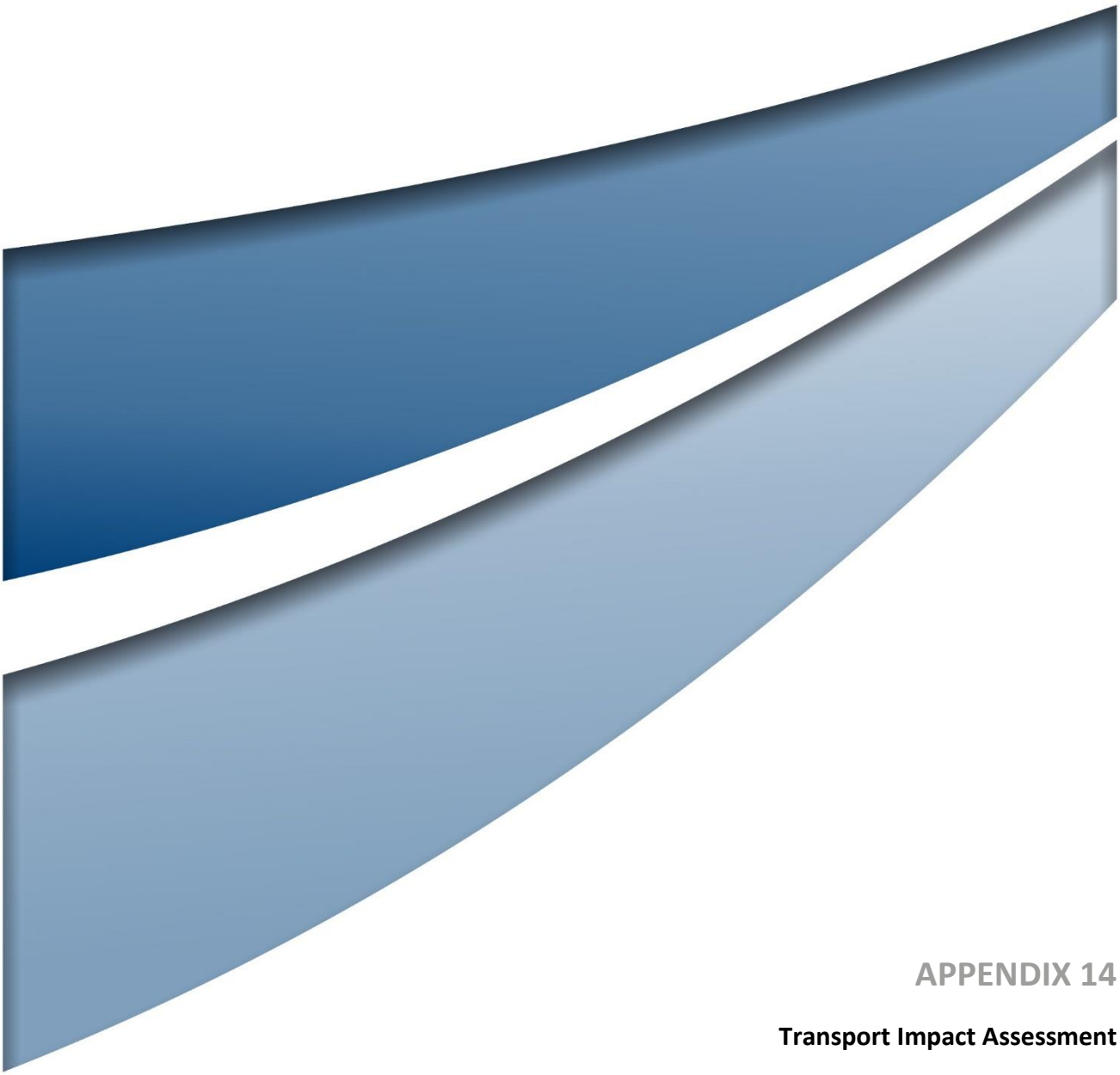

APPENDIX 14

Transport Impact Assessment

Gundary Solar Farm (SSD-48225958)
EIS Transport Impact Assessment

Prepared for:

Lightsource bp

1 August 2024

The Transport Planning Partnership

Gundary Solar Farm (SSD-48225958)
EIS Transport Impact Assessment

Client: Lightsource bp

Version: V02

Date: 1 August 2024

TTPP Reference: 23042

Quality Record

Version	Date	Prepared by	Reviewed by	Approved by	Signature
V01	19/02/2024	C. Hanna	J. Rudd	J. Rudd	
V02	01/08/2024	J. Rudd	J. Rudd	J. Rudd	

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C. TRANSPORT ROUTE SWEPT PATH ANALYSIS

D. PROJECT SITE ACCESS CONCEPT LAYOUT

1 Introduction

1.1 Project Overview

Lightsource Development Services Australia Pty Ltd (Lightsource bp) proposes to develop the Gundary Solar Farm (the Project) in the Southern Tablelands of New South Wales (NSW), approximately 10 kilometres (km) southeast of Goulburn within the Goulburn Mulwaree Local Government Area (LGA). The location of the Project and its regional context is presented in Figure 1.1.

The Project will involve the construction, operation, maintenance and decommissioning of a 400 Megawatt peak (MWp) solar farm with a Battery Energy Storage System (BESS) of up to 555 MWp and 1,570 Megawatt hour (MWh) capacity and associated infrastructure to connect the Project to the national electricity grid.

The Project will be accessed from Windellama Road off the Hume Highway, at 961 Windellama Road. Intersection works on Windellama Road are proposed as part of the Project to upgrade the Project access to accommodate heavy vehicles. The Project's conceptual layout is included in Figure 1.2.

The Project will supply electricity to the National Electricity Market (NEM), via a new onsite connection to the existing 330kV overhead transmission line traversing through the north-west corner of the Project Area. The Project will generate enough clean energy for about 133,000 homes and reduce carbon emissions by 670,000 tonnes. The BESS will have capacity to store up to 1,570 MWh of on-demand energy for supply to the grid.

The Project would be located on land zoned RU1 – Primary Production. The area surrounding the Project is characterised predominantly by agricultural lands associated with rural residential properties, small settlements, conservation areas and rural tourism. Land within and adjacent to the Project has been subject to extensive cultivation associated with historic and more recent agricultural land uses.

The Project will be developed across five freehold lots, covering an area of approximately 702 ha (the Project Area). These properties are primarily used for grazing activities. The Project Area also includes a small section of Windellama Road for proposed intersection works to upgrade the Project access to accommodate heavy vehicles. The Project infrastructure will cover approximately 512 ha (the development footprint).

The Project is expected to generate up to 400 Full Time Equivalent (FTE) jobs over the 18-to-24-month construction period with up to four FTE jobs during operation.

The Project is a State Significant Development (SSD) under the *State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP)* as the capital value of the Project is over

$30 million. A development application (DA) for the Project is required to be submitted under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Figure 1.1: Locality and Regional Context

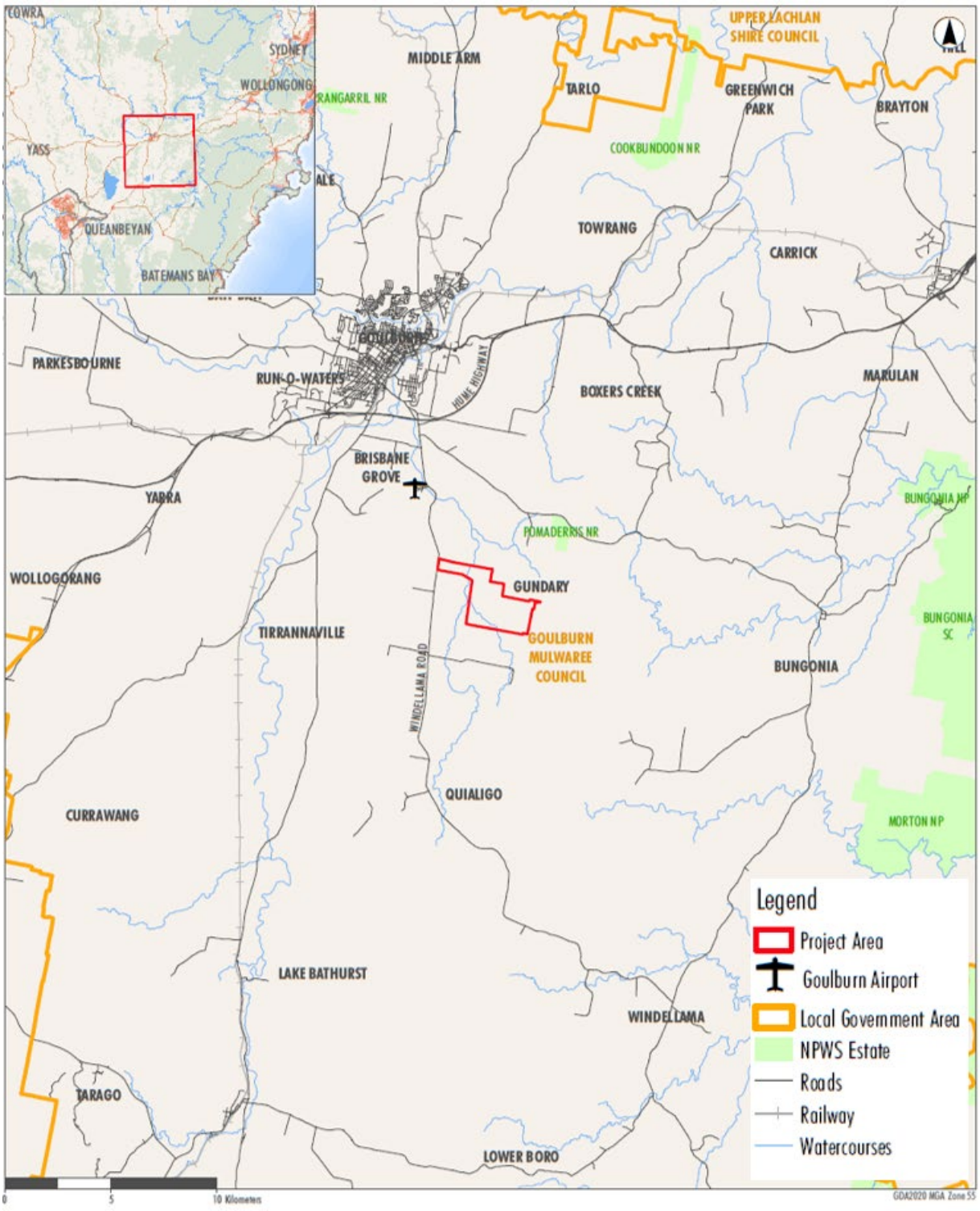


Figure 1.2: Project Conceptual Layout

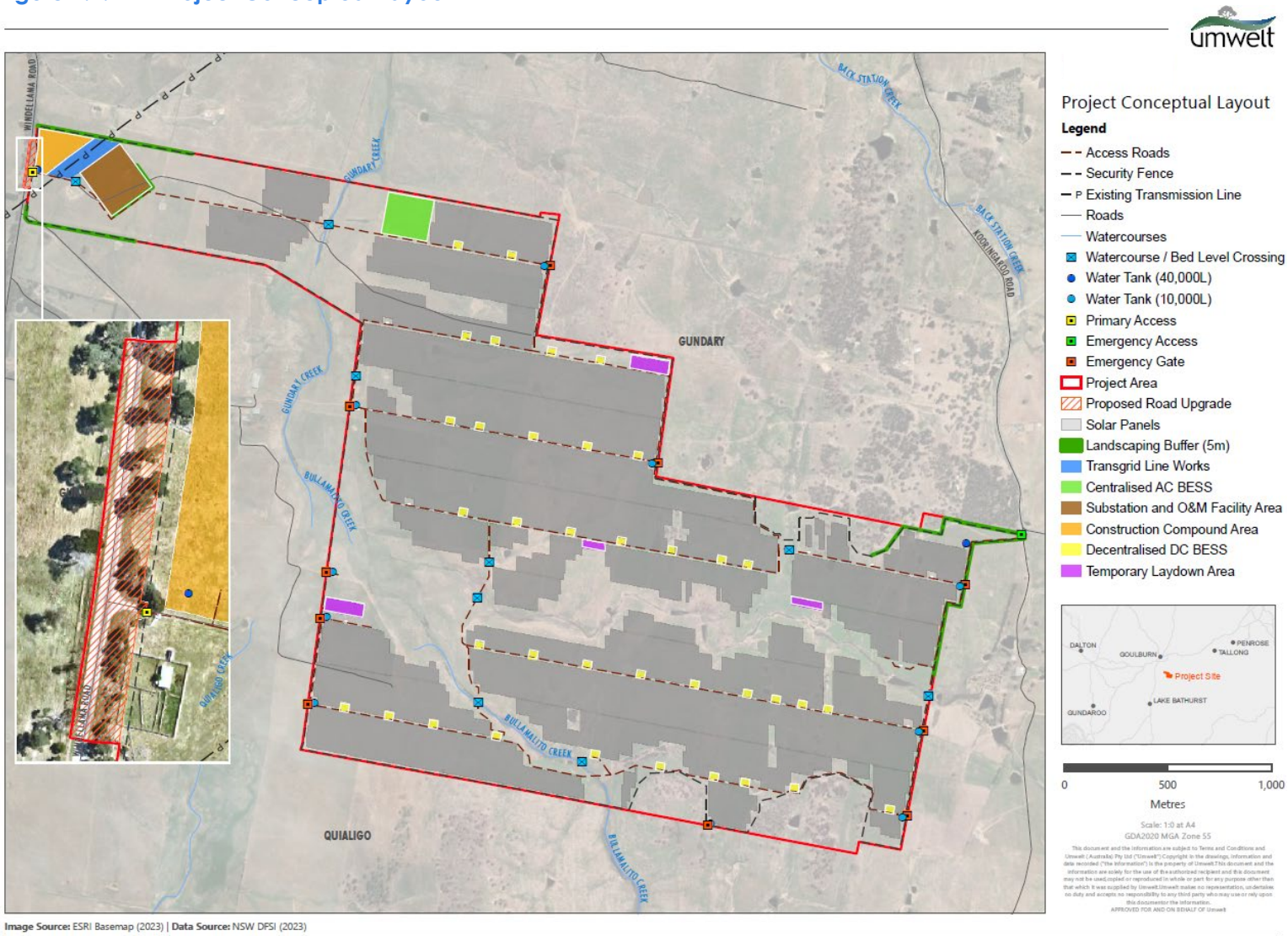


Image Source: ESRI Basemap (2023) | **Data Source:** NSW DFSI (2023)

1.2 Transport Assessment – Scope and Methodology

This *Traffic Impact Assessment* (TIA) report has been prepared by The Transport Planning Partnership Pty Ltd (TTPP) to accompany the Environmental Impact Statement (EIS) prepared as part of the SSD Application (SSD-48225958) for the Gundary Solar Farm (the Project).

This TIA report presents the findings of TTPP's assessment of the traffic aspects of the Project in accordance with the Secretary's Environmental Assessment Requirements (SEARs) issued by the then Department of Planning, Industry and Environment (DPIE) on 10 November 2022. It is noted that DPIE has changed their name to the Department of Planning, Housing and Infrastructure (DPHI). DPHI will be used as the reference to the department in the following sections of this document.

The transport assessment undertaken by TTPP investigated the traffic implications associated with construction, operation and decommissioning of the Project.

The scope and methodology utilised by TTPP in the preparation of this TIA included the following:

- Review of background information
- Project team discussions regarding construction, operation and decommissioning phases of the project
- Consultation with Transport for NSW (TfNSW) and Goulburn Mulwaree Council (Council)
- Inspections of the Project site and surrounding road network, specifically inspections of the proposed construction vehicle routes between the Project site access and the Hume Highway
- Traffic surveys (2023) and SIDRA modelling of key intersections along the potential construction vehicle routes
- Estimated the traffic generation and distribution of Project related traffic for construction, operation and decommissioning phases of the project.
- Assessment of the potential traffic impacts, including cumulative impacts, to the surrounding road network associated with the Project and identification measures to mitigate identified implications.

1.3 Environmental Assessment Requirements

As noted above, the Secretary's Environmental Assessment Requirements (SEARs) were issued for the Project by (DPHI) on 10 November 2022.

The specific requirements (SEARs) for the traffic assessment and where these requirements have been addressed in this TIA report is summarised in Table 1.1.

Table 1.1: Traffic Related SEARs for the Gundary Solar Farm Project

Traffic related SEAR	Where Addressed in This TIA Report
DPHI	
An assessment of the peak and average traffic generation, including over-dimensional vehicles / heavy vehicles requiring escort and construction worker transportation;	Section 5
An assessment of the likely transport impacts to the site access route(s), site access points, any Crown land, particularly in relation to the capacity and conditions of the roads, road safety and intersection performance;	Section 2 and Section 5
A cumulative impact assessment of traffic from nearby developments; and	Section 5
Provide details of measures to mitigate and / or manage potential impacts including a schedule of all required road upgrades (including resulting from heavy vehicle and over mass / over dimensional traffic haulage routes)., road maintenance contributions, and any other traffic control measures developed in consultation with the relevant road authorities.	Section 6
TfNSW	
Prepare a Traffic Impact Study	This Report
Strategic / Concept Design of road network improvements	Section 2.3 Section 5.2.1
Reflection	Section 5.12
Driver Code of Conduct	Section 6.3.1
Consultation with TfNSW	Section 1.2 Section 2.4.1 Section 5.1 Section 5.4
Goulburn Mulwaree Council	
Safety and Route Selection for construction vehicles	Section 5.1 Section 5.4 Section 6.3
Potential damage to road network, need for maintenance and renewal plan	Section 6.4
Implications of the Goulburn Floodplain	Section 5.13

2 The Project

2.1 Project Site Location

The proposed Gundary Solar Farm (the Project) site covers approximately 702 hectares of land located some 10 km south (south-east) of the township of Goulburn.

The location of the Project site is shown in Figure 1.1.

The Project area is bounded by Windellama Road to the west and Kooringaroo Road to the north-eastern corner of the Project site. Properties to the north, east, south and west of the Project site are rural residential properties with agricultural land uses.

2.2 Proposed On-site Facilities

During the operational phase of the Project, the on-site facilities and infrastructure will include:

- 660,000 solar panels (approximate)
- A lithium-ion BESS to store energy generated by the Project, comprising one of the following options: 325 MWp/650 MWh centralised alternating current (AC) BESS. 230 MWp/920 MWh decentralised direct current (DC) BESS. or combined centralised AC and decentralised DC BESS with a total capacity of 555 MWp/1,570 MWh.
- Substation / Switching station with on-site connection to the existing 330kV overhead power lines
- Operation and Maintenance facilities, including staff amenities, car parking and workshop
- Internal gravel access tracks, including some watercourse crossings (via culverts / bed level crossings to facilitate access across the site
- Primary access point from the existing driveway off Windellama Road, with an upgraded intersection to accommodate heavy vehicles
- Emergency access point via the existing entrance off Kooringaroo Road proposed on the east (for emergencies only)
- Perimeter security fencing, water tanks and lighting.

During construction, temporary construction facilities will be provided on-site including:

- Construction compound with office amenities, parking, storage
- Laydown areas suitable for storing plant and equipment
- Waste management facilities.

Once construction is complete, these temporary facilities will be removed from the Project site and the areas rehabilitated to their previous condition.

2.3 Project Area Access

The Project's primary access is proposed to be located along the Project Area's frontage to Windellama Road.

The Project's primary access would be via the existing driveway which is located approximately halfway along the Project Area's some 460m frontage to Windellama Road as shown in Figure 2.1.

As shown in Figure 2.1, the existing driveway consists of gravel surfaced road shoulders on the turn in and turn out vehicle paths.

Intersection upgrade works are proposed for the Project's primary access at Windellama Road to facilitate access for vehicles associated with the Project's construction, operation and decommissioning stages. The proposed upgrade works are detailed in Section 5 of this TIA report.

In addition to the Project's primary access at Windellama Road, a secondary / emergency vehicle access will be provided at the Project site's existing vehicle access from Kooringaroo Road. The secondary access would only be utilised for emergencies.

Approximately 20 km of internal all weather access tracks would be constructed within the Project's development footprint to provide access to the various areas of the Project site for construction as well as on-going operations and maintenance.

The access tracks, comprising of compacted gravel, would be approximately 4 m wide with turning bays for emergency vehicles, and main access track of 6 m wide to allow for the safe delivery, unloading and installation of key components.

2.4 Project Construction

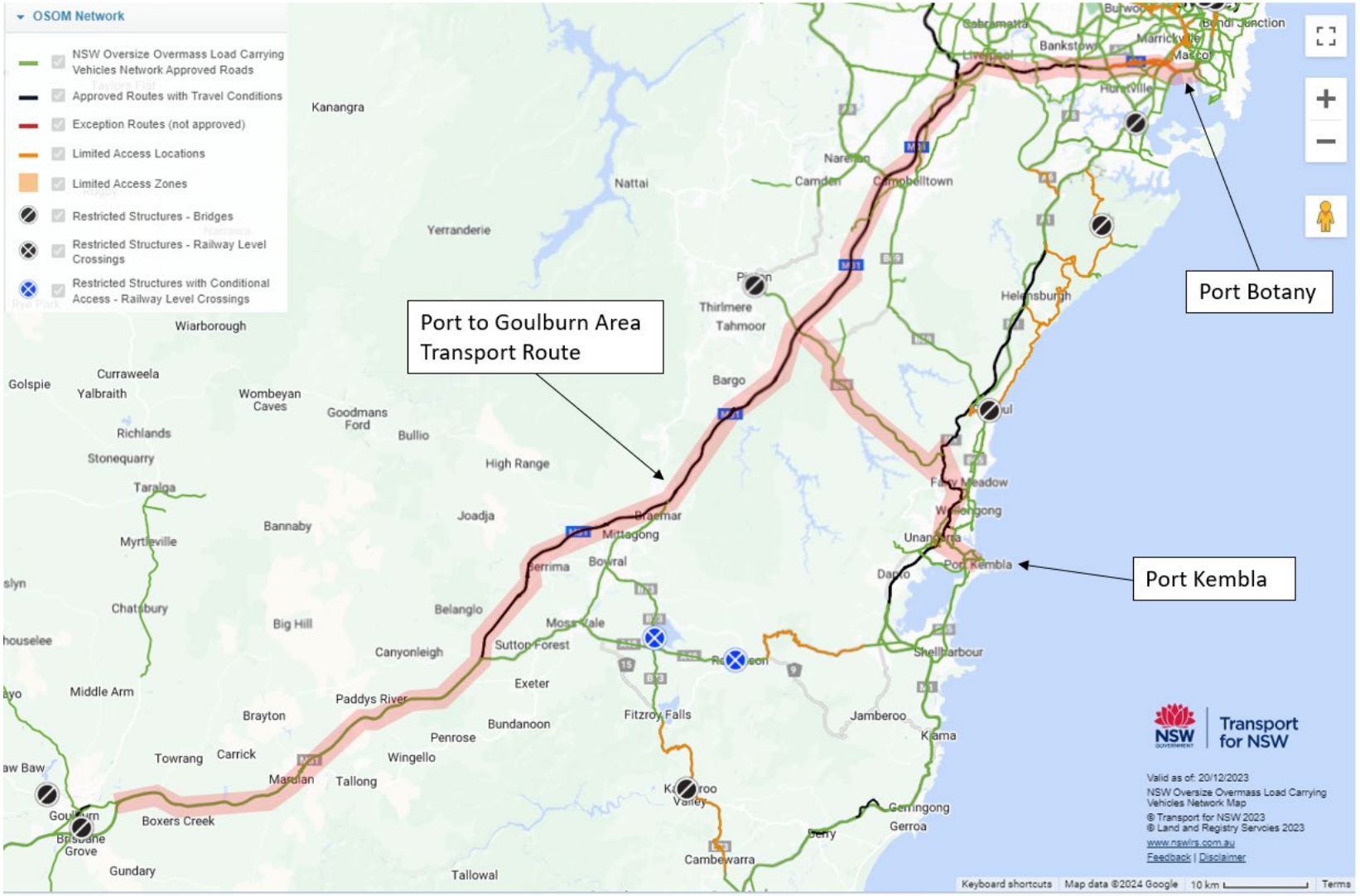
2.4.1 Construction Vehicle Routes

Major solar and BESS components would be delivered to either Port Botany in Sydney or Port Kembla south of Wollongong and transported to the Project Area by truck via the Hume Highway (see Figure 2.2).

Figure 2.1: Project Primary Site Access (Proposed) – Windellama Road

Source: www.nearmap.com (accessed 5/2/24)

Figure 2.2: Transport Route Options - Between Port(s) and Goulburn Area



The available routes between Port Botany or Port Kembla to the Hume Highway are designated as Oversize Over Mass (OSOM) Load Carrying Vehicles Network Approved Roads.

Two transport routes for solar and BESS components between the Hume Highway at Goulburn and the Project site have been considered as part of the planning process.

These two route options essentially seek to utilise either the 'northern' or 'southern' Goulburn exit from the Hume Highway and then use a combination of roads to access Windellama Road and the Project site.

These two routes (see Figure 2.3) are described as:

- **Option 1**: Hume Highway - Sydney Road – Reyolds Street – Grafton Street - Sloane Street – Braidwood Road - Bungonia Road - Windellama Road
- **Option 2**: Hume Highway - Hume Street - Garroorigang Road – Sloane Street - Braidwood Road – Bungonia Road - Windellama Road.

As will be assessed further in Section 5 of this TIA report, both Option 1 and Option 2 are considered to be feasible transport routes. However, through consultation with Council and TfNSW, Option 2 using the southern Goulburn Exit at the Hume Highway has been identified as the preferred transport route option for the Project.

2.4.2 Duration of Works

Construction and commissioning of the Project will take approximately 18 to 24 months, with a peak period of approximately 9 months towards the middle of the construction period.

Project site preparation and Project construction is planned to commence in late 2025 or early 2026, pending environmental approvals, licensing and completion of design and procurement processes.

2.4.3 Construction Hours

Construction activities associated with the Project are proposed to be:

- 7am to 6pm Monday to Friday
- 8am to 1pm on Saturdays
- No works on Sunday or public holidays.

Figure 2.3: Transport Route Options - Between Hume Hwy and Project Site

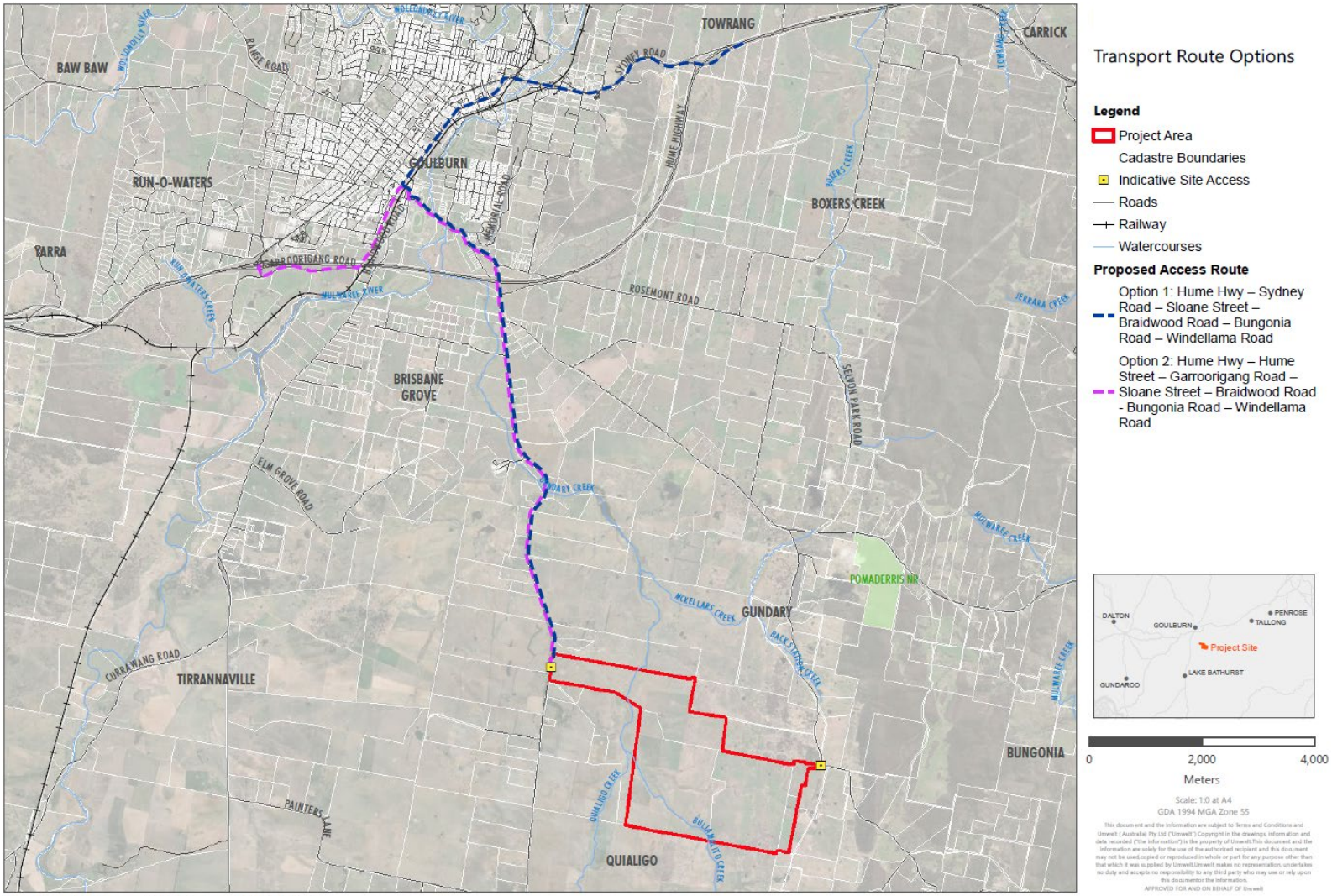


Image Source: ESRI Basemap (2023) | **Data Source:** NSW DFSI (2023)

In general, no construction activities would occur on Sundays or public holidays. Exceptions to these hours would be limited to activities with low noise generation where practicable, emergency works or where required for deliveries or dispatches by an authority due to safety reasons.

Council and surrounding landholders would be notified of any foreseeable exceptions.

2.4.4 Construction Workforce

It is estimated that the Project will generate up to 400 Full Time Equivalent (FTE) employment opportunities during construction with approximately 250 personnel on site during peak construction with a range of different skills required.

Lightsource bp will engage an Engineering, Procurement and Construction (EPC) Contractor to construct the Project.

The EPC Contractor will aim to engage a minimum of 5% local labour for construction and source local sub-contractors and suppliers, where possible and subject to local constraints.

Furthermore, Lightsource bp is proposing to partner with the local TAFE and other education providers to facilitate training in renewable energy employment opportunities.

2.5 Operation of Project

The operational lifespan of the Project is expected to be approximately 40 years from energisation of the project, with operations commencing in approximately Q4 2027 (assuming a 18-24-month construction period). It is anticipated that up to four FTE jobs would be required during operations.

Throughout operations, ongoing maintenance of the Project Area and infrastructure will be required. The operation of the Project would be largely automatically controlled by the SCADA system with inputs from the meteorology stations and other equipment.

Planned maintenance activities would likely include:

- Routine visual inspections, general maintenance and cleaning operations of the solar arrays and substation, as required.
- Vegetation management including potential sheep grazing and the use of seeding or armouring (i.e. jute mesh) to avoid erosion.
- 24-hour site security response.

- Replacement of equipment and infrastructure, as required.
- Pest and vermin control.
- Livestock operations.

During operations regular lightweight vehicle access will be required with occasional heavy vehicles access (i.e replacing inverters, transformers or components of the BESS).

2.6 Decommissioning of the Project

Decommissioning of the Project will occur at the end of its operational life. It is noted that the operational life of the Project may be extended with the facility repowered to continue operation.

A decommissioning plan for the Project and associated infrastructure will be prepared in advance of decommissioning in consultation with the relevant regulatory authorities and landholders.

The basis of the plan will be that the Project and associated infrastructure are to be decommissioned in line with the applicable legislative requirements and best practice guidelines existing at that time. Should the Project be approved, the development consent for the Project will include standard conditions regarding the cessation of operations, decommissioning and rehabilitation of the Project Area.

Lightsource bp or its contractors will seek to recycle all dismantled and decommissioned infrastructure and equipment, where feasible and practicable. Structures and equipment that cannot be recycled would be disposed of at an approved waste management facility in accordance with all statutory requirements.

Vehicle movements and personnel requirements during the decommissioning phase are expected to be similar or less than with the construction phase of the Project.

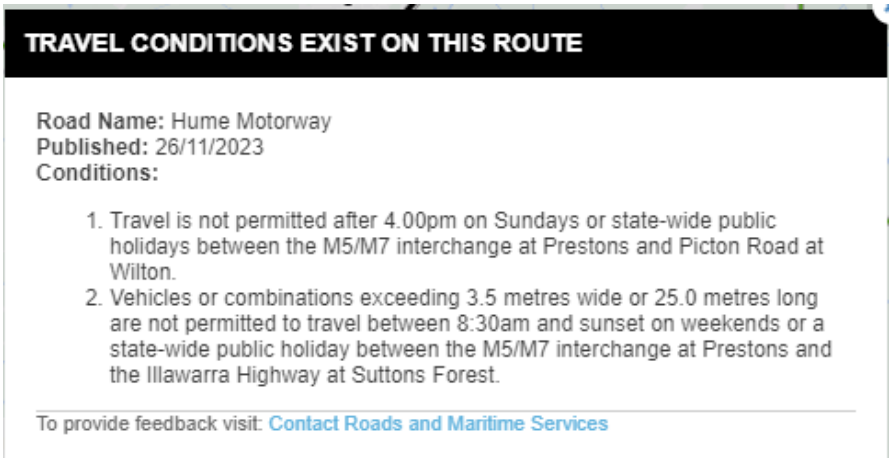
3 Existing Conditions

3.1 Road Network

The proposed transport routes for construction vehicles associated with the Project will comprise both major (National and State roads) and minor roads (Council Roads).

As shown in Figure 2.2, TfNSW approved OSOM vehicle routes are available between Port Botany and the alternative Port Kembla through to the Hume Highway and to Goulburn.

It is noted there are restricted travel times on the Hume Highway for OSOM vehicles between the M5/M7 Interchange at Prestons and the Illawarra Highway (A48). The restriction applies to the following hours:



Source: https://maps.transport.nsw.gov.au/egeomaps/load-carrying-vehicles-network/

For travel between the Hume Highway and the Project site, there are two potential route options, namely:

- Option 1: Hume Highway - Sydney Road – Reyolds Street – Grafton Street - Sloane Street – Braidwood Road - Bungonia Road - Windellama Road
- Option 2: Hume Highway - Hume Street - Garroorigang Road – Sloane Street - Braidwood Road – Bungonia Road - Windellama Road.

As shown in Figure 3.1, Option 1 comprises approved OSOM roads between the Hume Highway through to the intersection of Braidwood Road and Bungonia Road.

Figure 3.2, indicates that Option 2 is not a designated OSOM route between the Hume Highway and Braidwood Road.

Both Option 1 and Option 2 utilise what can be described as a bypass of Goulburn's main street (Auburn Street).

Reynolds Street, Grafton Street, Sloane Street and Garroorigang Road run between the northern and southern exits to Goulburn from the Hume Highway. This bypass route runs along the railway line at the back of the main street.

The roads forming this bypass generally provide a single travel lane in each direction.

Option 1 roads are fronted by a mixture of residential, commercial and retail land uses with a posted speed limit of 60km/h. School zones (40km/hr) apply along Reynolds Street at the St Joseph's Primary School.

Along Option 2, Garroorigang Road is signposted with an 80km/hr speed limit with rural frontages. Sloane Street has industrial frontages transitioning to residential with a sign posted speed limit of 60km/hr. Both Option 1 and Option 2 roads are generally designed to accommodate heavy vehicles with mountable roundabout treatments and wide corner radius.

Bungonia Road, between Memorial Road, is a two-lane two-way rural residential road with kerb and gutter recently constructed along one side of the road and sealed shoulder on the other. Beyond Memorial Road towards the Project site, Bungonia Road becomes a rural road with no kerb and gutter. The posted speed limit along Bungonia Road is 60 km/hr.

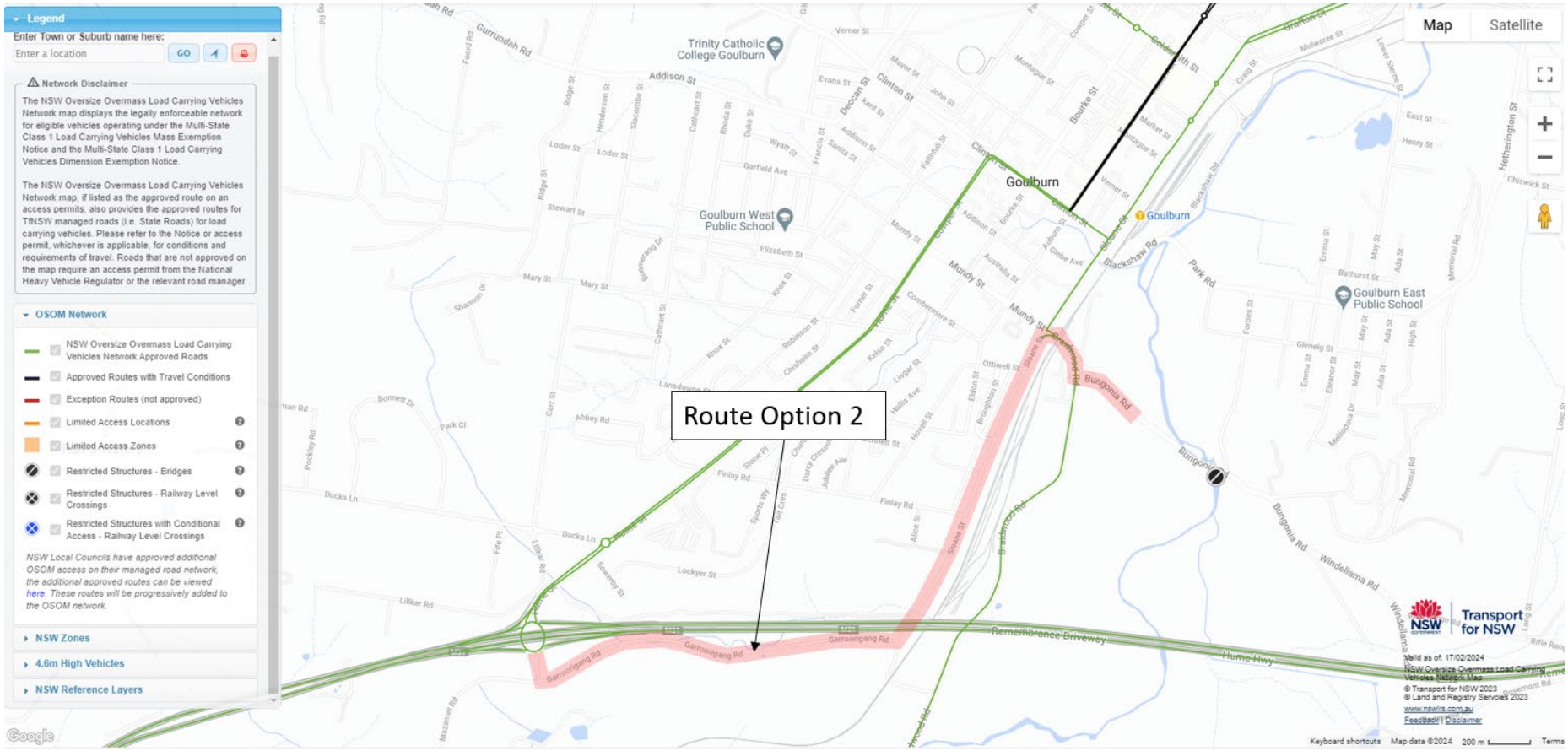
The Lansdowne Bridge is located on Bungonia Road and is thus located along the transport route for construction vehicles associated with the Project. The Lansdowne Bridge is identified as a 'restricted structure' by TfNSW. The capacity of the bridge to accommodate Project related construction traffic is assessed in Section 5.4 of this report.

Windellama Road is a rural two-way road with a single travel lane provided in each direction. The posted speed limit along Windellama Road at the Goulburn end is 80 km/hr increasing to 100km/hr south of the Hume Highway.

At the proposed Project site access, Windellama Road has a sealed road width of approximately 7m providing one travel lane in each direction.

Figure 3.1: Transport Route Option 1 Northern Exit from Hume Highway at Goulburn

Figure 3.2: Transport Route Option 2 Southern Exit from Hume Highway at Goulburn



3.2 Surveyed Road Network Traffic Flows

To facilitate the assessment of road network operation, traffic flow surveys along the proposed construction vehicle routes were undertaken by TTPP in August and September 2023.

Peak period turning movement counts were undertaken at the following intersections:

1. Braidwood Road / Bungonia Road
2. Braidwood Road / Sloane Street
3. Bungonia Road / Forbes Street
4. Bungonia Road / Memorial Road
5. Hume Street / Garroorigang Road / Mazamet Road
6. Sydney Road / Union Street / Lagoon Street
7. Sloane Street / Garroorigang Road
8. Windellama Road / Rifle Range Road

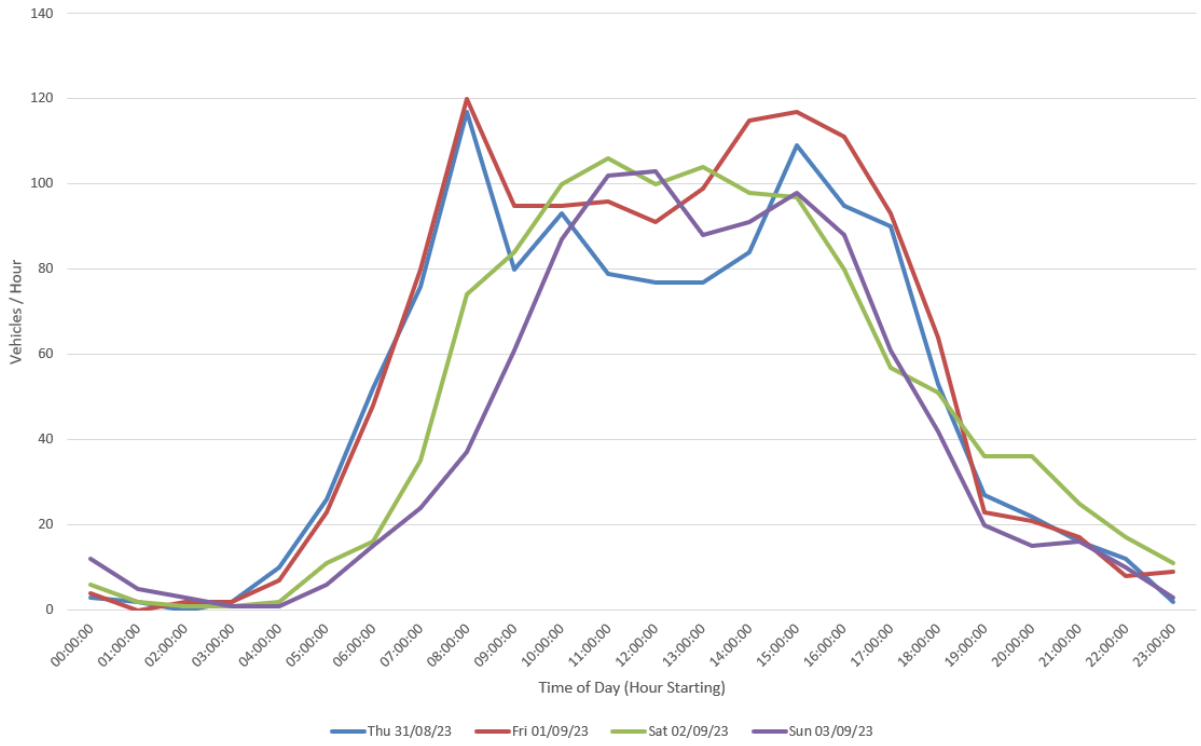
An automatic tube count (ATC) was also undertaken on Windellama Road at the proposed Project site access.

The locations of the traffic surveys are shown in Figure 3.3.

Figure 3.3: TTPP Traffic Survey Locations (2023)

The surveyed two-way traffic flows along Windellama Road at the proposed Project site access are summarised in Figure 3.4.

Figure 3.4: Surveyed Two-Way Traffic Flow Profile for Windellama Road at Project Site Access



The surveyed flows indicate that Windellama Road carries a maximum of 120 vehicles per hour (two-way) at the Project site access. This two-way peak occurs on weekdays between 7am-8am and between 3pm-4pm. Weekend two-way flows peak at about 100 vehicles per hour around midday.

Detailed traffic survey data is presented in Appendix A.

3.3 Road Network Operation

The operation of the key intersections along the proposed transport routes for the Project have been assessed using surveyed turning movements and SIDRA INTERSECTION (SIDRA), a computer-based modelling package which calculates intersection performance.

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

Table 3.1 shows the criteria that SIDRA adopts in assessing the level of service.

Table 3.1: SIDRA level of service criteria

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

Reference: TfNSW Traffic Modelling Guidelines 2013, Table 14.4

Table 3.2 presents a summary of the existing operation of key intersections along the Project's transport route. Full results presented in Appendix B of this report.

The SIDRA modelling results indicate that all intersections currently operate satisfactorily with good levels of service (i.e. LOS A – LoS D).

With the exception of the Sydney Road / Reynolds Street / Lagoon Street / Union Street intersection, all of the modelled intersections currently operate with minimal delays and significant intersection capacity (Los A).

It is noted that the signalised intersection at Sydney Road / Reynolds Street / Lagoon Street / Union Street experiences a level of service LoS D on weekday afternoon peaks. This was observed to be associated with the general traffic and pick up traffic associated with the Goulburn North Public School and the St Joseph's Primary School.

3.4 Road Safety

Historic crash data has been sourced from the TfNSW Centre for Road Safety for the five year period from January 2018 to December 2022 in the vicinity of the site and specifically the proposed Project site access at Windellama Road.

Table 3.2: Intersection Operation (Existing - 2023)

Intersection		AM Peak Hour			PM Peak Hour			SAT Peak Hour		
ID	Name	Delay (sec)	LOS	95th %ile queue (m)	Delay (sec)	LOS	95th %ile queue (m)	Delay (sec)	LOS	95th %ile queue (m)
1	Braidwood-Bungonia	6	A	6	7	A	7	6	A	5
2	Sloane-Braidwood	15	B	19	21	B	30	16	B	16
3	Bungonia-Forbes	9	A	1	10	A	1	9	A	1
4	Bungonia-Memorial	6	A	1	6	A	1	6	A	2
5	Hume-Garroorigang	6	A	2	6	A	2	6	A	2
6	Sydney Lagoon-Union-Reynolds	35	C	119	50	D	190	35	C	142
7	Sloane-Garroorigang	6	A	2	6	A	3	6	A	2
8	Windellama-Rifle Range	6	A	1	7	A	1	6	A	1

The crash locations in the vicinity of the Project site are shown in Figure 3.5.

The historic crash data shows that there have been 3 crashes between 2018 and 2022 near the Project site and specifically the Project site access, 2 of which were located on the transport route to and from the Project site for construction vehicles.

Each of the 3 crashes were single vehicle 'off road' crashes, 2 crashes at night and 1 crash during wet conditions. None of the crashes involved a fatality or a serious injury.

3.5 Public Transport Services

Public transport services are very limited within the immediate vicinity of the Project site. Goulburn railway station is located on Sloane Street on the southern edge of the main Goulburn commercial centre.

The train lines through Goulburn provide connections to Sydney, Canberra and Melbourne via the Main Southern Railway Line.

School bus services operated by Berrima Buslines and PBC Goulburn service the following school's within Goulburn:

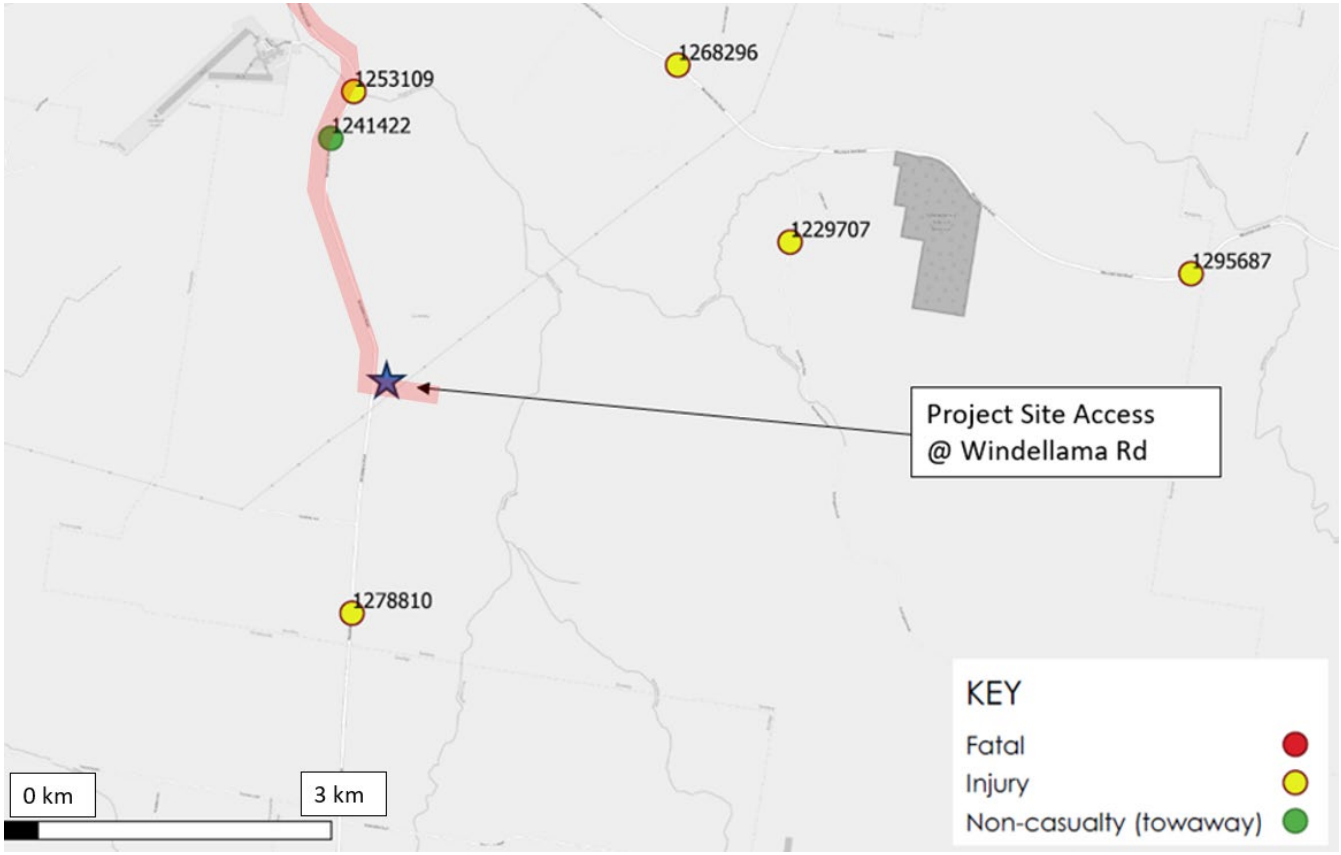
- Goulburn North Public School
- Goulburn High School
- St Josephs Primary School
- St Peter and Pauls Primary School
- Goulburn West Public School
- Trinity College Campus
- Wollondilly Public School
- Mulwaree High School

Local bus services within the Goulburn township are provided by PBC Goulburn bus services. However, there are no designated public bus routes operating near the Project site.

3.6 Active Transport Infrastructure

Given the rural nature of the Project site and its surrounds, there are no formal pedestrian or cyclist facilities within the vicinity of the Project site.

Figure 3.5: Crash Locations along Transport Route (Windellama Road) - 2018-2022



Crash ID	Degree of crash	Year of crash	Month of crash	Day of week of crash	Two-hour intervals	Street of crash	Distance	Direction	School zone location	Type of location	Alignment	Road surface	Surface condition	Weather	Natural lighting	Other traffic control	Speed limit	Road classification (admin)	RUM - code	RUM - description	DCA - description	Key TU type	No. of traffic units involved	No. killed	No. seriously injured	No. moderately injured	No. minor-other injured
1241422	Non-casualty (towaway)	2020	September	Thursday	Unknown	WINDELLAMA	0	Right on the spot	No	2-way undivided	Curved	Sealed	Dry	Fine	Darkness	No traffic controls	100 km/h	Local	87	Off lft/lft bnd=>obj	Off left bend into obj	Light truck utility(from 2018)	1	0	0	0	0
1253109	Injury	2020	December	Sunday	00:01 - 01:59	WINDELLAMA	720	South	No	2-way undivided	Straight	Sealed	Dry	Overcast	Darkness	No traffic controls	100 km/h	Local	71	Off rd left => obj	Left off cway into object	Light truck utility(from 2018)	1	0	0	1	0
1278810	Injury	2021	November	Thursday	06:00 - 07:59	WINDELLAMA	2000	North	No	2-way undivided	Straight	Sealed	Wet	Raining	Daylight	No traffic controls	100 km/h	Local	73	Off rd rght => obj	Right off cway into obj	Light truck utility(from 2018)	1	0	0	1	0

4 Project Traffic Generation Assumptions

This section of the TIA report sets out details of the assumptions used to estimate the potential traffic generation characteristics for the construction, operational and decommissioning stages of the Project.

In this report there is discussion and assessment of 'vehicle trips' generated by the proposed construction of the Project.

The RMS (now TfNSW) *Guide to Traffic Generating Developments* (2002) defines a trip as a vehicle movement from one point to another. A two-way trip is a trip in either direction between the two points. For clarity a vehicle delivering materials to the Project site and then departing the site is assessed as two vehicle trips or movements, one trip into and one trip out of the site.

4.1 Types of Project Related Traffic

For the purpose of the traffic assessment presented in this report, different types of traffic to be generated by the Project across the construction, operational and decommissioning stages of the Project are described as:

- General Construction Traffic (Non OSOM vehicles) for delivery of materials
- Construction Traffic – OSOM vehicles
- Workforce vehicles (construction and operation)

General construction vehicles (non-OSOM) would include the following type of vehicles:

- Semi-trailers (19m) for the delivery of solar panels and associated components within shipping containers
- Heavy Rigid Vehicles (HRV 12.5m) or truck and dogs for delivery of building materials such gravel and building materials
- Agitators (concrete trucks)
- Vans and utilities.

OSOM vehicles will be used to transport battery and sub-station components to the Project site. The potential OSOM vehicles to be used will be low loader trailers with an overall vehicle length ranging between 30-50 metres.

Vehicle specifications for a 38 metre and a 50 metre long OSOM vehicle that will be potentially used for the transportation of battery and substation components are provided in the swept path analysis presented in Appendix C.

Construction work force vehicles accessing the site will include a shuttle bus and passenger vehicles.

4.2 Peak Construction Traffic Generation Assumptions

4.2.1 General Construction Traffic Generation

Construction activities associated with the Project are expected to occur over a period of approximately 18 to 24 months.

Within this overall construction period, the level of construction activity will commence relatively low and build up to a 'peak' construction period of approximately 9 months occurring in the middle of the construction period. The level of activity will decrease towards the end of construction and commissioning.

The estimated daily two-way traffic generation of the Project during 'peak' construction is shown in Table 4.1.

Table 4.1: Project Peak Construction Daily Traffic Generation

Traffic Generation by Vehicle Type	Trips per Day (Total Two Way)	Daily Trips Inbound (to site)	Daily Trips Outbound (from site)
Light Vehicles Primarily for supervisors, engineers, specialized contractors and support staff	250	125	125
Shuttle Buses (construction workers)	60	30	30
Heavy Vehicles (Semi-Trailers and flat bed trucks)	90	45	45
Single Unit Trucks	50	25	25
Total	**450**	**225**	**225**

The arrival and departure of heavy vehicle movements to and from the Project site will be spread out over the course of the daily construction hours.

Light and shuttle bus vehicle movements to and from the site will be concentrated at the commencement and conclusion of work force shift times.

Workforce traffic generation has assumed that:

- 80% of the peak 250 workers (i.e. 200 workers) will travel to and from the Project site via shuttle bus
- 20% of the peak 250 workers (i.e. 50 workers) will travel to and from the Project site via private vehicle
- Private vehicle car occupancy of 1.7 workers / private vehicle (ie. car pooling).

4.2.2 Over Size Over Mass (OSOM) Traffic Generation

With regard to OSOM vehicles, it is estimated that there will be a total of 10 OSOM vehicle movements to and from the Project site over the entire construction of the Project (5 OSOM loaded inbound + 5 OSOM outbound empty vehicle trips).

4.3 Project Operational Stage Traffic Generation

A permanent operations and maintenance (O&M) facility would be constructed on the Project site. Once the Project is operational the O&M facility will be utilised by the operational work force.

The operational phase is estimated to run for 40 years.

Once operational, it is estimated that the Project will generate up to 10 light vehicles (cars / utilities) two-way vehicle movements per day. There would also be an occasional heavy vehicle movement for waste collection or general maintenance and deliveries.

4.4 Project Decommissioning Stage Traffic Generation

Decommissioning of the Project will occur at the end of the lifespan of the Project, whenever that may occur.

Traffic generation during decommissioning of the Project will include vehicles associated with the removal of equipment from the Project site and Project site rehabilitation.

Decommissioning is expected to generate some 30% less traffic than the peak construction period.

5 Construction Traffic Impact Assessment

This section of the report presents the findings of the assessment of traffic related aspects of the construction stage of the project.

5.1 Construction Vehicle Transport Routes

As detailed in Section 2 of this report, it is proposed that there are two feasible routes between the arterial road network at Goulburn (ie. Hume Highway) and the Project site.

Solar panel materials will be transported to the Project site from either Port Botany or Port Kembla. Both of these ports will utilise the arterial road network to access the Hume Highway and Goulburn and hence approach the site from the north.

Similarly, construction materials sourced from local quarries, water supplies etc. are expected to approach the Project site from the north.

Swept path analysis for large construction vehicles expected to access the Project site during construction has been undertaken for the southern Goulburn exit route (Option 2) As noted earlier, Option 1 is an approved OSOM route.

The swept path analysis includes assessment of the following:

- 19 metre long semi trailer
- 38 metre OSOM vehicle (transformer transport)
- 50 metre OSOM vehicle (transformer transport)

The swept path analysis is presented in Appendix C.

The swept path analysis indicated that the existing road geometry between the Hume Highway and the Project site access at Windellama Road along Option 2 construction routes can adequately accommodate a 19 metre long semi trailer without the need for road network upgrades.

Minor temporary works at some intersections (i.e. removal of street furniture and/or medians) and traffic control will be required to accommodate OSOM vehicles associated with battery and substation component transport to the Project Area. Further details of regarding OSOM vehicle transport are provided in Section 5.4 of this TIA. Goulburn Mulwaree Council has been consulted in this regard and Lightsource bp will continue to consult with Council regarding the extent and need for temporary works to accommodate the OSOM vehicles.

Notwithstanding the above, consultation with Council has highlighted a preference for Project construction traffic to utilise Option 2, namely the southern Hume Highway exit and Garroorigang Road and Sloane Street (south) to access Bungonia Road and onto Windellama Road.

The utilisation of the southern route (Option 2) will avoid more sensitive land uses including schools and a higher number of residential properties. The southern route is generally more industrial and rural than the northern route.

It is recommended that the southern route (Option 2) is adopted as the primary route for construction traffic associated with the Project.

However, it is noted that the northern route (Option 1) is geometrically feasible and may be appropriate for the movement of construction materials on an ad hoc / occasional basis.

Notwithstanding the above, no Project related construction traffic (heavy) shall utilise Option 1 during school zone hours of operation, namely 8-9.30am and 2.30 – 4pm on school days.

5.2 Project Site Access – Windellama Road

5.2.1 Proposed Site Access Improvement Works – Concept Layout

As described in Section 2, constructed related traffic will enter and exit the Project site via the Windellama Road site access.

It is understood that proposed Project site access works at Windellama Road would be undertaken in the early stages of construction such that the improved access arrangements will be in place to accommodate construction vehicles, particularly the transportation of solar panel equipment and other materials by heavy vehicles.

It is proposed that all heavy construction vehicles will approach the Project site from the north, thereby undertaking a left turn into the Project site from Windellama Road to connect to the internal Project site road network.

Similarly, heavy construction vehicles exiting the Project site will turn right at Windellama Road and head back towards Goulburn.

It is proposed that pavement widening be provided at the Project site access to accommodate a BAL left turn treatment along the Windellama Road approach. Additionally additional pavement is proposed to accommodate appropriate turn radius for a Basic rural intersection.

The concept design for the Project site access is shown in Figure 5.1 and Appendix D.

As shown in Figure 5.2 the concept layout with additional pavement can adequately accommodate the turning movements (swept paths) of a 19m semi-trailer which is largest general construction vehicle expected to access the Project site during construction.

It is noted that construction of the Project will include the delivery of substation components via approximately 5 x OSOM vehicles. The swept path assessment presented in Appendix C indicates that the proposed site access concept can accommodate the likely OSOM vehicles, namely a 38m long and a 50m long OSOM vehicle.

Figure 5.1: Project Site Access Improvements - Concept Layout

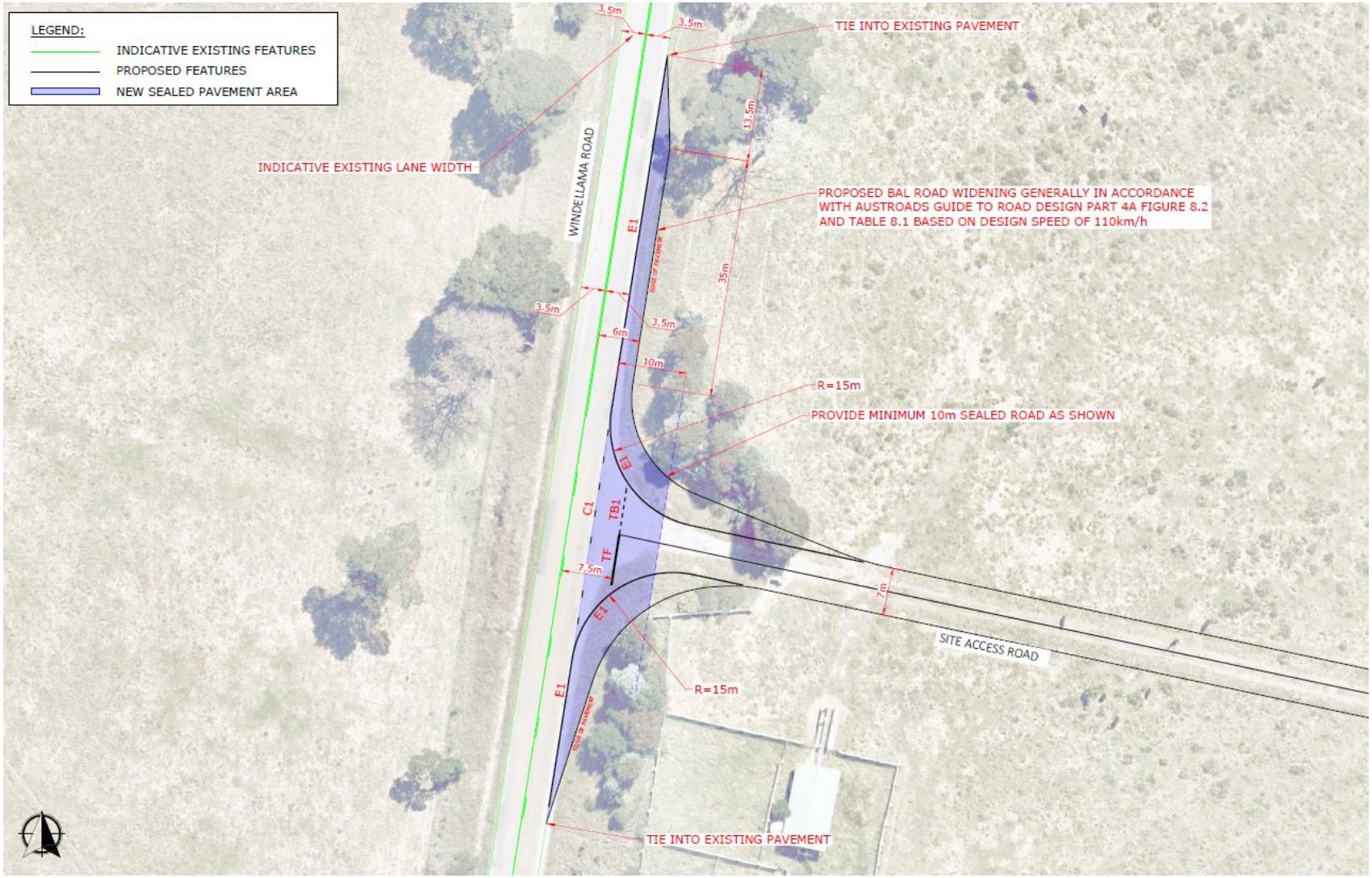
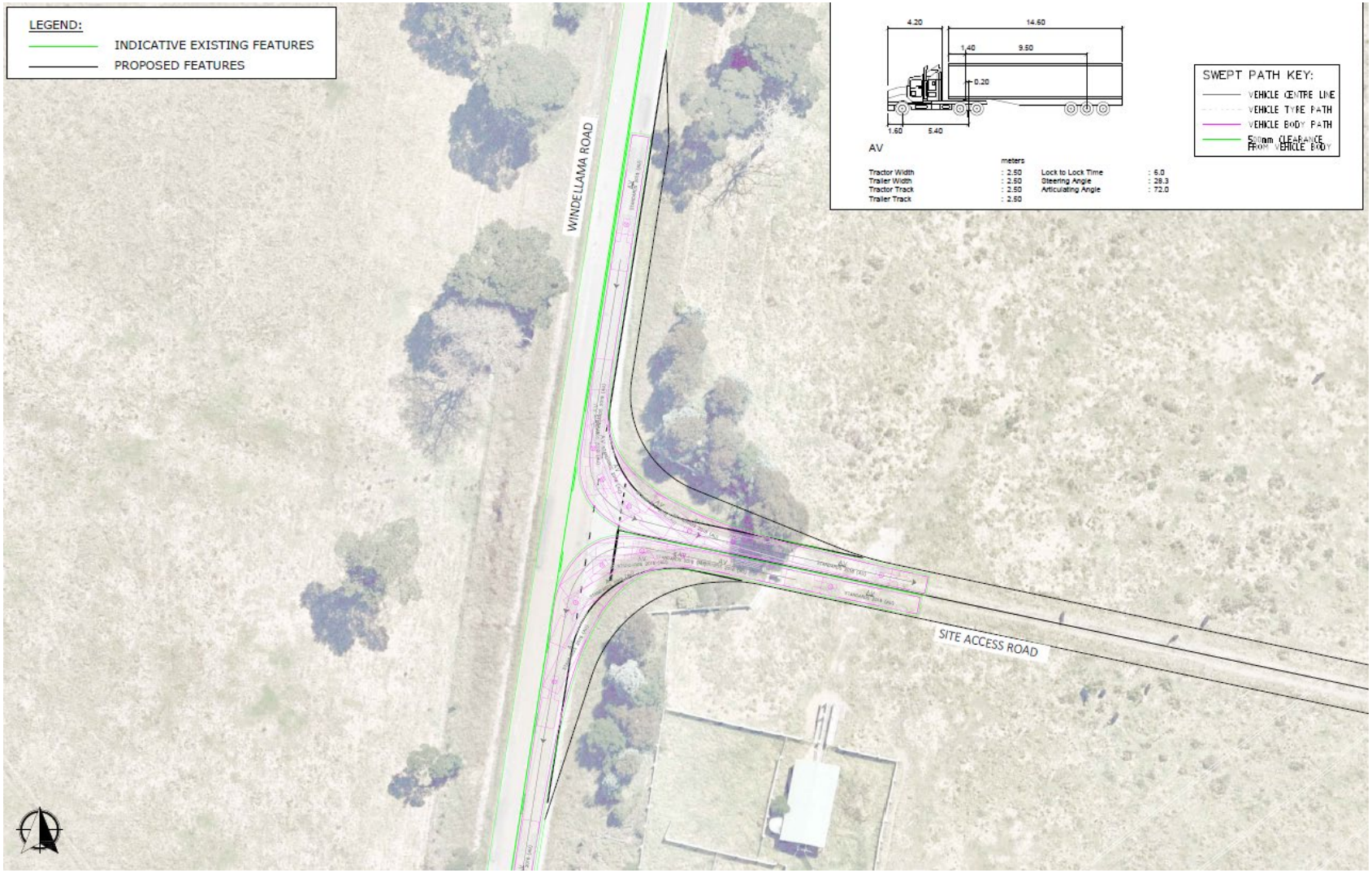


Figure 5.2: 19m Semi Trailer Swept Path – Project Site Access at Windellama Road

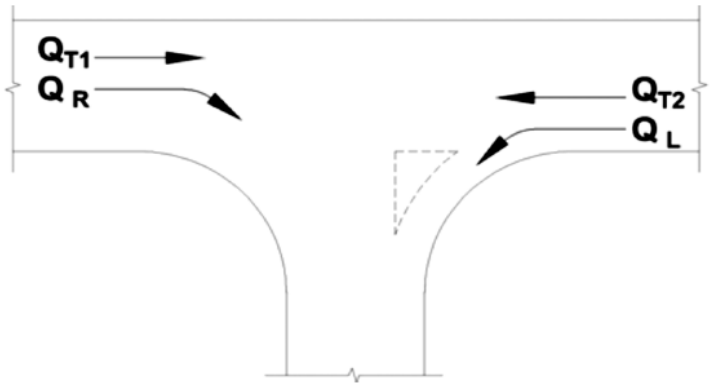


5.2.2 Project Site Access Intersection Design – Turn Warrants

An assessment of the turn treatments required for the proposed Project site access point at Windellama road has been undertaken in accordance with *Austroads Guide to Road Design (AGRD) Part 4* (2017 and 2021) and *Austroads Guide to Traffic Management (AGTM) Part 6 (2020)*.

