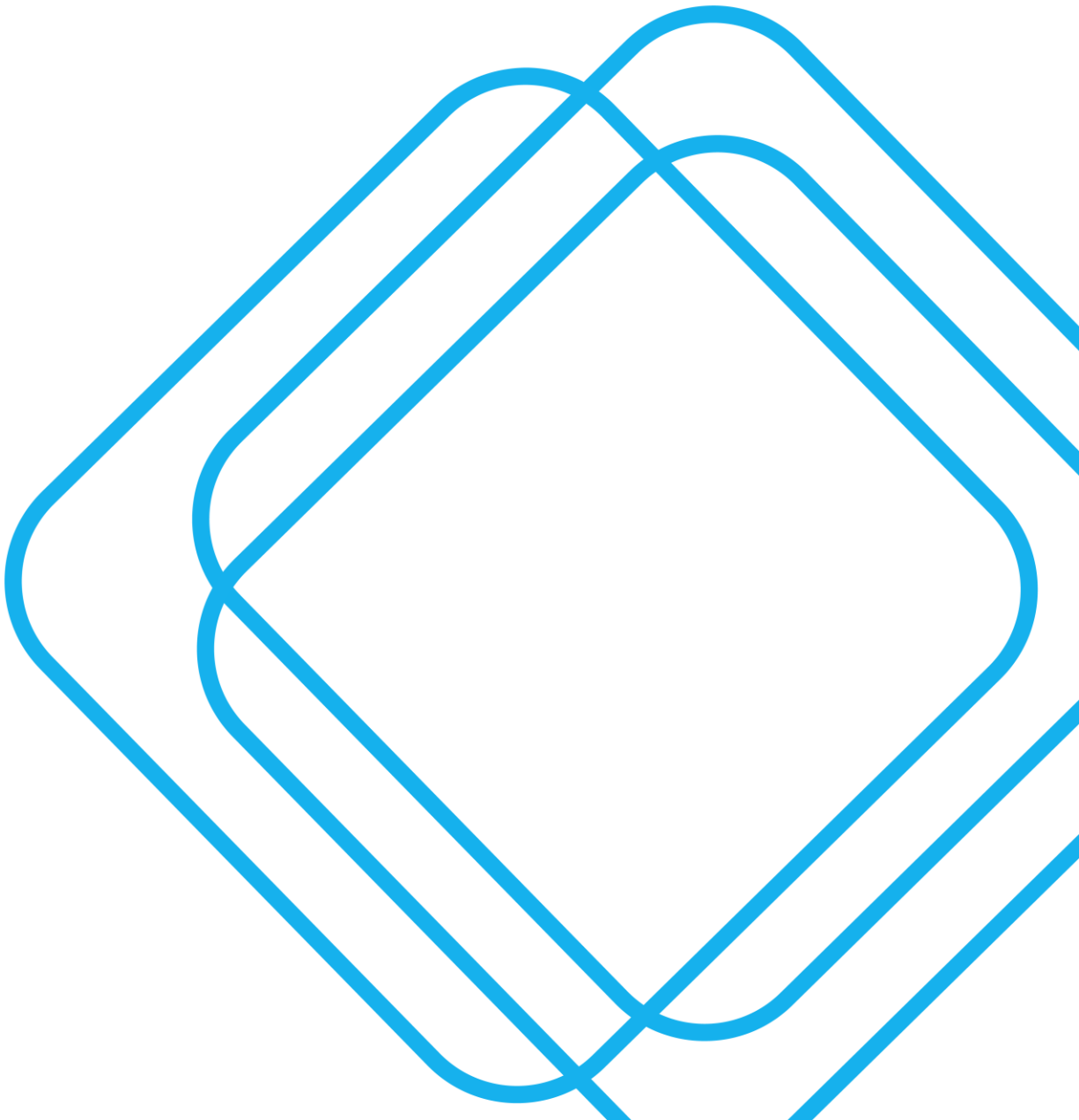
SCT Consulting

KIAMA WEST TRAFFIC IMPACT ASSESSMENT

13 OCTOBER 2022



Quality Assurance

Project:	Kiama West Traffic Impact Assessment		
Project Number:	SCT_00337		
Client:	Traders in Purple	**ABN:**	52 162 126 721
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Revision	Revision Date	Details
1.0	13 October 2022	Draft report

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Appendices

Executive summary

Purpose of this report

SCT Consulting was engaged by Traders In Purple (the proponent) to carry out a Traffic Impact Assessment to support the planning proposal for a site in Kiama West. The rezoned lots will enable the development of 1,103 residential dwellings and non-residential premises to serve the community.

Future planning context

Kiama Local Strategic Planning Statement (LSPS) highlights a housing growth requirement and improvements to the existing transport network to enable the target increase in population. Kiama West planning proposal would support the delivery of the housing growth target for the local government area.

Illawarra-Shoalhaven Regional Transport Plan works towards improving the public transport system and active transport to reduce dependence on private vehicles and promote the 'moving more with less' framework. This supports a sustainable outcome associated with the proposal.

