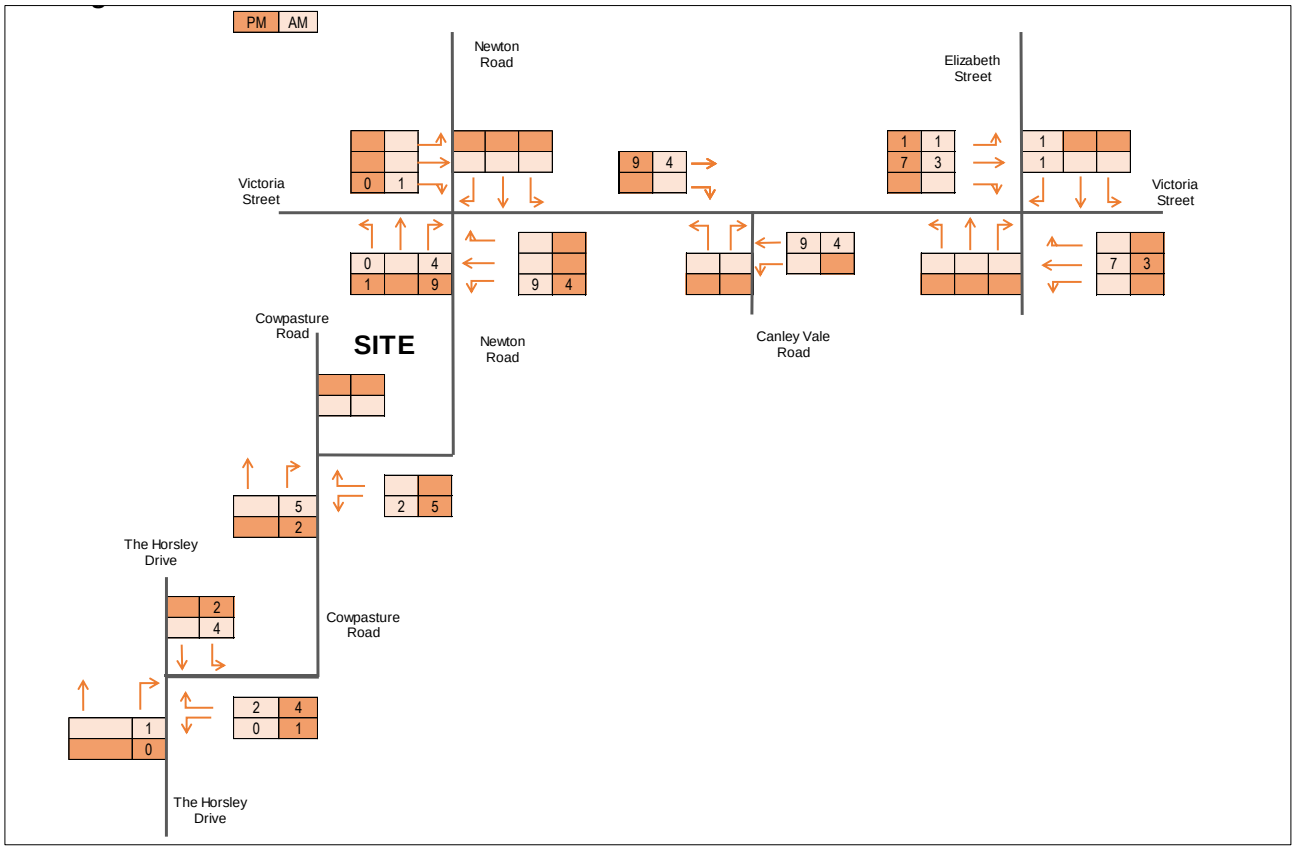


Figure 5: Trip Distribution – Light Vehicles

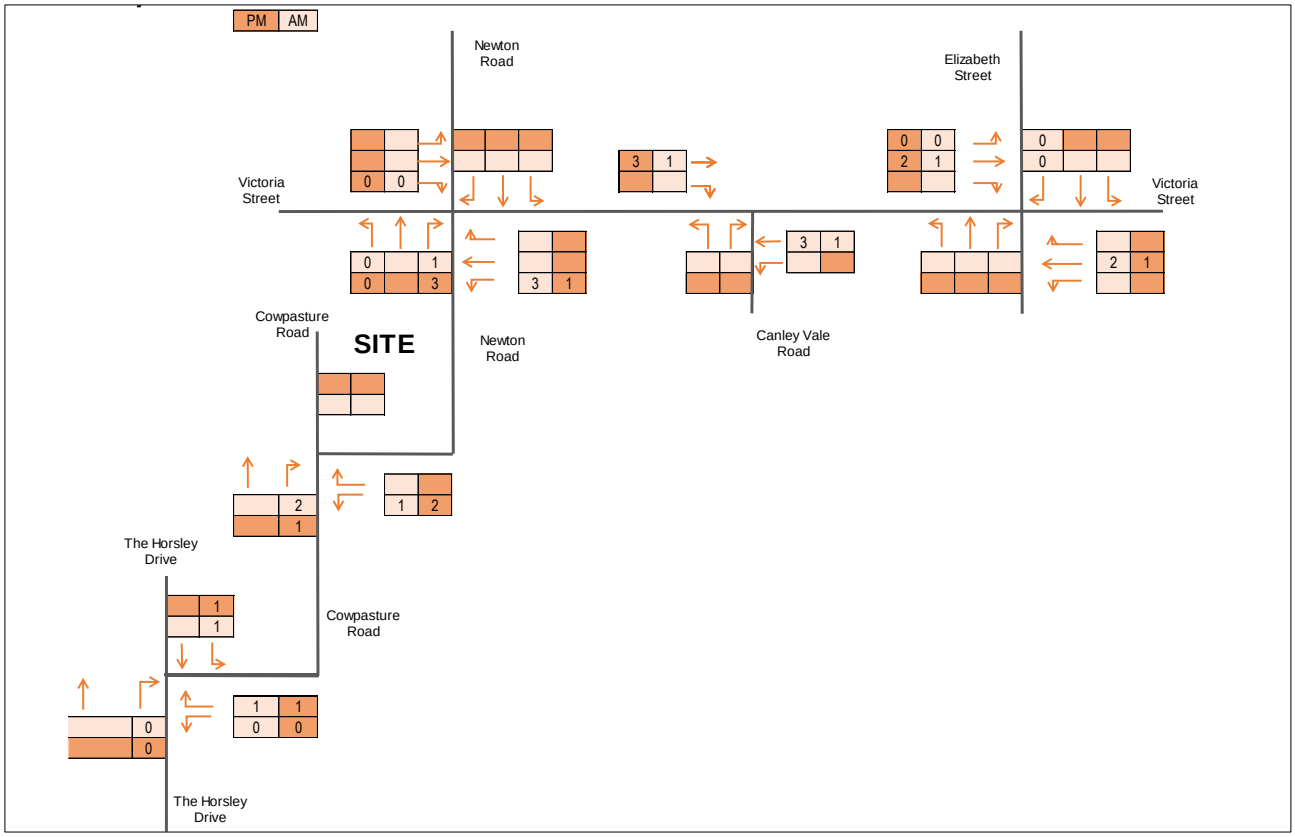


Figure 6: Trip Distribution – Heavy Vehicles

5.3 Traffic Impacts

5.3.1 Overview

With the proposed development expected to generate a net increase of less than 30 vehicle trips in any peak hour, such low volumes are not expected to materially affect the operation of the key surrounding study intersections. However, as part of a robust and conservative traffic-based assessment, post development traffic modelling has been completed to understand the impacts associated with the proposed development.

In this regard, the following scenarios have been completed to inform the traffic impacts on the surrounding road network.

- Year of opening (2026) base case.
- Year of opening (2026) with development.
- 10-year horizon (2036) base case.
- 10-year horizon (2036) with development.

5.3.2 Future Year Growth Rate

To assess the traffic impacts of the proposal under the above scenarios, reference has been made to the traffic volumes of the surrounding road network extracted from the Strategic Traffic Forecasting Model (STFM), as defined in the recently submitted SSDA on the site (SSD-61383966). When considering the STFM outputs over the forecast years, it is evident that a reduction in traffic volumes between 2021 and 2026 is expected in both the weekday AM and PM peak periods. This may be a result of some constraint in

the network that could result in motorists using alternative routes and/ or travelling at different times of the day.

The SSDA detailed a slight increase in STFM data forecasts in traffic volumes between 2026 and 2036 and aligns with the planned The Horsley Drive upgrades. The general traffic growth rate of 0.54 per cent and 0.36 per cent for the AM and PM peak periods respectively, between 2021 and 2036 has been adopted and reflected in the traffic modelling.

5.3.3 Year of Opening (2026)

The results of the SIDRA analysis for the critical intersections for the 2026 base and 2026 with development scenarios are shown in **Table 7** and detailed intersection operation outputs included in **Appendix A**.

TABLE 7: YEAR OF OPENING (2026) – BASE AND WITH DEVELOPMENT TRAFFIC

Intersection	Scenario	Period	DOS	AVD	LOS
Victoria Street/ Newton Road	2026 base	AM	0.38	24	B
		PM	0.57	24	B
	2026 with development	AM	0.38	24	B
		PM	0.59	25	B
Cowpasture Road/ Newton Road	2026 base	AM	0.18	14	A
		PM	0.92	30	C
	2026 with development	AM	0.18	14	A
		PM	0.96	36	C
Cowpasture Road/ The Horsley Drive	2026 base	AM	0.69	23	B
		PM	0.87	33	C
	2026 with development	AM	0.69	23	B
		PM	0.87	33	C
Canley Vale Road/ Victoria Street	2026 base	AM	0.65	32	C
		PM	0.59	28	B
	2026 with development	AM	0.65	33	C
		PM	0.60	29	C
Elizabeth Street/ Victoria Street	2026 base	AM	0.97	69	E
		PM	0.88	61	E
	2026 with development	AM	0.97	70	E
		PM	0.89	62	E

As shown in **Table 7**, for the opening year 2026 base scenario, the study intersections are expected to operate similar to the existing base scenario, given such minor increases in traffic volumes on the road network between 2023 and 2026.

For the 2026 with development scenario, the intersections also operate similarly with the 2026 base scenario, with minor changes in degree of saturation (DOS), average delay (AVD) and level of service (LOS). This confirms that the expected traffic generation of the proposed development would have a nominal impact on the operation of the surrounding road network.

5.3.4 10-Year Horizon (2036)

It is noted that as part of the recently submitted SSD on the site, TfNSW advised the project team about planned road network upgrades that may influence future traffic conditions in the study area. This primarily included NSW Government approved upgrades to the Cowpasture Road/ The Horsley Drive intersection with all works expected to be completed around 2031.

The upgrade will include delivery of an additional southbound traffic lane on The Horsley Drive and an additional left turn slip lane from the Cowpasture Road into The Horsley Drive. **Figure 7** shows the upgraded intersection layout with this layout adopted for the 10-year horizon modelling scenarios.

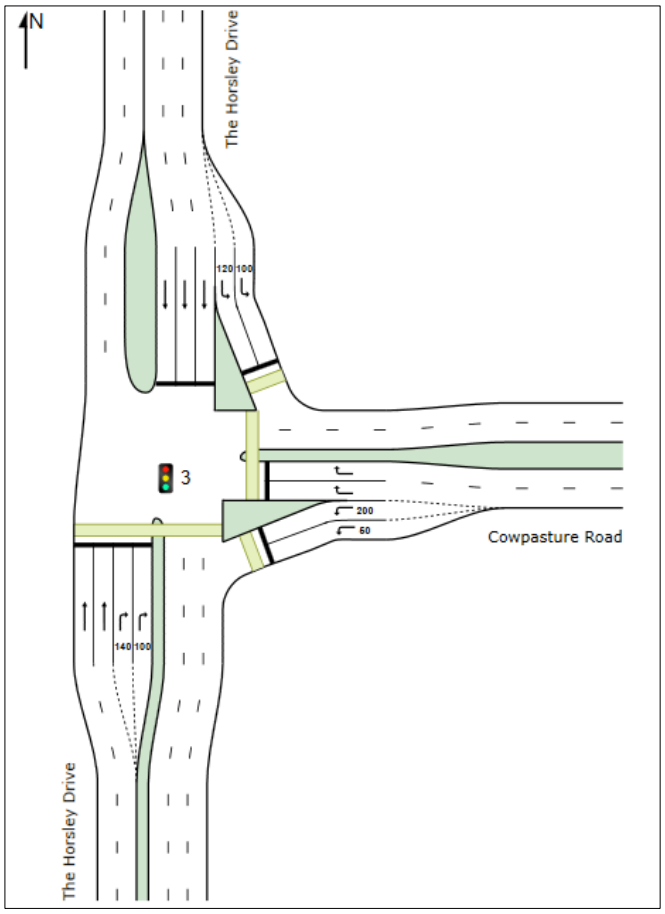


Figure 7: 2031 Upgraded Intersection Layout - The Horsley Dr / Cowpasture Rd

The results of the SIDRA analysis for the key study intersections for the 2036 base and 2036 with development scenarios are shown in **Table 8**, with detailed intersection outputs included in **Appendix A**.

TABLE 8: 10-YEAR HORIZON (2036) – BASE AND WITH DEVELOPMENT TRAFFIC					
Intersection	**Scenario**	**Period**	**DOS**	**AVD**	**LOS**
Victoria Street/ Newton Road	2036 base	AM	0.45	25	B
		PM	0.61	24	B
	2036 with development	AM	0.46	25	B
		PM	0.64	26	B
Cowpasture Road/ Newton Road	2036 base	AM	0.20	15	B
		PM	0.86	26	B
	2036 with development	AM	0.20	15	B
		PM	0.90	29	C
Cowpasture Road/ The Horsley Drive	2036 base	AM	0.73	24	B
		PM	0.83	31	C
	2036 with development	AM	0.73	23	B
		PM	0.83	31	C
Canley Vale Road/ Victoria Street	2036 base	AM	0.71	35	C
		PM	0.62	29	C
	2036 with development	AM	0.72	35	C
		PM	0.63	29	C
Elizabeth Street/ Victoria Street	2036 base	AM	1.03	87	F
		PM	0.91	65	E
	2036 with development	AM	1.03	89	F
		PM	0.92	66	E

As shown in **Table 8**, when including the development traffic, the road network operates similar to the 2036 base scenario, with minimal increases to AVD and DOS. This indicates that the proposed development does not have any such material impact on the operation of the surrounding key study intersections.

Overall, the proposed development would prove to be a minor contributor to the forecast traffic volumes in 2036. While it is recognised that the Elizabeth Street/ Victoria Street signalised intersection would likely decline marginally to LOS F in the AM peak for both the base and with development 2036 scenarios, the proposed development has an immaterial impact on the overall operation of this intersection. The change in intersection operation between 2026 and 2036 is almost wholly attributed to background traffic. The SIDRA modelling movement summary tables are included in **Appendix A**.

6 Design Review

The proposed site layout, access driveways, internal circulation, loading areas and car park layout have been designed in accordance with relevant Australian Standards. A detailed review of the site layout has been completed and confirms that the proposed development is expected to operate well noting the following:

- The proposal includes three separate access driveways on Newton Road, including:
  - Separate entry and exit driveways for heavy vehicles.
  - Combined entry and exit driveway for light vehicles.
- The proposed driveway layouts and widths comply with the requirements of AS2890.1 and AS2890.2 and consider the existing driveway layouts and configuration of Newton Road along the site's boundary.
- Heavy vehicles will enter the site in the south-west corner, circulate in a clockwise direction and exit in the north-east corner.
- The largest design check vehicle is a 36 metre A-Double, noting that there are currently no approved routes for such vehicles on the surrounding road network. If any such routes are approved by TfNSW in the future, the 36 metre A-Double will be restricted to turning left into the site from Newton Road and turning right out on exit. The swept paths confirm that the A-Double will not cross the road centreline when turning left on entry and does not affect vehicles parked on Newton Road when turning right on exit.
- The proposal improves site access arrangements and delivers a well-considered layout that separates light vehicles from all heavy vehicles on-site. Light vehicles will only use the dedicated driveway to access the on-site car park with this new crossover likely to result in the loss of about two parking spaces on Newton Road.
- The site access driveways include appropriate setbacks to structure and obstructions, with sightlines in accordance with the requirements for a posted 60km/h speed environment.
- The light vehicle driveway and heavy vehicle exit driveway are appropriately separated (by at least 20m) and minimise any such risk of conflicting movements. Sightlines would be further improved should this 20m section between the driveways include no parking signage, subject to Council approval. Such modifications would result in a nominal loss of about three on-street car spaces (or one semi-trailer space).
- The on-site car park has been designed as a User Class User 1A and 2 car park with 2.5 metre wide and 5.5 metre long spaces with adjacent 5.8 metre aisles in accordance with AS2890.1.
- Accessible spaces have been designed to be minimum 2.4 metres wide with an adjacent shared area of the same width (and central bollard), per the requirements of AS2890.6.
- The dedicated loading and hardstand areas allow for separation between manoeuvring vehicles and circulating vehicles, with all recessed loading docks able to be independently accessed.
- Headroom clearances exceed the minimum 4.5m requirement for all heavy vehicles.

A range of vehicle swept paths have been completed and included in **Appendix B**. These include swept paths at key locations to and from and internal to the site with the largest design check vehicles being 36 metre A-Doubles and 26 metre B-Doubles.

7 Conclusion

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

- This transport assessment has been prepared to support construction of a single-level warehouse with ancillary office space covering 30,250m^2 GFA.
- The proposal aims to mostly retain the two existing heavy vehicle access driveways with the addition of a light vehicle driveway crossover along the sites eastern boundary also aimed at wholly separating light and heavy vehicles on the site.
- The proposal generates the need for 202 on-site parking spaces based on the requirements of Fairfield City Wide DCP 2013. With provision of 213 parking spaces, the proposal exceeds the minimum parking requirements with all vehicles expected to be always accommodated wholly on-site.
- With about 175 staff expected to be on-site during any weekday peak period, bicycle parking demand is expected to be between five and nine spaces. The proposed development includes 10 bicycle spaces, 40 personal lockers, seven showers and two changes rooms and exceeds the recommended minimum requirements for end of trip facilities.
- The dedicated loading and hardstand area is designed to facilitate access by a range of heavy vehicles up to 36 metre A-Doubles and 26-metre B-Doubles. The 18 recessed loading docks have been designed to facilitate independent access by 20 metre semi-trailers with any larger trucks able to be side loaded or decoupled, as necessary internal to the site.
- The proposed parking layout is consistent with the dimensional requirements as set out in the Australian/ New Zealand Standard for Off Street Car Parking (AS/NZS2890.1:2004, AS2890.2:2018 and AS2890.6:2022).
- The site layout has been designed to allow all heavy vehicles to circulate one-way clockwise and to remove any such interaction between light and heavy vehicles internal to the site. The design maintains the existing separate entry and exit heavy vehicle access driveways and adds a dedicated light vehicle access along the eastern boundary.
- The proposed development is expected to generate a net increase of less than 30 vehicle trips in any peak hour. This equates to a minor increase of one vehicle trip every two minutes and is not expected to have a material impact on the surrounding road network.
- SIDRA INTERSECTION modelling confirms that the 2026 and 2036 post development traffic volumes would not result in a material change to the overall operation of the study intersections. Any nominal change in future years is expected due to background traffic growth, as evidenced by the Strategic Traffic Forecasting Model data included as part of the recently submitted SSDA (SSD-61383966).
- Overall, the proposed development is well considered and supported from a transport perspective.

Appendix A. SIDRA Results

MOVEMENT SUMMARY

Site: 1 [1. Existing AM - Newton Road / Victoria Street (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Existing AM (Network Folder: Existing)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Newton Road															
1	L2	All MCs	71	23.9	71	23.9	0.502	11.2	LOS A	3.2	30.1	0.78	0.88	0.96	47.5
2	T1	All MCs	44	40.5	44	40.5	0.502	12.2	LOS A	3.2	30.1	0.78	0.88	0.96	47.6
3	R2	All MCs	148	49.6	148	49.6	0.502	18.1	LOS B	3.2	30.1	0.78	0.88	0.96	41.7
3u	U	All MCs	1	0.0	1	0.0	0.502	17.8	LOS B	3.2	30.1	0.78	0.88	0.96	41.7
Approach			264	41.0	264	41.0	0.502	15.2	LOS B	3.2	30.1	0.78	0.88	0.96	45.0
East: Victoria Street															
4	L2	All MCs	282	26.5	282	26.5	0.539	6.0	LOS A	3.3	27.2	0.42	0.55	0.42	42.7
5	T1	All MCs	480	16.0	480	16.0	0.539	5.6	LOS A	3.3	27.2	0.42	0.59	0.42	50.3
6	R2	All MCs	252	14.6	252	14.6	0.539	10.9	LOS A	3.3	26.3	0.41	0.62	0.41	48.0
6u	U	All MCs	27	15.4	27	15.4	0.539	13.2	LOS A	3.3	26.3	0.41	0.62	0.41	39.2
Approach			1041	18.5	1041	18.5	0.539	7.2	LOS A	3.3	27.2	0.42	0.59	0.42	48.5
North: Newton Road															
7	L2	All MCs	77	38.4	77	38.4	0.373	11.3	LOS A	1.7	17.1	0.75	0.89	0.85	42.9
8	T1	All MCs	42	80.0	42	80.0	0.373	14.0	LOS A	1.7	17.1	0.75	0.89	0.85	42.9
9	R2	All MCs	15	57.1	15	57.1	0.373	18.1	LOS B	1.7	17.1	0.75	0.89	0.85	46.8
9u	U	All MCs	2	100.0	2	100.0	0.373	23.2	LOS B	1.7	17.1	0.75	0.89	0.85	45.6
Approach			136	54.3	136	54.3	0.373	13.1	LOS A	1.7	17.1	0.75	0.89	0.85	43.6
West: Victoria Street															
10	L2	All MCs	78	20.3	78	20.3	0.538	9.8	LOS A	4.3	34.9	0.77	0.73	0.88	50.5
11	T1	All MCs	624	18.0	624	18.0	0.538	9.7	LOS A	4.3	34.9	0.77	0.74	0.88	45.5
12	R2	All MCs	42	20.0	42	20.0	0.538	15.1	LOS B	4.3	34.7	0.77	0.75	0.88	44.8
12u	U	All MCs	65	14.5	65	14.5	0.538	17.2	LOS B	4.3	34.7	0.77	0.75	0.88	49.1
Approach			809	18.1	809	18.1	0.538	10.6	LOS A	4.3	34.9	0.77	0.74	0.88	46.7
All Vehicles			2251	23.2	2251	23.2	0.539	9.7	LOS A	4.3	34.9	0.61	0.69	0.67	47.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. Existing AM - Cowpasture Road / Newton Road (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Existing AM (Network Folder: Existing)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Cowpasture Road															
2	T1	All MCs	701	18.2	701	18.2	0.442	4.5	LOS A	2.8	22.9	0.13	0.42	0.13	51.8
3	R2	All MCs	468	20.4	468	20.4	0.442	9.2	LOS A	2.8	22.8	0.14	0.59	0.14	38.2
3u	U	All MCs	25	16.7	25	16.7	0.442	11.3	LOS A	2.8	22.8	0.14	0.59	0.14	38.2
Approach			1195	19.0	1195	19.0	0.442	6.5	LOS A	2.8	22.9	0.13	0.49	0.13	48.4
East: Newton Road															
4	L2	All MCs	254	55.2	254	55.2	0.406	7.3	LOS A	2.1	21.0	0.56	0.64	0.56	48.5
6	R2	All MCs	20	31.6	20	31.6	0.406	11.5	LOS A	2.1	21.0	0.56	0.64	0.56	50.6
6u	U	All MCs	3	0.0	3	0.0	0.406	12.6	LOS A	2.1	21.0	0.56	0.64	0.56	48.5
Approach			277	52.9	277	52.9	0.406	7.6	LOS A	2.1	21.0	0.56	0.64	0.56	48.8
North: Cowpasture Road															
7	L2	All MCs	48	28.3	48	28.3	0.179	8.1	LOS A	1.1	11.2	0.62	0.58	0.62	47.8
8	T1	All MCs	215	55.4	215	55.4	0.179	8.9	LOS A	1.1	11.2	0.62	0.58	0.62	47.5
9u	U	All MCs	1	0.0	1	0.0	0.179	14.3	LOS A	1.1	11.2	0.62	0.58	0.62	51.0
Approach			264	50.2	264	50.2	0.179	8.8	LOS A	1.1	11.2	0.62	0.58	0.62	47.5
All Vehicles			1736	29.2	1736	29.2	0.442	7.0	LOS A	2.8	22.9	0.27	0.53	0.27	48.3