The turn treatment warrants are based on the major road traffic volumes on Windellama Road 'QM', and the volume of turning movements generated by the construction activities, 'QR' and 'QL'. The value for QR and QL have been taken from peak period construction traffic generation as estimated above in this report.

Figure 5.3: Calculation of the Major Road Traffic Volume Parameter, QM



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= Q_{T1} + Q_{T2} + Q_L
		Yes	= Q_{T1} + Q_{T2}
	Left	Yes or no	= Q_{T2}

Source: Austroads Guide to Traffic Management Part 6, 2020

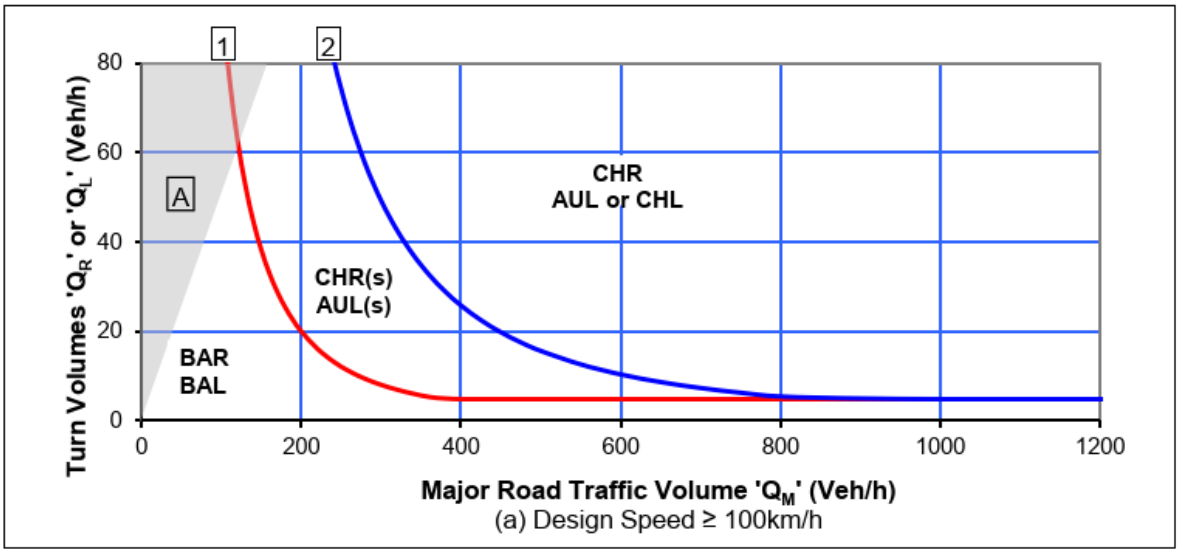
Table 5.1: Calculation of QM

Road Type	Peak Period	Turn Type	Splitter Island	Q_M (vph)	
Site Access at Windellama Road					
Two-Lane Two-Way	AM	Right (Q_R) = 0	No	$Q_M = Q_{T1} + Q_{T2} + Q_L$	165 vph
		Left (Q_L) = 45	No	$Q_M = Q_{T2}$	29 vph
	PM	Right (Q_R) = 0	No	$Q_M = Q_{T1} + Q_{T2} + Q_L$	132 vph
		Left (Q_L) = 45	No	$Q_M = Q_{T2}$	71 vph

The turn treatment warrant assessment also considers the design speed of the road, which is typically taken as the posted speed limit plus 10 km/h; namely, the design speed for Windellama Road is 110 km/h.

Figure 5.4 shows an extract from AGTM Part 6 of the turn treatment warrants on major roads at unsignalised intersections with a design speed more than 100 km/h, which is applicable to Windellama Road.

Figure 5.4: Warrants for Turn Treatments on Major Roads at Unsignalised Intersections



Source: Austroads Guide to Traffic Management Part 6, 2020

Based on values for Q_M, Q_L and Q_R in Table 5.1 and warrants for turn treatments in Figure 5.4, the turn treatments required at a Project site access at Windellama Road would be as follows:

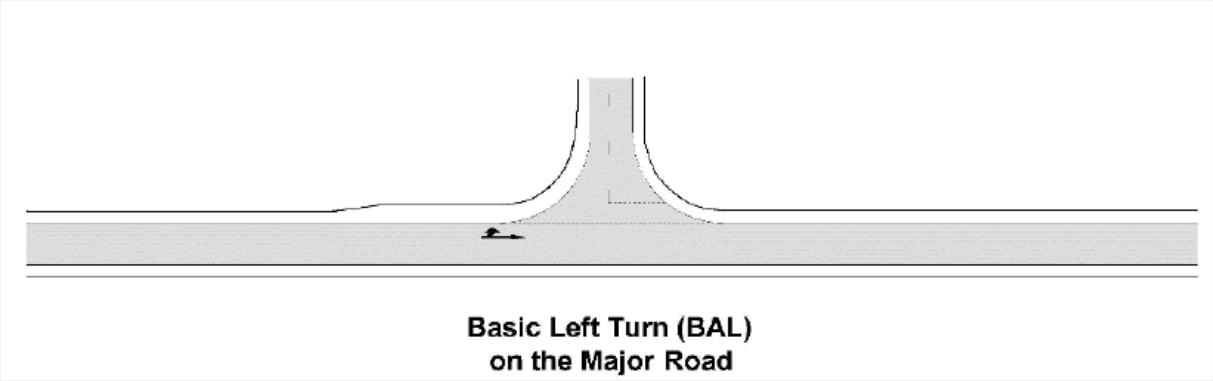
- a basic left-turn (BAL); and
- basic right-turn (BAR).

An indicative layout for BAL and BAR treatments as per AGRD Part 4 is provided in Figure 5.5.

It is noted that as construction vehicles shall approach from and depart to the north, construction vehicles (heavy) will not turn right into the site and thus BAR treatments are not required.

The proposed concept layout plan for the Windellama Road site access (Figure 5.1) satisfies these Austroad intersection requirements.

Figure 5.5: Basic Left Turn (BAL)



Source: Austroads Guide to Traffic Management Part 6, 2020

5.2.3 Project Site Access Intersection Capacity

To assess the capacity of a Project site access intersection at Windellama Road during peak construction periods a SIDRA intersection analysis was undertaken.

During the peak construction periods, the hourly traffic generation of the Project site during peak flows along Windellama Road have been estimated as summarised in Table 5.2.

For the purpose of the analysis, shuttle buses ferrying workers to and from the Project site are assessed as heavy vehicles.

Table 5.2: Project Peak Construction Hourly Traffic Generation

Intersection	Weekday AM Peak Hour (8-9am) (veh/hr)			Weekday Midday (12-1pm) (veh/hr)			Weekday PM Peak Hour (3-4pm) (veh/hr)		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
Inbound	63	38	106	0	38	38	32	38	80
Outbound	0	38	38	63	38	106	32	38	80
Total	**63**	**76**	**144**	**63**	**76**	**144**	**63**	**76**	**144**

The intersection capacity modelling results are shown in Table 5.3.

Table 5.3: Project Site Access Intersection Operation with Project Construction Traffic

Intersection	Period	Existing + Construction Traffic	
		Ave. Delay (sec)	LoS
Windellama Road / Project Access Intersection	Weekday Morning Peak	13	A
	Weekday Afternoon Peak	10	A
	Saturday Midday Peak	12	A

The modelling shows that a Project site access intersection would perform acceptably with the construction traffic generated by the Project.

It is noted that there are other potential and proposed developments within the vicinity of the Project site. Should the construction activities overlap then there is potential for additional traffic flows within the road network.

Further details regarding potential cumulative implications to the road network are detailed in Section 5.7. However, for the purpose of assessing the cumulative implications of other projects on the operation of the Project's site access, a SIDRA modelling analysis has been undertaken for the scenario whereby the nearby proposed Merino Solar Farm is constructed at the same time. In this scenario estimated construction traffic associated with the Merino Solar Farm is assumed to travel along Windellama Road past the Project's site access during peak Project construction.

The results of the 'Existing + Project Construction + Merino Proposal Construction' are set out in Table 5.5. The results indicate that the Project site access will continue to operate satisfactorily with minimal delays and good levels of service.

Table 5.4: Project Site Access Intersection Operation with Project Construction Traffic + Cumulative Development Traffic

Intersection	Period	Existing + Construction Traffic	
		Ave. Delay (sec)	LoS
Windellama Road / Project Access Intersection	Weekday Morning Peak	15	B
	Weekday Afternoon Peak	11	A
	Saturday Midday Peak	13	A

5.2.4 Sight Distance Assessment

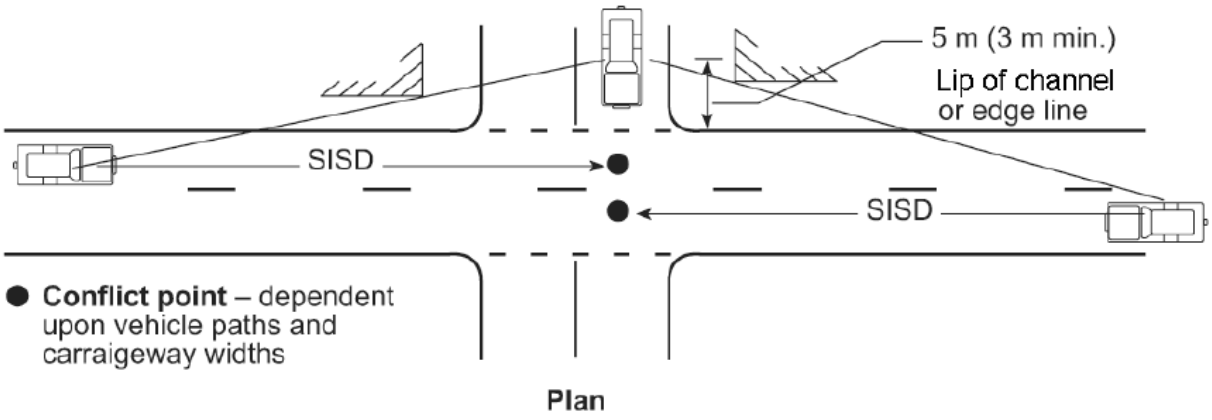
The provision of adequate distances for vehicles entering or exiting a road from another road or driveway is a key feature in the provision of safe intersection.

A review of driver sight distance at the Project site access has been undertaken in accordance with Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersection (2021) for the proposed Project site access at Windellama Road.

In assessing the available sight distances at the proposed Project site access the Safe Intersection Sight Distance (SISD) criteria as defined by Austroads has been applied.

SISD is the minimum sight distance which should be provided on the major road at any intersection. The method of calculating SISD is shown graphically in Figure 5.6

Figure 5.6: Safe Intersection Sight Distance (SISD)



Source: Austroads (2021) Guide to Road Design Part 4A: Unsignalised and Signalised Intersection

As shown in the extract from Austroads guide (see Figure 5.7), the SISD requirement increases with increasing design speed of the major road.

For the Windellama Road Project site access the design speed of 110km/h has been applied. This represents the posted speed limit (100km/h) + 10 km/h.

Based on Figure 5.7, the SISD requirement is 285 m.

The available sight distances at both of these locations exceeds 300 metres and thus complies with Austroad SISD requirements.

Thus, the proposed Project site access driveways will be located and constructed such that there is adequate entering sight distance to traffic along the frontage road.

Figure 5.7: Available Driver Sight Distances at Windellama Road Project site Access

Design speed (km/h)	Based on safe intersection sight distance for cars[1] h_1 = 1.1; h_2 = 1.25, d = 0.36[2]; Observation time = 3 sec					
	R_T = 1.5 sec[3]		R_T = 2.0 sec		R_T = 2.5 sec	
	SISD (m)	K	SISD (m)	K	SISD (m)	K
40	67	4.9	73	6	–	–
50	90	8.6	97	10	–	–
60	114	14	123	16	–	–
70	141	22	151	25	–	–
80	170	31	181	35	–	–
90	201	43	214	49	226	55
100	234	59	248	66	262	74
110	–	–	285	87	300	97
120	–	–	324	112	341	124
130	–	–	365	143	383	157

5.3 Road Network Capacity

As detailed in Section 3.3, TTPP undertook an assessment of the existing road network operation at key intersections along the proposed construction traffic routes namely the southern and northern Hume Hwy exits at Goulburn.

The estimated peak period construction traffic generation of the Project has been added to the existing traffic flows at the key intersections to represent the 'Existing + Development' scenario.

These 'Existing + Development' traffic flows were analysed using the SIDRA intersection modelling software and the results compared to the 'Existing' scenario to determine the level of impact associated with the Project construction.

The results of the SIDRA modelling are summarised in Table 5.5 and Table 5.6. Detailed results presented in Appendix B.

The results in Table 5.5 and Table 5.6 indicate that the addition of construction traffic related to the Project will not adversely impact on the operation or Level of Service at any of the key intersections along both the northern (Option 1) and southern (Option 2) Project construction transport routes.

In summary the road network can satisfactorily accommodate the peak construction period of the proposed Project.

Table 5.5: Intersection Operation - Existing + Project Construction Traffic Route Option 1 (Northern Access via Sydney Road)

	Intersection		AM Peak Hour		PM Peak Hour		SAT Peak Hour	
	ID	Name	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Existing + Dev to/from Sydney Rd	1	Braidwood-Bungonia	7	A	8	A	7	A
	2	Sloane-Braidwood	20	B	47	D	23	B
	3	Bungonia-Forbes	10	A	11	A	13	A
	4	Bungonia-Memorial	8	A	7	A	6	A
	5	Hume-Garoorigang	6	A	6	A	6	A
	6	Lagoon-Union	33	C	46	D	33	C
	7	Sloane-Garoorigang	6	A	6	A	6	A
	8	Windellama-Rifle Range	7	A	8	A	8	A
	9	Windellama-Site Access	18	B	12	A	14	A

Table 5.6: Intersection Operation - Existing + Project Construction Traffic Route Option 2 (Southern Access via Hume Street)

	Intersection		AM Peak Hour		PM Peak Hour		SAT Peak Hour	
	ID	Name	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Existing + Dev to/from Hume St	1	Braidwood-Bungonia	7	A	8	A	7	A
	2	Sloane-Braidwood	18	B	25	B	19	B
	3	Bungonia-Forbes	10	A	11	A	9	A
	4	Bungonia-Memorial	8	A	7	A	6	A
	5	Hume-Garoorigang	6	A	7	A	6	A
	6	Lagoon-Union	35	C	49	D	35	C
	7	Sloane-Garoorigang	7	A	6	A	6	A
	8	Windellama-Rifle Range	7	A	8	A	8	A
	9	Windellama-Site Access	12	A	12	A	14	A

5.4 OSOM Vehicle Transportation

It is expected that a total of 10 x OSOM two-way vehicle trips (5 OSOM loaded vehicles to site + 5 OSOM empty from the site) would be undertaken during the construction stage of the project.

As detailed above, these OSOM vehicles would typically be associated with the transportation of battery components to the Project site.

OSOM vehicle likely to be used will range in length between 30m to 50m.

Vehicle swept path analysis has been undertaken for the potential OSOM vehicles using the southern (Option 2) construction vehicle route between the Hume Highway and the Project site.

It is noted that the norther construction vehicle route (Option 1) is an approved and designated OSOM vehicle route between the Hume Highway and Bungonia Road (see Figure 3.1).

However, the southern route (Option 2) is not currently an approved OSOM vehicle between the Hume Highway and Bungonia Road (see Figure 3.2).

The results of the OSOM swept path assessment are presented in Appendix C.

The OSOM vehicle swept path assessment determined that:

- The southern (Option 2) construction vehicle routes can accommodate the geometric requirements of OSOM vehicles without adjustments to street furniture (ie. signs posts and kerb) between the Hume Highway and Bungonia Road.
- Notwithstanding the above, traffic controllers will need to be employed to temporarily stop traffic to allow OSOM to utilise the full road width. As shown in Figure 5 of Appendix C, an OSOM vehicle will cross the median at Sloan Street / Braidwood Road when attempting to travel on the left side of the road. Figure 6 of Appendix C indicates that the median at this intersection is avoided if OSOM vehicle are permitted to travel on the right side (approaching traffic) of the road, hence the need for traffic controllers to temporarily hold general traffic on the intersection approaches.
- Minor adjustments to the kerb and street signs at the Braidwood Road / Bungonia Road intersection will be required to accommodate the swept paths of OSOM vehicles.

OSOM vehicle loaded trips to the Project site across the entire construction period would be undertaken with appropriate traffic management measures, including pilot vehicle, warning signage and lights etc.

As shown in Figure 5.8, the OSOM mapping provided by TfNSW has identified the Lansdowne Bridge on Bungonia Road as a restricted structure. The Lansdowne Bridge is located on the transport route for construction vehicles associated with the Project.

Consultation with TfNSW has confirmed that the Lansdowne Bridge was replaced in 2019 from a timber structure to a new concrete bridge. TfNSW also confirmed that Council was now the relevant road authority for the new bridge.

Consultation with Council confirmed that with regard to the load limit of the bridge:

- Lansdowne Bridge was designed to AS5100-2004 Bridge Design with a traffic loading of SM1600.
- The design traffic speed is 70km/h (although noted that its signposted as 60km/h).
- The bridge has been designed to a Heavy Load Platform Loading of HLP320.
- Provision for HLP320 Loading is restricted to one vehicle at any one time.
- HLP320 Loading may be permitted up to +/- 1m laterally in either direction from centre of carriageway.
- OSOM vehicle speed is restricted to 10km/h when crossing the bridge.

Thus, subject to a detailed vehicle loading analysis for OSOM and implementation of the measures highlighted by Council, the upgraded bridge can accommodate OSOM vehicle associated with the project.

5.5 Road Safety

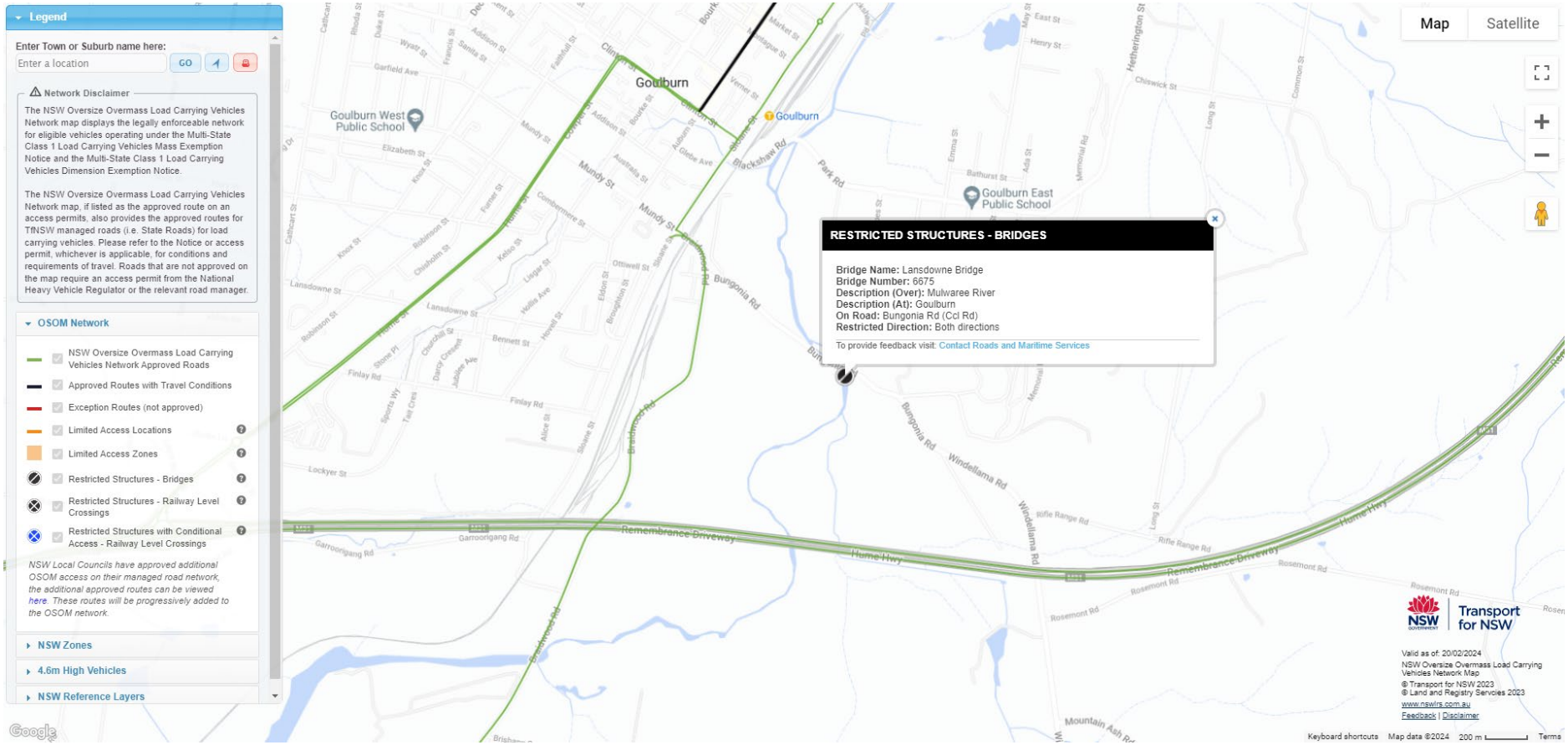
As documented above, the proposed Project site access arrangements at Windellama Road meet with the design requirements and safe intersection sight distances as defined by Austroads.

This will provide a safe environment for the entry and exit of vehicles to and from the Project site.

The analysis of historical crashes within the vicinity of the Project site indicated that the rate of crashes along Windellama Road is relatively low and that there were no systemic crash locations or accident types that would indicate a particular safety issue that would be adversely impacted with additional construction traffic associated with the Project.

As detailed above, the selection of the southern Goulburn exit from the Hume Highway as the primary construction vehicle route (ie. Option 2) will avoid potential conflicts with sensitive land uses, such as the Goulburn North Primary School and St Joseph Primary School.

Figure 5.8: Lansdowne Bridge – Restricted Structure



5.6 Internal Roads and Car Parking Arrangements

Suitable on-site manoeuvring areas would be available so that larger vehicles are able to safely manoeuvre into the Project site off the public road network, around the Project site and exit the Project site onto the public road network.

All vehicles would enter and exit the Project site to / from the public road network in a forward direction only.

All vehicles generated by construction staff would be accommodated within on-site parking areas.

The construction and maintenance of the solar farm will require the construction of an internal site access network to reach all the solar panel and BESS locations as well as other infrastructure.

The internal site access network will consist of private access tracks and will not be accessible to the public, ie. access will be controlled by lockable gates.

The internal site access network will generally be a minimum 3.5m – 4.0m wide with regular passing bays and turning heads as required to accommodate construction vehicles. These areas would also provide turning / manoeuvring and passing opportunities for delivery vehicles.

The internal accesses will comprise an all-weather graded surface. Ongoing operational maintenance of on-site accesses would be undertaken by the solar farm operator.

5.7 Public Transport, Pedestrians and Cyclists

Given the proposed weekday construction hours are from 7am to 6pm, the construction workforce trips would typically occur before 7am and after 6pm, which would generally not coincide with school bus services. Heavy vehicles would arrive and depart throughout the day. Any potential interaction with school bus operations and stops would be considered in the Construction Traffic Management Plan (CTMP) to minimise any delays, disruptions, and safety risks.

Regarding pedestrians and cyclists, the rural nature of the Project Area implies that most pedestrian and cycling activity occur within Goulburn town where there are footpaths provided. Given that the proposed construction working hours are from 7am to 6pm, the workforce vehicle trips would be outside the normal peak period for walking and cycling

activity in Goulburn. The distances between towns and other major centres in the area discourages casual cycling outside of the town areas.

It is considered that with the management and mitigation measures proposed (refer to Section 6), the Project will have negligible impact in terms of pedestrian and cyclist safety.

5.8 Cumulative Traffic Assessment

An analysis of potential major projects and local development applications within the region surrounding the Project site has been undertaken by Umwelt in the preparation of the EIS documentation.

There is a number of proposed renewable energy projects in the region that will also utilise the Hume Highway for the transportation of construction materials to relevant project sites. However, the Hume Highway is considered to have sufficient capacity to accommodate significant increases in traffic flows.

With regard to impacts of the proposed Gundary Project transport routes, the Merino Solar Farm proposal will potentially utilise the same transport routes, thereby increasing the volume of traffic on the route if construction occurs concurrently.

Details of the Merino Solar Farm transport routes, traffic generation and construction timing are not yet known.

However, the *Scoping Report* submitted to the DPHI in 2023 indicated that the Merino solar Farm will be 450 MWp solar farm with a BESS.

Based on the scoping report, the Merino Solar Farm project is some 12.5% larger than the Gundary Solar Farm (400MWp).

Conservatively assuming that both the Gundary and Merino Solar Farms have simultaneous peak construction activity, a cumulative assessment of road network operation has been undertaken by TTPP.

For the purpose of the cumulative assessment, it has been assumed that the Merino Solar Farm will generate 12.5% more construction traffic than the Gundary Solar Farm Project.

The traffic generation potential of the Merino Solar Farm project has been added to the 'Existing + Project Construction Traffic' scenario as detailed in Section 5.3. The key intersections along the transport routes have then been re-assessed using SIDRA intersection analysis. The results of the cumulative analysis are presented in Table 5.7.

Table 5.7: Intersection Operation - Existing + Gundary Project Construction Traffic + Cumulative Traffic (Merino Solar Farm)

	Intersection		AM Peak Hour		PM Peak Hour		SAT Peak Hour	
	ID	Name	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Existing + Dev + Merino to/from Sydney Rd	1	Braidwood-Bungonia	11	A	13	A	10	A
	2	Sloane-Braidwood	50	D	466	F	145	F
	3	Bungonia-Forbes	12	A	13	A	11	A
	4	Bungonia-Memorial	10	A	9	A	8	A
	5	Hume-Garoorigang	6	A	6	A	6	A
	6	Lagoon-Union	32	C	44	D	31	C
	7	Sloane-Garoorigang	6	A	6	A	6	A
	8	Windellama-Rifle Range	9	A	10	A	10	A
	9	Windellama-Site Access	25	C	17	B	19	B

	Intersection		AM Peak Hour		PM Peak Hour		SAT Peak Hour	
	ID	Name	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Existing + Dev + Merino to/from Hume St	1	Braidwood-Bungonia	11	A	13	A	10	A
	2	Sloane-Braidwood	29	C	44	D	27	B
	3	Bungonia-Forbes	12	A	13	A	11	A
	4	Bungonia-Memorial	10	A	9	A	12	A
	5	Hume-Garoorigang	7	A	9	A	9	A
	6	Lagoon-Union	35	C	49	D	35	C
	7	Sloane-Garoorigang	7	A	8	A	7	A
	8	Windellama-Rifle Range	9	A	10	A	10	A
	9	Windellama-Site Access	26	B	17	B	19	B

The cumulative analysis indicated that all key intersections along the transport routes for construction vehicles, with the exception of the Sloane Street / Braidwood Road intersection, will continue to operate satisfactorily with acceptable levels of service.

The analysis did highlight a noticeable change to the level of service at the Sloane Street / Braidwood Road intersection for the scenario where all construction traffic for both projects utilises the northern route (Option 1).

This suggests that should both the Gundary and Merino solar farm projects undertake peak construction at the same time, then the southern transport route (Option 2) shall be the preferred route for Gundary Solar Farm and the Merino Solar Farm to reduce potential congestion at the Braidwood Road / Sloane Street intersection.

5.9 Operational Stage Traffic Assessment

The operational phase of the Project includes the general operation of the solar farm, with monitoring both by on-site staffing and via remote monitoring.

Aspects of the Project operation to be dealt with by on-site staff would include safety management, environmental condition monitoring, landowner management, routine servicing, malfunction rectification and site inspections.

Those functions to be overseen by remote monitoring include solar panel and BESS performance assessment, solar farm reporting, remote resetting and maintenance co-ordination.

Maintenance staff will be on-site throughout the year, making routine checks of the solar farm infrastructure on an ongoing basis. Major planned servicing would be carried out intermittently and involve up to 10 light vehicle two way trips by staff with the occasional heavy vehicle for maintenance / deliveries.

This level of traffic generation would readily be absorbed into the spare capacity of the existing road network.

It is noted that operational traffic would continue to utilise the upgraded Project site access at Windellama Road.

5.10 Emergency Vehicle Access Arrangements

The proposed Project site access at Windellama Road and the existing Project site access at Kooringaroo Road will provide the Project site with alternate emergency vehicle access during construction and during operation. In addition, the perimeter fencing will have up to 10 emergency gate accesses for emergencies.

The provision of these two emergency vehicle accesses for the Project site will also facilitate general community access across the Project site in an emergency situation. That is the internal road connections between the two site accesses will facilitate an alternative evacuation path for site personnel and the general community in the case of a bush fire and disconnection of the Kooringaroo Road connection to Mountain Ash Road and beyond.

At the northern end of Kooringaroo Road, Kooringaroo Road is sealed road with a sealed width of approximately 6 metres and unsealed shoulders.

The southern end of Kooingaroo Road near the Project site's emergency access is narrower (approximately 4m wide) with additional shoulders and of gravel construction.

The available width of 4m wide lanes plus shoulders is satisfactory for the travel path of an emergency vehicle (including fire fighting vehicles). The available road shoulders will allow vehicles to pass an emergency vehicle travelling in the opposite direction.

5.11 Decommissioning Stage Traffic Assessment

At the end of the Project's operational life, the Project will be decommissioned with Project infrastructure dismantled and removed for the Project site.

Traffic generation during decommissioning is estimated to be approximately 30% less than the peak traffic generation during construction.

Based on the assessment of the road capacity during the construction phase, it is envisaged that road network impacts would be minimal.

Notwithstanding the above, it is considered appropriate that a comprehensive Construction Traffic Management Plan (CTMP) would be prepared prior to the decommissioning phase in conjunction with the relevant road authorities. This would aim to ensure adequate road safety and road network operations are maintained during decommissioning of the Project site.

5.12 Reflection

Two road receivers (namely Windellama Road and Kooringaroo Road) and one rail receiver were assessed for glint and glare impacts through a Glint and Glare Impact Assessment (Moir, 2024) completed for the Project.

Kooringaroo Road has been assessed as having potential to experience 'Yellow' glare that exceeds the acceptable threshold of 10 hours per year. This glare occurrence is expected during the period from mid-October to March, specifically between 5:50 pm and 7:00 pm.

Vegetation screening is proposed along the northeastern boundary of the Project Area, near Kooringaroo Road, which will mitigate the potential glare impact.

5.13 Flooding

Flood modelling completed for the Project (WRM, 2024) show that the location of the Project access from Windellama Road is suitable in terms of flooding constraints. No flooding is predicted at the Project access point under all flood events.

6 Project Impact Mitigation Measures

The following sets out suggested mitigation measures to manage and / or mitigate the potential traffic and transport related impacts associated with the proposed Gundary Solar Farm project.

6.1 OSOM Enabling Works

Oversized and over mass (OSOM) vehicles would be governed by a detailed traffic management plan that should be developed before approval for transport is granted.

The traffic management plan will include:

- Procedures for escorts of oversized and over mass vehicles.
- Traffic control plans for temporary road closures (if necessary) to allow vehicles to cross to carriageway. Specific plans will be required for OSOM access across the Lansdowne Bridge on Bungonia Road.
- Safe work methods and strategies for working on roadways.
- Dates and times for transporting loads via OSOM vehicles.
- Location and use of rest stops and layovers along the journey.
- Communication strategy to affected communities.
- Notification and consultation of key stakeholders including:
  - Police and emergency services
  - Local Councils along the route
  - Public and School bus operators that may be affected
  - Advertising in local newspaper and media releases.
- Contact details of foreman or project manager throughout operations to be shared with emergency services and road authorities.
- Timing of operations and measures to avoid commuter peaks and school peaks through populated areas where practicable.
- Consideration of cumulative impacts of other projects along the route.
- Identification of layby areas for driver breaks and co-ordination of OSOM on site arrivals.

6.2 Reducing Project Related Traffic Generation

To reduce the potential number of light vehicles generated by the Project, it is recommended that the use of shuttle bus services to and from key worker accommodation sites is implemented in a manner consistent with the percentages set out in this report.

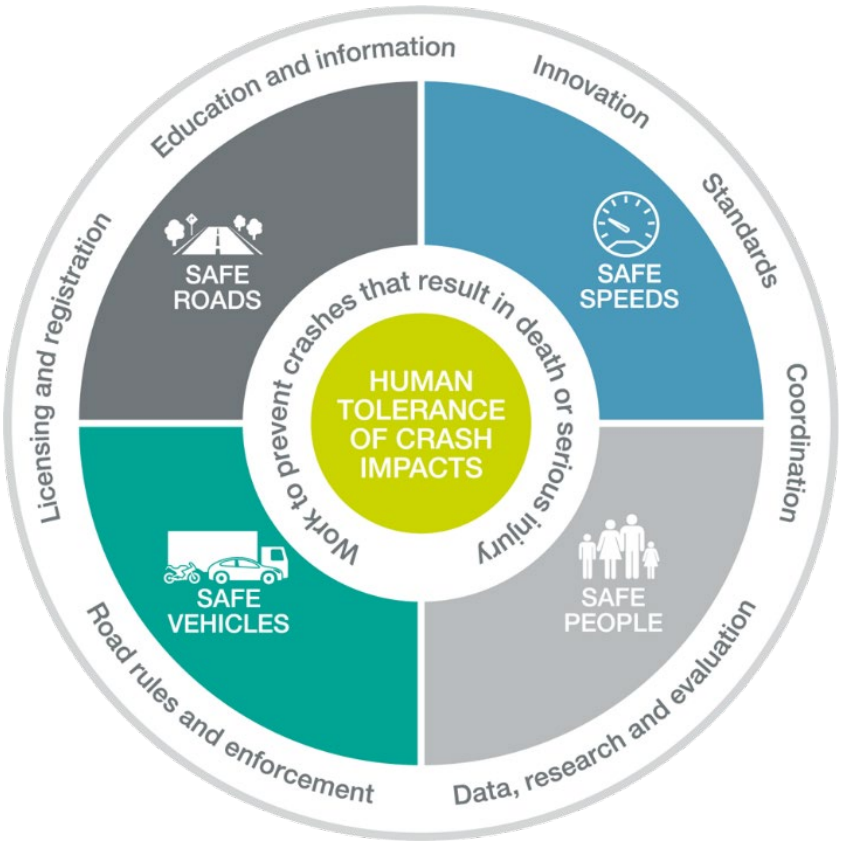
The adoption of shuttle bus transport would significantly reduce the potential volume of light vehicles and reduce the impact on the road network and improve the safety for workers and the community through driver fatigue management.

The assessment presented in this report has assumed the use of 12-seater minibuses though higher capacity vehicles should be considered if feasible to reduce the amount of traffic.

6.3 Road Safety

Under the safe systems approach road safety is generally improved by focussing on Safe Roads, Safe Speeds, Safe People and Safe Vehicles. The safe systems approach is summarised in Figure 6.1.

Figure 6.1: Safe Systems Approach



Source: National Road Safety Strategy

6.3.1 Safe People

"Safe people" can be achieved by education of workers and policies of the work site. To this end worker site induction should include driver education of the local road conditions and an adoption of a "drivers code of conduct".

This could include:

- Training on drivers respect private property and farm gates.
- Driving to the conditions on unsealed roads.
- Avoid speeding and other dangerous behaviour. Identification and communication of known road crash cluster locations. Also, identification and warning of when roads may be affected by black ice, road damage (pot-holes) and incidents.
- A drug and alcohol policy to reduce incidents of drunk and drug driving.
- Additional caution when driving at dawn and dusk of kangaroos and other wildlife.
- Driving around livestock.
- Measures to reduce the risk of workers driving while tired.

In addition, the use of shuttle bus services would reduce the number of workers driving from the Project site while tired.

6.3.2 Safe Vehicles

Contractors are to ensure that all vehicles used are road worthy and in good working condition with lights, brakes, tire pressure etc.

6.3.3 Safe Speeds

As part of managing the Project, workers would be required to drive to the conditions and respect speed limits.

6.3.4 Sensitive Land Uses

It is recognised that the Project may have an impact on sensitive land uses such as schools and residential precincts within townships along material delivery routes.

To minimise the impacts on schools it is recommended that temporary road closures for OSOM vehicle movements should be avoided during school peaks. To this end vehicle layovers should be identified so allow vehicles to wait until appropriate times for travel.

6.4 Dilapidation Survey

Dilapidation surveys covering the pavement, drainage, and bridge structures will be undertaken in consultation with TfNSW and local Councils for the proposed transport routes before and after construction. Regular inspections and consultation with local Councils and proponents would be developed. It is expected that any damage resulting from construction traffic, except normal wear and tear, would be repaired.

6.5 Road Authority Approvals for OSOM Vehicles

OSOM vehicles would require permits from the National Heavy Vehicle Regulator (NHVR). This replaces the approvals that were previously granted from TfNSW and councils. Applications are to be submitted to the NHVR.

7 Conclusions

The Gundary Solar Farm project will involve the construction and operation of a 400 MWp solar farm and battery storage system on the Project site located approximately 10km south-east of Goulburn in the Southern Highlands of NSW.

With regards to traffic and transport the construction of the Project will include:

- Construction duration of between 18 – 24 months with peak construction activity of approximately 9 months in the middle of the works
- Up to 250 personnel on site during peak construction activities
- Up to 450 two-way construction vehicle trips per day in peak construction
    - 250 light vehicle trips
    - 60 shuttle bus trips
    - 140 heavy vehicle trips
- Daily heavy vehicle trips will generally involve a range of vehicle sizes up to and including a 19m semi-trailer
- A total of 10 OSOM two-way vehicle trips are anticipated over the duration of the construction period and are associated with the delivery of battery components. The maximum length of the OSOM vehicles are expected to be a 30-50m long vehicles.

The proposed transport routes will utilise the Hume Highway to access the Project site from the selected port location (Port Botany or Port Kembla).

Two options have been identified for the transport of Project material between the Hume Highway and the Project site. The routes utilise the northern (Option 1) or the southern (Option 2) exit from the Hume Highway at Goulburn.

The two options for transport of materials to the Project site are described to be:

- Option 1: Hume Highway - Sydney Road – Reyolds Street – Grafton Street - Sloane Street – Braidwood Road - Bungonia Road - Windellama Road
- Option 2: Hume Highway - Hume Street - Garroorigang Road – Sloane Street - Braidwood Road – Bungonia Road - Windellama Road.

The geometric assessment of the transport route alternatives has demonstrated that both routes can satisfactorily accommodate the swept path movements of the proposed construction vehicle types (up to 19 meters long) without the need to adjust road infrastructure or intersection layouts with the exception of the Braidwood Road / Bungonia Road intersection.

Minor temporary modifications to street furniture (kerbs and signage) will be required at the Braidwood Road / Bungonia Road intersection to accommodate the 5 loaded OSOM vehicle deliveries of battery and substation components to the Project site.

Option 1 is designated as an approved OSOM route between the Hume Highway and Braidwood Road.

Notwithstanding the above, Option 2 has been identified by Council as the preferred route as it passes through mainly rural / industrial land uses. Option 2 is thus recommended as the primary transport for the Project. Option 1 will be an alternative route for ad hoc and potentially OSOM vehicles.

The assessment of the road network operation demonstrated that the road network on the proposed transport routes has sufficient capacity to accommodate the peak construction traffic generation of the Gundary Solar Farm project.

Furthermore, while the peak construction period timing of the nearby proposed Merino Solar Farm project is unlikely to occur simultaneously with the Gundary Solar Farm, a cumulative assessment of both projects has been undertaken. The cumulative assessment has indicated that the surrounding road network can satisfactorily accommodate both projects peak construction traffic concurrently using the southern (Option 2) construction vehicle route.

To accommodate the proposed Gundary Solar Farm project the following measures are recommended:

- Project site access intersection improvement works at the Windellama Road site access point to accommodate turning movements to and from the Project site.
- Utilisation of the southern transport route (Option 2) as the primary transport route. Construction vehicles not to utilise the northern route (Option 1) during School Zone times.
- Implementation of appropriate traffic control measures and plans for OSOM vehicle movements (5 inbound loaded + 5 outbound unloaded). This shall include the movement of OSOM vehicle over the Lansdowne Bridge on Bungonia Road.
- Implementation of the Drivers Code of Conduct detailing expectations for driver behaviour for travel to and from the Project site.
- Preparation and implementation of a detailed Construction Traffic Management Plan (CTMP) detailing how works to the Project site access and ongoing construction works will be undertaken. The CTMP shall be prepared by the proponent with the works contractor in consultation with Council.

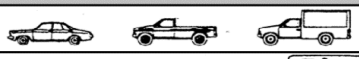
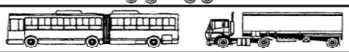
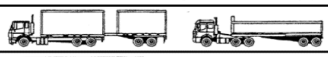
In conclusion, it is considered that with the mitigation measures set out in this report, that the construction, operation and decommissioning of the Gundary Solar Farm can be undertaken without significant adverse impacts to the operation, capacity or safety of the surrounding road network.

Appendix A

Traffic Surveys

Vehicle	Class	Group	Thu 31/08/23	Fri 01/09/23	Sat 02/09/23	Sun 03/09/23
SV	1	light_veh	927	1001	905	777
SVT	2	light_veh	56	85	71	56
TB2	3	heavy_rigid_veh	160	196	139	132
TB3	4	heavy_rigid_veh	18	11	1	4
T4	5	heavy_rigid_veh	3	2	2	0
ART3	6	heavy_art_veh	21	7	14	9
ART4	7	heavy_art_veh	5	14	10	5
ART5	8	heavy_art_veh	7	4	1	0
ART6	9	heavy_art_veh	5	10	1	2
BD	10	heavy_art_veh	0	6	0	0
DRT	11	heavy_art_veh	0	0	0	0
TRT	12	heavy_art_veh	0	0	0	0
M/C	1	motorcycle_veh	2	4	6	4
CYCLE	1	cycle_veh	0	0	0	0
???	N/A	unclass_veh	0	0	0	0
TOTAL			1204	1340	1150	989

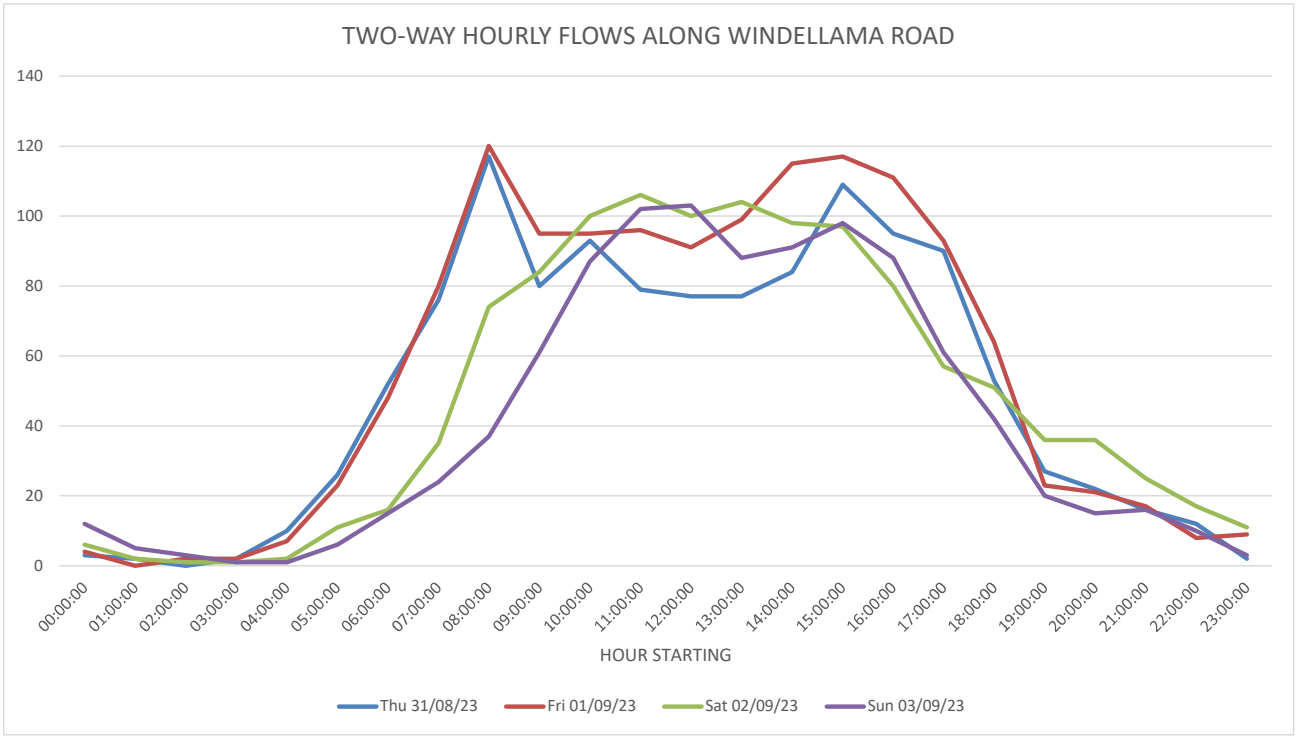
AUSTROADS Vehicle Classification System

Level 1 Length (indicative) Type	Level 2 Axles and Axle Groups: Axles	Groups	Level 3 Vehicle Type: Typical Description	AUSTROADS Classification: Class	Parameters	Typical Configuration
	LIGHT VEHICLES					
Short up to 5.5m		1 or 2	**Short** Sedan, Wagon, 4WD, Utility, Light Van, Bicycle, Motorcycle, etc	1	d(1) ≤ 3.2m and axles = 2	
Medium 5.5m to 14.5m	3, 4 or 5	3	**Short - Towing** Trailer, Caravan, Boat, etc	2	groups = 3 d(1) ≥ 2.1m, d(1) ≤ 3.2m, d(2) ≥ 2.1m and axles = 3, 4 or 5	
	HEAVY VEHICLES					
	2	2	**Two Axle Truck or Bus**	3	d(1) > 3.2m and axles = 2	
	3	2	**Three Axle Truck or Bus**	4	axles = 3 and groups = 2	
	> 3	2	**Four Axle Truck**	5	axles > 3 and groups = 2	
Long 11.5m to 19.0m	3	3	**Three Axle Articulated** Three axle articulated vehicle, or Rigid vehicle and trailer	6	d(1) > 3.2m, axles = 3 and groups = 3	
	4	> 2	**Four Axle Articulated** Four axle articulated vehicle, or Rigid vehicle and trailer	7	d(2) < 2.1m or d(1) < 2.1m or d(1) > 3.2m axles = 4 and groups > 2	
	5	> 2	**Five Axle Articulated** Five axle articulated vehicle, or Rigid vehicle and trailer	8	d(2) < 2.1m or d(1) < 2.1m or d(1) > 3.2m axles = 5 and groups > 2	
	≥ 6	> 2	**Six Axle Articulated** Six axle articulated vehicle, or Rigid vehicle and trailer	9	axles = 6 and groups > 2 or axles > 6 and groups = 3	
Medium Combination 17.5m to 36.5m	> 6	4	**B Double** B Double, or Heavy truck and trailer	10	groups = 4 and axles > 6	
	> 6	5 or 6	**Double Road Train** Double road train, or Medium articulated vehicle and one dog trailer (M.A.D.)	11	groups = 5 or 6 and axles > 6	
Large Combination Over 33.0m	> 6	> 6	**Triple Road Train** Triple road train, or Heavy truck and three trailers	12	groups > 6 and axles > 6	

Definitions:
Group: Axle group, where adjacent axles are less than 2.1m apart
Groups: Number of axle groups
Axles: Number of axles (maximum axle spacing of 10.0m)

d(1): Distance between first and second axle
d(2): Distance between second and third axle

Hour Starting	Thu 31/08/23	Fri 01/09/23	Sat 02/09/23	Sun 03/09/23
00:00:00	3	4	6	12
01:00:00	2	0	2	5
02:00:00	0	2	1	3
03:00:00	2	2	1	1
04:00:00	10	7	2	1
05:00:00	26	23	11	6
06:00:00	52	48	16	15
07:00:00	76	80	35	24
08:00:00	117	120	74	37
09:00:00	80	95	84	61
10:00:00	93	95	100	87
11:00:00	79	96	106	102
12:00:00	77	91	100	103
13:00:00	77	99	104	88
14:00:00	84	115	98	91
15:00:00	109	117	97	98
16:00:00	95	111	80	88
17:00:00	90	93	57	61
18:00:00	53	64	51	42
19:00:00	27	23	36	20
20:00:00	22	21	36	15
21:00:00	16	17	25	16
22:00:00	12	8	17	10
23:00:00	2	9	11	3
TOTAL	**1204**	**1340**	**1150**	**989**



Hour Starting	light_veh	heavy_rigid_veh	heavy_art_veh	motorcycle_veh	cycle_veh	unclass_veh	total
2023-08-31 00:00:00	3	0	0	0	0	0	3
2023-08-31 00:15:00	2	1	0	0	0	0	3
2023-08-31 00:30:00	2	1	0	0	0	0	3
2023-08-31 00:45:00	1	1	0	0	0	0	2
2023-08-31 01:00:00	1	1	0	0	0	0	2
2023-08-31 01:15:00	1	0	0	0	0	0	1
2023-08-31 01:30:00	1	0	0	0	0	0	1
2023-08-31 01:45:00	0	0	0	0	0	0	0
2023-08-31 02:00:00	0	0	0	0	0	0	0
2023-08-31 02:15:00	0	0	0	0	0	0	0
2023-08-31 02:30:00	0	0	0	0	0	0	0
2023-08-31 02:45:00	1	1	0	0	0	0	2
2023-08-31 03:00:00	1	1	0	0	0	0	2
2023-08-31 03:15:00	1	1	0	0	0	0	2
2023-08-31 03:30:00	1	2	0	0	0	0	3
2023-08-31 03:45:00	3	3	0	0	0	0	6
2023-08-31 04:00:00	6	4	0	0	0	0	10
2023-08-31 04:15:00	8	5	0	0	0	0	13
2023-08-31 04:30:00	14	8	0	0	0	0	22
2023-08-31 04:45:00	14	8	0	0	0	0	22
2023-08-31 05:00:00	15	11	0	0	0	0	26
2023-08-31 05:15:00	20	12	0	0	0	0	32
2023-08-31 05:30:00	22	14	0	0	0	0	36
2023-08-31 05:45:00	30	15	0	0	0	0	45
2023-08-31 06:00:00	38	13	1	0	0	0	52
2023-08-31 06:15:00	40	13	2	0	0	0	55
2023-08-31 06:30:00	47	12	2	0	0	0	61
2023-08-31 06:45:00	51	11	3	0	0	0	65
2023-08-31 07:00:00	58	15	3	0	0	0	76
2023-08-31 07:15:00	71	17	6	0	0	0	94
2023-08-31 07:30:00	85	18	6	0	0	0	109
2023-08-31 07:45:00	91	21	5	0	0	0	117
2023-08-31 08:00:00	93	19	5	0	0	0	117
2023-08-31 08:15:00	81	19	2	0	0	0	102
2023-08-31 08:30:00	71	17	3	0	0	0	91
2023-08-31 08:45:00	69	14	4	0	0	0	87
2023-08-31 09:00:00	62	15	3	0	0	0	80
2023-08-31 09:15:00	74	13	3	0	0	0	90
2023-08-31 09:30:00	75	10	4	0	0	0	89
2023-08-31 09:45:00	79	11	3	0	0	0	93
2023-08-31 10:00:00	81	9	3	0	0	0	93
2023-08-31 10:15:00	80	10	2	0	0	0	92
2023-08-31 10:30:00	73	10	0	0	0	0	83
2023-08-31 10:45:00	67	8	2	0	0	0	77
2023-08-31 11:00:00	68	7	4	0	0	0	79
2023-08-31 11:15:00	55	7	7	0	0	0	69
2023-08-31 11:30:00	67	8	8	0	0	0	83
2023-08-31 11:45:00	64	11	7	1	0	0	83
2023-08-31 12:00:00	58	12	6	1	0	0	77
2023-08-31 12:15:00	67	12	3	1	0	0	83
2023-08-31 12:30:00	56	15	3	2	0	0	76
2023-08-31 12:45:00	57	14	2	1	0	0	74
2023-08-31 13:00:00	60	14	2	1	0	0	77
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2023-08-31 14:30:00	75	11	2	0	0	0	88
2023-08-31 14:45:00	87	13	1	0	0	0	101
2023-08-31 15:00:00	92	16	1	0	0	0	109
2023-08-31 15:15:00	92	18	3	0	0	0	113
2023-08-31 15:30:00	87	20	3	0	0	0	110
2023-08-31 15:45:00	71	16	4	0	0	0	91
2023-08-31 16:00:00	78	11	6	0	0	0	95
2023-08-31 16:15:00	73	7	4	0	0	0	84

2023-08-31 16:30:00	80	8	4	0	0	0	92
2023-08-31 16:45:00	86	10	3	0	0	0	99
2023-08-31 17:00:00	79	10	1	0	0	0	90
2023-08-31 17:15:00	76	12	1	0	0	0	89
2023-08-31 17:30:00	72	7	0	0	0	0	79
2023-08-31 17:45:00	57	7	0	0	0	0	64
2023-08-31 18:00:00	46	7	0	0	0	0	53
2023-08-31 18:15:00	38	6	0	0	0	0	44
2023-08-31 18:30:00	26	6	0	0	0	0	32
2023-08-31 18:45:00	24	3	1	0	0	0	28
2023-08-31 19:00:00	24	2	1	0	0	0	27
2023-08-31 19:15:00	28	0	1	0	0	0	29
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2023-09-01 01:00:00	0	0	0	0	0	0	0
2023-09-01 01:15:00	1	0	0	0	0	0	1
2023-09-01 01:30:00	1	0	0	0	0	0	1
2023-09-01 01:45:00	2	0	0	0	0	0	2
2023-09-01 02:00:00	2	0	0	0	0	0	2
2023-09-01 02:15:00	1	0	0	0	0	0	1
2023-09-01 02:30:00	2	0	0	0	0	0	2
2023-09-01 02:45:00	2	0	0	0	0	0	2
2023-09-01 03:00:00	2	0	0	0	0	0	2
2023-09-01 03:15:00	2	0	0	0	0	0	2
2023-09-01 03:30:00	1	0	0	0	0	0	1
2023-09-01 03:45:00	1	2	0	0	0	0	3
2023-09-01 04:00:00	2	5	0	0	0	0	7
2023-09-01 04:15:00	7	5	1	0	0	0	13
2023-09-01 04:30:00	9	8	1	0	0	0	18
2023-09-01 04:45:00	13	7	1	0	0	0	21
2023-09-01 05:00:00	15	7	1	0	0	0	23
2023-09-01 05:15:00	14	9	1	0	0	0	24
2023-09-01 05:30:00	25	11	2	0	0	0	38
2023-09-01 05:45:00	28	14	2	0	0	0	44
2023-09-01 06:00:00	33	13	2	0	0	0	48
2023-09-01 06:15:00	41	13	2	0	0	0	56
2023-09-01 06:30:00	44	9	1	0	0	0	54
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2023-09-01 07:00:00	61	16	3	0	0	0	80
2023-09-01 07:15:00	70	21	2	0	0	0	93
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2023-09-01 07:45:00	89	23	3	0	0	0	115
2023-09-01 08:00:00	95	21	4	0	0	0	120
2023-09-01 08:15:00	95	17	4	0	0	0	116
2023-09-01 08:30:00	87	15	4	0	0	0	106
2023-09-01 08:45:00	80	19	3	0	0	0	102
2023-09-01 09:00:00	77	16	2	0	0	0	95

2023-09-01 09:15:00	79	20	2	0	0	0	101
2023-09-01 09:30:00	77	16	1	0	0	0	94
2023-09-01 09:45:00	74	16	1	1	0	0	92
2023-09-01 10:00:00	72	20	1	2	0	0	95
2023-09-01 10:15:00	64	16	4	2	0	0	86
2023-09-01 10:30:00	66	15	6	2	0	0	89
2023-09-01 10:45:00	67	16	6	1	0	0	90
2023-09-01 11:00:00	71	19	6	0	0	0	96
2023-09-01 11:15:00	72	21	3	0	0	0	96
2023-09-01 11:30:00	74	19	4	0	0	0	97
2023-09-01 11:45:00	77	16	4	0	0	0	97
2023-09-01 12:00:00	76	10	5	0	0	0	91
2023-09-01 12:15:00	78	8	5	0	0	0	91
2023-09-01 12:30:00	71	13	2	0	0	0	86
2023-09-01 12:45:00	74	13	2	0	0	0	89
2023-09-01 13:00:00	78	17	3	1	0	0	99
2023-09-01 13:15:00	78	18	3	2	0	0	101
2023-09-01 13:30:00	90	18	5	2	0	0	115
2023-09-01 13:45:00	88	21	5	2	0	0	116
2023-09-01 14:00:00	90	19	5	1	0	0	115
2023-09-01 14:15:00	96	21	8	0	0	0	125
2023-09-01 14:30:00	92	15	7	0	0	0	114
2023-09-01 14:45:00	91	12	8	0	0	0	111
2023-09-01 15:00:00	94	17	6	0	0	0	117
2023-09-01 15:15:00	95	18	3	0	0	0	116
2023-09-01 15:30:00	98	21	2	0	0	0	121
2023-09-01 15:45:00	105	19	0	0	0	0	124
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2023-09-01 16:45:00	78	5	3	0	0	0	86
2023-09-01 17:00:00	85	7	1	0	0	0	93
2023-09-01 17:15:00	86	7	1	0	0	0	94
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2023-09-01 18:45:00	24	3	0	0	0	0	27
2023-09-01 19:00:00	22	1	0	0	0	0	23
2023-09-01 19:15:00	20	1	0	0	0	0	21
2023-09-01 19:30:00	24	1	0	0	0	0	25
2023-09-01 19:45:00	24	0	0	0	0	0	24
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2023-09-01 20:30:00	16	1	0	0	0	0	17
2023-09-01 20:45:00	18	2	0	0	0	0	20
2023-09-01 21:00:00	16	1	0	0	0	0	17
2023-09-01 21:15:00	14	1	0	0	0	0	15
2023-09-01 21:30:00	8	1	0	0	0	0	9
2023-09-01 21:45:00	6	1	0	0	0	0	7
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2023-09-01 22:45:00	11	0	0	0	0	0	11
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2023-09-01 23:45:00	3	1	0	0	0	0	4
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2023-09-02 01:30:00	0	2	0	0	0	0	2
2023-09-02 01:45:00	0	2	0	0	0	0	2

2023-09-02 02:00:00	0	1	0	0	0	0	1
2023-09-02 02:15:00	0	1	0	0	0	0	1
2023-09-02 02:30:00	0	0	0	0	0	0	0
2023-09-02 02:45:00	0	0	0	0	0	0	0
2023-09-02 03:00:00	1	0	0	0	0	0	1
2023-09-02 03:15:00	1	0	0	0	0	0	1
2023-09-02 03:30:00	1	0	0	0	0	0	1
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2023-09-02 04:15:00	5	1	0	0	0	0	6
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2023-09-02 05:00:00	8	1	2	0	0	0	11
2023-09-02 05:15:00	6	1	2	0	0	0	9
2023-09-02 05:30:00	6	3	1	0	0	0	10
2023-09-02 05:45:00	9	4	0	0	0	0	13
2023-09-02 06:00:00	10	6	0	0	0	0	16
2023-09-02 06:15:00	14	5	0	0	0	0	19
2023-09-02 06:30:00	15	4	0	0	0	0	19
2023-09-02 06:45:00	20	6	0	0	0	0	26
2023-09-02 07:00:00	30	5	0	0	0	0	35
2023-09-02 07:15:00	36	8	1	0	0	0	45
2023-09-02 07:30:00	42	8	1	0	0	0	51
2023-09-02 07:45:00	48	6	1	0	0	0	55
2023-09-02 08:00:00	62	9	3	0	0	0	74
2023-09-02 08:15:00	65	8	2	0	0	0	75
2023-09-02 08:30:00	71	9	2	0	0	0	82
2023-09-02 08:45:00	84	11	3	0	0	0	98
2023-09-02 09:00:00	73	10	1	0	0	0	84
2023-09-02 09:15:00	71	14	1	0	0	0	86
2023-09-02 09:30:00	75	17	2	0	0	0	94
2023-09-02 09:45:00	70	19	4	0	0	0	93
2023-09-02 10:00:00	75	21	4	0	0	0	100
2023-09-02 10:15:00	82	19	4	0	0	0	105
2023-09-02 10:30:00	89	17	5	0	0	0	111
2023-09-02 10:45:00	87	14	2	0	0	0	103
2023-09-02 11:00:00	91	13	2	0	0	0	106
2023-09-02 11:15:00	96	12	2	0	0	0	110
2023-09-02 11:30:00	91	11	0	0	0	0	102
2023-09-02 11:45:00	93	11	1	0	0	0	105
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2023-09-02 12:15:00	95	8	2	1	0	0	106
2023-09-02 12:30:00	95	8	3	1	0	0	107
2023-09-02 12:45:00	86	8	3	1	0	0	98
2023-09-02 13:00:00	89	11	3	1	0	0	104
2023-09-02 13:15:00	82	9	3	3	0	0	97
2023-09-02 13:30:00	81	11	2	3	0	0	97
2023-09-02 13:45:00	94	11	2	5	0	0	112
2023-09-02 14:00:00	83	8	2	5	0	0	98
2023-09-02 14:15:00	81	8	2	2	0	0	93
2023-09-02 14:30:00	84	7	3	2	0	0	96
2023-09-02 14:45:00	76	9	2	0	0	0	87
2023-09-02 15:00:00	84	12	1	0	0	0	97
2023-09-02 15:15:00	84	15	1	0	0	0	100
2023-09-02 15:30:00	85	12	0	0	0	0	97
2023-09-02 15:45:00	80	9	0	0	0	0	89
2023-09-02 16:00:00	73	6	1	0	0	0	80
2023-09-02 16:15:00	65	3	2	0	0	0	70
2023-09-02 16:30:00	55	5	3	0	0	0	63
2023-09-02 16:45:00	51	5	3	0	0	0	59
2023-09-02 17:00:00	47	8	2	0	0	0	57
2023-09-02 17:15:00	51	8	1	0	0	0	60
2023-09-02 17:30:00	52	7	0	0	0	0	59
2023-09-02 17:45:00	49	6	0	0	0	0	55
2023-09-02 18:00:00	45	5	1	0	0	0	51
2023-09-02 18:15:00	44	6	1	0	0	0	51
2023-09-02 18:30:00	35	6	1	0	0	0	42

2023-09-02 18:45:00	32	8	1	0	0	0	41
2023-09-02 19:00:00	31	5	0	0	0	0	36
2023-09-02 19:15:00	28	3	0	0	0	0	31
2023-09-02 19:30:00	26	3	0	0	0	0	29
2023-09-02 19:45:00	32	2	1	0	0	0	35
2023-09-02 20:00:00	32	2	2	0	0	0	36
2023-09-02 20:15:00	26	2	2	0	0	0	30
2023-09-02 20:30:00	32	1	2	0	0	0	35
2023-09-02 20:45:00	23	0	1	0	0	0	24
2023-09-02 21:00:00	22	3	0	0	0	0	25
2023-09-02 21:15:00	22	4	0	0	0	0	26
2023-09-02 21:30:00	15	5	0	0	0	0	20
2023-09-02 21:45:00	16	5	0	0	0	0	21
2023-09-02 22:00:00	14	3	0	0	0	0	17
2023-09-02 22:15:00	12	3	0	0	0	0	15
2023-09-02 22:30:00	11	3	0	0	0	0	14
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2023-09-02 23:15:00	7	1	0	0	0	0	8
2023-09-02 23:30:00	8	0	0	0	0	0	8
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2023-09-03 00:00:00	9	2	1	0	0	0	12
2023-09-03 00:15:00	7	2	1	0	0	0	10
2023-09-03 00:30:00	6	2	1	0	0	0	9
2023-09-03 00:45:00	6	0	1	0	0	0	7
2023-09-03 01:00:00	5	0	0	0	0	0	5
2023-09-03 01:15:00	7	0	0	0	0	0	7
2023-09-03 01:30:00	5	0	0	0	0	0	5
2023-09-03 01:45:00	3	0	0	0	0	0	3
2023-09-03 02:00:00	3	0	0	0	0	0	3
2023-09-03 02:15:00	2	0	0	0	0	0	2
2023-09-03 02:30:00	2	0	0	0	0	0	2
2023-09-03 02:45:00	2	0	0	0	0	0	2
2023-09-03 03:00:00	1	0	0	0	0	0	1
2023-09-03 03:15:00	0	0	0	0	0	0	0
2023-09-03 03:30:00	1	0	0	0	0	0	1
2023-09-03 03:45:00	1	0	0	0	0	0	1
2023-09-03 04:00:00	1	0	0	0	0	0	1
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2023-09-03 05:45:00	6	3	0	0	0	0	9
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2023-09-03 06:30:00	14	1	1	0	0	0	16
2023-09-03 06:45:00	22	2	1	0	0	0	25
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2023-09-03 07:15:00	24	4	0	0	0	0	28
2023-09-03 07:30:00	28	7	0	0	0	0	35
2023-09-03 07:45:00	24	8	0	0	0	0	32
2023-09-03 08:00:00	29	8	0	0	0	0	37
2023-09-03 08:15:00	31	9	0	0	0	0	40
2023-09-03 08:30:00	31	10	0	0	0	0	41
2023-09-03 08:45:00	46	11	0	0	0	0	57
2023-09-03 09:00:00	48	13	0	0	0	0	61
2023-09-03 09:15:00	58	11	0	0	0	0	69
2023-09-03 09:30:00	72	12	0	0	0	0	84
2023-09-03 09:45:00	67	9	1	0	0	0	77
2023-09-03 10:00:00	75	10	2	0	0	0	87
2023-09-03 10:15:00	78	17	3	0	0	0	98
2023-09-03 10:30:00	82	14	4	0	0	0	100
2023-09-03 10:45:00	88	16	3	0	0	0	107
2023-09-03 11:00:00	87	13	2	0	0	0	102
2023-09-03 11:15:00	92	7	1	0	0	0	100

2023-09-03 11:30:00	84	9	0	0	0	0	93
2023-09-03 11:45:00	88	9	0	0	0	0	97
2023-09-03 12:00:00	91	11	0	1	0	0	103
2023-09-03 12:15:00	83	10	0	1	0	0	94
2023-09-03 12:30:00	83	12	0	1	0	0	96
2023-09-03 12:45:00	76	12	2	1	0	0	91
2023-09-03 13:00:00	73	13	2	0	0	0	88
2023-09-03 13:15:00	76	13	2	1	0	0	92
2023-09-03 13:30:00	76	8	3	1	0	0	88
2023-09-03 13:45:00	84	8	2	1	0	0	95
2023-09-03 14:00:00	84	4	2	1	0	0	91
2023-09-03 14:15:00	78	6	2	0	0	0	86
2023-09-03 14:30:00	83	7	2	0	0	0	92
2023-09-03 14:45:00	74	6	1	0	0	0	81
2023-09-03 15:00:00	84	13	1	0	0	0	98
2023-09-03 15:15:00	87	16	1	2	0	0	106
2023-09-03 15:30:00	79	15	1	2	0	0	97
2023-09-03 15:45:00	77	19	1	2	0	0	99
2023-09-03 16:00:00	68	17	1	2	0	0	88
2023-09-03 16:15:00	66	15	1	0	0	0	82
2023-09-03 16:30:00	67	19	0	0	0	0	86
2023-09-03 16:45:00	59	15	1	0	0	0	75
2023-09-03 17:00:00	45	14	2	0	0	0	61
2023-09-03 17:15:00	37	12	2	0	0	0	51
2023-09-03 17:30:00	32	8	2	0	0	0	42
2023-09-03 17:45:00	34	8	2	0	0	0	44
2023-09-03 18:00:00	37	4	1	0	0	0	42
2023-09-03 18:15:00	37	2	1	0	0	0	40
2023-09-03 18:30:00	34	1	1	0	0	0	36
2023-09-03 18:45:00	25	2	0	0	0	0	27
2023-09-03 19:00:00	18	2	0	0	0	0	20
2023-09-03 19:15:00	13	3	0	0	0	0	16
2023-09-03 19:30:00	9	3	0	0	0	0	12
2023-09-03 19:45:00	8	1	0	0	0	0	9
2023-09-03 20:00:00	13	2	0	0	0	0	15
2023-09-03 20:15:00	13	1	0	0	0	0	14
2023-09-03 20:30:00	14	2	0	0	0	0	16
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2023-09-03 21:00:00	15	1	0	0	0	0	16
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2023-09-03 21:30:00	15	1	1	0	0	0	17
2023-09-03 21:45:00	13	1	1	0	0	0	15
2023-09-03 22:00:00	7	2	1	0	0	0	10
2023-09-03 22:15:00	4	2	0	0	0	0	6
2023-09-03 22:30:00	2	1	0	0	0	0	3
2023-09-03 22:45:00	3	1	0	0	0	0	4
2023-09-03 23:00:00	3	0	0	0	0	0	3