Existing transport conditions

The study area showed a high proportion of private car use at 90 per cent. As the traffic demand is relatively low on the local road network, the convenience of private vehicles dominates the need to use any other mode of transport. Additionally, the older median age means that active modes such as cycling and/or walking are usually less preferred over other modes.

Only one bus route is running on Jamberoo Road to the north of the site. The bus frequency is relatively low during peak hours. Kiama train station is located in the town centre, which is on South Coast Line.

Shared path facilities are available to the east of the site completed together with the neighbouring subdivision. The connection to a wider cycle network especially to Kiama Town Centre is relatively poor.

Proposed development

The proposal would accommodate a total of 1,103 dwellings and non-residential premises to service the future residents.

The proposed street network aims at increasing the site's permeability with multi-tier streets and the proposed cross-sections are generally consistent with the Kiama Development Control Plan.

The proposed shared path system would connect with the existing shared path to the east of the site to facilitate cyclists to access a wider destination. The proposed bus routes would occur on the proposed loop road and a total of five bus stops would be provided.

Figure ES shows an indicative aerial view of the site.

Figure ES Indicative aerial view of the site

Source: e8urban, 2022

Transport appraisal

The net increase of vehicular traffic associated with the proposal is estimated to be 783 and 860 vehicles per hour for AM and PM peaks based on the RMS '*Guide to Traffic Generating Developments (2013)*'.

An approved planning proposal close to the subject development (Kiama South planning proposal) would have a cumulative impact on the road network in the vicinity of the site. Hence, traffic modelling was undertaken for 2036 AM peak and PM peak hours which assesses a 10-year horizon year after the development is opened (estimated in 2026). The scenarios for the future year include:

– Future year base case (including Kiama South planning proposal)

– Future base case with the Kiama West planning proposal.

Due to relatively low traffic demand and resultant sufficient remaining capacity, all intersections are expected to still operate at an acceptable level of service during the peak hours in 2036, including the addition of proposed Kiama West (the proposal).

Transport initiatives

It is proposed to partner with community organisations to investigate options for alternative transport such as community transport or shuttle services to connect the site with Kiama Town Centre. The current major collector/spine road has a cross-section that caters for future bus movements and would be capable of servicing future residents of Kiama West.

It is proposed to design shared paths that connect the site and the existing network. The current major collector/spine road has a cross-section that caters for shared paths on the verge. Cycle parking facilities should be provided in open spaces/parks as well as any community facilities. Cycle connections on Jamberoo Road and Bland Street (existing sections) are proposed to be provided for future connections to the local schools.

1.0 Introduction

1.1 Background

SCT Consulting was engaged by Traders In Purple (the proponent) to provide traffic and transport consultancy services to support the planning proposal of a site in Kiama West. The development proposes to rezone 14 land parcels for residential and non-residential use as shown in **Table 1-1**.

Table 1-1 Development Lot and DP numbers

Street Address	Lot Number(s)/Deposited Plan
103 Jamberoo Road Kiama	187/751279 102/1176643
33 Greyleigh Drive Kiama	156, 183, 185, 186, 188, 189/751279 1/995058 1/1003719 1320/1060995 2/1135218 1/1178500
177 Long Brush Road Jerrara	201/1148007

Source: e8urban, 2022

The rezoned lots will enable the development of 1,103 dwellings and non-residential premises.

1.2 Purpose of this report

The purpose of this Traffic Impact Assessment is to support the Planning Proposal for a mixed-use development at Longbrush Road Kiama.

The document has assessed the impact of the illustrative development concept in terms of the net increase in trips generated, connectivity and access to the surrounding road network, public and active transport requirements and any potential mitigation measures required as a result of the development.

The Traffic Impact Assessment has considered:

– Review relevant background documents and information including relevant state, regional and local planning policies, transport planning documents

– Collate existing travel pattern data including Census, Journey-to-work data, to understand existing traffic and transport conditions

– Undertake a desktop review of existing traffic and transport conditions, including all types of transport modes

– Calculate future traffic generation based on the Roads and Maritime Services *Guide to Traffic Generating Developments (2002)* and subsequent technical direction

– Determine the net increase in the trip generation of the proposed development (based on the agreed development yield)

– Distribute the net trip generation to the surrounding road network based on the preferred access strategy and travel pattern

– Undertake SIDRA modelling and determine likely infrastructure upgrades required to cater for the proposed development if required

– Identify key active transport and public transport routes to/from the development

– Identify public and active transport measures and sustainable travel initiatives for development.

1.3 Report structure

This report has been structured into the following sections:

– **Section 2.0** provides a summary of the review of all relevant background documents.

– **Section 3.0** describes the existing transport conditions for all modes of transport.

– **Section 4.0** describes the proposed development, its access strategy and a review of access requirements for different transport modes.

– **Section 5.0** outlines the traffic and transport appraisal which describes the modelling undertaken, the likely trip generation, and the indicative impact as a result of the proposed development.

– **Section 6.0** summarises the report content and presents the conclusions.