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

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

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. Existing AM - Cowpasture Road / The Horsley Drive (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Existing AM (Network Folder: Existing)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Horsley Drive															
2	T1	All MCs	1173	7.8	1173	7.8	0.446	7.9	LOS A	14.3	107.0	0.46	0.42	0.46	53.2
3	R2	All MCs	622	6.1	622	6.1	* 0.677	29.0	LOS C	10.2	75.4	0.95	0.83	0.95	31.2
Approach			1795	7.2	1795	7.2	0.677	15.2	LOS B	14.3	107.0	0.63	0.56	0.63	46.2
East: Cowpasture Road															
4	L2	All MCs	153	33.8	153	33.8	0.179	10.5	LOS A	2.5	22.5	0.35	0.64	0.35	45.4
6	R2	All MCs	306	65.3	306	65.3	* 0.631	56.3	LOS D	8.6	93.6	0.97	0.83	0.99	25.2
Approach			459	54.8	459	54.8	0.631	41.0	LOS C	8.6	93.6	0.77	0.76	0.78	29.6
North: The Horsley Drive															
7	L2	All MCs	525	28.7	525	28.7	0.301	13.6	LOS A	4.9	42.9	0.56	0.71	0.56	42.1
8	T1	All MCs	929	8.8	929	8.8	* 0.672	33.6	LOS C	22.7	170.6	0.90	0.79	0.90	38.8
Approach			1455	16.0	1455	16.0	0.672	26.4	LOS B	22.7	170.6	0.77	0.76	0.77	39.5
All Vehicles			3708	16.5	3708	16.5	0.677	22.8	LOS B	22.7	170.6	0.70	0.67	0.71	40.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: The Horsley Drive											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
East: Cowpasture Road											
P2	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: The Horsley Drive											
P3B	Slip/ Bypass	53	25.8	LOS C	0.1	0.1	0.90	0.90	179.6	200.0	1.11
All Pedestrians		158	44.8	LOS E	0.2	0.2	0.94	0.94	198.6	200.0	1.01

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

MOVEMENT SUMMARY

Site: 101 [4. Existing AM - Victoria Street / Canley Vale Road (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Existing AM (Network Folder: Existing)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 129 seconds (Minimum Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Canley Vale Road															
1	L2	All MCs	146	7.2	146	7.2	0.637	53.0	LOS D	12.3	93.8	0.97	0.83	0.97	20.9
3	R2	All MCs	83	36.7	83	36.7	* 0.637	69.2	LOS E	12.3	93.8	0.97	0.80	0.97	20.4
Approach			229	17.9	229	17.9	0.637	58.9	LOS E	12.3	93.8	0.97	0.82	0.97	20.7
East: Victoria Street															
4	L2	All MCs	54	51.0	54	51.0	0.549	41.7	LOS C	19.5	164.6	0.82	0.70	0.82	31.7
5	T1	All MCs	883	23.8	883	23.8	* 0.549	29.1	LOS C	19.8	166.9	0.74	0.67	0.74	27.4
Approach			937	25.4	937	25.4	0.549	29.8	LOS C	19.8	166.9	0.75	0.68	0.75	25.7
West: Victoria Street															
11	T1	All MCs	886	32.3	886	32.3	0.568	26.8	LOS B	20.6	183.9	0.70	0.63	0.70	24.9
12	R2	All MCs	41	10.3	41	10.3	* 0.568	50.2	LOS D	16.9	148.5	0.75	0.68	0.75	37.1
Approach			927	31.3	927	31.3	0.568	27.9	LOS B	20.6	183.9	0.70	0.63	0.70	21.3
All Vehicles			2094	27.2	2094	27.2	0.637	32.1	LOS C	20.6	183.9	0.75	0.67	0.75	23.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Canley Vale Road											
P1	Full	53	58.8	LOS E	0.2	0.2	0.96	0.96	212.6	200.0	0.94
East: Victoria Street											
P2	Full	53	58.8	LOS E	0.2	0.2	0.96	0.96	212.6	200.0	0.94
All Pedestrians		105	58.8	LOS E	0.2	0.2	0.96	0.96	212.6	200.0	0.94

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

MOVEMENT SUMMARY

Site: 101 [5. Existing AM - Victoria Street / Elizabeth Street (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Existing AM (Network Folder: Existing)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Elizabeth Street															
1	L2	All MCs	80	14.5	80	14.5	0.282	25.4	LOS B	3.8	30.4	0.84	0.75	0.84	30.7
2	T1	All MCs	259	17.9	259	17.9	* 0.939	75.7	LOS F	31.4	254.5	0.98	1.05	1.23	26.1
3	R2	All MCs	165	19.1	165	19.1	0.939	85.9	LOS F	31.4	254.5	1.00	1.11	1.30	25.2
Approach			504	17.7	504	17.7	0.939	71.0	LOS F	31.4	254.5	0.96	1.02	1.19	25.8
East: Victoria Street															
4	L2	All MCs	73	39.1	73	39.1	0.781	32.5	LOS C	23.7	198.0	0.98	0.89	1.03	30.7
5	T1	All MCs	686	20.6	686	20.6	0.781	55.6	LOS D	24.6	199.8	0.98	0.89	1.03	22.1
6	R2	All MCs	84	28.8	84	28.8	* 0.956	102.2	LOS F	7.1	61.9	1.00	1.05	1.59	21.4
Approach			843	23.0	843	23.0	0.956	58.3	LOS E	24.6	199.8	0.99	0.91	1.09	22.9
North: Elizabeth Street															
7	L2	All MCs	61	31.0	61	31.0	0.343	39.8	LOS C	4.8	42.5	0.92	0.75	0.92	31.7
8	T1	All MCs	85	30.9	85	30.9	* 0.891	68.0	LOS E	16.1	158.5	0.97	0.94	1.15	27.4
9	R2	All MCs	153	53.8	153	53.8	0.891	82.0	LOS F	16.1	158.5	1.00	1.05	1.29	16.0
Approach			299	42.6	299	42.6	0.891	69.4	LOS E	16.1	158.5	0.97	0.96	1.18	22.6
West: Victoria Street															
10	L2	All MCs	279	32.5	279	32.5	0.919	53.3	LOS D	30.1	268.7	1.00	1.08	1.24	23.5
11	T1	All MCs	568	36.7	568	36.7	* 0.919	79.8	LOS F	32.2	293.1	1.00	1.09	1.24	25.0
12	R2	All MCs	87	18.1	87	18.1	0.929	95.4	LOS F	7.1	57.1	1.00	1.02	1.50	20.4
Approach			935	33.7	935	33.7	0.929	73.3	LOS F	32.2	293.1	1.00	1.08	1.26	24.0
All Vehicles			2581	28.1	2581	28.1	0.956	67.5	LOS E	32.2	293.1	0.99	1.00	1.18	23.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth Street											
P1	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
East: Victoria Street											

P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
North: Elizabeth Street											
P3	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
West: Victoria Street											
P4	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
All Pedestrians		211	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

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

MOVEMENT SUMMARY

Site: 1 [1. Existing PM - Newton Road / Victoria Street (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Newton Road															
1	L2	All MCs	61	10.3	61	10.3	0.559	12.2	LOS A	3.7	29.6	0.83	0.96	1.09	46.5
2	T1	All MCs	15	64.3	15	64.3	0.559	15.7	LOS B	3.7	29.6	0.83	0.96	1.09	46.1
3	R2	All MCs	216	14.6	216	14.6	0.559	18.0	LOS B	3.7	29.6	0.83	0.96	1.09	40.1
3u	U	All MCs	3	66.7	3	66.7	0.559	23.7	LOS B	3.7	29.6	0.83	0.96	1.09	40.1
Approach			295	16.8	295	16.8	0.559	16.8	LOS B	3.7	29.6	0.83	0.96	1.09	42.4
East: Victoria Street															
4	L2	All MCs	175	28.3	175	28.3	0.590	7.2	LOS A	4.0	32.9	0.52	0.63	0.56	41.2
5	T1	All MCs	748	16.0	748	16.0	0.590	6.7	LOS A	4.0	33.0	0.52	0.65	0.55	50.1
6	R2	All MCs	92	39.1	92	39.1	0.590	12.7	LOS A	4.0	33.0	0.52	0.66	0.55	47.5
6u	U	All MCs	36	14.7	36	14.7	0.590	14.2	LOS A	4.0	33.0	0.52	0.66	0.55	39.8
Approach			1051	20.0	1051	20.0	0.590	7.6	LOS A	4.0	33.0	0.52	0.65	0.56	49.0
North: Newton Road															
7	L2	All MCs	235	14.8	235	14.8	0.683	13.7	LOS A	4.7	38.5	0.83	1.02	1.23	40.8
8	T1	All MCs	45	39.5	45	39.5	0.683	15.6	LOS B	4.7	38.5	0.83	1.02	1.23	40.8
9	R2	All MCs	78	18.9	78	18.9	0.683	19.5	LOS B	4.7	38.5	0.83	1.02	1.23	46.5
9u	U	All MCs	1	0.0	1	0.0	0.683	20.4	LOS B	4.7	38.5	0.83	1.02	1.23	47.0
Approach			359	18.8	359	18.8	0.683	15.2	LOS B	4.7	38.5	0.83	1.02	1.23	42.6
West: Victoria Street															
10	L2	All MCs	18	41.2	18	41.2	0.371	7.4	LOS A	2.2	17.3	0.61	0.59	0.61	51.3
11	T1	All MCs	493	14.1	493	14.1	0.371	6.6	LOS A	2.2	17.3	0.61	0.61	0.61	47.7
12	R2	All MCs	37	11.4	37	11.4	0.371	11.8	LOS A	2.2	17.3	0.61	0.64	0.61	46.6
12u	U	All MCs	71	20.9	71	20.9	0.371	14.5	LOS A	2.2	17.3	0.61	0.64	0.61	50.0
Approach			618	15.5	618	15.5	0.371	7.8	LOS A	2.2	17.3	0.61	0.61	0.61	48.3
All Vehicles			2322	18.2	2322	18.2	0.683	10.0	LOS A	4.7	38.5	0.63	0.73	0.74	46.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. Existing PM - Cowpasture Road / Newton Road (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Cowpasture Road															
2	T1	All MCs	194	53.3	194	53.3	0.144	4.7	LOS A	0.7	6.8	0.12	0.42	0.12	50.6
3	R2	All MCs	112	37.7	112	37.7	0.144	9.4	LOS A	0.7	6.2	0.12	0.58	0.12	38.3
3u	U	All MCs	17	50.0	17	50.0	0.144	11.6	LOS A	0.7	6.2	0.12	0.58	0.12	38.3
Approach			322	47.7	322	47.7	0.144	6.7	LOS A	0.7	6.8	0.12	0.48	0.12	47.8
East: Newton Road															
4	L2	All MCs	337	20.3	337	20.3	0.869	19.8	LOS B	6.1	49.8	0.92	1.24	1.77	36.6
6	R2	All MCs	21	15.0	21	15.0	0.869	24.3	LOS B	6.1	49.8	0.92	1.24	1.77	43.6
6u	U	All MCs	1	0.0	1	0.0	0.869	25.1	LOS B	6.1	49.8	0.92	1.24	1.77	36.6
Approach			359	19.9	359	19.9	0.869	20.1	LOS B	6.1	49.8	0.92	1.24	1.77	37.2
North: Cowpasture Road															
7	L2	All MCs	22	9.5	22	9.5	0.522	5.2	LOS A	3.1	23.9	0.43	0.45	0.43	49.6
8	T1	All MCs	985	12.0	985	12.0	0.522	5.3	LOS A	3.1	23.9	0.43	0.45	0.43	49.6
9u	U	All MCs	2	100.0	2	100.0	0.522	14.0	LOS A	3.0	23.4	0.44	0.45	0.44	48.8
Approach			1009	12.1	1009	12.1	0.522	5.3	LOS A	3.1	23.9	0.43	0.45	0.43	49.6
All Vehicles			1691	20.5	1691	20.5	0.869	8.7	LOS A	6.1	49.8	0.48	0.63	0.66	46.0

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

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

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. Existing PM - Cowpasture Road / The Horsley Drive (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Horsley Drive															
2	T1	All MCs	1073	7.1	1073	7.1	0.504	18.7	LOS B	20.1	149.5	0.64	0.58	0.64	46.8
3	R2	All MCs	124	22.9	124	22.9	* 0.421	70.3	LOS E	3.9	32.6	0.99	0.76	0.99	18.8
Approach			1197	8.7	1197	8.7	0.504	24.1	LOS B	20.1	149.5	0.68	0.60	0.68	42.5
East: Cowpasture Road															
4	L2	All MCs	498	8.2	498	8.2	0.599	18.8	LOS B	19.6	146.8	0.72	0.80	0.72	40.3
6	R2	All MCs	943	16.1	943	16.1	* 0.856	57.1	LOS E	30.8	245.0	1.00	0.94	1.12	25.4
Approach			1441	13.4	1441	13.4	0.856	43.9	LOS D	30.8	245.0	0.90	0.90	0.98	29.1
North: The Horsley Drive															
7	L2	All MCs	217	69.4	217	69.4	0.107	9.2	LOS A	1.4	15.2	0.21	0.59	0.21	47.6
8	T1	All MCs	1138	7.2	1138	7.2	* 0.700	31.8	LOS C	29.1	216.0	0.87	0.78	0.87	39.6
Approach			1355	17.2	1355	17.2	0.700	28.2	LOS B	29.1	216.0	0.77	0.75	0.77	40.1
All Vehicles			3993	13.3	3993	13.3	0.856	32.6	LOS C	30.8	245.0	0.79	0.76	0.82	36.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: The Horsley Drive											
P1	Full	53	59.3	LOS E	0.2	0.2	0.96	0.96	213.1	200.0	0.94
East: Cowpasture Road											
P2	Full	53	59.3	LOS E	0.2	0.2	0.96	0.96	213.1	200.0	0.94
North: The Horsley Drive											
P3B	Slip/ Bypass	53	59.3	LOS E	0.2	0.2	0.96	0.96	213.1	200.0	0.94
All Pedestrians		158	59.3	LOS E	0.2	0.2	0.96	0.96	213.1	200.0	0.94

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

MOVEMENT SUMMARY

Site: 101 [4. Existing PM - Victoria Street / Canley Vale Road (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Canley Vale Road															
1	L2	All MCs	75	14.1	75	14.1	0.398	55.1	LOS D	7.2	56.7	0.93	0.79	0.93	20.2
3	R2	All MCs	61	39.7	61	39.7	* 0.398	75.5	LOS F	7.2	56.7	0.95	0.77	0.95	18.8
Approach			136	25.6	136	25.6	0.398	64.3	LOS E	7.2	56.7	0.94	0.78	0.94	19.6
East: Victoria Street															
4	L2	All MCs	68	29.2	68	29.2	0.500	29.1	LOS C	19.3	158.6	0.70	0.63	0.70	36.1
5	T1	All MCs	906	20.8	906	20.8	* 0.500	24.7	LOS B	19.7	162.6	0.65	0.60	0.65	30.3
Approach			975	21.4	975	21.4	0.500	25.0	LOS B	19.7	162.6	0.66	0.61	0.66	28.5
West: Victoria Street															
11	T1	All MCs	901	15.1	901	15.1	0.581	23.4	LOS B	25.1	198.3	0.65	0.59	0.65	27.1
12	R2	All MCs	93	10.2	93	10.2	* 0.581	46.8	LOS D	15.3	119.5	0.78	0.72	0.78	35.7
Approach			994	14.6	994	14.6	0.581	25.6	LOS B	25.1	198.3	0.66	0.60	0.66	23.7
All Vehicles			2104	18.5	2104	18.5	0.581	27.8	LOS B	25.1	198.3	0.68	0.62	0.68	25.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Canley Vale Road											
P1	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
East: Victoria Street											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
All Pedestrians		105	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

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

MOVEMENT SUMMARY

Site: 101 [5. Existing PM - Victoria Street / Elizabeth Street (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Elizabeth Street															
1	L2	All MCs	116	10.0	116	10.0	0.533	32.9	LOS C	6.3	48.6	0.96	0.82	0.96	25.8
2	T1	All MCs	119	16.8	119	16.8	* 0.820	67.3	LOS E	15.6	125.2	0.98	0.90	1.08	28.7
3	R2	All MCs	142	17.8	142	17.8	0.820	73.9	LOS F	15.6	125.2	1.00	0.94	1.16	26.9
Approach			377	15.1	377	15.1	0.820	59.2	LOS E	15.6	125.2	0.98	0.89	1.07	27.4
East: Victoria Street															
4	L2	All MCs	227	8.3	227	8.3	0.763	43.2	LOS D	24.4	192.5	0.97	0.87	1.00	31.3
5	T1	All MCs	535	25.2	535	25.2	0.763	55.6	LOS D	24.4	198.3	0.98	0.87	1.00	22.5
6	R2	All MCs	58	14.5	58	14.5	0.482	76.5	LOS F	4.0	31.5	1.00	0.76	1.00	25.2
Approach			820	19.8	820	19.8	0.763	53.6	LOS D	24.4	198.3	0.98	0.86	1.00	25.7
North: Elizabeth Street															
7	L2	All MCs	77	6.8	77	6.8	0.741	41.5	LOS C	18.4	135.5	0.99	0.89	1.02	29.2
8	T1	All MCs	262	6.0	262	6.0	* 0.871	62.6	LOS E	22.7	185.9	0.99	0.91	1.06	29.2
9	R2	All MCs	258	22.4	258	22.4	0.871	72.6	LOS F	22.7	185.9	1.00	0.99	1.19	17.2
Approach			597	13.2	597	13.2	0.871	64.2	LOS E	22.7	185.9	1.00	0.94	1.11	24.4
West: Victoria Street															
10	L2	All MCs	167	27.7	167	27.7	0.868	35.4	LOS C	29.5	237.5	1.00	1.00	1.13	25.1
11	T1	All MCs	723	15.0	723	15.0	* 0.868	66.9	LOS E	31.8	248.1	1.00	1.00	1.13	27.4
12	R2	All MCs	112	4.7	112	4.7	* 0.869	85.8	LOS F	8.5	61.8	1.00	0.95	1.33	21.9
Approach			1002	16.0	1002	16.0	0.869	63.7	LOS E	31.8	248.1	1.00	0.99	1.15	26.2
All Vehicles			2796	16.4	2796	16.4	0.871	60.3	LOS E	31.8	248.1	0.99	0.93	1.09	25.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth Street											
P1	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
East: Victoria Street											

P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
North: Elizabeth Street											
P3	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
West: Victoria Street											
P4	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
All Pedestrians		211	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

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

MOVEMENT SUMMARY

Site: 1 [1. 2026 Base AM - Newton Road / Victoria Street (Site Folder: 2026 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2026 AM (Network Folder: Base - 2026)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Newton Road															
1	L2	All MCs	72	23.5	72	23.5	0.511	11.4	LOS A	3.3	31.1	0.79	0.89	0.98	47.4
2	T1	All MCs	44	40.5	44	40.5	0.511	12.4	LOS A	3.3	31.1	0.79	0.89	0.98	47.5
3	R2	All MCs	151	49.7	151	49.7	0.511	18.3	LOS B	3.3	31.1	0.79	0.89	0.98	41.5
3u	U	All MCs	1	0.0	1	0.0	0.511	18.0	LOS B	3.3	31.1	0.79	0.89	0.98	41.5
Approach			267	40.9	267	40.9	0.511	15.5	LOS B	3.3	31.1	0.79	0.89	0.98	44.8
East: Victoria Street															
4	L2	All MCs	286	26.5	286	26.5	0.547	6.0	LOS A	3.4	27.9	0.42	0.55	0.42	42.6
5	T1	All MCs	484	15.4	484	15.4	0.547	5.7	LOS A	3.4	27.9	0.42	0.59	0.42	50.3
6	R2	All MCs	256	14.8	256	14.8	0.547	10.9	LOS A	3.4	26.9	0.42	0.63	0.42	48.0
6u	U	All MCs	27	15.4	27	15.4	0.547	13.3	LOS A	3.4	26.9	0.42	0.63	0.42	39.2
Approach			1054	18.3	1054	18.3	0.547	7.2	LOS A	3.4	27.9	0.42	0.59	0.42	48.4
North: Newton Road															
7	L2	All MCs	78	37.8	78	37.8	0.384	11.5	LOS A	1.7	17.8	0.76	0.90	0.87	42.6
8	T1	All MCs	43	80.5	43	80.5	0.384	14.3	LOS A	1.7	17.8	0.76	0.90	0.87	42.6
9	R2	All MCs	15	57.1	15	57.1	0.384	18.4	LOS B	1.7	17.8	0.76	0.90	0.87	46.6
9u	U	All MCs	2	100.0	2	100.0	0.384	23.5	LOS B	1.7	17.8	0.76	0.90	0.87	45.5
Approach			138	54.2	138	54.2	0.384	13.3	LOS A	1.7	17.8	0.76	0.90	0.87	43.4
West: Victoria Street															
10	L2	All MCs	79	20.0	79	20.0	0.551	10.1	LOS A	4.5	36.7	0.78	0.74	0.91	50.3
11	T1	All MCs	635	18.1	635	18.1	0.551	10.0	LOS A	4.5	36.7	0.78	0.75	0.91	45.2
12	R2	All MCs	43	19.5	43	19.5	0.551	15.4	LOS B	4.5	36.5	0.78	0.76	0.91	44.5
12u	U	All MCs	66	14.3	66	14.3	0.551	17.5	LOS B	4.5	36.5	0.78	0.76	0.91	48.9
Approach			823	18.0	823	18.0	0.551	10.9	LOS A	4.5	36.7	0.78	0.75	0.91	46.4
All Vehicles			2282	23.0	2282	23.0	0.551	9.9	LOS A	4.5	36.7	0.62	0.70	0.69	46.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. 2026 Base AM - Cowpasture Road / Newton Road (Site Folder: 2026 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2026 AM (Network Folder: Base - 2026)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Cowpasture Road															
2	T1	All MCs	713	18.2	713	18.2	0.449	4.5	LOS A	2.9	23.6	0.13	0.42	0.13	51.8
3	R2	All MCs	476	20.4	476	20.4	0.449	9.2	LOS A	2.9	23.4	0.14	0.59	0.14	38.2
3u	U	All MCs	25	16.7	25	16.7	0.449	11.3	LOS A	2.9	23.4	0.14	0.59	0.14	38.2
Approach			1214	19.0	1214	19.0	0.449	6.5	LOS A	2.9	23.6	0.13	0.49	0.13	48.4
East: Newton Road															
4	L2	All MCs	258	55.1	258	55.1	0.414	7.3	LOS A	2.1	21.5	0.57	0.64	0.57	48.5
6	R2	All MCs	20	31.6	20	31.6	0.414	11.5	LOS A	2.1	21.5	0.57	0.64	0.57	50.6
6u	U	All MCs	3	0.0	3	0.0	0.414	12.6	LOS A	2.1	21.5	0.57	0.64	0.57	48.5
Approach			281	52.8	281	52.8	0.414	7.7	LOS A	2.1	21.5	0.57	0.64	0.57	48.8
North: Cowpasture Road															
7	L2	All MCs	49	27.7	49	27.7	0.183	8.2	LOS A	1.2	11.6	0.62	0.58	0.62	47.6
8	T1	All MCs	218	55.6	218	55.6	0.183	9.0	LOS A	1.2	11.6	0.62	0.58	0.62	47.3
9u	U	All MCs	1	0.0	1	0.0	0.183	14.4	LOS A	1.1	11.5	0.62	0.58	0.62	50.9
Approach			268	50.2	268	50.2	0.183	8.9	LOS A	1.2	11.6	0.62	0.58	0.62	47.4
All Vehicles			1763	29.1	1763	29.1	0.449	7.0	LOS A	2.9	23.6	0.28	0.53	0.28	48.3