Maximum hourly count for each vehicle group

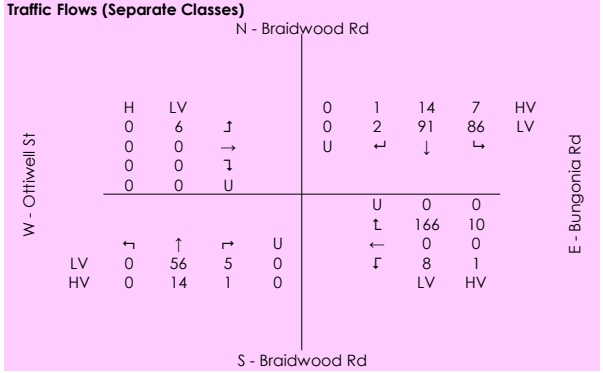
Date	light_veh	heavy_rigid_veh	heavy_art_veh	motorcycle_veh	cycle_veh	unclass_veh	total
Thu 31/08/23	93	21	8	2	0	0	117
Fri 01/09/23	105	30	8	2	0	0	125
Sat 02/09/23	96	21	5	5	0	0	112
Sun 03/09/23	92	19	4	2	0	0	107

transport planning

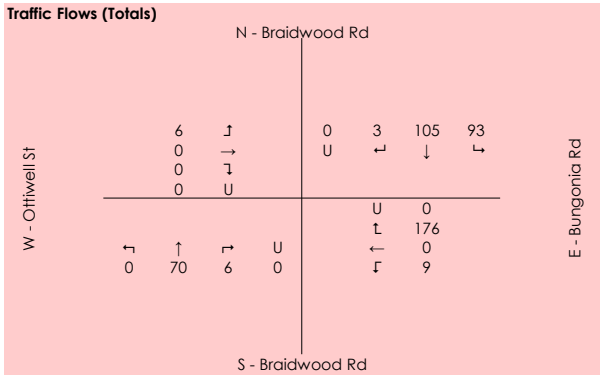
Job Number	23042
Intersection	1 - Braidwood Rd / Bungonia Rd / Ottiwell S
Weather	Fine
Date	Thursday, 31 August 2023
AM Peak	8:30 AM
PM Peak	3:30 PM

AM PEAK

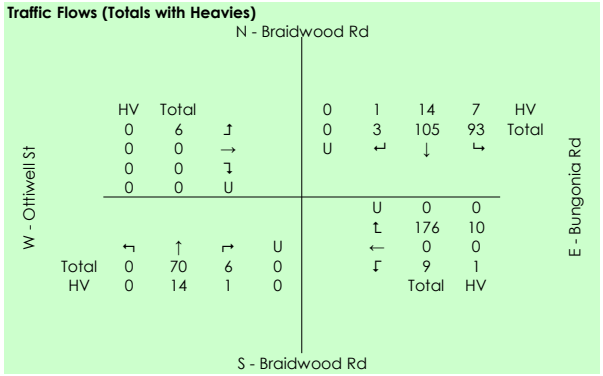
Traffic Flows (Separate Classes)



Traffic Flows (Totals)

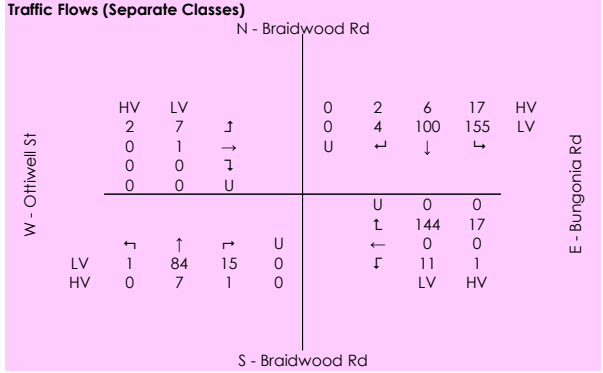


Traffic Flows (Totals with Heavies)

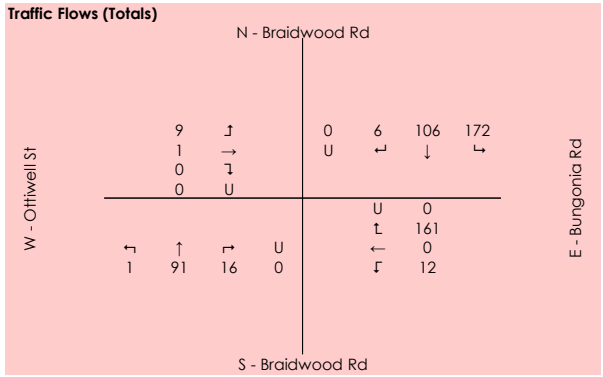


PM PEAK

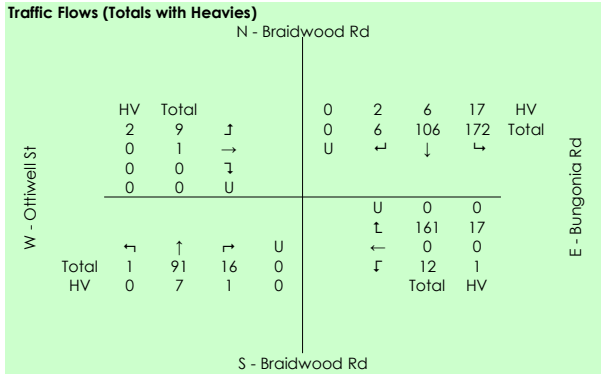
Traffic Flows (Separate Classes)



Traffic Flows (Totals)



Traffic Flows (Totals with Heavies)

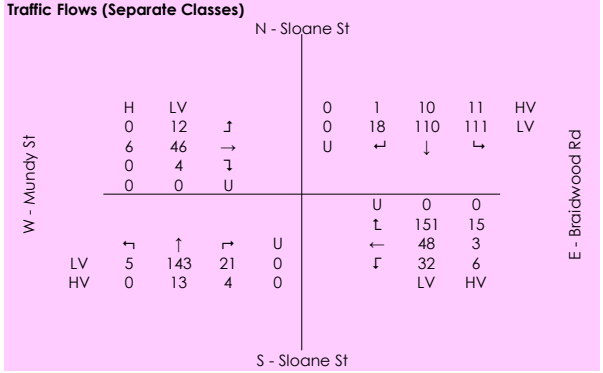


transport planning

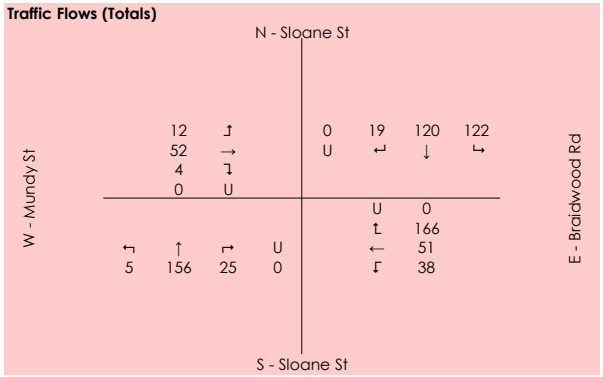
Job Number	23042
Intersection	2 - Sloane St / Braidwood Rd / Mundy St
Weather	Fine
Date	Thursday, 31 August 2023
AM Peak	8:30 AM
PM Peak	3:30 PM

AM PEAK

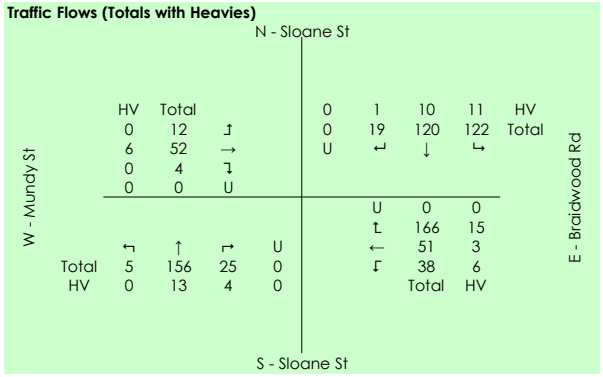
Traffic Flows (Separate Classes)



Traffic Flows (Totals)

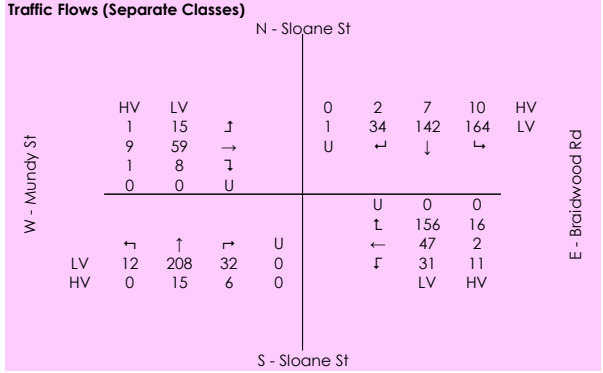


Traffic Flows (Totals with Heavies)

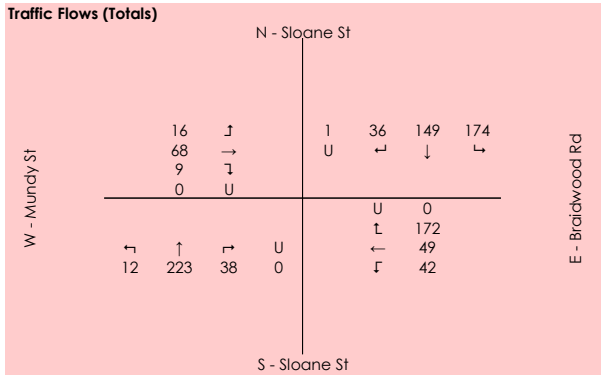


PM PEAK

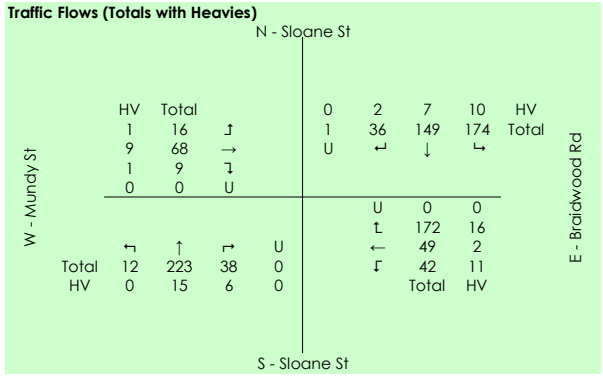
Traffic Flows (Separate Classes)



Traffic Flows (Totals)



Traffic Flows (Totals with Heavies)

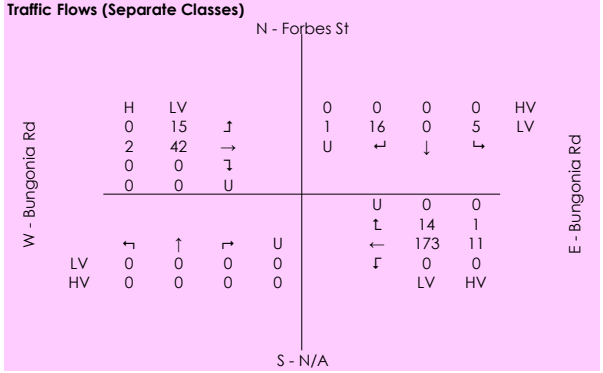


transport planning

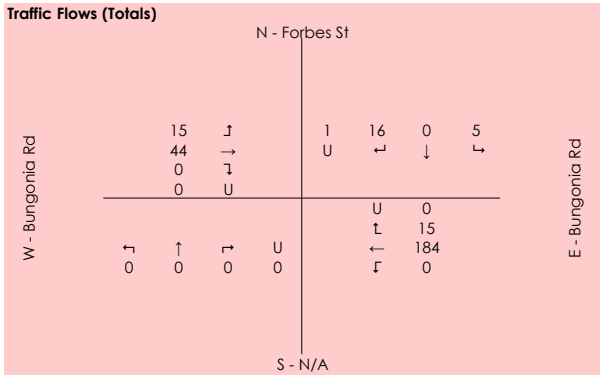
Job Number	23042
Intersection	3 - Bungonia Rd / Forbes St
Weather	Fine
Date	Thursday, 31 August 2023
AM Peak	8:00 AM
PM Peak	3:30 PM

AM PEAK

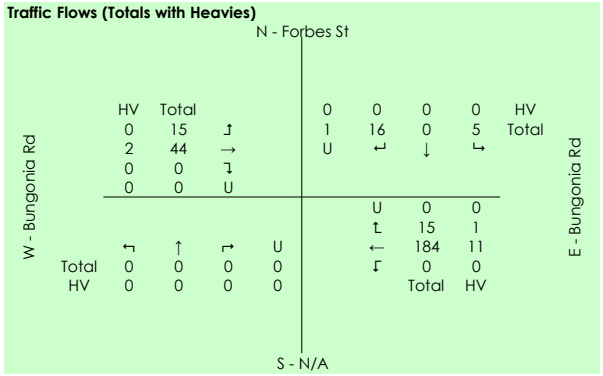
Traffic Flows (Separate Classes)



Traffic Flows (Totals)

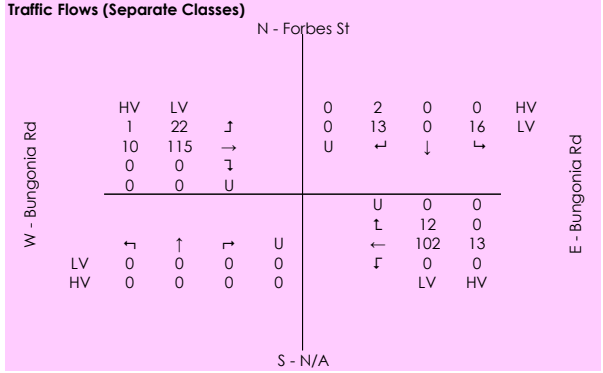


Traffic Flows (Totals with Heavies)

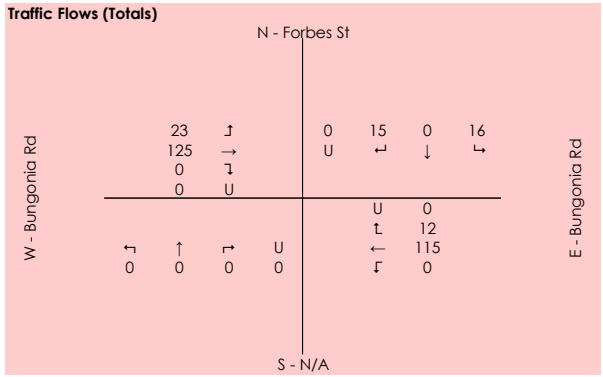


PM PEAK

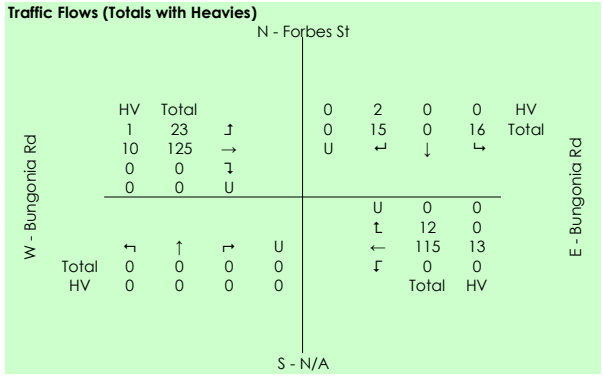
Traffic Flows (Separate Classes)



Traffic Flows (Totals)



Traffic Flows (Totals with Heavies)

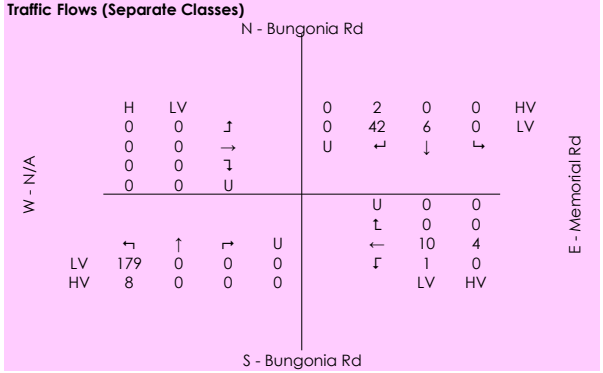


transport planning

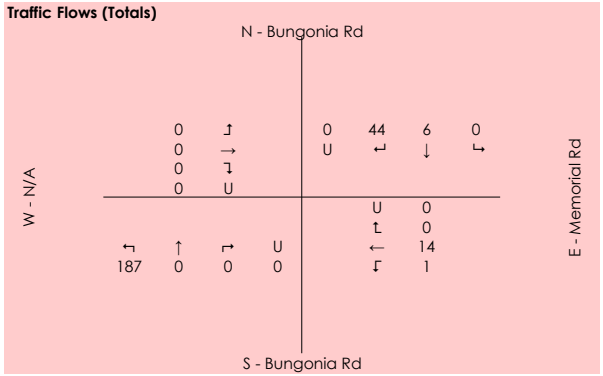
Job Number	23042
Intersection	4 - Bungonia Rd / Memorial Rd
Weather	Fine
Date	Thursday, 31 August 2023
AM Peak	8:00 AM
PM Peak	3:30 PM

AM PEAK

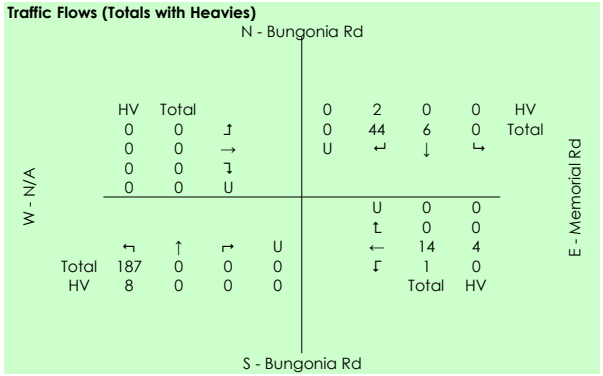
Traffic Flows (Separate Classes)



Traffic Flows (Totals)

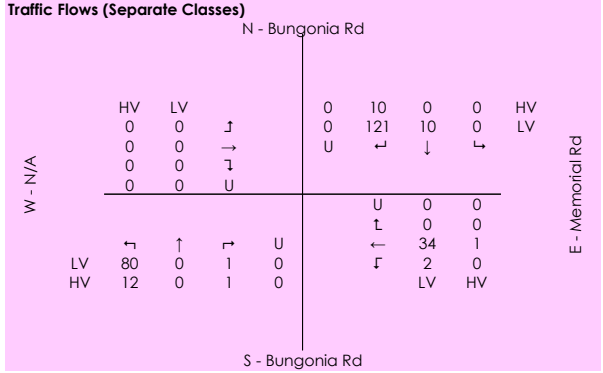


Traffic Flows (Totals with Heavies)

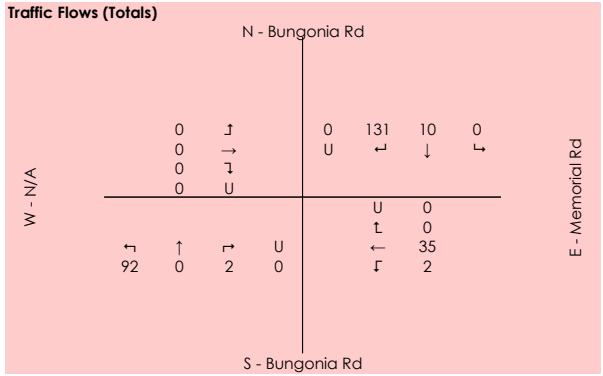


PM PEAK

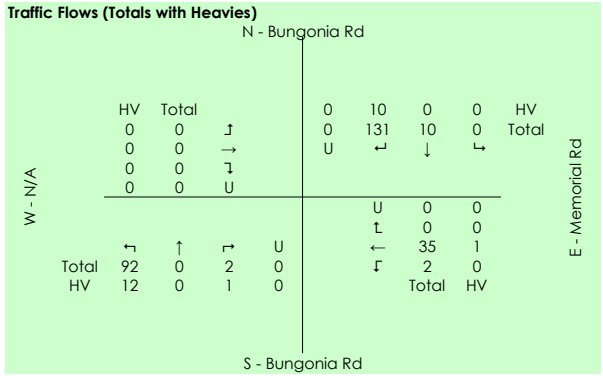
Traffic Flows (Separate Classes)



Traffic Flows (Totals)



Traffic Flows (Totals with Heavies)

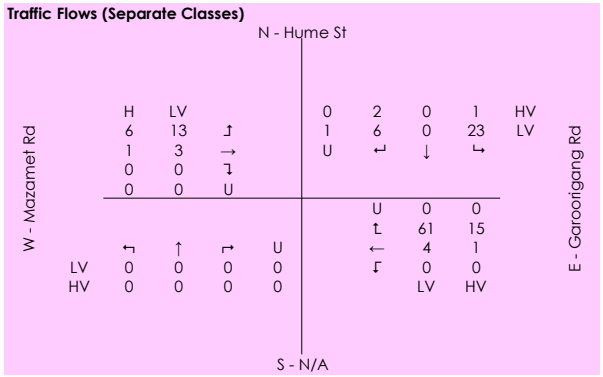


transport planning

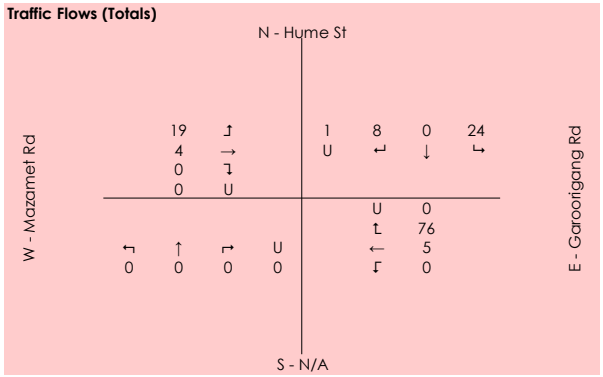
Job Number	23042
Intersection	5 - Hume St / Garoorigang Rd / Mazamet R
Weather	Fine
Date	Thursday, 31 August 2023
AM Peak	7:45 AM
PM Peak	3:30 PM

AM PEAK

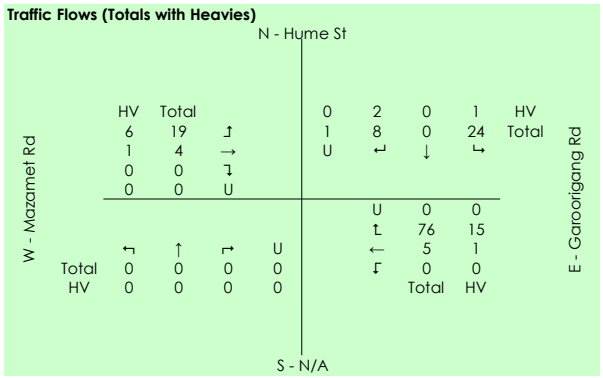
Traffic Flows (Separate Classes)



Traffic Flows (Totals)

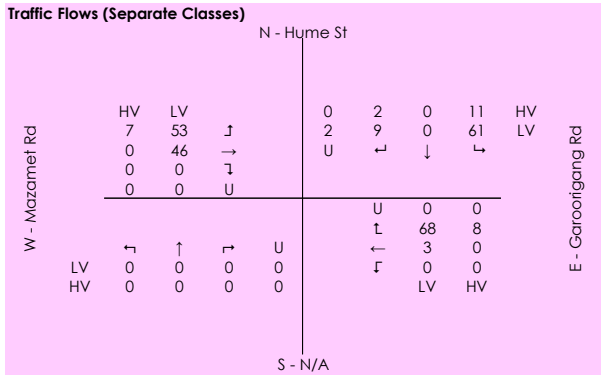


Traffic Flows (Totals with Heavies)

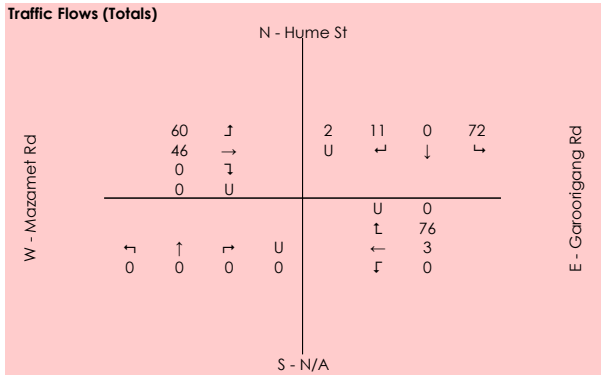


PM PEAK

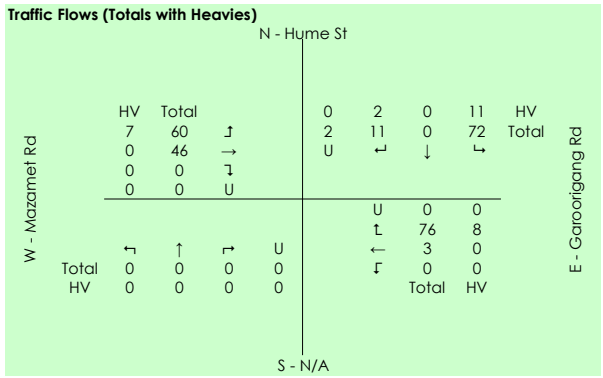
Traffic Flows (Separate Classes)



Traffic Flows (Totals)



Traffic Flows (Totals with Heavies)

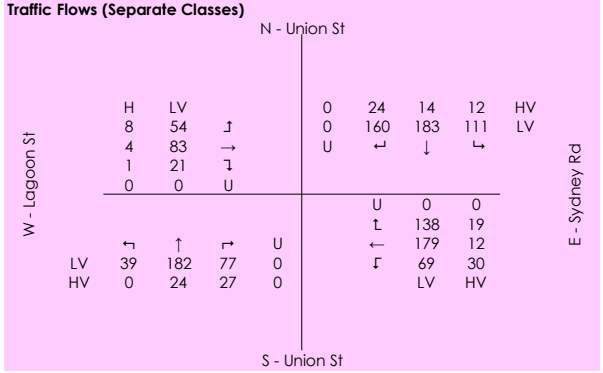


transport planning

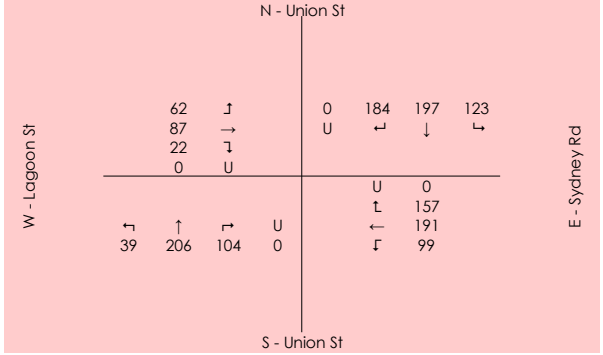
Job Number	23042
Intersection	6 - Sydney Rd / Union St / Lagoon St
Weather	Fine
Date	Thursday, 31 August 2023
AM Peak	8:15 AM
PM Peak	3:15 PM

AM PEAK

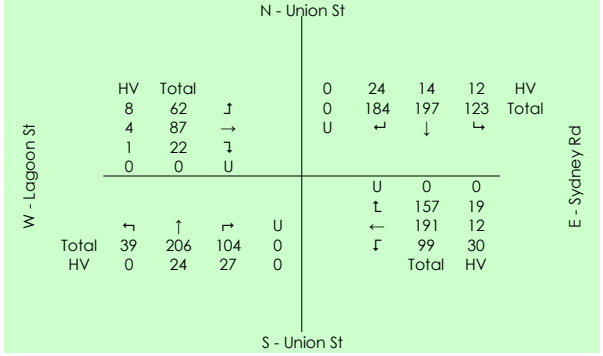
Traffic Flows (Separate Classes)



Traffic Flows (Totals)

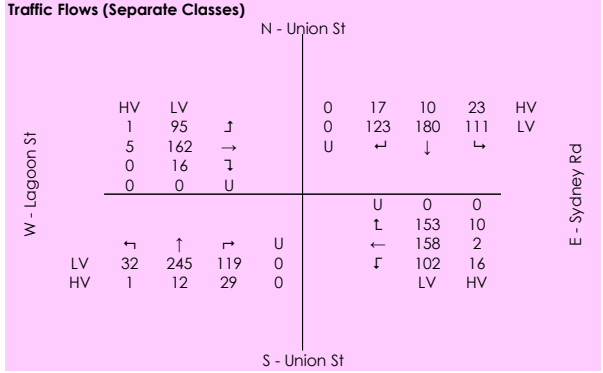


Traffic Flows (Totals with Heavies)

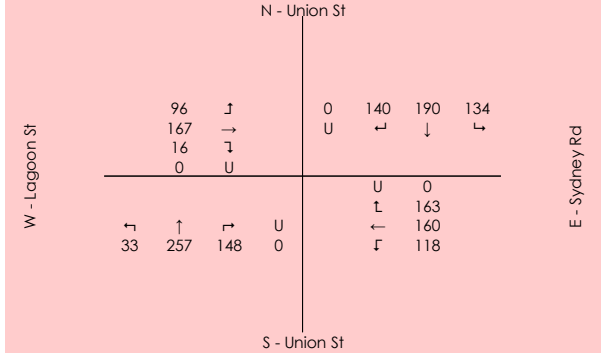


PM PEAK

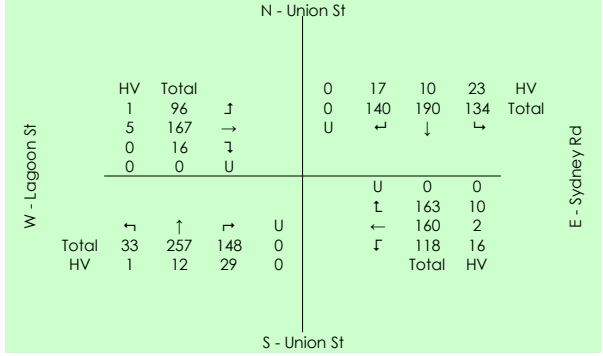
Traffic Flows (Separate Classes)



Traffic Flows (Totals)



Traffic Flows (Totals with Heavies)

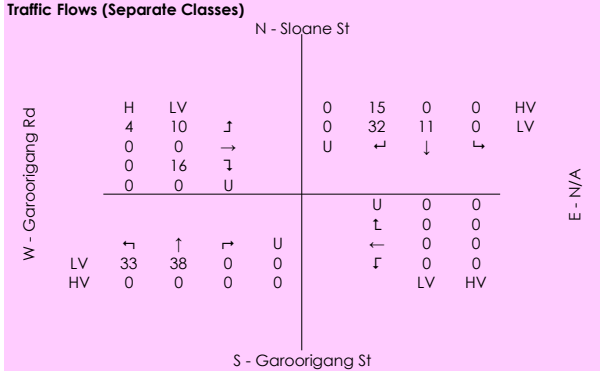


transport planning

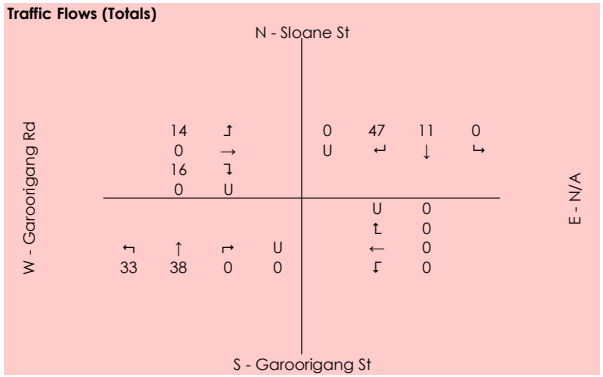
Job Number	23042
Intersection	7 - Sloane St / Garoorigang St / Garoorigan
Weather	Fine
Date	Thursday, 31 August 2023
AM Peak	7:45 AM
PM Peak	3:30 PM

AM PEAK

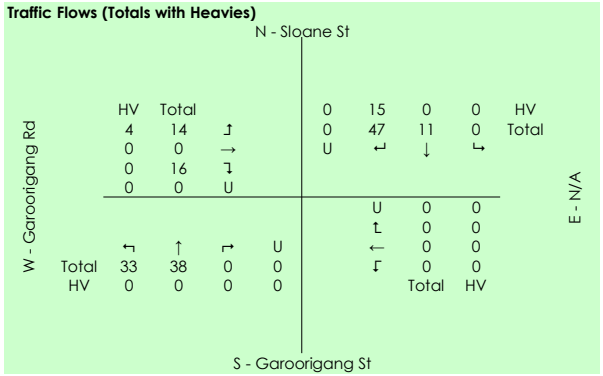
Traffic Flows (Separate Classes)



Traffic Flows (Totals)

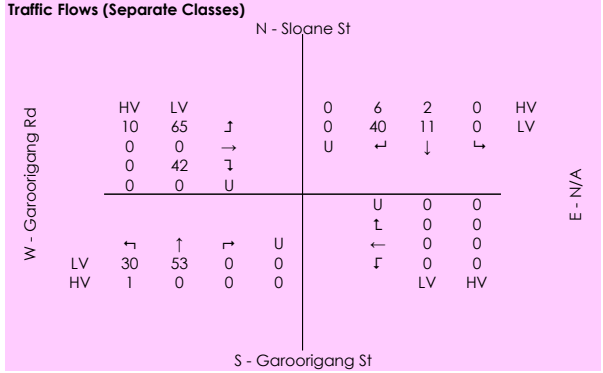


Traffic Flows (Totals with Heavies)

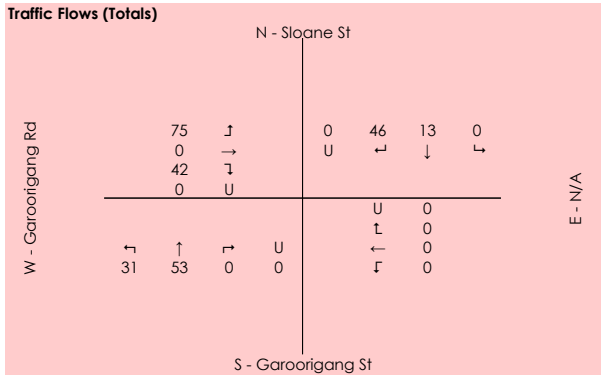


PM PEAK

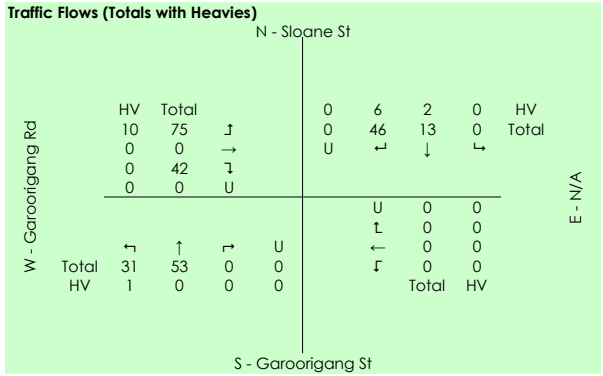
Traffic Flows (Separate Classes)



Traffic Flows (Totals)



Traffic Flows (Totals with Heavies)

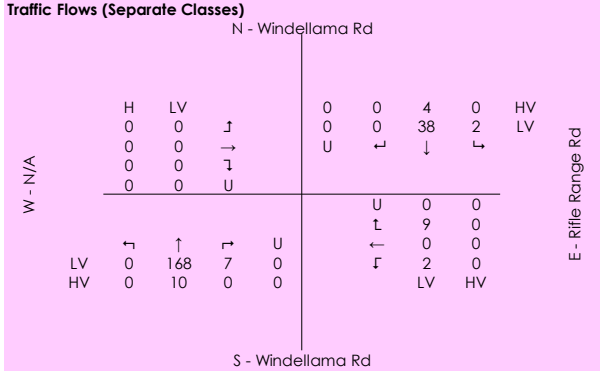


transport planning

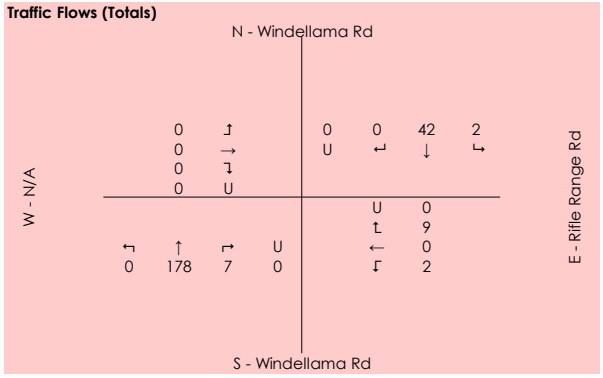
Job Number	23042
Intersection	8 - Windellama Rd / Rifle Range Rd
Weather	Fine
Date	Thursday, 31 August 2023
AM Peak	7:45 AM
PM Peak	3:30 PM

AM PEAK

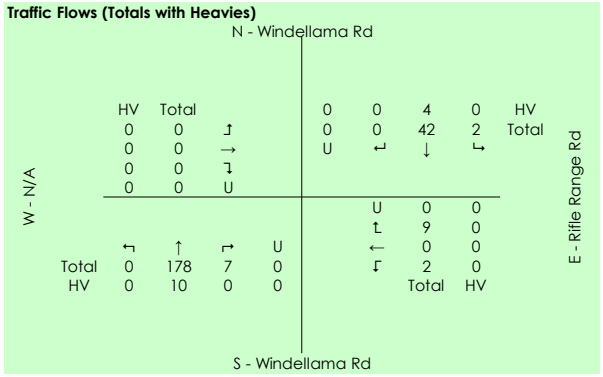
Traffic Flows (Separate Classes)



Traffic Flows (Totals)

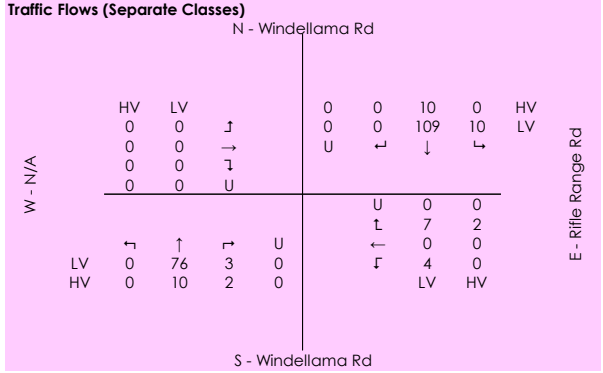


Traffic Flows (Totals with Heavies)

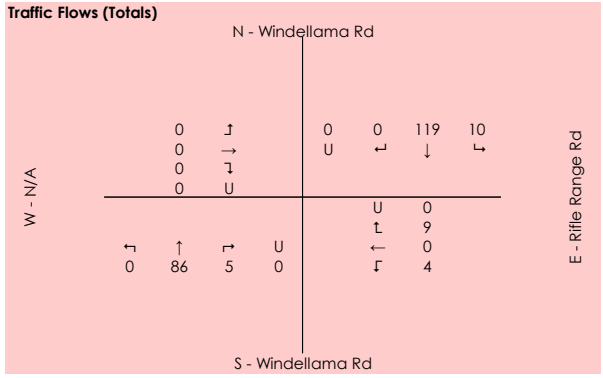


PM PEAK

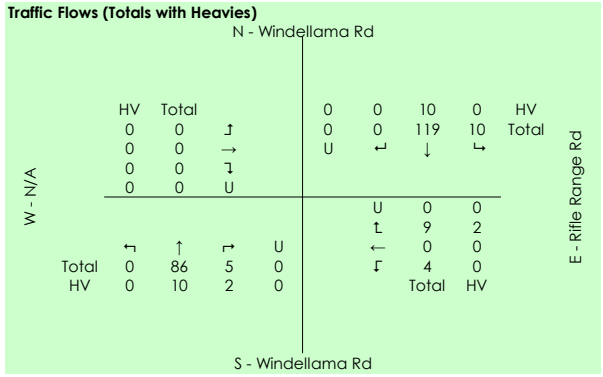
Traffic Flows (Separate Classes)



Traffic Flows (Totals)



Traffic Flows (Totals with Heavies)

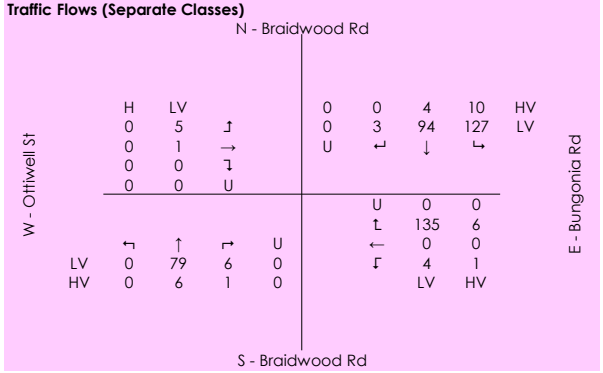


transport planning

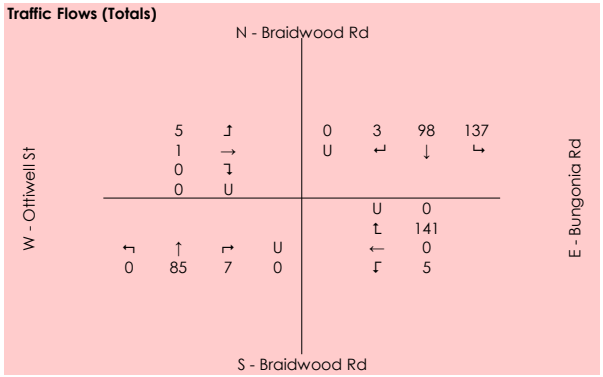
Job Number	23042
Intersection	1 - Braidwood Rd / Bungonia Rd / Ottiwell S
Weather	Fine
Date	Saturday, 1 January 2022
AM Peak	10:45 AM
PM Peak	12:30 PM

AM PEAK

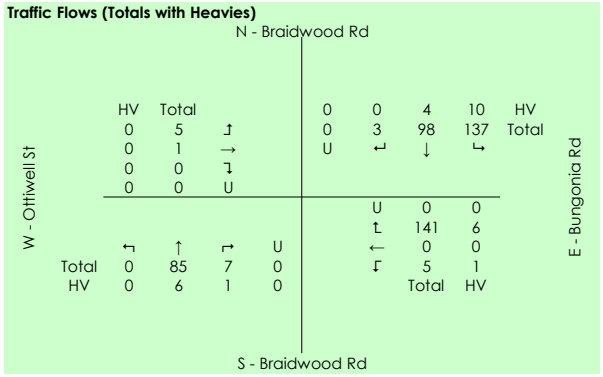
Traffic Flows (Separate Classes)



Traffic Flows (Totals)

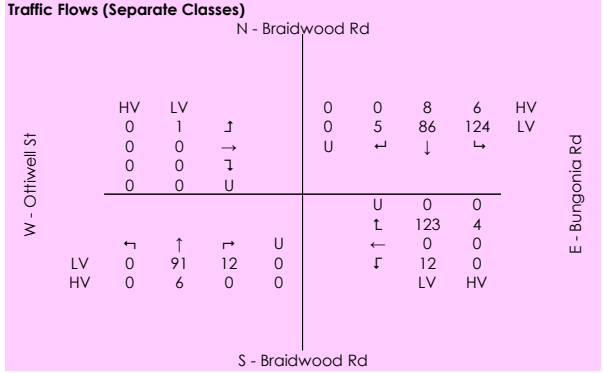


Traffic Flows (Totals with Heavies)

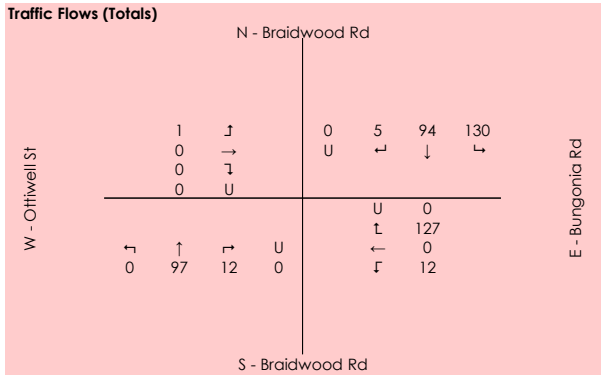


PM PEAK

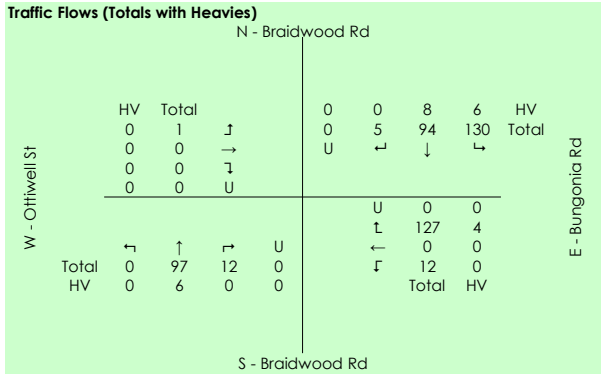
Traffic Flows (Separate Classes)



Traffic Flows (Totals)



Traffic Flows (Totals with Heavies)

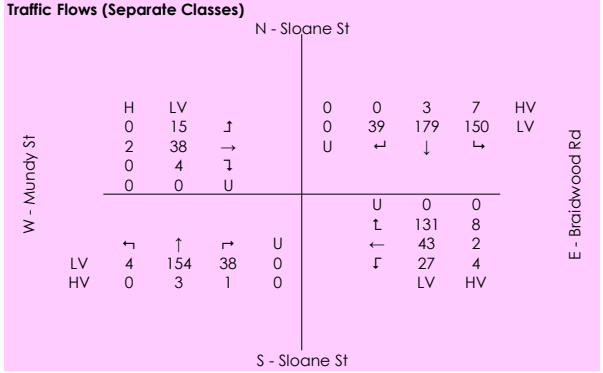


transport planning

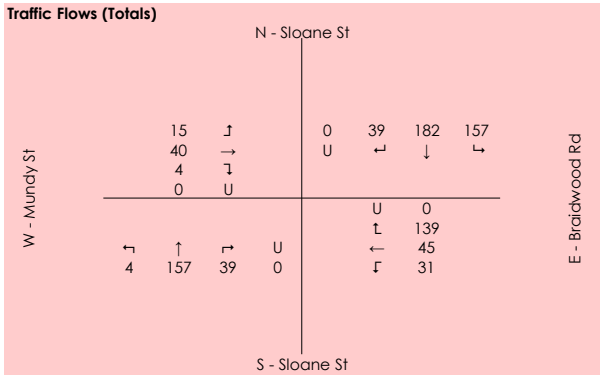
Job Number	23042
Intersection	2 - Sloane St / Braidwood Rd / Mundy St
Weather	Fine
Date	Saturday, 1 January 2022
AM Peak	11:45 AM
PM Peak	12:00 PM

AM PEAK

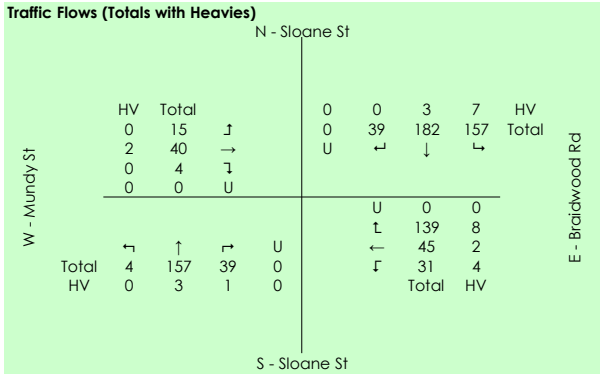
Traffic Flows (Separate Classes)



Traffic Flows (Totals)

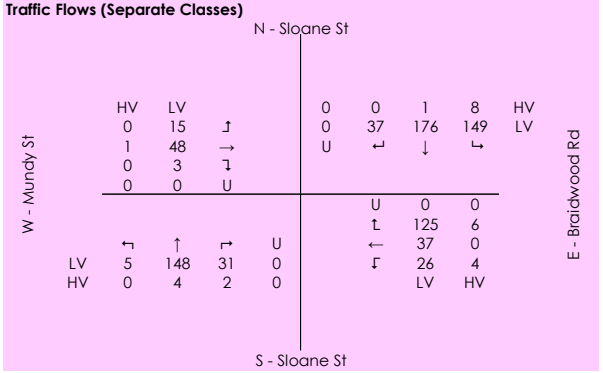


Traffic Flows (Totals with Heavies)

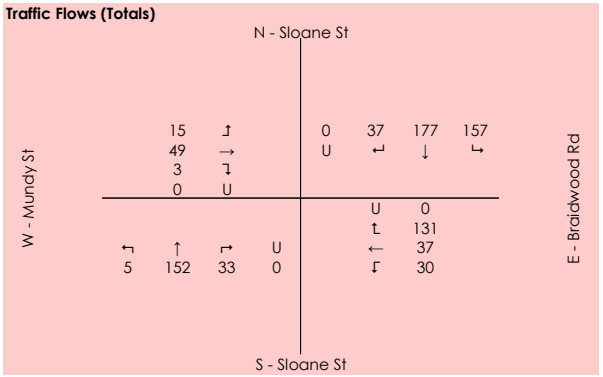


PM PEAK

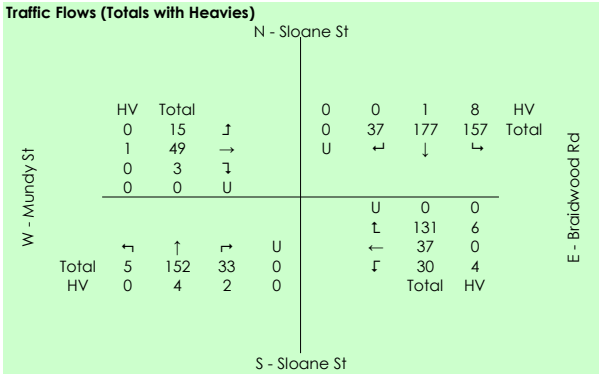
Traffic Flows (Separate Classes)



Traffic Flows (Totals)



Traffic Flows (Totals with Heavies)

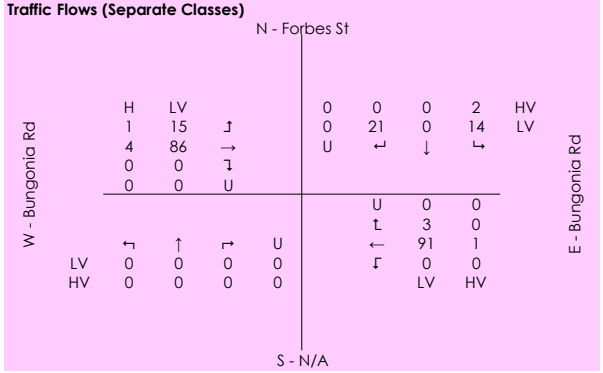


transport planning

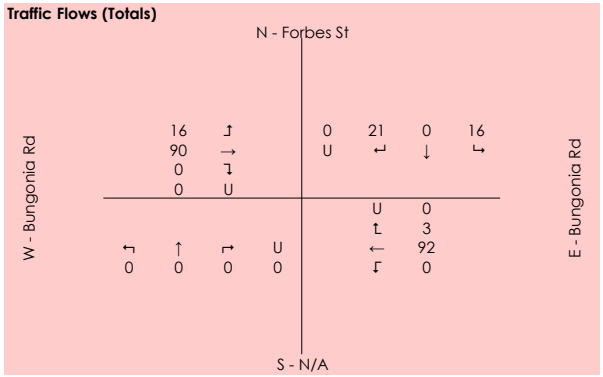
Job Number	23042
Intersection	3 - Bungonia Rd / Forbes St
Weather	Fine
Date	Saturday, 1 January 2022
AM Peak	10:45 AM
PM Peak	12:30 PM

AM PEAK

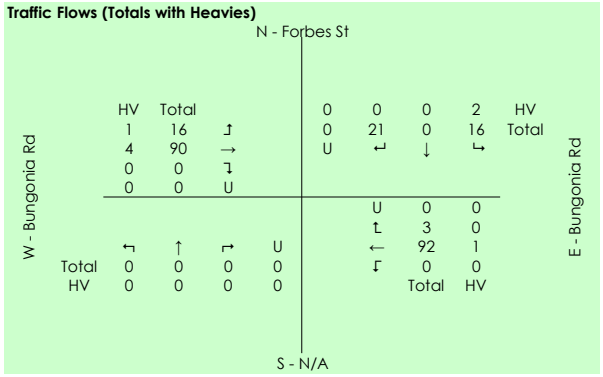
Traffic Flows (Separate Classes)



Traffic Flows (Totals)

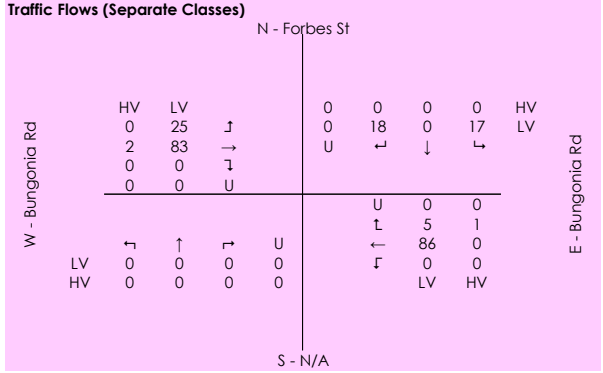


Traffic Flows (Totals with Heavies)

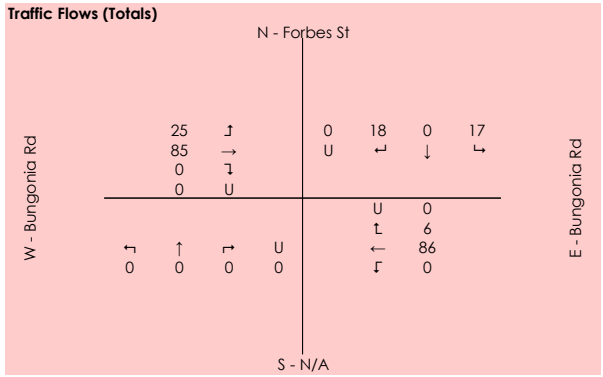


PM PEAK

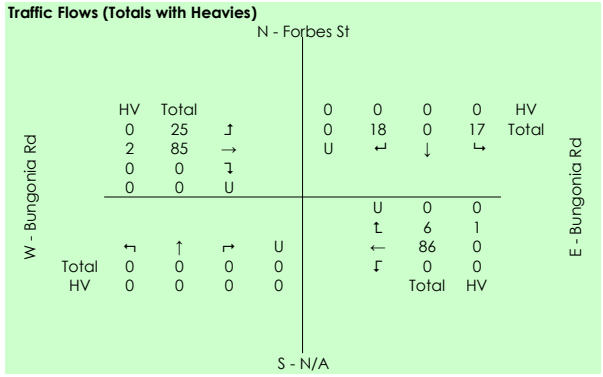
Traffic Flows (Separate Classes)



Traffic Flows (Totals)



Traffic Flows (Totals with Heavies)

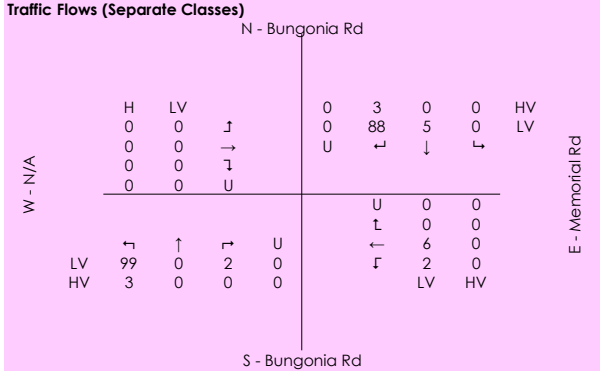


transport planning

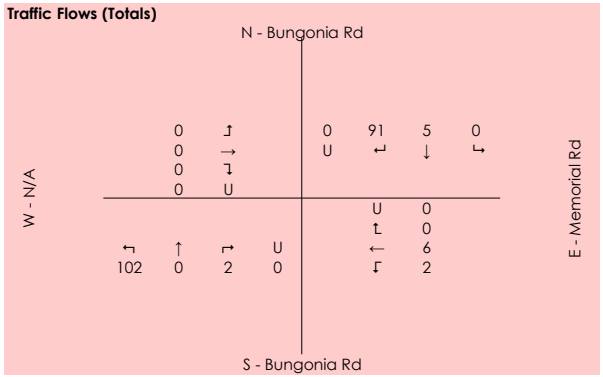
Job Number	23042
Intersection	4 - Bungonia Rd / Memorial Rd
Weather	Fine
Date	Saturday, 1 January 2022
AM Peak	11:15 AM
PM Peak	1:00 PM

AM PEAK

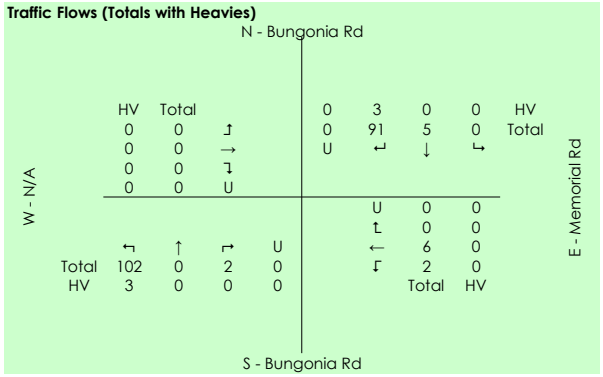
Traffic Flows (Separate Classes)



Traffic Flows (Totals)

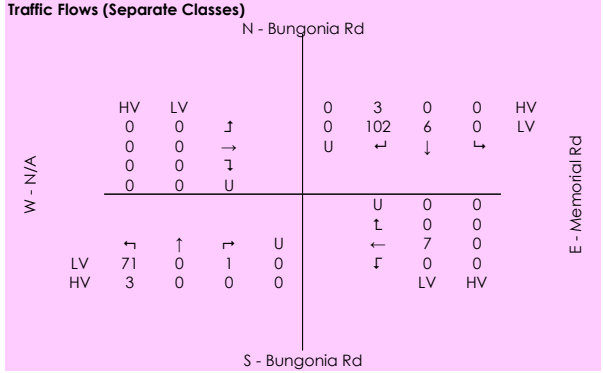


Traffic Flows (Totals with Heavies)

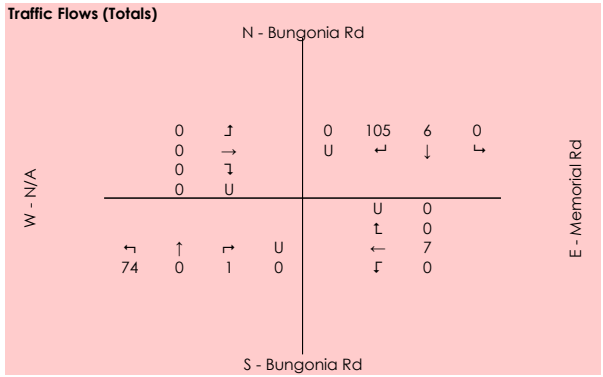


PM PEAK

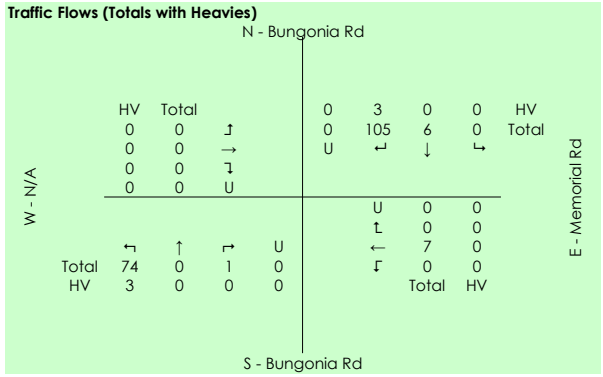
Traffic Flows (Separate Classes)



Traffic Flows (Totals)



Traffic Flows (Totals with Heavies)

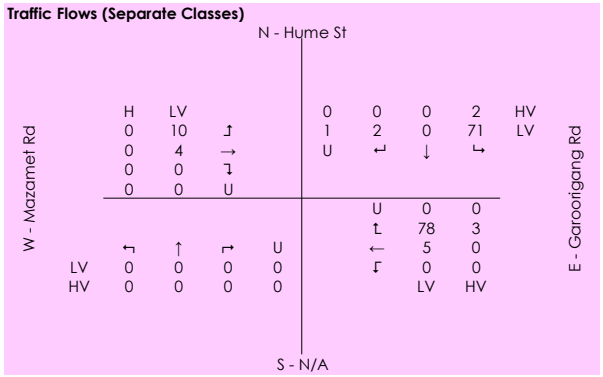


transport planning

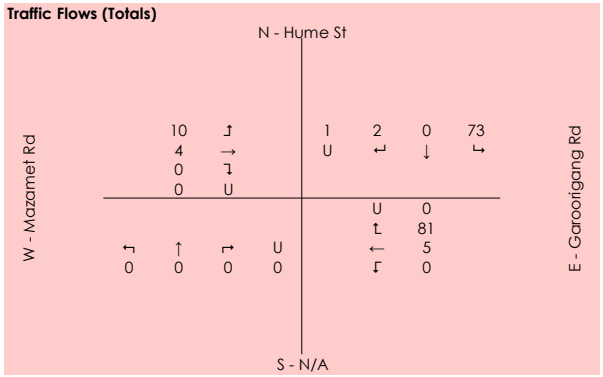
Job Number	23042
Intersection	5 - Hume St / Garoorigang Rd / Mazamet R
Weather	Fine
Date	Saturday, 1 January 2022
AM Peak	11:45 AM
PM Peak	12:00 PM

AM PEAK

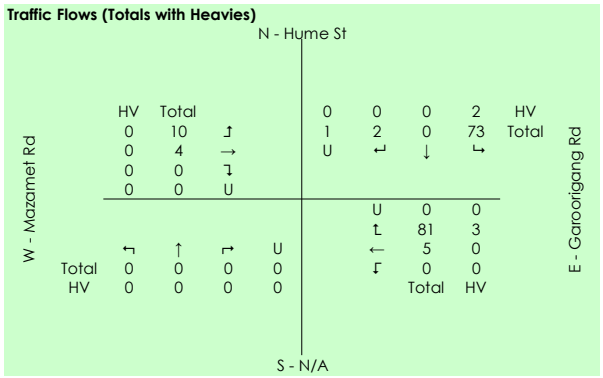
Traffic Flows (Separate Classes)



Traffic Flows (Totals)

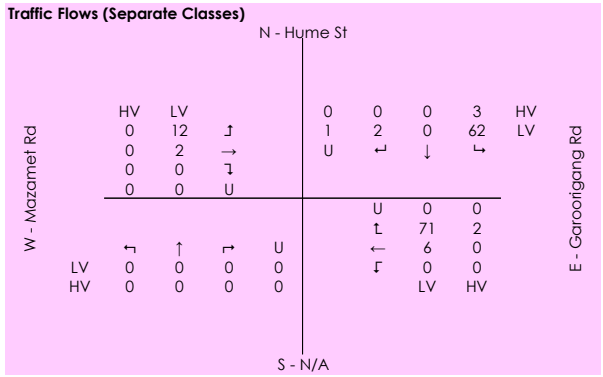


Traffic Flows (Totals with Heavies)

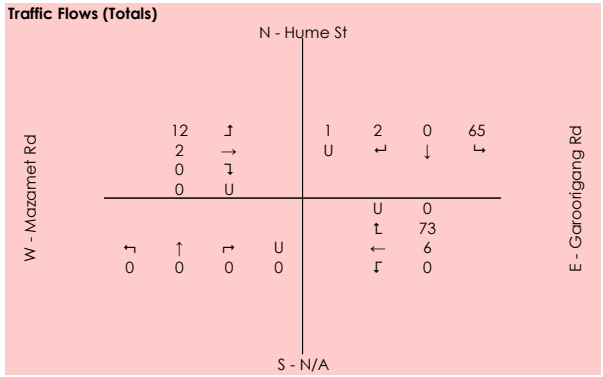


PM PEAK

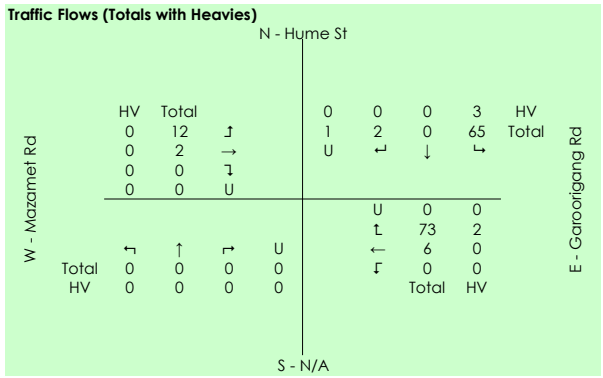
Traffic Flows (Separate Classes)



Traffic Flows (Totals)



Traffic Flows (Totals with Heavies)

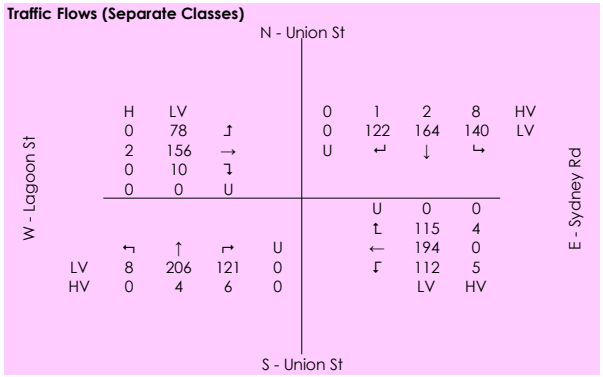


transport planning

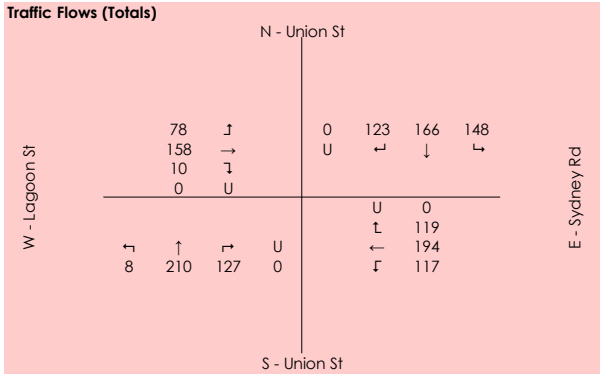
Job Number	23042
Intersection	6 - Sydney Rd / Union St / Lagoon St
Weather	Fine
Date	Saturday, 1 January 2022
AM Peak	11:15 AM
PM Peak	1:00 PM

AM PEAK

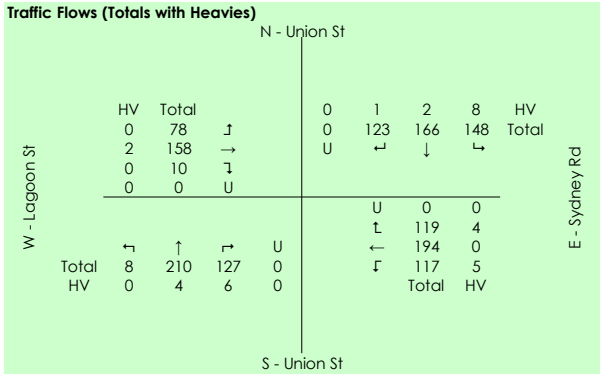
Traffic Flows (Separate Classes)



Traffic Flows (Totals)

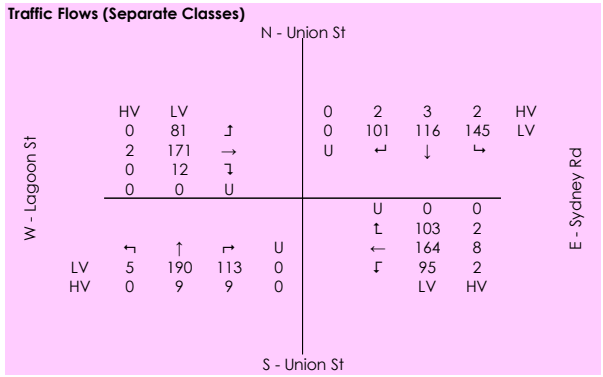


Traffic Flows (Totals with Heavies)

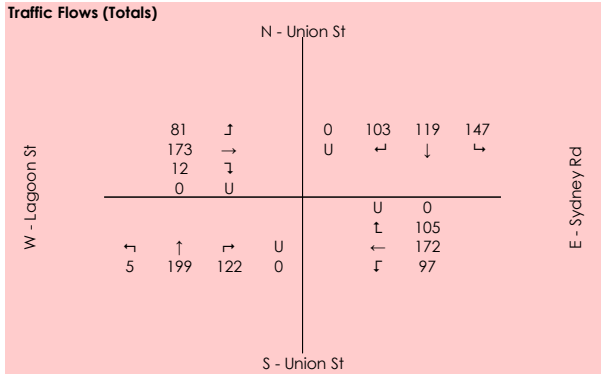


PM PEAK

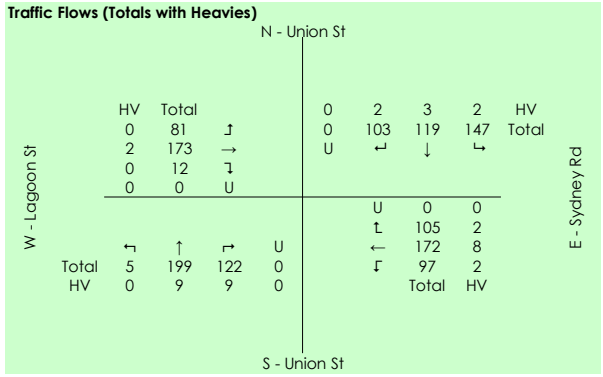
Traffic Flows (Separate Classes)