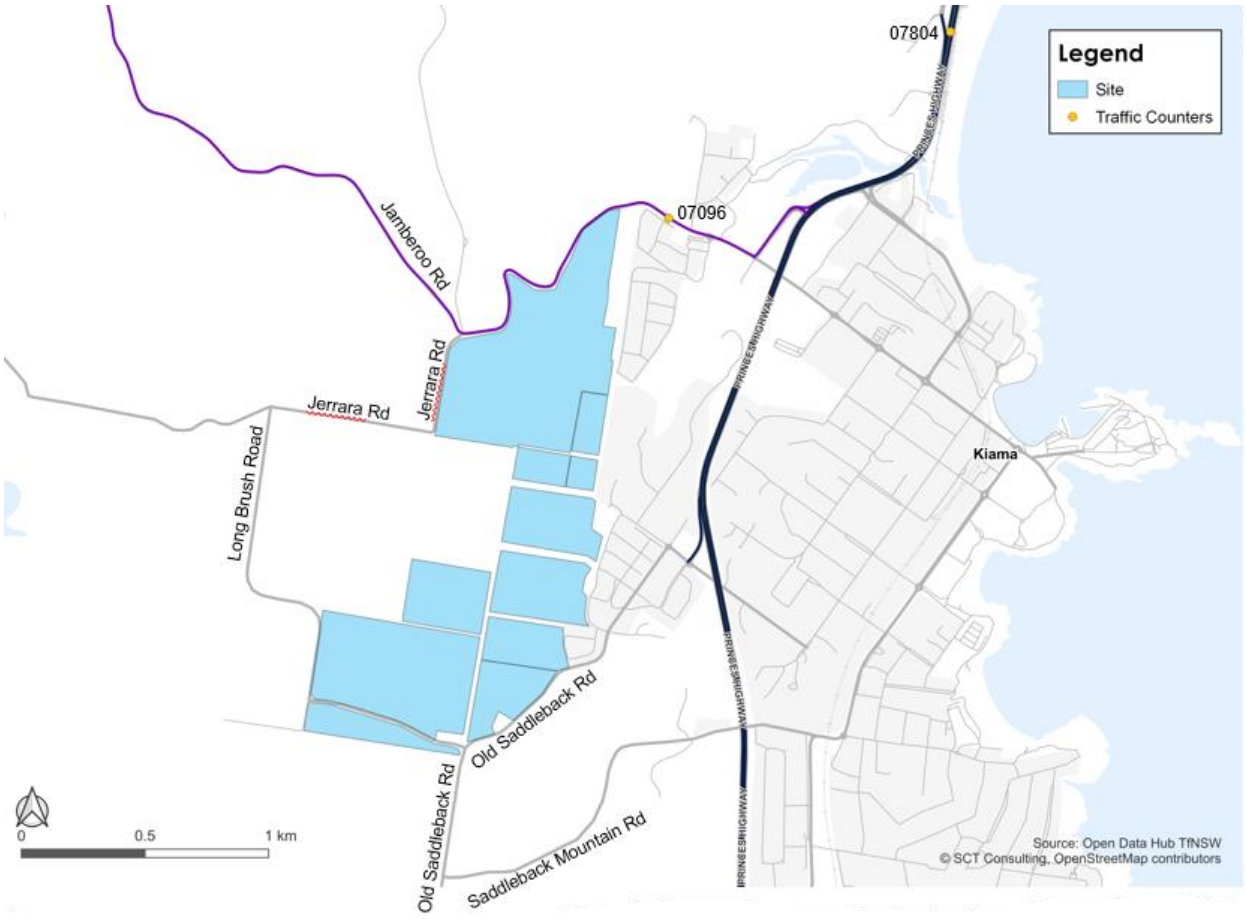
2.0 Strategic context

2.1 Site context

Kiama West is a precinct of 14 lots located to the west of the existing Kiama township. The site is bounded by the existing residential subdivision to the east, Jamberoo Road to the north, Long Brush Road and Old Saddleback Road to the south and rural landscape to the west.

Figure 2–1 illustrates the site's location relative to the existing township as well as the surrounding road network.

Figure 2–1 Site location and bounding road network



2.2 Kiama Local Strategic Planning Statement (2020)

Kiama Local Strategic Planning Statement (LSPS) set out the vision of the land use planning for Kiama. The LSPS aims to:

– Manage sustainable growth

– Develop a diverse and resilient economy

– Protect rural landscapes

– Mitigate and adapt to climate change to protect the environment

– Foster vibrant and accessible places.

To manage the predicted moderate housing growth, the Kiama locality will need an additional 1,400 houses to cater for the projected 18 per cent population increase (from the 2016 figures). This growth will be accommodated by greenfield expansions as well as infill developments that do not disrupt nor spoil the distinct nature, character and heritage of the existing towns and villages.

The LSPS looks at improving the existing transport network by:

– Completing the Kiama traffic and parking study to identify the future needs of the Kiama Municipality

– Advocating for ongoing prioritisation for connections to Kiama such as rail improvements and ongoing improvements to the Princes Highway

– Partnering with community organisations to investigate options for alternative transport such as community transport or shuttle services

– Completing a walking and cycling strategy to identify opportunities for improved walking and cycling within and between town centres.

Implications for Kiama West: The LSPS highlights a housing growth requirement. The network improvements would enable it to withstand the increased population. Kiama West would support the delivery of the housing growth target and promote the mode shift to sustainable transport methods.