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

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

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. 2026 Base AM - Cowpasture Road / The Horsley Drive (Site Folder: 2026 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2026 AM (Network Folder: Base - 2026)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Horsley Drive															
2	T1	All MCs	1192	7.8	1192	7.8	0.453	7.9	LOS A	14.7	109.5	0.46	0.42	0.46	53.1
3	R2	All MCs	633	6.2	633	6.2	* 0.688	29.1	LOS C	10.5	77.0	0.96	0.83	0.96	31.1
Approach			1824	7.2	1824	7.2	0.688	15.3	LOS B	14.7	109.5	0.64	0.56	0.64	46.2
East: Cowpasture Road															
4	L2	All MCs	156	33.8	156	33.8	0.184	10.5	LOS A	2.6	23.1	0.35	0.64	0.35	45.4
6	R2	All MCs	312	65.2	312	65.2	* 0.641	56.5	LOS E	8.8	95.7	0.97	0.83	1.00	25.1
Approach			467	54.7	467	54.7	0.641	41.2	LOS C	8.8	95.7	0.77	0.77	0.78	29.5
North: The Horsley Drive															
7	L2	All MCs	534	28.6	534	28.6	0.305	13.7	LOS A	5.0	43.7	0.56	0.71	0.56	42.1
8	T1	All MCs	944	8.8	944	8.8	* 0.683	33.8	LOS C	23.1	174.2	0.90	0.80	0.90	38.7
Approach			1478	16.0	1478	16.0	0.683	26.5	LOS B	23.1	174.2	0.78	0.77	0.78	39.4
All Vehicles			3769	16.5	3769	16.5	0.688	22.9	LOS B	23.1	174.2	0.71	0.67	0.71	40.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: The Horsley Drive											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
East: Cowpasture Road											
P2	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: The Horsley Drive											
P3B	Slip/ Bypass	53	25.8	LOS C	0.1	0.1	0.90	0.90	179.6	200.0	1.11
All Pedestrians		158	44.8	LOS E	0.2	0.2	0.94	0.94	198.6	200.0	1.01

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.

MOVEMENT SUMMARY

Site: 101 [4. 2026 Base AM - Victoria Street / Canley Vale Road (Site Folder: 2026 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2026 AM (Network Folder: Base - 2026)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 129 seconds (Minimum Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Canley Vale Road															
1	L2	All MCs	148	7.1	148	7.1	0.647	53.1	LOS D	12.5	95.3	0.98	0.83	0.98	20.9
3	R2	All MCs	84	36.3	84	36.3	* 0.647	69.3	LOS E	12.5	95.3	0.97	0.80	0.97	20.4
Approach			233	17.6	233	17.6	0.647	59.0	LOS E	12.5	95.3	0.97	0.82	0.97	20.7
East: Victoria Street															
4	L2	All MCs	54	51.0	54	51.0	0.557	41.7	LOS C	19.9	168.0	0.83	0.70	0.83	31.7
5	T1	All MCs	897	23.8	897	23.8	* 0.557	29.2	LOS C	20.2	170.3	0.75	0.68	0.75	27.3
Approach			951	25.4	951	25.4	0.557	29.9	LOS C	20.2	170.3	0.75	0.68	0.75	25.6
West: Victoria Street															
11	T1	All MCs	900	32.3	900	32.3	0.579	27.2	LOS B	21.2	189.3	0.71	0.64	0.71	24.7
12	R2	All MCs	42	10.0	42	10.0	* 0.579	50.6	LOS D	17.2	151.5	0.76	0.68	0.76	36.9
Approach			942	31.3	942	31.3	0.579	28.2	LOS B	21.2	189.3	0.71	0.64	0.71	21.2
All Vehicles			2125	27.1	2125	27.1	0.647	32.3	LOS C	21.2	189.3	0.76	0.68	0.76	23.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Canley Vale Road											
P1	Full	53	58.8	LOS E	0.2	0.2	0.96	0.96	212.6	200.0	0.94
East: Victoria Street											
P2	Full	53	58.8	LOS E	0.2	0.2	0.96	0.96	212.6	200.0	0.94
All Pedestrians		105	58.8	LOS E	0.2	0.2	0.96	0.96	212.6	200.0	0.94

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

MOVEMENT SUMMARY

Site: 101 [5. 2026 Base AM - Victoria Street / Elizabeth Street (Site Folder: 2026 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2026 AM (Network Folder: Base - 2026)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Elizabeth Street															
1	L2	All MCs	81	14.3	81	14.3	0.278	25.4	LOS B	3.9	30.8	0.84	0.75	0.84	30.9
2	T1	All MCs	263	18.0	263	18.0	* 0.927	72.8	LOS F	31.1	252.2	0.97	1.03	1.20	26.7
3	R2	All MCs	167	18.9	167	18.9	0.927	82.6	LOS F	31.1	252.2	1.00	1.09	1.27	25.8
Approach			512	17.7	512	17.7	0.927	68.5	LOS E	31.1	252.2	0.96	1.01	1.16	26.3
East: Victoria Street															
4	L2	All MCs	74	38.6	74	38.6	0.793	32.5	LOS C	24.4	203.4	0.99	0.90	1.05	30.5
5	T1	All MCs	697	20.5	697	20.5	0.793	56.5	LOS D	25.2	205.2	0.99	0.90	1.04	21.9
6	R2	All MCs	85	28.4	85	28.4	* 0.966	105.1	LOS F	7.3	63.5	1.00	1.06	1.61	21.0
Approach			856	22.9	856	22.9	0.966	59.2	LOS E	25.2	205.2	0.99	0.92	1.10	22.6
North: Elizabeth Street															
7	L2	All MCs	38	50.0	38	50.0	0.344	38.0	LOS C	4.3	40.3	0.92	0.75	0.92	31.6
8	T1	All MCs	86	30.5	86	30.5	* 0.895	63.4	LOS E	15.4	152.8	0.96	0.89	1.11	28.4
9	R2	All MCs	155	53.7	155	53.7	0.895	83.3	LOS F	15.4	152.8	1.00	1.05	1.31	15.8
Approach			279	46.0	279	46.0	0.895	71.0	LOS F	15.4	152.8	0.98	0.96	1.19	22.0
West: Victoria Street															
10	L2	All MCs	283	32.3	283	32.3	0.935	57.9	LOS E	31.7	283.1	1.00	1.10	1.27	22.7
11	T1	All MCs	578	36.6	578	36.6	* 0.935	83.8	LOS F	33.8	307.0	1.00	1.12	1.27	24.1
12	R2	All MCs	88	17.9	88	17.9	0.939	97.3	LOS F	7.2	58.4	1.00	1.03	1.53	20.1
Approach			949	33.6	949	33.6	0.939	77.3	LOS F	33.8	307.0	1.00	1.11	1.29	23.3
All Vehicles			2596	28.3	2596	28.3	0.966	68.9	LOS E	33.8	307.0	0.99	1.01	1.19	23.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth Street											
P1	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

East: Victoria Street										
P2 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
North: Elizabeth Street										
P3 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
West: Victoria Street										
P4 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
All Pedestrians	211	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

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

MOVEMENT SUMMARY

Site: 1 [1. 2026 Base PM - Newton Road / Victoria Street (Site Folder: 2026 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2026 PM (Network Folder: Base - 2026)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Newton Road															
1	L2	All MCs	62	10.2	62	10.2	0.569	12.5	LOS A	3.8	30.5	0.84	0.97	1.11	46.4
2	T1	All MCs	15	64.3	15	64.3	0.569	16.0	LOS B	3.8	30.5	0.84	0.97	1.11	46.0
3	R2	All MCs	218	14.5	218	14.5	0.569	18.3	LOS B	3.8	30.5	0.84	0.97	1.11	39.8
3u	U	All MCs	3	66.7	3	66.7	0.569	24.0	LOS B	3.8	30.5	0.84	0.97	1.11	39.8
Approach			298	16.6	298	16.6	0.569	17.0	LOS B	3.8	30.5	0.84	0.97	1.11	42.2
East: Victoria Street															
4	L2	All MCs	177	28.6	177	28.6	0.598	7.4	LOS A	4.1	33.9	0.53	0.64	0.57	41.1
5	T1	All MCs	756	16.0	756	16.0	0.598	6.8	LOS A	4.2	34.0	0.53	0.65	0.56	50.1
6	R2	All MCs	93	38.6	93	38.6	0.598	12.8	LOS A	4.2	34.0	0.53	0.67	0.56	47.4
6u	U	All MCs	36	14.7	36	14.7	0.598	14.3	LOS A	4.2	34.0	0.53	0.67	0.56	39.7
Approach			1061	20.0	1061	20.0	0.598	7.7	LOS A	4.2	34.0	0.53	0.65	0.56	48.9
North: Newton Road															
7	L2	All MCs	237	14.7	237	14.7	0.693	13.9	LOS A	4.9	39.5	0.84	1.03	1.25	40.6
8	T1	All MCs	45	39.5	45	39.5	0.693	15.9	LOS B	4.9	39.5	0.84	1.03	1.25	40.6
9	R2	All MCs	79	18.7	79	18.7	0.693	19.8	LOS B	4.9	39.5	0.84	1.03	1.25	46.3
9u	U	All MCs	1	0.0	1	0.0	0.693	20.7	LOS B	4.9	39.5	0.84	1.03	1.25	46.8
Approach			362	18.6	362	18.6	0.693	15.5	LOS B	4.9	39.5	0.84	1.03	1.25	42.4
West: Victoria Street															
10	L2	All MCs	18	41.2	18	41.2	0.375	7.5	LOS A	2.2	17.6	0.62	0.59	0.62	51.3
11	T1	All MCs	498	14.2	498	14.2	0.375	6.6	LOS A	2.2	17.6	0.62	0.61	0.62	47.7
12	R2	All MCs	37	11.4	37	11.4	0.375	11.8	LOS A	2.2	17.6	0.62	0.64	0.62	46.6
12u	U	All MCs	72	20.6	72	20.6	0.375	14.4	LOS A	2.2	17.6	0.62	0.64	0.62	50.0
Approach			624	15.5	624	15.5	0.375	7.8	LOS A	2.2	17.6	0.62	0.62	0.62	48.2
All Vehicles			2345	18.2	2345	18.2	0.693	10.1	LOS A	4.9	39.5	0.64	0.74	0.75	46.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. 2026 Base PM - Cowpasture Road / Newton Road (Site Folder: 2026 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2026 PM (Network Folder: Base - 2026)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Cowpasture Road															
2	T1	All MCs	196	53.2	196	53.2	0.146	4.7	LOS A	0.7	7.0	0.12	0.42	0.12	50.6
3	R2	All MCs	113	37.4	113	37.4	0.146	9.3	LOS A	0.7	6.3	0.12	0.58	0.12	38.3
3u	U	All MCs	17	50.0	17	50.0	0.146	11.6	LOS A	0.7	6.3	0.12	0.58	0.12	38.3
Approach			325	47.6	325	47.6	0.146	6.7	LOS A	0.7	7.0	0.12	0.48	0.12	47.8
East: Newton Road															
4	L2	All MCs	341	20.4	341	20.4	0.917	24.2	LOS B	7.3	60.3	0.95	1.37	2.13	33.7
6	R2	All MCs	21	15.0	21	15.0	0.917	28.7	LOS C	7.3	60.3	0.95	1.37	2.13	41.4
6u	U	All MCs	1	0.0	1	0.0	0.917	29.5	LOS C	7.3	60.3	0.95	1.37	2.13	33.7
Approach			363	20.0	363	20.0	0.917	24.5	LOS B	7.3	60.3	0.95	1.37	2.13	34.4
North: Cowpasture Road															
7	L2	All MCs	22	9.5	22	9.5	0.544	5.3	LOS A	3.3	25.1	0.45	0.45	0.45	49.5
8	T1	All MCs	996	11.9	996	11.9	0.544	5.4	LOS A	3.3	25.1	0.45	0.45	0.45	49.4
9u	U	All MCs	2	100.0	2	100.0	0.544	14.1	LOS A	3.2	24.6	0.46	0.46	0.46	48.7
Approach			1020	12.1	1020	12.1	0.544	5.4	LOS A	3.3	25.1	0.45	0.45	0.45	49.4
All Vehicles			1708	20.5	1708	20.5	0.917	9.7	LOS A	7.3	60.3	0.49	0.65	0.75	44.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. 2026 Base PM - Cowpasture Road / The Horsley Drive (Site Folder: 2026 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2026 PM (Network Folder: Base - 2026)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Horsley Drive															
2	T1	All MCs	1084	7.1	1084	7.1	0.510	18.9	LOS B	20.5	152.0	0.65	0.58	0.65	46.7
3	R2	All MCs	125	22.7	125	22.7	* 0.424	70.6	LOS F	3.9	32.8	0.99	0.76	0.99	18.8
Approach			1209	8.7	1209	8.7	0.510	24.2	LOS B	20.5	152.0	0.68	0.60	0.68	42.4
East: Cowpasture Road															
4	L2	All MCs	503	8.2	503	8.2	0.599	17.8	LOS B	19.3	144.7	0.71	0.80	0.71	41.0
6	R2	All MCs	954	16.1	954	16.1	* 0.865	58.4	LOS E	31.6	251.7	1.00	0.96	1.13	25.1
Approach			1457	13.4	1457	13.4	0.865	44.4	LOS D	31.6	251.7	0.90	0.90	0.98	29.0
North: The Horsley Drive															
7	L2	All MCs	175	61.4	175	61.4	0.083	8.8	LOS A	1.1	11.4	0.21	0.59	0.21	47.7
8	T1	All MCs	1121	4.6	1121	4.6	* 0.675	31.0	LOS C	28.1	204.1	0.86	0.77	0.86	39.9
Approach			1296	12.3	1296	12.3	0.675	28.0	LOS B	28.1	204.1	0.77	0.75	0.77	40.3
All Vehicles			3962	11.6	3962	11.6	0.865	32.9	LOS C	31.6	251.7	0.79	0.76	0.82	36.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: The Horsley Drive											
P1	Full	53	59.3	LOS E	0.2	0.2	0.96	0.96	213.1	200.0	0.94
East: Cowpasture Road											
P2	Full	53	59.3	LOS E	0.2	0.2	0.96	0.96	213.1	200.0	0.94
North: The Horsley Drive											
P3B	Slip/ Bypass	53	59.3	LOS E	0.2	0.2	0.96	0.96	213.1	200.0	0.94
All Pedestrians		158	59.3	LOS E	0.2	0.2	0.96	0.96	213.1	200.0	0.94

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.

MOVEMENT SUMMARY

Site: 101 [4. 2026 Base PM - Victoria Street / Canley Vale Road (Site Folder: 2026 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2026 PM (Network Folder: Base - 2026)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Canley Vale Road															
1	L2	All MCs	76	13.9	76	13.9	0.401	55.2	LOS D	7.3	57.2	0.93	0.79	0.93	20.2
3	R2	All MCs	61	39.7	61	39.7	* 0.401	75.5	LOS F	7.3	57.2	0.95	0.77	0.95	18.8
Approach			137	25.4	137	25.4	0.401	64.3	LOS E	7.3	57.2	0.94	0.78	0.94	19.6
East: Victoria Street															
4	L2	All MCs	68	29.2	68	29.2	0.505	30.6	LOS C	19.5	160.9	0.70	0.64	0.70	36.1
5	T1	All MCs	916	20.8	916	20.8	* 0.505	25.4	LOS B	20.0	164.9	0.66	0.61	0.66	30.2
Approach			984	21.4	984	21.4	0.505	25.8	LOS B	20.0	164.9	0.66	0.61	0.66	28.0
West: Victoria Street															
11	T1	All MCs	911	15.0	911	15.0	0.591	23.8	LOS B	25.8	203.8	0.65	0.60	0.65	26.9
12	R2	All MCs	94	10.1	94	10.1	* 0.591	48.6	LOS D	15.5	121.3	0.79	0.73	0.79	35.3
Approach			1004	14.6	1004	14.6	0.591	26.1	LOS B	25.8	203.8	0.67	0.61	0.67	23.5
All Vehicles			2125	18.4	2125	18.4	0.591	28.4	LOS B	25.8	203.8	0.68	0.62	0.68	25.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Canley Vale Road											
P1	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
East: Victoria Street											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
All Pedestrians		105	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

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

MOVEMENT SUMMARY

Site: 101 [5. 2026 Base PM - Victoria Street / Elizabeth Street (Site Folder: 2026 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2026 PM (Network Folder: Base - 2026)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Elizabeth Street															
1	L2	All MCs	117	9.9	117	9.9	0.537	33.1	LOS C	6.4	49.2	0.96	0.83	0.96	25.8
2	T1	All MCs	120	16.7	120	16.7	* 0.826	67.7	LOS E	15.8	126.7	0.98	0.90	1.09	28.6
3	R2	All MCs	143	17.6	143	17.6	0.826	74.4	LOS F	15.8	126.7	1.00	0.95	1.16	26.9
Approach			380	15.0	380	15.0	0.826	59.6	LOS E	15.8	126.7	0.98	0.90	1.08	27.3
East: Victoria Street															
4	L2	All MCs	229	8.3	229	8.3	0.770	43.6	LOS D	24.8	195.6	0.97	0.88	1.01	31.2
5	T1	All MCs	540	25.1	540	25.1	0.770	56.0	LOS D	24.8	201.5	0.98	0.88	1.01	22.4
6	R2	All MCs	59	14.3	59	14.3	0.490	76.5	LOS F	4.1	32.0	1.00	0.76	1.00	25.2
Approach			828	19.7	828	19.7	0.770	54.0	LOS D	24.8	201.5	0.98	0.87	1.01	25.6
North: Elizabeth Street															
7	L2	All MCs	78	6.8	78	6.8	0.750	41.9	LOS C	18.7	138.1	0.99	0.89	1.03	29.1
8	T1	All MCs	265	6.0	265	6.0	* 0.882	63.3	LOS E	23.3	190.9	0.99	0.92	1.07	29.0
9	R2	All MCs	261	22.6	261	22.6	0.882	74.2	LOS F	23.3	190.9	1.00	1.01	1.21	17.0
Approach			604	13.2	604	13.2	0.882	65.2	LOS E	23.3	190.9	1.00	0.95	1.12	24.2
West: Victoria Street															
10	L2	All MCs	168	27.5	168	27.5	0.877	36.5	LOS C	30.2	243.0	1.00	1.01	1.15	24.9
11	T1	All MCs	731	15.0	731	15.0	* 0.877	68.1	LOS E	32.5	253.5	1.00	1.01	1.14	27.1
12	R2	All MCs	113	4.7	113	4.7	* 0.877	86.5	LOS F	8.6	62.7	1.00	0.96	1.34	21.8
Approach			1012	15.9	1012	15.9	0.877	64.9	LOS E	32.5	253.5	1.00	1.00	1.17	26.0
All Vehicles			2824	16.3	2824	16.3	0.882	61.1	LOS E	32.5	253.5	0.99	0.94	1.10	25.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth Street											
P1	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

East: Victoria Street										
P2 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
North: Elizabeth Street										
P3 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
West: Victoria Street										
P4 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
All Pedestrians	211	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