Traffic Flows (Totals)



Traffic Flows (Totals with Heavies)

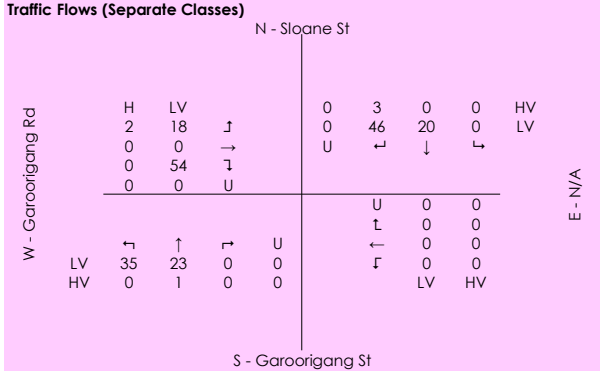


transport planning

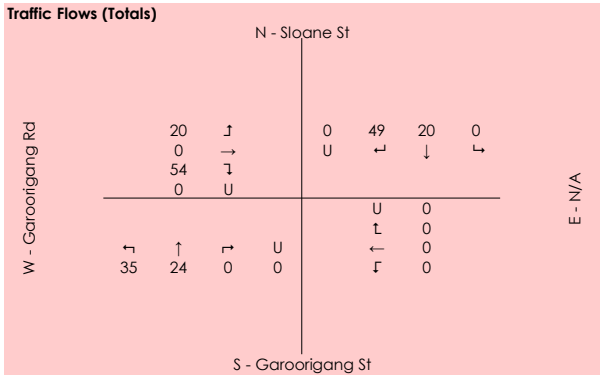
Job Number	23042
Intersection	7 - Sloane St / Garoorigang St / Garoorigan
Weather	Fine
Date	Saturday, 1 January 2022
AM Peak	11:45 AM
PM Peak	12:00 PM

AM PEAK

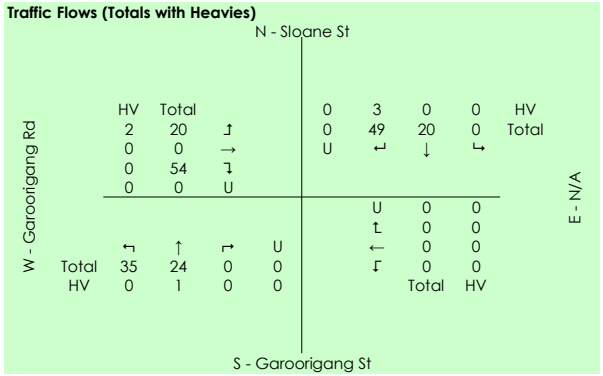
Traffic Flows (Separate Classes)



Traffic Flows (Totals)

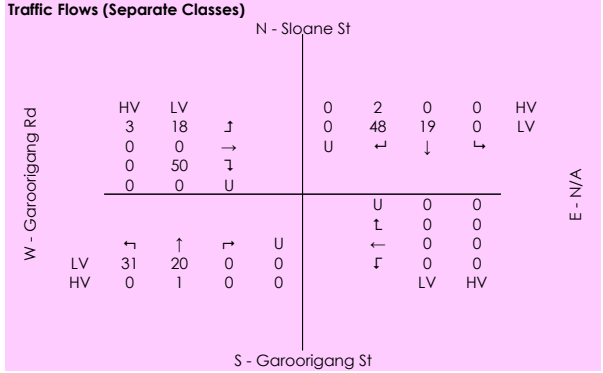


Traffic Flows (Totals with Heavies)

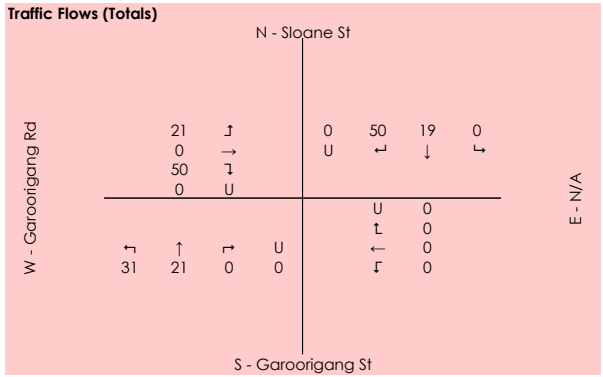


PM PEAK

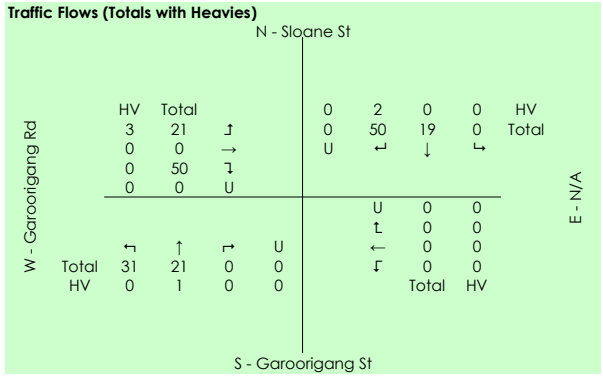
Traffic Flows (Separate Classes)



Traffic Flows (Totals)



Traffic Flows (Totals with Heavies)

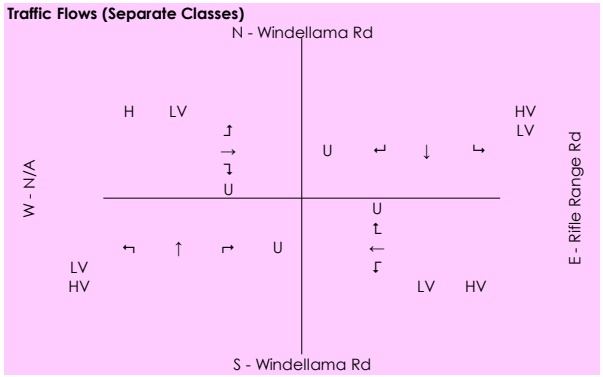


transport planning

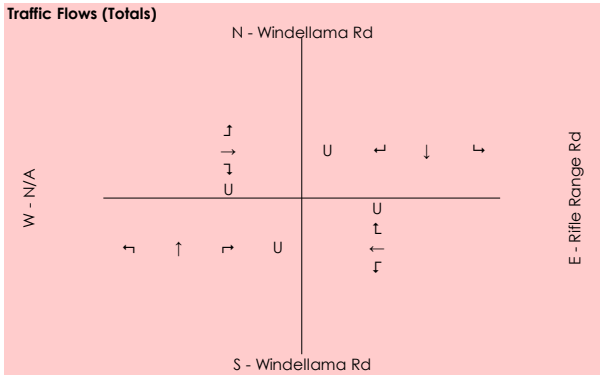
Job Number	23042
Intersection	8 - Windellama Rd / Rifle Range Rd
Weather	Fine
Date	Saturday, 2 September 2023
AM Peak	#N/A
PM Peak	#N/A

AM PEAK

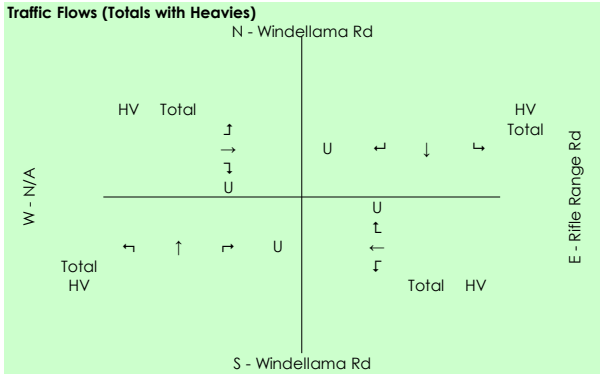
Traffic Flows (Separate Classes)



Traffic Flows (Totals)

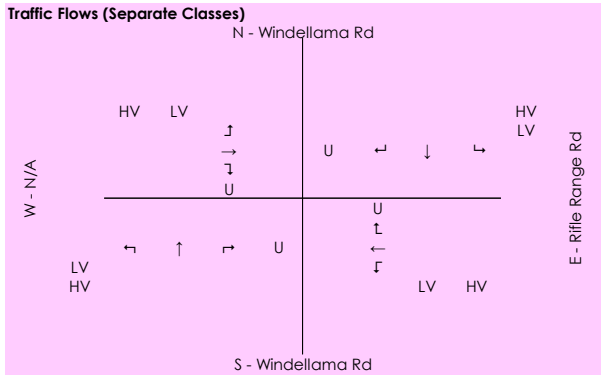


Traffic Flows (Totals with Heavies)

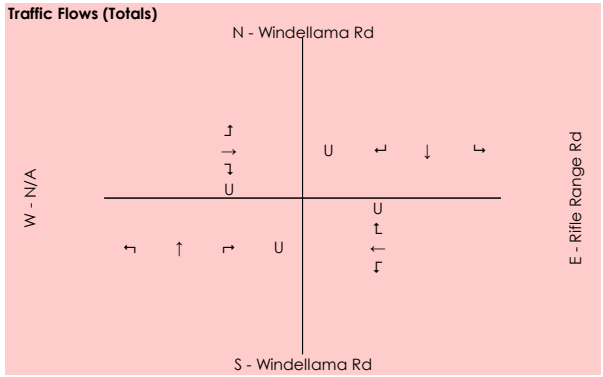


PM PEAK

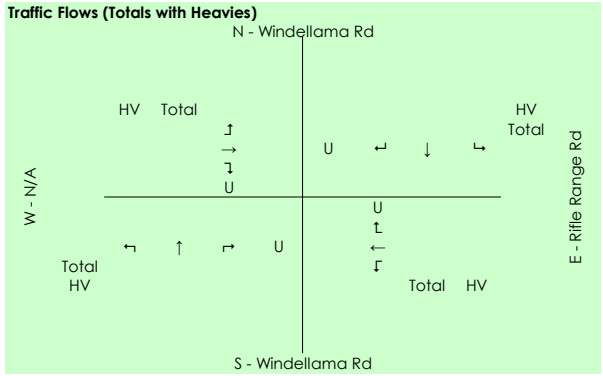
Traffic Flows (Separate Classes)



Traffic Flows (Totals)



Traffic Flows (Totals with Heavies)



Appendix B

SIDRA Intersection Analysis Results

MOVEMENT SUMMARY

Site: 1 [1. AM_Braidwood-Bungonia (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Braidwood Rd															
1	L2	All MCs	1	0.0	1	0.0	0.048	5.9	LOS A	0.0	0.4	0.04	0.07	0.04	25.3
2	T1	All MCs	74	20.0	74	20.0	0.048	0.0	LOS A	0.0	0.4	0.04	0.07	0.04	58.1
3	R2	All MCs	6	16.7	6	16.7	0.048	6.0	LOS A	0.0	0.4	0.04	0.07	0.04	44.8
Approach			81	19.5	81	19.5	0.048	0.6	NA	0.0	0.4	0.04	0.07	0.04	56.8
East: Bungonia Rd															
4	L2	All MCs	9	11.1	9	11.1	0.007	4.5	LOS A	0.0	0.2	0.21	0.51	0.21	34.5
5	T1	All MCs	1	0.0	1	0.0	0.226	4.1	LOS A	0.9	6.3	0.39	0.65	0.39	33.5
6	R2	All MCs	185	5.7	185	5.7	0.226	5.7	LOS A	0.9	6.3	0.39	0.65	0.39	39.7
Approach			196	5.9	196	5.9	0.226	5.7	LOS A	0.9	6.3	0.38	0.64	0.38	39.6
North: Braidwood Rd															
7	L2	All MCs	98	7.5	98	7.5	0.127	5.7	LOS A	0.5	3.8	0.04	0.26	0.04	37.4
8	T1	All MCs	111	13.3	111	13.3	0.127	0.0	LOS A	0.5	3.8	0.04	0.26	0.04	53.1
9	R2	All MCs	3	33.3	3	33.3	0.127	6.0	LOS A	0.5	3.8	0.04	0.26	0.04	36.9
Approach			212	10.9	212	10.9	0.127	2.7	NA	0.5	3.8	0.04	0.26	0.04	44.8
West: Ottiwell St															
10	L2	All MCs	6	0.0	6	0.0	0.006	5.8	LOS A	0.0	0.2	0.18	0.53	0.18	42.9
11	T1	All MCs	1	0.0	1	0.0	0.006	4.9	LOS A	0.0	0.2	0.18	0.53	0.18	31.5
12	R2	All MCs	1	0.0	1	0.0	0.006	6.4	LOS A	0.0	0.2	0.18	0.53	0.18	35.8
Approach			8	0.0	8	0.0	0.006	5.7	LOS A	0.0	0.2	0.18	0.53	0.18	41.2
All Vehicles			497	10.2	497	10.2	0.226	3.6	NA	0.9	6.3	0.18	0.38	0.18	44.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. AM_Sloane-Braidwood (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Braidwood Rd															
4	L2	All MCs	40	15.8	40	15.8	0.436	11.1	LOS A	2.5	19.1	0.59	1.00	0.80	37.7
5	T1	All MCs	54	5.9	54	5.9	0.436	12.8	LOS A	2.5	19.1	0.59	1.00	0.80	38.5
6	R2	All MCs	175	9.0	175	9.0	0.436	14.7	LOS B	2.5	19.1	0.59	1.00	0.80	38.1
Approach			268	9.4	268	9.4	0.436	13.7	LOS A	2.5	19.1	0.59	1.00	0.80	38.1
NorthEast: Sloane St															
7	L2	All MCs	128	9.0	128	9.0	0.172	6.0	LOS A	0.8	5.8	0.19	0.33	0.19	47.6
8	T1	All MCs	126	8.3	126	8.3	0.172	0.3	LOS A	0.8	5.8	0.19	0.33	0.19	52.1
9	R2	All MCs	20	5.3	20	5.3	0.172	6.2	LOS A	0.8	5.8	0.19	0.33	0.19	46.4
Approach			275	8.4	275	8.4	0.172	3.4	NA	0.8	5.8	0.19	0.33	0.19	49.4
NorthWest: Mundy St															
10	L2	All MCs	13	0.0	13	0.0	0.090	8.7	LOS A	0.3	2.5	0.41	0.95	0.41	41.2
11	T1	All MCs	55	11.5	55	11.5	0.090	10.6	LOS A	0.3	2.5	0.41	0.95	0.41	40.5
12	R2	All MCs	4	0.0	4	0.0	0.090	10.3	LOS A	0.3	2.5	0.41	0.95	0.41	40.4
Approach			72	8.8	72	8.8	0.090	10.2	LOS A	0.3	2.5	0.41	0.95	0.41	40.6
SouthWest: Sloane St															
1	L2	All MCs	5	0.0	5	0.0	0.111	6.0	LOS A	0.2	1.6	0.09	0.13	0.09	51.8
2	T1	All MCs	164	8.3	164	8.3	0.111	0.1	LOS A	0.2	1.6	0.09	0.13	0.09	57.2
3	R2	All MCs	26	16.0	26	16.0	0.111	6.2	LOS A	0.2	1.6	0.09	0.13	0.09	48.1
Approach			196	9.1	196	9.1	0.111	1.1	NA	0.2	1.6	0.09	0.13	0.09	55.5
All Vehicles			811	9.0	811	9.0	0.436	6.9	NA	2.5	19.1	0.32	0.56	0.39	45.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. AM_Bungonia-Forbes (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Bungonia Rd															
5	T1	All MCs	194	6.0	194	6.0	0.113	0.0	LOS A	0.1	0.8	0.03	0.05	0.03	59.3
6	R2	All MCs	16	6.7	16	6.7	0.113	5.7	LOS A	0.1	0.8	0.03	0.05	0.03	55.4
Approach			209	6.0	209	6.0	0.113	0.4	NA	0.1	0.8	0.03	0.05	0.03	59.0
North: Forbes St															
7	L2	All MCs	5	0.0	5	0.0	0.004	8.2	LOS A	0.0	0.1	0.13	0.90	0.13	48.5
9	R2	All MCs	17	0.0	17	0.0	0.019	8.7	LOS A	0.1	0.4	0.33	0.87	0.33	50.7
Approach			22	0.0	22	0.0	0.019	8.5	LOS A	0.1	0.4	0.28	0.88	0.28	50.3
West: Bungonia Rd															
10	L2	All MCs	16	0.0	16	0.0	0.033	5.5	LOS A	0.0	0.0	0.00	0.15	0.00	56.2
11	T1	All MCs	46	4.5	46	4.5	0.033	0.0	LOS A	0.0	0.0	0.00	0.15	0.00	58.1
Approach			62	3.4	62	3.4	0.033	1.4	NA	0.0	0.0	0.00	0.15	0.00	57.5
All Vehicles			294	5.0	294	5.0	0.113	1.3	NA	0.1	0.8	0.04	0.13	0.04	57.7

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 4 [4. AM_Bungonia-Memorial (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bungonia Rd															
1a	L1	All MCs	197	4.3	197	4.3	0.107	5.4	LOS A	0.0	0.0	0.00	0.59	0.00	47.8
3	R2	All MCs	1	0.0	1	0.0	0.107	5.4	LOS A	0.0	0.0	0.00	0.59	0.00	48.6
Approach			198	4.3	198	4.3	0.107	5.4	NA	0.0	0.0	0.00	0.59	0.00	47.8
East: Memorial Rd															
4	L2	All MCs	1	0.0	1	0.0	0.017	5.6	LOS A	0.1	0.5	0.17	0.54	0.17	48.2
6a	R1	All MCs	15	28.6	15	28.6	0.017	6.4	LOS A	0.1	0.5	0.17	0.54	0.17	41.7
Approach			16	26.7	16	26.7	0.017	6.3	LOS A	0.1	0.5	0.17	0.54	0.17	42.2
NorthWest: Bungonia Rd															
27a	L1	All MCs	44	0.0	44	0.0	0.027	5.3	LOS A	0.0	0.2	0.00	0.59	0.00	46.9
29a	R1	All MCs	6	0.0	6	0.0	0.027	5.0	LOS A	0.0	0.2	0.00	0.59	0.00	48.8
Approach			51	0.0	51	0.0	0.027	5.3	NA	0.0	0.2	0.00	0.59	0.00	47.1
All Vehicles			264	4.8	264	4.8	0.107	5.4	NA	0.1	0.5	0.01	0.59	0.01	47.3

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 5 [5. AM_Hume-Garoorigang (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Garoorigang Rd															
5	T1	All MCs	5	20.0	5	20.0	0.053	0.1	LOS A	0.2	2.0	0.10	0.53	0.10	55.0
6	R2	All MCs	80	19.7	80	19.7	0.053	5.8	LOS A	0.2	2.0	0.10	0.53	0.10	47.7
Approach			85	19.8	85	19.8	0.053	5.4	NA	0.2	2.0	0.10	0.53	0.10	48.3
North: Hume St															
7	L2	All MCs	25	4.2	25	4.2	0.021	5.6	LOS A	0.1	0.6	0.03	0.56	0.03	49.1
9	R2	All MCs	6	0.0	6	0.0	0.021	5.5	LOS A	0.1	0.6	0.03	0.56	0.03	49.0
Approach			32	3.3	32	3.3	0.021	5.6	LOS A	0.1	0.6	0.03	0.56	0.03	49.1
West: Mazamet Rd															
10	L2	All MCs	20	31.6	20	31.6	0.016	5.9	LOS A	0.0	0.0	0.00	0.48	0.00	48.5
11	T1	All MCs	4	25.0	4	25.0	0.016	0.0	LOS A	0.0	0.0	0.00	0.48	0.00	55.9
Approach			24	30.4	24	30.4	0.016	4.9	NA	0.0	0.0	0.00	0.48	0.00	50.1
All Vehicles			141	17.9	141	17.9	0.053	5.4	NA	0.2	2.0	0.07	0.53	0.07	48.8

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 6.1512 [6. AM_Lagoon-Union (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 112 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Union St															
1	L2	All MCs	41	0.0	41	0.0	0.661	49.7	LOS D	13.1	99.6	0.97	0.82	0.97	26.2
2	T1	All MCs	217	11.7	217	11.7	* 0.661	44.1	LOS D	13.1	99.6	0.97	0.82	0.97	24.2
3	R2	All MCs	109	26.0	109	26.0	0.119	16.6	LOS B	2.6	22.2	0.47	0.68	0.47	43.6
Approach			367	14.6	367	14.6	0.661	36.5	LOS C	13.1	99.6	0.82	0.78	0.82	30.1
East: Sydney Rd															
4	L2	All MCs	104	30.3	104	30.3	0.256	22.8	LOS B	5.7	47.7	0.73	0.71	0.73	36.9
5	T1	All MCs	201	6.3	201	6.3	0.256	33.9	LOS C	6.2	47.7	0.77	0.66	0.77	35.6
6	R2	All MCs	165	12.1	165	12.1	* 0.429	39.1	LOS C	7.3	56.3	0.84	0.80	0.84	28.2
Approach			471	13.6	471	13.6	0.429	33.3	LOS C	7.3	56.3	0.79	0.72	0.79	33.3
North: Union St															
7	L2	All MCs	129	9.8	129	9.8	* 0.617	42.3	LOS C	15.9	118.8	0.91	0.81	0.91	28.5
8	T1	All MCs	207	7.1	207	7.1	0.617	35.8	LOS C	15.9	118.8	0.91	0.81	0.91	26.5
9	R2	All MCs	194	13.0	194	13.0	0.375	38.8	LOS C	8.4	65.0	0.83	0.79	0.83	19.4
Approach			531	9.9	531	9.9	0.617	38.5	LOS C	15.9	118.8	0.88	0.80	0.88	24.7
West: Lagoon St															
10	L2	All MCs	65	12.9	65	12.9	0.057	12.0	LOS A	1.2	9.0	0.35	0.65	0.35	34.3
11	T1	All MCs	92	4.6	92	4.6	0.075	28.1	LOS B	1.7	12.5	0.73	0.55	0.73	36.5
12	R2	All MCs	23	4.5	23	4.5	0.079	39.8	LOS C	1.0	7.1	0.79	0.71	0.79	27.8
Approach			180	7.6	180	7.6	0.079	23.8	LOS B	1.7	12.5	0.60	0.61	0.60	34.6
All Vehicles			1548	11.9	1548	11.9	0.661	34.7	LOS C	15.9	118.8	0.81	0.75	0.81	29.8

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Union St												
P1	Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
East: Sydney Rd												

P2	Full	11	12	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
North: Union St												
P3	Full	11	12	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
West: Lagoon St												
P4	Full	2	2	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
All Pedestrians		25	26	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98

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

MOVEMENT SUMMARY

Site: 7 [7. AM_Sloane-Garoorigang (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Garoorigang St															
1	L2	All MCs	35	0.0	35	0.0	0.039	5.5	LOS A	0.0	0.0	0.00	0.28	0.00	54.7
2	T1	All MCs	40	0.0	40	0.0	0.039	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	57.2
Approach			75	0.0	75	0.0	0.039	2.6	NA	0.0	0.0	0.00	0.28	0.00	56.0
North: Sloane St															
8	T1	All MCs	12	0.0	12	0.0	0.042	0.3	LOS A	0.2	1.6	0.19	0.47	0.19	55.1
9	R2	All MCs	49	31.9	49	31.9	0.042	6.1	LOS A	0.2	1.6	0.19	0.47	0.19	51.6
Approach			61	25.9	61	25.9	0.042	5.0	NA	0.2	1.6	0.19	0.47	0.19	52.2
West: Garoorigang Rd															
10	L2	All MCs	15	28.6	15	28.6	0.025	6.0	LOS A	0.1	0.7	0.14	0.55	0.14	51.2
12	R2	All MCs	17	0.0	17	0.0	0.025	5.9	LOS A	0.1	0.7	0.14	0.55	0.14	51.5
Approach			32	13.3	32	13.3	0.025	5.9	LOS A	0.1	0.7	0.14	0.55	0.14	51.3
All Vehicles			167	11.9	167	11.9	0.042	4.1	NA	0.2	1.6	0.09	0.40	0.09	53.6

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 8 [8. AM_Windellama-Rifle (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Rd															
2	T1	All MCs	187	5.6	187	5.6	0.104	0.0	LOS A	0.0	0.3	0.01	0.02	0.01	59.7
3	R2	All MCs	7	0.0	7	0.0	0.104	5.5	LOS A	0.0	0.3	0.01	0.02	0.01	56.9
Approach			195	5.4	195	5.4	0.104	0.2	NA	0.0	0.3	0.01	0.02	0.01	59.6
East: Rifle Range Rd															
4	L2	All MCs	2	0.0	2	0.0	0.010	5.6	LOS A	0.0	0.2	0.21	0.56	0.21	52.3
6	R2	All MCs	9	0.0	9	0.0	0.010	6.3	LOS A	0.0	0.2	0.21	0.56	0.21	52.1
Approach			12	0.0	12	0.0	0.010	6.2	LOS A	0.0	0.2	0.21	0.56	0.21	52.1
North: Windellama Rd															
7	L2	All MCs	6	66.7	6	66.7	0.026	6.3	LOS A	0.0	0.0	0.00	0.08	0.00	54.1
8	T1	All MCs	40	0.0	40	0.0	0.026	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	59.7
Approach			46	9.1	46	9.1	0.026	0.9	NA	0.0	0.0	0.00	0.08	0.00	58.9
All Vehicles			253	5.8	253	5.8	0.104	0.6	NA	0.0	0.3	0.02	0.06	0.02	59.1

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 1 [1. PM_Braidwood-Bungonia (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Braidwood Rd															
1	L2	All MCs	1	0.0	1	0.0	0.063	5.9	LOS A	0.1	0.8	0.08	0.12	0.08	24.9
2	T1	All MCs	96	7.7	96	7.7	0.063	0.1	LOS A	0.1	0.8	0.08	0.12	0.08	56.9
3	R2	All MCs	17	6.3	17	6.3	0.063	5.9	LOS A	0.1	0.8	0.08	0.12	0.08	43.9
Approach			114	7.4	114	7.4	0.063	1.0	NA	0.1	0.8	0.08	0.12	0.08	55.2
East: Bungonia Rd															
4	L2	All MCs	13	8.3	13	8.3	0.009	4.5	LOS A	0.0	0.3	0.21	0.51	0.21	34.8
5	T1	All MCs	1	0.0	1	0.0	0.236	4.5	LOS A	0.9	6.7	0.45	0.69	0.45	32.1
6	R2	All MCs	169	10.6	169	10.6	0.236	6.5	LOS A	0.9	6.7	0.45	0.69	0.45	37.7
Approach			183	10.3	183	10.3	0.236	6.4	LOS A	0.9	6.7	0.43	0.68	0.43	37.6
North: Braidwood Rd															
7	L2	All MCs	181	9.9	181	9.9	0.185	5.8	LOS A	0.9	6.5	0.08	0.34	0.08	36.4
8	T1	All MCs	112	5.7	112	5.7	0.185	0.1	LOS A	0.9	6.5	0.08	0.34	0.08	51.4
9	R2	All MCs	6	33.3	6	33.3	0.185	6.2	LOS A	0.9	6.5	0.08	0.34	0.08	36.1
Approach			299	8.8	299	8.8	0.185	3.6	NA	0.9	6.5	0.08	0.34	0.08	41.3
West: Ottiwell St															
10	L2	All MCs	9	22.2	9	22.2	0.009	5.9	LOS A	0.0	0.3	0.21	0.53	0.21	38.5
11	T1	All MCs	1	0.0	1	0.0	0.009	5.0	LOS A	0.0	0.3	0.21	0.53	0.21	31.3
12	R2	All MCs	1	0.0	1	0.0	0.009	6.6	LOS A	0.0	0.3	0.21	0.53	0.21	35.6
Approach			12	18.2	12	18.2	0.009	5.9	LOS A	0.0	0.3	0.21	0.53	0.21	37.9
All Vehicles			607	9.2	607	9.2	0.236	4.0	NA	0.9	6.7	0.19	0.40	0.19	42.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. PM_Sloane-Braidwood (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Braidwood Rd															
4	L2	All MCs	44	26.2	44	26.2	0.579	13.8	LOS A	3.8	29.5	0.73	1.13	1.26	33.2
5	T1	All MCs	52	4.1	52	4.1	0.579	16.9	LOS B	3.8	29.5	0.73	1.13	1.26	34.8
6	R2	All MCs	181	9.3	181	9.3	0.579	20.7	LOS B	3.8	29.5	0.73	1.13	1.26	34.3
Approach			277	11.0	277	11.0	0.579	18.9	LOS B	3.8	29.5	0.73	1.13	1.26	34.2
NorthEast: Sloane St															
7	L2	All MCs	183	5.7	183	5.7	0.241	6.1	LOS A	1.2	8.7	0.26	0.37	0.26	47.6
8	T1	All MCs	157	4.7	157	4.7	0.241	0.5	LOS A	1.2	8.7	0.26	0.37	0.26	51.2
9	R2	All MCs	38	5.6	38	5.6	0.241	6.6	LOS A	1.2	8.7	0.26	0.37	0.26	45.6
Approach			378	5.3	378	5.3	0.241	3.9	NA	1.2	8.7	0.26	0.37	0.26	48.7
NorthWest: Mundy St															
10	L2	All MCs	17	6.3	17	6.3	0.153	9.4	LOS A	0.6	4.3	0.51	0.99	0.51	39.0
11	T1	All MCs	72	13.2	72	13.2	0.153	12.2	LOS A	0.6	4.3	0.51	0.99	0.51	39.1
12	R2	All MCs	9	11.1	9	11.1	0.153	13.3	LOS A	0.6	4.3	0.51	0.99	0.51	37.6
Approach			98	11.8	98	11.8	0.153	11.9	LOS A	0.6	4.3	0.51	0.99	0.51	38.9
SouthWest: Sloane St															
1	L2	All MCs	13	0.0	13	0.0	0.163	6.1	LOS A	0.3	2.6	0.11	0.15	0.11	51.4
2	T1	All MCs	235	6.7	235	6.7	0.163	0.1	LOS A	0.3	2.6	0.11	0.15	0.11	56.7
3	R2	All MCs	40	15.8	40	15.8	0.163	6.3	LOS A	0.3	2.6	0.11	0.15	0.11	47.9
Approach			287	7.7	287	7.7	0.163	1.3	NA	0.3	2.6	0.11	0.15	0.11	55.0
All Vehicles			1040	8.1	1040	8.1	0.579	7.9	NA	3.8	29.5	0.37	0.57	0.51	43.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. PM_Bungonia-Forbes (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Bungonia Rd															
5	T1	All MCs	121	11.3	121	11.3	0.075	0.1	LOS A	0.1	0.6	0.06	0.08	0.06	58.9
6	R2	All MCs	13	0.0	13	0.0	0.075	6.0	LOS A	0.1	0.6	0.06	0.08	0.06	55.5
Approach			134	10.2	134	10.2	0.075	0.6	NA	0.1	0.6	0.06	0.08	0.06	58.6
North: Forbes St															
7	L2	All MCs	17	0.0	17	0.0	0.013	8.5	LOS A	0.1	0.4	0.24	0.86	0.24	48.5
9	R2	All MCs	16	13.3	16	13.3	0.020	9.5	LOS A	0.1	0.5	0.35	0.89	0.35	50.0
Approach			33	6.5	33	6.5	0.020	9.0	LOS A	0.1	0.5	0.29	0.88	0.29	49.3
West: Bungonia Rd															
10	L2	All MCs	24	4.3	24	4.3	0.084	5.6	LOS A	0.0	0.0	0.00	0.09	0.00	56.5
11	T1	All MCs	132	8.0	132	8.0	0.084	0.0	LOS A	0.0	0.0	0.00	0.09	0.00	58.8
Approach			156	7.4	156	7.4	0.084	0.9	NA	0.0	0.0	0.00	0.09	0.00	58.3
All Vehicles			322	8.5	322	8.5	0.084	1.6	NA	0.1	0.6	0.05	0.17	0.05	57.2

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 4 [4. PM_Bungonia-Memorial (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bungonia Rd															
1a	L1	All MCs	97	13.0	97	13.0	0.057	5.5	LOS A	0.0	0.2	0.02	0.59	0.02	46.3
3	R2	All MCs	2	50.0	2	50.0	0.057	6.3	LOS A	0.0	0.2	0.02	0.59	0.02	41.2
Approach			99	13.8	99	13.8	0.057	5.5	NA	0.0	0.2	0.02	0.59	0.02	46.2
East: Memorial Rd															
4	L2	All MCs	2	0.0	2	0.0	0.036	5.6	LOS A	0.1	0.8	0.18	0.54	0.18	48.6
6a	R1	All MCs	37	2.9	37	2.9	0.036	5.7	LOS A	0.1	0.8	0.18	0.54	0.18	46.2
Approach			39	2.7	39	2.7	0.036	5.7	LOS A	0.1	0.8	0.18	0.54	0.18	46.3
NorthWest: Bungonia Rd															
27a	L1	All MCs	138	7.6	138	7.6	0.082	5.4	LOS A	0.1	0.5	0.00	0.59	0.00	45.4
29a	R1	All MCs	11	0.0	11	0.0	0.082	5.0	LOS A	0.1	0.5	0.00	0.59	0.00	48.8
Approach			148	7.1	148	7.1	0.082	5.4	NA	0.1	0.5	0.00	0.59	0.00	45.7
All Vehicles			286	8.8	286	8.8	0.082	5.5	NA	0.1	0.8	0.03	0.58	0.03	46.0

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 5 [5. PM_Hume-Garoorigang (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Garoorigang Rd															
5	T1	All MCs	3	0.0	3	0.0	0.054	0.4	LOS A	0.2	1.9	0.23	0.54	0.23	54.6
6	R2	All MCs	80	10.5	80	10.5	0.054	6.0	LOS A	0.2	1.9	0.23	0.54	0.23	47.8
Approach			83	10.1	83	10.1	0.054	5.7	NA	0.2	1.9	0.23	0.54	0.23	48.1
North: Hume St															
7	L2	All MCs	76	15.3	76	15.3	0.064	5.9	LOS A	0.3	2.0	0.14	0.54	0.14	48.0
9	R2	All MCs	12	18.2	12	18.2	0.064	6.4	LOS A	0.3	2.0	0.14	0.54	0.14	47.4
Approach			87	15.7	87	15.7	0.064	6.0	LOS A	0.3	2.0	0.14	0.54	0.14	48.0
West: Mazamet Rd															
10	L2	All MCs	63	11.7	63	11.7	0.062	5.7	LOS A	0.0	0.0	0.00	0.33	0.00	51.5
11	T1	All MCs	48	0.0	48	0.0	0.062	0.0	LOS A	0.0	0.0	0.00	0.33	0.00	57.2
Approach			112	6.6	112	6.6	0.062	3.2	NA	0.0	0.0	0.00	0.33	0.00	54.4
All Vehicles			282	10.4	282	10.4	0.064	4.8	NA	0.3	2.0	0.11	0.46	0.11	50.7

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 6.1512 [6. PM_Lagoon-Union (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 173 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Union St															
1	L2	All MCs	35	3.0	35	3.0	0.580	63.0	LOS E	21.9	159.1	0.92	0.79	0.92	22.8
2	T1	All MCs	271	4.7	271	4.7	* 0.580	57.4	LOS E	21.9	159.1	0.92	0.79	0.92	20.8
3	R2	All MCs	156	19.6	156	19.6	0.152	20.2	LOS B	5.2	42.7	0.44	0.69	0.44	42.2
Approach			461	9.6	461	9.6	0.580	45.2	LOS D	21.9	159.1	0.75	0.76	0.75	27.3
East: Sydney Rd															
4	L2	All MCs	124	13.6	124	13.6	0.236	33.1	LOS C	8.5	65.6	0.73	0.74	0.73	32.0
5	T1	All MCs	168	1.3	168	1.3	0.236	54.2	LOS D	8.8	65.6	0.78	0.66	0.78	29.2
6	R2	All MCs	172	6.1	172	6.1	* 0.528	62.3	LOS E	12.3	90.5	0.90	0.82	0.90	21.9
Approach			464	6.3	464	6.3	0.528	51.5	LOS D	12.3	90.5	0.81	0.74	0.81	27.1
North: Union St															
7	L2	All MCs	141	17.2	141	17.2	0.660	65.8	LOS E	24.9	189.5	0.93	0.83	0.93	22.6
8	T1	All MCs	200	5.3	200	5.3	* 0.660	60.2	LOS E	24.9	189.5	0.93	0.83	0.93	20.5
9	R2	All MCs	147	12.1	147	12.1	0.287	58.7	LOS E	9.4	72.7	0.81	0.78	0.81	15.5
Approach			488	10.8	488	10.8	0.660	61.4	LOS E	24.9	189.5	0.90	0.81	0.90	19.0
West: Lagoon St															
10	L2	All MCs	101	1.0	101	1.0	0.085	17.4	LOS B	3.1	21.7	0.39	0.67	0.39	30.1
11	T1	All MCs	176	3.0	176	3.0	0.149	46.8	LOS D	5.3	38.1	0.76	0.61	0.76	29.5
12	R2	All MCs	17	0.0	17	0.0	0.058	61.0	LOS E	1.1	7.5	0.79	0.70	0.79	22.7
Approach			294	2.2	294	2.2	0.149	37.5	LOS C	5.3	38.1	0.64	0.64	0.64	28.6
All Vehicles			1707	7.8	1707	7.8	0.660	50.2	LOS D	24.9	189.5	0.79	0.75	0.79	25.0

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Union St												
P1	Full	1	1	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
East: Sydney Rd												

P2 Full	3	3	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
North: Union St											
P3 Full	1	1	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
West: Lagoon St											
P4 Full	1	1	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
All Pedestrians	6	6	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85

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

MOVEMENT SUMMARY

Site: 7 [7. PM_Sloane-Garoorigang (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Garoorigang St															
1	L2	All MCs	33	3.2	33	3.2	0.047	5.6	LOS A	0.0	0.0	0.00	0.22	0.00	55.1
2	T1	All MCs	56	0.0	56	0.0	0.047	0.0	LOS A	0.0	0.0	0.00	0.22	0.00	57.8
Approach			88	1.2	88	1.2	0.047	2.1	NA	0.0	0.0	0.00	0.22	0.00	56.8
North: Sloane St															
8	T1	All MCs	14	15.4	14	15.4	0.039	0.3	LOS A	0.2	1.4	0.19	0.45	0.19	54.8
9	R2	All MCs	48	13.0	48	13.0	0.039	5.9	LOS A	0.2	1.4	0.19	0.45	0.19	52.3
Approach			62	13.6	62	13.6	0.039	4.7	NA	0.2	1.4	0.19	0.45	0.19	52.8
West: Garoorigang Rd															
10	L2	All MCs	79	13.3	79	13.3	0.093	5.9	LOS A	0.4	2.7	0.16	0.55	0.16	51.7
12	R2	All MCs	44	0.0	44	0.0	0.093	5.9	LOS A	0.4	2.7	0.16	0.55	0.16	51.4
Approach			123	8.5	123	8.5	0.093	5.9	LOS A	0.4	2.7	0.16	0.55	0.16	51.6
All Vehicles			274	7.3	274	7.3	0.093	4.4	NA	0.4	2.7	0.12	0.42	0.12	53.4

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 8 [8. PM_Windellama-Rifle (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Rd															
2	T1	All MCs	91	11.6	91	11.6	0.055	0.1	LOS A	0.0	0.4	0.04	0.05	0.04	59.6
3	R2	All MCs	5	40.0	5	40.0	0.055	6.5	LOS A	0.0	0.4	0.04	0.05	0.04	54.8
Approach			96	13.2	96	13.2	0.055	0.4	NA	0.0	0.4	0.04	0.05	0.04	59.3
East: Rifle Range Rd															
4	L2	All MCs	4	0.0	4	0.0	0.013	5.9	LOS A	0.0	0.3	0.27	0.57	0.27	52.2
6	R2	All MCs	9	22.2	9	22.2	0.013	6.8	LOS A	0.0	0.3	0.27	0.57	0.27	50.9
Approach			14	15.4	14	15.4	0.013	6.5	LOS A	0.0	0.3	0.27	0.57	0.27	51.3
North: Windellama Rd															
7	L2	All MCs	11	0.0	11	0.0	0.073	5.6	LOS A	0.0	0.0	0.00	0.05	0.00	57.0
8	T1	All MCs	125	8.4	125	8.4	0.073	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	59.5
Approach			136	7.8	136	7.8	0.073	0.4	NA	0.0	0.0	0.00	0.05	0.00	59.3
All Vehicles			245	10.3	245	10.3	0.073	0.8	NA	0.0	0.4	0.03	0.08	0.03	58.8

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 1 [1. SAT_Braidwood-Bungonia (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Braidwood Rd															
1	L2	All MCs	1	0.0	1	0.0	0.054	5.8	LOS A	0.1	0.4	0.04	0.06	0.04	25.4
2	T1	All MCs	89	7.1	89	7.1	0.054	0.0	LOS A	0.1	0.4	0.04	0.06	0.04	58.3
3	R2	All MCs	7	14.3	7	14.3	0.054	5.9	LOS A	0.1	0.4	0.04	0.06	0.04	45.2
Approach			98	7.5	98	7.5	0.054	0.5	NA	0.1	0.4	0.04	0.06	0.04	57.2
East: Bungonia Rd															
4	L2	All MCs	5	20.0	5	20.0	0.004	4.5	LOS A	0.0	0.1	0.20	0.50	0.20	33.8
5	T1	All MCs	1	0.0	1	0.0	0.184	4.1	LOS A	0.7	4.9	0.39	0.65	0.39	33.4
6	R2	All MCs	148	4.3	148	4.3	0.184	5.8	LOS A	0.7	4.9	0.39	0.65	0.39	40.0
Approach			155	4.8	155	4.8	0.184	5.7	LOS A	0.7	4.9	0.39	0.65	0.39	39.8
North: Braidwood Rd															
7	L2	All MCs	144	7.3	144	7.3	0.151	5.7	LOS A	0.7	4.9	0.05	0.32	0.05	36.8
8	T1	All MCs	103	4.1	103	4.1	0.151	0.0	LOS A	0.7	4.9	0.05	0.32	0.05	52.1
9	R2	All MCs	3	0.0	3	0.0	0.151	5.6	LOS A	0.7	4.9	0.05	0.32	0.05	37.7
Approach			251	5.9	251	5.9	0.151	3.4	NA	0.7	4.9	0.05	0.32	0.05	42.4
West: Ottiwell St															
10	L2	All MCs	5	0.0	5	0.0	0.006	5.8	LOS A	0.0	0.1	0.20	0.53	0.20	42.8
11	T1	All MCs	1	0.0	1	0.0	0.006	4.9	LOS A	0.0	0.1	0.20	0.53	0.20	31.4
12	R2	All MCs	1	0.0	1	0.0	0.006	6.4	LOS A	0.0	0.1	0.20	0.53	0.20	35.8
Approach			7	0.0	7	0.0	0.006	5.7	LOS A	0.0	0.1	0.20	0.53	0.20	40.9
All Vehicles			511	5.8	511	5.8	0.184	3.6	NA	0.7	4.9	0.15	0.37	0.15	43.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. SAT_Sloane-Braidwood (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Braidwood Rd															
4	L2	All MCs	33	12.9	33	12.9	0.413	11.2	LOS A	2.1	15.8	0.62	1.04	0.85	37.3
5	T1	All MCs	47	4.4	47	4.4	0.413	13.7	LOS A	2.1	15.8	0.62	1.04	0.85	37.8
6	R2	All MCs	146	5.8	146	5.8	0.413	15.6	LOS B	2.1	15.8	0.62	1.04	0.85	37.7
Approach			226	6.5	226	6.5	0.413	14.6	LOS B	2.1	15.8	0.62	1.04	0.85	37.6
NorthEast: Sloane St															
7	L2	All MCs	165	4.5	165	4.5	0.240	6.0	LOS A	1.2	8.2	0.20	0.32	0.20	48.7
8	T1	All MCs	192	1.6	192	1.6	0.240	0.3	LOS A	1.2	8.2	0.20	0.32	0.20	52.3
9	R2	All MCs	41	0.0	41	0.0	0.240	6.1	LOS A	1.2	8.2	0.20	0.32	0.20	47.5
Approach			398	2.6	398	2.6	0.240	3.3	NA	1.2	8.2	0.20	0.32	0.20	50.1
NorthWest: Mundy St															
10	L2	All MCs	16	0.0	16	0.0	0.080	8.7	LOS A	0.3	2.1	0.43	0.93	0.43	41.0
11	T1	All MCs	42	5.0	42	5.0	0.080	10.7	LOS A	0.3	2.1	0.43	0.93	0.43	41.3
12	R2	All MCs	4	0.0	4	0.0	0.080	11.1	LOS A	0.3	2.1	0.43	0.93	0.43	40.1
Approach			62	3.4	62	3.4	0.080	10.2	LOS A	0.3	2.1	0.43	0.93	0.43	41.1
SouthWest: Sloane St															
1	L2	All MCs	4	0.0	4	0.0	0.117	6.2	LOS A	0.3	2.1	0.14	0.18	0.14	50.8
2	T1	All MCs	165	1.9	165	1.9	0.117	0.2	LOS A	0.3	2.1	0.14	0.18	0.14	56.0
3	R2	All MCs	41	2.6	41	2.6	0.117	6.1	LOS A	0.3	2.1	0.14	0.18	0.14	50.4
Approach			211	2.0	211	2.0	0.117	1.5	NA	0.3	2.1	0.14	0.18	0.14	54.6
All Vehicles			897	3.5	897	3.5	0.413	6.2	NA	2.1	15.8	0.31	0.51	0.37	46.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. SAT_Bungonia-Forbes (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Bungonia Rd															
5	T1	All MCs	97	1.1	97	1.1	0.052	0.0	LOS A	0.0	0.1	0.02	0.02	0.02	59.7
6	R2	All MCs	3	0.0	3	0.0	0.052	5.6	LOS A	0.0	0.1	0.02	0.02	0.02	56.2
Approach			100	1.1	100	1.1	0.052	0.2	NA	0.0	0.1	0.02	0.02	0.02	59.5
North: Forbes St															
7	L2	All MCs	17	12.5	17	12.5	0.014	8.9	LOS A	0.1	0.4	0.20	0.89	0.20	47.0
9	R2	All MCs	22	0.0	22	0.0	0.023	8.3	LOS A	0.1	0.5	0.28	0.88	0.28	50.9
Approach			39	5.4	39	5.4	0.023	8.6	LOS A	0.1	0.5	0.24	0.88	0.24	49.4
West: Bungonia Rd															
10	L2	All MCs	17	6.3	17	6.3	0.059	5.6	LOS A	0.0	0.0	0.00	0.09	0.00	56.4
11	T1	All MCs	95	4.4	95	4.4	0.059	0.0	LOS A	0.0	0.0	0.00	0.09	0.00	58.9
Approach			112	4.7	112	4.7	0.059	0.9	NA	0.0	0.0	0.00	0.09	0.00	58.4
All Vehicles			251	3.4	251	3.4	0.059	1.8	NA	0.1	0.5	0.04	0.19	0.04	57.0

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 4 [4. SAT_Bungonia-Memorial (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bungonia Rd															
1a	L1	All MCs	107	2.9	107	2.9	0.059	5.4	LOS A	0.0	0.1	0.00	0.59	0.00	48.0
3	R2	All MCs	2	0.0	2	0.0	0.059	5.4	LOS A	0.0	0.1	0.00	0.59	0.00	48.6
Approach			109	2.9	109	2.9	0.059	5.4	NA	0.0	0.1	0.00	0.59	0.00	48.0
East: Memorial Rd															
4	L2	All MCs	2	0.0	2	0.0	0.007	5.8	LOS A	0.0	0.2	0.23	0.54	0.23	48.2
6a	R1	All MCs	6	0.0	6	0.0	0.007	5.7	LOS A	0.0	0.2	0.23	0.54	0.23	46.3
Approach			8	0.0	8	0.0	0.007	5.7	LOS A	0.0	0.2	0.23	0.54	0.23	46.8
NorthWest: Bungonia Rd															
27a	L1	All MCs	5	0.0	5	0.0	0.057	5.3	LOS A	0.3	1.9	0.02	0.56	0.02	47.1
29a	R1	All MCs	96	3.3	96	3.3	0.057	5.0	LOS A	0.3	1.9	0.02	0.56	0.02	48.8
Approach			101	3.1	101	3.1	0.057	5.0	NA	0.3	1.9	0.02	0.56	0.02	48.8
All Vehicles			219	2.9	219	2.9	0.059	5.2	NA	0.3	1.9	0.02	0.58	0.02	48.3

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 5 [5. SAT_Hume-Garoorigang (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Garoorigang Rd															
5	T1	All MCs	5	0.0	5	0.0	0.052	0.0	LOS A	0.2	1.7	0.07	0.54	0.07	55.1
6	R2	All MCs	85	3.7	85	3.7	0.052	5.5	LOS A	0.2	1.7	0.07	0.54	0.07	48.9
Approach			91	3.5	91	3.5	0.052	5.2	NA	0.2	1.7	0.07	0.54	0.07	49.4
North: Hume St															
7	L2	All MCs	77	2.7	77	2.7	0.050	5.6	LOS A	0.2	1.4	0.03	0.56	0.03	49.2
9	R2	All MCs	2	0.0	2	0.0	0.050	5.5	LOS A	0.2	1.4	0.03	0.56	0.03	49.0
Approach			79	2.7	79	2.7	0.050	5.6	LOS A	0.2	1.4	0.03	0.56	0.03	49.2
West: Mazamet Rd															
10	L2	All MCs	11	0.0	11	0.0	0.008	5.5	LOS A	0.0	0.0	0.00	0.42	0.00	51.2
11	T1	All MCs	4	0.0	4	0.0	0.008	0.0	LOS A	0.0	0.0	0.00	0.42	0.00	56.3
Approach			15	0.0	15	0.0	0.008	4.0	NA	0.0	0.0	0.00	0.42	0.00	53.1
All Vehicles			184	2.9	184	2.9	0.052	5.3	NA	0.2	1.7	0.05	0.54	0.05	49.6

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 6.1512 [6. SAT_Lagoon-Union (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 112 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Union St															
1	L2	All MCs	8	0.0	8	0.0	0.439	42.3	LOS C	10.3	73.3	0.88	0.74	0.88	29.0
2	T1	All MCs	218	1.9	218	1.9	*0.439	36.8	LOS C	10.3	73.3	0.88	0.74	0.88	27.1
3	R2	All MCs	134	4.7	134	4.7	0.108	11.8	LOS A	2.4	17.5	0.36	0.66	0.36	47.2
Approach			360	2.9	360	2.9	0.439	27.6	LOS B	10.3	73.3	0.69	0.71	0.69	34.7
East: Sydney Rd															
4	L2	All MCs	123	4.3	123	4.3	0.222	17.6	LOS B	5.8	42.0	0.68	0.70	0.68	39.0
5	T1	All MCs	204	0.0	204	0.0	0.222	31.3	LOS C	5.9	42.0	0.72	0.62	0.72	37.6
6	R2	All MCs	125	3.4	125	3.4	*0.300	35.2	LOS C	5.1	36.7	0.78	0.77	0.78	29.8
Approach			453	2.1	453	2.1	0.300	28.7	LOS C	5.9	42.0	0.72	0.68	0.72	35.8
North: Union St															
7	L2	All MCs	156	5.4	156	5.4	0.864	60.8	LOS E	19.7	141.9	1.00	1.01	1.21	22.9
8	T1	All MCs	175	1.2	175	1.2	*0.864	55.2	LOS D	19.7	141.9	1.00	1.01	1.21	20.6
9	R2	All MCs	129	0.8	129	0.8	0.341	47.0	LOS D	6.1	43.1	0.90	0.78	0.90	17.6
Approach			460	2.5	460	2.5	0.864	54.8	LOS D	19.7	141.9	0.97	0.94	1.12	20.8
West: Lagoon St															
10	L2	All MCs	82	0.0	82	0.0	0.071	14.2	LOS A	1.7	12.0	0.41	0.67	0.41	32.7
11	T1	All MCs	166	1.3	166	1.3	0.117	25.0	LOS B	3.0	21.0	0.70	0.55	0.70	38.2
12	R2	All MCs	11	0.0	11	0.0	0.030	34.3	LOS C	0.4	2.8	0.72	0.67	0.72	29.9
Approach			259	0.8	259	0.8	0.117	21.9	LOS B	3.0	21.0	0.61	0.59	0.61	36.7
All Vehicles			1532	2.2	1532	2.2	0.864	35.1	LOS C	19.7	141.9	0.77	0.75	0.82	30.4

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Union St												
P1	Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
East: Sydney Rd												

P2 Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
North: Union St											
P3 Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
West: Lagoon St											
P4 Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
All Pedestrians	4	4	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98

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

MOVEMENT SUMMARY

Site: 7 [7. SAT_Sloane-Garoorigang (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Garoorigang St															
1	L2	All MCs	37	0.0	37	0.0	0.033	5.5	LOS A	0.0	0.0	0.00	0.35	0.00	54.1
2	T1	All MCs	25	4.2	25	4.2	0.033	0.0	LOS A	0.0	0.0	0.00	0.35	0.00	56.4
Approach			62	1.7	62	1.7	0.033	3.3	NA	0.0	0.0	0.00	0.35	0.00	55.0
North: Sloane St															
8	T1	All MCs	21	0.0	21	0.0	0.043	0.2	LOS A	0.2	1.4	0.15	0.41	0.15	55.4
9	R2	All MCs	52	6.1	52	6.1	0.043	5.7	LOS A	0.2	1.4	0.15	0.41	0.15	53.1
Approach			73	4.3	73	4.3	0.043	4.1	NA	0.2	1.4	0.15	0.41	0.15	53.7
West: Garoorigang Rd															
10	L2	All MCs	21	10.0	21	10.0	0.063	5.7	LOS A	0.2	1.6	0.14	0.56	0.14	52.0
12	R2	All MCs	57	0.0	57	0.0	0.063	5.9	LOS A	0.2	1.6	0.14	0.56	0.14	51.5
Approach			78	2.7	78	2.7	0.063	5.8	LOS A	0.2	1.6	0.14	0.56	0.14	51.6
All Vehicles			213	3.0	213	3.0	0.063	4.5	NA	0.2	1.6	0.10	0.45	0.10	53.3

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 8 [8. SAT_Windellama-Rifle (*) (Site Folder: Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Weekday PM Flows Used
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Rd															
2	T1	All MCs	91	11.6	91	11.6	0.055	0.1	LOS A	0.0	0.4	0.04	0.05	0.04	59.6
3	R2	All MCs	5	40.0	5	40.0	0.055	6.5	LOS A	0.0	0.4	0.04	0.05	0.04	54.8
Approach			96	13.2	96	13.2	0.055	0.4	NA	0.0	0.4	0.04	0.05	0.04	59.3
East: Rifle Range Rd															
4	L2	All MCs	4	0.0	4	0.0	0.013	5.9	LOS A	0.0	0.3	0.27	0.57	0.27	52.2
6	R2	All MCs	9	22.2	9	22.2	0.013	6.8	LOS A	0.0	0.3	0.27	0.57	0.27	50.9
Approach			14	15.4	14	15.4	0.013	6.5	LOS A	0.0	0.3	0.27	0.57	0.27	51.3
North: Windellama Rd															
7	L2	All MCs	11	0.0	11	0.0	0.073	5.6	LOS A	0.0	0.0	0.00	0.05	0.00	57.0
8	T1	All MCs	125	8.4	125	8.4	0.073	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	59.5
Approach			136	7.8	136	7.8	0.073	0.4	NA	0.0	0.0	0.00	0.05	0.00	59.3
All Vehicles			245	10.3	245	10.3	0.073	0.8	NA	0.0	0.4	0.03	0.08	0.03	58.8

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 1 [1. AM_Braidwood-Bungonia (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Braidwood Rd															
1	L2	All MCs	1	0.0	1	0.0	0.048	5.9	LOS A	0.0	0.4	0.04	0.07	0.04	25.3
2	T1	All MCs	74	20.0	74	20.0	0.048	0.0	LOS A	0.0	0.4	0.04	0.07	0.04	58.1
3	R2	All MCs	6	16.7	6	16.7	0.048	6.0	LOS A	0.0	0.4	0.04	0.07	0.04	44.8
Approach			81	19.5	81	19.5	0.048	0.6	NA	0.0	0.4	0.04	0.07	0.04	56.8
East: Bungonia Rd															
4	L2	All MCs	9	11.1	9	11.1	0.007	4.5	LOS A	0.0	0.2	0.21	0.51	0.21	34.5
5	T1	All MCs	1	0.0	1	0.0	0.268	4.3	LOS A	1.0	8.0	0.43	0.67	0.43	32.6
6	R2	All MCs	201	13.1	201	13.1	0.268	6.2	LOS A	1.0	8.0	0.43	0.67	0.43	37.6
Approach			212	12.9	212	12.9	0.268	6.1	LOS A	1.0	8.0	0.42	0.66	0.42	37.5
North: Braidwood Rd															
7	L2	All MCs	145	15.9	145	15.9	0.163	5.8	LOS A	0.7	5.7	0.05	0.31	0.05	36.8
8	T1	All MCs	111	13.3	111	13.3	0.163	0.0	LOS A	0.7	5.7	0.05	0.31	0.05	52.3
9	R2	All MCs	3	33.3	3	33.3	0.163	6.0	LOS A	0.7	5.7	0.05	0.31	0.05	36.5
Approach			259	15.0	259	15.0	0.163	3.3	NA	0.7	5.7	0.05	0.31	0.05	42.6
West: Ottiwell St															
10	L2	All MCs	6	0.0	6	0.0	0.006	5.8	LOS A	0.0	0.2	0.18	0.53	0.18	42.9
11	T1	All MCs	1	0.0	1	0.0	0.006	4.9	LOS A	0.0	0.2	0.18	0.53	0.18	31.5
12	R2	All MCs	1	0.0	1	0.0	0.006	6.4	LOS A	0.0	0.2	0.18	0.53	0.18	35.8
Approach			8	0.0	8	0.0	0.006	5.7	LOS A	0.0	0.2	0.18	0.53	0.18	41.2
All Vehicles			560	14.7	560	14.7	0.268	4.0	NA	1.0	8.0	0.19	0.41	0.19	42.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. AM_Sloane-Braidwood (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Braidwood Rd															
4	L2	All MCs	40	15.8	40	15.8	0.512	11.9	LOS A	3.3	26.2	0.65	1.05	1.00	36.2
5	T1	All MCs	54	5.9	54	5.9	0.512	14.1	LOS A	3.3	26.2	0.65	1.05	1.00	36.8
6	R2	All MCs	191	16.6	191	16.6	0.512	17.3	LOS B	3.3	26.2	0.65	1.05	1.00	35.7
Approach			284	14.4	284	14.4	0.512	16.0	LOS B	3.3	26.2	0.65	1.05	1.00	36.0
NorthEast: Sloane St															
7	L2	All MCs	176	15.6	176	15.6	0.211	6.1	LOS A	1.0	7.9	0.21	0.36	0.21	45.9
8	T1	All MCs	126	8.3	126	8.3	0.211	0.3	LOS A	1.0	7.9	0.21	0.36	0.21	51.4
9	R2	All MCs	20	5.3	20	5.3	0.211	6.2	LOS A	1.0	7.9	0.21	0.36	0.21	45.9
Approach			322	12.1	322	12.1	0.211	3.9	NA	1.0	7.9	0.21	0.36	0.21	47.8
NorthWest: Mundy St															
10	L2	All MCs	13	0.0	13	0.0	0.090	8.7	LOS A	0.3	2.5	0.41	0.95	0.41	41.2
11	T1	All MCs	55	11.5	55	11.5	0.090	10.6	LOS A	0.3	2.5	0.41	0.95	0.41	40.5
12	R2	All MCs	4	0.0	4	0.0	0.090	10.3	LOS A	0.3	2.5	0.41	0.95	0.41	40.4
Approach			72	8.8	72	8.8	0.090	10.2	LOS A	0.3	2.5	0.41	0.95	0.41	40.6
SouthWest: Sloane St															
1	L2	All MCs	5	0.0	5	0.0	0.111	6.0	LOS A	0.2	1.6	0.09	0.13	0.09	51.8
2	T1	All MCs	164	8.3	164	8.3	0.111	0.1	LOS A	0.2	1.6	0.09	0.13	0.09	57.2
3	R2	All MCs	26	16.0	26	16.0	0.111	6.2	LOS A	0.2	1.6	0.09	0.13	0.09	48.1
Approach			196	9.1	196	9.1	0.111	1.1	NA	0.2	1.6	0.09	0.13	0.09	55.5
All Vehicles			874	11.9	874	11.9	0.512	7.7	NA	3.3	26.2	0.34	0.58	0.45	43.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. AM_Bungonia-Forbes (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Bungonia Rd															
5	T1	All MCs	209	13.1	209	13.1	0.127	0.0	LOS A	0.1	0.9	0.04	0.05	0.04	59.2
6	R2	All MCs	16	6.7	16	6.7	0.127	5.9	LOS A	0.1	0.9	0.04	0.05	0.04	55.4
Approach			225	12.6	225	12.6	0.127	0.4	NA	0.1	0.9	0.04	0.05	0.04	58.9
North: Forbes St															
7	L2	All MCs	5	0.0	5	0.0	0.004	8.4	LOS A	0.0	0.1	0.20	0.87	0.20	48.5
9	R2	All MCs	17	0.0	17	0.0	0.021	9.1	LOS A	0.1	0.5	0.38	0.88	0.38	50.5
Approach			22	0.0	22	0.0	0.021	8.9	LOS A	0.1	0.5	0.33	0.88	0.33	50.1
West: Bungonia Rd															
10	L2	All MCs	16	0.0	16	0.0	0.063	5.6	LOS A	0.0	0.0	0.00	0.09	0.00	56.6
11	T1	All MCs	94	19.1	94	19.1	0.063	0.0	LOS A	0.0	0.0	0.00	0.09	0.00	58.7
Approach			109	16.3	109	16.3	0.063	0.8	NA	0.0	0.0	0.00	0.09	0.00	58.3
All Vehicles			357	13.0	357	13.0	0.127	1.1	NA	0.1	0.9	0.05	0.11	0.05	58.0

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 4 [4. AM_Bungonia-Memorial (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bungonia Rd															
1a	L1	All MCs	213	11.4	213	11.4	0.121	5.5	LOS A	0.0	0.1	0.00	0.59	0.00	46.6
3	R2	All MCs	1	0.0	1	0.0	0.121	5.4	LOS A	0.0	0.1	0.00	0.59	0.00	48.6
Approach			214	11.3	214	11.3	0.121	5.5	NA	0.0	0.1	0.00	0.59	0.00	46.7
East: Memorial Rd															
4	L2	All MCs	1	0.0	1	0.0	0.019	5.7	LOS A	0.1	0.5	0.32	0.58	0.32	47.7
6a	R1	All MCs	15	28.6	15	28.6	0.019	6.9	LOS A	0.1	0.5	0.32	0.58	0.32	41.3
Approach			16	26.7	16	26.7	0.019	6.8	LOS A	0.1	0.5	0.32	0.58	0.32	41.7
NorthWest: Bungonia Rd															
27a	L1	All MCs	44	0.0	44	0.0	0.060	5.3	LOS A	0.3	2.1	0.01	0.58	0.01	47.0
29a	R1	All MCs	54	29.4	54	29.4	0.060	5.3	LOS A	0.3	2.1	0.01	0.58	0.01	47.1
Approach			98	16.1	98	16.1	0.060	5.3	NA	0.3	2.1	0.01	0.58	0.01	47.0
All Vehicles			327	13.5	327	13.5	0.121	5.5	NA	0.3	2.1	0.02	0.59	0.02	46.5

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 5 [5. AM_Hume-Garoorigang (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Garoorigang Rd															
5	T1	All MCs	5	20.0	5	20.0	0.053	0.1	LOS A	0.2	2.0	0.10	0.53	0.10	55.0
6	R2	All MCs	80	19.7	80	19.7	0.053	5.8	LOS A	0.2	2.0	0.10	0.53	0.10	47.7
Approach			85	19.8	85	19.8	0.053	5.4	NA	0.2	2.0	0.10	0.53	0.10	48.3
North: Hume St															
7	L2	All MCs	25	4.2	25	4.2	0.021	5.6	LOS A	0.1	0.6	0.03	0.56	0.03	49.1
9	R2	All MCs	6	0.0	6	0.0	0.021	5.5	LOS A	0.1	0.6	0.03	0.56	0.03	49.0
Approach			32	3.3	32	3.3	0.021	5.6	LOS A	0.1	0.6	0.03	0.56	0.03	49.1
West: Mazamet Rd															
10	L2	All MCs	20	31.6	20	31.6	0.016	5.9	LOS A	0.0	0.0	0.00	0.48	0.00	48.5
11	T1	All MCs	4	25.0	4	25.0	0.016	0.0	LOS A	0.0	0.0	0.00	0.48	0.00	55.9
Approach			24	30.4	24	30.4	0.016	4.9	NA	0.0	0.0	0.00	0.48	0.00	50.1
All Vehicles			141	17.9	141	17.9	0.053	5.4	NA	0.2	2.0	0.07	0.53	0.07	48.8

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 6.1512 [6. AM_Lagoon-Union (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 112 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Union St															
1	L2	All MCs	41	0.0	41	0.0	0.661	49.7	LOS D	13.1	99.6	0.97	0.82	0.97	26.2
2	T1	All MCs	217	11.7	217	11.7	* 0.661	44.1	LOS D	13.1	99.6	0.97	0.82	0.97	24.2
3	R2	All MCs	125	35.3	125	35.3	0.143	16.9	LOS B	3.0	27.6	0.48	0.69	0.48	43.2
Approach			383	18.1	383	18.1	0.661	35.8	LOS C	13.1	99.6	0.81	0.78	0.81	30.5
East: Sydney Rd															
4	L2	All MCs	136	34.9	136	34.9	0.276	23.8	LOS B	6.3	54.7	0.71	0.73	0.71	37.3
5	T1	All MCs	201	6.3	201	6.3	0.276	33.5	LOS C	6.7	54.7	0.77	0.66	0.77	35.6
6	R2	All MCs	165	12.1	165	12.1	* 0.429	39.1	LOS C	7.3	56.3	0.84	0.80	0.84	28.2
Approach			502	15.9	502	15.9	0.429	32.8	LOS C	7.3	56.3	0.78	0.72	0.78	33.7
North: Union St															
7	L2	All MCs	129	9.8	129	9.8	* 0.617	42.3	LOS C	15.9	118.8	0.91	0.81	0.91	28.5
8	T1	All MCs	207	7.1	207	7.1	0.617	35.8	LOS C	15.9	118.8	0.91	0.81	0.91	26.5
9	R2	All MCs	194	13.0	194	13.0	0.375	38.8	LOS C	8.4	65.0	0.83	0.79	0.83	19.4
Approach			531	9.9	531	9.9	0.617	38.5	LOS C	15.9	118.8	0.88	0.80	0.88	24.7
West: Lagoon St															
10	L2	All MCs	65	12.9	65	12.9	0.057	12.0	LOS A	1.2	9.0	0.35	0.65	0.35	34.3
11	T1	All MCs	92	4.6	92	4.6	0.075	28.1	LOS B	1.7	12.5	0.73	0.55	0.73	36.5
12	R2	All MCs	23	4.5	23	4.5	0.084	40.8	LOS C	1.0	7.2	0.80	0.71	0.80	27.5
Approach			180	7.6	180	7.6	0.084	23.9	LOS B	1.7	12.5	0.60	0.61	0.60	34.5
All Vehicles			1596	13.5	1596	13.5	0.661	34.4	LOS C	15.9	118.8	0.80	0.75	0.80	30.1

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Union St												
P1	Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
East: Sydney Rd												

P2	Full	11	12	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
North: Union St												
P3	Full	11	12	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
West: Lagoon St												
P4	Full	2	2	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
All Pedestrians		25	26	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98

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

MOVEMENT SUMMARY

Site: 7 [7. AM_Sloane-Garoorigang (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Garoorigang St															
1	L2	All MCs	35	0.0	35	0.0	0.039	5.5	LOS A	0.0	0.0	0.00	0.28	0.00	54.7
2	T1	All MCs	40	0.0	40	0.0	0.039	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	57.2
Approach			75	0.0	75	0.0	0.039	2.6	NA	0.0	0.0	0.00	0.28	0.00	56.0
North: Sloane St															
8	T1	All MCs	12	0.0	12	0.0	0.042	0.3	LOS A	0.2	1.6	0.19	0.47	0.19	55.1
9	R2	All MCs	49	31.9	49	31.9	0.042	6.1	LOS A	0.2	1.6	0.19	0.47	0.19	51.6
Approach			61	25.9	61	25.9	0.042	5.0	NA	0.2	1.6	0.19	0.47	0.19	52.2
West: Garoorigang Rd															
10	L2	All MCs	15	28.6	15	28.6	0.025	6.0	LOS A	0.1	0.7	0.14	0.55	0.14	51.2
12	R2	All MCs	17	0.0	17	0.0	0.025	5.9	LOS A	0.1	0.7	0.14	0.55	0.14	51.5
Approach			32	13.3	32	13.3	0.025	5.9	LOS A	0.1	0.7	0.14	0.55	0.14	51.3
All Vehicles			167	11.9	167	11.9	0.042	4.1	NA	0.2	1.6	0.09	0.40	0.09	53.6