2.3 Illawarra-Shoalhaven Regional Transport Plan

The Illawarra-Shoalhaven plan articulates how Transport for NSW plans to reshape transport needs based on five major changes in the region, which are:

– A growing population

– Regionally significant precincts

– Expanding freight task

– Influence of Western Sydney

– Low emissions future.

The plan aims to accommodate these regionally based changes by working towards the milestones that are categorised under the following goals:

– The connected multimodal network facilitates seamless connectivity between people's homes, workplaces and leisure

– Safer travel in the Illawarra-Shoalhaven region

– Liveable transport network that supports vibrant places while enabling and promoting the movement of people

– Adaptive and sustainable to contribute to a low emissions future

– Productive and efficient support the idea of 'moving more with less'

– Resilient against major disruptions such as natural disasters or unplanned events.

The improvement to the transport system will assist Kiama in accommodating a growing population in a safe, adaptive and sustainable way including:

– 30-minute public transport catchments for Kiama

– Sydney to Bomaderry Fast Rail Improvements

– South Coast Line Electrification – Kiama to Bomaderry

– Trial on-demand transport services

– Opportunities to implement 30 km/h speed zones

– Addressing barriers to walking and cycling to school.

Implications for Kiama West: There are plans in place that work towards improving the public transport system and active transport to reduce dependence on private vehicles and promote the 'moving more with less' framework. This supports a sustainable outcome associated with the proposal.

2.4 Kiama Capital Works Program

The Kiama municipal capital works program provides insight into the planned works/programs for the Kiama municipal region. The following projects have been identified as relevant to this assessment and development:

– Footpaths and Cycleways
  - Jamberoo Valley cycleway construction

– Roads and bridges
  - Claremont Place/Seg 01 Irvine Street to end/surface
  - Irvine Street, Barney St to Thomson St Road surface renewal

– Traffic facilities
  - Traffic facilities improvement program
  - Town centre study – traffic improvements

Implications for Kiama West: There are planned improvements for Kiama's (and its surrounding suburbs) facilities and services to accommodate the increase in population. The Kiama West proposal could provide the housing required to accommodate the increase in population. There are limited capital works occurring in the vicinity of the site due to its rural land use. There is an opportunity for the site to contribute to the local infrastructure improvement as part of the land rezoning.

2.5 Cycleway Plan

The Kiama *Cycleway Plan* provides insight into the existing and proposed on/off-road cycleways in the suburb of Kiama. The objectives of the plan are to:

– Establish a network of routes to support safe, convenient and pleasant cycling for residents and visitors

– Consult with community groups in the preparation of the Cycleway Plan

– Encourage community education on the benefits of cycling

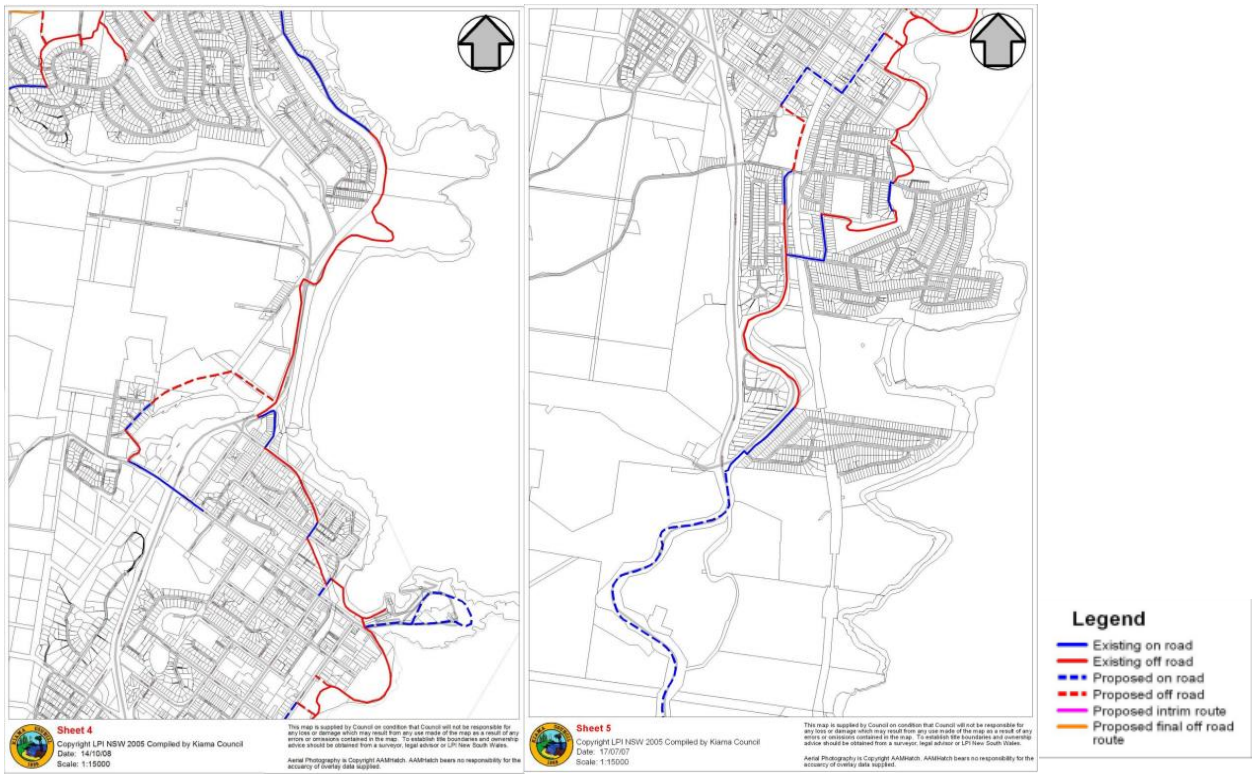
– Improve safety for bicycle riders and provide a range of facilities to support cycling both as a transport and recreational activity