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

MOVEMENT SUMMARY

Site: 1 [1. 2026 Base w/ Dev AM - Newton Road / Victoria Street (Site Folder: 2026 Base w Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev 2026 AM (Network Folder: Base w Dev - 2026)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Newton Road															
1	L2	All MCs	72	23.5	72	23.5	0.521	11.6	LOS A	3.4	32.2	0.80	0.89	1.00	47.2
2	T1	All MCs	44	40.5	44	40.5	0.521	12.6	LOS A	3.4	32.2	0.80	0.89	1.00	47.3
3	R2	All MCs	156	48.6	156	48.6	0.521	18.5	LOS B	3.4	32.2	0.80	0.89	1.00	41.3
3u	U	All MCs	1	0.0	1	0.0	0.521	18.2	LOS B	3.4	32.2	0.80	0.89	1.00	41.3
Approach			273	40.5	273	40.5	0.521	15.7	LOS B	3.4	32.2	0.80	0.89	1.00	44.6
East: Victoria Street															
4	L2	All MCs	299	26.4	299	26.4	0.554	6.1	LOS A	3.4	28.6	0.43	0.56	0.43	42.5
5	T1	All MCs	484	15.4	484	15.4	0.554	5.7	LOS A	3.5	28.6	0.43	0.60	0.43	50.2
6	R2	All MCs	256	14.8	256	14.8	0.554	11.0	LOS A	3.5	27.6	0.42	0.63	0.42	48.0
6u	U	All MCs	27	15.4	27	15.4	0.554	13.3	LOS A	3.5	27.6	0.42	0.63	0.42	39.2
Approach			1066	18.4	1066	18.4	0.554	7.2	LOS A	3.5	28.6	0.43	0.59	0.43	48.4
North: Newton Road															
7	L2	All MCs	78	37.8	78	37.8	0.387	11.6	LOS A	1.8	18.0	0.76	0.90	0.88	42.5
8	T1	All MCs	43	80.5	43	80.5	0.387	14.4	LOS A	1.8	18.0	0.76	0.90	0.88	42.5
9	R2	All MCs	15	57.1	15	57.1	0.387	18.5	LOS B	1.8	18.0	0.76	0.90	0.88	46.6
9u	U	All MCs	2	100.0	2	100.0	0.387	23.6	LOS B	1.8	18.0	0.76	0.90	0.88	45.4
Approach			138	54.2	138	54.2	0.387	13.4	LOS A	1.8	18.0	0.76	0.90	0.88	43.3
West: Victoria Street															
10	L2	All MCs	79	20.0	79	20.0	0.555	10.3	LOS A	4.6	37.3	0.79	0.75	0.93	50.2
11	T1	All MCs	635	18.1	635	18.1	0.555	10.2	LOS A	4.6	37.3	0.79	0.76	0.92	45.1
12	R2	All MCs	44	19.0	44	19.0	0.555	15.5	LOS B	4.6	37.1	0.79	0.77	0.92	44.3
12u	U	All MCs	66	14.3	66	14.3	0.555	17.6	LOS B	4.6	37.1	0.79	0.77	0.92	48.8
Approach			824	18.0	824	18.0	0.555	11.1	LOS A	4.6	37.3	0.79	0.76	0.92	46.2
All Vehicles			2301	23.0	2301	23.0	0.555	10.0	LOS A	4.6	37.3	0.62	0.71	0.70	46.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. 2026 Base w/ Dev AM - Cowpasture Road / Newton Road (Site Folder: 2026 Base w Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev 2026 AM (Network Folder: Base w Dev - 2026)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Cowpasture Road															
2	T1	All MCs	713	18.2	713	18.2	0.451	4.5	LOS A	3.0	23.9	0.13	0.41	0.13	51.8
3	R2	All MCs	483	20.5	483	20.5	0.451	9.2	LOS A	2.9	23.7	0.14	0.59	0.14	38.1
3u	U	All MCs	25	16.7	25	16.7	0.451	11.3	LOS A	2.9	23.7	0.14	0.59	0.14	38.1
Approach			1221	19.1	1221	19.1	0.451	6.5	LOS A	3.0	23.9	0.13	0.49	0.13	48.3
East: Newton Road															
4	L2	All MCs	261	54.8	261	54.8	0.418	7.3	LOS A	2.1	21.8	0.57	0.64	0.57	48.5
6	R2	All MCs	20	31.6	20	31.6	0.418	11.6	LOS A	2.1	21.8	0.57	0.64	0.57	50.6
6u	U	All MCs	3	0.0	3	0.0	0.418	12.6	LOS A	2.1	21.8	0.57	0.64	0.57	48.5
Approach			284	52.6	284	52.6	0.418	7.7	LOS A	2.1	21.8	0.57	0.64	0.57	48.8
North: Cowpasture Road															
7	L2	All MCs	49	27.7	49	27.7	0.184	8.2	LOS A	1.2	11.7	0.63	0.58	0.63	47.5
8	T1	All MCs	218	55.6	218	55.6	0.184	9.1	LOS A	1.2	11.7	0.63	0.58	0.63	47.2
9u	U	All MCs	1	0.0	1	0.0	0.184	14.5	LOS A	1.1	11.7	0.63	0.59	0.63	50.8
Approach			268	50.2	268	50.2	0.184	9.0	LOS A	1.2	11.7	0.63	0.58	0.63	47.3
All Vehicles			1774	29.1	1774	29.1	0.451	7.1	LOS A	3.0	23.9	0.28	0.53	0.28	48.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. 2026 Base w/ Dev AM - Cowpasture Road / The Horsley Drive (Site Folder: 2026 Base w Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev 2026 AM (Network Folder: Base w Dev - 2026)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Horsley Drive															
2	T1	All MCs	1192	7.8	1192	7.8	0.453	7.9	LOS A	14.7	109.5	0.46	0.42	0.46	53.1
3	R2	All MCs	634	6.1	634	6.1	* 0.689	29.1	LOS C	10.5	77.2	0.96	0.83	0.96	31.1
Approach			1825	7.2	1825	7.2	0.689	15.3	LOS B	14.7	109.5	0.64	0.56	0.64	46.2
East: Cowpasture Road															
4	L2	All MCs	156	33.8	156	33.8	0.184	10.5	LOS A	2.6	23.1	0.35	0.64	0.35	45.4
6	R2	All MCs	315	64.9	315	64.9	* 0.647	56.7	LOS E	8.9	96.7	0.98	0.83	1.00	25.1
Approach			471	54.6	471	54.6	0.647	41.4	LOS C	8.9	96.7	0.77	0.77	0.79	29.4
North: The Horsley Drive															
7	L2	All MCs	539	28.5	539	28.5	0.308	13.7	LOS A	5.1	44.2	0.56	0.71	0.56	42.1
8	T1	All MCs	944	8.8	944	8.8	* 0.683	33.8	LOS C	23.1	174.2	0.90	0.80	0.90	38.7
Approach			1483	16.0	1483	16.0	0.683	26.5	LOS B	23.1	174.2	0.78	0.77	0.78	39.4
All Vehicles			3779	16.5	3779	16.5	0.689	22.9	LOS B	23.1	174.2	0.71	0.67	0.71	40.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: The Horsley Drive											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
East: Cowpasture Road											
P2	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: The Horsley Drive											
P3B	Slip/ Bypass	53	25.8	LOS C	0.1	0.1	0.90	0.90	179.6	200.0	1.11
All Pedestrians		158	44.8	LOS E	0.2	0.2	0.94	0.94	198.6	200.0	1.01

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.

MOVEMENT SUMMARY

Site: 101 [4. 2026 Base w/ Dev AM - Victoria Street / Canley Vale Road (Site Folder: 2026 Base w Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev 2026 AM (Network Folder: Base w Dev - 2026)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 129 seconds (Minimum Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Canley Vale Road															
1	L2	All MCs	148	7.1	148	7.1	0.647	53.1	LOS D	12.5	95.3	0.98	0.83	0.98	20.9
3	R2	All MCs	84	36.3	84	36.3	* 0.647	69.3	LOS E	12.5	95.3	0.97	0.80	0.97	20.4
Approach			233	17.6	233	17.6	0.647	59.0	LOS E	12.5	95.3	0.97	0.82	0.97	20.7
East: Victoria Street															
4	L2	All MCs	54	51.0	54	51.0	0.564	41.7	LOS C	20.3	171.3	0.83	0.70	0.83	31.7
5	T1	All MCs	909	23.8	909	23.8	* 0.564	29.3	LOS C	20.6	173.5	0.75	0.68	0.75	27.2
Approach			963	25.4	963	25.4	0.564	30.0	LOS C	20.6	173.5	0.76	0.68	0.76	25.6
West: Victoria Street															
11	T1	All MCs	905	32.2	905	32.2	0.585	27.5	LOS B	21.5	192.2	0.71	0.64	0.71	24.5
12	R2	All MCs	42	10.0	42	10.0	* 0.585	52.8	LOS D	17.5	153.3	0.77	0.69	0.77	36.6
Approach			947	31.2	947	31.2	0.585	28.6	LOS C	21.5	192.2	0.71	0.64	0.71	21.0
All Vehicles			2143	27.1	2143	27.1	0.647	32.5	LOS C	21.5	192.2	0.76	0.68	0.76	23.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Canley Vale Road											
P1	Full	53	58.8	LOS E	0.2	0.2	0.96	0.96	212.6	200.0	0.94
East: Victoria Street											
P2	Full	53	58.8	LOS E	0.2	0.2	0.96	0.96	212.6	200.0	0.94
All Pedestrians		105	58.8	LOS E	0.2	0.2	0.96	0.96	212.6	200.0	0.94

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

MOVEMENT SUMMARY

Site: 101 [5. 2026 Base w/ Dev AM - Victoria Street / Elizabeth Street (Site Folder: 2026 Base w Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev 2026 AM (Network Folder: Base w Dev - 2026)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Elizabeth Street															
1	L2	All MCs	81	14.3	81	14.3	0.278	25.4	LOS B	3.9	30.8	0.84	0.75	0.84	30.9
2	T1	All MCs	263	18.0	263	18.0	* 0.927	72.8	LOS F	31.1	252.2	0.97	1.03	1.20	26.7
3	R2	All MCs	167	18.9	167	18.9	0.927	82.6	LOS F	31.1	252.2	1.00	1.09	1.27	25.8
Approach			512	17.7	512	17.7	0.927	68.5	LOS E	31.1	252.2	0.96	1.01	1.16	26.3
East: Victoria Street															
4	L2	All MCs	74	38.6	74	38.6	0.803	33.1	LOS C	25.0	208.2	0.99	0.91	1.06	30.3
5	T1	All MCs	706	20.6	706	20.6	0.803	57.2	LOS E	25.8	210.0	0.99	0.91	1.06	21.7
6	R2	All MCs	85	28.4	85	28.4	* 0.966	105.1	LOS F	7.3	63.5	1.00	1.06	1.61	21.0
Approach			865	22.9	865	22.9	0.966	59.8	LOS E	25.8	210.0	0.99	0.93	1.11	22.5
North: Elizabeth Street															
7	L2	All MCs	38	50.0	38	50.0	0.345	38.0	LOS C	4.3	40.4	0.93	0.75	0.93	31.6
8	T1	All MCs	86	30.5	86	30.5	* 0.898	63.6	LOS E	15.5	153.7	0.96	0.89	1.11	28.4
9	R2	All MCs	156	53.4	156	53.4	0.898	83.7	LOS F	15.5	153.7	1.00	1.05	1.31	15.7
Approach			280	45.9	280	45.9	0.898	71.3	LOS F	15.5	153.7	0.98	0.96	1.20	21.9
West: Victoria Street															
10	L2	All MCs	284	32.2	284	32.2	0.940	59.6	LOS E	32.4	288.8	1.00	1.11	1.28	22.4
11	T1	All MCs	582	36.5	582	36.5	* 0.940	85.5	LOS F	34.4	312.5	1.00	1.13	1.28	23.8
12	R2	All MCs	88	17.9	88	17.9	0.939	97.3	LOS F	7.2	58.4	1.00	1.03	1.53	20.1
Approach			955	33.5	955	33.5	0.940	78.9	LOS F	34.4	312.5	1.00	1.11	1.31	23.0
All Vehicles			2612	28.2	2612	28.2	0.966	69.7	LOS E	34.4	312.5	0.99	1.01	1.20	23.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth Street											
P1	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

East: Victoria Street										
P2 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
North: Elizabeth Street										
P3 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
West: Victoria Street										
P4 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
All Pedestrians	211	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

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

MOVEMENT SUMMARY

Site: 1 [1. 2026 Base w/ Dev PM - Newton Road / Victoria Street (Site Folder: 2026 Base w Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev 2026 PM (Network Folder: Base w Dev - 2026)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Newton Road															
1	L2	All MCs	63	10.0	63	10.0	0.597	13.0	LOS A	4.2	33.3	0.85	0.98	1.15	46.1
2	T1	All MCs	15	64.3	15	64.3	0.597	16.6	LOS B	4.2	33.3	0.85	0.98	1.15	45.6
3	R2	All MCs	231	15.1	231	15.1	0.597	18.9	LOS B	4.2	33.3	0.85	0.98	1.15	39.4
3u	U	All MCs	3	66.7	3	66.7	0.597	24.6	LOS B	4.2	33.3	0.85	0.98	1.15	39.4
Approach			312	16.9	312	16.9	0.597	17.7	LOS B	4.2	33.3	0.85	0.98	1.15	41.7
East: Victoria Street															
4	L2	All MCs	182	28.3	182	28.3	0.600	7.4	LOS A	4.2	34.4	0.53	0.64	0.57	41.0
5	T1	All MCs	756	16.0	756	16.0	0.600	6.8	LOS A	4.2	34.4	0.53	0.65	0.57	50.1
6	R2	All MCs	93	38.6	93	38.6	0.600	12.8	LOS A	4.2	34.4	0.53	0.67	0.57	47.4
6u	U	All MCs	36	14.7	36	14.7	0.600	14.4	LOS A	4.2	34.4	0.53	0.67	0.57	39.7
Approach			1066	20.0	1066	20.0	0.600	7.7	LOS A	4.2	34.4	0.53	0.65	0.57	48.9
North: Newton Road															
7	L2	All MCs	237	14.7	237	14.7	0.700	14.3	LOS A	5.0	40.4	0.84	1.04	1.28	40.2
8	T1	All MCs	45	39.5	45	39.5	0.700	16.3	LOS B	5.0	40.4	0.84	1.04	1.28	40.2
9	R2	All MCs	79	18.7	79	18.7	0.700	20.1	LOS B	5.0	40.4	0.84	1.04	1.28	46.1
9u	U	All MCs	1	0.0	1	0.0	0.700	21.1	LOS B	5.0	40.4	0.84	1.04	1.28	46.6
Approach			362	18.6	362	18.6	0.700	15.8	LOS B	5.0	40.4	0.84	1.04	1.28	42.2
West: Victoria Street															
10	L2	All MCs	18	41.2	18	41.2	0.381	7.6	LOS A	2.3	18.0	0.63	0.60	0.63	51.2
11	T1	All MCs	498	14.2	498	14.2	0.381	6.7	LOS A	2.3	18.0	0.63	0.62	0.63	47.6
12	R2	All MCs	37	11.4	37	11.4	0.381	11.9	LOS A	2.3	18.0	0.63	0.65	0.63	46.5
12u	U	All MCs	72	20.6	72	20.6	0.381	14.5	LOS B	2.3	18.0	0.63	0.65	0.63	49.9
Approach			624	15.5	624	15.5	0.381	7.9	LOS A	2.3	18.0	0.63	0.62	0.63	48.1
All Vehicles			2364	18.2	2364	18.2	0.700	10.3	LOS A	5.0	40.4	0.65	0.75	0.77	46.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. 2026 Base w/ Dev PM - Cowpasture Road / Newton Road (Site Folder: 2026 Base w Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev 2026 PM (Network Folder: Base w Dev - 2026)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Cowpasture Road															
2	T1	All MCs	196	53.2	196	53.2	0.147	4.7	LOS A	0.7	7.1	0.12	0.42	0.12	50.6
3	R2	All MCs	116	37.3	116	37.3	0.147	9.3	LOS A	0.7	6.4	0.12	0.58	0.12	38.2
3u	U	All MCs	17	50.0	17	50.0	0.147	11.6	LOS A	0.7	6.4	0.12	0.58	0.12	38.2
Approach			328	47.4	328	47.4	0.147	6.7	LOS A	0.7	7.1	0.12	0.48	0.12	47.7
East: Newton Road															
4	L2	All MCs	348	20.5	348	20.5	0.956	30.9	LOS C	9.3	76.4	0.97	1.55	2.65	30.0
6	R2	All MCs	21	15.0	21	15.0	0.956	35.3	LOS C	9.3	76.4	0.97	1.55	2.65	38.5
6u	U	All MCs	1	0.0	1	0.0	0.956	36.1	LOS C	9.3	76.4	0.97	1.55	2.65	30.0
Approach			371	20.2	371	20.2	0.956	31.2	LOS C	9.3	76.4	0.97	1.55	2.65	30.8
North: Cowpasture Road															
7	L2	All MCs	22	9.5	22	9.5	0.555	5.3	LOS A	3.3	25.6	0.46	0.46	0.46	49.4
8	T1	All MCs	996	11.9	996	11.9	0.555	5.4	LOS A	3.3	25.6	0.46	0.46	0.46	49.3
9u	U	All MCs	2	100.0	2	100.0	0.555	14.2	LOS A	3.2	25.1	0.47	0.46	0.47	48.7
Approach			1020	12.1	1020	12.1	0.555	5.4	LOS A	3.3	25.6	0.46	0.46	0.46	49.3
All Vehicles			1719	20.6	1719	20.6	0.956	11.2	LOS A	9.3	76.4	0.51	0.70	0.87	43.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. 2026 Base w/ Dev PM - Cowpasture Road / The Horsley Drive (Site Folder: 2026 Base w Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev 2026 PM (Network Folder: Base w Dev - 2026)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 130 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Horsley Drive															
2	T1	All MCs	1084	7.1	1084	7.1	0.510	18.9	LOS B	20.5	152.0	0.65	0.58	0.65	46.7
3	R2	All MCs	125	22.7	125	22.7	* 0.424	70.6	LOS F	3.9	32.8	0.99	0.76	0.99	18.8
Approach			1209	8.7	1209	8.7	0.510	24.2	LOS B	20.5	152.0	0.68	0.60	0.68	42.4
East: Cowpasture Road															
4	L2	All MCs	504	8.1	504	8.1	0.600	17.8	LOS B	19.4	145.3	0.71	0.80	0.71	40.9
6	R2	All MCs	959	16.1	959	16.1	* 0.870	59.1	LOS E	32.0	255.2	1.00	0.96	1.14	24.9
Approach			1463	13.4	1463	13.4	0.870	44.9	LOS D	32.0	255.2	0.90	0.91	0.99	28.8
North: The Horsley Drive															
7	L2	All MCs	178	60.9	178	60.9	0.084	8.8	LOS A	1.1	11.6	0.21	0.59	0.21	47.7
8	T1	All MCs	1121	4.6	1121	4.6	* 0.675	31.0	LOS C	28.1	204.1	0.86	0.77	0.86	39.9
Approach			1299	12.3	1299	12.3	0.675	28.0	LOS B	28.1	204.1	0.77	0.74	0.77	40.3
All Vehicles			3972	11.6	3972	11.6	0.870	33.1	LOS C	32.0	255.2	0.79	0.76	0.82	36.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: The Horsley Drive											
P1	Full	53	59.3	LOS E	0.2	0.2	0.96	0.96	213.1	200.0	0.94
East: Cowpasture Road											
P2	Full	53	59.3	LOS E	0.2	0.2	0.96	0.96	213.1	200.0	0.94
North: The Horsley Drive											
P3B	Slip/ Bypass	53	59.3	LOS E	0.2	0.2	0.96	0.96	213.1	200.0	0.94
All Pedestrians		158	59.3	LOS E	0.2	0.2	0.96	0.96	213.1	200.0	0.94

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.

MOVEMENT SUMMARY

Site: 101 [4. 2026 Base w/ Dev PM - Victoria Street / Canley Vale Road (Site Folder: 2026 Base w Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev 2026 PM (Network Folder: Base w Dev - 2026)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Canley Vale Road															
1	L2	All MCs	76	13.9	76	13.9	0.401	55.2	LOS D	7.3	57.2	0.93	0.79	0.93	20.2
3	R2	All MCs	61	39.7	61	39.7	* 0.401	75.5	LOS F	7.3	57.2	0.95	0.77	0.95	18.8
Approach			137	25.4	137	25.4	0.401	64.3	LOS E	7.3	57.2	0.94	0.78	0.94	19.6
East: Victoria Street															
4	L2	All MCs	68	29.2	68	29.2	0.507	30.9	LOS C	19.7	162.2	0.70	0.64	0.70	36.1
5	T1	All MCs	921	20.8	921	20.8	* 0.507	25.6	LOS B	20.2	166.1	0.66	0.61	0.66	30.2
Approach			989	21.4	989	21.4	0.507	26.0	LOS B	20.2	166.1	0.66	0.61	0.66	27.9
West: Victoria Street															
11	T1	All MCs	923	15.2	923	15.2	0.597	24.0	LOS B	26.3	207.7	0.66	0.60	0.66	26.8
12	R2	All MCs	94	10.1	94	10.1	* 0.597	49.0	LOS D	15.9	124.1	0.80	0.73	0.80	35.2
Approach			1017	14.7	1017	14.7	0.597	26.3	LOS B	26.3	207.7	0.67	0.62	0.67	23.3
All Vehicles			2143	18.5	2143	18.5	0.597	28.6	LOS C	26.3	207.7	0.68	0.62	0.68	25.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Canley Vale Road											
P1	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
East: Victoria Street											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
All Pedestrians		105	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

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

MOVEMENT SUMMARY

Site: 101 [5. 2026 Base w/ Dev PM - Victoria Street / Elizabeth Street (Site Folder: 2026 Base w Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev 2026 PM (Network Folder: Base w Dev - 2026)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Elizabeth Street															
1	L2	All MCs	117	9.9	117	9.9	0.537	33.1	LOS C	6.4	49.2	0.96	0.83	0.96	25.8
2	T1	All MCs	120	16.7	120	16.7	* 0.826	67.7	LOS E	15.8	126.7	0.98	0.90	1.09	28.6
3	R2	All MCs	143	17.6	143	17.6	0.826	74.4	LOS F	15.8	126.7	1.00	0.95	1.16	26.9
Approach			380	15.0	380	15.0	0.826	59.6	LOS E	15.8	126.7	0.98	0.90	1.08	27.3
East: Victoria Street															
4	L2	All MCs	229	8.3	229	8.3	0.775	43.9	LOS D	25.1	197.6	0.98	0.88	1.01	31.1
5	T1	All MCs	544	25.1	544	25.1	0.775	56.3	LOS D	25.1	203.6	0.98	0.88	1.02	22.3
6	R2	All MCs	59	14.3	59	14.3	0.490	76.5	LOS F	4.1	32.0	1.00	0.76	1.00	25.2
Approach			833	19.7	833	19.7	0.775	54.3	LOS D	25.1	203.6	0.98	0.87	1.01	25.5
North: Elizabeth Street															
7	L2	All MCs	78	6.8	78	6.8	0.751	42.0	LOS C	18.8	138.5	0.99	0.90	1.04	29.1
8	T1	All MCs	265	6.0	265	6.0	* 0.884	63.3	LOS E	23.4	191.5	0.99	0.92	1.07	29.0
9	R2	All MCs	262	22.5	262	22.5	0.884	74.4	LOS F	23.4	191.5	1.00	1.01	1.21	17.0
Approach			605	13.2	605	13.2	0.884	65.4	LOS E	23.4	191.5	1.00	0.95	1.13	24.2
West: Victoria Street															
10	L2	All MCs	169	27.3	169	27.3	0.888	38.0	LOS C	31.1	250.6	1.00	1.02	1.16	24.5
11	T1	All MCs	740	15.1	740	15.1	* 0.888	69.8	LOS E	33.5	261.1	1.00	1.02	1.16	26.7
12	R2	All MCs	113	4.7	113	4.7	* 0.877	86.5	LOS F	8.6	62.7	1.00	0.96	1.34	21.8
Approach			1022	16.0	1022	16.0	0.888	66.4	LOS E	33.5	261.1	1.00	1.01	1.18	25.7
All Vehicles			2840	16.3	2840	16.3	0.888	61.7	LOS E	33.5	261.1	0.99	0.94	1.11	25.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth Street											
P1	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

East: Victoria Street										
P2 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
North: Elizabeth Street										
P3 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
West: Victoria Street										
P4 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
All Pedestrians	211	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