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 8 [8. AM_Windellama-Rifle (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Rd															
2	T1	All MCs	203	13.0	203	13.0	0.117	0.0	LOS A	0.0	0.4	0.02	0.02	0.02	59.7
3	R2	All MCs	7	0.0	7	0.0	0.117	5.6	LOS A	0.0	0.4	0.02	0.02	0.02	56.9
Approach			211	12.5	211	12.5	0.117	0.2	NA	0.0	0.4	0.02	0.02	0.02	59.6
East: Rifle Range Rd															
4	L2	All MCs	2	0.0	2	0.0	0.011	5.8	LOS A	0.0	0.3	0.29	0.57	0.29	52.1
6	R2	All MCs	9	0.0	9	0.0	0.011	6.6	LOS A	0.0	0.3	0.29	0.57	0.29	51.9
Approach			12	0.0	12	0.0	0.011	6.5	LOS A	0.0	0.3	0.29	0.57	0.29	51.9
North: Windellama Rd															
7	L2	All MCs	6	66.7	6	66.7	0.055	6.3	LOS A	0.0	0.0	0.00	0.04	0.00	54.2
8	T1	All MCs	87	18.1	87	18.1	0.055	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.8
Approach			94	21.3	94	21.3	0.055	0.4	NA	0.0	0.0	0.00	0.04	0.00	59.4
All Vehicles			316	14.7	316	14.7	0.117	0.5	NA	0.0	0.4	0.02	0.05	0.02	59.2

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 9 [9. AM_Windellama-Site Access (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Road															
2	T1	All MCs	45	30.2	45	30.2	0.028	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	59.8
3	R2	All MCs	1	0.0	1	0.0	0.028	5.5	LOS A	0.0	0.1	0.01	0.01	0.01	57.0
Approach			46	29.5	46	29.5	0.028	0.1	NA	0.0	0.1	0.01	0.01	0.01	59.7
East: Site Access															
4	L2	All MCs	1	0.0	1	0.0	0.029	8.2	LOS A	0.1	1.4	0.30	0.95	0.30	50.5
6	R2	All MCs	17	93.8	17	93.8	0.029	13.3	LOS A	0.1	1.4	0.30	0.95	0.30	46.9
Approach			18	88.2	18	88.2	0.029	13.0	LOS A	0.1	1.4	0.30	0.95	0.30	47.1
North: Windellama Road															
7	L2	All MCs	47	33.3	47	33.3	0.032	5.9	LOS A	0.0	0.0	0.00	0.57	0.00	51.5
8	T1	All MCs	38	27.8	38	27.8	0.023	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			85	30.9	85	30.9	0.032	3.3	NA	0.0	0.0	0.00	0.32	0.00	55.0
All Vehicles			149	37.3	149	37.3	0.032	3.5	NA	0.1	1.4	0.04	0.30	0.04	55.2

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 1 [1. PM_Braidwood-Bungonia (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Braidwood Rd															
1	L2	All MCs	1	0.0	1	0.0	0.063	5.9	LOS A	0.1	0.8	0.08	0.12	0.08	24.9
2	T1	All MCs	96	7.7	96	7.7	0.063	0.1	LOS A	0.1	0.8	0.08	0.12	0.08	56.9
3	R2	All MCs	17	6.3	17	6.3	0.063	5.9	LOS A	0.1	0.8	0.08	0.12	0.08	43.9
Approach			114	7.4	114	7.4	0.063	1.0	NA	0.1	0.8	0.08	0.12	0.08	55.2
East: Bungonia Rd															
4	L2	All MCs	13	8.3	13	8.3	0.009	4.5	LOS A	0.0	0.3	0.21	0.51	0.21	34.8
5	T1	All MCs	1	0.0	1	0.0	0.314	4.9	LOS A	1.3	10.6	0.49	0.72	0.53	31.1
6	R2	All MCs	217	15.5	217	15.5	0.314	7.1	LOS A	1.3	10.6	0.49	0.72	0.53	36.0
Approach			231	15.1	231	15.1	0.314	7.0	LOS A	1.3	10.6	0.47	0.71	0.51	36.0
North: Braidwood Rd															
7	L2	All MCs	186	12.4	186	12.4	0.191	5.8	LOS A	0.9	6.9	0.08	0.34	0.08	36.3
8	T1	All MCs	112	5.7	112	5.7	0.191	0.1	LOS A	0.9	6.9	0.08	0.34	0.08	51.4
9	R2	All MCs	6	33.3	6	33.3	0.191	6.2	LOS A	0.9	6.9	0.08	0.34	0.08	36.1
Approach			304	10.4	304	10.4	0.191	3.7	NA	0.9	6.9	0.08	0.34	0.08	41.2
West: Ottiwell St															
10	L2	All MCs	9	22.2	9	22.2	0.009	5.9	LOS A	0.0	0.3	0.21	0.53	0.21	38.5
11	T1	All MCs	1	0.0	1	0.0	0.009	5.0	LOS A	0.0	0.3	0.21	0.53	0.21	31.3
12	R2	All MCs	1	0.0	1	0.0	0.009	6.6	LOS A	0.0	0.3	0.21	0.53	0.21	35.6
Approach			12	18.2	12	18.2	0.009	5.9	LOS A	0.0	0.3	0.21	0.53	0.21	37.9
All Vehicles			660	11.6	660	11.6	0.314	4.4	NA	1.3	10.6	0.22	0.44	0.23	41.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. PM_Sloane-Braidwood (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Braidwood Rd															
4	L2	All MCs	44	26.2	44	26.2	0.746	17.7	LOS B	6.5	51.4	0.83	1.33	1.92	29.8
5	T1	All MCs	52	4.1	52	4.1	0.746	21.6	LOS B	6.5	51.4	0.83	1.33	1.92	31.1
6	R2	All MCs	228	14.3	228	14.3	0.746	27.1	LOS B	6.5	51.4	0.83	1.33	1.92	30.4
Approach			324	14.3	324	14.3	0.746	24.9	LOS B	6.5	51.4	0.83	1.33	1.92	30.4
NorthEast: Sloane St															
7	L2	All MCs	199	13.2	199	13.2	0.261	6.3	LOS A	1.3	10.0	0.27	0.38	0.27	46.1
8	T1	All MCs	157	4.7	157	4.7	0.261	0.5	LOS A	1.3	10.0	0.27	0.38	0.27	51.1
9	R2	All MCs	38	5.6	38	5.6	0.261	6.7	LOS A	1.3	10.0	0.27	0.38	0.27	45.6
Approach			394	9.1	394	9.1	0.261	4.0	NA	1.3	10.0	0.27	0.38	0.27	47.8
NorthWest: Mundy St															
10	L2	All MCs	17	6.3	17	6.3	0.153	9.4	LOS A	0.6	4.3	0.51	0.99	0.51	39.0
11	T1	All MCs	72	13.2	72	13.2	0.153	12.2	LOS A	0.6	4.3	0.51	0.99	0.51	39.1
12	R2	All MCs	9	11.1	9	11.1	0.153	13.3	LOS A	0.6	4.3	0.51	0.99	0.51	37.6
Approach			98	11.8	98	11.8	0.153	11.9	LOS A	0.6	4.3	0.51	0.99	0.51	38.9
SouthWest: Sloane St															
1	L2	All MCs	13	0.0	13	0.0	0.163	6.1	LOS A	0.3	2.6	0.11	0.15	0.11	51.4
2	T1	All MCs	235	6.7	235	6.7	0.163	0.1	LOS A	0.3	2.6	0.11	0.15	0.11	56.7
3	R2	All MCs	40	15.8	40	15.8	0.163	6.3	LOS A	0.3	2.6	0.11	0.15	0.11	47.9
Approach			287	7.7	287	7.7	0.163	1.3	NA	0.3	2.6	0.11	0.15	0.11	55.0
All Vehicles			1103	10.5	1103	10.5	0.746	10.1	NA	6.5	51.4	0.41	0.65	0.73	41.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. PM_Bungonia-Forbes (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Bungonia Rd															
5	T1	All MCs	168	17.5	168	17.5	0.104	0.1	LOS A	0.1	0.7	0.05	0.06	0.05	59.1
6	R2	All MCs	13	0.0	13	0.0	0.104	6.1	LOS A	0.1	0.7	0.05	0.06	0.05	55.7
Approach			181	16.3	181	16.3	0.104	0.5	NA	0.1	0.7	0.05	0.06	0.05	58.9
North: Forbes St															
7	L2	All MCs	17	0.0	17	0.0	0.014	8.6	LOS A	0.1	0.4	0.26	0.86	0.26	48.5
9	R2	All MCs	16	13.3	16	13.3	0.022	10.1	LOS A	0.1	0.5	0.40	0.90	0.40	49.7
Approach			33	6.5	33	6.5	0.022	9.3	LOS A	0.1	0.5	0.33	0.88	0.33	49.1
West: Bungonia Rd															
10	L2	All MCs	24	4.3	24	4.3	0.098	5.6	LOS A	0.0	0.0	0.00	0.08	0.00	56.5
11	T1	All MCs	147	17.9	147	17.9	0.098	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	58.8
Approach			172	16.0	172	16.0	0.098	0.8	NA	0.0	0.0	0.00	0.08	0.00	58.4
All Vehicles			385	15.3	385	15.3	0.104	1.4	NA	0.1	0.7	0.05	0.14	0.05	57.5

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 4 [4. PM_Bungonia-Memorial (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bungonia Rd															
1a	L1	All MCs	144	19.7	144	19.7	0.088	5.6	LOS A	0.0	0.2	0.01	0.59	0.01	45.4
3	R2	All MCs	2	50.0	2	50.0	0.088	6.2	LOS A	0.0	0.2	0.01	0.59	0.01	41.2
Approach			146	20.1	146	20.1	0.088	5.6	NA	0.0	0.2	0.01	0.59	0.01	45.3
East: Memorial Rd															
4	L2	All MCs	2	0.0	2	0.0	0.038	5.6	LOS A	0.1	0.9	0.27	0.57	0.27	48.2
6a	R1	All MCs	37	2.9	37	2.9	0.038	6.0	LOS A	0.1	0.9	0.27	0.57	0.27	45.8
Approach			39	2.7	39	2.7	0.038	6.0	LOS A	0.1	0.9	0.27	0.57	0.27	45.9
NorthWest: Bungonia Rd															
27a	L1	All MCs	138	7.6	138	7.6	0.099	5.4	LOS A	0.2	1.7	0.01	0.59	0.01	45.4
29a	R1	All MCs	26	60.0	26	60.0	0.099	5.7	LOS A	0.2	1.7	0.01	0.59	0.01	45.2
Approach			164	16.0	164	16.0	0.099	5.5	NA	0.2	1.7	0.01	0.59	0.01	45.4
All Vehicles			349	16.3	349	16.3	0.099	5.6	NA	0.2	1.7	0.04	0.59	0.04	45.4

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 5 [5. PM_Hume-Garoorigang (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Garoorigang Rd															
5	T1	All MCs	3	0.0	3	0.0	0.054	0.4	LOS A	0.2	1.9	0.23	0.54	0.23	54.6
6	R2	All MCs	80	10.5	80	10.5	0.054	6.0	LOS A	0.2	1.9	0.23	0.54	0.23	47.8
Approach			83	10.1	83	10.1	0.054	5.7	NA	0.2	1.9	0.23	0.54	0.23	48.1
North: Hume St															
7	L2	All MCs	76	15.3	76	15.3	0.064	5.9	LOS A	0.3	2.0	0.14	0.54	0.14	48.0
9	R2	All MCs	12	18.2	12	18.2	0.064	6.4	LOS A	0.3	2.0	0.14	0.54	0.14	47.4
Approach			87	15.7	87	15.7	0.064	6.0	LOS A	0.3	2.0	0.14	0.54	0.14	48.0
West: Mazamet Rd															
10	L2	All MCs	63	11.7	63	11.7	0.062	5.7	LOS A	0.0	0.0	0.00	0.33	0.00	51.5
11	T1	All MCs	48	0.0	48	0.0	0.062	0.0	LOS A	0.0	0.0	0.00	0.33	0.00	57.2
Approach			112	6.6	112	6.6	0.062	3.2	NA	0.0	0.0	0.00	0.33	0.00	54.4
All Vehicles			282	10.4	282	10.4	0.064	4.8	NA	0.3	2.0	0.11	0.46	0.11	50.7

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 6.1512 [6. PM_Lagoon-Union (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 173 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Union St															
1	L2	All MCs	35	3.0	35	3.0	0.585	63.1	LOS E	21.9	159.3	0.92	0.80	0.92	22.8
2	T1	All MCs	271	4.7	271	4.7	* 0.585	57.5	LOS E	21.9	159.3	0.92	0.80	0.92	20.8
3	R2	All MCs	203	22.8	203	22.8	0.202	20.7	LOS B	7.1	59.2	0.45	0.70	0.45	41.8
Approach			508	11.8	508	11.8	0.585	43.2	LOS D	21.9	159.3	0.73	0.76	0.73	28.4
East: Sydney Rd															
4	L2	All MCs	140	23.3	140	23.3	0.246	33.4	LOS C	8.8	72.1	0.70	0.74	0.70	32.8
5	T1	All MCs	168	1.3	168	1.3	0.246	52.6	LOS D	9.2	72.1	0.78	0.66	0.78	29.2
6	R2	All MCs	172	6.1	172	6.1	* 0.528	62.3	LOS E	12.3	90.5	0.90	0.82	0.90	21.9
Approach			480	9.4	480	9.4	0.528	50.4	LOS D	12.3	90.5	0.80	0.74	0.80	27.5
North: Union St															
7	L2	All MCs	141	17.2	141	17.2	0.660	65.8	LOS E	24.9	189.5	0.93	0.83	0.93	22.6
8	T1	All MCs	200	5.3	200	5.3	* 0.660	60.2	LOS E	24.9	189.5	0.93	0.83	0.93	20.5
9	R2	All MCs	147	12.1	147	12.1	0.287	58.7	LOS E	9.4	72.7	0.81	0.78	0.81	15.5
Approach			488	10.8	488	10.8	0.660	61.4	LOS E	24.9	189.5	0.90	0.81	0.90	19.0
West: Lagoon St															
10	L2	All MCs	101	1.0	101	1.0	0.085	17.4	LOS B	3.1	21.7	0.39	0.67	0.39	30.1
11	T1	All MCs	176	3.0	176	3.0	0.149	46.8	LOS D	5.3	38.1	0.76	0.61	0.76	29.5
12	R2	All MCs	17	0.0	17	0.0	0.061	61.9	LOS E	1.1	7.6	0.79	0.70	0.79	22.5
Approach			294	2.2	294	2.2	0.149	37.6	LOS C	5.3	38.1	0.64	0.64	0.64	28.6
All Vehicles			1771	9.3	1771	9.3	0.660	49.2	LOS D	24.9	189.5	0.78	0.75	0.78	25.5

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Union St												
P1	Full	1	1	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
East: Sydney Rd												

P2 Full	3	3	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
North: Union St											
P3 Full	1	1	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
West: Lagoon St											
P4 Full	1	1	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
All Pedestrians	6	6	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85

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

MOVEMENT SUMMARY

Site: 7 [7. PM_Sloane-Garoorigang (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Garoorigang St															
1	L2	All MCs	33	3.2	33	3.2	0.047	5.6	LOS A	0.0	0.0	0.00	0.22	0.00	55.1
2	T1	All MCs	56	0.0	56	0.0	0.047	0.0	LOS A	0.0	0.0	0.00	0.22	0.00	57.8
Approach			88	1.2	88	1.2	0.047	2.1	NA	0.0	0.0	0.00	0.22	0.00	56.8
North: Sloane St															
8	T1	All MCs	14	15.4	14	15.4	0.039	0.3	LOS A	0.2	1.4	0.19	0.45	0.19	54.8
9	R2	All MCs	48	13.0	48	13.0	0.039	5.9	LOS A	0.2	1.4	0.19	0.45	0.19	52.3
Approach			62	13.6	62	13.6	0.039	4.7	NA	0.2	1.4	0.19	0.45	0.19	52.8
West: Garoorigang Rd															
10	L2	All MCs	79	13.3	79	13.3	0.093	5.9	LOS A	0.4	2.7	0.16	0.55	0.16	51.7
12	R2	All MCs	44	0.0	44	0.0	0.093	5.9	LOS A	0.4	2.7	0.16	0.55	0.16	51.4
Approach			123	8.5	123	8.5	0.093	5.9	LOS A	0.4	2.7	0.16	0.55	0.16	51.6
All Vehicles			274	7.3	274	7.3	0.093	4.4	NA	0.4	2.7	0.12	0.42	0.12	53.4

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 8 [8. PM_Windellama-Rifle (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Rd															
2	T1	All MCs	138	19.1	138	19.1	0.084	0.0	LOS A	0.0	0.4	0.03	0.03	0.03	59.7
3	R2	All MCs	5	40.0	5	40.0	0.084	6.5	LOS A	0.0	0.4	0.03	0.03	0.03	54.9
Approach			143	19.9	143	19.9	0.084	0.3	NA	0.0	0.4	0.03	0.03	0.03	59.5
East: Rifle Range Rd															
4	L2	All MCs	4	0.0	4	0.0	0.014	6.0	LOS A	0.0	0.4	0.31	0.58	0.31	52.0
6	R2	All MCs	9	22.2	9	22.2	0.014	7.2	LOS A	0.0	0.4	0.31	0.58	0.31	50.8
Approach			14	15.4	14	15.4	0.014	6.8	LOS A	0.0	0.4	0.31	0.58	0.31	51.2
North: Windellama Rd															
7	L2	All MCs	11	0.0	11	0.0	0.087	5.6	LOS A	0.0	0.0	0.00	0.04	0.00	57.0
8	T1	All MCs	141	18.7	141	18.7	0.087	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.5
Approach			152	17.4	152	17.4	0.087	0.4	NA	0.0	0.0	0.00	0.04	0.00	59.3
All Vehicles			308	18.4	308	18.4	0.087	0.6	NA	0.0	0.4	0.03	0.06	0.03	59.0

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 9 [9. PM_Windellama-Site Access (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Road															
2	T1	All MCs	46	22.7	46	22.7	0.028	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	59.8
3	R2	All MCs	1	0.0	1	0.0	0.028	5.5	LOS A	0.0	0.1	0.01	0.01	0.01	57.0
Approach			47	22.2	47	22.2	0.028	0.1	NA	0.0	0.1	0.01	0.01	0.01	59.7
East: Site Access															
4	L2	All MCs	1	0.0	1	0.0	0.063	8.3	LOS A	0.2	2.2	0.30	0.91	0.30	50.7
6	R2	All MCs	47	33.3	47	33.3	0.063	10.4	LOS A	0.2	2.2	0.30	0.91	0.30	49.3
Approach			48	32.6	48	32.6	0.063	10.4	LOS A	0.2	2.2	0.30	0.91	0.30	49.4
North: Windellama Road															
7	L2	All MCs	17	93.8	17	93.8	0.015	6.6	LOS A	0.0	0.0	0.00	0.56	0.00	49.2
8	T1	All MCs	68	15.4	68	15.4	0.039	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			85	30.9	85	30.9	0.039	1.3	NA	0.0	0.0	0.00	0.11	0.00	57.5
All Vehicles			181	29.1	181	29.1	0.063	3.4	NA	0.2	2.2	0.08	0.30	0.08	55.6

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 1 [1. SAT_Braidwood-Bungonia (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Braidwood Rd															
1	L2	All MCs	1	0.0	1	0.0	0.054	5.8	LOS A	0.1	0.4	0.04	0.06	0.04	25.4
2	T1	All MCs	89	7.1	89	7.1	0.054	0.0	LOS A	0.1	0.4	0.04	0.06	0.04	58.3
3	R2	All MCs	7	14.3	7	14.3	0.054	5.9	LOS A	0.1	0.4	0.04	0.06	0.04	45.2
Approach			98	7.5	98	7.5	0.054	0.5	NA	0.1	0.4	0.04	0.06	0.04	57.2
East: Bungonia Rd															
4	L2	All MCs	5	20.0	5	20.0	0.004	4.5	LOS A	0.0	0.1	0.20	0.50	0.20	33.8
5	T1	All MCs	1	0.0	1	0.0	0.243	4.3	LOS A	0.9	7.0	0.43	0.67	0.43	32.5
6	R2	All MCs	180	12.3	180	12.3	0.243	6.3	LOS A	0.9	7.0	0.43	0.67	0.43	37.7
Approach			186	12.4	186	12.4	0.243	6.2	LOS A	0.9	7.0	0.43	0.67	0.43	37.6
North: Braidwood Rd															
7	L2	All MCs	176	15.0	176	15.0	0.177	5.8	LOS A	0.8	6.3	0.05	0.34	0.05	36.5
8	T1	All MCs	103	4.1	103	4.1	0.177	0.0	LOS A	0.8	6.3	0.05	0.34	0.05	51.7
9	R2	All MCs	3	0.0	3	0.0	0.177	5.6	LOS A	0.8	6.3	0.05	0.34	0.05	37.6
Approach			282	10.8	282	10.8	0.177	3.7	NA	0.8	6.3	0.05	0.34	0.05	41.4
West: Ottiwell St															
10	L2	All MCs	5	0.0	5	0.0	0.006	5.8	LOS A	0.0	0.1	0.20	0.53	0.20	42.8
11	T1	All MCs	1	0.0	1	0.0	0.006	4.9	LOS A	0.0	0.1	0.20	0.53	0.20	31.4
12	R2	All MCs	1	0.0	1	0.0	0.006	6.4	LOS A	0.0	0.1	0.20	0.53	0.20	35.8
Approach			7	0.0	7	0.0	0.006	5.7	LOS A	0.0	0.1	0.20	0.53	0.20	40.9
All Vehicles			574	10.6	574	10.6	0.243	4.0	NA	0.9	7.0	0.17	0.40	0.17	42.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. SAT_Sloane-Braidwood (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Braidwood Rd															
4	L2	All MCs	33	12.9	33	12.9	0.531	12.5	LOS A	3.2	24.4	0.69	1.12	1.12	35.2
5	T1	All MCs	47	4.4	47	4.4	0.531	15.5	LOS B	3.2	24.4	0.69	1.12	1.12	35.7
6	R2	All MCs	178	13.6	178	13.6	0.531	19.0	LOS B	3.2	24.4	0.69	1.12	1.12	34.8
Approach			258	11.8	258	11.8	0.531	17.5	LOS B	3.2	24.4	0.69	1.12	1.12	35.0
NorthEast: Sloane St															
7	L2	All MCs	197	11.8	197	11.8	0.269	6.1	LOS A	1.4	10.0	0.22	0.34	0.22	47.0
8	T1	All MCs	192	1.6	192	1.6	0.269	0.3	LOS A	1.4	10.0	0.22	0.34	0.22	52.0
9	R2	All MCs	41	0.0	41	0.0	0.269	6.1	LOS A	1.4	10.0	0.22	0.34	0.22	47.2
Approach			429	6.1	429	6.1	0.269	3.5	NA	1.4	10.0	0.22	0.34	0.22	49.0
NorthWest: Mundy St															
10	L2	All MCs	16	0.0	16	0.0	0.080	8.7	LOS A	0.3	2.1	0.43	0.93	0.43	41.0
11	T1	All MCs	42	5.0	42	5.0	0.080	10.7	LOS A	0.3	2.1	0.43	0.93	0.43	41.3
12	R2	All MCs	4	0.0	4	0.0	0.080	11.1	LOS A	0.3	2.1	0.43	0.93	0.43	40.1
Approach			62	3.4	62	3.4	0.080	10.2	LOS A	0.3	2.1	0.43	0.93	0.43	41.1
SouthWest: Sloane St															
1	L2	All MCs	4	0.0	4	0.0	0.117	6.2	LOS A	0.3	2.1	0.14	0.18	0.14	50.8
2	T1	All MCs	165	1.9	165	1.9	0.117	0.2	LOS A	0.3	2.1	0.14	0.18	0.14	56.0
3	R2	All MCs	41	2.6	41	2.6	0.117	6.1	LOS A	0.3	2.1	0.14	0.18	0.14	50.4
Approach			211	2.0	211	2.0	0.117	1.5	NA	0.3	2.1	0.14	0.18	0.14	54.6
All Vehicles			960	6.6	960	6.6	0.531	7.3	NA	3.2	24.4	0.34	0.55	0.46	44.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. SAT_Bungonia-Forbes (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Bungonia Rd															
5	T1	All MCs	128	13.1	128	13.1	0.073	0.0	LOS A	0.0	0.2	0.01	0.02	0.01	59.7
6	R2	All MCs	3	0.0	3	0.0	0.073	5.7	LOS A	0.0	0.2	0.01	0.02	0.01	56.2
Approach			132	12.8	132	12.8	0.073	0.1	NA	0.0	0.2	0.01	0.02	0.01	59.6
North: Forbes St															
7	L2	All MCs	17	12.5	17	12.5	0.014	9.1	LOS A	0.1	0.4	0.24	0.88	0.24	47.0
9	R2	All MCs	22	0.0	22	0.0	0.025	8.7	LOS A	0.1	0.6	0.33	0.88	0.33	50.7
Approach			39	5.4	39	5.4	0.025	8.9	LOS A	0.1	0.6	0.30	0.88	0.30	49.3
West: Bungonia Rd															
10	L2	All MCs	17	6.3	17	6.3	0.081	5.6	LOS A	0.0	0.0	0.00	0.07	0.00	56.5
11	T1	All MCs	126	15.8	126	15.8	0.081	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	59.0
Approach			143	14.7	143	14.7	0.081	0.7	NA	0.0	0.0	0.00	0.07	0.00	58.6
All Vehicles			314	12.8	314	12.8	0.081	1.5	NA	0.1	0.6	0.04	0.15	0.04	57.5

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 4 [4. SAT_Bungonia-Memorial (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bungonia Rd															
1a	L1	All MCs	139	13.6	139	13.6	0.081	5.5	LOS A	0.0	0.1	0.00	0.59	0.00	46.3
3	R2	All MCs	2	0.0	2	0.0	0.081	5.4	LOS A	0.0	0.1	0.00	0.59	0.00	48.6
Approach			141	13.4	141	13.4	0.081	5.5	NA	0.0	0.1	0.00	0.59	0.00	46.3
East: Memorial Rd															
4	L2	All MCs	2	0.0	2	0.0	0.008	5.9	LOS A	0.0	0.2	0.28	0.55	0.28	48.0
6a	R1	All MCs	6	0.0	6	0.0	0.008	6.0	LOS A	0.0	0.2	0.28	0.55	0.28	46.1
Approach			8	0.0	8	0.0	0.008	5.9	LOS A	0.0	0.2	0.28	0.55	0.28	46.6
NorthWest: Bungonia Rd															
27a	L1	All MCs	5	0.0	5	0.0	0.079	5.3	LOS A	0.4	3.0	0.02	0.56	0.02	47.1
29a	R1	All MCs	127	14.9	127	14.9	0.079	5.1	LOS A	0.4	3.0	0.02	0.56	0.02	48.1
Approach			133	14.3	133	14.3	0.079	5.1	NA	0.4	3.0	0.02	0.56	0.02	48.1
All Vehicles			282	13.4	282	13.4	0.081	5.3	NA	0.4	3.0	0.02	0.58	0.02	47.1

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 5 [5. SAT_Hume-Garoorigang (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Garoorigang Rd															
5	T1	All MCs	5	0.0	5	0.0	0.052	0.0	LOS A	0.2	1.7	0.07	0.54	0.07	55.1
6	R2	All MCs	85	3.7	85	3.7	0.052	5.5	LOS A	0.2	1.7	0.07	0.54	0.07	48.9
Approach			91	3.5	91	3.5	0.052	5.2	NA	0.2	1.7	0.07	0.54	0.07	49.4
North: Hume St															
7	L2	All MCs	77	2.7	77	2.7	0.050	5.6	LOS A	0.2	1.4	0.03	0.56	0.03	49.2
9	R2	All MCs	2	0.0	2	0.0	0.050	5.5	LOS A	0.2	1.4	0.03	0.56	0.03	49.0
Approach			79	2.7	79	2.7	0.050	5.6	LOS A	0.2	1.4	0.03	0.56	0.03	49.2
West: Mazamet Rd															
10	L2	All MCs	11	0.0	11	0.0	0.008	5.5	LOS A	0.0	0.0	0.00	0.42	0.00	51.2
11	T1	All MCs	4	0.0	4	0.0	0.008	0.0	LOS A	0.0	0.0	0.00	0.42	0.00	56.3
Approach			15	0.0	15	0.0	0.008	4.0	NA	0.0	0.0	0.00	0.42	0.00	53.1
All Vehicles			184	2.9	184	2.9	0.052	5.3	NA	0.2	1.7	0.05	0.54	0.05	49.6

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 6.1512 [6. SAT_Lagoon-Union (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 112 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Union St															
1	L2	All MCs	8	0.0	8	0.0	0.439	42.3	LOS C	10.3	73.3	0.88	0.74	0.88	29.0
2	T1	All MCs	218	1.9	218	1.9	*0.439	36.8	LOS C	10.3	73.3	0.88	0.74	0.88	27.1
3	R2	All MCs	165	13.4	165	13.4	0.142	12.1	LOS A	3.1	23.9	0.37	0.67	0.37	46.8
Approach			392	6.7	392	6.7	0.439	26.5	LOS B	10.3	73.3	0.66	0.71	0.66	35.6
East: Sydney Rd															
4	L2	All MCs	165	12.7	165	12.7	0.244	18.7	LOS B	6.4	48.8	0.64	0.72	0.64	39.8
5	T1	All MCs	204	0.0	204	0.0	0.244	30.4	LOS C	6.6	48.8	0.72	0.63	0.72	37.6
6	R2	All MCs	125	3.4	125	3.4	*0.300	35.2	LOS C	5.1	36.7	0.78	0.77	0.78	29.8
Approach			495	5.1	495	5.1	0.300	27.7	LOS B	6.6	48.8	0.71	0.69	0.71	36.4
North: Union St															
7	L2	All MCs	156	5.4	156	5.4	0.864	60.8	LOS E	19.7	141.9	1.00	1.01	1.21	22.9
8	T1	All MCs	175	1.2	175	1.2	*0.864	55.2	LOS D	19.7	141.9	1.00	1.01	1.21	20.6
9	R2	All MCs	129	0.8	129	0.8	0.341	47.0	LOS D	6.1	43.1	0.90	0.78	0.90	17.6
Approach			460	2.5	460	2.5	0.864	54.8	LOS D	19.7	141.9	0.97	0.94	1.12	20.8
West: Lagoon St															
10	L2	All MCs	82	0.0	82	0.0	0.071	14.2	LOS A	1.7	12.0	0.41	0.67	0.41	32.7
11	T1	All MCs	166	1.3	166	1.3	0.117	25.0	LOS B	3.0	21.0	0.70	0.55	0.70	38.2
12	R2	All MCs	11	0.0	11	0.0	0.032	35.1	LOS C	0.4	2.8	0.73	0.67	0.73	29.6
Approach			259	0.8	259	0.8	0.117	22.0	LOS B	3.0	21.0	0.61	0.59	0.61	36.7
All Vehicles			1605	4.1	1605	4.1	0.864	34.2	LOS C	19.7	141.9	0.76	0.75	0.80	31.0

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Union St												
P1	Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
East: Sydney Rd												

P2 Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
North: Union St											
P3 Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
West: Lagoon St											
P4 Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
All Pedestrians	4	4	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98

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

MOVEMENT SUMMARY

Site: 7 [7. SAT_Sloane-Garoorigang (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Garoorigang St															
1	L2	All MCs	37	0.0	37	0.0	0.033	5.5	LOS A	0.0	0.0	0.00	0.35	0.00	54.1
2	T1	All MCs	25	4.2	25	4.2	0.033	0.0	LOS A	0.0	0.0	0.00	0.35	0.00	56.4
Approach			62	1.7	62	1.7	0.033	3.3	NA	0.0	0.0	0.00	0.35	0.00	55.0
North: Sloane St															
8	T1	All MCs	21	0.0	21	0.0	0.043	0.2	LOS A	0.2	1.4	0.15	0.41	0.15	55.4
9	R2	All MCs	52	6.1	52	6.1	0.043	5.7	LOS A	0.2	1.4	0.15	0.41	0.15	53.1
Approach			73	4.3	73	4.3	0.043	4.1	NA	0.2	1.4	0.15	0.41	0.15	53.7
West: Garoorigang Rd															
10	L2	All MCs	21	10.0	21	10.0	0.063	5.7	LOS A	0.2	1.6	0.14	0.56	0.14	52.0
12	R2	All MCs	57	0.0	57	0.0	0.063	5.9	LOS A	0.2	1.6	0.14	0.56	0.14	51.5
Approach			78	2.7	78	2.7	0.063	5.8	LOS A	0.2	1.6	0.14	0.56	0.14	51.6
All Vehicles			213	3.0	213	3.0	0.063	4.5	NA	0.2	1.6	0.10	0.45	0.10	53.3

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 8 [8. SAT_Windellama-Rifle (*) (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Weekday PM Flows Used
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Rd															
2	T1	All MCs	122	21.6	122	21.6	0.076	0.0	LOS A	0.0	0.4	0.03	0.04	0.03	59.7
3	R2	All MCs	5	40.0	5	40.0	0.076	6.7	LOS A	0.0	0.4	0.03	0.04	0.03	54.8
Approach			127	22.3	127	22.3	0.076	0.3	NA	0.0	0.4	0.03	0.04	0.03	59.5
East: Rifle Range Rd															
4	L2	All MCs	4	0.0	4	0.0	0.014	6.0	LOS A	0.0	0.4	0.32	0.58	0.32	52.0
6	R2	All MCs	9	22.2	9	22.2	0.014	7.2	LOS A	0.0	0.4	0.32	0.58	0.32	50.8
Approach			14	15.4	14	15.4	0.014	6.8	LOS A	0.0	0.4	0.32	0.58	0.32	51.2
North: Windellama Rd															
7	L2	All MCs	11	0.0	11	0.0	0.095	5.6	LOS A	0.0	0.0	0.00	0.04	0.00	57.1
8	T1	All MCs	157	16.8	157	16.8	0.095	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.5
Approach			167	15.7	167	15.7	0.095	0.4	NA	0.0	0.0	0.00	0.04	0.00	59.4
All Vehicles			308	18.4	308	18.4	0.095	0.6	NA	0.0	0.4	0.03	0.06	0.03	59.0

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 9 [9. SAT_Windellama-Site Access (Site Folder: Existing + Dev to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Road															
2	T1	All MCs	82	12.8	82	12.8	0.046	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	59.9
3	R2	All MCs	1	0.0	1	0.0	0.046	5.5	LOS A	0.0	0.1	0.01	0.01	0.01	57.1
Approach			83	12.7	83	12.7	0.046	0.1	NA	0.0	0.1	0.01	0.01	0.01	59.9
East: Site Access															
4	L2	All MCs	1	0.0	1	0.0	0.051	8.3	LOS A	0.2	1.9	0.37	0.92	0.37	50.2
6	R2	All MCs	32	50.0	32	50.0	0.051	12.0	LOS A	0.2	1.9	0.37	0.92	0.37	48.2
Approach			33	48.4	33	48.4	0.051	11.9	LOS A	0.2	1.9	0.37	0.92	0.37	48.3
North: Windellama Road															
7	L2	All MCs	32	50.0	32	50.0	0.023	6.1	LOS A	0.0	0.0	0.00	0.57	0.00	50.9
8	T1	All MCs	86	12.2	86	12.2	0.048	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			118	22.3	118	22.3	0.048	1.6	NA	0.0	0.0	0.00	0.15	0.00	57.2
All Vehicles			234	22.5	234	22.5	0.051	2.5	NA	0.2	1.9	0.05	0.21	0.05	56.6

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 1 [1. AM_Braidwood-Bungonia (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Braidwood Rd															
1	L2	All MCs	1	0.0	1	0.0	0.048	5.9	LOS A	0.0	0.4	0.04	0.07	0.04	25.3
2	T1	All MCs	74	20.0	74	20.0	0.048	0.0	LOS A	0.0	0.4	0.04	0.07	0.04	58.1
3	R2	All MCs	6	16.7	6	16.7	0.048	6.0	LOS A	0.0	0.4	0.04	0.07	0.04	44.8
Approach			81	19.5	81	19.5	0.048	0.6	NA	0.0	0.4	0.04	0.07	0.04	56.8
East: Bungonia Rd															
4	L2	All MCs	9	11.1	9	11.1	0.007	4.5	LOS A	0.0	0.2	0.21	0.51	0.21	34.5
5	T1	All MCs	1	0.0	1	0.0	0.268	4.3	LOS A	1.0	8.0	0.43	0.67	0.43	32.6
6	R2	All MCs	201	13.1	201	13.1	0.268	6.2	LOS A	1.0	8.0	0.43	0.67	0.43	37.6
Approach			212	12.9	212	12.9	0.268	6.1	LOS A	1.0	8.0	0.42	0.66	0.42	37.5
North: Braidwood Rd															
7	L2	All MCs	145	15.9	145	15.9	0.163	5.8	LOS A	0.7	5.7	0.05	0.31	0.05	36.8
8	T1	All MCs	111	13.3	111	13.3	0.163	0.0	LOS A	0.7	5.7	0.05	0.31	0.05	52.3
9	R2	All MCs	3	33.3	3	33.3	0.163	6.0	LOS A	0.7	5.7	0.05	0.31	0.05	36.5
Approach			259	15.0	259	15.0	0.163	3.3	NA	0.7	5.7	0.05	0.31	0.05	42.6
West: Ottiwell St															
10	L2	All MCs	6	0.0	6	0.0	0.006	5.8	LOS A	0.0	0.2	0.18	0.53	0.18	42.9
11	T1	All MCs	1	0.0	1	0.0	0.006	4.9	LOS A	0.0	0.2	0.18	0.53	0.18	31.5
12	R2	All MCs	1	0.0	1	0.0	0.006	6.4	LOS A	0.0	0.2	0.18	0.53	0.18	35.8
Approach			8	0.0	8	0.0	0.006	5.7	LOS A	0.0	0.2	0.18	0.53	0.18	41.2
All Vehicles			560	14.7	560	14.7	0.268	4.0	NA	1.0	8.0	0.19	0.41	0.19	42.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. AM_Sloane-Braidwood (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Braidwood Rd															
4	L2	All MCs	56	39.6	56	39.6	0.487	12.9	LOS A	3.2	24.8	0.63	1.02	0.93	34.6
5	T1	All MCs	54	5.9	54	5.9	0.487	14.2	LOS A	3.2	24.8	0.63	1.02	0.93	37.4
6	R2	All MCs	175	9.0	175	9.0	0.487	16.5	LOS B	3.2	24.8	0.63	1.02	0.93	37.0
Approach			284	14.4	284	14.4	0.487	15.4	LOS B	3.2	24.8	0.63	1.02	0.93	36.6
NorthEast: Sloane St															
7	L2	All MCs	128	9.0	128	9.0	0.177	6.3	LOS A	0.8	6.0	0.25	0.35	0.25	47.3
8	T1	All MCs	126	8.3	126	8.3	0.177	0.4	LOS A	0.8	6.0	0.25	0.35	0.25	51.6
9	R2	All MCs	20	5.3	20	5.3	0.177	6.2	LOS A	0.8	6.0	0.25	0.35	0.25	46.0
Approach			275	8.4	275	8.4	0.177	3.6	NA	0.8	6.0	0.25	0.35	0.25	49.0
NorthWest: Mundy St															
10	L2	All MCs	13	0.0	13	0.0	0.097	8.7	LOS A	0.3	2.6	0.44	0.96	0.44	40.8
11	T1	All MCs	55	11.5	55	11.5	0.097	11.1	LOS A	0.3	2.6	0.44	0.96	0.44	40.2
12	R2	All MCs	4	0.0	4	0.0	0.097	10.9	LOS A	0.3	2.6	0.44	0.96	0.44	40.0
Approach			72	8.8	72	8.8	0.097	10.6	LOS A	0.3	2.6	0.44	0.96	0.44	40.3
SouthWest: Sloane St															
1	L2	All MCs	5	0.0	5	0.0	0.150	6.1	LOS A	0.6	4.4	0.19	0.25	0.19	49.8
2	T1	All MCs	164	8.3	164	8.3	0.150	0.3	LOS A	0.6	4.4	0.19	0.25	0.19	54.9
3	R2	All MCs	74	27.1	74	27.1	0.150	6.4	LOS A	0.6	4.4	0.19	0.25	0.19	44.4
Approach			243	13.9	243	13.9	0.150	2.3	NA	0.6	4.4	0.19	0.25	0.19	50.9
All Vehicles			874	11.9	874	11.9	0.487	7.6	NA	3.2	24.8	0.37	0.59	0.47	43.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. AM_Bungonia-Forbes (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Bungonia Rd															
5	T1	All MCs	209	13.1	209	13.1	0.127	0.0	LOS A	0.1	0.9	0.04	0.05	0.04	59.2
6	R2	All MCs	16	6.7	16	6.7	0.127	5.9	LOS A	0.1	0.9	0.04	0.05	0.04	55.4
Approach			225	12.6	225	12.6	0.127	0.4	NA	0.1	0.9	0.04	0.05	0.04	58.9
North: Forbes St															
7	L2	All MCs	5	0.0	5	0.0	0.004	8.4	LOS A	0.0	0.1	0.20	0.87	0.20	48.5
9	R2	All MCs	17	0.0	17	0.0	0.021	9.1	LOS A	0.1	0.5	0.38	0.88	0.38	50.5
Approach			22	0.0	22	0.0	0.021	8.9	LOS A	0.1	0.5	0.33	0.88	0.33	50.1
West: Bungonia Rd															
10	L2	All MCs	16	0.0	16	0.0	0.063	5.6	LOS A	0.0	0.0	0.00	0.09	0.00	56.6
11	T1	All MCs	94	19.1	94	19.1	0.063	0.0	LOS A	0.0	0.0	0.00	0.09	0.00	58.7
Approach			109	16.3	109	16.3	0.063	0.8	NA	0.0	0.0	0.00	0.09	0.00	58.3
All Vehicles			357	13.0	357	13.0	0.127	1.1	NA	0.1	0.9	0.05	0.11	0.05	58.0

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 4 [4. AM_Bungonia-Memorial (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bungonia Rd															
1a	L1	All MCs	213	11.4	213	11.4	0.121	5.5	LOS A	0.0	0.1	0.00	0.59	0.00	46.6
3	R2	All MCs	1	0.0	1	0.0	0.121	5.4	LOS A	0.0	0.1	0.00	0.59	0.00	48.6
Approach			214	11.3	214	11.3	0.121	5.5	NA	0.0	0.1	0.00	0.59	0.00	46.7
East: Memorial Rd															
4	L2	All MCs	1	0.0	1	0.0	0.019	5.7	LOS A	0.1	0.5	0.32	0.58	0.32	47.7
6a	R1	All MCs	15	28.6	15	28.6	0.019	6.9	LOS A	0.1	0.5	0.32	0.58	0.32	41.3
Approach			16	26.7	16	26.7	0.019	6.8	LOS A	0.1	0.5	0.32	0.58	0.32	41.7
NorthWest: Bungonia Rd															
27a	L1	All MCs	44	0.0	44	0.0	0.060	5.3	LOS A	0.3	2.1	0.01	0.58	0.01	47.0
29a	R1	All MCs	54	29.4	54	29.4	0.060	5.3	LOS A	0.3	2.1	0.01	0.58	0.01	47.1
Approach			98	16.1	98	16.1	0.060	5.3	NA	0.3	2.1	0.01	0.58	0.01	47.0
All Vehicles			327	13.5	327	13.5	0.121	5.5	NA	0.3	2.1	0.02	0.59	0.02	46.5

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 5 [5. AM_Hume-Garoorigang (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Garoorigang Rd															
5	T1	All MCs	5	20.0	5	20.0	0.067	0.1	LOS A	0.3	2.8	0.11	0.54	0.11	55.0
6	R2	All MCs	96	33.0	96	33.0	0.067	6.0	LOS A	0.3	2.8	0.11	0.54	0.11	46.8
Approach			101	32.3	101	32.3	0.067	5.7	NA	0.3	2.8	0.11	0.54	0.11	47.4
North: Hume St															
7	L2	All MCs	73	23.2	73	23.2	0.055	5.8	LOS A	0.2	1.8	0.03	0.56	0.03	48.0
9	R2	All MCs	6	0.0	6	0.0	0.055	5.6	LOS A	0.2	1.8	0.03	0.56	0.03	48.9
Approach			79	21.3	79	21.3	0.055	5.8	LOS A	0.2	1.8	0.03	0.56	0.03	48.1
West: Mazamet Rd															
10	L2	All MCs	20	31.6	20	31.6	0.016	5.9	LOS A	0.0	0.0	0.00	0.48	0.00	48.5
11	T1	All MCs	4	25.0	4	25.0	0.016	0.0	LOS A	0.0	0.0	0.00	0.48	0.00	55.9
Approach			24	30.4	24	30.4	0.016	4.9	NA	0.0	0.0	0.00	0.48	0.00	50.1
All Vehicles			204	27.8	204	27.8	0.067	5.6	NA	0.3	2.8	0.07	0.54	0.07	48.0

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 6.1512 [6. AM_Lagoon-Union (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 112 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Union St															
1	L2	All MCs	41	0.0	41	0.0	0.661	49.7	LOS D	13.1	99.6	0.97	0.82	0.97	26.2
2	T1	All MCs	217	11.7	217	11.7	* 0.661	44.1	LOS D	13.1	99.6	0.97	0.82	0.97	24.2
3	R2	All MCs	109	26.0	109	26.0	0.119	16.6	LOS B	2.6	22.2	0.47	0.68	0.47	43.6
Approach			367	14.6	367	14.6	0.661	36.5	LOS C	13.1	99.6	0.82	0.78	0.82	30.1
East: Sydney Rd															
4	L2	All MCs	104	30.3	104	30.3	0.256	22.8	LOS B	5.7	47.7	0.73	0.71	0.73	36.9
5	T1	All MCs	201	6.3	201	6.3	0.256	33.9	LOS C	6.2	47.7	0.77	0.66	0.77	35.6
6	R2	All MCs	165	12.1	165	12.1	* 0.429	39.1	LOS C	7.3	56.3	0.84	0.80	0.84	28.2
Approach			471	13.6	471	13.6	0.429	33.3	LOS C	7.3	56.3	0.79	0.72	0.79	33.3
North: Union St															
7	L2	All MCs	129	9.8	129	9.8	* 0.617	42.3	LOS C	15.9	118.8	0.91	0.81	0.91	28.5
8	T1	All MCs	207	7.1	207	7.1	0.617	35.8	LOS C	15.9	118.8	0.91	0.81	0.91	26.5
9	R2	All MCs	194	13.0	194	13.0	0.375	38.8	LOS C	8.4	65.0	0.83	0.79	0.83	19.4
Approach			531	9.9	531	9.9	0.617	38.5	LOS C	15.9	118.8	0.88	0.80	0.88	24.7
West: Lagoon St															
10	L2	All MCs	65	12.9	65	12.9	0.057	12.0	LOS A	1.2	9.0	0.35	0.65	0.35	34.3
11	T1	All MCs	92	4.6	92	4.6	0.075	28.1	LOS B	1.7	12.5	0.73	0.55	0.73	36.5
12	R2	All MCs	23	4.5	23	4.5	0.079	39.8	LOS C	1.0	7.1	0.79	0.71	0.79	27.8
Approach			180	7.6	180	7.6	0.079	23.8	LOS B	1.7	12.5	0.60	0.61	0.60	34.6
All Vehicles			1548	11.9	1548	11.9	0.661	34.7	LOS C	15.9	118.8	0.81	0.75	0.81	29.8

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Union St												
P1	Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
East: Sydney Rd												

P2	Full	11	12	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
North: Union St												
P3	Full	11	12	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
West: Lagoon St												
P4	Full	2	2	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
All Pedestrians		25	26	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98

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

MOVEMENT SUMMARY

Site: 7 [7. AM_Sloane-Garoorigang (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Garoorigang St															
1	L2	All MCs	35	0.0	35	0.0	0.039	5.5	LOS A	0.0	0.0	0.00	0.28	0.00	54.7
2	T1	All MCs	40	0.0	40	0.0	0.039	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	57.2
Approach			75	0.0	75	0.0	0.039	2.6	NA	0.0	0.0	0.00	0.28	0.00	56.0
North: Sloane St															
8	T1	All MCs	12	0.0	12	0.0	0.057	0.3	LOS A	0.3	2.5	0.20	0.49	0.20	55.0
9	R2	All MCs	65	48.4	65	48.4	0.057	6.4	LOS A	0.3	2.5	0.20	0.49	0.20	50.9
Approach			77	41.1	77	41.1	0.057	5.5	NA	0.3	2.5	0.20	0.49	0.20	51.4
West: Garoorigang Rd															
10	L2	All MCs	62	32.2	62	32.2	0.061	6.1	LOS A	0.2	2.0	0.13	0.54	0.13	51.1
12	R2	All MCs	17	0.0	17	0.0	0.061	6.0	LOS A	0.2	2.0	0.13	0.54	0.13	51.5
Approach			79	25.3	79	25.3	0.061	6.1	LOS A	0.2	2.0	0.13	0.54	0.13	51.1
All Vehicles			231	22.4	231	22.4	0.061	4.7	NA	0.3	2.5	0.11	0.44	0.11	52.6

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 8 [8. AM_Windellama-Rifle (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Rd															
2	T1	All MCs	203	13.0	203	13.0	0.117	0.0	LOS A	0.0	0.4	0.02	0.02	0.02	59.7
3	R2	All MCs	7	0.0	7	0.0	0.117	5.6	LOS A	0.0	0.4	0.02	0.02	0.02	56.9
Approach			211	12.5	211	12.5	0.117	0.2	NA	0.0	0.4	0.02	0.02	0.02	59.6
East: Rifle Range Rd															
4	L2	All MCs	2	0.0	2	0.0	0.011	5.8	LOS A	0.0	0.3	0.29	0.57	0.29	52.1
6	R2	All MCs	9	0.0	9	0.0	0.011	6.6	LOS A	0.0	0.3	0.29	0.57	0.29	51.9
Approach			12	0.0	12	0.0	0.011	6.5	LOS A	0.0	0.3	0.29	0.57	0.29	51.9
North: Windellama Rd															
7	L2	All MCs	6	66.7	6	66.7	0.055	6.3	LOS A	0.0	0.0	0.00	0.04	0.00	54.2
8	T1	All MCs	87	18.1	87	18.1	0.055	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.8
Approach			94	21.3	94	21.3	0.055	0.4	NA	0.0	0.0	0.00	0.04	0.00	59.4
All Vehicles			316	14.7	316	14.7	0.117	0.5	NA	0.0	0.4	0.02	0.05	0.02	59.2

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 9 [9. AM_Windellama-Site Access (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Road															
2	T1	All MCs	45	30.2	45	30.2	0.028	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	59.8
3	R2	All MCs	1	0.0	1	0.0	0.028	5.5	LOS A	0.0	0.1	0.01	0.01	0.01	57.0
Approach			46	29.5	46	29.5	0.028	0.1	NA	0.0	0.1	0.01	0.01	0.01	59.7
East: Site Access															
4	L2	All MCs	1	0.0	1	0.0	0.029	8.2	LOS A	0.1	1.4	0.30	0.95	0.30	50.5
6	R2	All MCs	17	93.8	17	93.8	0.029	13.3	LOS A	0.1	1.4	0.30	0.95	0.30	46.9
Approach			18	88.2	18	88.2	0.029	13.0	LOS A	0.1	1.4	0.30	0.95	0.30	47.1
North: Windellama Road															
7	L2	All MCs	47	33.3	47	33.3	0.032	5.9	LOS A	0.0	0.0	0.00	0.57	0.00	51.5
8	T1	All MCs	38	27.8	38	27.8	0.023	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			85	30.9	85	30.9	0.032	3.3	NA	0.0	0.0	0.00	0.32	0.00	55.0
All Vehicles			149	37.3	149	37.3	0.032	3.5	NA	0.1	1.4	0.04	0.30	0.04	55.2

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 1 [1. PM_Braidwood-Bungonia (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Braidwood Rd															
1	L2	All MCs	1	0.0	1	0.0	0.063	5.9	LOS A	0.1	0.8	0.08	0.12	0.08	24.9
2	T1	All MCs	96	7.7	96	7.7	0.063	0.1	LOS A	0.1	0.8	0.08	0.12	0.08	56.9
3	R2	All MCs	17	6.3	17	6.3	0.063	5.9	LOS A	0.1	0.8	0.08	0.12	0.08	43.9
Approach			114	7.4	114	7.4	0.063	1.0	NA	0.1	0.8	0.08	0.12	0.08	55.2
East: Bungonia Rd															
4	L2	All MCs	13	8.3	13	8.3	0.009	4.5	LOS A	0.0	0.3	0.21	0.51	0.21	34.8
5	T1	All MCs	1	0.0	1	0.0	0.290	4.7	LOS A	1.2	8.9	0.47	0.71	0.49	31.6
6	R2	All MCs	206	11.2	206	11.2	0.290	6.8	LOS A	1.2	8.9	0.47	0.71	0.49	37.2
Approach			220	11.0	220	11.0	0.290	6.7	LOS A	1.2	8.9	0.46	0.70	0.48	37.1
North: Braidwood Rd															
7	L2	All MCs	186	12.4	186	12.4	0.191	5.8	LOS A	0.9	6.9	0.08	0.34	0.08	36.3
8	T1	All MCs	112	5.7	112	5.7	0.191	0.1	LOS A	0.9	6.9	0.08	0.34	0.08	51.4
9	R2	All MCs	6	33.3	6	33.3	0.191	6.2	LOS A	0.9	6.9	0.08	0.34	0.08	36.1
Approach			304	10.4	304	10.4	0.191	3.7	NA	0.9	6.9	0.08	0.34	0.08	41.2
West: Ottiwell St															
10	L2	All MCs	9	22.2	9	22.2	0.009	5.9	LOS A	0.0	0.3	0.21	0.53	0.21	38.5
11	T1	All MCs	1	0.0	1	0.0	0.009	5.0	LOS A	0.0	0.3	0.21	0.53	0.21	31.3
12	R2	All MCs	1	0.0	1	0.0	0.009	6.6	LOS A	0.0	0.3	0.21	0.53	0.21	35.6
Approach			12	18.2	12	18.2	0.009	5.9	LOS A	0.0	0.3	0.21	0.53	0.21	37.9
All Vehicles			649	10.2	649	10.2	0.290	4.3	NA	1.2	8.9	0.21	0.43	0.22	41.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. PM_Sloane-Braidwood (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Braidwood Rd															
4	L2	All MCs	92	29.9	92	29.9	0.641	15.1	LOS B	5.3	42.0	0.77	1.13	1.45	32.2
5	T1	All MCs	52	4.1	52	4.1	0.641	19.1	LOS B	5.3	42.0	0.77	1.13	1.45	34.0
6	R2	All MCs	181	9.3	181	9.3	0.641	23.5	LOS B	5.3	42.0	0.77	1.13	1.45	33.5
Approach			324	14.3	324	14.3	0.641	20.4	LOS B	5.3	42.0	0.77	1.13	1.45	33.2
NorthEast: Sloane St															
7	L2	All MCs	183	5.7	183	5.7	0.244	6.3	LOS A	1.2	8.9	0.28	0.39	0.28	47.4
8	T1	All MCs	157	4.7	157	4.7	0.244	0.6	LOS A	1.2	8.9	0.28	0.39	0.28	51.0
9	R2	All MCs	38	5.6	38	5.6	0.244	6.6	LOS A	1.2	8.9	0.28	0.39	0.28	45.5
Approach			378	5.3	378	5.3	0.244	3.9	NA	1.2	8.9	0.28	0.39	0.28	48.6
NorthWest: Mundy St															
10	L2	All MCs	17	6.3	17	6.3	0.159	9.4	LOS A	0.6	4.4	0.52	0.99	0.52	38.8
11	T1	All MCs	72	13.2	72	13.2	0.159	12.5	LOS A	0.6	4.4	0.52	0.99	0.52	38.9
12	R2	All MCs	9	11.1	9	11.1	0.159	13.7	LOS A	0.6	4.4	0.52	0.99	0.52	37.4
Approach			98	11.8	98	11.8	0.159	12.1	LOS A	0.6	4.4	0.52	0.99	0.52	38.7
SouthWest: Sloane St															
1	L2	All MCs	13	0.0	13	0.0	0.184	6.3	LOS A	0.6	4.3	0.16	0.20	0.16	51.0
2	T1	All MCs	235	6.7	235	6.7	0.184	0.3	LOS A	0.6	4.3	0.16	0.20	0.16	56.3
3	R2	All MCs	56	39.6	56	39.6	0.184	6.8	LOS A	0.6	4.3	0.16	0.20	0.16	42.9
Approach			303	12.5	303	12.5	0.184	1.7	NA	0.6	4.3	0.16	0.20	0.16	52.8
All Vehicles			1103	10.5	1103	10.5	0.641	8.9	NA	5.3	42.0	0.41	0.61	0.61	42.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. PM_Bungonia-Forbes (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Bungonia Rd															
5	T1	All MCs	168	17.5	168	17.5	0.104	0.1	LOS A	0.1	0.7	0.05	0.06	0.05	59.1
6	R2	All MCs	13	0.0	13	0.0	0.104	6.1	LOS A	0.1	0.7	0.05	0.06	0.05	55.7
Approach			181	16.3	181	16.3	0.104	0.5	NA	0.1	0.7	0.05	0.06	0.05	58.9
North: Forbes St															
7	L2	All MCs	17	0.0	17	0.0	0.014	8.6	LOS A	0.1	0.4	0.26	0.86	0.26	48.5
9	R2	All MCs	16	13.3	16	13.3	0.022	10.1	LOS A	0.1	0.5	0.40	0.90	0.40	49.7
Approach			33	6.5	33	6.5	0.022	9.3	LOS A	0.1	0.5	0.33	0.88	0.33	49.1
West: Bungonia Rd															
10	L2	All MCs	24	4.3	24	4.3	0.098	5.6	LOS A	0.0	0.0	0.00	0.08	0.00	56.5
11	T1	All MCs	147	17.9	147	17.9	0.098	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	58.8
Approach			172	16.0	172	16.0	0.098	0.8	NA	0.0	0.0	0.00	0.08	0.00	58.4
All Vehicles			385	15.3	385	15.3	0.104	1.4	NA	0.1	0.7	0.05	0.14	0.05	57.5

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 4 [4. PM_Bungonia-Memorial (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bungonia Rd															
1a	L1	All MCs	144	19.7	144	19.7	0.088	5.6	LOS A	0.0	0.2	0.01	0.59	0.01	45.4
3	R2	All MCs	2	50.0	2	50.0	0.088	6.2	LOS A	0.0	0.2	0.01	0.59	0.01	41.2
Approach			146	20.1	146	20.1	0.088	5.6	NA	0.0	0.2	0.01	0.59	0.01	45.3
East: Memorial Rd															
4	L2	All MCs	2	0.0	2	0.0	0.038	5.6	LOS A	0.1	0.9	0.27	0.57	0.27	48.2
6a	R1	All MCs	37	2.9	37	2.9	0.038	6.0	LOS A	0.1	0.9	0.27	0.57	0.27	45.8
Approach			39	2.7	39	2.7	0.038	6.0	LOS A	0.1	0.9	0.27	0.57	0.27	45.9
NorthWest: Bungonia Rd															
27a	L1	All MCs	138	7.6	138	7.6	0.099	5.4	LOS A	0.2	1.7	0.01	0.59	0.01	45.4
29a	R1	All MCs	26	60.0	26	60.0	0.099	5.7	LOS A	0.2	1.7	0.01	0.59	0.01	45.2
Approach			164	16.0	164	16.0	0.099	5.5	NA	0.2	1.7	0.01	0.59	0.01	45.4
All Vehicles			349	16.3	349	16.3	0.099	5.6	NA	0.2	1.7	0.04	0.59	0.04	45.4

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 5 [5. PM_Hume-Garoorigang (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Garoorigang Rd															
5	T1	All MCs	3	0.0	3	0.0	0.089	0.4	LOS A	0.4	3.4	0.24	0.56	0.24	54.5
6	R2	All MCs	127	19.0	127	19.0	0.089	6.1	LOS A	0.4	3.4	0.24	0.56	0.24	47.1
Approach			131	18.5	131	18.5	0.089	6.0	NA	0.4	3.4	0.24	0.56	0.24	47.3
North: Hume St															
7	L2	All MCs	92	29.9	92	29.9	0.080	6.1	LOS A	0.3	2.8	0.15	0.54	0.15	47.2
9	R2	All MCs	12	18.2	12	18.2	0.080	6.7	LOS A	0.3	2.8	0.15	0.54	0.15	47.4
Approach			103	28.6	103	28.6	0.080	6.2	LOS A	0.3	2.8	0.15	0.54	0.15	47.2
West: Mazamet Rd															
10	L2	All MCs	63	11.7	63	11.7	0.062	5.7	LOS A	0.0	0.0	0.00	0.33	0.00	51.5
11	T1	All MCs	48	0.0	48	0.0	0.062	0.0	LOS A	0.0	0.0	0.00	0.33	0.00	57.2
Approach			112	6.6	112	6.6	0.062	3.2	NA	0.0	0.0	0.00	0.33	0.00	54.4
All Vehicles			345	17.7	345	17.7	0.089	5.1	NA	0.4	3.4	0.13	0.48	0.13	49.7

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 6.1512 [6. PM_Lagoon-Union (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 173 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Union St															
1	L2	All MCs	35	3.0	35	3.0	0.580	63.0	LOS E	21.9	159.1	0.92	0.79	0.92	22.8
2	T1	All MCs	271	4.7	271	4.7	* 0.580	57.4	LOS E	21.9	159.1	0.92	0.79	0.92	20.8
3	R2	All MCs	156	19.6	156	19.6	0.152	20.2	LOS B	5.2	42.7	0.44	0.69	0.44	42.2
Approach			461	9.6	461	9.6	0.580	45.2	LOS D	21.9	159.1	0.75	0.76	0.75	27.3
East: Sydney Rd															
4	L2	All MCs	124	13.6	124	13.6	0.236	33.1	LOS C	8.5	65.6	0.73	0.74	0.73	32.0
5	T1	All MCs	168	1.3	168	1.3	0.236	54.2	LOS D	8.8	65.6	0.78	0.66	0.78	29.2
6	R2	All MCs	172	6.1	172	6.1	* 0.528	62.3	LOS E	12.3	90.5	0.90	0.82	0.90	21.9
Approach			464	6.3	464	6.3	0.528	51.5	LOS D	12.3	90.5	0.81	0.74	0.81	27.1
North: Union St															
7	L2	All MCs	141	17.2	141	17.2	0.660	65.8	LOS E	24.9	189.5	0.93	0.83	0.93	22.6
8	T1	All MCs	200	5.3	200	5.3	* 0.660	60.2	LOS E	24.9	189.5	0.93	0.83	0.93	20.5
9	R2	All MCs	147	12.1	147	12.1	0.287	58.7	LOS E	9.4	72.7	0.81	0.78	0.81	15.5
Approach			488	10.8	488	10.8	0.660	61.4	LOS E	24.9	189.5	0.90	0.81	0.90	19.0
West: Lagoon St															
10	L2	All MCs	101	1.0	101	1.0	0.085	17.4	LOS B	3.1	21.7	0.39	0.67	0.39	30.1
11	T1	All MCs	176	3.0	176	3.0	0.149	46.8	LOS D	5.3	38.1	0.76	0.61	0.76	29.5
12	R2	All MCs	17	0.0	17	0.0	0.058	61.0	LOS E	1.1	7.5	0.79	0.70	0.79	22.7
Approach			294	2.2	294	2.2	0.149	37.5	LOS C	5.3	38.1	0.64	0.64	0.64	28.6
All Vehicles			1707	7.8	1707	7.8	0.660	50.2	LOS D	24.9	189.5	0.79	0.75	0.79	25.0

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Union St												
P1	Full	1	1	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
East: Sydney Rd												

P2 Full	3	3	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
North: Union St											
P3 Full	1	1	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
West: Lagoon St											
P4 Full	1	1	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
All Pedestrians	6	6	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85

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

MOVEMENT SUMMARY

Site: 7 [7. PM_Sloane-Garoorigang (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Garoorigang St															
1	L2	All MCs	33	3.2	33	3.2	0.047	5.6	LOS A	0.0	0.0	0.00	0.22	0.00	55.1
2	T1	All MCs	56	0.0	56	0.0	0.047	0.0	LOS A	0.0	0.0	0.00	0.22	0.00	57.8
Approach			88	1.2	88	1.2	0.047	2.1	NA	0.0	0.0	0.00	0.22	0.00	56.8
North: Sloane St															
8	T1	All MCs	14	15.4	14	15.4	0.073	0.3	LOS A	0.3	2.9	0.21	0.50	0.21	54.4
9	R2	All MCs	96	23.1	96	23.1	0.073	6.1	LOS A	0.3	2.9	0.21	0.50	0.21	51.5
Approach			109	22.1	109	22.1	0.073	5.4	NA	0.3	2.9	0.21	0.50	0.21	51.8
West: Garoorigang Rd															
10	L2	All MCs	95	27.8	95	27.8	0.110	6.1	LOS A	0.4	3.6	0.17	0.55	0.17	51.1
12	R2	All MCs	44	0.0	44	0.0	0.110	6.2	LOS A	0.4	3.6	0.17	0.55	0.17	51.4
Approach			139	18.9	139	18.9	0.110	6.1	LOS A	0.4	3.6	0.17	0.55	0.17	51.2
All Vehicles			337	15.3	337	15.3	0.110	4.8	NA	0.4	3.6	0.14	0.45	0.14	52.7

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 8 [8. PM_Windellama-Rifle (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Rd															
2	T1	All MCs	138	19.1	138	19.1	0.084	0.0	LOS A	0.0	0.4	0.03	0.03	0.03	59.7
3	R2	All MCs	5	40.0	5	40.0	0.084	6.5	LOS A	0.0	0.4	0.03	0.03	0.03	54.9
Approach			143	19.9	143	19.9	0.084	0.3	NA	0.0	0.4	0.03	0.03	0.03	59.5
East: Rifle Range Rd															
4	L2	All MCs	4	0.0	4	0.0	0.014	6.0	LOS A	0.0	0.4	0.31	0.58	0.31	52.0
6	R2	All MCs	9	22.2	9	22.2	0.014	7.2	LOS A	0.0	0.4	0.31	0.58	0.31	50.8
Approach			14	15.4	14	15.4	0.014	6.8	LOS A	0.0	0.4	0.31	0.58	0.31	51.2
North: Windellama Rd															
7	L2	All MCs	11	0.0	11	0.0	0.087	5.6	LOS A	0.0	0.0	0.00	0.04	0.00	57.0
8	T1	All MCs	141	18.7	141	18.7	0.087	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.5
Approach			152	17.4	152	17.4	0.087	0.4	NA	0.0	0.0	0.00	0.04	0.00	59.3
All Vehicles			308	18.4	308	18.4	0.087	0.6	NA	0.0	0.4	0.03	0.06	0.03	59.0

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 9 [9. PM_Windellama-Site Access (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Road															
2	T1	All MCs	46	22.7	46	22.7	0.028	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	59.8
3	R2	All MCs	1	0.0	1	0.0	0.028	5.5	LOS A	0.0	0.1	0.01	0.01	0.01	57.0
Approach			47	22.2	47	22.2	0.028	0.1	NA	0.0	0.1	0.01	0.01	0.01	59.7
East: Site Access															
4	L2	All MCs	1	0.0	1	0.0	0.063	8.3	LOS A	0.2	2.2	0.30	0.91	0.30	50.7
6	R2	All MCs	47	33.3	47	33.3	0.063	10.4	LOS A	0.2	2.2	0.30	0.91	0.30	49.3
Approach			48	32.6	48	32.6	0.063	10.4	LOS A	0.2	2.2	0.30	0.91	0.30	49.4
North: Windellama Road															
7	L2	All MCs	17	93.8	17	93.8	0.015	6.6	LOS A	0.0	0.0	0.00	0.56	0.00	49.2
8	T1	All MCs	68	15.4	68	15.4	0.039	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			85	30.9	85	30.9	0.039	1.3	NA	0.0	0.0	0.00	0.11	0.00	57.5
All Vehicles			181	29.1	181	29.1	0.063	3.4	NA	0.2	2.2	0.08	0.30	0.08	55.6