– Identify suitable requirements for the introduction of bicycle routes in new residential release areas

– Produce a bike route map for distribution to the general community, and specifically to schools, to encourage the use of bicycles within the local areas

– Identify the necessary facilities to be provided at points of connection with various other modes of transport. To establish a priority list of bicycle links within the Municipality and with adjoining Municipalities.

Figure 2–2 Location of the potential expansion areas



Source: Kiama Cycleway Plan – March 2005 (Appendix Sheet 4 and 5)

Implications for Kiama West: The bicycle plan aims to improve and encourage the movement of people in ways that reduce dependence on the existing road infrastructure. There are limited cycle facility and infrastructure upgrades planned in the vicinity of the site due to its rural nature in land use. The proposed development would have the opportunity to improve the active transport facility surrounding the site and extend the proposed network in Kiama to Kiama West.

2.6 Kiama Development Control Plans

The *Kiama Development Control Plan* (DCP) outlines requirements for the provision of parking, active transport, traffic assessments/plans and road hierarchy within development sites.

2.6.1 Parking requirements

The parking requirements are a set of controls that dictate vehicular parking within a development based on factors such as size and use. The controls applicable to the proposed site are shown in **Table 2-1** for the relevant land uses that are proposed in Kiama West.

Table 2-1 Minimum Car Parking Standards

Type of development	Minimum car parking requirement
Dwelling house	1 dedicated space behind the building line 1 space behind the front boundary
Dual occupancy/Attached dwelling	For each occupancy, – 1 dedicated space behind the building line – 1 space behind the front boundary
Multi-dwelling housing/residential flat building	– 1 dedicated space behind the building line (per one- or two-bedroom dwelling) – 1 additional space per three-bedroom dwelling (and above) behind the front boundary – plus 1 space per 2 dwellings for visitor parking behind the front boundary.

Type of development	Minimum car parking requirement
Retail premises	1 space per 35m^2 of gross leasable floor area

Source: Kiama Development Control Plan 2020 – Chapter 3.6 Common Requirements

Additionally, for any parking access analysis, Kiama municipal council requires that any medium-density zoned developments (7 dwellings or more) use the B99 vehicle for minimum access requirements.

2.6.2 Active and public transport

The active transport requirements are a set of controls that ensure designs fulfil the following main objectives. Applicable controls to the proposed project are:

- Any residential subdivision should identify the overall layout of dedicated pedestrian footpaths and cycleways within the subdivision. The constructed pedestrian footpath shall be a minimum width of 1.2 metres. For any shared pedestrian footpath/cycleway, minimum 2.5-metre width is required and widened to 3 metres if the shared footpath/cycleway, is located adjacent to any structure or obstruction.
- Pedestrian and cycleways should be provided to link roads particularly cul-de-sacs and to directly access public transport routes such as bus stops as well as public reserves.
- Pedestrian footpaths should have a maximum longitudinal grade of 15%, except in cases where the approved road carriageway will have a longitudinal grade greater than 15%. Path ramps connecting pedestrian footpaths with roads must be designed to meet the needs of people with a disability (eg wheelchairs or sight impairment) and people with a pram. The pathway should be constructed of concrete, except where varied by Council.
- Safe pedestrian crossings are to be created with the use of pedestrian refuges, slow points, thresholds or other appropriate measures
- All footpaths and cycleways are to be provided with appropriate lighting and designed to incorporate Crime Prevention through Environmental Design (CPTED) principles by minimising any potential hiding places
- Large residential subdivisions should be designed to make provision for a bus service to link existing urban areas with the new residential subdivisions. The bus route should be designed to provide adequate servicing by bus companies. Therefore, consultation should take place with the local bus companies and the relevant NSW Government Transport Agency to determine whether a bus service can be provided in the new residential subdivision.
- The bus route should be primarily designed along collector roads and linked up to sub-arterial or arterial roads, due to the requirement for wider road carriageways.
- Indented bus parking bays should be provided at nominated bus stops.
- Bus stops should be generally located within 400 metres of walking distance for 90% of the lots in the immediate locality.

2.6.3 Road hierarchy

The road hierarchy requirements are a set of controls that ensure designs fulfil the following main objectives:

- To provide a defined hierarchy of roads, to provide an acceptable level of access, safety and convenience for all road users.
- To ensure that the design features of each residential road within a subdivision reflect the role of the road within the overall road network
- To provide an acceptable level of access, safety and convenience for all road users within existing urban areas and new release areas, whilst ensuring acceptable levels of amenity and minimising traffic management issues in the particular locality.
- To provide appropriate road access for larger and special purpose vehicles including garbage and recycling trucks, fire trucks, delivery trucks etc.