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

MOVEMENT SUMMARY

Site: 1 [1. 2036 Base AM - Newton Road / Victoria Street (Site Folder: 2036 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2036 AM (Network Folder: Base - 2036)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Newton Road															
1	L2	All MCs	76	23.6	76	23.6	0.567	13.0	LOS A	4.0	37.5	0.83	0.94	1.09	46.4
2	T1	All MCs	47	40.0	47	40.0	0.567	14.1	LOS A	4.0	37.5	0.83	0.94	1.09	46.5
3	R2	All MCs	159	49.7	159	49.7	0.567	20.0	LOS B	4.0	37.5	0.83	0.94	1.09	40.1
3u	U	All MCs	1	0.0	1	0.0	0.567	19.6	LOS B	4.0	37.5	0.83	0.94	1.09	40.1
Approach			283	40.9	283	40.9	0.567	17.2	LOS B	4.0	37.5	0.83	0.94	1.09	43.6
East: Victoria Street															
4	L2	All MCs	302	26.5	302	26.5	0.589	6.3	LOS A	3.9	32.8	0.46	0.58	0.46	42.2
5	T1	All MCs	515	16.0	515	16.0	0.589	6.0	LOS A	3.9	32.8	0.45	0.61	0.46	50.0
6	R2	All MCs	271	14.8	271	14.8	0.589	11.3	LOS A	3.9	31.1	0.45	0.65	0.46	47.7
6u	U	All MCs	29	14.3	29	14.3	0.589	13.6	LOS A	3.9	31.1	0.45	0.65	0.46	38.7
Approach			1117	18.5	1117	18.5	0.589	7.5	LOS A	3.9	32.8	0.45	0.61	0.46	48.2
North: Newton Road															
7	L2	All MCs	82	38.5	82	38.5	0.453	13.0	LOS A	2.1	21.4	0.79	0.95	0.97	41.3
8	T1	All MCs	45	79.1	45	79.1	0.453	15.8	LOS B	2.1	21.4	0.79	0.95	0.97	41.3
9	R2	All MCs	16	60.0	16	60.0	0.453	20.0	LOS B	2.1	21.4	0.79	0.95	0.97	45.7
9u	U	All MCs	2	100.0	2	100.0	0.453	25.1	LOS B	2.1	21.4	0.79	0.95	0.97	44.7
Approach			145	54.3	145	54.3	0.453	14.8	LOS B	2.1	21.4	0.79	0.95	0.97	42.1
West: Victoria Street															
10	L2	All MCs	83	20.3	83	20.3	0.623	12.2	LOS A	5.6	45.1	0.85	0.82	1.08	48.9
11	T1	All MCs	669	18.1	669	18.1	0.623	12.0	LOS A	5.9	48.0	0.85	0.83	1.08	43.3
12	R2	All MCs	45	20.9	45	20.9	0.623	17.3	LOS B	5.9	48.0	0.85	0.83	1.07	42.7
12u	U	All MCs	71	14.9	71	14.9	0.623	19.4	LOS B	5.9	48.0	0.85	0.83	1.07	47.7
Approach			868	18.2	868	18.2	0.623	12.9	LOS A	5.9	48.0	0.85	0.83	1.08	44.6
All Vehicles			2414	23.2	2414	23.2	0.623	11.0	LOS A	5.9	48.0	0.66	0.75	0.79	45.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. 2036 Base AM - Cowpasture Road / Newton Road (Site Folder: 2036 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2036 AM (Network Folder: Base - 2036)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Cowpasture Road															
2	T1	All MCs	753	18.2	753	18.2	0.474	4.5	LOS A	3.3	26.3	0.14	0.42	0.14	51.7
3	R2	All MCs	503	20.5	503	20.5	0.474	9.2	LOS A	3.2	26.1	0.15	0.59	0.15	38.1
3u	U	All MCs	26	16.0	26	16.0	0.474	11.3	LOS A	3.2	26.1	0.15	0.59	0.15	38.1
Approach			1282	19.0	1282	19.0	0.474	6.5	LOS A	3.3	26.3	0.14	0.49	0.14	48.3
East: Newton Road															
4	L2	All MCs	273	55.2	273	55.2	0.444	7.7	LOS A	2.4	24.4	0.60	0.66	0.62	48.0
6	R2	All MCs	21	30.0	21	30.0	0.444	11.9	LOS A	2.4	24.4	0.60	0.66	0.62	50.4
6u	U	All MCs	3	0.0	3	0.0	0.444	13.0	LOS A	2.4	24.4	0.60	0.66	0.62	48.0
Approach			297	52.8	297	52.8	0.444	8.1	LOS A	2.4	24.4	0.60	0.66	0.62	48.3
North: Cowpasture Road															
7	L2	All MCs	52	28.6	52	28.6	0.197	8.6	LOS A	1.3	13.1	0.65	0.59	0.65	47.1
8	T1	All MCs	231	55.3	231	55.3	0.197	9.5	LOS A	1.3	13.1	0.65	0.59	0.65	46.8
9u	U	All MCs	1	0.0	1	0.0	0.197	14.8	LOS B	1.3	12.9	0.65	0.59	0.65	50.6
Approach			283	50.2	283	50.2	0.197	9.3	LOS A	1.3	13.1	0.65	0.59	0.65	46.9
All Vehicles			1862	29.2	1862	29.2	0.474	7.2	LOS A	3.3	26.3	0.29	0.53	0.29	48.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. 2036 Base AM - Cowpasture Road / The Horsley Drive - Upgraded (Site Folder: 2036 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2036 AM (Network Folder: Base - 2036)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Horsley Drive															
2	T1	All MCs	1257	7.8	1257	7.8	0.495	9.6	LOS A	17.3	129.0	0.52	0.47	0.52	51.9
3	R2	All MCs	667	6.2	667	6.2	* 0.726	29.7	LOS C	10.8	79.7	0.97	0.85	0.99	31.0
Approach			1924	7.2	1924	7.2	0.726	16.6	LOS B	17.3	129.0	0.67	0.60	0.68	45.3
East: Cowpasture Road															
4	L2	All MCs	164	34.0	164	34.0	0.096	18.1	LOS B	2.1	19.2	0.47	0.67	0.47	40.1
6	R2	All MCs	328	65.4	328	65.4	* 0.598	53.1	LOS D	8.9	97.3	0.95	0.82	0.95	26.1
Approach			493	54.9	493	54.9	0.598	41.5	LOS C	8.9	97.3	0.79	0.77	0.79	29.5
North: The Horsley Drive															
7	L2	All MCs	563	28.6	563	28.6	0.322	13.6	LOS A	5.2	45.0	0.56	0.72	0.56	42.1
8	T1	All MCs	997	8.9	997	8.9	* 0.515	33.2	LOS C	15.4	115.8	0.85	0.73	0.85	39.0
Approach			1560	16.0	1560	16.0	0.515	26.1	LOS B	15.4	115.8	0.74	0.73	0.74	39.6
All Vehicles			3977	16.6	3977	16.6	0.726	23.4	LOS B	17.3	129.0	0.72	0.67	0.72	40.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: The Horsley Drive											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
East: Cowpasture Road											
P2	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
P2B	Slip/ Bypass	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: The Horsley Drive											
P3B	Slip/ Bypass	53	25.0	LOS C	0.1	0.1	0.90	0.90	178.9	200.0	1.12
All Pedestrians		211	47.0	LOS E	0.2	0.2	0.94	0.94	200.8	200.0	1.00

MOVEMENT SUMMARY

Site: 101 [4. 2036 Base AM - Victoria Street / Canley Vale Road (Site Folder: 2036 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2036 AM (Network Folder: Base - 2036)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 129 seconds (Minimum Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Canley Vale Road															
1	L2	All MCs	157	7.4	157	7.4	0.710	55.0	LOS D	13.7	104.6	0.99	0.85	1.03	20.5
3	R2	All MCs	88	35.7	88	35.7	* 0.710	71.0	LOS F	13.7	104.6	0.98	0.82	1.01	20.1
Approach			245	17.6	245	17.6	0.710	60.7	LOS E	13.7	104.6	0.99	0.84	1.03	20.3
East: Victoria Street															
4	L2	All MCs	57	50.0	57	50.0	0.588	40.8	LOS C	21.5	181.6	0.83	0.71	0.83	31.9
5	T1	All MCs	946	23.8	946	23.8	* 0.588	29.8	LOS C	21.9	184.0	0.77	0.70	0.77	27.0
Approach			1003	25.3	1003	25.3	0.588	30.4	LOS C	21.9	184.0	0.77	0.70	0.77	25.4
West: Victoria Street															
11	T1	All MCs	951	32.3	951	32.3	0.701	30.7	LOS C	26.1	233.1	0.79	0.72	0.79	22.9
12	R2	All MCs	44	9.5	44	9.5	* 0.701	59.7	LOS E	19.5	171.5	0.85	0.76	0.85	35.1
Approach			995	31.3	995	31.3	0.701	32.0	LOS C	26.1	233.1	0.79	0.72	0.79	19.5
All Vehicles			2243	27.1	2243	27.1	0.710	34.4	LOS C	26.1	233.1	0.80	0.72	0.81	22.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Canley Vale Road											
P1	Full	53	58.8	LOS E	0.2	0.2	0.96	0.96	212.6	200.0	0.94
East: Victoria Street											
P2	Full	53	58.8	LOS E	0.2	0.2	0.96	0.96	212.6	200.0	0.94
All Pedestrians		105	58.8	LOS E	0.2	0.2	0.96	0.96	212.6	200.0	0.94

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

MOVEMENT SUMMARY

Site: 101 [5. 2036 Base AM - Victoria Street / Elizabeth Street (Site Folder: 2036 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2036 AM (Network Folder: Base - 2036)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Elizabeth Street															
1	L2	All MCs	86	14.6	86	14.6	0.307	31.3	LOS C	4.5	35.8	0.85	0.77	0.85	29.5
2	T1	All MCs	278	17.8	278	17.8	* 1.022	111.8	LOS F	40.0	324.3	0.98	1.21	1.44	21.3
3	R2	All MCs	177	19.0	177	19.0	1.022	127.8	LOS F	40.0	324.3	1.00	1.30	1.55	20.0
Approach			541	17.7	541	17.7	1.022	104.2	LOS F	40.0	324.3	0.96	1.17	1.38	20.6
East: Victoria Street															
4	L2	All MCs	78	39.2	78	39.2	0.839	36.6	LOS C	27.2	226.6	1.00	0.95	1.10	29.5
5	T1	All MCs	736	20.5	736	20.5	0.839	60.4	LOS E	28.1	228.3	1.00	0.95	1.10	20.9
6	R2	All MCs	91	29.1	91	29.1	* 1.030	135.5	LOS F	8.7	76.3	1.00	1.15	1.80	17.9
Approach			904	22.9	904	22.9	1.030	65.8	LOS E	28.1	228.3	1.00	0.97	1.17	21.2
North: Elizabeth Street															
7	L2	All MCs	65	30.6	65	30.6	0.367	39.9	LOS C	5.2	45.6	0.92	0.76	0.92	31.7
8	T1	All MCs	92	31.0	92	31.0	* 0.953	77.2	LOS F	18.9	186.8	0.97	1.00	1.24	25.6
9	R2	All MCs	163	53.5	163	53.5	0.953	96.7	LOS F	18.9	186.8	1.00	1.15	1.44	14.2
Approach			320	42.4	320	42.4	0.953	79.5	LOS F	18.9	186.8	0.98	1.03	1.28	20.9
West: Victoria Street															
10	L2	All MCs	299	32.4	299	32.4	0.991	79.0	LOS F	39.0	348.4	1.00	1.18	1.42	19.5
11	T1	All MCs	608	36.5	608	36.5	* 0.991	108.1	LOS F	40.4	367.4	1.00	1.25	1.42	20.6
12	R2	All MCs	94	18.0	94	18.0	0.996	118.3	LOS F	8.5	68.3	1.00	1.10	1.68	18.0
Approach			1001	33.5	1001	33.5	0.996	100.3	LOS F	40.4	367.4	1.00	1.21	1.45	19.8
All Vehicles			2766	28.0	2766	28.0	1.030	87.4	LOS F	40.4	367.4	0.99	1.10	1.32	20.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth Street											
P1	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

East: Victoria Street										
P2 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
North: Elizabeth Street										
P3 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
West: Victoria Street										
P4 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
All Pedestrians	211	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

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

MOVEMENT SUMMARY

Site: 1 [1. 2036 Base PM - Newton Road / Victoria Street (Site Folder: 2036 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2036 PM (Network Folder: Base - 2036)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Newton Road															
1	L2	All MCs	63	10.0	63	10.0	0.606	13.6	LOS A	4.2	33.9	0.86	1.00	1.18	45.8
2	T1	All MCs	15	64.3	15	64.3	0.606	17.2	LOS B	4.2	33.9	0.86	1.00	1.18	45.4
3	R2	All MCs	225	14.5	225	14.5	0.606	19.4	LOS B	4.2	33.9	0.86	1.00	1.18	39.0
3u	U	All MCs	3	66.7	3	66.7	0.606	25.2	LOS B	4.2	33.9	0.86	1.00	1.18	39.0
Approach			306	16.5	306	16.5	0.606	18.2	LOS B	4.2	33.9	0.86	1.00	1.18	41.4
East: Victoria Street															
4	L2	All MCs	183	28.2	183	28.2	0.627	7.8	LOS A	4.7	38.4	0.55	0.67	0.61	40.6
5	T1	All MCs	784	16.0	784	16.0	0.627	7.3	LOS A	4.7	38.5	0.55	0.68	0.61	49.8
6	R2	All MCs	97	39.1	97	39.1	0.627	13.3	LOS A	4.7	38.5	0.55	0.69	0.61	47.2
6u	U	All MCs	37	14.3	37	14.3	0.627	14.8	LOS B	4.7	38.5	0.55	0.69	0.61	39.3
Approach			1101	20.0	1101	20.0	0.627	8.1	LOS A	4.7	38.5	0.55	0.68	0.61	48.7
North: Newton Road															
7	L2	All MCs	246	15.0	246	15.0	0.773	16.7	LOS B	6.0	48.5	0.89	1.11	1.47	38.3
8	T1	All MCs	47	40.0	47	40.0	0.773	18.8	LOS B	6.0	48.5	0.89	1.11	1.47	38.3
9	R2	All MCs	82	19.2	82	19.2	0.773	22.5	LOS B	6.0	48.5	0.89	1.11	1.47	44.8
9u	U	All MCs	1	0.0	1	0.0	0.773	23.3	LOS B	6.0	48.5	0.89	1.11	1.47	45.3
Approach			377	19.0	377	19.0	0.773	18.2	LOS B	6.0	48.5	0.89	1.11	1.47	40.4
West: Victoria Street															
10	L2	All MCs	18	41.2	18	41.2	0.408	7.7	LOS A	2.3	18.5	0.64	0.60	0.64	51.2
11	T1	All MCs	516	14.1	516	14.1	0.408	6.8	LOS A	2.5	19.5	0.64	0.62	0.64	47.5
12	R2	All MCs	38	11.1	38	11.1	0.408	12.0	LOS A	2.5	19.5	0.64	0.65	0.64	46.4
12u	U	All MCs	75	21.1	75	21.1	0.408	14.7	LOS B	2.5	19.5	0.64	0.65	0.64	49.9
Approach			646	15.5	646	15.5	0.408	8.0	LOS A	2.5	19.5	0.64	0.63	0.64	48.0
All Vehicles			2431	18.2	2431	18.2	0.773	10.9	LOS A	6.0	48.5	0.67	0.77	0.82	46.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. 2036 Base PM - Cowpasture Road / Newton Road (Site Folder: 2036 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2036 PM (Network Folder: Base - 2036)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Cowpasture Road															
2	T1	All MCs	203	53.4	203	53.4	0.150	4.7	LOS A	0.7	7.0	0.12	0.42	0.12	50.6
3	R2	All MCs	117	37.8	117	37.8	0.150	9.4	LOS A	0.7	6.5	0.12	0.57	0.12	38.4
3u	U	All MCs	17	50.0	17	50.0	0.150	11.6	LOS A	0.7	6.5	0.12	0.57	0.12	38.4
Approach			337	47.8	337	47.8	0.150	6.7	LOS A	0.7	7.0	0.12	0.48	0.12	47.8
East: Newton Road															
4	L2	All MCs	353	20.3	353	20.3	0.859	20.2	LOS B	6.4	52.4	0.91	1.24	1.77	36.3
6	R2	All MCs	22	14.3	22	14.3	0.859	24.6	LOS B	6.4	52.4	0.91	1.24	1.77	43.4
6u	U	All MCs	1	0.0	1	0.0	0.859	25.5	LOS B	6.4	52.4	0.91	1.24	1.77	36.3
Approach			376	19.9	376	19.9	0.859	20.4	LOS B	6.4	52.4	0.91	1.24	1.77	37.0
North: Cowpasture Road															
7	L2	All MCs	23	9.1	23	9.1	0.504	5.3	LOS A	3.2	24.7	0.42	0.45	0.42	49.7
8	T1	All MCs	1032	11.9	1032	11.9	0.504	5.4	LOS A	3.2	24.7	0.43	0.45	0.43	49.6
9u	U	All MCs	2	100.0	2	100.0	0.504	14.1	LOS A	3.1	24.3	0.43	0.46	0.43	48.8
Approach			1057	12.1	1057	12.1	0.504	5.4	LOS A	3.2	24.7	0.43	0.45	0.43	49.6
All Vehicles			1769	20.5	1769	20.5	0.859	8.8	LOS A	6.4	52.4	0.47	0.63	0.66	45.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. 2036 Base PM - Cowpasture Road / The Horsley Drive - Upgraded (Site Folder: 2036 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2036 PM (Network Folder: Base - 2036)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Horsley Drive															
2	T1	All MCs	1123	7.0	1123	7.0	0.556	19.1	LOS B	21.3	157.8	0.71	0.64	0.71	45.8
3	R2	All MCs	129	22.8	129	22.8	* 0.347	34.5	LOS C	2.0	16.8	0.96	0.75	0.96	28.8
Approach			1253	8.7	1253	8.7	0.556	20.7	LOS B	21.3	157.8	0.73	0.65	0.73	44.3
East: Cowpasture Road															
4	L2	All MCs	522	8.3	522	8.3	0.259	19.2	LOS B	7.5	56.2	0.53	0.71	0.53	40.1
6	R2	All MCs	988	16.1	988	16.1	* 0.828	48.6	LOS D	28.5	226.8	0.98	0.92	1.07	27.8
Approach			1511	13.4	1511	13.4	0.828	38.4	LOS C	28.5	226.8	0.83	0.85	0.88	31.1
North: The Horsley Drive															
7	L2	All MCs	181	61.6	181	61.6	0.099	9.3	LOS A	1.0	10.7	0.33	0.62	0.33	47.0
8	T1	All MCs	1161	4.5	1161	4.5	* 0.584	34.2	LOS C	18.4	134.1	0.87	0.76	0.87	38.6
Approach			1342	12.2	1342	12.2	0.584	30.8	LOS C	18.4	134.1	0.80	0.74	0.80	39.1
All Vehicles			4105	11.6	4105	11.6	0.828	30.5	LOS C	28.5	226.8	0.79	0.75	0.81	37.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: The Horsley Drive											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
East: Cowpasture Road											
P2	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
P2B	Slip/ Bypass	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: The Horsley Drive											
P3B	Slip/ Bypass	53	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12
All Pedestrians		211	46.8	LOS E	0.2	0.2	0.94	0.94	200.6	200.0	1.00

MOVEMENT SUMMARY

Site: 101 [4. 2036 Base PM - Victoria Street / Canley Vale Road (Site Folder: 2036 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2036 PM (Network Folder: Base - 2036)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Canley Vale Road															
1	L2	All MCs	78	13.5	78	13.5	0.399	54.7	LOS D	7.5	58.5	0.93	0.79	0.93	20.4
3	R2	All MCs	63	38.3	63	38.3	* 0.399	74.1	LOS F	7.5	58.5	0.95	0.77	0.95	19.0
Approach			141	24.6	141	24.6	0.399	63.4	LOS E	7.5	58.5	0.94	0.78	0.94	19.8
East: Victoria Street															
4	L2	All MCs	71	28.4	71	28.4	0.524	30.7	LOS C	20.6	169.7	0.71	0.64	0.71	36.1
5	T1	All MCs	951	20.8	951	20.8	* 0.524	25.9	LOS B	21.1	173.7	0.67	0.62	0.67	30.0
Approach			1021	21.3	1021	21.3	0.524	26.2	LOS B	21.1	173.7	0.67	0.62	0.67	27.8
West: Victoria Street															
11	T1	All MCs	944	15.1	944	15.1	0.621	24.8	LOS B	28.1	221.7	0.67	0.62	0.67	26.4
12	R2	All MCs	97	9.8	97	9.8	* 0.621	51.4	LOS D	16.2	126.8	0.82	0.76	0.82	34.6
Approach			1041	14.6	1041	14.6	0.621	27.3	LOS B	28.1	221.7	0.69	0.63	0.69	22.9
All Vehicles			2203	18.3	2203	18.3	0.621	29.1	LOS C	28.1	221.7	0.70	0.64	0.70	24.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Canley Vale Road											
P1	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
East: Victoria Street											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
All Pedestrians		105	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

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

MOVEMENT SUMMARY

Site: 101 [5. 2036 Base PM - Victoria Street / Elizabeth Street (Site Folder: 2036 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base 2036 PM (Network Folder: Base - 2036)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Elizabeth Street															
1	L2	All MCs	122	10.3	122	10.3	0.558	33.7	LOS C	6.8	52.4	0.96	0.83	0.96	25.5
2	T1	All MCs	124	16.9	124	16.9	* 0.859	70.2	LOS E	16.8	135.4	0.99	0.93	1.12	28.1
3	R2	All MCs	148	17.7	148	17.7	0.859	77.3	LOS F	16.8	135.4	1.00	0.99	1.21	26.3
Approach			395	15.2	395	15.2	0.859	61.6	LOS E	16.8	135.4	0.98	0.92	1.10	26.8
East: Victoria Street															
4	L2	All MCs	238	8.4	238	8.4	0.800	45.5	LOS D	26.5	209.3	0.99	0.90	1.04	30.7
5	T1	All MCs	560	25.2	560	25.2	0.800	58.0	LOS E	26.5	215.3	0.99	0.91	1.05	21.9
6	R2	All MCs	60	14.0	60	14.0	0.498	76.6	LOS F	4.2	32.6	1.00	0.76	1.00	25.2
Approach			858	19.8	858	19.8	0.800	55.9	LOS D	26.5	215.3	0.99	0.89	1.04	25.1
North: Elizabeth Street															
7	L2	All MCs	80	6.6	80	6.6	0.774	43.1	LOS D	19.7	145.4	1.00	0.91	1.06	28.8
8	T1	All MCs	275	6.1	275	6.1	* 0.911	65.4	LOS E	25.1	205.4	1.00	0.94	1.10	28.5
9	R2	All MCs	269	22.3	269	22.3	0.911	79.2	LOS F	25.1	205.4	1.00	1.05	1.26	16.3
Approach			624	13.2	624	13.2	0.911	68.5	LOS E	25.1	205.4	1.00	0.98	1.16	23.6
West: Victoria Street															
10	L2	All MCs	175	27.7	175	27.7	0.909	41.9	LOS C	33.2	267.2	1.00	1.04	1.20	23.7
11	T1	All MCs	757	14.9	757	14.9	* 0.909	74.1	LOS F	35.6	277.7	1.00	1.06	1.20	25.7
12	R2	All MCs	117	4.5	117	4.5	* 0.909	90.1	LOS F	9.2	66.6	1.00	0.99	1.41	21.2
Approach			1048	15.9	1048	15.9	0.909	70.5	LOS F	35.6	277.7	1.00	1.05	1.22	24.8
All Vehicles			2925	16.3	2925	16.3	0.911	64.6	LOS E	35.6	277.7	0.99	0.97	1.14	24.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth Street											
P1	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

East: Victoria Street										
P2 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
North: Elizabeth Street										
P3 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
West: Victoria Street										
P4 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
All Pedestrians	211	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