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 1 [1. SAT_Braidwood-Bungonia (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Braidwood Rd															
1	L2	All MCs	1	0.0	1	0.0	0.054	5.8	LOS A	0.1	0.4	0.04	0.06	0.04	25.4
2	T1	All MCs	89	7.1	89	7.1	0.054	0.0	LOS A	0.1	0.4	0.04	0.06	0.04	58.3
3	R2	All MCs	7	14.3	7	14.3	0.054	5.9	LOS A	0.1	0.4	0.04	0.06	0.04	45.2
Approach			98	7.5	98	7.5	0.054	0.5	NA	0.1	0.4	0.04	0.06	0.04	57.2
East: Bungonia Rd															
4	L2	All MCs	5	20.0	5	20.0	0.004	4.5	LOS A	0.0	0.1	0.20	0.50	0.20	33.8
5	T1	All MCs	1	0.0	1	0.0	0.243	4.3	LOS A	0.9	7.0	0.43	0.67	0.43	32.5
6	R2	All MCs	180	12.3	180	12.3	0.243	6.3	LOS A	0.9	7.0	0.43	0.67	0.43	37.7
Approach			186	12.4	186	12.4	0.243	6.2	LOS A	0.9	7.0	0.43	0.67	0.43	37.6
North: Braidwood Rd															
7	L2	All MCs	176	15.0	176	15.0	0.177	5.8	LOS A	0.8	6.3	0.05	0.34	0.05	36.5
8	T1	All MCs	103	4.1	103	4.1	0.177	0.0	LOS A	0.8	6.3	0.05	0.34	0.05	51.7
9	R2	All MCs	3	0.0	3	0.0	0.177	5.6	LOS A	0.8	6.3	0.05	0.34	0.05	37.6
Approach			282	10.8	282	10.8	0.177	3.7	NA	0.8	6.3	0.05	0.34	0.05	41.4
West: Ottiwell St															
10	L2	All MCs	5	0.0	5	0.0	0.006	5.8	LOS A	0.0	0.1	0.20	0.53	0.20	42.8
11	T1	All MCs	1	0.0	1	0.0	0.006	4.9	LOS A	0.0	0.1	0.20	0.53	0.20	31.4
12	R2	All MCs	1	0.0	1	0.0	0.006	6.4	LOS A	0.0	0.1	0.20	0.53	0.20	35.8
Approach			7	0.0	7	0.0	0.006	5.7	LOS A	0.0	0.1	0.20	0.53	0.20	40.9
All Vehicles			574	10.6	574	10.6	0.243	4.0	NA	0.9	7.0	0.17	0.40	0.17	42.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. SAT_Sloane-Braidwood (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Braidwood Rd															
4	L2	All MCs	64	31.1	64	31.1	0.466	12.7	LOS A	2.7	21.1	0.65	1.04	0.95	35.1
5	T1	All MCs	47	4.4	47	4.4	0.466	15.0	LOS B	2.7	21.1	0.65	1.04	0.95	37.3
6	R2	All MCs	146	5.8	146	5.8	0.466	17.2	LOS B	2.7	21.1	0.65	1.04	0.95	37.1
Approach			258	11.8	258	11.8	0.466	15.7	LOS B	2.7	21.1	0.65	1.04	0.95	36.6
NorthEast: Sloane St															
7	L2	All MCs	165	4.5	165	4.5	0.244	6.1	LOS A	1.2	8.4	0.24	0.34	0.24	48.4
8	T1	All MCs	192	1.6	192	1.6	0.244	0.4	LOS A	1.2	8.4	0.24	0.34	0.24	52.0
9	R2	All MCs	41	0.0	41	0.0	0.244	6.1	LOS A	1.2	8.4	0.24	0.34	0.24	47.2
Approach			398	2.6	398	2.6	0.244	3.4	NA	1.2	8.4	0.24	0.34	0.24	49.8
NorthWest: Mundy St															
10	L2	All MCs	16	0.0	16	0.0	0.084	8.7	LOS A	0.3	2.2	0.44	0.93	0.44	40.7
11	T1	All MCs	42	5.0	42	5.0	0.084	11.1	LOS A	0.3	2.2	0.44	0.93	0.44	41.1
12	R2	All MCs	4	0.0	4	0.0	0.084	11.6	LOS A	0.3	2.2	0.44	0.93	0.44	39.8
Approach			62	3.4	62	3.4	0.084	10.5	LOS A	0.3	2.2	0.44	0.93	0.44	40.9
SouthWest: Sloane St															
1	L2	All MCs	4	0.0	4	0.0	0.149	6.4	LOS A	0.6	4.3	0.23	0.28	0.23	49.6
2	T1	All MCs	165	1.9	165	1.9	0.149	0.4	LOS A	0.6	4.3	0.23	0.28	0.23	54.6
3	R2	All MCs	73	23.2	73	23.2	0.149	6.6	LOS A	0.6	4.3	0.23	0.28	0.23	45.0
Approach			242	8.3	242	8.3	0.149	2.4	NA	0.6	4.3	0.23	0.28	0.23	51.1
All Vehicles			960	6.6	960	6.6	0.466	6.9	NA	2.7	21.1	0.36	0.55	0.44	44.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. SAT_Bungonia-Forbes (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Bungonia Rd															
5	T1	All MCs	128	13.1	128	13.1	0.073	0.0	LOS A	0.0	0.2	0.01	0.02	0.01	59.7
6	R2	All MCs	3	0.0	3	0.0	0.073	5.7	LOS A	0.0	0.2	0.01	0.02	0.01	56.2
Approach			132	12.8	132	12.8	0.073	0.1	NA	0.0	0.2	0.01	0.02	0.01	59.6
North: Forbes St															
7	L2	All MCs	17	12.5	17	12.5	0.014	9.1	LOS A	0.1	0.4	0.24	0.88	0.24	47.0
9	R2	All MCs	22	0.0	22	0.0	0.025	8.7	LOS A	0.1	0.6	0.33	0.88	0.33	50.7
Approach			39	5.4	39	5.4	0.025	8.9	LOS A	0.1	0.6	0.30	0.88	0.30	49.3
West: Bungonia Rd															
10	L2	All MCs	17	6.3	17	6.3	0.081	5.6	LOS A	0.0	0.0	0.00	0.07	0.00	56.5
11	T1	All MCs	126	15.8	126	15.8	0.081	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	59.0
Approach			143	14.7	143	14.7	0.081	0.7	NA	0.0	0.0	0.00	0.07	0.00	58.6
All Vehicles			314	12.8	314	12.8	0.081	1.5	NA	0.1	0.6	0.04	0.15	0.04	57.5

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 4 [4. SAT_Bungonia-Memorial (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bungonia Rd															
1a	L1	All MCs	139	13.6	139	13.6	0.081	5.5	LOS A	0.0	0.1	0.00	0.59	0.00	46.3
3	R2	All MCs	2	0.0	2	0.0	0.081	5.4	LOS A	0.0	0.1	0.00	0.59	0.00	48.6
Approach			141	13.4	141	13.4	0.081	5.5	NA	0.0	0.1	0.00	0.59	0.00	46.3
East: Memorial Rd															
4	L2	All MCs	2	0.0	2	0.0	0.008	5.9	LOS A	0.0	0.2	0.28	0.55	0.28	48.0
6a	R1	All MCs	6	0.0	6	0.0	0.008	6.0	LOS A	0.0	0.2	0.28	0.55	0.28	46.1
Approach			8	0.0	8	0.0	0.008	5.9	LOS A	0.0	0.2	0.28	0.55	0.28	46.6
NorthWest: Bungonia Rd															
27a	L1	All MCs	5	0.0	5	0.0	0.079	5.3	LOS A	0.4	3.0	0.02	0.56	0.02	47.1
29a	R1	All MCs	127	14.9	127	14.9	0.079	5.1	LOS A	0.4	3.0	0.02	0.56	0.02	48.1
Approach			133	14.3	133	14.3	0.079	5.1	NA	0.4	3.0	0.02	0.56	0.02	48.1
All Vehicles			282	13.4	282	13.4	0.081	5.3	NA	0.4	3.0	0.02	0.58	0.02	47.1

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 5 [5. SAT_Hume-Garoorigang (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Garoorigang Rd															
5	T1	All MCs	5	0.0	5	0.0	0.074	0.0	LOS A	0.4	2.8	0.07	0.55	0.07	55.1
6	R2	All MCs	117	16.2	117	16.2	0.074	5.7	LOS A	0.4	2.8	0.07	0.55	0.07	48.0
Approach			122	15.5	122	15.5	0.074	5.4	NA	0.4	2.8	0.07	0.55	0.07	48.4
North: Hume St															
7	L2	All MCs	108	16.5	108	16.5	0.074	5.7	LOS A	0.3	2.5	0.03	0.56	0.03	48.4
9	R2	All MCs	2	0.0	2	0.0	0.074	5.6	LOS A	0.3	2.5	0.03	0.56	0.03	49.0
Approach			111	16.2	111	16.2	0.074	5.7	LOS A	0.3	2.5	0.03	0.56	0.03	48.4
West: Mazamet Rd															
10	L2	All MCs	11	0.0	11	0.0	0.008	5.5	LOS A	0.0	0.0	0.00	0.42	0.00	51.2
11	T1	All MCs	4	0.0	4	0.0	0.008	0.0	LOS A	0.0	0.0	0.00	0.42	0.00	56.3
Approach			15	0.0	15	0.0	0.008	4.0	NA	0.0	0.0	0.00	0.42	0.00	53.1
All Vehicles			247	14.9	247	14.9	0.074	5.5	NA	0.4	2.8	0.05	0.55	0.05	48.7

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 6.1512 [6. SAT_Lagoon-Union (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 112 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Union St															
1	L2	All MCs	8	0.0	8	0.0	0.439	42.3	LOS C	10.3	73.3	0.88	0.74	0.88	29.0
2	T1	All MCs	218	1.9	218	1.9	*0.439	36.8	LOS C	10.3	73.3	0.88	0.74	0.88	27.1
3	R2	All MCs	134	4.7	134	4.7	0.108	11.8	LOS A	2.4	17.5	0.36	0.66	0.36	47.2
Approach			360	2.9	360	2.9	0.439	27.6	LOS B	10.3	73.3	0.69	0.71	0.69	34.7
East: Sydney Rd															
4	L2	All MCs	123	4.3	123	4.3	0.222	17.6	LOS B	5.8	42.0	0.68	0.70	0.68	39.0
5	T1	All MCs	204	0.0	204	0.0	0.222	31.3	LOS C	5.9	42.0	0.72	0.62	0.72	37.6
6	R2	All MCs	125	3.4	125	3.4	*0.300	35.2	LOS C	5.1	36.7	0.78	0.77	0.78	29.8
Approach			453	2.1	453	2.1	0.300	28.7	LOS C	5.9	42.0	0.72	0.68	0.72	35.8
North: Union St															
7	L2	All MCs	156	5.4	156	5.4	0.864	60.8	LOS E	19.7	141.9	1.00	1.01	1.21	22.9
8	T1	All MCs	175	1.2	175	1.2	*0.864	55.2	LOS D	19.7	141.9	1.00	1.01	1.21	20.6
9	R2	All MCs	129	0.8	129	0.8	0.341	47.0	LOS D	6.1	43.1	0.90	0.78	0.90	17.6
Approach			460	2.5	460	2.5	0.864	54.8	LOS D	19.7	141.9	0.97	0.94	1.12	20.8
West: Lagoon St															
10	L2	All MCs	82	0.0	82	0.0	0.071	14.2	LOS A	1.7	12.0	0.41	0.67	0.41	32.7
11	T1	All MCs	166	1.3	166	1.3	0.117	25.0	LOS B	3.0	21.0	0.70	0.55	0.70	38.2
12	R2	All MCs	11	0.0	11	0.0	0.030	34.3	LOS C	0.4	2.8	0.72	0.67	0.72	29.9
Approach			259	0.8	259	0.8	0.117	21.9	LOS B	3.0	21.0	0.61	0.59	0.61	36.7
All Vehicles			1532	2.2	1532	2.2	0.864	35.1	LOS C	19.7	141.9	0.77	0.75	0.82	30.4

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Union St												
P1	Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
East: Sydney Rd												

P2 Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
North: Union St											
P3 Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
West: Lagoon St											
P4 Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
All Pedestrians	4	4	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98

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

MOVEMENT SUMMARY

Site: 7 [7. SAT_Sloane-Garoorigang (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Garoorigang St															
1	L2	All MCs	37	0.0	37	0.0	0.033	5.5	LOS A	0.0	0.0	0.00	0.35	0.00	54.1
2	T1	All MCs	25	4.2	25	4.2	0.033	0.0	LOS A	0.0	0.0	0.00	0.35	0.00	56.4
Approach			62	1.7	62	1.7	0.033	3.3	NA	0.0	0.0	0.00	0.35	0.00	55.0
North: Sloane St															
8	T1	All MCs	21	0.0	21	0.0	0.067	0.2	LOS A	0.3	2.6	0.17	0.46	0.17	55.1
9	R2	All MCs	83	22.8	83	22.8	0.067	6.0	LOS A	0.3	2.6	0.17	0.46	0.17	52.0
Approach			104	18.2	104	18.2	0.067	4.8	NA	0.3	2.6	0.17	0.46	0.17	52.6
West: Garoorigang Rd															
10	L2	All MCs	53	34.0	53	34.0	0.089	6.0	LOS A	0.3	2.7	0.13	0.55	0.13	51.0
12	R2	All MCs	57	0.0	57	0.0	0.089	6.0	LOS A	0.3	2.7	0.13	0.55	0.13	51.5
Approach			109	16.3	109	16.3	0.089	6.0	LOS A	0.3	2.7	0.13	0.55	0.13	51.3
All Vehicles			276	13.7	276	13.7	0.089	5.0	NA	0.3	2.7	0.11	0.47	0.11	52.5

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 8 [8. SAT_Windellama-Rifle (*) (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Weekday PM Flows Used
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Rd															
2	T1	All MCs	122	21.6	122	21.6	0.076	0.0	LOS A	0.0	0.4	0.03	0.04	0.03	59.7
3	R2	All MCs	5	40.0	5	40.0	0.076	6.7	LOS A	0.0	0.4	0.03	0.04	0.03	54.8
Approach			127	22.3	127	22.3	0.076	0.3	NA	0.0	0.4	0.03	0.04	0.03	59.5
East: Rifle Range Rd															
4	L2	All MCs	4	0.0	4	0.0	0.014	6.0	LOS A	0.0	0.4	0.32	0.58	0.32	52.0
6	R2	All MCs	9	22.2	9	22.2	0.014	7.2	LOS A	0.0	0.4	0.32	0.58	0.32	50.8
Approach			14	15.4	14	15.4	0.014	6.8	LOS A	0.0	0.4	0.32	0.58	0.32	51.2
North: Windellama Rd															
7	L2	All MCs	11	0.0	11	0.0	0.095	5.6	LOS A	0.0	0.0	0.00	0.04	0.00	57.1
8	T1	All MCs	157	16.8	157	16.8	0.095	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.5
Approach			167	15.7	167	15.7	0.095	0.4	NA	0.0	0.0	0.00	0.04	0.00	59.4
All Vehicles			308	18.4	308	18.4	0.095	0.6	NA	0.0	0.4	0.03	0.06	0.03	59.0

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 9 [9. SAT_Windellama-Site Access (Site Folder: Existing + Dev to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Road															
2	T1	All MCs	82	12.8	82	12.8	0.046	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	59.9
3	R2	All MCs	1	0.0	1	0.0	0.046	5.5	LOS A	0.0	0.1	0.01	0.01	0.01	57.1
Approach			83	12.7	83	12.7	0.046	0.1	NA	0.0	0.1	0.01	0.01	0.01	59.9
East: Site Access															
4	L2	All MCs	1	0.0	1	0.0	0.051	8.3	LOS A	0.2	1.9	0.37	0.92	0.37	50.2
6	R2	All MCs	32	50.0	32	50.0	0.051	12.0	LOS A	0.2	1.9	0.37	0.92	0.37	48.2
Approach			33	48.4	33	48.4	0.051	11.9	LOS A	0.2	1.9	0.37	0.92	0.37	48.3
North: Windellama Road															
7	L2	All MCs	32	50.0	32	50.0	0.023	6.1	LOS A	0.0	0.0	0.00	0.57	0.00	50.9
8	T1	All MCs	86	12.2	86	12.2	0.048	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			118	22.3	118	22.3	0.048	1.6	NA	0.0	0.0	0.00	0.15	0.00	57.2
All Vehicles			234	22.5	234	22.5	0.051	2.5	NA	0.2	1.9	0.05	0.21	0.05	56.6

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 1 [1. AM_Braidwood-Bungonia (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Braidwood Rd															
1	L2	All MCs	1	0.0	1	0.0	0.048	5.9	LOS A	0.0	0.4	0.04	0.07	0.04	25.3
2	T1	All MCs	74	20.0	74	20.0	0.048	0.0	LOS A	0.0	0.4	0.04	0.07	0.04	58.1
3	R2	All MCs	6	16.7	6	16.7	0.048	6.0	LOS A	0.0	0.4	0.04	0.07	0.04	44.8
Approach			81	19.5	81	19.5	0.048	0.6	NA	0.0	0.4	0.04	0.07	0.04	56.8
East: Bungonia Rd															
4	L2	All MCs	9	11.1	9	11.1	0.007	4.5	LOS A	0.0	0.2	0.21	0.51	0.21	34.5
5	T1	All MCs	1	0.0	1	0.0	0.319	4.8	LOS A	1.4	11.2	0.48	0.71	0.52	31.2
6	R2	All MCs	219	20.2	219	20.2	0.319	7.1	LOS A	1.4	11.2	0.48	0.71	0.52	35.3
Approach			229	19.7	229	19.7	0.319	7.0	LOS A	1.4	11.2	0.47	0.71	0.51	35.2
North: Braidwood Rd															
7	L2	All MCs	199	20.6	199	20.6	0.203	5.8	LOS A	1.0	7.9	0.05	0.35	0.05	36.3
8	T1	All MCs	111	13.3	111	13.3	0.203	0.0	LOS A	1.0	7.9	0.05	0.35	0.05	51.6
9	R2	All MCs	3	33.3	3	33.3	0.203	6.0	LOS A	1.0	7.9	0.05	0.35	0.05	36.2
Approach			313	18.2	313	18.2	0.203	3.8	NA	1.0	7.9	0.05	0.35	0.05	41.0
West: Ottiwell St															
10	L2	All MCs	6	0.0	6	0.0	0.006	5.8	LOS A	0.0	0.2	0.18	0.53	0.18	42.9
11	T1	All MCs	1	0.0	1	0.0	0.006	4.9	LOS A	0.0	0.2	0.18	0.53	0.18	31.5
12	R2	All MCs	1	0.0	1	0.0	0.006	6.4	LOS A	0.0	0.2	0.18	0.53	0.18	35.8
Approach			8	0.0	8	0.0	0.006	5.7	LOS A	0.0	0.2	0.18	0.53	0.18	41.2
All Vehicles			632	18.7	632	18.7	0.319	4.6	NA	1.4	11.2	0.20	0.44	0.22	40.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. AM_Sloane-Braidwood (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Braidwood Rd															
4	L2	All MCs	40	15.8	40	15.8	0.609	13.4	LOS A	4.5	37.1	0.72	1.14	1.30	34.0
5	T1	All MCs	54	5.9	54	5.9	0.609	16.3	LOS B	4.5	37.1	0.72	1.14	1.30	34.6
6	R2	All MCs	208	23.7	208	23.7	0.609	21.1	LOS B	4.5	37.1	0.72	1.14	1.30	33.1
Approach			302	19.5	302	19.5	0.609	19.2	LOS B	4.5	37.1	0.72	1.14	1.30	33.4
NorthEast: Sloane St															
7	L2	All MCs	229	19.7	229	19.7	0.255	6.2	LOS A	1.3	10.3	0.22	0.38	0.22	44.8
8	T1	All MCs	126	8.3	126	8.3	0.255	0.4	LOS A	1.3	10.3	0.22	0.38	0.22	50.9
9	R2	All MCs	20	5.3	20	5.3	0.255	6.3	LOS A	1.3	10.3	0.22	0.38	0.22	45.5
Approach			376	15.1	376	15.1	0.255	4.3	NA	1.3	10.3	0.22	0.38	0.22	46.6
NorthWest: Mundy St															
10	L2	All MCs	13	0.0	13	0.0	0.090	8.7	LOS A	0.3	2.5	0.41	0.95	0.41	41.2
11	T1	All MCs	55	11.5	55	11.5	0.090	10.6	LOS A	0.3	2.5	0.41	0.95	0.41	40.5
12	R2	All MCs	4	0.0	4	0.0	0.090	10.3	LOS A	0.3	2.5	0.41	0.95	0.41	40.4
Approach			72	8.8	72	8.8	0.090	10.2	LOS A	0.3	2.5	0.41	0.95	0.41	40.6
SouthWest: Sloane St															
1	L2	All MCs	5	0.0	5	0.0	0.111	6.0	LOS A	0.2	1.6	0.09	0.13	0.09	51.8
2	T1	All MCs	164	8.3	164	8.3	0.111	0.1	LOS A	0.2	1.6	0.09	0.13	0.09	57.2
3	R2	All MCs	26	16.0	26	16.0	0.111	6.2	LOS A	0.2	1.6	0.09	0.13	0.09	48.1
Approach			196	9.1	196	9.1	0.111	1.1	NA	0.2	1.6	0.09	0.13	0.09	55.5
All Vehicles			945	14.8	945	14.8	0.609	8.8	NA	4.5	37.1	0.37	0.62	0.55	42.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. AM_Bungonia-Forbes (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Bungonia Rd															
5	T1	All MCs	227	19.9	227	19.9	0.142	0.1	LOS A	0.1	1.0	0.05	0.06	0.05	59.2
6	R2	All MCs	16	6.7	16	6.7	0.142	6.3	LOS A	0.1	1.0	0.05	0.06	0.05	55.3
Approach			243	19.0	243	19.0	0.142	0.5	NA	0.1	1.0	0.05	0.06	0.05	58.9
North: Forbes St															
7	L2	All MCs	5	0.0	5	0.0	0.004	8.6	LOS A	0.0	0.1	0.26	0.84	0.26	48.5
9	R2	All MCs	17	0.0	17	0.0	0.023	9.7	LOS A	0.1	0.5	0.42	0.89	0.42	50.2
Approach			22	0.0	22	0.0	0.023	9.4	LOS A	0.1	0.5	0.39	0.88	0.39	49.8
West: Bungonia Rd															
10	L2	All MCs	16	0.0	16	0.0	0.096	5.6	LOS A	0.0	0.0	0.00	0.06	0.00	56.8
11	T1	All MCs	147	24.3	147	24.3	0.096	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	59.0
Approach			163	21.9	163	21.9	0.096	0.6	NA	0.0	0.0	0.00	0.06	0.00	58.8
All Vehicles			428	19.2	428	19.2	0.142	1.0	NA	0.1	1.0	0.05	0.10	0.05	58.2

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 4 [4. AM_Bungonia-Memorial (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bungonia Rd															
1a	L1	All MCs	231	18.3	231	18.3	0.137	5.5	LOS A	0.0	0.1	0.00	0.60	0.00	45.6
3	R2	All MCs	1	0.0	1	0.0	0.137	5.4	LOS A	0.0	0.1	0.00	0.60	0.00	48.6
Approach			232	18.2	232	18.2	0.137	5.5	NA	0.0	0.1	0.00	0.60	0.00	45.6
East: Memorial Rd															
4	L2	All MCs	1	0.0	1	0.0	0.021	5.9	LOS A	0.1	0.6	0.39	0.62	0.39	47.1
6a	R1	All MCs	15	28.6	15	28.6	0.021	7.5	LOS A	0.1	0.6	0.39	0.62	0.39	40.7
Approach			16	26.7	16	26.7	0.021	7.4	LOS A	0.1	0.6	0.39	0.62	0.39	41.2
NorthWest: Bungonia Rd															
27a	L1	All MCs	44	0.0	44	0.0	0.096	5.3	LOS A	0.5	3.9	0.02	0.57	0.02	47.0
29a	R1	All MCs	107	31.4	107	31.4	0.096	5.3	LOS A	0.5	3.9	0.02	0.57	0.02	47.0
Approach			152	22.2	152	22.2	0.096	5.3	NA	0.5	3.9	0.02	0.57	0.02	47.0
All Vehicles			399	20.1	399	20.1	0.137	5.5	NA	0.5	3.9	0.02	0.59	0.02	46.0

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 5 [5. AM_Hume-Garoorigang (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Garoorigang Rd															
5	T1	All MCs	5	20.0	5	20.0	0.053	0.1	LOS A	0.2	2.0	0.10	0.53	0.10	55.0
6	R2	All MCs	80	19.7	80	19.7	0.053	5.8	LOS A	0.2	2.0	0.10	0.53	0.10	47.7
Approach			85	19.8	85	19.8	0.053	5.4	NA	0.2	2.0	0.10	0.53	0.10	48.3
North: Hume St															
7	L2	All MCs	25	4.2	25	4.2	0.021	5.6	LOS A	0.1	0.6	0.03	0.56	0.03	49.1
9	R2	All MCs	6	0.0	6	0.0	0.021	5.5	LOS A	0.1	0.6	0.03	0.56	0.03	49.0
Approach			32	3.3	32	3.3	0.021	5.6	LOS A	0.1	0.6	0.03	0.56	0.03	49.1
West: Mazamet Rd															
10	L2	All MCs	20	31.6	20	31.6	0.016	5.9	LOS A	0.0	0.0	0.00	0.48	0.00	48.5
11	T1	All MCs	4	25.0	4	25.0	0.016	0.0	LOS A	0.0	0.0	0.00	0.48	0.00	55.9
Approach			24	30.4	24	30.4	0.016	4.9	NA	0.0	0.0	0.00	0.48	0.00	50.1
All Vehicles			141	17.9	141	17.9	0.053	5.4	NA	0.2	2.0	0.07	0.53	0.07	48.8

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 6.1512 [6. AM_Lagoon-Union (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 112 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Union St															
1	L2	All MCs	41	0.0	41	0.0	0.661	49.7	LOS D	13.1	99.6	0.97	0.82	0.97	26.2
2	T1	All MCs	217	11.7	217	11.7	* 0.661	44.1	LOS D	13.1	99.6	0.97	0.82	0.97	24.2
3	R2	All MCs	143	43.4	143	43.4	0.171	17.2	LOS B	3.5	33.9	0.48	0.69	0.48	42.8
Approach			401	21.8	401	21.8	0.661	35.1	LOS C	13.1	99.6	0.80	0.78	0.80	31.0
East: Sydney Rd															
4	L2	All MCs	189	34.4	189	34.4	0.299	23.0	LOS B	7.1	63.3	0.66	0.74	0.66	38.8
5	T1	All MCs	201	6.3	201	6.3	0.299	32.3	LOS C	7.4	63.3	0.78	0.67	0.78	35.6
6	R2	All MCs	165	12.1	165	12.1	* 0.429	39.1	LOS C	7.3	56.3	0.84	0.80	0.84	28.2
Approach			556	17.6	556	17.6	0.429	31.2	LOS C	7.4	63.3	0.76	0.73	0.76	34.6
North: Union St															
7	L2	All MCs	129	9.8	129	9.8	* 0.617	42.3	LOS C	15.9	118.8	0.91	0.81	0.91	28.5
8	T1	All MCs	207	7.1	207	7.1	0.617	35.8	LOS C	15.9	118.8	0.91	0.81	0.91	26.5
9	R2	All MCs	194	13.0	194	13.0	0.375	38.8	LOS C	8.4	65.0	0.83	0.79	0.83	19.4
Approach			531	9.9	531	9.9	0.617	38.5	LOS C	15.9	118.8	0.88	0.80	0.88	24.7
West: Lagoon St															
10	L2	All MCs	65	12.9	65	12.9	0.057	12.0	LOS A	1.2	9.0	0.35	0.65	0.35	34.3
11	T1	All MCs	92	4.6	92	4.6	0.075	28.1	LOS B	1.7	12.5	0.73	0.55	0.73	36.5
12	R2	All MCs	23	4.5	23	4.5	0.092	41.8	LOS C	1.0	7.3	0.81	0.71	0.81	27.1
Approach			180	7.6	180	7.6	0.092	24.0	LOS B	1.7	12.5	0.60	0.61	0.60	34.4
All Vehicles			1667	15.1	1667	15.1	0.661	33.7	LOS C	15.9	118.8	0.79	0.75	0.79	30.7

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Union St												
P1	Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
East: Sydney Rd												

P2	Full	11	12	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
North: Union St												
P3	Full	11	12	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
West: Lagoon St												
P4	Full	2	2	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
All Pedestrians		25	26	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98

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

MOVEMENT SUMMARY

Site: 7 [7. AM_Sloane-Garoorigang (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Garoorigang St															
1	L2	All MCs	35	0.0	35	0.0	0.039	5.5	LOS A	0.0	0.0	0.00	0.28	0.00	54.7
2	T1	All MCs	40	0.0	40	0.0	0.039	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	57.2
Approach			75	0.0	75	0.0	0.039	2.6	NA	0.0	0.0	0.00	0.28	0.00	56.0
North: Sloane St															
8	T1	All MCs	12	0.0	12	0.0	0.042	0.3	LOS A	0.2	1.6	0.19	0.47	0.19	55.1
9	R2	All MCs	49	31.9	49	31.9	0.042	6.1	LOS A	0.2	1.6	0.19	0.47	0.19	51.6
Approach			61	25.9	61	25.9	0.042	5.0	NA	0.2	1.6	0.19	0.47	0.19	52.2
West: Garoorigang Rd															
10	L2	All MCs	15	28.6	15	28.6	0.025	6.0	LOS A	0.1	0.7	0.14	0.55	0.14	51.2
12	R2	All MCs	17	0.0	17	0.0	0.025	5.9	LOS A	0.1	0.7	0.14	0.55	0.14	51.5
Approach			32	13.3	32	13.3	0.025	5.9	LOS A	0.1	0.7	0.14	0.55	0.14	51.3
All Vehicles			167	11.9	167	11.9	0.042	4.1	NA	0.2	1.6	0.09	0.40	0.09	53.6

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 8 [8. AM_Windellama-Rifle (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Rd															
2	T1	All MCs	221	20.0	221	20.0	0.133	0.0	LOS A	0.1	0.4	0.02	0.02	0.02	59.7
3	R2	All MCs	7	0.0	7	0.0	0.133	5.7	LOS A	0.1	0.4	0.02	0.02	0.02	56.9
Approach			228	19.4	228	19.4	0.133	0.2	NA	0.1	0.4	0.02	0.02	0.02	59.6
East: Rifle Range Rd															
4	L2	All MCs	2	0.0	2	0.0	0.012	6.0	LOS A	0.0	0.3	0.35	0.59	0.35	51.9
6	R2	All MCs	9	0.0	9	0.0	0.012	7.0	LOS A	0.0	0.3	0.35	0.59	0.35	51.6
Approach			12	0.0	12	0.0	0.012	6.8	LOS A	0.0	0.3	0.35	0.59	0.35	51.7
North: Windellama Rd															
7	L2	All MCs	6	66.7	6	66.7	0.089	6.3	LOS A	0.0	0.0	0.00	0.02	0.00	54.2
8	T1	All MCs	141	23.9	141	23.9	0.089	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	59.8
Approach			147	25.7	147	25.7	0.089	0.3	NA	0.0	0.0	0.00	0.02	0.00	59.6
All Vehicles			387	21.2	387	21.2	0.133	0.4	NA	0.1	0.4	0.02	0.04	0.02	59.3

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 9 [9. AM_Windellama-Site Access (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Road															
2	T1	All MCs	63	50.0	63	50.0	0.044	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	59.8
3	R2	All MCs	1	0.0	1	0.0	0.044	5.6	LOS A	0.0	0.1	0.01	0.01	0.01	57.0
Approach			64	49.2	64	49.2	0.044	0.1	NA	0.0	0.1	0.01	0.01	0.01	59.7
East: Site Access															
4	L2	All MCs	1	0.0	1	0.0	0.034	8.4	LOS A	0.1	1.6	0.41	0.94	0.41	49.6
6	R2	All MCs	17	93.8	17	93.8	0.034	14.8	LOS B	0.1	1.6	0.41	0.94	0.41	46.2
Approach			18	88.2	18	88.2	0.034	14.4	LOS A	0.1	1.6	0.41	0.94	0.41	46.4
North: Windellama Road															
7	L2	All MCs	47	33.3	47	33.3	0.032	5.9	LOS A	0.0	0.0	0.00	0.57	0.00	51.5
8	T1	All MCs	92	31.0	92	31.0	0.056	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			139	31.8	139	31.8	0.056	2.0	NA	0.0	0.0	0.00	0.19	0.00	56.8
All Vehicles			221	41.4	221	41.4	0.056	2.5	NA	0.1	1.6	0.04	0.20	0.04	56.6

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 1 [1. PM_Braidwood-Bungonia (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Braidwood Rd															
1	L2	All MCs	1	0.0	1	0.0	0.063	5.9	LOS A	0.1	0.8	0.08	0.12	0.08	24.9
2	T1	All MCs	96	7.7	96	7.7	0.063	0.1	LOS A	0.1	0.8	0.08	0.12	0.08	56.9
3	R2	All MCs	17	6.3	17	6.3	0.063	5.9	LOS A	0.1	0.8	0.08	0.12	0.08	43.9
Approach			114	7.4	114	7.4	0.063	1.0	NA	0.1	0.8	0.08	0.12	0.08	55.2
East: Bungonia Rd															
4	L2	All MCs	13	8.3	13	8.3	0.009	4.5	LOS A	0.0	0.3	0.21	0.51	0.21	34.8
5	T1	All MCs	1	0.0	1	0.0	0.409	5.6	LOS A	2.1	17.3	0.54	0.79	0.68	29.4
6	R2	All MCs	271	19.1	271	19.1	0.409	8.2	LOS A	2.1	17.3	0.54	0.79	0.68	34.3
Approach			284	18.5	284	18.5	0.409	8.0	LOS A	2.1	17.3	0.52	0.77	0.66	34.3
North: Braidwood Rd															
7	L2	All MCs	204	20.1	204	20.1	0.210	5.9	LOS A	1.0	8.1	0.09	0.35	0.09	36.2
8	T1	All MCs	112	5.7	112	5.7	0.210	0.1	LOS A	1.0	8.1	0.09	0.35	0.09	51.4
9	R2	All MCs	6	33.3	6	33.3	0.210	6.3	LOS A	1.0	8.1	0.09	0.35	0.09	36.1
Approach			322	15.4	322	15.4	0.210	3.9	NA	1.0	8.1	0.09	0.35	0.09	40.8
West: Ottiwell St															
10	L2	All MCs	9	22.2	9	22.2	0.009	5.9	LOS A	0.0	0.3	0.21	0.53	0.21	38.5
11	T1	All MCs	1	0.0	1	0.0	0.009	5.0	LOS A	0.0	0.3	0.21	0.53	0.21	31.3
12	R2	All MCs	1	0.0	1	0.0	0.009	6.6	LOS A	0.0	0.3	0.21	0.53	0.21	35.6
Approach			12	18.2	12	18.2	0.009	5.9	LOS A	0.0	0.3	0.21	0.53	0.21	37.9
All Vehicles			732	15.4	732	15.4	0.409	5.1	NA	2.1	17.3	0.26	0.48	0.31	39.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. PM_Sloane-Braidwood (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Braidwood Rd															
4	L2	All MCs	44	26.2	44	26.2	0.946	37.8	LOS C	15.6	125.3	0.95	1.98	4.04	21.1
5	T1	All MCs	52	4.1	52	4.1	0.946	42.9	LOS D	15.6	125.3	0.95	1.98	4.04	21.9
6	R2	All MCs	282	17.9	282	17.9	0.946	50.3	LOS D	15.6	125.3	0.95	1.98	4.04	21.5
Approach			378	17.0	378	17.0	0.946	47.8	LOS D	15.6	125.3	0.95	1.98	4.04	21.5
NorthEast: Sloane St															
7	L2	All MCs	217	20.4	217	20.4	0.282	6.4	LOS A	1.5	11.5	0.28	0.39	0.28	44.8
8	T1	All MCs	157	4.7	157	4.7	0.282	0.6	LOS A	1.5	11.5	0.28	0.39	0.28	51.0
9	R2	All MCs	38	5.6	38	5.6	0.282	6.7	LOS A	1.5	11.5	0.28	0.39	0.28	45.5
Approach			412	13.0	412	13.0	0.282	4.2	NA	1.5	11.5	0.28	0.39	0.28	46.9
NorthWest: Mundy St															
10	L2	All MCs	17	6.3	17	6.3	0.153	9.4	LOS A	0.6	4.3	0.51	0.99	0.51	39.0
11	T1	All MCs	72	13.2	72	13.2	0.153	12.2	LOS A	0.6	4.3	0.51	0.99	0.51	39.1
12	R2	All MCs	9	11.1	9	11.1	0.153	13.3	LOS A	0.6	4.3	0.51	0.99	0.51	37.6
Approach			98	11.8	98	11.8	0.153	11.9	LOS A	0.6	4.3	0.51	0.99	0.51	38.9
SouthWest: Sloane St															
1	L2	All MCs	13	0.0	13	0.0	0.163	6.1	LOS A	0.3	2.6	0.11	0.15	0.11	51.4
2	T1	All MCs	235	6.7	235	6.7	0.163	0.1	LOS A	0.3	2.6	0.11	0.15	0.11	56.7
3	R2	All MCs	40	15.8	40	15.8	0.163	6.3	LOS A	0.3	2.6	0.11	0.15	0.11	47.9
Approach			287	7.7	287	7.7	0.163	1.3	NA	0.3	2.6	0.11	0.15	0.11	55.0
All Vehicles			1175	12.9	1175	12.9	0.946	18.2	NA	15.6	125.3	0.48	0.89	1.47	34.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. PM_Bungonia-Forbes (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Bungonia Rd															
5	T1	All MCs	222	21.3	222	21.3	0.138	0.1	LOS A	0.1	0.8	0.04	0.05	0.04	59.3
6	R2	All MCs	13	0.0	13	0.0	0.138	6.2	LOS A	0.1	0.8	0.04	0.05	0.04	55.8
Approach			235	20.2	235	20.2	0.138	0.4	NA	0.1	0.8	0.04	0.05	0.04	59.1
North: Forbes St															
7	L2	All MCs	17	0.0	17	0.0	0.014	8.7	LOS A	0.1	0.4	0.28	0.85	0.28	48.4
9	R2	All MCs	16	13.3	16	13.3	0.025	10.8	LOS A	0.1	0.6	0.45	0.91	0.45	49.2
Approach			33	6.5	33	6.5	0.025	9.7	LOS A	0.1	0.6	0.36	0.88	0.36	48.9
West: Bungonia Rd															
10	L2	All MCs	24	4.3	24	4.3	0.113	5.6	LOS A	0.0	0.0	0.00	0.08	0.00	56.5
11	T1	All MCs	165	26.8	165	26.8	0.113	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	58.8
Approach			189	23.9	189	23.9	0.113	0.7	NA	0.0	0.0	0.00	0.08	0.00	58.4
All Vehicles			457	20.7	457	20.7	0.138	1.2	NA	0.1	0.8	0.05	0.12	0.05	57.8

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 4 [4. PM_Bungonia-Memorial (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bungonia Rd															
1a	L1	All MCs	198	23.4	198	23.4	0.122	5.6	LOS A	0.0	0.2	0.01	0.60	0.01	44.8
3	R2	All MCs	2	50.0	2	50.0	0.122	6.2	LOS A	0.0	0.2	0.01	0.60	0.01	41.3
Approach			200	23.7	200	23.7	0.122	5.6	NA	0.0	0.2	0.01	0.60	0.01	44.8
East: Memorial Rd															
4	L2	All MCs	2	0.0	2	0.0	0.042	5.7	LOS A	0.1	1.0	0.34	0.60	0.34	47.8
6a	R1	All MCs	37	2.9	37	2.9	0.042	6.4	LOS A	0.1	1.0	0.34	0.60	0.34	45.4
Approach			39	2.7	39	2.7	0.042	6.4	LOS A	0.1	1.0	0.34	0.60	0.34	45.5
NorthWest: Bungonia Rd															
27a	L1	All MCs	138	7.6	138	7.6	0.118	5.4	LOS A	0.4	3.2	0.02	0.58	0.02	45.4
29a	R1	All MCs	44	76.2	44	76.2	0.118	5.9	LOS A	0.4	3.2	0.02	0.58	0.02	44.3
Approach			182	24.3	182	24.3	0.118	5.5	NA	0.4	3.2	0.02	0.58	0.02	45.1
All Vehicles			421	22.0	421	22.0	0.122	5.6	NA	0.4	3.2	0.04	0.59	0.04	45.0

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 5 [5. PM_Hume-Garoorigang (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Garoorigang Rd															
5	T1	All MCs	3	0.0	3	0.0	0.054	0.4	LOS A	0.2	1.9	0.23	0.54	0.23	54.6
6	R2	All MCs	80	10.5	80	10.5	0.054	6.0	LOS A	0.2	1.9	0.23	0.54	0.23	47.8
Approach			83	10.1	83	10.1	0.054	5.7	NA	0.2	1.9	0.23	0.54	0.23	48.1
North: Hume St															
7	L2	All MCs	76	15.3	76	15.3	0.064	5.9	LOS A	0.3	2.0	0.14	0.54	0.14	48.0
9	R2	All MCs	12	18.2	12	18.2	0.064	6.4	LOS A	0.3	2.0	0.14	0.54	0.14	47.4
Approach			87	15.7	87	15.7	0.064	6.0	LOS A	0.3	2.0	0.14	0.54	0.14	48.0
West: Mazamet Rd															
10	L2	All MCs	63	11.7	63	11.7	0.062	5.7	LOS A	0.0	0.0	0.00	0.33	0.00	51.5
11	T1	All MCs	48	0.0	48	0.0	0.062	0.0	LOS A	0.0	0.0	0.00	0.33	0.00	57.2
Approach			112	6.6	112	6.6	0.062	3.2	NA	0.0	0.0	0.00	0.33	0.00	54.4
All Vehicles			282	10.4	282	10.4	0.064	4.8	NA	0.3	2.0	0.11	0.46	0.11	50.7

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 6.1512 [6. PM_Lagoon-Union (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 173 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Union St															
1	L2	All MCs	35	3.0	35	3.0	0.592	63.2	LOS E	22.0	159.7	0.92	0.80	0.92	22.8
2	T1	All MCs	271	4.7	271	4.7	* 0.592	57.6	LOS E	22.0	159.7	0.92	0.80	0.92	20.8
3	R2	All MCs	257	25.0	257	25.0	0.259	21.4	LOS B	9.3	79.3	0.47	0.71	0.47	41.4
Approach			562	13.9	562	13.9	0.592	41.4	LOS C	22.0	159.7	0.72	0.76	0.72	29.4
East: Sydney Rd															
4	L2	All MCs	158	32.0	158	32.0	0.255	32.2	LOS C	8.9	78.4	0.67	0.74	0.67	34.0
5	T1	All MCs	168	1.3	168	1.3	0.255	50.8	LOS D	9.5	78.4	0.78	0.66	0.78	29.2
6	R2	All MCs	172	6.1	172	6.1	* 0.528	62.3	LOS E	12.3	90.5	0.90	0.82	0.90	21.9
Approach			498	12.7	498	12.7	0.528	48.9	LOS D	12.3	90.5	0.78	0.74	0.78	28.0
North: Union St															
7	L2	All MCs	141	17.2	141	17.2	0.660	65.8	LOS E	24.9	189.5	0.93	0.83	0.93	22.6
8	T1	All MCs	200	5.3	200	5.3	* 0.660	60.2	LOS E	24.9	189.5	0.93	0.83	0.93	20.5
9	R2	All MCs	147	12.1	147	12.1	0.287	58.7	LOS E	9.4	72.7	0.81	0.78	0.81	15.5
Approach			488	10.8	488	10.8	0.660	61.4	LOS E	24.9	189.5	0.90	0.81	0.90	19.0
West: Lagoon St															
10	L2	All MCs	101	1.0	101	1.0	0.085	17.4	LOS B	3.1	21.7	0.39	0.67	0.39	30.1
11	T1	All MCs	176	3.0	176	3.0	0.149	46.8	LOS D	5.3	38.1	0.76	0.61	0.76	29.5
12	R2	All MCs	17	0.0	17	0.0	0.064	62.8	LOS E	1.1	7.6	0.80	0.70	0.80	22.3
Approach			294	2.2	294	2.2	0.149	37.6	LOS C	5.3	38.1	0.64	0.64	0.64	28.6
All Vehicles			1842	10.9	1842	10.9	0.660	48.1	LOS D	24.9	189.5	0.77	0.75	0.77	26.0

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Union St												
P1	Full	1	1	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
East: Sydney Rd												

P2 Full	3	3	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
North: Union St											
P3 Full	1	1	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
West: Lagoon St											
P4 Full	1	1	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
All Pedestrians	6	6	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85

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

MOVEMENT SUMMARY

Site: 7 [7. PM_Sloane-Garoorigang (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Garoorigang St															
1	L2	All MCs	33	3.2	33	3.2	0.047	5.6	LOS A	0.0	0.0	0.00	0.22	0.00	55.1
2	T1	All MCs	56	0.0	56	0.0	0.047	0.0	LOS A	0.0	0.0	0.00	0.22	0.00	57.8
Approach			88	1.2	88	1.2	0.047	2.1	NA	0.0	0.0	0.00	0.22	0.00	56.8
North: Sloane St															
8	T1	All MCs	14	15.4	14	15.4	0.039	0.3	LOS A	0.2	1.4	0.19	0.45	0.19	54.8
9	R2	All MCs	48	13.0	48	13.0	0.039	5.9	LOS A	0.2	1.4	0.19	0.45	0.19	52.3
Approach			62	13.6	62	13.6	0.039	4.7	NA	0.2	1.4	0.19	0.45	0.19	52.8
West: Garoorigang Rd															
10	L2	All MCs	79	13.3	79	13.3	0.093	5.9	LOS A	0.4	2.7	0.16	0.55	0.16	51.7
12	R2	All MCs	44	0.0	44	0.0	0.093	5.9	LOS A	0.4	2.7	0.16	0.55	0.16	51.4
Approach			123	8.5	123	8.5	0.093	5.9	LOS A	0.4	2.7	0.16	0.55	0.16	51.6
All Vehicles			274	7.3	274	7.3	0.093	4.4	NA	0.4	2.7	0.12	0.42	0.12	53.4

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 8 [8. PM_Windellama-Rifle (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Rd															
2	T1	All MCs	192	23.1	192	23.1	0.118	0.0	LOS A	0.0	0.4	0.02	0.03	0.02	59.8
3	R2	All MCs	5	40.0	5	40.0	0.118	6.5	LOS A	0.0	0.4	0.02	0.03	0.02	54.9
Approach			197	23.5	197	23.5	0.118	0.2	NA	0.0	0.4	0.02	0.03	0.02	59.6
East: Rifle Range Rd															
4	L2	All MCs	4	0.0	4	0.0	0.016	6.1	LOS A	0.1	0.4	0.36	0.60	0.36	51.7
6	R2	All MCs	9	22.2	9	22.2	0.016	7.8	LOS A	0.1	0.4	0.36	0.60	0.36	50.5
Approach			14	15.4	14	15.4	0.016	7.2	LOS A	0.1	0.4	0.36	0.60	0.36	50.9
North: Windellama Rd															
7	L2	All MCs	11	0.0	11	0.0	0.102	5.6	LOS A	0.0	0.0	0.00	0.04	0.00	57.0
8	T1	All MCs	159	27.8	159	27.8	0.102	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.5
Approach			169	26.1	169	26.1	0.102	0.4	NA	0.0	0.0	0.00	0.04	0.00	59.3
All Vehicles			380	24.4	380	24.4	0.118	0.5	NA	0.1	0.4	0.03	0.05	0.03	59.1

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 9 [9. PM_Windellama-Site Access (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Road															
2	T1	All MCs	100	28.4	100	28.4	0.062	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	59.9
3	R2	All MCs	1	0.0	1	0.0	0.062	5.5	LOS A	0.0	0.1	0.01	0.01	0.01	57.1
Approach			101	28.1	101	28.1	0.062	0.1	NA	0.0	0.1	0.01	0.01	0.01	59.9
East: Site Access															
4	L2	All MCs	1	0.0	1	0.0	0.072	8.4	LOS A	0.3	2.5	0.39	0.91	0.39	50.2
6	R2	All MCs	47	33.3	47	33.3	0.072	11.4	LOS A	0.3	2.5	0.39	0.91	0.39	48.8
Approach			48	32.6	48	32.6	0.072	11.4	LOS A	0.3	2.5	0.39	0.91	0.39	48.8
North: Windellama Road															
7	L2	All MCs	17	93.8	17	93.8	0.015	6.6	LOS A	0.0	0.0	0.00	0.56	0.00	49.2
8	T1	All MCs	86	32.9	86	32.9	0.054	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			103	42.9	103	42.9	0.054	1.1	NA	0.0	0.0	0.00	0.09	0.00	57.9
All Vehicles			253	35.0	253	35.0	0.072	2.7	NA	0.3	2.5	0.08	0.22	0.08	56.6

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 1 [1. SAT_Braidwood-Bungonia (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Braidwood Rd															
1	L2	All MCs	1	0.0	1	0.0	0.054	5.8	LOS A	0.1	0.4	0.04	0.06	0.04	25.4
2	T1	All MCs	89	7.1	89	7.1	0.054	0.0	LOS A	0.1	0.4	0.04	0.06	0.04	58.3
3	R2	All MCs	7	14.3	7	14.3	0.054	5.9	LOS A	0.1	0.4	0.04	0.06	0.04	45.2
Approach			98	7.5	98	7.5	0.054	0.5	NA	0.1	0.4	0.04	0.06	0.04	57.2
East: Bungonia Rd															
4	L2	All MCs	5	20.0	5	20.0	0.004	4.5	LOS A	0.0	0.1	0.20	0.50	0.20	33.8
5	T1	All MCs	1	0.0	1	0.0	0.313	4.8	LOS A	1.3	10.7	0.48	0.71	0.52	31.2
6	R2	All MCs	216	18.5	216	18.5	0.313	7.0	LOS A	1.3	10.7	0.48	0.71	0.52	35.6
Approach			222	18.5	222	18.5	0.313	7.0	LOS A	1.3	10.7	0.47	0.71	0.51	35.6
North: Braidwood Rd															
7	L2	All MCs	212	20.9	212	20.9	0.207	5.8	LOS A	1.0	8.0	0.06	0.36	0.06	36.2
8	T1	All MCs	103	4.1	103	4.1	0.207	0.0	LOS A	1.0	8.0	0.06	0.36	0.06	51.4
9	R2	All MCs	3	0.0	3	0.0	0.207	5.6	LOS A	1.0	8.0	0.06	0.36	0.06	37.4
Approach			318	15.2	318	15.2	0.207	4.0	NA	1.0	8.0	0.06	0.36	0.06	40.5
West: Ottiwell St															
10	L2	All MCs	5	0.0	5	0.0	0.006	5.8	LOS A	0.0	0.1	0.20	0.53	0.20	42.8
11	T1	All MCs	1	0.0	1	0.0	0.006	4.9	LOS A	0.0	0.1	0.20	0.53	0.20	31.4
12	R2	All MCs	1	0.0	1	0.0	0.006	6.4	LOS A	0.0	0.1	0.20	0.53	0.20	35.8
Approach			7	0.0	7	0.0	0.006	5.7	LOS A	0.0	0.1	0.20	0.53	0.20	40.9
All Vehicles			645	15.0	645	15.0	0.313	4.5	NA	1.3	10.7	0.20	0.44	0.21	40.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. SAT_Sloane-Braidwood (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Braidwood Rd															
4	L2	All MCs	33	12.9	33	12.9	0.676	15.0	LOS B	4.9	39.2	0.77	1.26	1.57	32.2
5	T1	All MCs	47	4.4	47	4.4	0.676	18.8	LOS B	4.9	39.2	0.77	1.26	1.57	32.7
6	R2	All MCs	214	19.7	214	19.7	0.676	24.0	LOS B	4.9	39.2	0.77	1.26	1.57	31.5
Approach			294	16.5	294	16.5	0.676	22.1	LOS B	4.9	39.2	0.77	1.26	1.57	31.8
NorthEast: Sloane St															
7	L2	All MCs	233	17.6	233	17.6	0.302	6.2	LOS A	1.6	12.2	0.23	0.36	0.23	45.7
8	T1	All MCs	192	1.6	192	1.6	0.302	0.4	LOS A	1.6	12.2	0.23	0.36	0.23	51.7
9	R2	All MCs	41	0.0	41	0.0	0.302	6.2	LOS A	1.6	12.2	0.23	0.36	0.23	47.0
Approach			465	9.5	465	9.5	0.302	3.8	NA	1.6	12.2	0.23	0.36	0.23	48.0
NorthWest: Mundy St															
10	L2	All MCs	16	0.0	16	0.0	0.080	8.7	LOS A	0.3	2.1	0.43	0.93	0.43	41.0
11	T1	All MCs	42	5.0	42	5.0	0.080	10.7	LOS A	0.3	2.1	0.43	0.93	0.43	41.3
12	R2	All MCs	4	0.0	4	0.0	0.080	11.1	LOS A	0.3	2.1	0.43	0.93	0.43	40.1
Approach			62	3.4	62	3.4	0.080	10.2	LOS A	0.3	2.1	0.43	0.93	0.43	41.1
SouthWest: Sloane St															
1	L2	All MCs	4	0.0	4	0.0	0.117	6.2	LOS A	0.3	2.1	0.14	0.18	0.14	50.8
2	T1	All MCs	165	1.9	165	1.9	0.117	0.2	LOS A	0.3	2.1	0.14	0.18	0.14	56.0
3	R2	All MCs	41	2.6	41	2.6	0.117	6.1	LOS A	0.3	2.1	0.14	0.18	0.14	50.4
Approach			211	2.0	211	2.0	0.117	1.5	NA	0.3	2.1	0.14	0.18	0.14	54.6
All Vehicles			1032	9.6	1032	9.6	0.676	8.9	NA	4.9	39.2	0.38	0.61	0.61	42.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. SAT_Bungonia-Forbes (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Bungonia Rd															
5	T1	All MCs	164	21.2	164	21.2	0.098	0.0	LOS A	0.0	0.2	0.01	0.01	0.01	59.7
6	R2	All MCs	3	0.0	3	0.0	0.098	5.7	LOS A	0.0	0.2	0.01	0.01	0.01	56.3
Approach			167	20.8	167	20.8	0.098	0.1	NA	0.0	0.2	0.01	0.01	0.01	59.7
North: Forbes St															
7	L2	All MCs	17	12.5	17	12.5	0.015	9.3	LOS A	0.1	0.4	0.29	0.87	0.29	46.9
9	R2	All MCs	22	0.0	22	0.0	0.028	9.2	LOS A	0.1	0.6	0.39	0.89	0.39	50.4
Approach			39	5.4	39	5.4	0.028	9.3	LOS A	0.1	0.6	0.35	0.88	0.35	49.1
West: Bungonia Rd															
10	L2	All MCs	17	6.3	17	6.3	0.105	5.6	LOS A	0.0	0.0	0.00	0.06	0.00	56.6
11	T1	All MCs	162	23.4	162	23.4	0.105	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	59.1
Approach			179	21.8	179	21.8	0.105	0.6	NA	0.0	0.0	0.00	0.06	0.00	58.8
All Vehicles			385	19.7	385	19.7	0.105	1.2	NA	0.1	0.6	0.04	0.12	0.04	57.8

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 4 [4. SAT_Bungonia-Memorial (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bungonia Rd															
1a	L1	All MCs	175	21.1	175	21.1	0.106	5.6	LOS A	0.0	0.1	0.00	0.60	0.00	45.2
3	R2	All MCs	2	0.0	2	0.0	0.106	5.4	LOS A	0.0	0.1	0.00	0.60	0.00	48.6
Approach			177	20.8	177	20.8	0.106	5.6	NA	0.0	0.1	0.00	0.60	0.00	45.2
East: Memorial Rd															
4	L2	All MCs	2	0.0	2	0.0	0.008	6.1	LOS A	0.0	0.2	0.33	0.56	0.33	47.8
6a	R1	All MCs	6	0.0	6	0.0	0.008	6.3	LOS A	0.0	0.2	0.33	0.56	0.33	45.8
Approach			8	0.0	8	0.0	0.008	6.3	LOS A	0.0	0.2	0.33	0.56	0.33	46.4
NorthWest: Bungonia Rd															
27a	L1	All MCs	5	0.0	5	0.0	0.104	5.3	LOS A	0.5	4.3	0.02	0.56	0.02	47.1
29a	R1	All MCs	163	22.6	163	22.6	0.104	5.2	LOS A	0.5	4.3	0.02	0.56	0.02	47.6
Approach			168	21.9	168	21.9	0.104	5.2	NA	0.5	4.3	0.02	0.56	0.02	47.6
All Vehicles			354	20.8	354	20.8	0.106	5.4	NA	0.5	4.3	0.02	0.58	0.02	46.4

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 5 [5. SAT_Hume-Garoorigang (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Garoorigang Rd															
5	T1	All MCs	5	0.0	5	0.0	0.052	0.0	LOS A	0.2	1.7	0.07	0.54	0.07	55.1
6	R2	All MCs	85	3.7	85	3.7	0.052	5.5	LOS A	0.2	1.7	0.07	0.54	0.07	48.9
Approach			91	3.5	91	3.5	0.052	5.2	NA	0.2	1.7	0.07	0.54	0.07	49.4
North: Hume St															
7	L2	All MCs	77	2.7	77	2.7	0.050	5.6	LOS A	0.2	1.4	0.03	0.56	0.03	49.2
9	R2	All MCs	2	0.0	2	0.0	0.050	5.5	LOS A	0.2	1.4	0.03	0.56	0.03	49.0
Approach			79	2.7	79	2.7	0.050	5.6	LOS A	0.2	1.4	0.03	0.56	0.03	49.2
West: Mazamet Rd															
10	L2	All MCs	11	0.0	11	0.0	0.008	5.5	LOS A	0.0	0.0	0.00	0.42	0.00	51.2
11	T1	All MCs	4	0.0	4	0.0	0.008	0.0	LOS A	0.0	0.0	0.00	0.42	0.00	56.3
Approach			15	0.0	15	0.0	0.008	4.0	NA	0.0	0.0	0.00	0.42	0.00	53.1
All Vehicles			184	2.9	184	2.9	0.052	5.3	NA	0.2	1.7	0.05	0.54	0.05	49.6

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 6.1512 [6. SAT_Lagoon-Union (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 112 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Union St															
1	L2	All MCs	8	0.0	8	0.0	0.439	42.3	LOS C	10.3	73.3	0.88	0.74	0.88	29.0
2	T1	All MCs	218	1.9	218	1.9	*0.439	36.8	LOS C	10.3	73.3	0.88	0.74	0.88	27.1
3	R2	All MCs	201	19.9	201	19.9	0.180	12.4	LOS A	3.8	31.5	0.38	0.67	0.38	46.4
Approach			427	10.3	427	10.3	0.439	25.4	LOS B	10.3	73.3	0.64	0.71	0.64	36.4
East: Sydney Rd															
4	L2	All MCs	201	19.4	201	19.4	0.258	17.8	LOS B	6.5	52.7	0.58	0.72	0.58	41.4
5	T1	All MCs	204	0.0	204	0.0	0.258	28.8	LOS C	7.0	52.7	0.73	0.63	0.73	37.7
6	R2	All MCs	125	3.4	125	3.4	*0.300	35.2	LOS C	5.1	36.7	0.78	0.77	0.78	29.8
Approach			531	8.1	531	8.1	0.300	26.1	LOS B	7.0	52.7	0.68	0.69	0.68	37.3
North: Union St															
7	L2	All MCs	156	5.4	156	5.4	0.864	60.8	LOS E	19.7	141.9	1.00	1.01	1.21	22.9
8	T1	All MCs	175	1.2	175	1.2	*0.864	55.2	LOS D	19.7	141.9	1.00	1.01	1.21	20.6
9	R2	All MCs	129	0.8	129	0.8	0.341	47.0	LOS D	6.1	43.1	0.90	0.78	0.90	17.6
Approach			460	2.5	460	2.5	0.864	54.8	LOS D	19.7	141.9	0.97	0.94	1.12	20.8
West: Lagoon St															
10	L2	All MCs	82	0.0	82	0.0	0.071	14.2	LOS A	1.7	12.0	0.41	0.67	0.41	32.7
11	T1	All MCs	166	1.3	166	1.3	0.117	25.0	LOS B	3.0	21.0	0.70	0.55	0.70	38.2
12	R2	All MCs	11	0.0	11	0.0	0.034	36.0	LOS C	0.4	2.9	0.74	0.68	0.74	29.3
Approach			259	0.8	259	0.8	0.117	22.0	LOS B	3.0	21.0	0.61	0.59	0.61	36.6
All Vehicles			1677	6.0	1677	6.0	0.864	33.2	LOS C	19.7	141.9	0.74	0.75	0.78	31.7

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Union St												
P1	Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
East: Sydney Rd												

P2 Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
North: Union St											
P3 Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
West: Lagoon St											
P4 Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
All Pedestrians	4	4	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98

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

MOVEMENT SUMMARY

Site: 7 [7. SAT_Sloane-Garoorigang (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Garoorigang St															
1	L2	All MCs	37	0.0	37	0.0	0.033	5.5	LOS A	0.0	0.0	0.00	0.35	0.00	54.1
2	T1	All MCs	25	4.2	25	4.2	0.033	0.0	LOS A	0.0	0.0	0.00	0.35	0.00	56.4
Approach			62	1.7	62	1.7	0.033	3.3	NA	0.0	0.0	0.00	0.35	0.00	55.0
North: Sloane St															
8	T1	All MCs	21	0.0	21	0.0	0.043	0.2	LOS A	0.2	1.4	0.15	0.41	0.15	55.4
9	R2	All MCs	52	6.1	52	6.1	0.043	5.7	LOS A	0.2	1.4	0.15	0.41	0.15	53.1
Approach			73	4.3	73	4.3	0.043	4.1	NA	0.2	1.4	0.15	0.41	0.15	53.7
West: Garoorigang Rd															
10	L2	All MCs	21	10.0	21	10.0	0.063	5.7	LOS A	0.2	1.6	0.14	0.56	0.14	52.0
12	R2	All MCs	57	0.0	57	0.0	0.063	5.9	LOS A	0.2	1.6	0.14	0.56	0.14	51.5
Approach			78	2.7	78	2.7	0.063	5.8	LOS A	0.2	1.6	0.14	0.56	0.14	51.6
All Vehicles			213	3.0	213	3.0	0.063	4.5	NA	0.2	1.6	0.10	0.45	0.10	53.3

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 8 [8. SAT_Windellama-Rifle (*) (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Weekday PM Flows Used
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Rd															
2	T1	All MCs	158	28.0	158	28.0	0.101	0.1	LOS A	0.1	0.4	0.03	0.04	0.03	59.7
3	R2	All MCs	5	40.0	5	40.0	0.101	7.0	LOS A	0.1	0.4	0.03	0.04	0.03	54.9
Approach			163	28.4	163	28.4	0.101	0.3	NA	0.1	0.4	0.03	0.04	0.03	59.6
East: Rifle Range Rd															
4	L2	All MCs	4	0.0	4	0.0	0.016	6.2	LOS A	0.1	0.4	0.37	0.60	0.37	51.7
6	R2	All MCs	9	22.2	9	22.2	0.016	7.8	LOS A	0.1	0.4	0.37	0.60	0.37	50.5
Approach			14	15.4	14	15.4	0.016	7.3	LOS A	0.1	0.4	0.37	0.60	0.37	50.9
North: Windellama Rd															
7	L2	All MCs	11	0.0	11	0.0	0.119	5.6	LOS A	0.0	0.0	0.00	0.03	0.00	57.1
8	T1	All MCs	193	23.0	193	23.0	0.119	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	59.6
Approach			203	21.8	203	21.8	0.119	0.3	NA	0.0	0.0	0.00	0.03	0.00	59.4
All Vehicles			380	24.4	380	24.4	0.119	0.5	NA	0.1	0.4	0.03	0.05	0.03	59.1

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 9 [9. SAT_Windellama-Site Access (Site Folder: Existing + Dev + Merino to/from Sydney Road)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Road															
2	T1	All MCs	118	24.1	118	24.1	0.071	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	59.9
3	R2	All MCs	1	0.0	1	0.0	0.071	5.6	LOS A	0.0	0.1	0.01	0.01	0.01	57.1
Approach			119	23.9	119	23.9	0.071	0.1	NA	0.0	0.1	0.01	0.01	0.01	59.9
East: Site Access															
4	L2	All MCs	1	0.0	1	0.0	0.059	8.5	LOS A	0.2	2.2	0.45	0.93	0.45	49.5
6	R2	All MCs	32	50.0	32	50.0	0.059	13.3	LOS A	0.2	2.2	0.45	0.93	0.45	47.6
Approach			33	48.4	33	48.4	0.059	13.2	LOS A	0.2	2.2	0.45	0.93	0.45	47.6
North: Windellama Road															
7	L2	All MCs	32	50.0	32	50.0	0.023	6.1	LOS A	0.0	0.0	0.00	0.57	0.00	50.9
8	T1	All MCs	122	23.3	122	23.3	0.072	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			154	28.8	154	28.8	0.072	1.3	NA	0.0	0.0	0.00	0.12	0.00	57.8
All Vehicles			305	29.0	305	29.0	0.072	2.1	NA	0.2	2.2	0.05	0.16	0.05	57.3

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 1 [1. AM_Braidwood-Bungonia (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Braidwood Rd															
1	L2	All MCs	1	0.0	1	0.0	0.048	5.9	LOS A	0.0	0.4	0.04	0.07	0.04	25.3
2	T1	All MCs	74	20.0	74	20.0	0.048	0.0	LOS A	0.0	0.4	0.04	0.07	0.04	58.1
3	R2	All MCs	6	16.7	6	16.7	0.048	6.0	LOS A	0.0	0.4	0.04	0.07	0.04	44.8
Approach			81	19.5	81	19.5	0.048	0.6	NA	0.0	0.4	0.04	0.07	0.04	56.8
East: Bungonia Rd															
4	L2	All MCs	9	11.1	9	11.1	0.007	4.5	LOS A	0.0	0.2	0.21	0.51	0.21	34.5
5	T1	All MCs	1	0.0	1	0.0	0.319	4.8	LOS A	1.4	11.2	0.48	0.71	0.52	31.2
6	R2	All MCs	219	20.2	219	20.2	0.319	7.1	LOS A	1.4	11.2	0.48	0.71	0.52	35.3
Approach			229	19.7	229	19.7	0.319	7.0	LOS A	1.4	11.2	0.47	0.71	0.51	35.2
North: Braidwood Rd															
7	L2	All MCs	199	20.6	199	20.6	0.203	5.8	LOS A	1.0	7.9	0.05	0.35	0.05	36.3
8	T1	All MCs	111	13.3	111	13.3	0.203	0.0	LOS A	1.0	7.9	0.05	0.35	0.05	51.6
9	R2	All MCs	3	33.3	3	33.3	0.203	6.0	LOS A	1.0	7.9	0.05	0.35	0.05	36.2
Approach			313	18.2	313	18.2	0.203	3.8	NA	1.0	7.9	0.05	0.35	0.05	41.0
West: Ottiwell St															
10	L2	All MCs	6	0.0	6	0.0	0.006	5.8	LOS A	0.0	0.2	0.18	0.53	0.18	42.9
11	T1	All MCs	1	0.0	1	0.0	0.006	4.9	LOS A	0.0	0.2	0.18	0.53	0.18	31.5
12	R2	All MCs	1	0.0	1	0.0	0.006	6.4	LOS A	0.0	0.2	0.18	0.53	0.18	35.8
Approach			8	0.0	8	0.0	0.006	5.7	LOS A	0.0	0.2	0.18	0.53	0.18	41.2
All Vehicles			632	18.7	632	18.7	0.319	4.6	NA	1.4	11.2	0.20	0.44	0.22	40.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. AM_Sloane-Braidwood (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Braidwood Rd															
4	L2	All MCs	74	54.3	74	54.3	0.553	14.6	LOS B	4.1	33.6	0.69	1.05	1.12	32.2
5	T1	All MCs	54	5.9	54	5.9	0.553	16.4	LOS B	4.1	33.6	0.69	1.05	1.12	35.9
6	R2	All MCs	175	9.0	175	9.0	0.553	19.3	LOS B	4.1	33.6	0.69	1.05	1.12	35.5
Approach			302	19.5	302	19.5	0.553	17.6	LOS B	4.1	33.6	0.69	1.05	1.12	34.7
NorthEast: Sloane St															
7	L2	All MCs	128	9.0	128	9.0	0.183	6.5	LOS A	0.8	6.3	0.30	0.39	0.30	47.0
8	T1	All MCs	126	8.3	126	8.3	0.183	0.6	LOS A	0.8	6.3	0.30	0.39	0.30	51.3
9	R2	All MCs	20	5.3	20	5.3	0.183	6.2	LOS A	0.8	6.3	0.30	0.39	0.30	45.7
Approach			275	8.4	275	8.4	0.183	3.8	NA	0.8	6.3	0.30	0.39	0.30	48.7
NorthWest: Mundy St															
10	L2	All MCs	13	0.0	13	0.0	0.105	8.7	LOS A	0.4	2.8	0.47	0.96	0.47	40.3
11	T1	All MCs	55	11.5	55	11.5	0.105	11.7	LOS A	0.4	2.8	0.47	0.96	0.47	39.7
12	R2	All MCs	4	0.0	4	0.0	0.105	11.7	LOS A	0.4	2.8	0.47	0.96	0.47	39.4
Approach			72	8.8	72	8.8	0.105	11.2	LOS A	0.4	2.8	0.47	0.96	0.47	39.8
SouthWest: Sloane St															
1	L2	All MCs	5	0.0	5	0.0	0.193	6.2	LOS A	0.9	7.3	0.24	0.33	0.24	48.5
2	T1	All MCs	164	8.3	164	8.3	0.193	0.4	LOS A	0.9	7.3	0.24	0.33	0.24	53.4
3	R2	All MCs	127	29.8	127	29.8	0.193	6.5	LOS A	0.9	7.3	0.24	0.33	0.24	43.0
Approach			297	17.4	297	17.4	0.193	3.1	NA	0.9	7.3	0.24	0.33	0.24	48.0
All Vehicles			945	14.8	945	14.8	0.553	8.6	NA	4.1	33.6	0.42	0.62	0.56	42.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. AM_Bungonia-Forbes (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Bungonia Rd															
5	T1	All MCs	227	19.9	227	19.9	0.142	0.1	LOS A	0.1	1.0	0.05	0.06	0.05	59.2
6	R2	All MCs	16	6.7	16	6.7	0.142	6.3	LOS A	0.1	1.0	0.05	0.06	0.05	55.3
Approach			243	19.0	243	19.0	0.142	0.5	NA	0.1	1.0	0.05	0.06	0.05	58.9
North: Forbes St															
7	L2	All MCs	5	0.0	5	0.0	0.004	8.6	LOS A	0.0	0.1	0.26	0.84	0.26	48.5
9	R2	All MCs	17	0.0	17	0.0	0.023	9.7	LOS A	0.1	0.5	0.42	0.89	0.42	50.2
Approach			22	0.0	22	0.0	0.023	9.4	LOS A	0.1	0.5	0.39	0.88	0.39	49.8
West: Bungonia Rd															
10	L2	All MCs	16	0.0	16	0.0	0.096	5.6	LOS A	0.0	0.0	0.00	0.06	0.00	56.8
11	T1	All MCs	147	24.3	147	24.3	0.096	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	59.0
Approach			163	21.9	163	21.9	0.096	0.6	NA	0.0	0.0	0.00	0.06	0.00	58.8
All Vehicles			428	19.2	428	19.2	0.142	1.0	NA	0.1	1.0	0.05	0.10	0.05	58.2