The minimum requirements for the road hierarchy are shown in **Table 2-2**.

Table 2-2 Road Characteristics for Residential Road Networks

Street Type	Traffic Volume (VPD)	Target Speed (km/h)	Carriageway width (m)	Verge Width (m)	Road Reserve (m)	Pavement Type	Parking Provision in Road Reserve	Concrete Footpath	Shared Path	Recommended no. of dwellings:
Access Place	<100	15	3.5	3.5	10.5	Reinforced Concrete	1 hardstand verge space per 2 dwellings	No	No	10
Access Street	<300	40	6.5	3.5	13.5	Asphalt	Carriageway	No	No	30
Access Road	301-1,000	40	8	3.5	15	Asphalt	Carriageway	1.2m wide on one side	No	100
Minor Collector	1,001-3,000	50	9.5	3.5	16.5	Asphalt	Carriageway	1.2m wide one side away from the kerb	Provide within the street pavement	300
Major Collector	3,001-6,000	50	11.5	Min. 3.5	Min. 18.5	Asphalt	Carriageway	1.2 wide along one side away from the kerb	2.5 wide along one side	600
Sub-Arterial	>6,000	60	Design using road performance criteria and guides i.e. Austroads, RMS standards etc							-

Source: Kiama Development Control Plan 2020 – Chapter 3.6 Common Requirements

3.0 Existing conditions

3.1 Travel behaviour

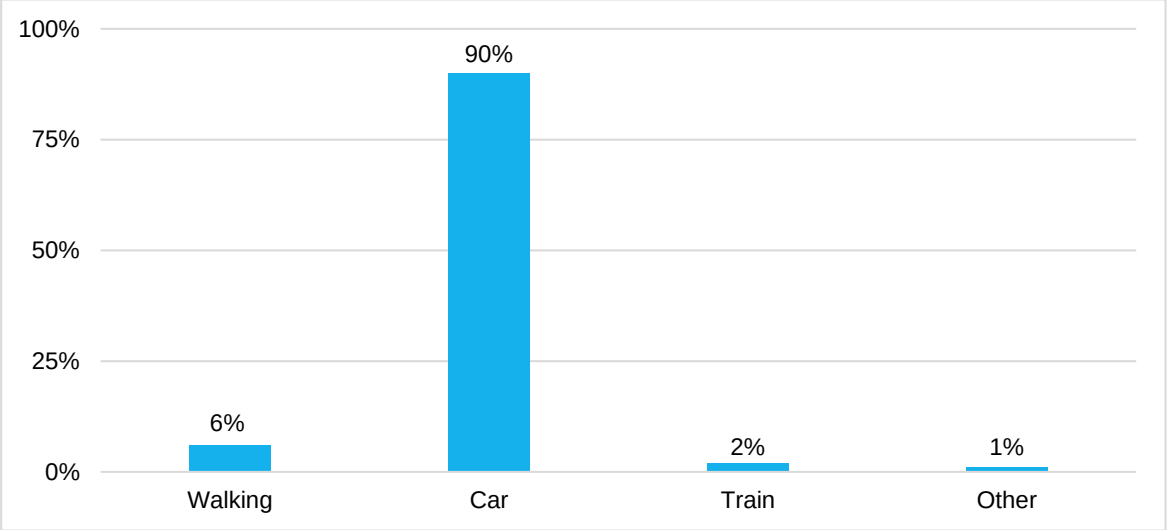
According to Kiama LSPS 2020, the below population characteristics were identified for Kiama:

– Median Age: 47

– Population: 26,100

The journey to work mode share is shown in **Figure 3–1**.

Figure 3–1 Travel mode choice



Source: Traffic and parking study, Bitzios consulting (2021) and Australian Bureau of Statistics Census data (2016).

The dominant method of travel for residents was by car (90 per cent). However, the most notable feature is the underuse of buses as well as bicycles. This can be justified by the older-than-average median age (38 for NSW) and the relatively low population. As the traffic demand is relatively low, the convenience of private vehicles dominates the need to use any other mode of transport. Additionally, the older median age means that active modes such as cycling and/or walking are usually less preferred over other modes.

3.2 Road network

This analysis aims to consider the hierarchy and capability of the existing surrounding network. The surrounding street network types around the development are shown in **Table 3-1**.

Table 3-1 Road characteristics for existing road networks

Street Name	TfNSW [1]	Function Type [2]	Approximate Road Reserve (m) [3]
Princes Highway (A1)	State	Primary	27
Jamberoo Road	Regional	Arterial	19
Jerrara Road	Local	Local	15
Old Saddleback Road	Local	Local	10
Long Brush Road	Local	Local	13
Saddleback Mountain Road	Local	Sub-arterial	13
Bland Street	Local	Local	23

Notes: 1. Obtained from NSW Road Network Classifications (TfNSW) 2. Obtained from NSW Transport Theme – Road Segment 3. Calculated from SIX Maps. Accurate measurements will be required for the in-depth analysis/assessment. 4. This table has excluded any minor vehicular tracks.