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

MOVEMENT SUMMARY

Site: 1 [1. 2036 Base AM - Newton Road / Victoria Street (Site Folder: 2036 Base with Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev - 2036 AM (Network Folder: Base w Dev - 2036)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Newton Road															
1	L2	All MCs	76	23.6	76	23.6	0.577	13.2	LOS A	4.1	38.5	0.84	0.94	1.11	46.3
2	T1	All MCs	47	40.0	47	40.0	0.577	14.2	LOS A	4.1	38.5	0.84	0.94	1.11	46.4
3	R2	All MCs	164	48.7	164	48.7	0.577	20.2	LOS B	4.1	38.5	0.84	0.94	1.11	39.9
3u	U	All MCs	1	0.0	1	0.0	0.577	19.7	LOS B	4.1	38.5	0.84	0.94	1.11	39.9
Approach			288	40.5	288	40.5	0.577	17.3	LOS B	4.1	38.5	0.84	0.94	1.11	43.5
East: Victoria Street															
4	L2	All MCs	315	26.4	315	26.4	0.595	6.4	LOS A	4.0	33.6	0.46	0.58	0.47	42.1
5	T1	All MCs	515	16.0	515	16.0	0.595	6.0	LOS A	4.1	33.6	0.46	0.62	0.47	50.0
6	R2	All MCs	271	14.8	271	14.8	0.595	11.2	LOS A	4.1	32.1	0.46	0.65	0.46	47.8
6u	U	All MCs	29	14.3	29	14.3	0.595	13.5	LOS A	4.1	32.1	0.46	0.65	0.46	38.8
Approach			1129	18.5	1129	18.5	0.595	7.6	LOS A	4.1	33.6	0.46	0.61	0.47	48.1
North: Newton Road															
7	L2	All MCs	82	38.5	82	38.5	0.463	13.2	LOS A	2.1	21.8	0.80	0.95	0.98	41.1
8	T1	All MCs	45	79.1	45	79.1	0.463	16.1	LOS B	2.1	21.8	0.80	0.95	0.98	41.1
9	R2	All MCs	16	60.0	16	60.0	0.463	20.3	LOS B	2.1	21.8	0.80	0.95	0.98	45.6
9u	U	All MCs	2	100.0	2	100.0	0.463	25.4	LOS B	2.1	21.8	0.80	0.95	0.98	44.6
Approach			145	54.3	145	54.3	0.463	15.0	LOS B	2.1	21.8	0.80	0.95	0.98	41.9
West: Victoria Street															
10	L2	All MCs	83	20.3	83	20.3	0.636	12.6	LOS A	5.7	46.1	0.86	0.84	1.11	48.7
11	T1	All MCs	669	18.1	669	18.1	0.636	12.3	LOS A	6.2	50.2	0.86	0.84	1.11	42.9
12	R2	All MCs	46	20.5	46	20.5	0.636	17.7	LOS B	6.2	50.2	0.86	0.85	1.10	42.4
12u	U	All MCs	71	14.9	71	14.9	0.636	19.8	LOS B	6.2	50.2	0.86	0.85	1.10	47.5
Approach			869	18.2	869	18.2	0.636	13.2	LOS A	6.2	50.2	0.86	0.84	1.11	44.3
All Vehicles			2433	23.2	2433	23.2	0.636	11.2	LOS A	6.2	50.2	0.67	0.75	0.80	45.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. 2036 Base AM - Cowpasture Road / Newton Road (Site Folder: 2036 Base with Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev - 2036 AM (Network Folder: Base w Dev - 2036)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Cowpasture Road															
2	T1	All MCs	753	18.2	753	18.2	0.477	4.5	LOS A	3.3	26.6	0.14	0.41	0.14	51.7
3	R2	All MCs	511	20.6	511	20.6	0.477	9.2	LOS A	3.2	26.4	0.15	0.59	0.15	38.1
3u	U	All MCs	26	16.0	26	16.0	0.477	11.3	LOS A	3.2	26.4	0.15	0.59	0.15	38.1
Approach			1289	19.1	1289	19.1	0.477	6.5	LOS A	3.3	26.6	0.14	0.49	0.14	48.3
East: Newton Road															
4	L2	All MCs	276	55.0	276	55.0	0.449	7.8	LOS A	2.4	24.8	0.60	0.67	0.62	47.9
6	R2	All MCs	21	30.0	21	30.0	0.449	11.9	LOS A	2.4	24.8	0.60	0.67	0.62	50.4
6u	U	All MCs	3	0.0	3	0.0	0.449	13.0	LOS A	2.4	24.8	0.60	0.67	0.62	47.9
Approach			300	52.6	300	52.6	0.449	8.1	LOS A	2.4	24.8	0.60	0.67	0.62	48.2
North: Cowpasture Road															
7	L2	All MCs	52	28.6	52	28.6	0.198	8.7	LOS A	1.4	13.3	0.66	0.59	0.66	47.0
8	T1	All MCs	231	55.3	231	55.3	0.198	9.6	LOS A	1.4	13.3	0.66	0.59	0.66	46.7
9u	U	All MCs	1	0.0	1	0.0	0.198	14.9	LOS B	1.3	13.1	0.66	0.60	0.66	50.5
Approach			283	50.2	283	50.2	0.198	9.4	LOS A	1.4	13.3	0.66	0.59	0.66	46.8
All Vehicles			1873	29.2	1873	29.2	0.477	7.2	LOS A	3.3	26.6	0.29	0.53	0.30	48.0

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

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

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

Roundabout Capacity Model: SIDRA Standard.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. 2036 Base AM - Cowpasture Road / The Horsley Drive - Upgraded (Site Folder: 2036 Base with Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev - 2036 AM (Network Folder: Base w Dev - 2036)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Horsley Drive															
2	T1	All MCs	1257	7.8	1257	7.8	0.495	9.6	LOS A	17.3	129.0	0.52	0.47	0.52	51.9
3	R2	All MCs	668	6.1	668	6.1	* 0.727	29.8	LOS C	10.8	79.9	0.97	0.85	0.99	30.9
Approach			1925	7.2	1925	7.2	0.727	16.6	LOS B	17.3	129.0	0.67	0.60	0.68	45.3
East: Cowpasture Road															
4	L2	All MCs	164	34.0	164	34.0	0.096	18.1	LOS B	2.1	19.2	0.47	0.67	0.47	40.1
6	R2	All MCs	332	65.1	332	65.1	* 0.603	53.2	LOS D	9.0	98.2	0.95	0.82	0.95	26.1
Approach			496	54.8	496	54.8	0.603	41.6	LOS C	9.0	98.2	0.79	0.77	0.79	29.5
North: The Horsley Drive															
7	L2	All MCs	568	28.5	568	28.5	0.325	13.6	LOS A	5.2	45.4	0.57	0.72	0.57	42.1
8	T1	All MCs	997	8.9	997	8.9	* 0.515	33.2	LOS C	15.4	115.8	0.85	0.73	0.85	39.0
Approach			1565	16.0	1565	16.0	0.515	26.1	LOS B	15.4	115.8	0.74	0.73	0.74	39.6
All Vehicles			3986	16.6	3986	16.6	0.727	23.4	LOS B	17.3	129.0	0.72	0.67	0.72	40.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: The Horsley Drive											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
East: Cowpasture Road											
P2	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
P2B	Slip/ Bypass	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: The Horsley Drive											
P3B	Slip/ Bypass	53	25.0	LOS C	0.1	0.1	0.90	0.90	178.9	200.0	1.12
All Pedestrians		211	47.0	LOS E	0.2	0.2	0.94	0.94	200.8	200.0	1.00

MOVEMENT SUMMARY

Site: 101 [4. 2036 Base AM - Victoria Street / Canley Vale Road (Site Folder: 2036 Base with Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev - 2036 AM (Network Folder: Base w Dev - 2036)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 129 seconds (Minimum Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Canley Vale Road															
1	L2	All MCs	157	7.4	157	7.4	0.716	55.2	LOS D	13.8	105.0	0.99	0.86	1.04	20.4
3	R2	All MCs	88	35.7	88	35.7	* 0.716	71.2	LOS F	13.8	105.0	0.98	0.83	1.02	20.0
Approach			245	17.6	245	17.6	0.716	61.0	LOS E	13.8	105.0	0.99	0.84	1.03	20.3
East: Victoria Street															
4	L2	All MCs	57	50.0	57	50.0	0.596	40.8	LOS C	21.9	185.0	0.84	0.71	0.84	31.8
5	T1	All MCs	959	23.8	959	23.8	* 0.596	29.9	LOS C	22.3	187.4	0.77	0.70	0.77	26.9
Approach			1016	25.3	1016	25.3	0.596	30.5	LOS C	22.3	187.4	0.77	0.70	0.77	25.3
West: Victoria Street															
11	T1	All MCs	956	32.3	956	32.3	0.724	31.4	LOS C	26.9	240.5	0.81	0.73	0.81	22.5
12	R2	All MCs	44	9.5	44	9.5	* 0.724	63.0	LOS E	20.1	176.0	0.87	0.78	0.87	34.5
Approach			1000	31.3	1000	31.3	0.724	32.8	LOS C	26.9	240.5	0.81	0.73	0.81	19.2
All Vehicles			2261	27.1	2261	27.1	0.724	34.8	LOS C	26.9	240.5	0.81	0.73	0.82	22.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Canley Vale Road											
P1	Full	53	58.8	LOS E	0.2	0.2	0.96	0.96	212.6	200.0	0.94
East: Victoria Street											
P2	Full	53	58.8	LOS E	0.2	0.2	0.96	0.96	212.6	200.0	0.94
All Pedestrians		105	58.8	LOS E	0.2	0.2	0.96	0.96	212.6	200.0	0.94

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

MOVEMENT SUMMARY

Site: 101 [5. 2036 Base AM - Victoria Street / Elizabeth Street (Site Folder: 2036 Base with Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev - 2036 AM (Network Folder: Base w Dev - 2036)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Elizabeth Street															
1	L2	All MCs	86	14.6	86	14.6	0.307	31.3	LOS C	4.5	35.8	0.85	0.77	0.85	29.5
2	T1	All MCs	278	17.8	278	17.8	* 1.022	111.8	LOS F	40.0	324.3	0.98	1.21	1.44	21.3
3	R2	All MCs	177	19.0	177	19.0	1.022	127.8	LOS F	40.0	324.3	1.00	1.30	1.55	20.0
Approach			541	17.7	541	17.7	1.022	104.2	LOS F	40.0	324.3	0.96	1.17	1.38	20.6
East: Victoria Street															
4	L2	All MCs	78	39.2	78	39.2	0.849	37.6	LOS C	27.8	232.3	1.00	0.96	1.12	29.2
5	T1	All MCs	745	20.5	745	20.5	0.849	61.4	LOS E	28.8	233.9	1.00	0.97	1.11	20.7
6	R2	All MCs	91	29.1	91	29.1	* 1.030	135.5	LOS F	8.7	76.3	1.00	1.15	1.80	17.9
Approach			914	22.9	914	22.9	1.030	66.7	LOS E	28.8	233.9	1.00	0.99	1.18	21.0
North: Elizabeth Street															
7	L2	All MCs	65	30.6	65	30.6	0.368	39.9	LOS C	5.2	45.7	0.92	0.76	0.92	31.7
8	T1	All MCs	92	31.0	92	31.0	* 0.956	77.6	LOS F	19.1	188.2	0.97	1.00	1.25	25.5
9	R2	All MCs	164	53.2	164	53.2	0.956	97.5	LOS F	19.1	188.2	1.00	1.15	1.44	14.2
Approach			321	42.3	321	42.3	0.956	80.1	LOS F	19.1	188.2	0.98	1.03	1.28	20.8
West: Victoria Street															
10	L2	All MCs	300	32.3	300	32.3	0.997	82.1	LOS F	40.0	356.8	1.00	1.19	1.44	19.1
11	T1	All MCs	613	36.4	613	36.4	* 0.997	111.6	LOS F	41.3	375.2	1.00	1.26	1.44	20.1
12	R2	All MCs	94	18.0	94	18.0	0.996	118.6	LOS F	8.5	68.3	1.00	1.10	1.68	18.0
Approach			1006	33.5	1006	33.5	0.997	103.4	LOS F	41.3	375.2	1.00	1.23	1.46	19.4
All Vehicles			2782	28.0	2782	28.0	1.030	88.8	LOS F	41.3	375.2	0.99	1.11	1.33	20.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth Street											
P1	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

East: Victoria Street										
P2 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
North: Elizabeth Street										
P3 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
West: Victoria Street										
P4 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
All Pedestrians	211	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

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

MOVEMENT SUMMARY

Site: 1 [1. 2036 w Dev PM - Newton Road / Victoria Street (Site Folder: 2036 Base with Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev - 2036 PM (Network Folder: Base w Dev - 2036)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Newton Road															
1	L2	All MCs	64	9.8	64	9.8	0.635	14.3	LOS A	4.6	37.1	0.87	1.02	1.24	45.4
2	T1	All MCs	15	64.3	15	64.3	0.635	18.0	LOS B	4.6	37.1	0.87	1.02	1.24	45.0
3	R2	All MCs	238	15.0	238	15.0	0.635	20.1	LOS B	4.6	37.1	0.87	1.02	1.24	38.4
3u	U	All MCs	3	66.7	3	66.7	0.635	26.0	LOS B	4.6	37.1	0.87	1.02	1.24	38.4
Approach			320	16.8	320	16.8	0.635	18.9	LOS B	4.6	37.1	0.87	1.02	1.24	40.8
East: Victoria Street															
4	L2	All MCs	188	27.9	188	27.9	0.630	7.8	LOS A	4.7	38.9	0.56	0.67	0.62	40.5
5	T1	All MCs	784	16.0	784	16.0	0.630	7.3	LOS A	4.8	39.0	0.56	0.68	0.61	49.8
6	R2	All MCs	97	39.1	97	39.1	0.630	13.3	LOS A	4.8	39.0	0.56	0.69	0.61	47.2
6u	U	All MCs	37	14.3	37	14.3	0.630	14.8	LOS B	4.8	39.0	0.56	0.69	0.61	39.3
Approach			1106	20.0	1106	20.0	0.630	8.2	LOS A	4.8	39.0	0.56	0.68	0.61	48.6
North: Newton Road															
7	L2	All MCs	246	15.0	246	15.0	0.794	17.7	LOS B	6.3	51.1	0.90	1.14	1.54	37.5
8	T1	All MCs	47	40.0	47	40.0	0.794	19.9	LOS B	6.3	51.1	0.90	1.14	1.54	37.5
9	R2	All MCs	82	19.2	82	19.2	0.794	23.6	LOS B	6.3	51.1	0.90	1.14	1.54	44.2
9u	U	All MCs	1	0.0	1	0.0	0.794	24.4	LOS B	6.3	51.1	0.90	1.14	1.54	44.7
Approach			377	19.0	377	19.0	0.794	19.3	LOS B	6.3	51.1	0.90	1.14	1.54	39.7
West: Victoria Street															
10	L2	All MCs	18	41.2	18	41.2	0.419	7.9	LOS A	2.4	19.0	0.66	0.62	0.66	51.1
11	T1	All MCs	516	14.1	516	14.1	0.419	7.0	LOS A	2.6	20.3	0.66	0.63	0.66	47.3
12	R2	All MCs	38	11.1	38	11.1	0.419	12.1	LOS A	2.6	20.3	0.66	0.66	0.66	46.3
12u	U	All MCs	75	21.1	75	21.1	0.419	14.8	LOS B	2.6	20.3	0.66	0.66	0.66	49.8
Approach			646	15.5	646	15.5	0.419	8.2	LOS A	2.6	20.3	0.66	0.64	0.66	47.9
All Vehicles			2449	18.2	2449	18.2	0.794	11.3	LOS A	6.3	51.1	0.68	0.78	0.85	45.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. 2036 w Dev PM - Cowpasture Road / Newton Road (Site Folder: 2036 Base with Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev - 2036 PM (Network Folder: Base w Dev - 2036)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Cowpasture Road															
2	T1	All MCs	203	53.4	203	53.4	0.152	4.7	LOS A	0.7	7.2	0.12	0.42	0.12	50.6
3	R2	All MCs	120	39.5	120	39.5	0.152	9.4	LOS A	0.7	6.6	0.12	0.58	0.12	38.3
3u	U	All MCs	17	50.0	17	50.0	0.152	11.6	LOS A	0.7	6.6	0.12	0.58	0.12	38.3
Approach			340	48.3	340	48.3	0.152	6.7	LOS A	0.7	7.2	0.12	0.48	0.12	47.7
East: Newton Road															
4	L2	All MCs	360	21.9	360	21.9	0.902	24.1	LOS B	7.6	63.3	0.94	1.35	2.09	33.8
6	R2	All MCs	22	14.3	22	14.3	0.902	28.4	LOS B	7.6	63.3	0.94	1.35	2.09	41.5
6u	U	All MCs	1	0.0	1	0.0	0.902	29.2	LOS C	7.6	63.3	0.94	1.35	2.09	33.8
Approach			383	21.4	383	21.4	0.902	24.3	LOS B	7.6	63.3	0.94	1.35	2.09	34.4
North: Cowpasture Road															
7	L2	All MCs	23	9.1	23	9.1	0.513	5.3	LOS A	3.3	25.1	0.44	0.46	0.44	49.6
8	T1	All MCs	1032	11.9	1032	11.9	0.513	5.4	LOS A	3.3	25.1	0.44	0.46	0.44	49.5
9u	U	All MCs	2	100.0	2	100.0	0.513	14.1	LOS A	3.2	24.7	0.45	0.46	0.45	48.8
Approach			1057	12.1	1057	12.1	0.513	5.4	LOS A	3.3	25.1	0.44	0.46	0.44	49.5
All Vehicles			1780	21.0	1780	21.0	0.902	9.7	LOS A	7.6	63.3	0.49	0.65	0.73	44.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. 2036 w Dev PM - Cowpasture Road / The Horsley Drive - Upgraded (Site Folder: 2036 Base with Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev - 2036 PM (Network Folder: Base w Dev - 2036)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Horsley Drive															
2	T1	All MCs	1123	7.0	1123	7.0	0.556	19.1	LOS B	21.3	157.8	0.71	0.64	0.71	45.8
3	R2	All MCs	129	22.8	129	22.8	* 0.347	34.5	LOS C	2.0	16.8	0.96	0.75	0.96	28.8
Approach			1253	8.7	1253	8.7	0.556	20.7	LOS B	21.3	157.8	0.73	0.65	0.73	44.3
East: Cowpasture Road															
4	L2	All MCs	523	8.2	523	8.2	0.259	19.2	LOS B	7.5	56.3	0.53	0.71	0.53	40.1
6	R2	All MCs	994	16.1	994	16.1	* 0.832	49.1	LOS D	28.8	229.6	0.98	0.93	1.07	27.7
Approach			1517	13.4	1517	13.4	0.832	38.8	LOS C	28.8	229.6	0.83	0.85	0.89	30.9
North: The Horsley Drive															
7	L2	All MCs	184	61.1	184	61.1	0.101	9.3	LOS A	1.0	10.9	0.33	0.62	0.33	47.0
8	T1	All MCs	1161	4.5	1161	4.5	* 0.584	34.2	LOS C	18.4	134.1	0.87	0.76	0.87	38.6
Approach			1345	12.3	1345	12.3	0.584	30.8	LOS C	18.4	134.1	0.80	0.74	0.80	39.1
All Vehicles			4115	11.6	4115	11.6	0.832	30.7	LOS C	28.8	229.6	0.79	0.75	0.81	37.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: The Horsley Drive											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
East: Cowpasture Road											
P2	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
P2B	Slip/ Bypass	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
North: The Horsley Drive											
P3B	Slip/ Bypass	53	24.4	LOS C	0.1	0.1	0.90	0.90	178.2	200.0	1.12
All Pedestrians		211	46.8	LOS E	0.2	0.2	0.94	0.94	200.6	200.0	1.00

MOVEMENT SUMMARY

Site: 101 [4. 2036 w Dev PM - Victoria Street / Canley Vale Road (Site Folder: 2036 Base with Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev - 2036 PM (Network Folder: Base w Dev - 2036)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Canley Vale Road															
1	L2	All MCs	78	13.5	78	13.5	0.399	54.7	LOS D	7.5	58.5	0.93	0.79	0.93	20.4
3	R2	All MCs	63	38.3	63	38.3	* 0.399	74.1	LOS F	7.5	58.5	0.95	0.77	0.95	19.0
Approach			141	24.6	141	24.6	0.399	63.4	LOS E	7.5	58.5	0.94	0.78	0.94	19.8
East: Victoria Street															
4	L2	All MCs	71	28.4	71	28.4	0.526	30.7	LOS C	20.8	171.0	0.71	0.64	0.71	36.1
5	T1	All MCs	956	20.8	956	20.8	* 0.526	26.0	LOS B	21.2	175.0	0.67	0.62	0.67	30.0
Approach			1026	21.3	1026	21.3	0.526	26.3	LOS B	21.2	175.0	0.67	0.62	0.67	27.8
West: Victoria Street															
11	T1	All MCs	957	15.2	957	15.2	0.629	25.1	LOS B	28.6	226.3	0.68	0.62	0.68	26.3
12	R2	All MCs	97	9.8	97	9.8	* 0.629	51.8	LOS D	16.6	129.5	0.83	0.76	0.83	34.5
Approach			1054	14.7	1054	14.7	0.629	27.5	LOS B	28.6	226.3	0.69	0.64	0.69	22.7
All Vehicles			2221	18.4	2221	18.4	0.629	29.2	LOS C	28.6	226.3	0.70	0.64	0.70	24.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Canley Vale Road											
P1	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
East: Victoria Street											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
All Pedestrians		105	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

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

MOVEMENT SUMMARY

Site: 101 [5. 2036 w Dev PM - Victoria Street / Elizabeth Street (Site Folder: 2036 Base with Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Base w Dev - 2036 PM (Network Folder: Base w Dev - 2036)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Elizabeth Street															
1	L2	All MCs	122	10.3	122	10.3	0.558	33.7	LOS C	6.8	52.4	0.96	0.83	0.96	25.5
2	T1	All MCs	124	16.9	124	16.9	* 0.859	70.2	LOS E	16.8	135.4	0.99	0.93	1.12	28.1
3	R2	All MCs	148	17.7	148	17.7	0.859	77.3	LOS F	16.8	135.4	1.00	0.99	1.21	26.3
Approach			395	15.2	395	15.2	0.859	61.6	LOS E	16.8	135.4	0.98	0.92	1.10	26.8
East: Victoria Street															
4	L2	All MCs	238	8.4	238	8.4	0.804	45.8	LOS D	26.8	211.5	0.99	0.91	1.05	30.6
5	T1	All MCs	564	25.2	564	25.2	0.804	58.4	LOS E	26.8	217.6	0.99	0.91	1.05	21.8
6	R2	All MCs	60	14.0	60	14.0	0.498	76.6	LOS F	4.2	32.6	1.00	0.76	1.00	25.2
Approach			862	19.8	862	19.8	0.804	56.2	LOS D	26.8	217.6	0.99	0.90	1.05	25.0
North: Elizabeth Street															
7	L2	All MCs	80	6.6	80	6.6	0.775	43.2	LOS D	19.8	145.8	1.00	0.92	1.06	28.8
8	T1	All MCs	275	6.1	275	6.1	* 0.912	65.5	LOS E	25.2	206.2	1.00	0.94	1.10	28.5
9	R2	All MCs	271	22.2	271	22.2	0.912	79.5	LOS F	25.2	206.2	1.00	1.05	1.27	16.2
Approach			625	13.1	625	13.1	0.912	68.7	LOS E	25.2	206.2	1.00	0.98	1.17	23.5
West: Victoria Street															
10	L2	All MCs	176	27.5	176	27.5	0.920	44.2	LOS D	34.3	276.4	1.00	1.06	1.22	23.3
11	T1	All MCs	766	15.0	766	15.0	* 0.920	76.6	LOS F	36.8	286.8	1.00	1.08	1.22	25.2
12	R2	All MCs	117	4.5	117	4.5	* 0.909	90.1	LOS F	9.2	66.6	1.00	0.99	1.41	21.2
Approach			1059	15.9	1059	15.9	0.920	72.7	LOS F	36.8	286.8	1.00	1.06	1.24	24.4
All Vehicles			2941	16.4	2941	16.4	0.920	65.5	LOS E	36.8	286.8	1.00	0.98	1.15	24.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