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 4 [4. AM_Bungonia-Memorial (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bungonia Rd															
1a	L1	All MCs	231	18.3	231	18.3	0.137	5.5	LOS A	0.0	0.1	0.00	0.60	0.00	45.6
3	R2	All MCs	1	0.0	1	0.0	0.137	5.4	LOS A	0.0	0.1	0.00	0.60	0.00	48.6
Approach			232	18.2	232	18.2	0.137	5.5	NA	0.0	0.1	0.00	0.60	0.00	45.6
East: Memorial Rd															
4	L2	All MCs	1	0.0	1	0.0	0.021	5.9	LOS A	0.1	0.6	0.39	0.62	0.39	47.1
6a	R1	All MCs	15	28.6	15	28.6	0.021	7.5	LOS A	0.1	0.6	0.39	0.62	0.39	40.7
Approach			16	26.7	16	26.7	0.021	7.4	LOS A	0.1	0.6	0.39	0.62	0.39	41.2
NorthWest: Bungonia Rd															
27a	L1	All MCs	44	0.0	44	0.0	0.096	5.3	LOS A	0.5	3.9	0.02	0.57	0.02	47.0
29a	R1	All MCs	107	31.4	107	31.4	0.096	5.3	LOS A	0.5	3.9	0.02	0.57	0.02	47.0
Approach			152	22.2	152	22.2	0.096	5.3	NA	0.5	3.9	0.02	0.57	0.02	47.0
All Vehicles			399	20.1	399	20.1	0.137	5.5	NA	0.5	3.9	0.02	0.59	0.02	46.0

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 5 [5. AM_Hume-Garoorigang (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Garoorigang Rd															
5	T1	All MCs	5	20.0	5	20.0	0.083	0.1	LOS A	0.4	3.8	0.11	0.54	0.11	55.0
6	R2	All MCs	114	43.5	114	43.5	0.083	6.1	LOS A	0.4	3.8	0.11	0.54	0.11	46.1
Approach			119	42.5	119	42.5	0.083	5.8	NA	0.4	3.8	0.11	0.54	0.11	46.7
North: Hume St															
7	L2	All MCs	126	27.5	126	27.5	0.094	5.9	LOS A	0.4	3.4	0.04	0.56	0.04	47.8
9	R2	All MCs	6	0.0	6	0.0	0.094	5.6	LOS A	0.4	3.4	0.04	0.56	0.04	48.9
Approach			133	26.2	133	26.2	0.094	5.8	LOS A	0.4	3.4	0.04	0.56	0.04	47.8
West: Mazamet Rd															
10	L2	All MCs	20	31.6	20	31.6	0.016	5.9	LOS A	0.0	0.0	0.00	0.48	0.00	48.5
11	T1	All MCs	4	25.0	4	25.0	0.016	0.0	LOS A	0.0	0.0	0.00	0.48	0.00	55.9
Approach			24	30.4	24	30.4	0.016	4.9	NA	0.0	0.0	0.00	0.48	0.00	50.1
All Vehicles			276	33.6	276	33.6	0.094	5.8	NA	0.4	3.8	0.07	0.54	0.07	47.5

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 6.1512 [6. AM_Lagoon-Union (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 112 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Union St															
1	L2	All MCs	41	0.0	41	0.0	0.661	49.7	LOS D	13.1	99.6	0.97	0.82	0.97	26.2
2	T1	All MCs	217	11.7	217	11.7	* 0.661	44.1	LOS D	13.1	99.6	0.97	0.82	0.97	24.2
3	R2	All MCs	109	26.0	109	26.0	0.119	16.6	LOS B	2.6	22.2	0.47	0.68	0.47	43.6
Approach			367	14.6	367	14.6	0.661	36.5	LOS C	13.1	99.6	0.82	0.78	0.82	30.1
East: Sydney Rd															
4	L2	All MCs	104	30.3	104	30.3	0.256	22.8	LOS B	5.7	47.7	0.73	0.71	0.73	36.9
5	T1	All MCs	201	6.3	201	6.3	0.256	33.9	LOS C	6.2	47.7	0.77	0.66	0.77	35.6
6	R2	All MCs	165	12.1	165	12.1	* 0.429	39.1	LOS C	7.3	56.3	0.84	0.80	0.84	28.2
Approach			471	13.6	471	13.6	0.429	33.3	LOS C	7.3	56.3	0.79	0.72	0.79	33.3
North: Union St															
7	L2	All MCs	129	9.8	129	9.8	* 0.617	42.3	LOS C	15.9	118.8	0.91	0.81	0.91	28.5
8	T1	All MCs	207	7.1	207	7.1	0.617	35.8	LOS C	15.9	118.8	0.91	0.81	0.91	26.5
9	R2	All MCs	194	13.0	194	13.0	0.375	38.8	LOS C	8.4	65.0	0.83	0.79	0.83	19.4
Approach			531	9.9	531	9.9	0.617	38.5	LOS C	15.9	118.8	0.88	0.80	0.88	24.7
West: Lagoon St															
10	L2	All MCs	65	12.9	65	12.9	0.057	12.0	LOS A	1.2	9.0	0.35	0.65	0.35	34.3
11	T1	All MCs	92	4.6	92	4.6	0.075	28.1	LOS B	1.7	12.5	0.73	0.55	0.73	36.5
12	R2	All MCs	23	4.5	23	4.5	0.079	39.8	LOS C	1.0	7.1	0.79	0.71	0.79	27.8
Approach			180	7.6	180	7.6	0.079	23.8	LOS B	1.7	12.5	0.60	0.61	0.60	34.6
All Vehicles			1548	11.9	1548	11.9	0.661	34.7	LOS C	15.9	118.8	0.81	0.75	0.81	29.8

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Union St												
P1	Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
East: Sydney Rd												

P2	Full	11	12	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
North: Union St												
P3	Full	11	12	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
West: Lagoon St												
P4	Full	2	2	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
All Pedestrians		25	26	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98

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

MOVEMENT SUMMARY

Site: 7 [7. AM_Sloane-Garoorigang (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Garoorigang St															
1	L2	All MCs	35	0.0	35	0.0	0.039	5.5	LOS A	0.0	0.0	0.00	0.28	0.00	54.7
2	T1	All MCs	40	0.0	40	0.0	0.039	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	57.2
Approach			75	0.0	75	0.0	0.039	2.6	NA	0.0	0.0	0.00	0.28	0.00	56.0
North: Sloane St															
8	T1	All MCs	12	0.0	12	0.0	0.074	0.4	LOS A	0.3	3.5	0.20	0.51	0.20	55.0
9	R2	All MCs	83	59.5	83	59.5	0.074	6.6	LOS A	0.3	3.5	0.20	0.51	0.20	50.4
Approach			95	52.2	95	52.2	0.074	5.8	NA	0.3	3.5	0.20	0.51	0.20	50.9
West: Garoorigang Rd															
10	L2	All MCs	116	32.7	116	32.7	0.101	6.1	LOS A	0.4	3.6	0.13	0.54	0.13	51.0
12	R2	All MCs	17	0.0	17	0.0	0.101	6.1	LOS A	0.4	3.6	0.13	0.54	0.13	51.5
Approach			133	28.6	133	28.6	0.101	6.1	LOS A	0.4	3.6	0.13	0.54	0.13	51.1
All Vehicles			302	28.9	302	28.9	0.101	5.1	NA	0.4	3.6	0.12	0.46	0.12	52.1

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 8 [8. AM_Windellama-Rifle (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Rd															
2	T1	All MCs	221	20.0	221	20.0	0.133	0.0	LOS A	0.1	0.4	0.02	0.02	0.02	59.7
3	R2	All MCs	7	0.0	7	0.0	0.133	5.7	LOS A	0.1	0.4	0.02	0.02	0.02	56.9
Approach			228	19.4	228	19.4	0.133	0.2	NA	0.1	0.4	0.02	0.02	0.02	59.6
East: Rifle Range Rd															
4	L2	All MCs	2	0.0	2	0.0	0.012	6.0	LOS A	0.0	0.3	0.35	0.59	0.35	51.9
6	R2	All MCs	9	0.0	9	0.0	0.012	7.0	LOS A	0.0	0.3	0.35	0.59	0.35	51.6
Approach			12	0.0	12	0.0	0.012	6.8	LOS A	0.0	0.3	0.35	0.59	0.35	51.7
North: Windellama Rd															
7	L2	All MCs	6	66.7	6	66.7	0.089	6.3	LOS A	0.0	0.0	0.00	0.02	0.00	54.2
8	T1	All MCs	141	23.9	141	23.9	0.089	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	59.8
Approach			147	25.7	147	25.7	0.089	0.3	NA	0.0	0.0	0.00	0.02	0.00	59.6
All Vehicles			387	21.2	387	21.2	0.133	0.4	NA	0.1	0.4	0.02	0.04	0.02	59.3

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 9 [9. AM_Windellama-Site Access (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Road															
2	T1	All MCs	63	50.0	63	50.0	0.044	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	59.8
3	R2	All MCs	1	0.0	1	0.0	0.044	5.6	LOS A	0.0	0.1	0.01	0.01	0.01	57.0
Approach			64	49.2	64	49.2	0.044	0.1	NA	0.0	0.1	0.01	0.01	0.01	59.7
East: Site Access															
4	L2	All MCs	1	0.0	1	0.0	0.034	8.4	LOS A	0.1	1.6	0.41	0.94	0.41	49.6
6	R2	All MCs	17	93.8	17	93.8	0.034	14.8	LOS B	0.1	1.6	0.41	0.94	0.41	46.2
Approach			18	88.2	18	88.2	0.034	14.4	LOS A	0.1	1.6	0.41	0.94	0.41	46.4
North: Windellama Road															
7	L2	All MCs	47	33.3	47	33.3	0.032	5.9	LOS A	0.0	0.0	0.00	0.57	0.00	51.5
8	T1	All MCs	92	31.0	92	31.0	0.056	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			139	31.8	139	31.8	0.056	2.0	NA	0.0	0.0	0.00	0.19	0.00	56.8
All Vehicles			221	41.4	221	41.4	0.056	2.5	NA	0.1	1.6	0.04	0.20	0.04	56.6

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 1 [1. PM_Braidwood-Bungonia (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Braidwood Rd															
1	L2	All MCs	1	0.0	1	0.0	0.063	5.9	LOS A	0.1	0.8	0.08	0.12	0.08	24.9
2	T1	All MCs	96	7.7	96	7.7	0.063	0.1	LOS A	0.1	0.8	0.08	0.12	0.08	56.9
3	R2	All MCs	17	6.3	17	6.3	0.063	5.9	LOS A	0.1	0.8	0.08	0.12	0.08	43.9
Approach			114	7.4	114	7.4	0.063	1.0	NA	0.1	0.8	0.08	0.12	0.08	55.2
East: Bungonia Rd															
4	L2	All MCs	13	8.3	13	8.3	0.009	4.5	LOS A	0.0	0.3	0.21	0.51	0.21	34.8
5	T1	All MCs	1	0.0	1	0.0	0.334	5.1	LOS A	1.5	11.2	0.50	0.74	0.56	31.0
6	R2	All MCs	239	8.4	239	8.4	0.334	7.2	LOS A	1.5	11.2	0.50	0.74	0.56	37.3
Approach			253	8.3	253	8.3	0.334	7.0	LOS A	1.5	11.2	0.48	0.72	0.54	37.2
North: Braidwood Rd															
7	L2	All MCs	204	20.1	204	20.1	0.210	5.9	LOS A	1.0	8.1	0.09	0.35	0.09	36.2
8	T1	All MCs	112	5.7	112	5.7	0.210	0.1	LOS A	1.0	8.1	0.09	0.35	0.09	51.4
9	R2	All MCs	6	33.3	6	33.3	0.210	6.3	LOS A	1.0	8.1	0.09	0.35	0.09	36.1
Approach			322	15.4	322	15.4	0.210	3.9	NA	1.0	8.1	0.09	0.35	0.09	40.8
West: Ottiwell St															
10	L2	All MCs	9	22.2	9	22.2	0.009	5.9	LOS A	0.0	0.3	0.21	0.53	0.21	38.5
11	T1	All MCs	1	0.0	1	0.0	0.009	5.0	LOS A	0.0	0.3	0.21	0.53	0.21	31.3
12	R2	All MCs	1	0.0	1	0.0	0.009	6.6	LOS A	0.0	0.3	0.21	0.53	0.21	35.6
Approach			12	18.2	12	18.2	0.009	5.9	LOS A	0.0	0.3	0.21	0.53	0.21	37.9
All Vehicles			700	11.6	700	11.6	0.334	4.6	NA	1.5	11.2	0.23	0.45	0.25	41.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. PM_Sloane-Braidwood (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Braidwood Rd															
4	L2	All MCs	145	31.2	145	31.2	0.713	17.0	LOS B	7.8	62.3	0.83	1.17	1.75	30.8
5	T1	All MCs	52	4.1	52	4.1	0.713	22.4	LOS B	7.8	62.3	0.83	1.17	1.75	32.6
6	R2	All MCs	181	9.3	181	9.3	0.713	27.7	LOS B	7.8	62.3	0.83	1.17	1.75	32.2
Approach			378	17.0	378	17.0	0.713	22.9	LOS B	7.8	62.3	0.83	1.17	1.75	31.7
NorthEast: Sloane St															
7	L2	All MCs	183	5.7	183	5.7	0.248	6.4	LOS A	1.2	9.0	0.31	0.40	0.31	47.3
8	T1	All MCs	157	4.7	157	4.7	0.248	0.7	LOS A	1.2	9.0	0.31	0.40	0.31	50.8
9	R2	All MCs	38	5.6	38	5.6	0.248	6.6	LOS A	1.2	9.0	0.31	0.40	0.31	45.4
Approach			378	5.3	378	5.3	0.248	4.0	NA	1.2	9.0	0.31	0.40	0.31	48.4
NorthWest: Mundy St															
10	L2	All MCs	17	6.3	17	6.3	0.165	9.4	LOS A	0.6	4.6	0.53	0.99	0.53	38.5
11	T1	All MCs	72	13.2	72	13.2	0.165	12.9	LOS A	0.6	4.6	0.53	0.99	0.53	38.6
12	R2	All MCs	9	11.1	9	11.1	0.165	14.2	LOS A	0.6	4.6	0.53	0.99	0.53	37.1
Approach			98	11.8	98	11.8	0.165	12.4	LOS A	0.6	4.6	0.53	0.99	0.53	38.5
SouthWest: Sloane St															
1	L2	All MCs	13	0.0	13	0.0	0.207	6.5	LOS A	0.8	6.2	0.20	0.24	0.20	50.7
2	T1	All MCs	235	6.7	235	6.7	0.207	0.4	LOS A	0.8	6.2	0.20	0.24	0.20	55.9
3	R2	All MCs	74	54.3	74	54.3	0.207	7.1	LOS A	0.8	6.2	0.20	0.24	0.20	40.2
Approach			321	17.4	321	17.4	0.207	2.2	NA	0.8	6.2	0.20	0.24	0.20	50.8
All Vehicles			1175	12.9	1175	12.9	0.713	10.3	NA	7.8	62.3	0.47	0.65	0.76	40.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. PM_Bungonia-Forbes (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Bungonia Rd															
5	T1	All MCs	222	21.3	222	21.3	0.138	0.1	LOS A	0.1	0.8	0.04	0.05	0.04	59.3
6	R2	All MCs	13	0.0	13	0.0	0.138	6.2	LOS A	0.1	0.8	0.04	0.05	0.04	55.8
Approach			235	20.2	235	20.2	0.138	0.4	NA	0.1	0.8	0.04	0.05	0.04	59.1
North: Forbes St															
7	L2	All MCs	17	0.0	17	0.0	0.014	8.7	LOS A	0.1	0.4	0.28	0.85	0.28	48.4
9	R2	All MCs	16	13.3	16	13.3	0.025	10.8	LOS A	0.1	0.6	0.45	0.91	0.45	49.2
Approach			33	6.5	33	6.5	0.025	9.7	LOS A	0.1	0.6	0.36	0.88	0.36	48.9
West: Bungonia Rd															
10	L2	All MCs	24	4.3	24	4.3	0.113	5.6	LOS A	0.0	0.0	0.00	0.08	0.00	56.5
11	T1	All MCs	165	26.8	165	26.8	0.113	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	58.8
Approach			189	23.9	189	23.9	0.113	0.7	NA	0.0	0.0	0.00	0.08	0.00	58.4
All Vehicles			457	20.7	457	20.7	0.138	1.2	NA	0.1	0.8	0.05	0.12	0.05	57.8

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 4 [4. PM_Bungonia-Memorial (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bungonia Rd															
1a	L1	All MCs	198	23.4	198	23.4	0.122	5.6	LOS A	0.0	0.2	0.01	0.60	0.01	44.8
3	R2	All MCs	2	50.0	2	50.0	0.122	6.2	LOS A	0.0	0.2	0.01	0.60	0.01	41.3
Approach			200	23.7	200	23.7	0.122	5.6	NA	0.0	0.2	0.01	0.60	0.01	44.8
East: Memorial Rd															
4	L2	All MCs	2	0.0	2	0.0	0.042	5.7	LOS A	0.1	1.0	0.34	0.60	0.34	47.8
6a	R1	All MCs	37	2.9	37	2.9	0.042	6.4	LOS A	0.1	1.0	0.34	0.60	0.34	45.4
Approach			39	2.7	39	2.7	0.042	6.4	LOS A	0.1	1.0	0.34	0.60	0.34	45.5
NorthWest: Bungonia Rd															
27a	L1	All MCs	138	7.6	138	7.6	0.118	5.4	LOS A	0.4	3.2	0.02	0.58	0.02	45.4
29a	R1	All MCs	44	76.2	44	76.2	0.118	5.9	LOS A	0.4	3.2	0.02	0.58	0.02	44.3
Approach			182	24.3	182	24.3	0.118	5.5	NA	0.4	3.2	0.02	0.58	0.02	45.1
All Vehicles			421	22.0	421	22.0	0.122	5.6	NA	0.4	3.2	0.04	0.59	0.04	45.0

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 5 [5. PM_Hume-Garoorigang (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Garoorigang Rd															
5	T1	All MCs	3	0.0	3	0.0	0.128	0.5	LOS A	0.6	5.2	0.25	0.56	0.25	54.4
6	R2	All MCs	181	23.3	181	23.3	0.128	6.2	LOS A	0.6	5.2	0.25	0.56	0.25	46.8
Approach			184	22.9	184	22.9	0.128	6.1	NA	0.6	5.2	0.25	0.56	0.25	46.9
North: Hume St															
7	L2	All MCs	109	41.3	109	41.3	0.098	6.2	LOS A	0.4	3.8	0.15	0.54	0.15	46.6
9	R2	All MCs	12	18.2	12	18.2	0.098	7.1	LOS A	0.4	3.8	0.15	0.54	0.15	47.4
Approach			121	39.1	121	39.1	0.098	6.3	LOS A	0.4	3.8	0.15	0.54	0.15	46.7
West: Mazamet Rd															
10	L2	All MCs	63	11.7	63	11.7	0.062	5.7	LOS A	0.0	0.0	0.00	0.33	0.00	51.5
11	T1	All MCs	48	0.0	48	0.0	0.062	0.0	LOS A	0.0	0.0	0.00	0.33	0.00	57.2
Approach			112	6.6	112	6.6	0.062	3.2	NA	0.0	0.0	0.00	0.33	0.00	54.4
All Vehicles			417	23.2	417	23.2	0.128	5.4	NA	0.6	5.2	0.16	0.49	0.16	49.0

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 6.1512 [6. PM_Lagoon-Union (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 173 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Union St															
1	L2	All MCs	35	3.0	35	3.0	0.580	63.0	LOS E	21.9	159.1	0.92	0.79	0.92	22.8
2	T1	All MCs	271	4.7	271	4.7	* 0.580	57.4	LOS E	21.9	159.1	0.92	0.79	0.92	20.8
3	R2	All MCs	156	19.6	156	19.6	0.152	20.2	LOS B	5.2	42.7	0.44	0.69	0.44	42.2
Approach			461	9.6	461	9.6	0.580	45.2	LOS D	21.9	159.1	0.75	0.76	0.75	27.3
East: Sydney Rd															
4	L2	All MCs	124	13.6	124	13.6	0.236	33.1	LOS C	8.5	65.6	0.73	0.74	0.73	32.0
5	T1	All MCs	168	1.3	168	1.3	0.236	54.2	LOS D	8.8	65.6	0.78	0.66	0.78	29.2
6	R2	All MCs	172	6.1	172	6.1	* 0.528	62.3	LOS E	12.3	90.5	0.90	0.82	0.90	21.9
Approach			464	6.3	464	6.3	0.528	51.5	LOS D	12.3	90.5	0.81	0.74	0.81	27.1
North: Union St															
7	L2	All MCs	141	17.2	141	17.2	0.660	65.8	LOS E	24.9	189.5	0.93	0.83	0.93	22.6
8	T1	All MCs	200	5.3	200	5.3	* 0.660	60.2	LOS E	24.9	189.5	0.93	0.83	0.93	20.5
9	R2	All MCs	147	12.1	147	12.1	0.287	58.7	LOS E	9.4	72.7	0.81	0.78	0.81	15.5
Approach			488	10.8	488	10.8	0.660	61.4	LOS E	24.9	189.5	0.90	0.81	0.90	19.0
West: Lagoon St															
10	L2	All MCs	101	1.0	101	1.0	0.085	17.4	LOS B	3.1	21.7	0.39	0.67	0.39	30.1
11	T1	All MCs	176	3.0	176	3.0	0.149	46.8	LOS D	5.3	38.1	0.76	0.61	0.76	29.5
12	R2	All MCs	17	0.0	17	0.0	0.058	61.0	LOS E	1.1	7.5	0.79	0.70	0.79	22.7
Approach			294	2.2	294	2.2	0.149	37.5	LOS C	5.3	38.1	0.64	0.64	0.64	28.6
All Vehicles			1707	7.8	1707	7.8	0.660	50.2	LOS D	24.9	189.5	0.79	0.75	0.79	25.0

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Union St												
P1	Full	1	1	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
East: Sydney Rd												

P2 Full	3	3	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
North: Union St											
P3 Full	1	1	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
West: Lagoon St											
P4 Full	1	1	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85
All Pedestrians	6	6	80.6	LOS F	0.0	0.0	0.97	0.97	234.5	200.0	0.85

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

MOVEMENT SUMMARY

Site: 7 [7. PM_Sloane-Garoorigang (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Garoorigang St															
1	L2	All MCs	33	3.2	33	3.2	0.047	5.6	LOS A	0.0	0.0	0.00	0.22	0.00	55.1
2	T1	All MCs	56	0.0	56	0.0	0.047	0.0	LOS A	0.0	0.0	0.00	0.22	0.00	57.8
Approach			88	1.2	88	1.2	0.047	2.1	NA	0.0	0.0	0.00	0.22	0.00	56.8
North: Sloane St															
8	T1	All MCs	14	15.4	14	15.4	0.112	0.4	LOS A	0.5	4.6	0.22	0.53	0.22	54.2
9	R2	All MCs	149	26.8	149	26.8	0.112	6.1	LOS A	0.5	4.6	0.22	0.53	0.22	51.1
Approach			163	25.8	163	25.8	0.112	5.7	NA	0.5	4.6	0.22	0.53	0.22	51.4
West: Garoorigang Rd															
10	L2	All MCs	113	39.3	113	39.3	0.130	6.3	LOS A	0.5	4.6	0.18	0.55	0.18	50.6
12	R2	All MCs	44	0.0	44	0.0	0.130	6.5	LOS A	0.5	4.6	0.18	0.55	0.18	51.3
Approach			157	28.2	157	28.2	0.130	6.3	LOS A	0.5	4.6	0.18	0.55	0.18	50.8
All Vehicles			408	21.4	408	21.4	0.130	5.1	NA	0.5	4.6	0.16	0.47	0.16	52.1

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 8 [8. PM_Windellama-Rifle (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Rd															
2	T1	All MCs	192	23.1	192	23.1	0.118	0.0	LOS A	0.0	0.4	0.02	0.03	0.02	59.8
3	R2	All MCs	5	40.0	5	40.0	0.118	6.5	LOS A	0.0	0.4	0.02	0.03	0.02	54.9
Approach			197	23.5	197	23.5	0.118	0.2	NA	0.0	0.4	0.02	0.03	0.02	59.6
East: Rifle Range Rd															
4	L2	All MCs	4	0.0	4	0.0	0.016	6.1	LOS A	0.1	0.4	0.36	0.60	0.36	51.7
6	R2	All MCs	9	22.2	9	22.2	0.016	7.8	LOS A	0.1	0.4	0.36	0.60	0.36	50.5
Approach			14	15.4	14	15.4	0.016	7.2	LOS A	0.1	0.4	0.36	0.60	0.36	50.9
North: Windellama Rd															
7	L2	All MCs	11	0.0	11	0.0	0.102	5.6	LOS A	0.0	0.0	0.00	0.04	0.00	57.0
8	T1	All MCs	159	27.8	159	27.8	0.102	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.5
Approach			169	26.1	169	26.1	0.102	0.4	NA	0.0	0.0	0.00	0.04	0.00	59.3
All Vehicles			380	24.4	380	24.4	0.118	0.5	NA	0.1	0.4	0.03	0.05	0.03	59.1

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 9 [9. PM_Windellama-Site Access (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Road															
2	T1	All MCs	100	28.4	100	28.4	0.062	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	59.9
3	R2	All MCs	1	0.0	1	0.0	0.062	5.5	LOS A	0.0	0.1	0.01	0.01	0.01	57.1
Approach			101	28.1	101	28.1	0.062	0.1	NA	0.0	0.1	0.01	0.01	0.01	59.9
East: Site Access															
4	L2	All MCs	1	0.0	1	0.0	0.072	8.4	LOS A	0.3	2.5	0.39	0.91	0.39	50.2
6	R2	All MCs	47	33.3	47	33.3	0.072	11.4	LOS A	0.3	2.5	0.39	0.91	0.39	48.8
Approach			48	32.6	48	32.6	0.072	11.4	LOS A	0.3	2.5	0.39	0.91	0.39	48.8
North: Windellama Road															
7	L2	All MCs	17	93.8	17	93.8	0.015	6.6	LOS A	0.0	0.0	0.00	0.56	0.00	49.2
8	T1	All MCs	86	32.9	86	32.9	0.054	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			103	42.9	103	42.9	0.054	1.1	NA	0.0	0.0	0.00	0.09	0.00	57.9
All Vehicles			253	35.0	253	35.0	0.072	2.7	NA	0.3	2.5	0.08	0.22	0.08	56.6

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 1 [1. SAT_Braidwood-Bungonia (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Braidwood Rd															
1	L2	All MCs	1	0.0	1	0.0	0.054	5.8	LOS A	0.1	0.4	0.04	0.06	0.04	25.4
2	T1	All MCs	89	7.1	89	7.1	0.054	0.0	LOS A	0.1	0.4	0.04	0.06	0.04	58.3
3	R2	All MCs	7	14.3	7	14.3	0.054	5.9	LOS A	0.1	0.4	0.04	0.06	0.04	45.2
Approach			98	7.5	98	7.5	0.054	0.5	NA	0.1	0.4	0.04	0.06	0.04	57.2
East: Bungonia Rd															
4	L2	All MCs	5	20.0	5	20.0	0.004	4.5	LOS A	0.0	0.1	0.20	0.50	0.20	33.8
5	T1	All MCs	1	0.0	1	0.0	0.313	4.8	LOS A	1.3	10.7	0.48	0.71	0.52	31.2
6	R2	All MCs	216	18.5	216	18.5	0.313	7.0	LOS A	1.3	10.7	0.48	0.71	0.52	35.6
Approach			222	18.5	222	18.5	0.313	7.0	LOS A	1.3	10.7	0.47	0.71	0.51	35.6
North: Braidwood Rd															
7	L2	All MCs	212	20.9	212	20.9	0.207	5.8	LOS A	1.0	8.0	0.06	0.36	0.06	36.2
8	T1	All MCs	103	4.1	103	4.1	0.207	0.0	LOS A	1.0	8.0	0.06	0.36	0.06	51.4
9	R2	All MCs	3	0.0	3	0.0	0.207	5.6	LOS A	1.0	8.0	0.06	0.36	0.06	37.4
Approach			318	15.2	318	15.2	0.207	4.0	NA	1.0	8.0	0.06	0.36	0.06	40.5
West: Ottiwell St															
10	L2	All MCs	5	0.0	5	0.0	0.006	5.8	LOS A	0.0	0.1	0.20	0.53	0.20	42.8
11	T1	All MCs	1	0.0	1	0.0	0.006	4.9	LOS A	0.0	0.1	0.20	0.53	0.20	31.4
12	R2	All MCs	1	0.0	1	0.0	0.006	6.4	LOS A	0.0	0.1	0.20	0.53	0.20	35.8
Approach			7	0.0	7	0.0	0.006	5.7	LOS A	0.0	0.1	0.20	0.53	0.20	40.9
All Vehicles			645	15.0	645	15.0	0.313	4.5	NA	1.3	10.7	0.20	0.44	0.21	40.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2. SAT_Sloane-Braidwood (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
SouthEast: Braidwood Rd															
4	L2	All MCs	100	37.9	100	37.9	0.527	13.8	LOS A	3.6	28.8	0.68	1.05	1.08	33.8
5	T1	All MCs	47	4.4	47	4.4	0.527	16.7	LOS B	3.6	28.8	0.68	1.05	1.08	36.4
6	R2	All MCs	146	5.8	146	5.8	0.527	19.3	LOS B	3.6	28.8	0.68	1.05	1.08	36.3
Approach			294	16.5	294	16.5	0.527	17.0	LOS B	3.6	28.8	0.68	1.05	1.08	35.5
NorthEast: Sloane St															
7	L2	All MCs	165	4.5	165	4.5	0.249	6.3	LOS A	1.2	8.6	0.28	0.36	0.28	48.2
8	T1	All MCs	192	1.6	192	1.6	0.249	0.5	LOS A	1.2	8.6	0.28	0.36	0.28	51.7
9	R2	All MCs	41	0.0	41	0.0	0.249	6.1	LOS A	1.2	8.6	0.28	0.36	0.28	47.0
Approach			398	2.6	398	2.6	0.249	3.5	NA	1.2	8.6	0.28	0.36	0.28	49.6
NorthWest: Mundy St															
10	L2	All MCs	16	0.0	16	0.0	0.089	8.7	LOS A	0.3	2.3	0.46	0.93	0.46	40.4
11	T1	All MCs	42	5.0	42	5.0	0.089	11.6	LOS A	0.3	2.3	0.46	0.93	0.46	40.7
12	R2	All MCs	4	0.0	4	0.0	0.089	12.1	LOS A	0.3	2.3	0.46	0.93	0.46	39.5
Approach			62	3.4	62	3.4	0.089	10.9	LOS A	0.3	2.3	0.46	0.93	0.46	40.6
SouthWest: Sloane St															
1	L2	All MCs	4	0.0	4	0.0	0.184	6.5	LOS A	0.9	6.7	0.29	0.35	0.29	48.7
2	T1	All MCs	165	1.9	165	1.9	0.184	0.6	LOS A	0.9	6.7	0.29	0.35	0.29	53.6
3	R2	All MCs	108	32.0	108	32.0	0.184	6.8	LOS A	0.9	6.7	0.29	0.35	0.29	42.7
Approach			278	13.6	278	13.6	0.184	3.1	NA	0.9	6.7	0.29	0.35	0.29	48.5
All Vehicles			1032	9.6	1032	9.6	0.527	7.7	NA	3.6	28.8	0.41	0.59	0.52	43.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 3 [3. SAT_Bungonia-Forbes (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Bungonia Rd															
5	T1	All MCs	164	21.2	164	21.2	0.098	0.0	LOS A	0.0	0.2	0.01	0.01	0.01	59.7
6	R2	All MCs	3	0.0	3	0.0	0.098	5.7	LOS A	0.0	0.2	0.01	0.01	0.01	56.3
Approach			167	20.8	167	20.8	0.098	0.1	NA	0.0	0.2	0.01	0.01	0.01	59.7
North: Forbes St															
7	L2	All MCs	17	12.5	17	12.5	0.015	9.3	LOS A	0.1	0.4	0.29	0.87	0.29	46.9
9	R2	All MCs	22	0.0	22	0.0	0.028	9.2	LOS A	0.1	0.6	0.39	0.89	0.39	50.4
Approach			39	5.4	39	5.4	0.028	9.3	LOS A	0.1	0.6	0.35	0.88	0.35	49.1
West: Bungonia Rd															
10	L2	All MCs	17	6.3	17	6.3	0.105	5.6	LOS A	0.0	0.0	0.00	0.06	0.00	56.6
11	T1	All MCs	162	23.4	162	23.4	0.105	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	59.1
Approach			179	21.8	179	21.8	0.105	0.6	NA	0.0	0.0	0.00	0.06	0.00	58.8
All Vehicles			385	19.7	385	19.7	0.105	1.2	NA	0.1	0.6	0.04	0.12	0.04	57.8

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

MOVEMENT SUMMARY

Site: 4 [4. SAT_Bungonia-Memorial (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

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

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Bungonia Rd															
1a	L1	All MCs	175	21.1	175	21.1	0.106	5.6	LOS A	0.0	0.1	0.00	0.60	0.00	45.2
3	R2	All MCs	2	0.0	2	0.0	0.106	5.4	LOS A	0.0	0.1	0.00	0.60	0.00	48.6
Approach			177	20.8	177	20.8	0.106	5.6	NA	0.0	0.1	0.00	0.60	0.00	45.2
East: Memorial Rd															
4	L2	All MCs	2	0.0	2	0.0	0.008	6.1	LOS A	0.0	0.2	0.33	0.56	0.33	47.8
6a	R1	All MCs	6	0.0	6	0.0	0.008	6.3	LOS A	0.0	0.2	0.33	0.56	0.33	45.8
Approach			8	0.0	8	0.0	0.008	6.3	LOS A	0.0	0.2	0.33	0.56	0.33	46.4
NorthWest: Bungonia Rd															
27a	L1	All MCs	5	0.0	5	0.0	0.104	5.3	LOS A	0.5	4.3	0.02	0.56	0.02	47.1
29a	R1	All MCs	163	22.6	163	22.6	0.104	5.2	LOS A	0.5	4.3	0.02	0.56	0.02	47.6
Approach			168	21.9	168	21.9	0.104	5.2	NA	0.5	4.3	0.02	0.56	0.02	47.6
All Vehicles			354	20.8	354	20.8	0.106	5.4	NA	0.5	4.3	0.02	0.58	0.02	46.4

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

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

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

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 5 [5. SAT_Hume-Garoorigang (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Garoorigang Rd															
5	T1	All MCs	5	0.0	5	0.0	0.100	0.0	LOS A	0.5	4.1	0.07	0.56	0.07	55.0
6	R2	All MCs	153	24.1	153	24.1	0.100	5.8	LOS A	0.5	4.1	0.07	0.56	0.07	47.4
Approach			158	23.3	158	23.3	0.100	5.6	NA	0.5	4.1	0.07	0.56	0.07	47.8
North: Hume St															
7	L2	All MCs	144	24.8	144	24.8	0.101	5.8	LOS A	0.4	3.7	0.03	0.56	0.03	47.9
9	R2	All MCs	2	0.0	2	0.0	0.101	5.6	LOS A	0.4	3.7	0.03	0.56	0.03	49.0
Approach			146	24.5	146	24.5	0.101	5.8	LOS A	0.4	3.7	0.03	0.56	0.03	47.9
West: Mazamet Rd															
10	L2	All MCs	11	0.0	11	0.0	0.008	5.5	LOS A	0.0	0.0	0.00	0.42	0.00	51.2
11	T1	All MCs	4	0.0	4	0.0	0.008	0.0	LOS A	0.0	0.0	0.00	0.42	0.00	56.3
Approach			15	0.0	15	0.0	0.008	4.0	NA	0.0	0.0	0.00	0.42	0.00	53.1
All Vehicles			319	22.8	319	22.8	0.101	5.6	NA	0.5	4.1	0.05	0.55	0.05	48.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 6.1512 [6. SAT_Lagoon-Union (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 112 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Union St															
1	L2	All MCs	8	0.0	8	0.0	0.439	42.3	LOS C	10.3	73.3	0.88	0.74	0.88	29.0
2	T1	All MCs	218	1.9	218	1.9	*0.439	36.8	LOS C	10.3	73.3	0.88	0.74	0.88	27.1
3	R2	All MCs	134	4.7	134	4.7	0.108	11.8	LOS A	2.4	17.5	0.36	0.66	0.36	47.2
Approach			360	2.9	360	2.9	0.439	27.6	LOS B	10.3	73.3	0.69	0.71	0.69	34.7
East: Sydney Rd															
4	L2	All MCs	123	4.3	123	4.3	0.222	17.6	LOS B	5.8	42.0	0.68	0.70	0.68	39.0
5	T1	All MCs	204	0.0	204	0.0	0.222	31.3	LOS C	5.9	42.0	0.72	0.62	0.72	37.6
6	R2	All MCs	125	3.4	125	3.4	*0.300	35.2	LOS C	5.1	36.7	0.78	0.77	0.78	29.8
Approach			453	2.1	453	2.1	0.300	28.7	LOS C	5.9	42.0	0.72	0.68	0.72	35.8
North: Union St															
7	L2	All MCs	156	5.4	156	5.4	0.864	60.8	LOS E	19.7	141.9	1.00	1.01	1.21	22.9
8	T1	All MCs	175	1.2	175	1.2	*0.864	55.2	LOS D	19.7	141.9	1.00	1.01	1.21	20.6
9	R2	All MCs	129	0.8	129	0.8	0.341	47.0	LOS D	6.1	43.1	0.90	0.78	0.90	17.6
Approach			460	2.5	460	2.5	0.864	54.8	LOS D	19.7	141.9	0.97	0.94	1.12	20.8
West: Lagoon St															
10	L2	All MCs	82	0.0	82	0.0	0.071	14.2	LOS A	1.7	12.0	0.41	0.67	0.41	32.7
11	T1	All MCs	166	1.3	166	1.3	0.117	25.0	LOS B	3.0	21.0	0.70	0.55	0.70	38.2
12	R2	All MCs	11	0.0	11	0.0	0.030	34.3	LOS C	0.4	2.8	0.72	0.67	0.72	29.9
Approach			259	0.8	259	0.8	0.117	21.9	LOS B	3.0	21.0	0.61	0.59	0.61	36.7
All Vehicles			1532	2.2	1532	2.2	0.864	35.1	LOS C	19.7	141.9	0.77	0.75	0.82	30.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Union St												
P1	Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
East: Sydney Rd												

P2 Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
North: Union St											
P3 Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
West: Lagoon St											
P4 Full	1	1	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98
All Pedestrians	4	4	50.2	LOS E	0.0	0.0	0.95	0.95	204.0	200.0	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 7 [7. SAT_Sloane-Garoorigang (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Garoorigang St															
1	L2	All MCs	37	0.0	37	0.0	0.033	5.5	LOS A	0.0	0.0	0.00	0.35	0.00	54.1
2	T1	All MCs	25	4.2	25	4.2	0.033	0.0	LOS A	0.0	0.0	0.00	0.35	0.00	56.4
Approach			62	1.7	62	1.7	0.033	3.3	NA	0.0	0.0	0.00	0.35	0.00	55.0
North: Sloane St															
8	T1	All MCs	21	0.0	21	0.0	0.095	0.3	LOS A	0.5	3.9	0.18	0.49	0.18	54.8
9	R2	All MCs	119	31.0	119	31.0	0.095	6.1	LOS A	0.5	3.9	0.18	0.49	0.18	51.5
Approach			140	26.3	140	26.3	0.095	5.2	NA	0.5	3.9	0.18	0.49	0.18	51.9
West: Garoorigang Rd															
10	L2	All MCs	88	40.5	88	40.5	0.119	6.1	LOS A	0.5	4.0	0.13	0.55	0.13	50.8
12	R2	All MCs	57	0.0	57	0.0	0.119	6.2	LOS A	0.5	4.0	0.13	0.55	0.13	51.5
Approach			145	24.6	145	24.6	0.119	6.2	LOS A	0.5	4.0	0.13	0.55	0.13	51.0
All Vehicles			347	21.2	347	21.2	0.119	5.3	NA	0.5	4.0	0.12	0.49	0.12	52.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 8 [8. SAT_Windellama-Rifle (*) (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Weekday PM Flows Used
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Rd															
2	T1	All MCs	158	28.0	158	28.0	0.101	0.1	LOS A	0.1	0.4	0.03	0.04	0.03	59.7
3	R2	All MCs	5	40.0	5	40.0	0.101	7.0	LOS A	0.1	0.4	0.03	0.04	0.03	54.9
Approach			163	28.4	163	28.4	0.101	0.3	NA	0.1	0.4	0.03	0.04	0.03	59.6
East: Rifle Range Rd															
4	L2	All MCs	4	0.0	4	0.0	0.016	6.2	LOS A	0.1	0.4	0.37	0.60	0.37	51.7
6	R2	All MCs	9	22.2	9	22.2	0.016	7.8	LOS A	0.1	0.4	0.37	0.60	0.37	50.5
Approach			14	15.4	14	15.4	0.016	7.3	LOS A	0.1	0.4	0.37	0.60	0.37	50.9
North: Windellama Rd															
7	L2	All MCs	11	0.0	11	0.0	0.119	5.6	LOS A	0.0	0.0	0.00	0.03	0.00	57.1
8	T1	All MCs	193	23.0	193	23.0	0.119	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	59.6
Approach			203	21.8	203	21.8	0.119	0.3	NA	0.0	0.0	0.00	0.03	0.00	59.4
All Vehicles			380	24.4	380	24.4	0.119	0.5	NA	0.1	0.4	0.03	0.05	0.03	59.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 9 [9. SAT_Windellama-Site Access (Site Folder: Existing + Dev + Merino to/from Hume Street)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

NA
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Windellama Road															
2	T1	All MCs	118	24.1	118	24.1	0.071	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	59.9
3	R2	All MCs	1	0.0	1	0.0	0.071	5.6	LOS A	0.0	0.1	0.01	0.01	0.01	57.1
Approach			119	23.9	119	23.9	0.071	0.1	NA	0.0	0.1	0.01	0.01	0.01	59.9
East: Site Access															
4	L2	All MCs	1	0.0	1	0.0	0.059	8.5	LOS A	0.2	2.2	0.45	0.93	0.45	49.5
6	R2	All MCs	32	50.0	32	50.0	0.059	13.3	LOS A	0.2	2.2	0.45	0.93	0.45	47.6
Approach			33	48.4	33	48.4	0.059	13.2	LOS A	0.2	2.2	0.45	0.93	0.45	47.6
North: Windellama Road															
7	L2	All MCs	32	50.0	32	50.0	0.023	6.1	LOS A	0.0	0.0	0.00	0.57	0.00	50.9
8	T1	All MCs	122	23.3	122	23.3	0.072	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			154	28.8	154	28.8	0.072	1.3	NA	0.0	0.0	0.00	0.12	0.00	57.8
All Vehicles			305	29.0	305	29.0	0.072	2.1	NA	0.2	2.2	0.05	0.16	0.05	57.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

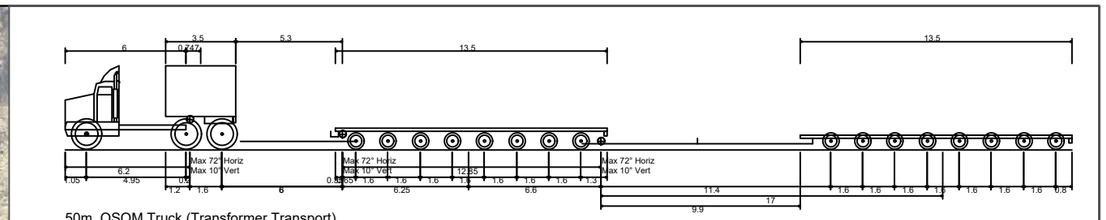
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Appendix C

Transport Route Swept Path Analysis



50m_OSOM Truck (Transformer Transport)

Overall Length	50.050m
Overall Width	4.880m
Overall Body Height	4.170m
Min Body Ground Clearance	0.300m
Track Width	4.270m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
500mm clearance		

HUME STREET

MAZAMET ROAD

GARROORIGANG ROAD

Date: 19 July 2024

Filename: 23042CAD003-240719-SWEPT PATH 50m TRUCK.dwg

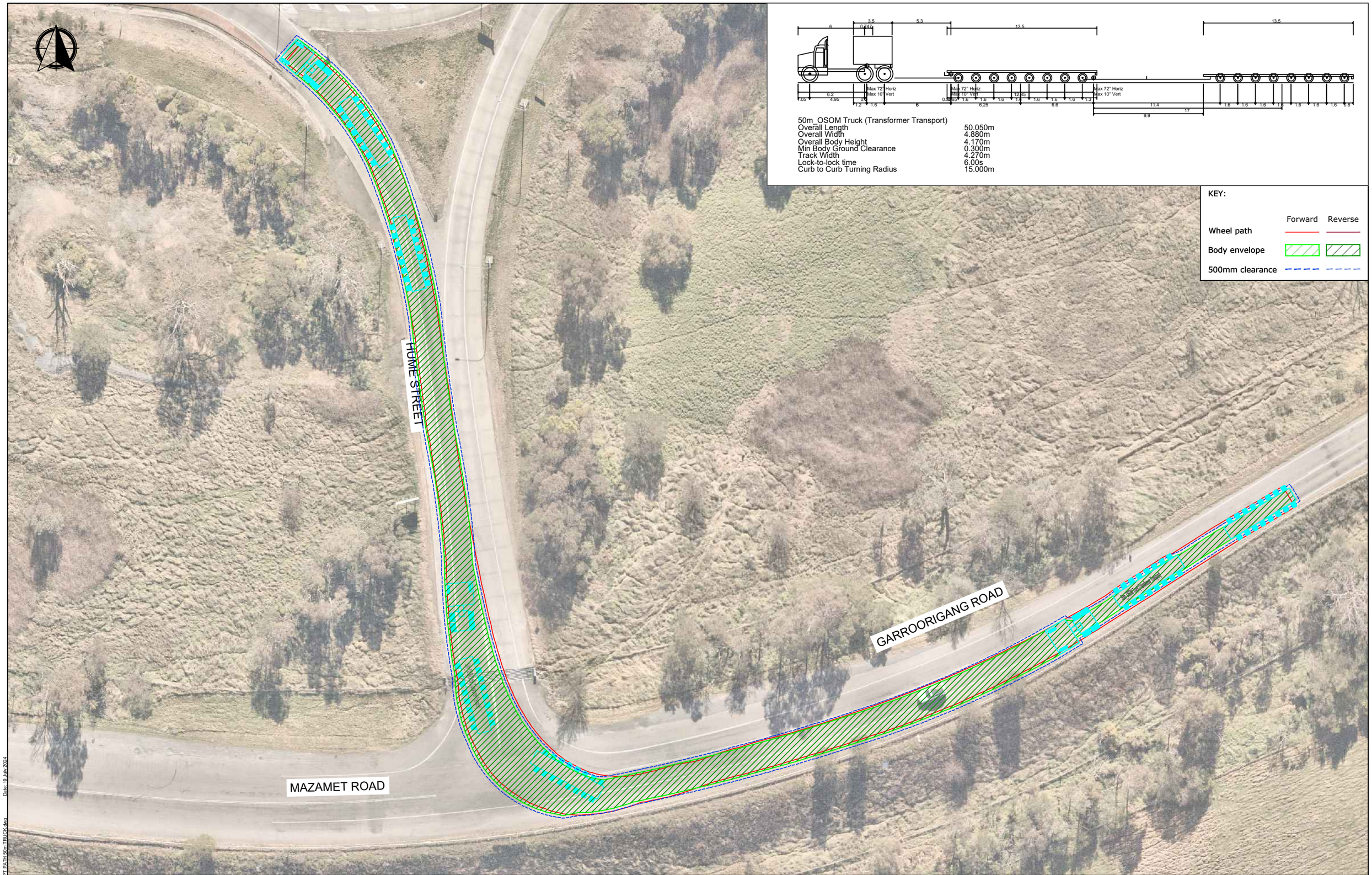
REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	JR	JR	19/07/24

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

TITLE: SWEPT PATH ANALYSIS - SOUTHERN ROUTE - HUME STREET/GARROORIGANG ROAD - INBOUND
50M OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No.	23042CAD003 FIGURE 1
DATE STAMP	19 JULY 2024
PROJECT No.	23042
SCALE	1:600 @A3
REV.	A



50m_OSOM Truck (Transformer Transport)

Overall Length	50.050m
Overall Width	4.880m
Overall Body Height	4.170m
Min Body Ground Clearance	0.300m
Track Width	4.270m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
500mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	JR	JR	19/07/24

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

TITLE: SWEPT PATH ANALYSIS - SOUTHERN ROUTE - HUME STREET/GARROORIGANG ROAD - OUTBOUND
50M OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No. 23042CAD003 FIGURE 2

DATE STAMP: 19 JULY 2024

PROJECT No. 23042 | SCALE 1:600 @A3 | REV. A

Filename: 23042CAD003-240719-SWEPT PATH 50m TRUCK.dwg
Date: 19 July 2024

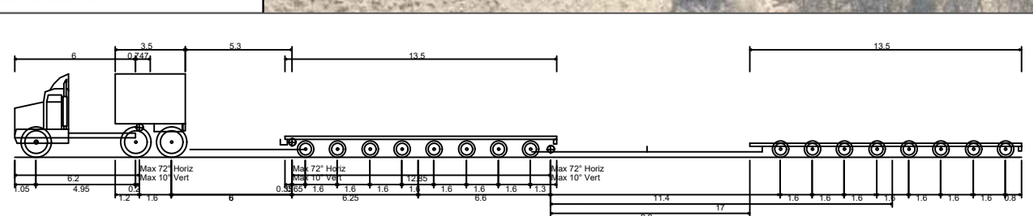
SLOANE STREET

GARROORIGANG ROAD

GARROORIGANG STREET

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
500mm clearance		



50m OSOM Truck (Transformer Transport)

Overall Length	50.050m
Overall Width	4.880m
Overall Body Height	4.170m
Min Body Ground Clearance	0.300m
Track Width	4.270m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	JR	JR	19/07/24

ttpp transport planning

PROJECT

GUNDARY SOLAR FARM

TITLE

SWEPT PATH ANALYSIS - SOUTHERN ROUTE - GARROORIGANG ROAD/SLOANE STREET - INBOUND
50M OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No. 23042CAD003
FIGURE 3

DATE STAMP 19 JULY 2024

PROJECT No. 23042 | SCALE 1:500 @A3 | REV. A

Filename: 23042CAD003-240719-SWEPT PATH-50m TRUCK.dwg Date: 19 July 2024

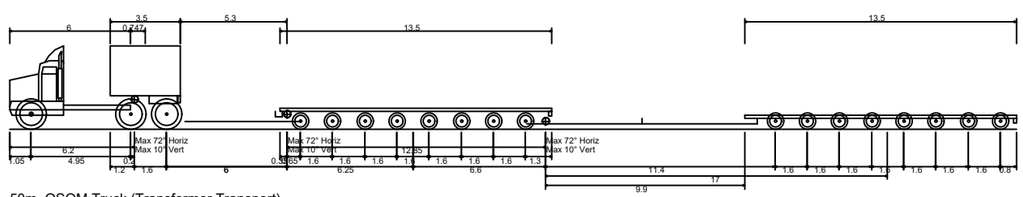
SLOANE STREET

GARROORIGANG ROAD

GARROORIGANG STREET

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
500mm clearance		



50m_OSOM Truck (Transformer Transport)

Overall Length	50.050m
Overall Width	4.880m
Overall Body Height	4.170m
Min Body Ground Clearance	0.300m
Track Width	4.270m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	JR	JR	19/07/24

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

TITLE: SWEPT PATH ANALYSIS - SOUTHERN ROUTE - GARROORIGANG ROAD/SLOANE STREET - OUTBOUND
50M OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No. 23042CAD003 FIGURE 4

DATE STAMP 19 JULY 2024

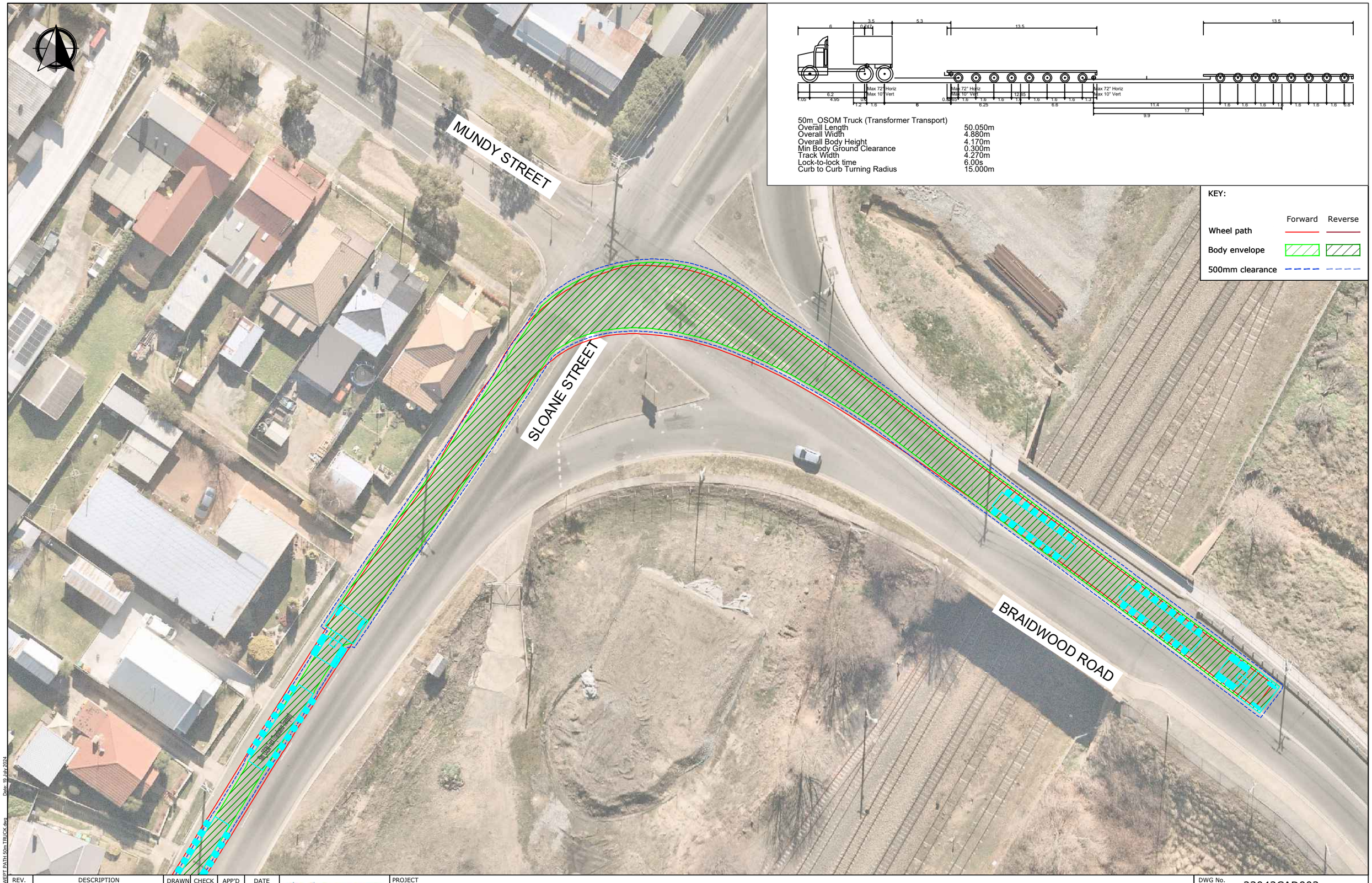
PROJECT No. 23042

SCALE 1:500 @A3

REV. A

Date: 19 July 2024

Filename: 23042CAD003-240719-SWEPT PATH 50m TRUCK.dwg



Date: 19 JULY 2024

Filename: 23042CAD003-240718-SWEPT PATH 50m TRUCK.dwg

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	JR	JR	19/07/24

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

TITLE: SWEPT PATH ANALYSIS - SOUTHERN ROUTE - SLOANE STREET/BRAIDWOOD ROAD - INBOUND
50M OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No. 23042CAD003 FIGURE 5

DATE STAMP 19 JULY 2024

PROJECT No. 23042

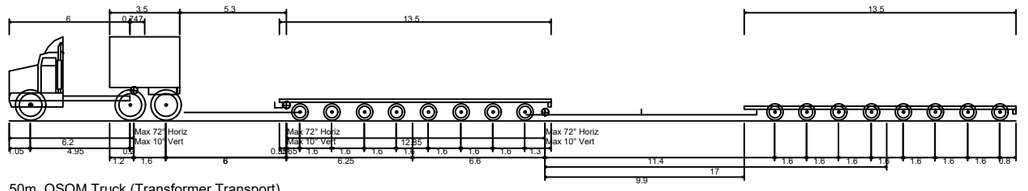
SCALE 1:500 @A3

REV. A

MUNDY STREET

SLOANE STREET

BRAIDWOOD ROAD



50m_OSOM Truck (Transformer Transport)

Overall Length	50.050m
Overall Width	4.880m
Overall Body Height	4.170m
Min Body Ground Clearance	0.300m
Track Width	4.270m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
500mm clearance		

Date: 19 July 2024

Filename: 23042CAD003-240718-SWEPT PATH 50m TRUCK.dwg

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	JR	JR	19/07/24

ttpp transport planning

PROJECT

GUNDARY SOLAR FARM

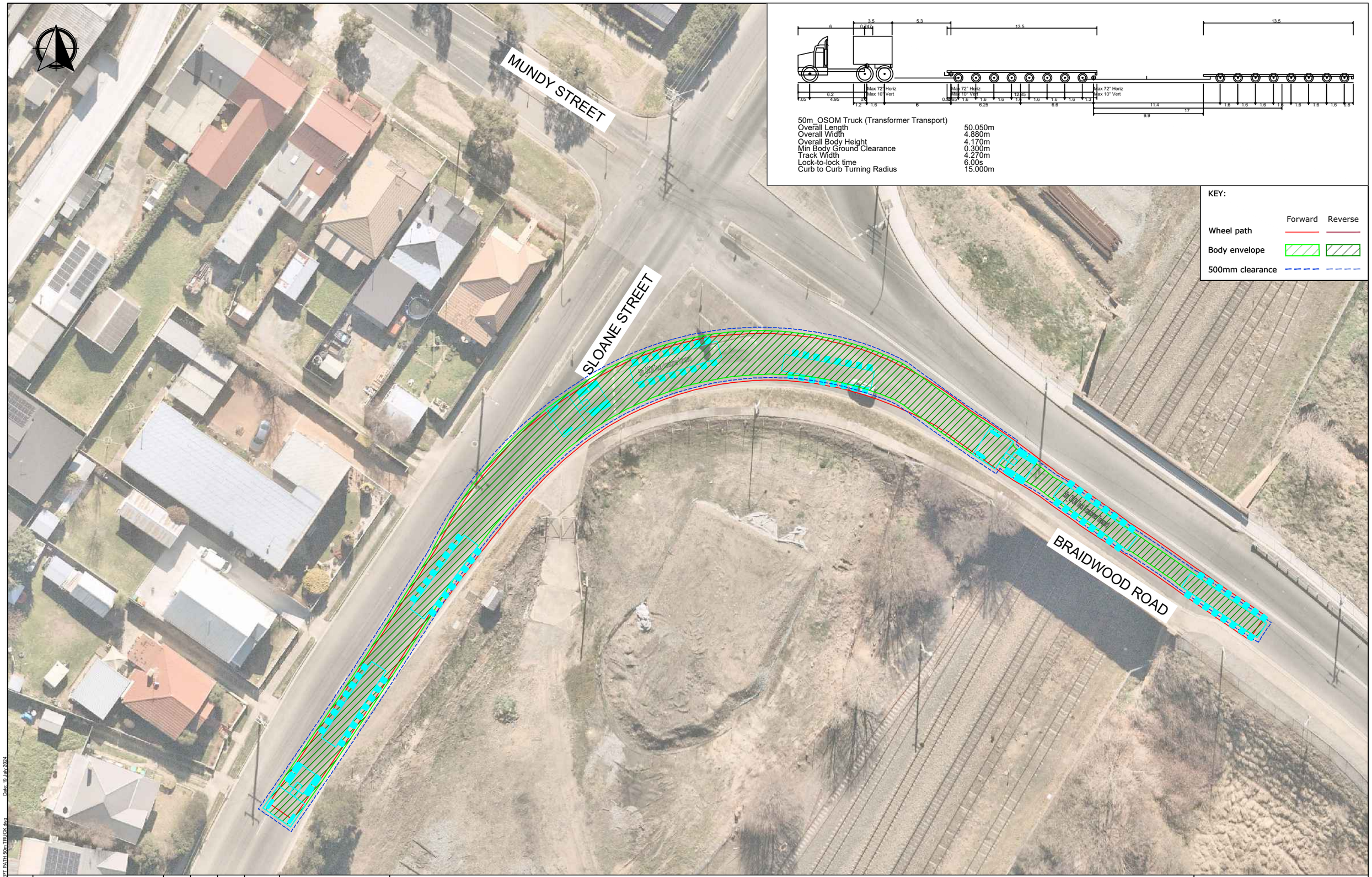
TITLE

SWEPT PATH ANALYSIS - SOUTHERN ROUTE - SLOANE STREET/BRAIDWOOD ROAD - INBOUND
50M OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No. 23042CAD003 FIGURE 6

DATE STAMP 19 JULY 2024

PROJECT No.	SCALE	REV.
23042	1:500 @A3	A



50m_OSOM Truck (Transformer Transport)

Overall Length	50.050m
Overall Width	4.880m
Overall Body Height	4.170m
Min Body Ground Clearance	0.300m
Track Width	4.270m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
500mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	JR	JR	19/07/24

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

TITLE: SWEPT PATH ANALYSIS - SOUTHERN ROUTE - SLOANE STREET/BRAIDWOOD ROAD - OUTBOUND
50M OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No. 23042CAD003 FIGURE 7

DATE STAMP: 19 JULY 2024

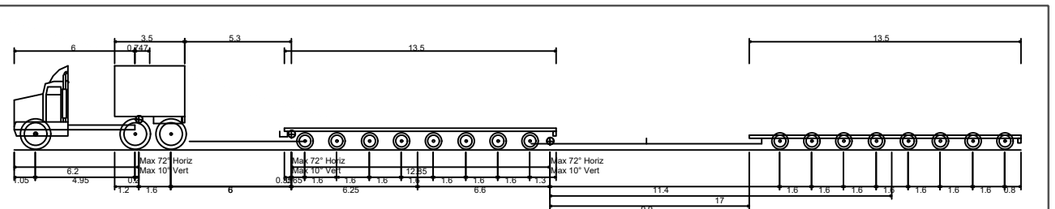
PROJECT No.	SCALE	REV.
23042	1:500 @A3	A

Filename: 23042CAD003-240719-SWEPT PATH 50m TRUCK.dwg Date: 19 July 2024

MUNDY STREET

SLOANE STREET

BRAIDWOOD ROAD



50m_OSOM Truck (Transformer Transport)

Overall Length	50.050m
Overall Width	4.880m
Overall Body Height	4.170m
Min Body Ground Clearance	0.300m
Track Width	4.270m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
500mm clearance		

Date: 19 July 2024

Filename: 23042CAD003-24071b-SWEPT PATH 50m TRUCK.dwg

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	JR	JR	19/07/24

ttpp transport planning

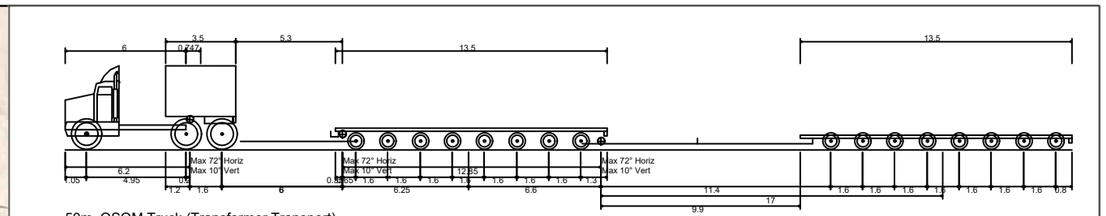
PROJECT: GUNDARY SOLAR FARM

TITLE: SWEPT PATH ANALYSIS - SOUTHERN ROUTE - SLOANE STREET/BRAIDWOOD ROAD - OUTBOUND
50M OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No. 23042CAD003 FIGURE 8

DATE STAMP 19 JULY 2024

PROJECT No. 23042 | SCALE 1:500 @A3 | REV. A



50m_OSOM Truck (Transformer Transport)

Overall Length	50.050m
Overall Width	4.880m
Overall Body Height	4.170m
Min Body Ground Clearance	0.300m
Track Width	4.270m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
500mm clearance		

BRAIDWOOD ROAD

OTTIWELL STREET

BUNGONIA ROAD

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	JR	JR	19/07/24

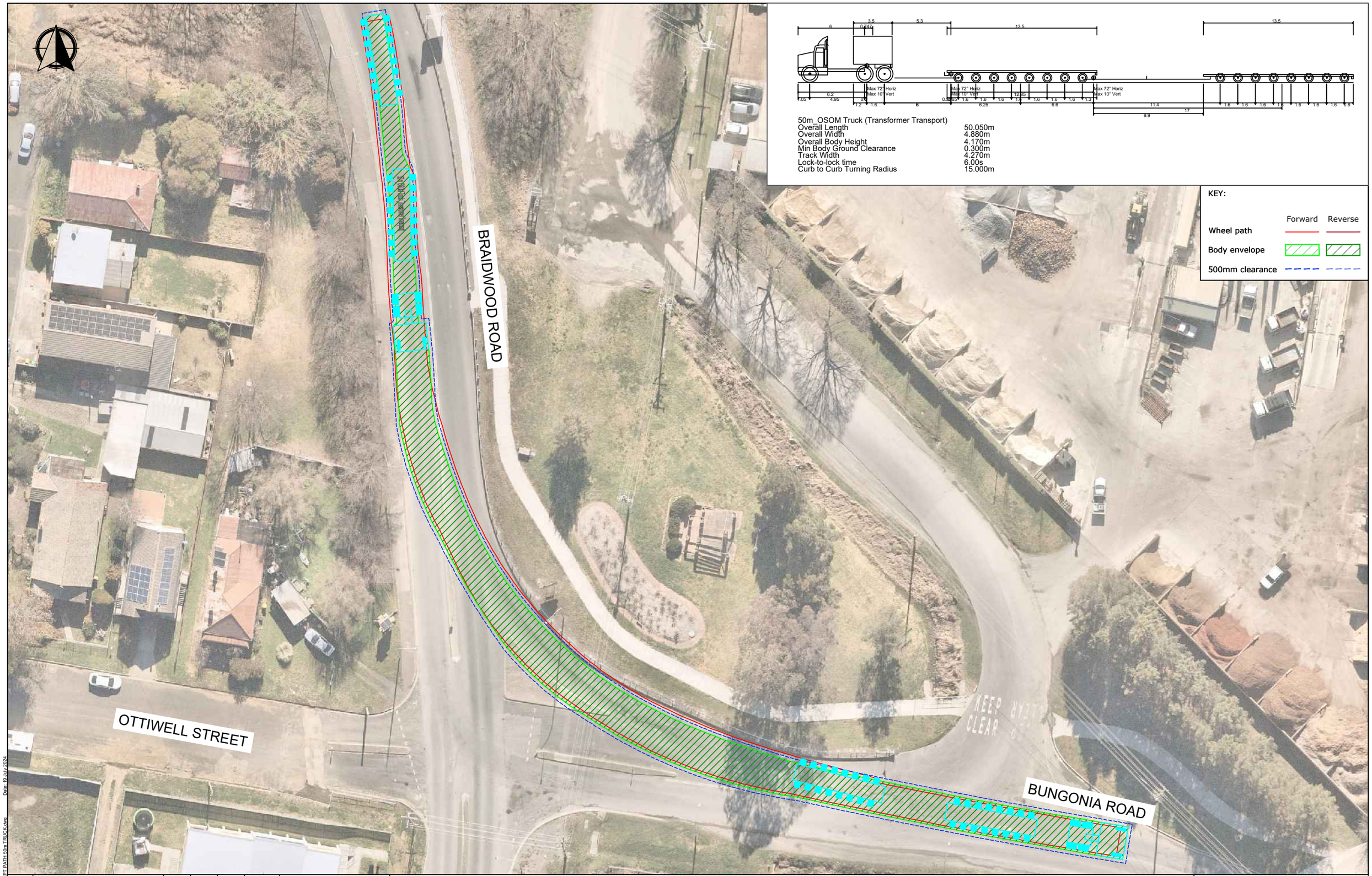
ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

TITLE: SWEPT PATH ANALYSIS - BRAIDWOOD ROAD/BUNGONIA ROAD - INBOUND
50M OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No.	23042CAD003 FIGURE 9		
DATE STAMP	19 JULY 2024		
PROJECT No.	23042	SCALE	1:500 @A3
REV.	A		