The characteristics of the key road network, surrounding the subject site are (refer to **Figure 2–1**):

– **Jamberoo Road** is a west-east regional road to the north of the site. It has one lane in each direction and connects Jamberoo with Princes Highway (A1) and the existing Kiama township. The signposted speed limit in the vicinity of the site is 60km/h. The road is sealed with a 6.5m wide carriageway and is segmented by a double centre line. It intersects with Spring Creek Drive which provides on ramp and off ramp for the northbound direction of A1. Brown Street provides a southbound on ramp to A1 while Gipps Street/Collins Street provides an off ramp from A1, which connect with Jamberoo Road/Terralong Street.

– **Bland Street** is a local road located east of the site. It has one lane in each direction and connects the site to Princes Highway and the existing Kiama township. The signposted speed limit is 50km/h. The road is sealed with a 7.7m wide carriageway and is not segmented by any centre line marking. A northbound on ramp to A1 intersects with Bland Street at Eugene Street.

– **Saddleback Mountain Road** is a local sub-arterial road located south of the site. It has one lane in each direction and connects Old Saddleback Road to the existing Kiama township. The signposted speed limit is 60km/h. The road is sealed and has a 6m wide carriageway with a signposted speed limit of 60km/h. Saddleback Mountain Road also connects with South Kiama Drive just to the east of Kiama High School, where South Kiama Drive provides on and off ramps to A1 southbound and an off ramp for the northbound direction of A1.

– **Old Saddleback Road** is a local road located south of the site. It has one lane in each direction, however, has no centre line marking. It is connected to Bland Street to the north and Saddleback Mountain Road to the south. The road is sealed and has a 4.5m wide carriageway with a signposted speed limit of 60km/h.

3.3 Road Safety

The number of crashes and the type of casualties recorded in Kiama between 2016 and 2020 are shown in **Figure 3–2**, and listed below in their casualty catergories:

– Fatal = 1

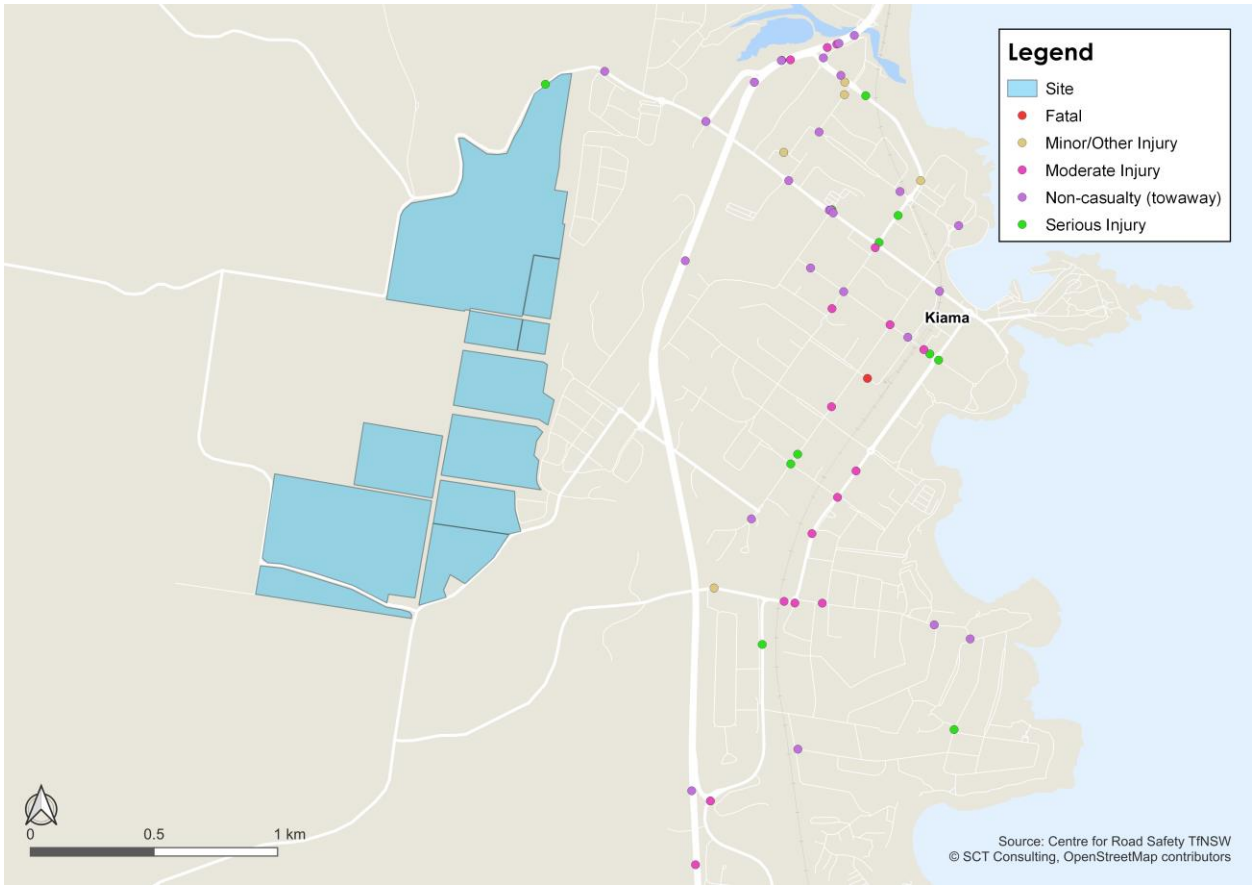
– Serious Injury = 11

– Moderate Injury = 19

– Minor/other injury = 5

– Non-casualty = 27

Figure 3–2 Crash data



Kiama west's road network has less casualties than the Kiama town centre as it only had 3 vehicle crashes (2 non-casualty and 1 serious injury) along Jamberoo Road.