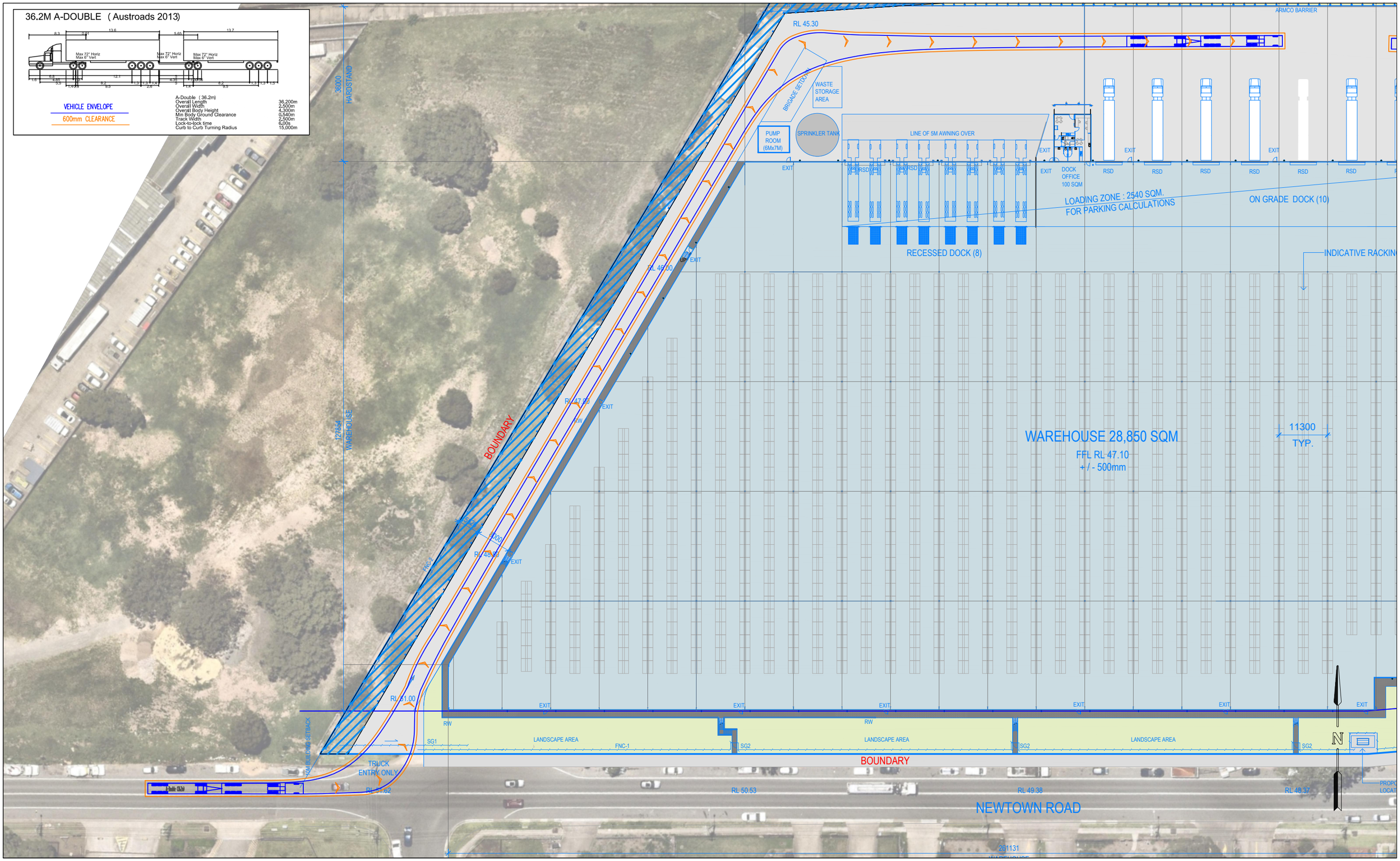
Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Elizabeth Street											
P1	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

East: Victoria Street										
P2 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
North: Elizabeth Street										
P3 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
West: Victoria Street										
P4 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92
All Pedestrians	211	64.3	LOS F	0.2	0.2	0.96	0.96	218.1	200.0	0.92

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.

Appendix B. Swept Path Analysis



GENERAL NOTES

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Base Plan prepared by SBA Architects, received 04.04.2024.

DESIGNED	Jay Wu
PAPER SIZE	A3
APPROVED BY	R. Hazell
DATE	28.05.2024
SCALE	1:800

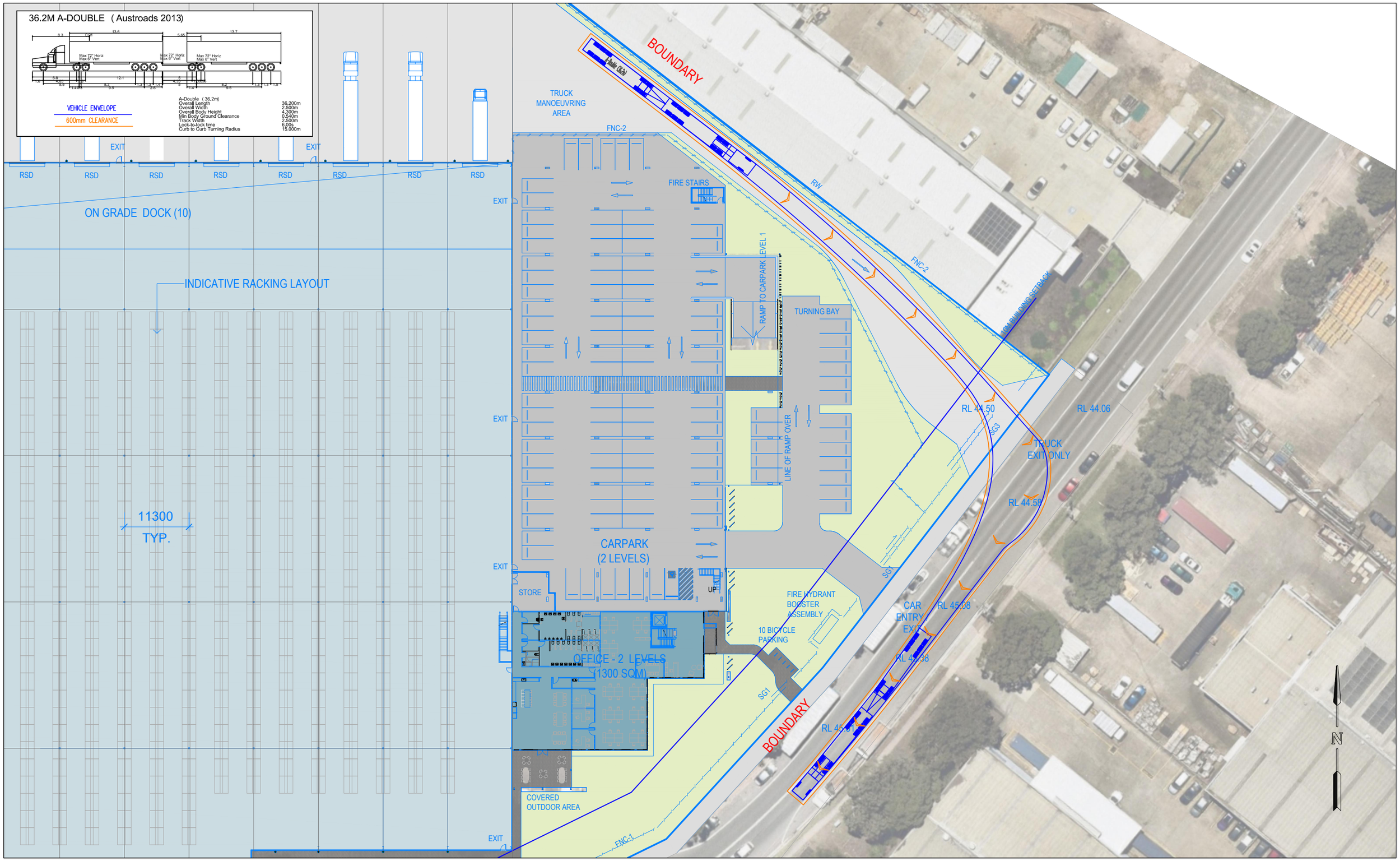
CLIENT
Centuria Capital Limited

PROJECT
P2514
88 Newton Road, Whetherill Park

DOCUMENT INFORMATION
Swept Path Analysis - 36.2m A-Double
Ground Floor

FILE NAME	SHEET
AG2514-01-v05-Design Assessment.dwg	AG01

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au



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Base Plan prepared by SBA Architects, received 04.04.2024.

DESIGNED: Jay Wu	PAPER SIZE: A3	CLIENT: Centuria Capital Limited	DOCUMENT INFORMATION: Swept Path Analysis - 36.2m A-Double; Ground Floor
APPROVED BY: R. Hazell	DATE: 28.05.2024	PROJECT: P2514; 88 Newton Road, Whetherill Park	FILE NAME: AG2514-01-v05-Design Assessment.dwg; SHEET: AG02
SCALE: 1:600			

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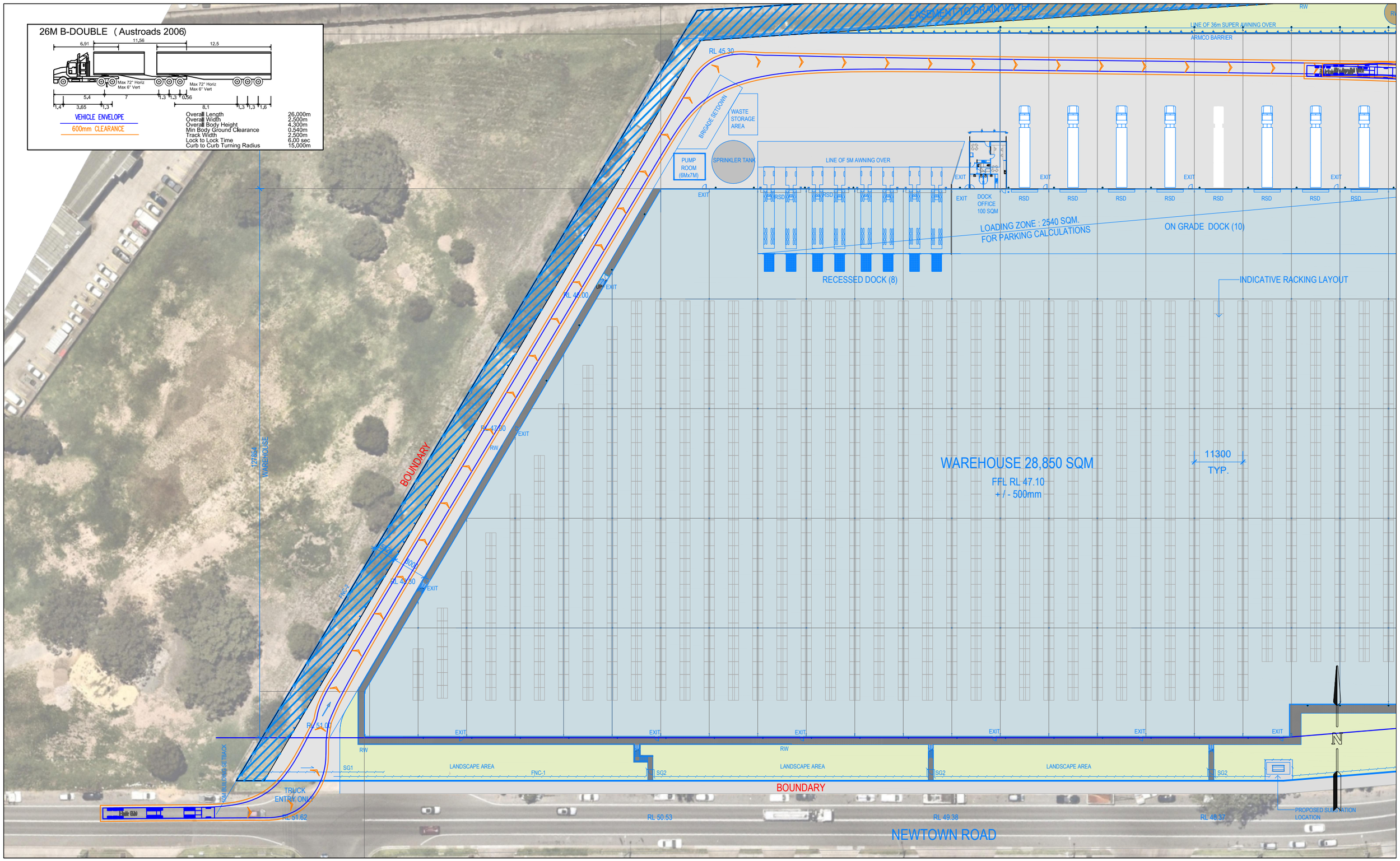

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DESIGNED	Jay Wu
PAPER SIZE	A3
APPROVED BY	R. Hazell
DATE	28.05.2024
SCALE	1:800

CLIENT
Centuria Capital Limited

PROJECT
P2514
88 Newton Road, Whetherill Park

DOCUMENT INFORMATION
Swept Path Analysis
Ground Floor

FILE NAME	SHEET
AG2514-01-v05-Design Assessment.dwg	AG03

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
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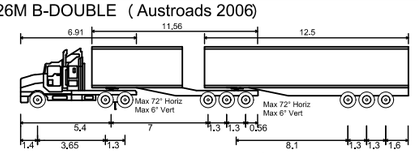
EASEMENT TO DRAIN WATER
RW
RWT
RWT
LINE OF 36m SUPER AWNING OVER
ARMCO BARRIER
RL 46.30
BOUNDARY
LINE OF 5M AWNING OVER
EXIT
RSD
DOCK OFFICE 100 SQM
LOADING ZONE : 2540 SQM.
FOR PARKING CALCULATIONS
ON GRADE DOCK (10)
RECESSED DOCK (8)
INDICATIVE RACKING LAYOUT
WAREHOUSE 28,850 SQM
FFL RL 47.10
+ / - 500mm
11300
TYP.
TRUCK MANOEUVRING AREA
FNC-2
FIRE STAIRS
RAMP TO CARPARK LEVEL 1
TURNING BAY
LINE OF RAMP OVER
CARPARK
(2 LEVELS)
STORE
UP
OFFICE - 2 LEVELS
1300 SQM
FIRE HYDRANT BOOSTER ASSEMBLY
10 BICYCLE PARKING
CAR ENTRY / EXIT
TRUCK EXIT ONLY
SG1
SG2
COVERED OUTDOOR AREA
ENC-1
LANDSCAPE AREA
PROPOSED SUBSTATION LOCATION
RL 47.20
RL 45.81
RL 44.06
RL 44.56
RL 49.38
RL 48.37
NEWTOWN ROAD
N

26M B-DOUBLE (Austroads 2006)



VEHICLE ENVELOPE
600mm CLEARANCE

Overall Length	26.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock to Lock Time	6.00 sec
Curb to Curb Turning Radius	15.000m

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PAPER SIZE	A3
APPROVED BY	R. Hazell
DATE	28.05.2024
SCALE	1:800

CLIENT: Centuria Capital Limited

PROJECT: P2514
88 Newton Road, Whetherill Park

DOCUMENT INFORMATION
Swept Path Analysis
Ground Floor

FILE NAME	SHEET
AG2514-01-v05-Design Assessment.dwg	AG04

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
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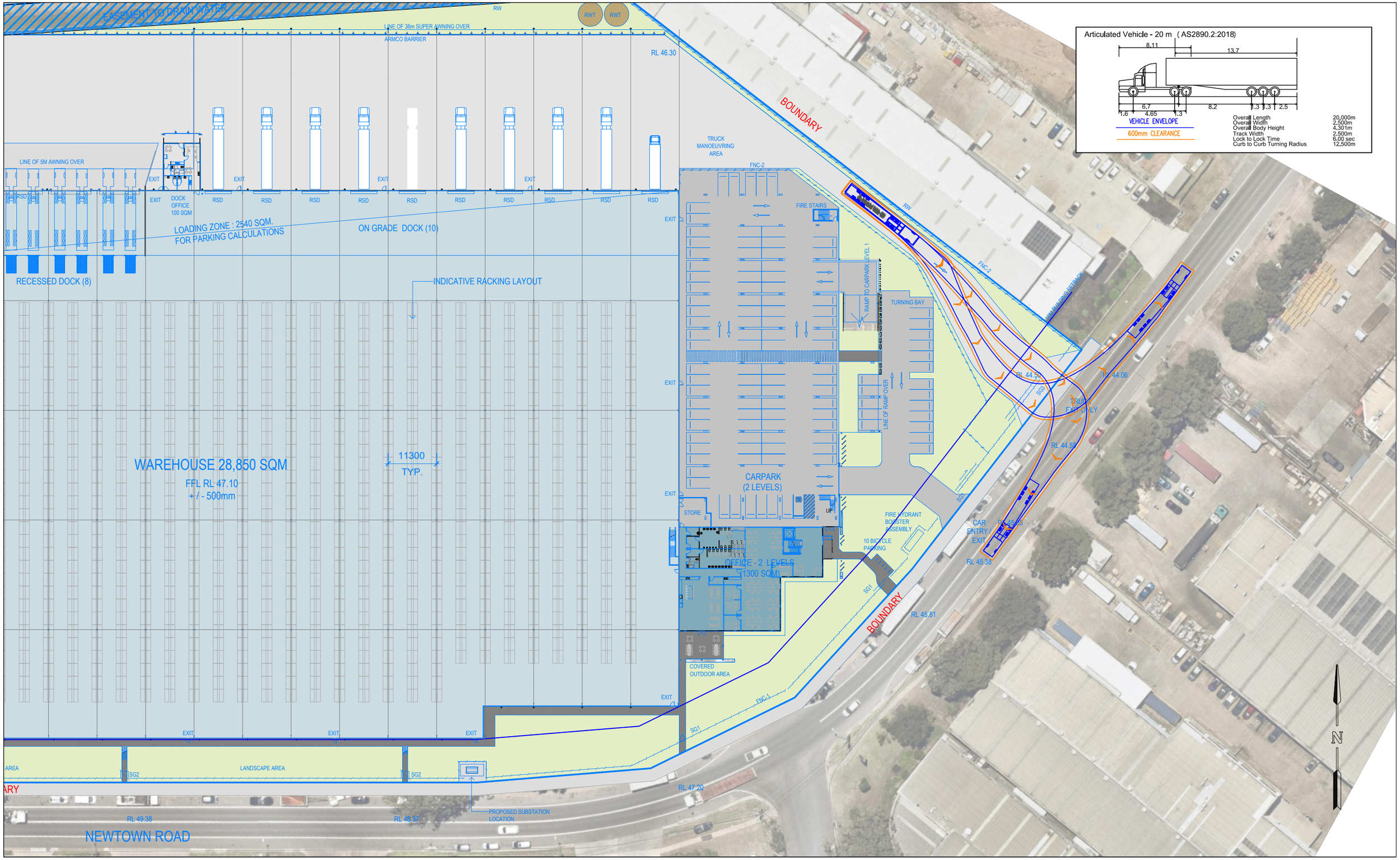

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DESIGNED: Jay Wu	PAPER SIZE: A3
APPROVED BY: R. Hazell	DATE: 28.05.2024
SCALE: 1:800	

CLIENT
Centuria Capital Limited

PROJECT
P2514
88 Newton Road, Whetherill Park

DOCUMENT INFORMATION
Swept Path Analysis
Ground Floor

FILE NAME	SHEET
AG2514-01-v05-Design Assessment.dwg	AG05

asongroup
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Sydney NSW 2000
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192100
WAREHOUSE

BOUNDARY

EASEMENT TO DRAIN WATER

RW

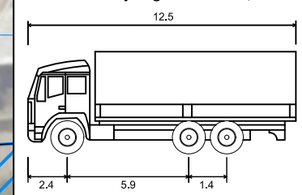
RW

LINE OF 36m SUPER AWNING OVER

ARMCO BARRIER

RL 45.30

HRV - Heavy Rigid Vehicle (AS/NZS2890.2:2002)



VEHICLE ENVELOPE

600mm CLEARANCE

Overall Length	12.500m
Overall Width	2.500m
Track Width	2.500m
Lock to Lock Time	6.00 sec
Curb to Curb Turning Radius	12.500m

WASTE STORAGE AREA

PUMP ROOM (6Mx7M)

SPRINKLER TANK

LINE OF 5M AWNING OVER

EXIT

EXIT

EXIT

EXIT

EXIT

DOCK OFFICE 100 SQM

RSD

RSD

RSD

RSD

RSD

RSD

RSD

RSD

RSD

LOADING ZONE : 2540 SQM.
FOR PARKING CALCULATIONS

ON GRADE DOCK (10)

RECESSED DOCK (8)

INDICATIVE RACKING LA

RL 46.00

UP

EXIT

RL 47.00

EXIT

N

GENERAL NOTES

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Base Plan prepared by SBA Architects, received 04.04.2024.