Filename: 23042CAD003-240719-SWEPT PATH 50m TRUCK.dwg
Date: 19 July 2024



50m_OSOM Truck (Transformer Transport)

Overall Length	50.050m
Overall Width	4.880m
Overall Body Height	4.170m
Min Body Ground Clearance	0.300m
Track Width	4.270m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
500mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	JR	JR	19/07/24

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

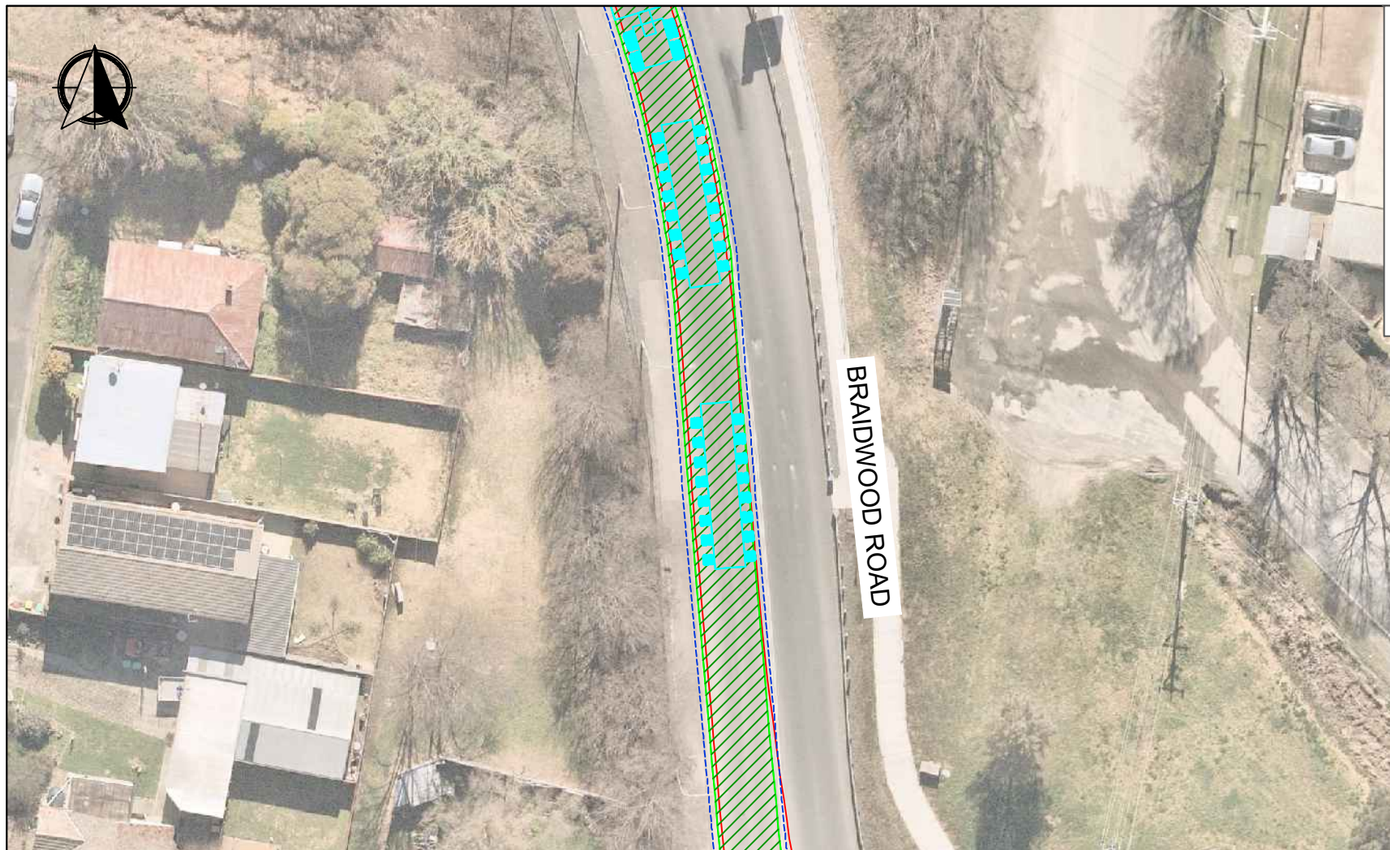
TITLE: SWEPT PATH ANALYSIS - BRAIDWOOD ROAD/BUNGONIA ROAD - INBOUND
50M OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No. 23042CAD003 FIGURE 10

DATE STAMP 19 JULY 2024

PROJECT No.	SCALE	REV.
23042	1:500 @A3	A

Filename: 23042CAD003-240718-SWEPT PATH 50m TRUCK.dwg
Date: 19 July 2024



50m_OSOM Truck (Transformer Transport)

Overall Length	50.050m
Overall Width	4.880m
Overall Body Height	4.170m
Min Body Ground Clearance	0.300m
Track Width	4.270m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
500mm clearance		

BRAIDWOOD ROAD

OTTIWELL STREET

BUNGONIA ROAD

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	JR	JR	19/07/24

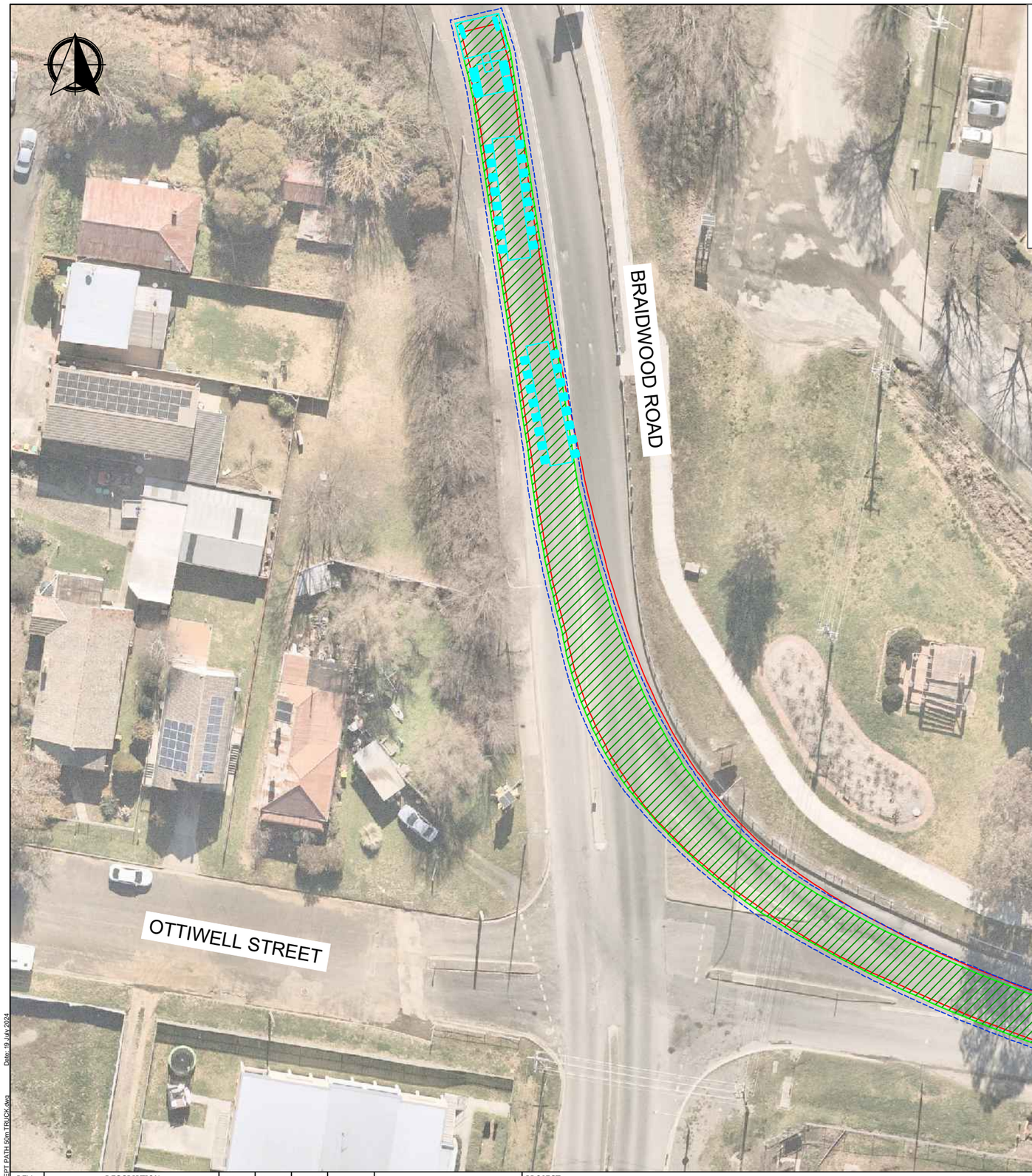
ttpp transport planning

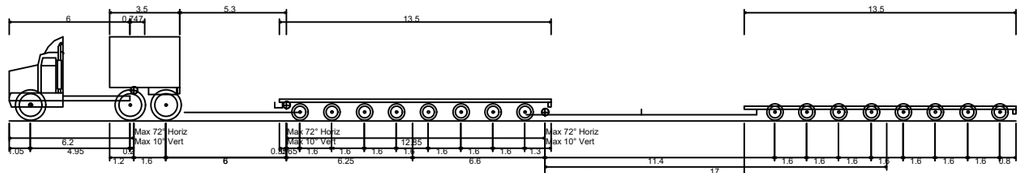
PROJECT: GUNDARY SOLAR FARM

TITLE: SWEPT PATH ANALYSIS - BRAIDWOOD ROAD/BUNGONIA ROAD - OUTBOUND
50M OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No.	23042CAD003 FIGURE 11
DATE STAMP	19 JULY 2024
PROJECT No.	23042
SCALE	1:500 @A3
REV.	A

Filename: 23042CAD003-240719-SWEPT PATH 50m TRUCK.dwg
Date: 19 July 2024





50m_OSOM Truck (Transformer Transport)

Overall Length	50.050m
Overall Width	4.880m
Overall Body Height	4.170m
Min Body Ground Clearance	0.300m
Track Width	4.270m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
500mm clearance		

BRAIDWOOD ROAD

OTTIWELL STREET

BUNGONIA ROAD

KEEP AWAY CLEAR

Date: 19 July 2024

Filename: 23042CAD003-240719-SWEPT PATH 50m TRUCK.dwg

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	JR	JR	19/07/24

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

TITLE: SWEPT PATH ANALYSIS - BRAIDWOOD ROAD/BUNGONIA ROAD - OUTBOUND
50M OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No. 23042CAD003
FIGURE 12

DATE STAMP: 19 JULY 2024

PROJECT No.	SCALE	REV.
23042	1:500 @A3	A

50m_OSOM Truck (Transformer Transport)

Overall Length	50.050m
Overall Width	4.880m
Overall Body Height	4.170m
Min Body Ground Clearance	0.300m
Track Width	4.270m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
500mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	JR	JR	19/07/24

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

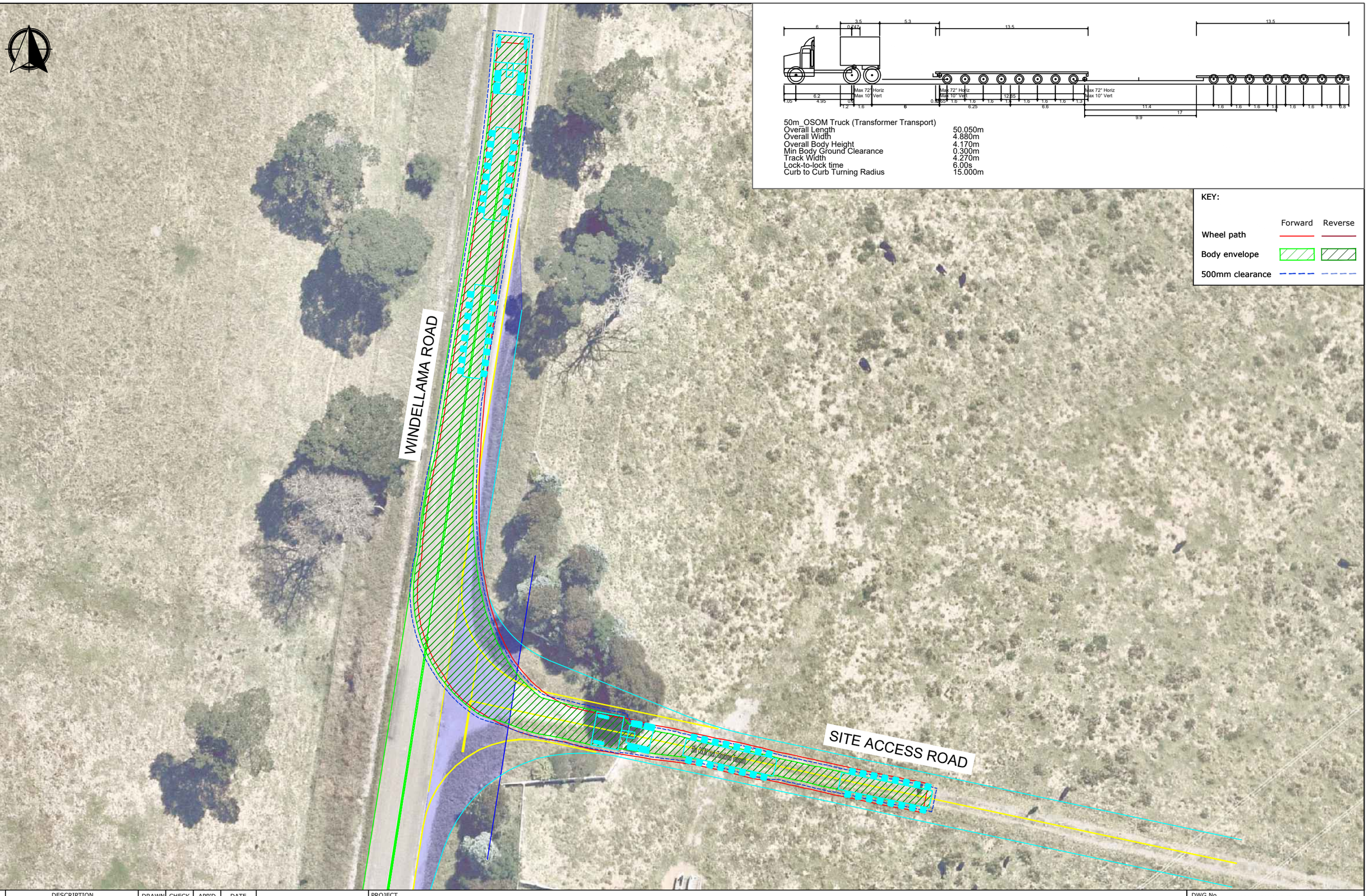
TITLE: SWEPT PATH ANALYSIS - SITE ACCESS - INBOUND
50M OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No. 23042CAD003 FIGURE 13

DATE STAMP 19 JULY 2024

PROJECT No. 23042 | SCALE 1:500 @A3 | REV. A

Filename: 23042CAD003-240719-SWEPT PATH 50m TRUCK.dwg Date: 19 July 2024



50m_OSOM Truck (Transformer Transport)

Overall Length	50.050m
Overall Width	4.880m
Overall Body Height	4.170m
Min Body Ground Clearance	0.300m
Track Width	4.270m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
500mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	JR	JR	19/07/24

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

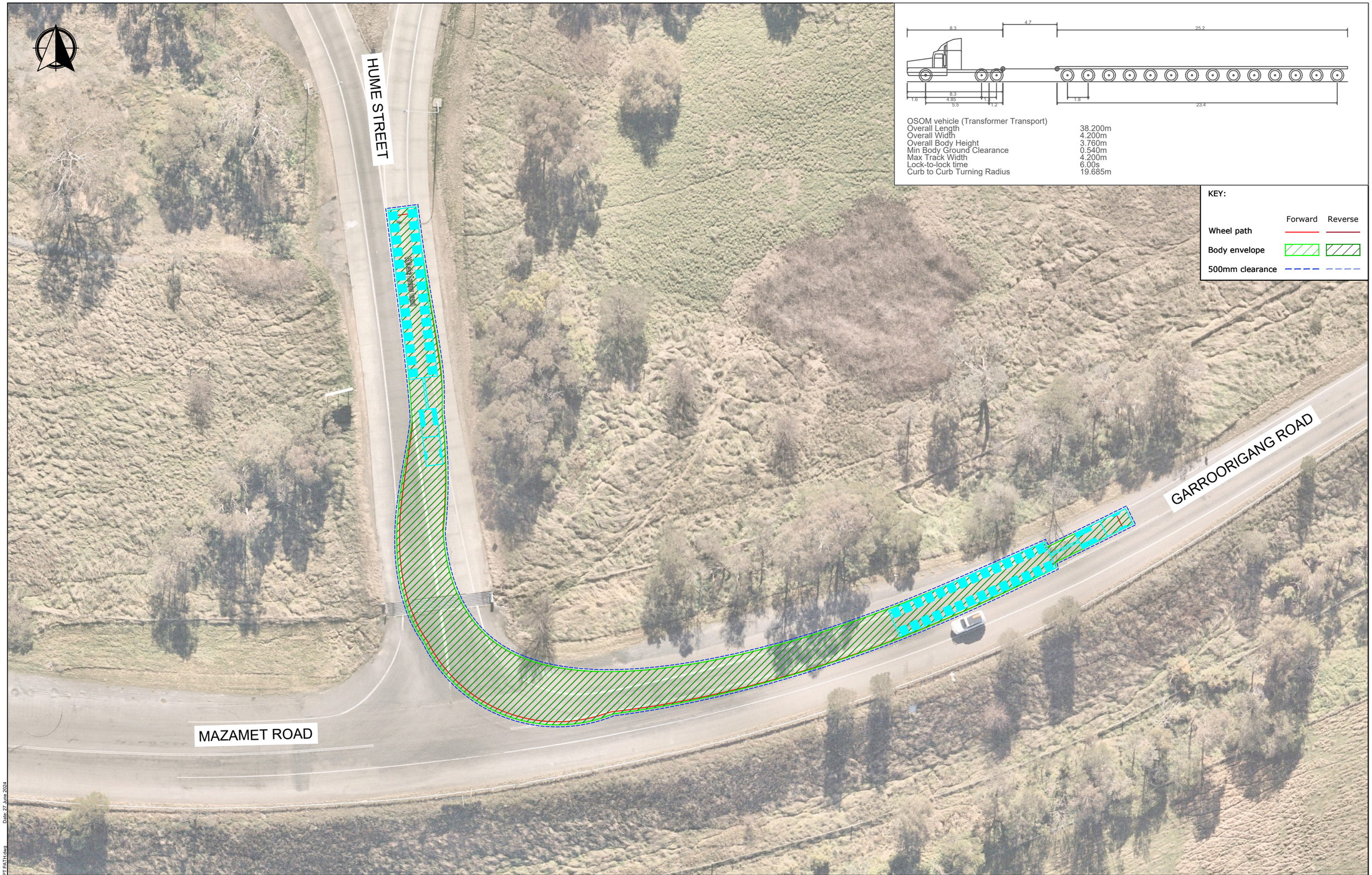
TITLE: SWEPT PATH ANALYSIS - SITE ACCESS - OUTBOUND
50M OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No. 23042CAD003 FIGURE 14

DATE STAMP 19 JULY 2024

PROJECT No. 23042 | SCALE 1:500 @A3 | REV. A

Filename: 23042CAD003-240719-SWEPT PATH 50m TRUCK.dwg Date: 19 July 2024



OSOM vehicle (Transformer Transport)

Overall Length	38.200m
Overall Width	4.200m
Overall Body Height	3.760m
Min Body Ground Clearance	0.540m
Max Track Width	4.200m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	19.685m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
500mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	JR	JR	27/08/24

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

TITLE: SWEPT PATH ANALYSIS - SOUTHERN ROUTE - HUME STREET/GARROORIGANG ROAD - INBOUND
38m OSOM VEHICLE (TRANSFORMER TRANSPORT)

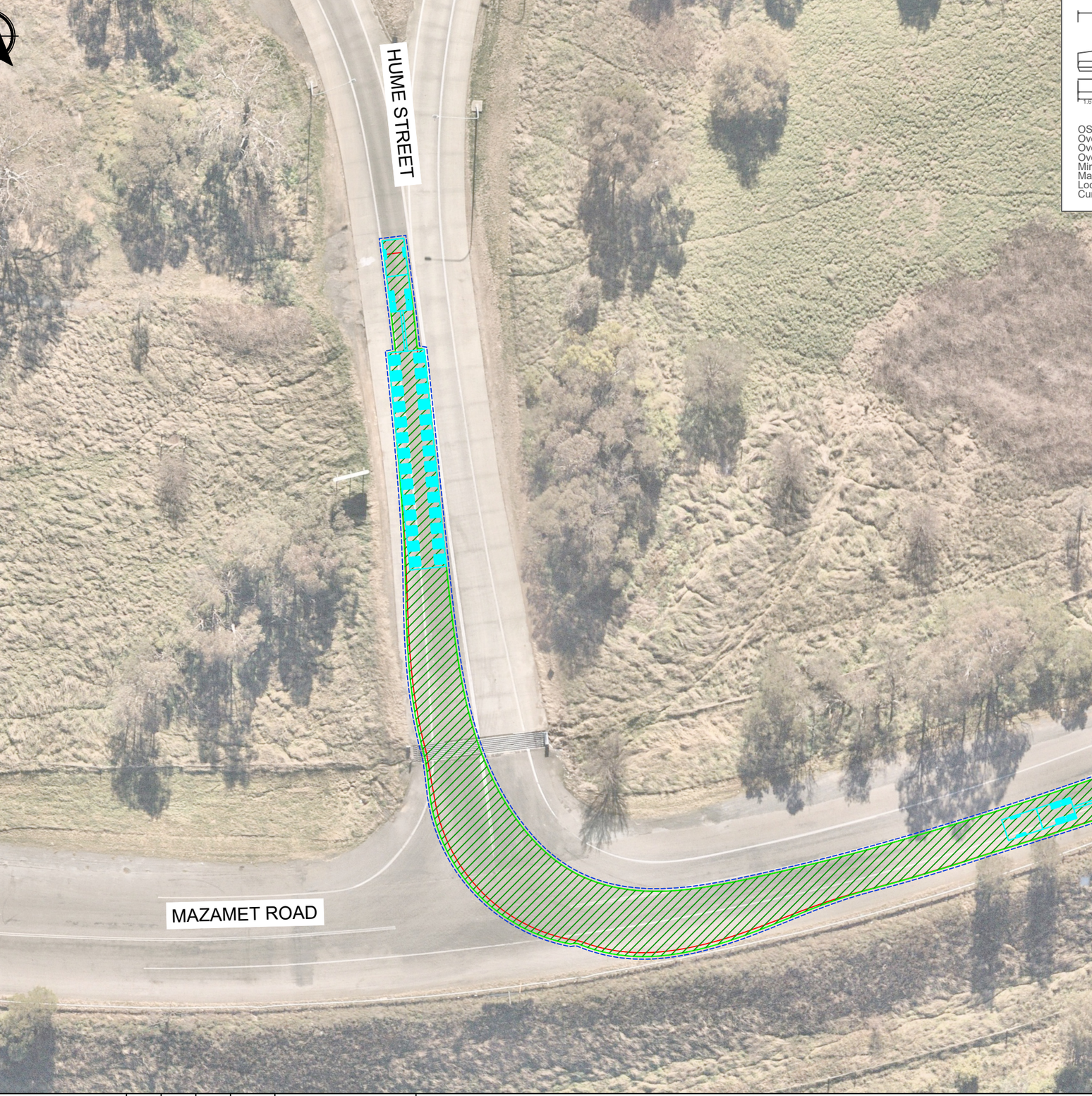
DWG No. 23042CAD002
FIGURE 1

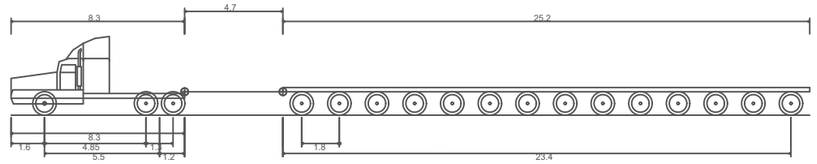
DATE STAMP: 27 AUGUST 2024

PROJECT No. 23042 | SCALE 1:500 @A3 | REV. A

Date: 27 June 2024

Filename: 23042CAD002-240627-SWEPT PATH.dwg





OSOM vehicle (Transformer Transport)

Overall Length	38.200m
Overall Width	4.200m
Overall Body Height	3.760m
Min Body Ground Clearance	0.540m
Max Track Width	4.200m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	19.685m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
500mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	JR	JR	27/08/24

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

TITLE: SWEPT PATH ANALYSIS - SOUTHERN ROUTE - HUME STREET/GARROORIGANG ROAD - OUTBOUND
38m OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No. 23042CAD002
FIGURE 2

DATE STAMP 27 AUGUST 2024

PROJECT No. 23042 | SCALE 1:500 @A3 | REV. A

Date: 27 June 2024

Filename: 23042CAD002-240627-SWEPT PATH.dwg

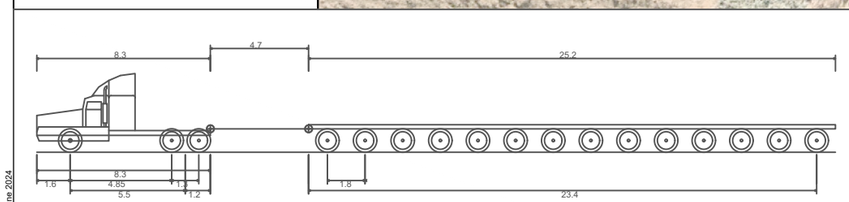
SLOANE STREET

GARROORIGANG ROAD

GARROORIGANG STREET

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



OSOM vehicle (Transformer Transport)

Overall Length	38.200m
Overall Width	4.200m
Overall Body Height	3.760m
Min Body Ground Clearance	0.540m
Max Track Width	4.200m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	19.685m

Date: 27 June 2024

Filename: 23042CAD002-240627-SWEPT PATH.dwg

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	JR	JR	27/08/24

ttpp transport planning

PROJECT

GUNDARY SOLAR FARM

TITLE

SWEPT PATH ANALYSIS - SOUTHERN ROUTE - GARROORIGANG ROAD/SLOANE STREET - INBOUND
38m OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No.	23042CAD002 FIGURE 3
DATE STAMP	27 AUGUST 2024
PROJECT No.	23042
SCALE	1:500 @A3
REV.	A

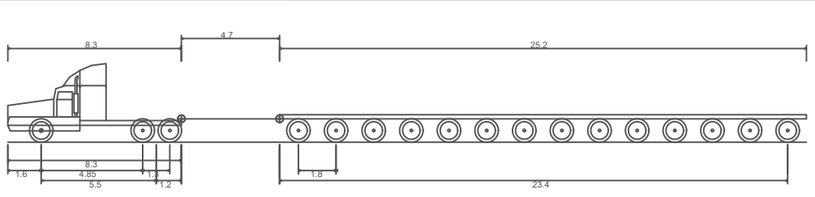
SLOANE STREET

GARROORIGANG ROAD

GARROORIGANG STREET

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



OSOM vehicle (Transformer Transport)

Overall Length	38.200m
Overall Width	4.200m
Overall Body Height	3.760m
Min Body Ground Clearance	0.540m
Max Track Width	4.200m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	19.685m

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	JR	JR	27/08/24

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

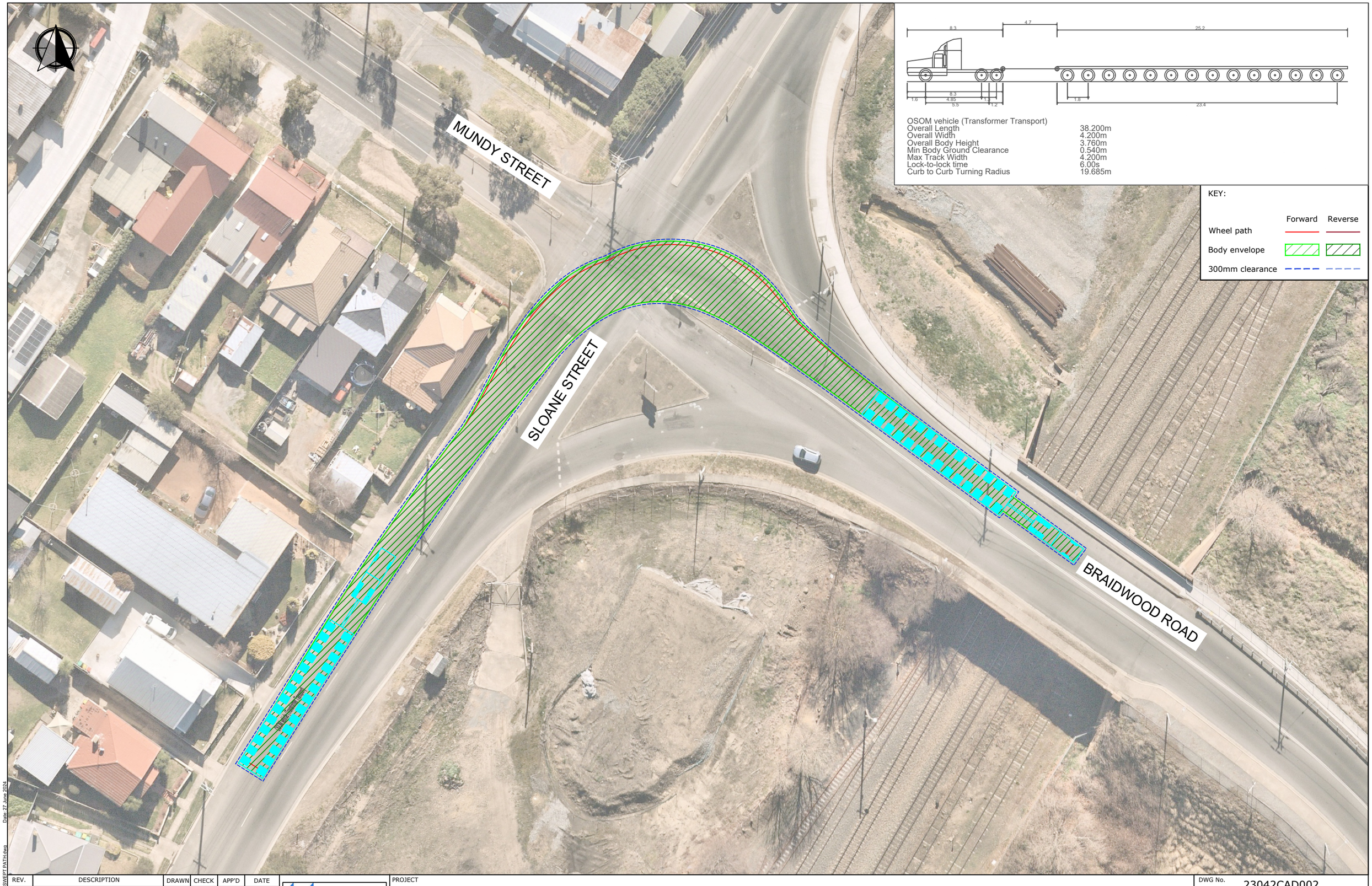
TITLE: SWEPT PATH ANALYSIS - SOUTHERN ROUTE - GARROORIGANG ROAD/SLOANE STREET - OUTBOUND
38m OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No. 23042CAD002
FIGURE 4

DATE STAMP: 27 AUGUST 2024

PROJECT No. 23042 | SCALE 1:500 @A3 | REV. A

Filename: 23042CAD002-240627-SWEPT PATH.dwg
Date: 27 June 2024



OSOM vehicle (Transformer Transport)

Overall Length	38.200m
Overall Width	4.200m
Overall Body Height	3.760m
Min Body Ground Clearance	0.540m
Max Track Width	4.200m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	19.685m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	JR	JR	27/08/24

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

TITLE: SWEPT PATH ANALYSIS - SOUTHERN ROUTE - SLOANE STREET/BRAIDWOOD ROAD - INBOUND
38m OSOM VEHICLE (TRANSFORMER TRANSPORT)

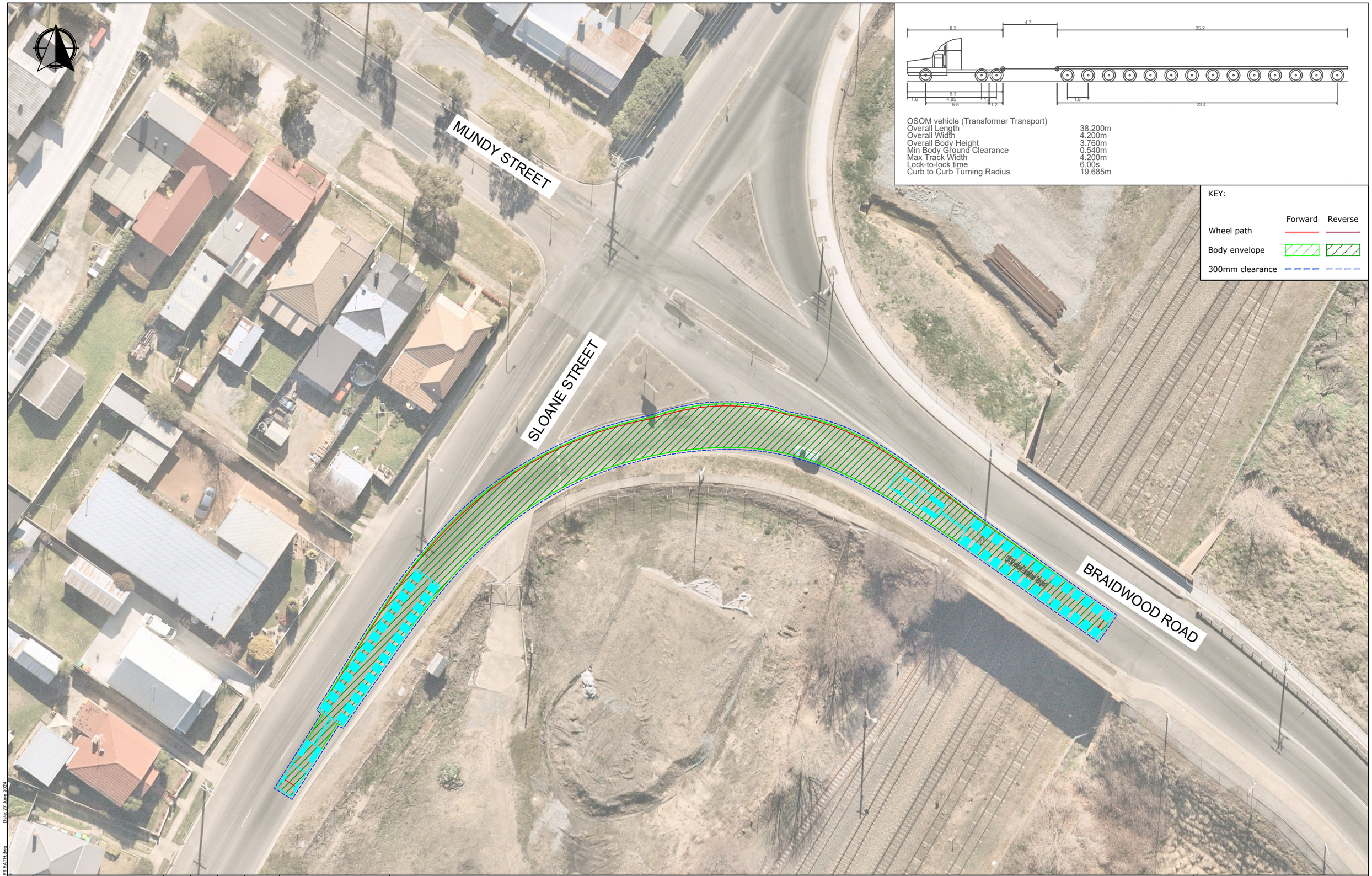
DWG No. 23042CAD002
FIGURE 5

DATE STAMP: 27 AUGUST 2024

PROJECT No.: 23042 | SCALE: 1:500 @A3 | REV.: A

Date: 27 June 2024

Filename: 23042CAD002-240627-SWEPT PATH.dwg



OSOM vehicle (Transformer Transport)	
Overall Length	38.200m
Overall Width	4.200m
Overall Body Height	3.760m
Min Body Ground Clearance	0.540m
Max Track Width	4.200m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	19.685m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	JR	JR	27/08/24

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

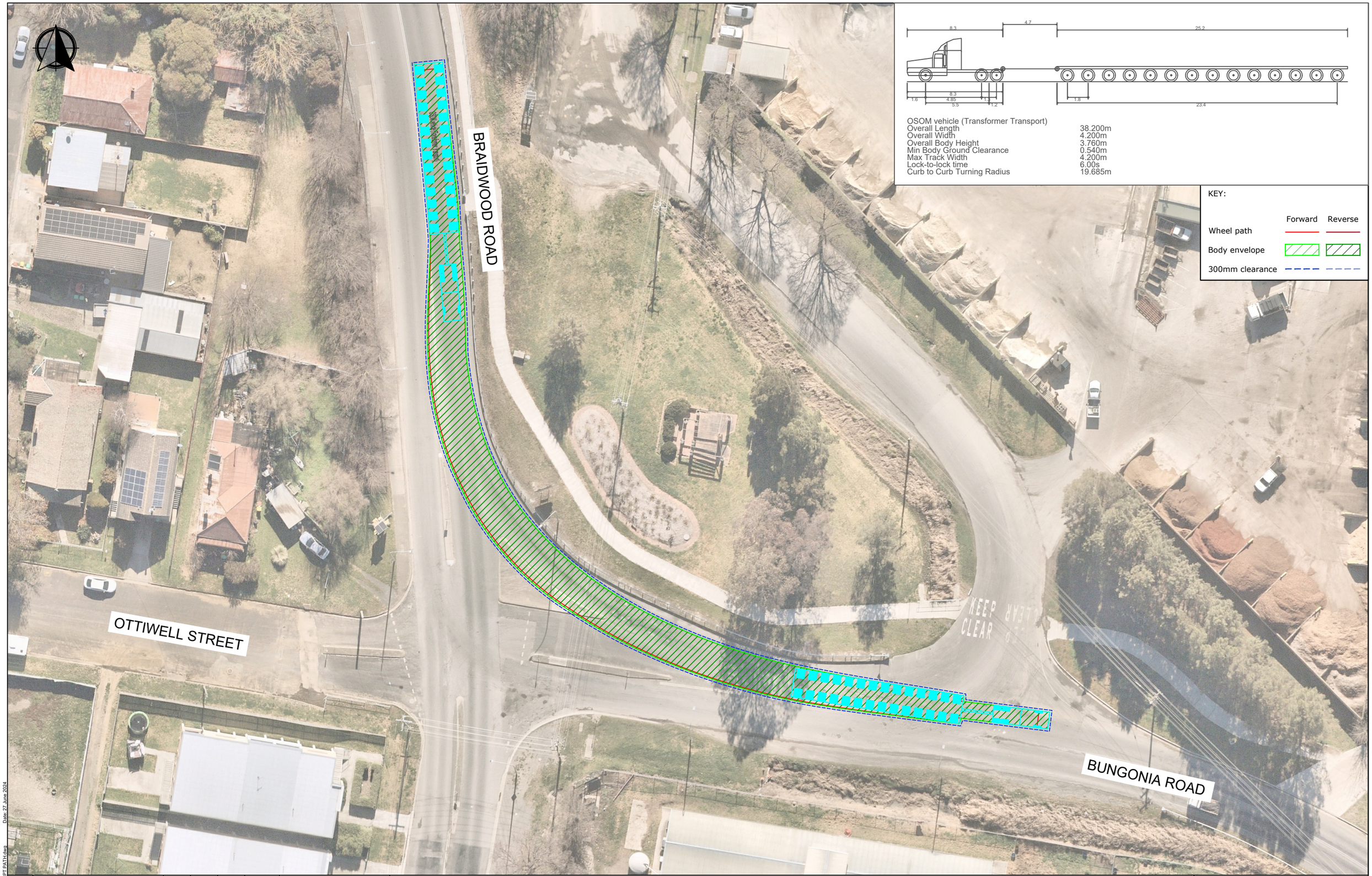
TITLE: SWEPT PATH ANALYSIS - SOUTHERN ROUTE - SLOANE STREET/BRAIDWOOD ROAD - OUTBOUND
38m OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No. 23042CAD002 FIGURE 6

DATE STAMP: 27 AUGUST 2024

PROJECT No.: 23042 | SCALE: 1:500 @A3 | REV.: A

Filename: 23042CAD002-240827-SWEPT PATH.dwg
Date: 27 June 2024



OSOM vehicle (Transformer Transport)

Overall Length	38.200m
Overall Width	4.200m
Overall Body Height	3.760m
Min Body Ground Clearance	0.540m
Max Track Width	4.200m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	19.685m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	JR	JR	27/08/24

ttpp transport planning

PROJECT

GUNDARY SOLAR FARM

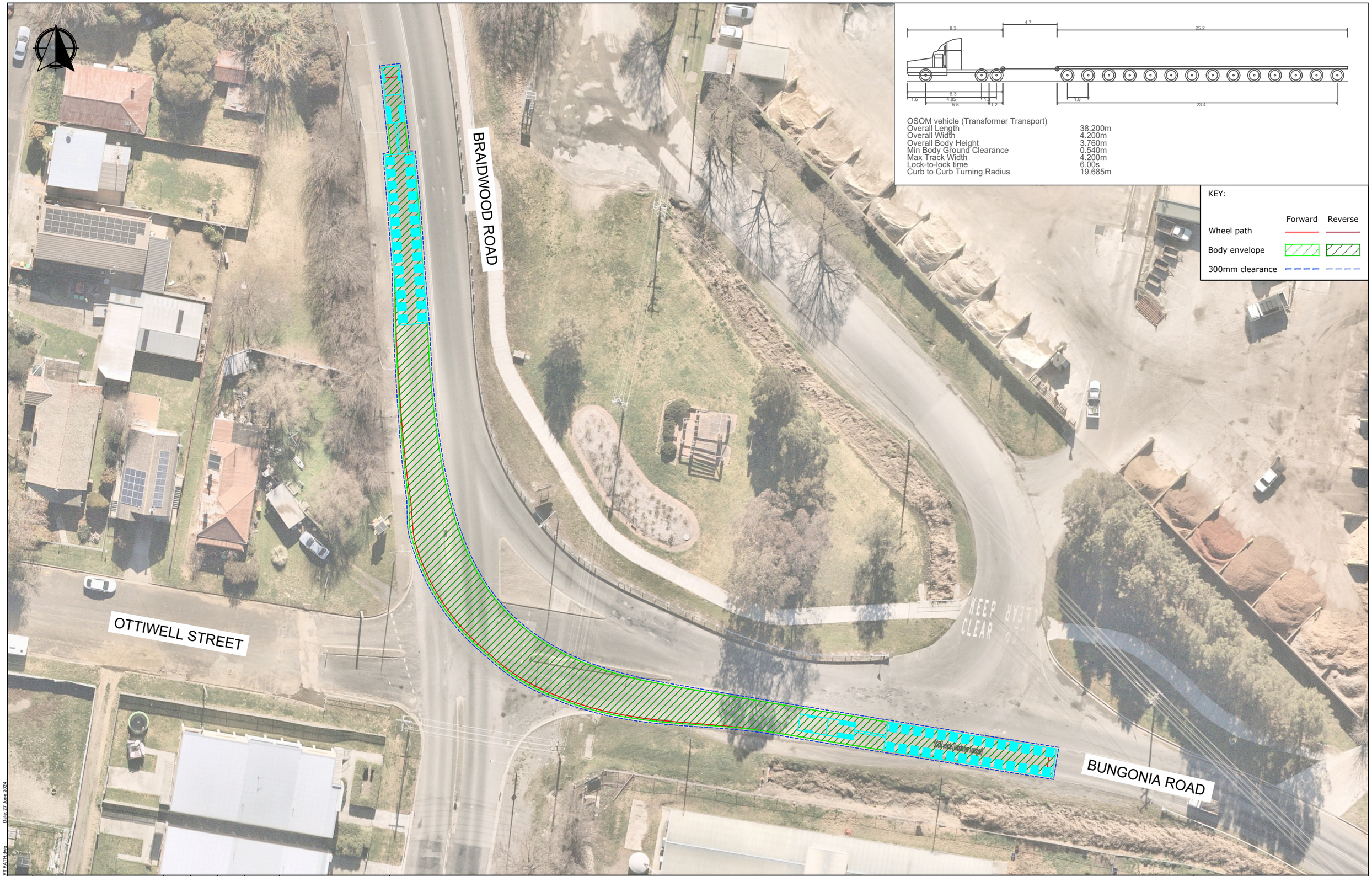
TITLE

SWEPT PATH ANALYSIS - BRAIDWOOD ROAD/BUNGONIA ROAD - INBOUND
38m OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No.	23042CAD002 FIGURE 7
DATE STAMP	27 AUGUST 2024
PROJECT No.	23042
SCALE	1:500 @A3
REV.	A

Date: 27 June 2024

Filename: 23042CAD002-240927-SWEPT PATH.dwg



OSOM vehicle (Transformer Transport)

Overall Length	38.200m
Overall Width	4.200m
Overall Body Height	3.760m
Min Body Ground Clearance	0.540m
Max Track Width	4.200m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	19.685m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

Date: 27 June 2024

Filename: 23042CAD002-240627-SWEPT PATH.dwg

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	JR	JR	27/08/24

ttpp transport planning

PROJECT

GUNDARY SOLAR FARM

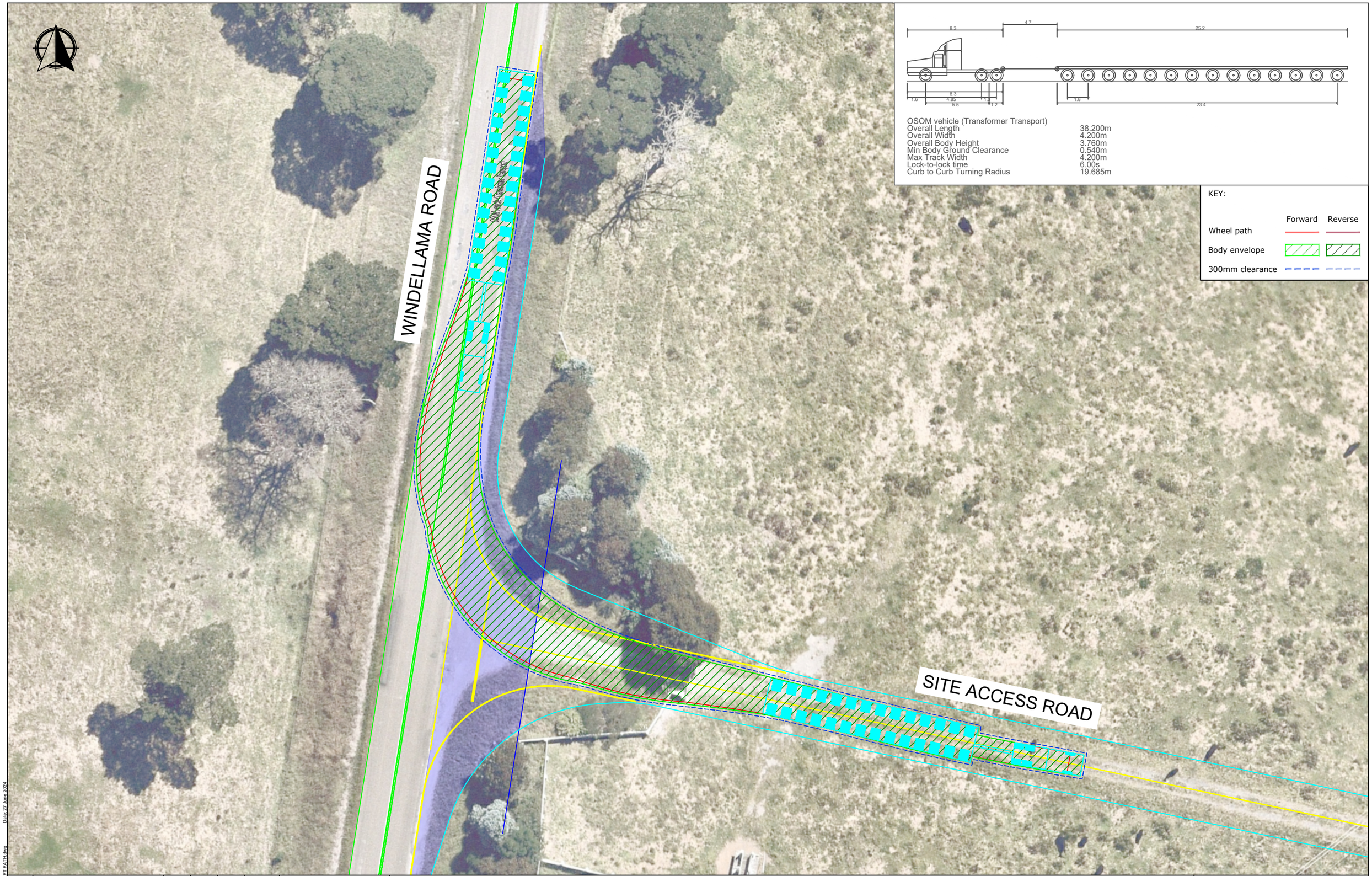
TITLE

SWEPT PATH ANALYSIS - BRAIDWOOD ROAD/BUNGONIA ROAD - OUTBOUND
38m OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No. 23042CAD002 FIGURE 8

DATE STAMP 27 AUGUST 2024

PROJECT No.	SCALE	REV.
23042	1:500 @A3	A



OSOM vehicle (Transformer Transport)

Overall Length	38.200m
Overall Width	4.200m
Overall Body Height	3.760m
Min Body Ground Clearance	0.540m
Max Track Width	4.200m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	19.685m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	JR	JR	27/08/24

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

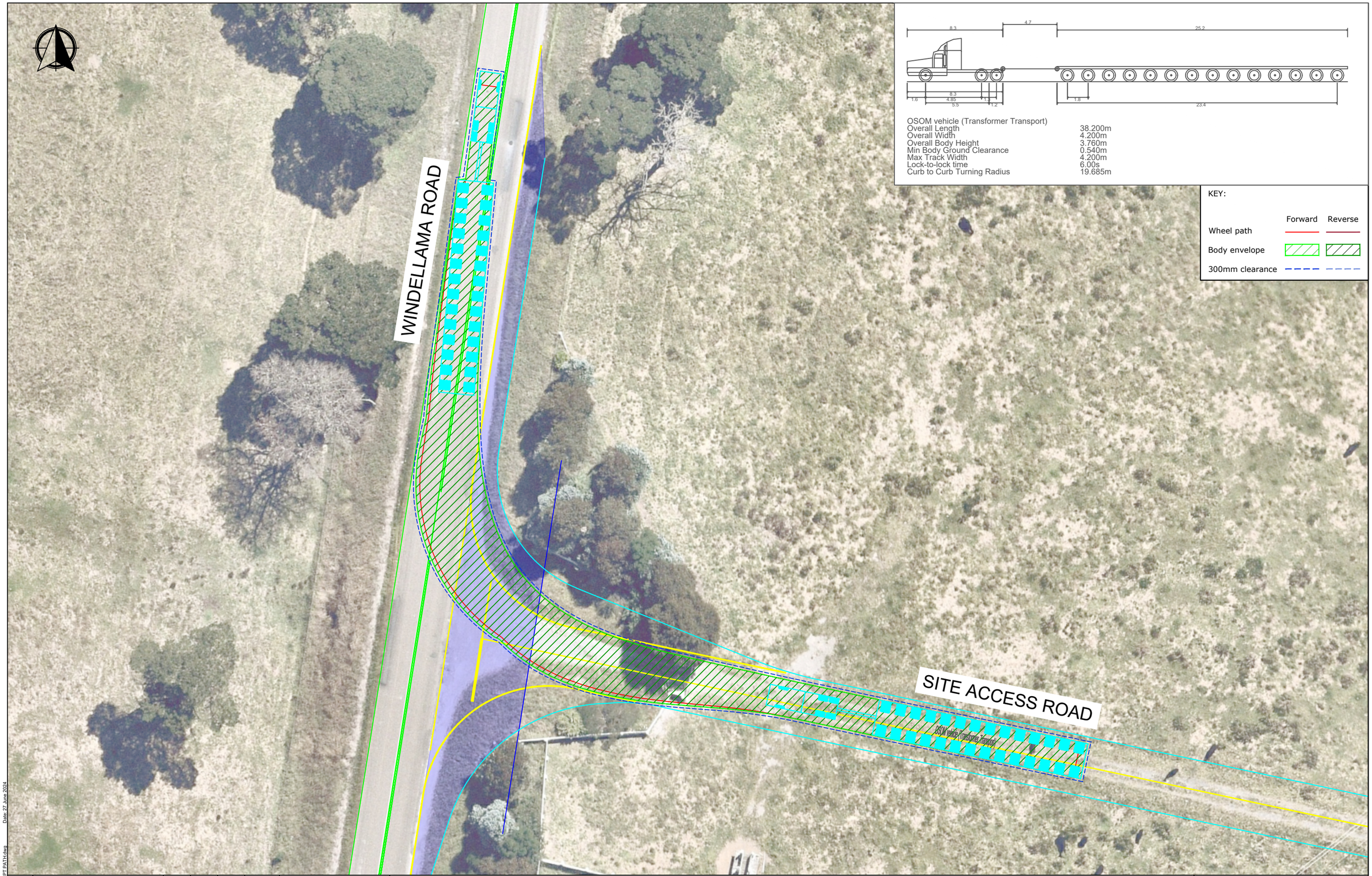
TITLE: SWEPT PATH ANALYSIS - SITE ACCESS - INBOUND
38m OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No. 23042CAD002
FIGURE 9

DATE STAMP: 27 AUGUST 2024

PROJECT No.	SCALE	REV.
23042	1:400 @A3	A

Filename: 23042CAD002-240627-SWEPT PATH.dwg Date: 27 June 2024



OSOM vehicle (Transformer Transport)

Overall Length	38.200m
Overall Width	4.200m
Overall Body Height	3.760m
Min Body Ground Clearance	0.540m
Max Track Width	4.200m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	19.685m

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	JR	JR	27/08/24

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

TITLE: SWEPT PATH ANALYSIS - SITE ACCESS - OUTBOUND
38m OSOM VEHICLE (TRANSFORMER TRANSPORT)

DWG No. 23042CAD002
FIGURE 10

DATE STAMP: 27 AUGUST 2024

PROJECT No.	SCALE	REV.
23042	1:400 @A3	A

Filename: 23042CAD002-240627-SWEPT PATH.dwg Date: 27 June 2024

Prime mover and semi-trailer (19 m)

Overall Length	19000mm
Overall Width	2500mm
Overall Body Height	4300mm
Min Body Ground Clearance	540mm
Track Width	2500mm
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12500mm

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	JR	JR	17/08/23

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

TITLE: SWEPT PATH ANALYSIS - SOUTHERN ROUTE - HUME STREET/GARROORIGANG ROAD
AUSTROADS (2013) 19m PRIME MOVER AND SEMI-TRAILER

DWG No. 23042CAD001 FIGURE 1

DATE STAMP: 17 AUGUST 2023

PROJECT No.	SCALE	REV.
23042	1:400 @A3	A

Filename: 23042CAD001-230817-SWEPT PATH.dwg
Date: 17 August 2023

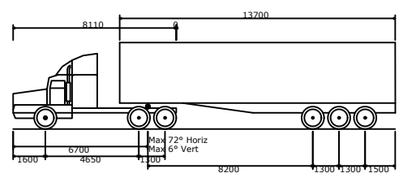
GARROORIGANG ROAD

SLOANE STREET

GARROORIGANG STREET

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



Prime mover and semi-trailer (19 m)

Overall Length	19000mm
Overall Width	2500mm
Overall Body Height	4300mm
Min Body Ground Clearance	540mm
Track Width	2500mm
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12500mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	JR	JR	17/08/23

ttpp transport planning

PROJECT

GUNDARY SOLAR FARM

TITLE

SWEPT PATH ANALYSIS - SOUTHERN ROUTE - GARROORIGANG ROAD/SLOANE STREET
AUSTROADS (2013) 19m PRIME MOVER AND SEMI-TRAILER

DWG No. 23042CAD001
FIGURE 2

DATE STAMP 17 AUGUST 2023

PROJECT No. 23042 | SCALE 1:400 @A3 | REV. A

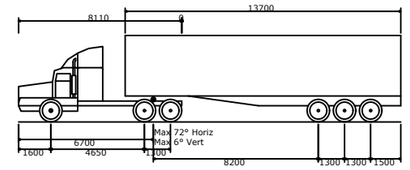
Filename: 23042CAD001-230817-SWEPT PATH.dwg

Date: 17 August 2023

MUNDY STREET

SLOANE STREET

BRAIDWOOD ROAD



Prime mover and semi-trailer (19 m)

Overall Length	19000mm
Overall Width	2500mm
Overall Body Height	4300mm
Min Body Ground Clearance	540mm
Track Width	2500mm
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12500mm

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	JR	JR	17/08/23

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

TITLE: SWEPT PATH ANALYSIS - SOUTHERN ROUTE - SLOANE STREET/BRAIDWOOD ROAD
AUSTROADS (2013) 19m PRIME MOVER AND SEMI-TRAILER

DWG No. 23042CAD001
FIGURE 3

DATE STAMP: 17 AUGUST 2023

PROJECT No.	SCALE	REV.
23042	1:400 @A3	A

Filename: 23042CAD001-230817-SWEPT PATH.dwg
Date: 17 August 2023

LAGOON STREET

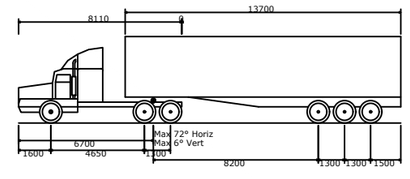
SYDNEY ROAD

UNION STREET

40

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



Prime mover and semi-trailer (19 m)

Overall Length	19000mm
Overall Width	2500mm
Overall Body Height	4300mm
Min Body Ground Clearance	540mm
Track Width	2500mm
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12500mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	JR	JR	17/08/23

ttpp transport planning

PROJECT

GUNDARY SOLAR FARM

TITLE

SWEPT PATH ANALYSIS - NORTHERN ROUTE - SYDNEY ROAD/UNION STREET
AUSTROADS (2013) 19m PRIME MOVER AND SEMI-TRAILER

DWG No. 23042CAD001 FIGURE 4

DATE STAMP 17 AUGUST 2023

PROJECT No.	SCALE	REV.
23042	1:500 @A3	A

Filename: 23042CAD001-230817-SWEPT PATH.dwg

Date: 17 August 2023

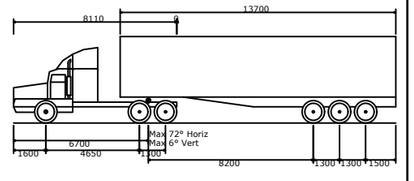
MUNDY STREET

SLOANE STREET

BRAIDWOOD ROAD

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



Prime mover and semi-trailer (19 m)

Overall Length	19000mm
Overall Width	2500mm
Overall Body Height	4300mm
Min Body Ground Clearance	540mm
Track Width	2500mm
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12500mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	JR	JR	17/08/23

ttpp transport planning

PROJECT

GUNDARY SOLAR FARM

TITLE

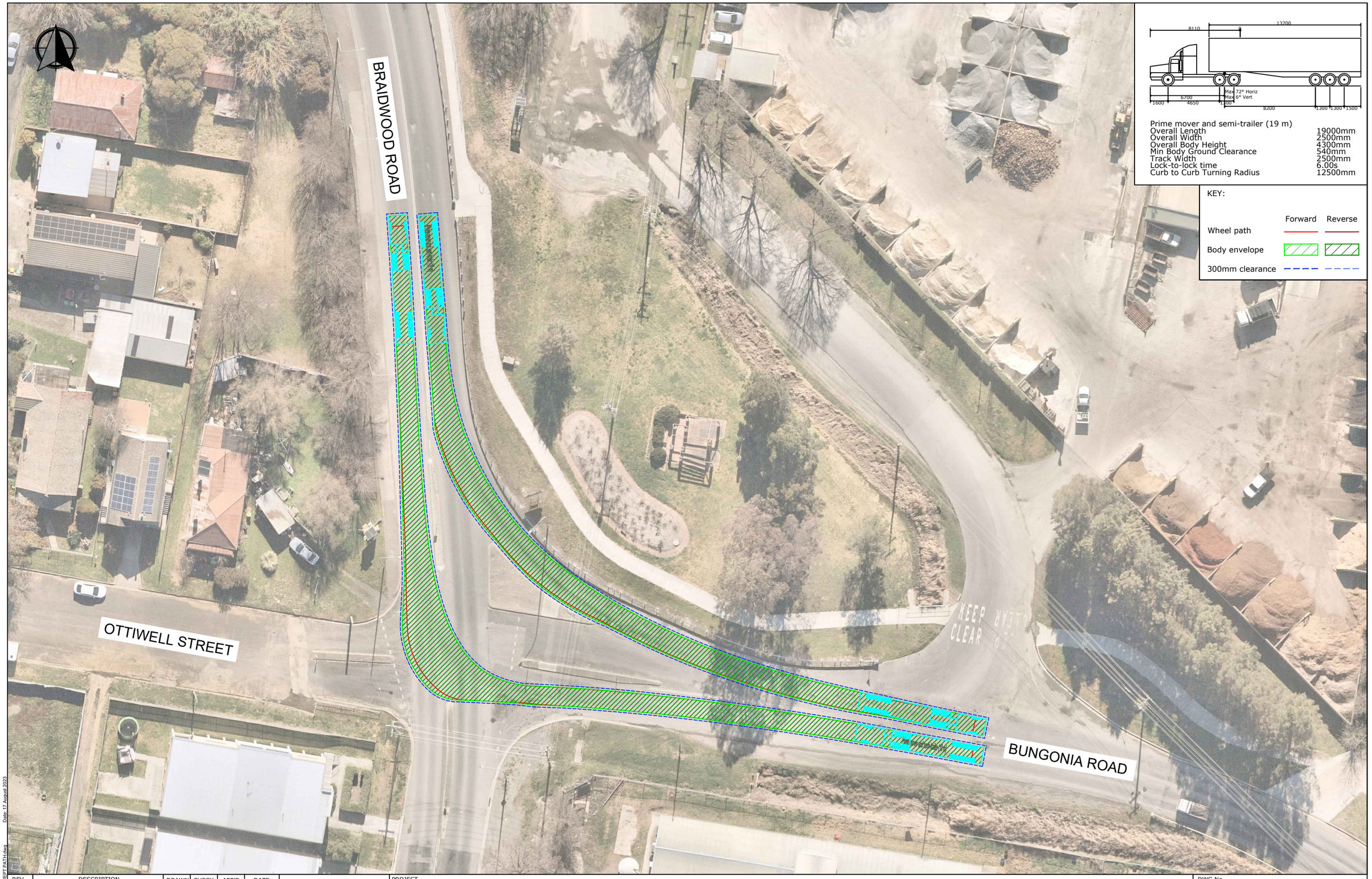
SWEPT PATH ANALYSIS - NORTHERN ROUTE - SLOANE STREET/BRAIDWOOD ROAD
AUSTROADS (2013) 19m PRIME MOVER AND SEMI-TRAILER

DWG No. 23042CAD001
FIGURE 5

DATE STAMP 17 AUGUST 2023

PROJECT No.	SCALE	REV.
23042	1:500 @A3	A

Filename: 23042CAD001-230817-SWEPT PATH.dwg
Date: 17 August 2023



Prime mover and semi-trailer (19 m)

Overall Length	19000mm
Overall Width	2500mm
Overall Body Height	4300mm
Min Body Ground Clearance	540mm
Track Width	2500mm
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12500mm

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	JR	JR	17/08/23

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

TITLE: SWEPT PATH ANALYSIS - BRAIDWOOD ROAD/BUNGONIA ROAD
AUSTROADS (2013) 19m PRIME MOVER AND SEMI-TRAILER

DWG No. 23042CAD001 FIGURE 6		
DATE STAMP 17 AUGUST 2023		
PROJECT No. 23042	SCALE 1:500 @A3	REV. A

Filename: 23042CAD001-230817-SWEPT PATH.dwg
Date: 17 August 2023

Prime mover and semi-trailer (19 m)

Overall Length	19000mm
Overall Width	2500mm
Overall Body Height	4300mm
Min Body Ground Clearance	540mm
Track Width	2500mm
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12500mm

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	JR	JR	17/08/23

ttpp transport planning

PROJECT

GUNDARY SOLAR FARM

TITLE

SWEPT PATH ANALYSIS - BUNGONIA ROAD
AUSTROADS (2013) 19m PRIME MOVER AND SEMI-TRAILER

DWG No. 23042CAD001 FIGURE 7

DATE STAMP 17 AUGUST 2023

PROJECT No. 23042 | SCALE 1:1000 @A3 | REV. A

Filename: 23042CAD001-230817-SWEPT PATH.dwg Date: 17 August 2023

Prime mover and semi-trailer (19 m)

Overall Length	19000mm
Overall Width	2500mm
Overall Body Height	4300mm
Min Body Ground Clearance	540mm
Track Width	2500mm
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12500mm

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	JR	JR	17/08/23

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM

TITLE: SWEPT PATH ANALYSIS - WINDELLEMA ROAD
AUSTROADS (2013) 19m PRIME MOVER AND SEMI-TRAILER

DWG No. 23042CAD001 FIGURE 8

DATE STAMP: 17 AUGUST 2023

PROJECT No.	SCALE	REV.
23042	1:1000 @A3	A

Filename: 23042CAD001-230817-SWEPT PATH.dwg Date: 17 August 2023

Appendix D

Project Site Access Concept Layout

LEGEND:

- INDICATIVE EXISTING FEATURES
- PROPOSED FEATURES
- NEW SEALED PAVEMENT AREA

INDICATIVE EXISTING LANE WIDTH

TIE INTO EXISTING PAVEMENT

PROPOSED BAL ROAD WIDENING GENERALLY IN ACCORDANCE WITH AUSTROADS GUIDE TO ROAD DESIGN PART 4A FIGURE 8.2 AND TABLE 8.1 BASED ON DESIGN SPEED OF 110km/h

R=15m

PROVIDE MINIMUM 10m SEALED ROAD AS SHOWN

R=15m

TIE INTO EXISTING PAVEMENT

WINDELLAMA ROAD

SITE ACCESS ROAD

3.5m
3.5m
13.5m
35m
3.5m
3.5m
6m
10m
7.5m
7m

E1
EDGE OF PAVEMENT
C1
TB1
TF

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	SY	JR	JR	21/12/23

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM (GOULBURN) - WINDELLAMA ROAD INTERSECTION

TITLE: CONCEPT LAYOUT

DWG No. 23042CAD01-FIGURE 1

DATE STAMP 21 December 2023

PROJECT No. 23042

SCALE 1:500 @A3

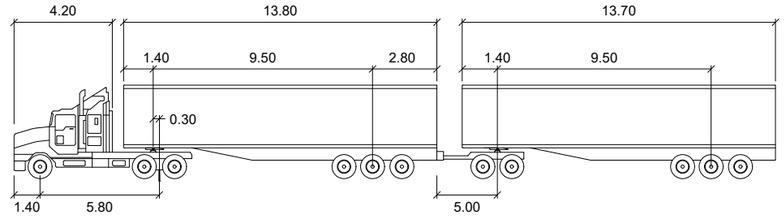
REV. A

Filename: 23042CAD01-Windellama Road Intersection Design-231221.dwg Date: 21 December 2023

LEGEND:

INDICATIVE EXISTING FEATURES

PROPOSED FEATURES



A Double

meters

Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 24.7
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 500mm CLEARANCE FROM VEHICLE BODY

WINDELLAMA ROAD

SITE ACCESS ROAD

A-DOUBLE AUSTROADS 2013 (AU)

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	SY	JR	JR	21/12/23

ttpp transport planning

PROJECT: GUNDARY SOLAR FARM (GOULBURN) - WINDELLAMA ROAD INTERSECTION

TITLE: SWEPT PATH ASSESSMENT

DWG No. 23042CAD01-FIGURE 2

DATE STAMP 21 December 2023

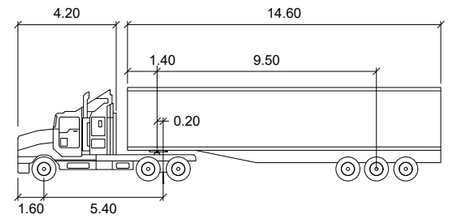
PROJECT No. 23042 | SCALE 1:500 @A3 | REV. A

Filename: 23042CAD01-Windellama Road Intersection Design-231221.dwg Date: 21 December 2023

LEGEND:

INDICATIVE EXISTING FEATURES

PROPOSED FEATURES



AV

	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 500mm CLEARANCE FROM VEHICLE BODY

WINDELLAMA ROAD

SITE ACCESS ROAD

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	SY	JR	JR	21/12/23

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PROJECT: GUNDARY SOLAR FARM (GOULBURN) - WINDELLAMA ROAD INTERSECTION

TITLE: SWEPT PATH ASSESSMENT

DWG No. 23042CAD01-FIGURE 3

DATE STAMP 21 December 2023

PROJECT No. 23042

SCALE 1:500 @A3

REV. A

Filename: 23042CAD01-Windellama Road Intersection Design-231221.dwg Date: 21 December 2023

The Transport Planning Partnership
Suite 402 Level 4, 22 Atchison Street
St Leonards NSW 2065

P.O. Box 237
St Leonards NSW 1590

02 8437 7800

info@ttpp.net.au

www.ttpp.net.au