DESIGNED	Jay Wu
PAPER SIZE	A3
APPROVED BY	R. Hazell
DATE	28.05.2024
SCALE	1:500

CLIENT: Centuria Capital Limited

PROJECT: P2514

88 Newton Road, Whetherill Park

DOCUMENT INFORMATION

Swept Path Analysis

Fire Truck

FILE NAME	SHEET
AG2514-01-v05-Design Assessment.dwg	AG06

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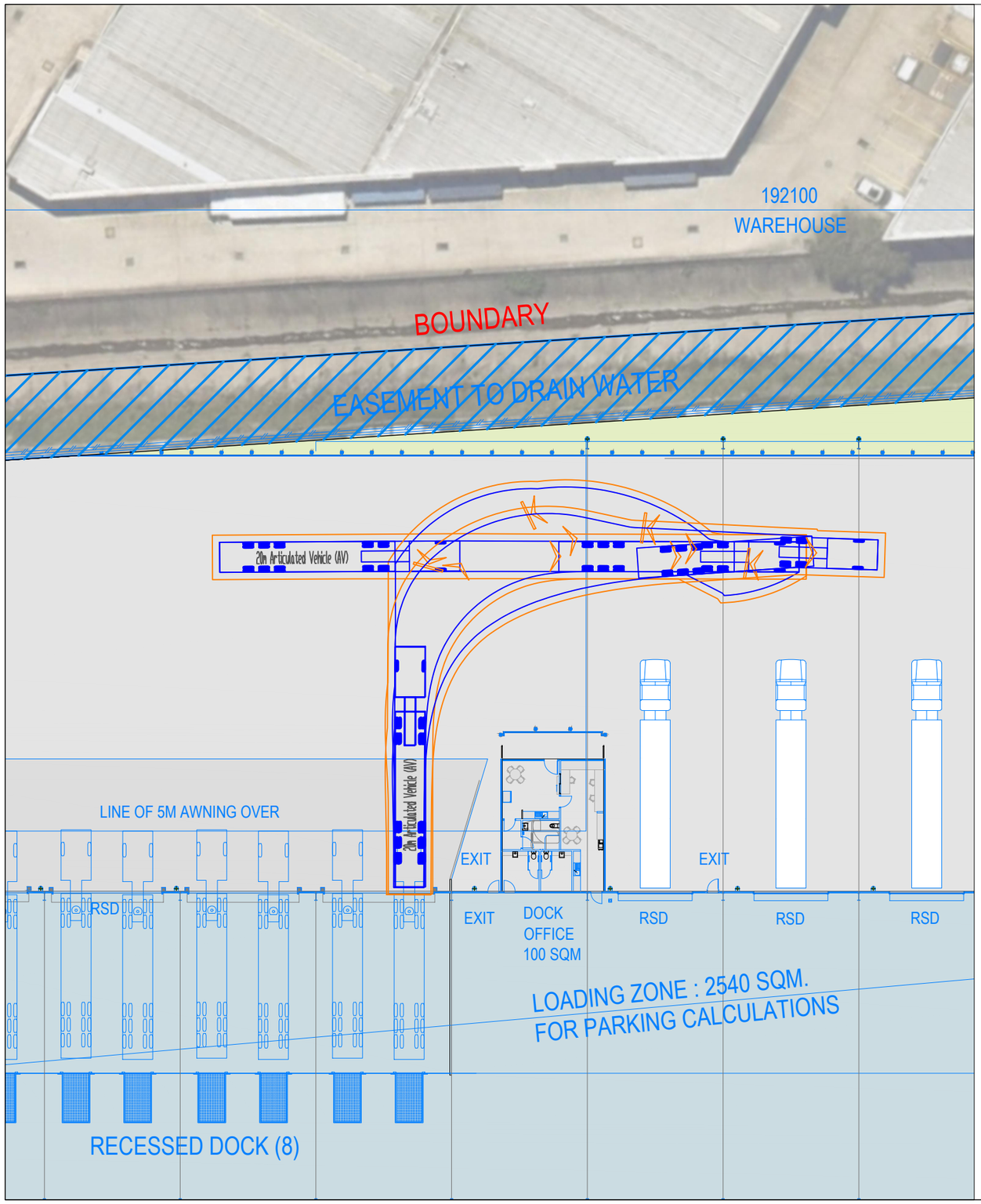

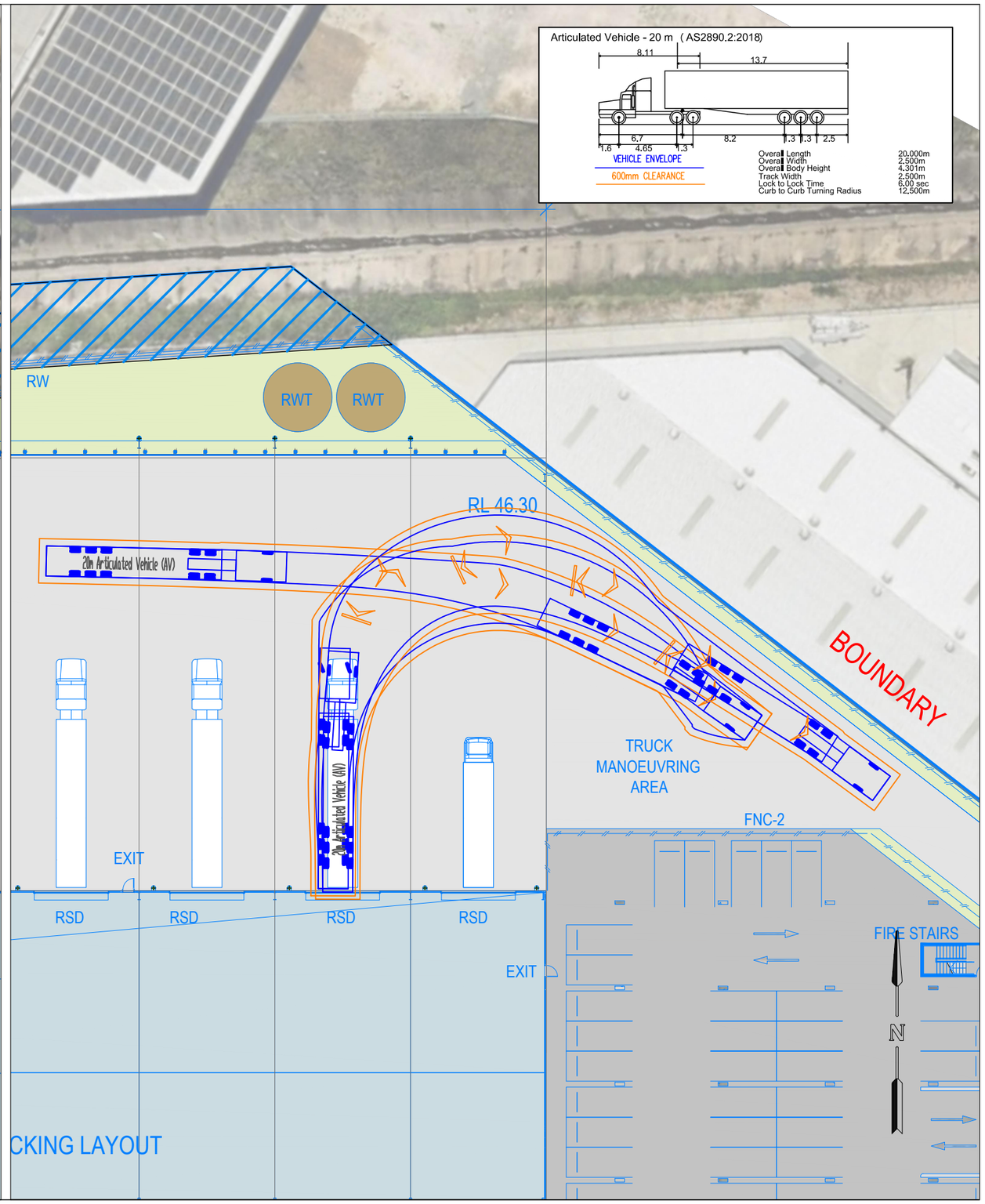

GENERAL NOTES

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Base Plan prepared by SBA Architects, received 04.04.2024.

DESIGNED	Jay Wu
PAPER SIZE	A3
APPROVED BY	R. Hazell
DATE	28.05.2024
SCALE	1:400

CLIENT
Centuria Capital Limited

PROJECT
P2514
88 Newton Road, Whetherill Park

DOCUMENT INFORMATION
Swept Path Analysis
Ground Floor

FILE NAME	SHEET
AG2514-01-v05-Design Assessment.dwg	AG07

asongroup
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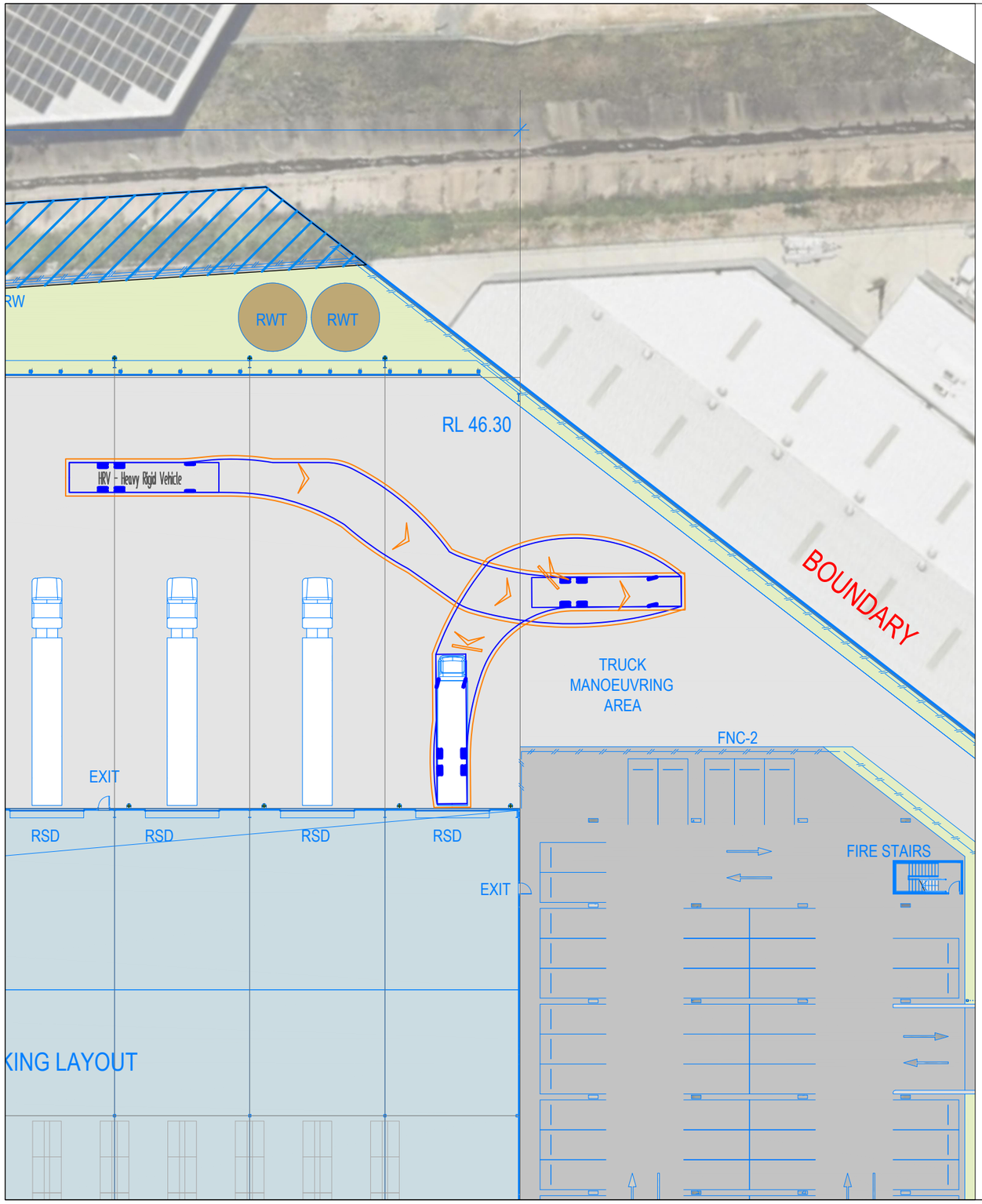

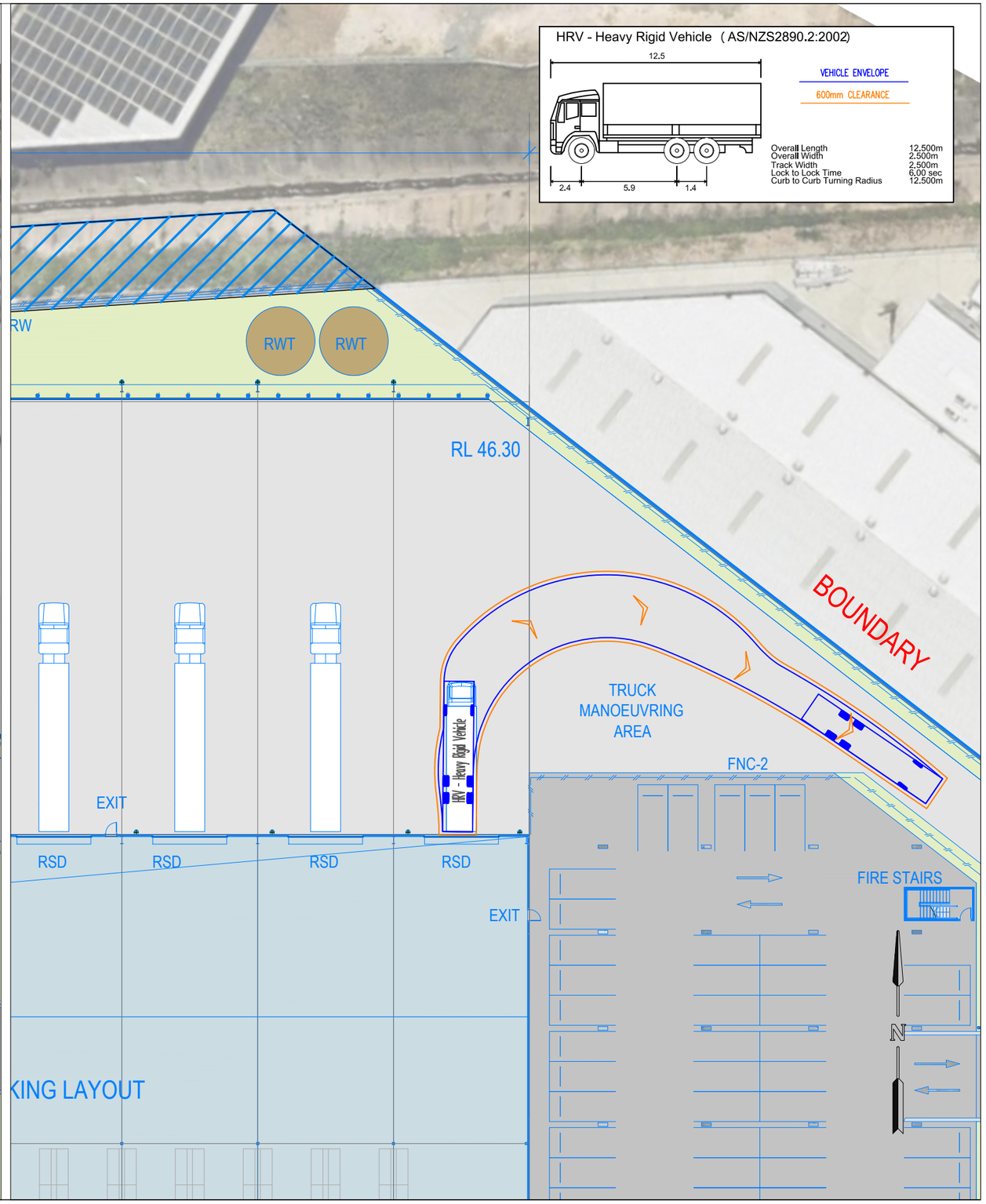

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DESIGNED	Jay Wu
PAPER SIZE	A3
APPROVED BY	R. Hazell
DATE	28.05.2024
SCALE	1400

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PROJECT
P2514
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DOCUMENT INFORMATION
Swept Path Analysis
Ground Floor

FILE NAME	SHEET
AG2514-01-v05-Design Assessment.dwg	AG08

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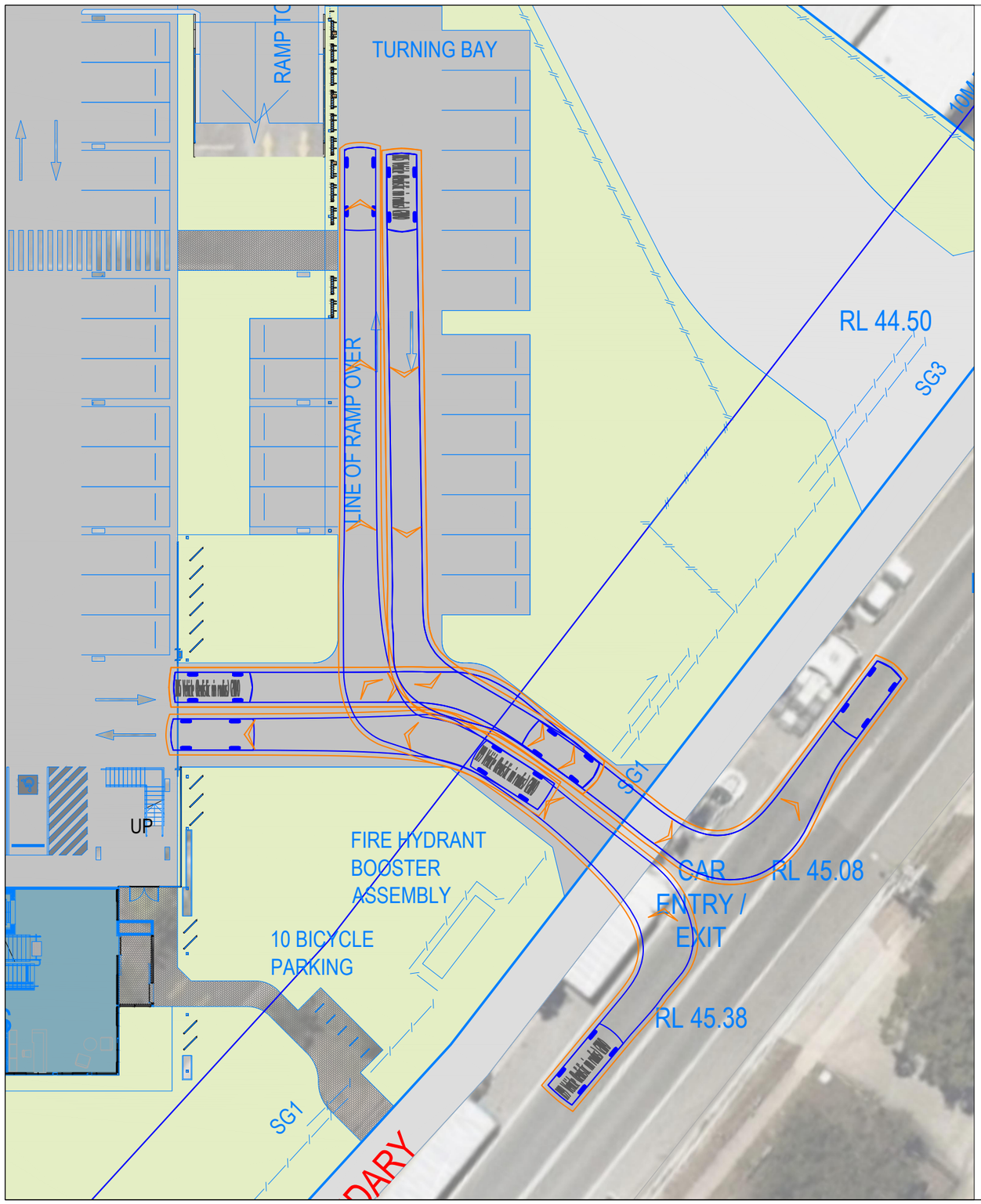

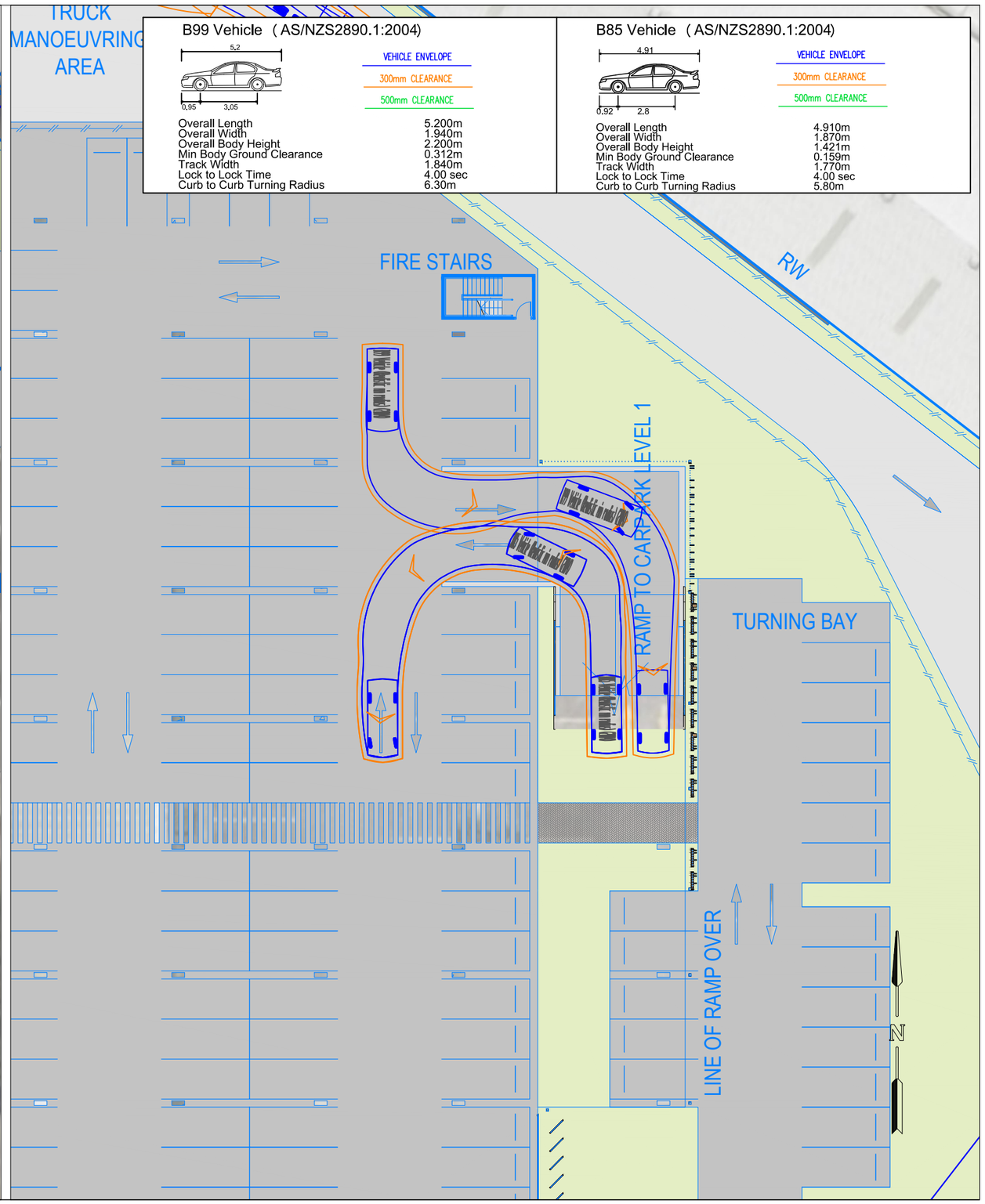

B99 Vehicle (AS/NZS2890.1:2004)

VEHICLE ENVELOPE
300mm CLEARANCE
500mm CLEARANCE

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	2.200m
Min Body Ground Clearance	0.312m
Track Width	1.840m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	6.30m

B85 Vehicle (AS/NZS2890.1:2004)

VEHICLE ENVELOPE
300mm CLEARANCE
500mm CLEARANCE

Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	5.80m

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DESIGNED	Jay Wu
PAPER SIZE	A3
APPROVED BY	R. Hazell
DATE	28.05.2024
SCALE	1:300

CLIENT: Centuria Capital Limited

PROJECT: P2514
88 Newton Road, Whetherill Park

DOCUMENT INFORMATION
Swept Path Analysis
Ground Floor

FILE NAME	SHEET
AG2514-01-v05-Design Assessment.dwg	AG09

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