3.4 Public transport

3.4.1 Bus network

Kiama West currently has access to bus route 125 on Jamberoo Road that provides bus connection between Jamberoo and Kiama. Other bus services are also available in the existing Kiama township on the eastern side of Princes Highway, which is over 1km walking distance from Kiama West. The typical frequency for the bus network during the peak period (6:30am to 10:00am and 3:00pm – 7:00pm) are shown as follows:

– Route 125: 1 service

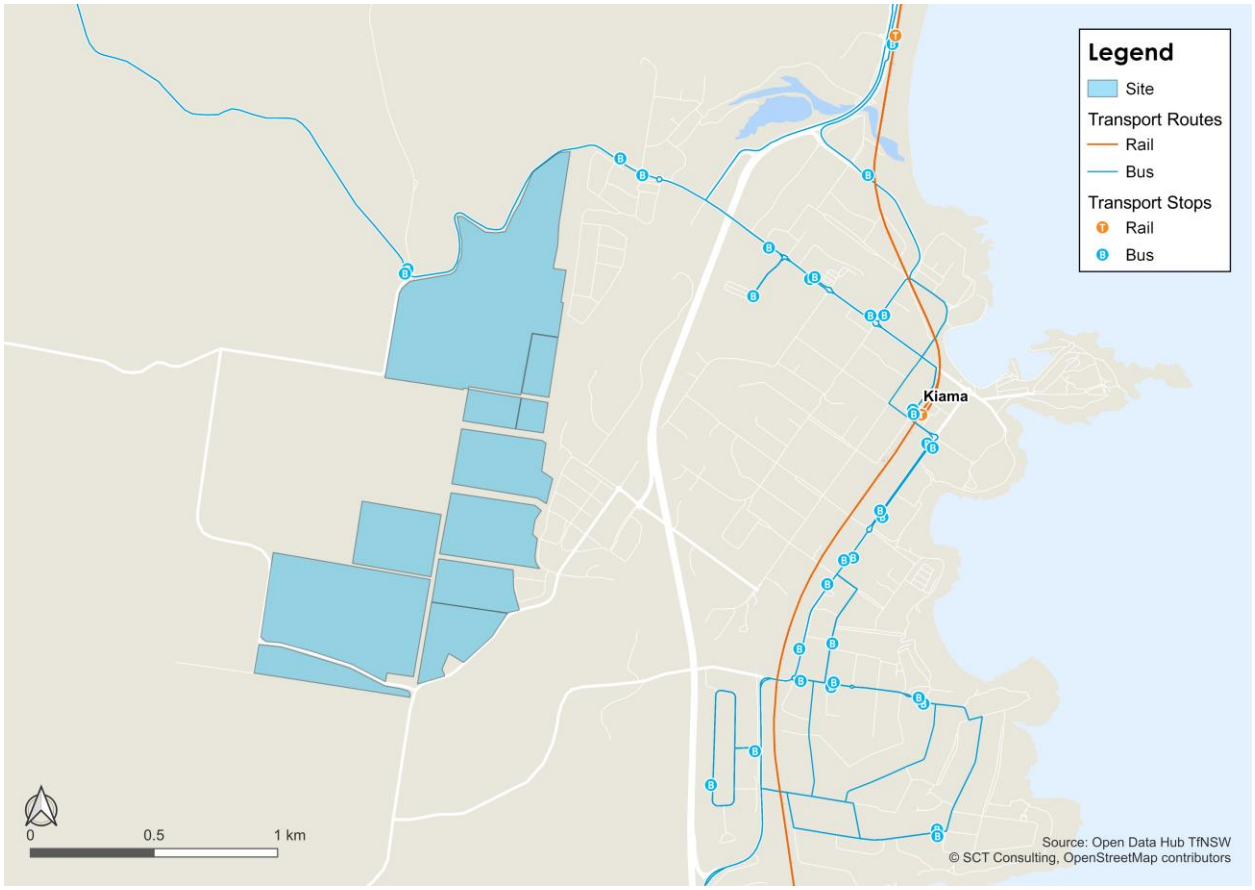
– Route 71: 3 services

– Route 126: 2 services

3.4.2 Train network

Kiama has access to the train network through the South Coast Line (SCO) which connects Bomaderry to the south and Bondi Junction via Central to the north. The train heading north has a typical frequency of six services during the peak period and one service per hour outside of peak period. The train heading south has a typical frequency of three services during the peak period and one service every two hours outside of peak period.

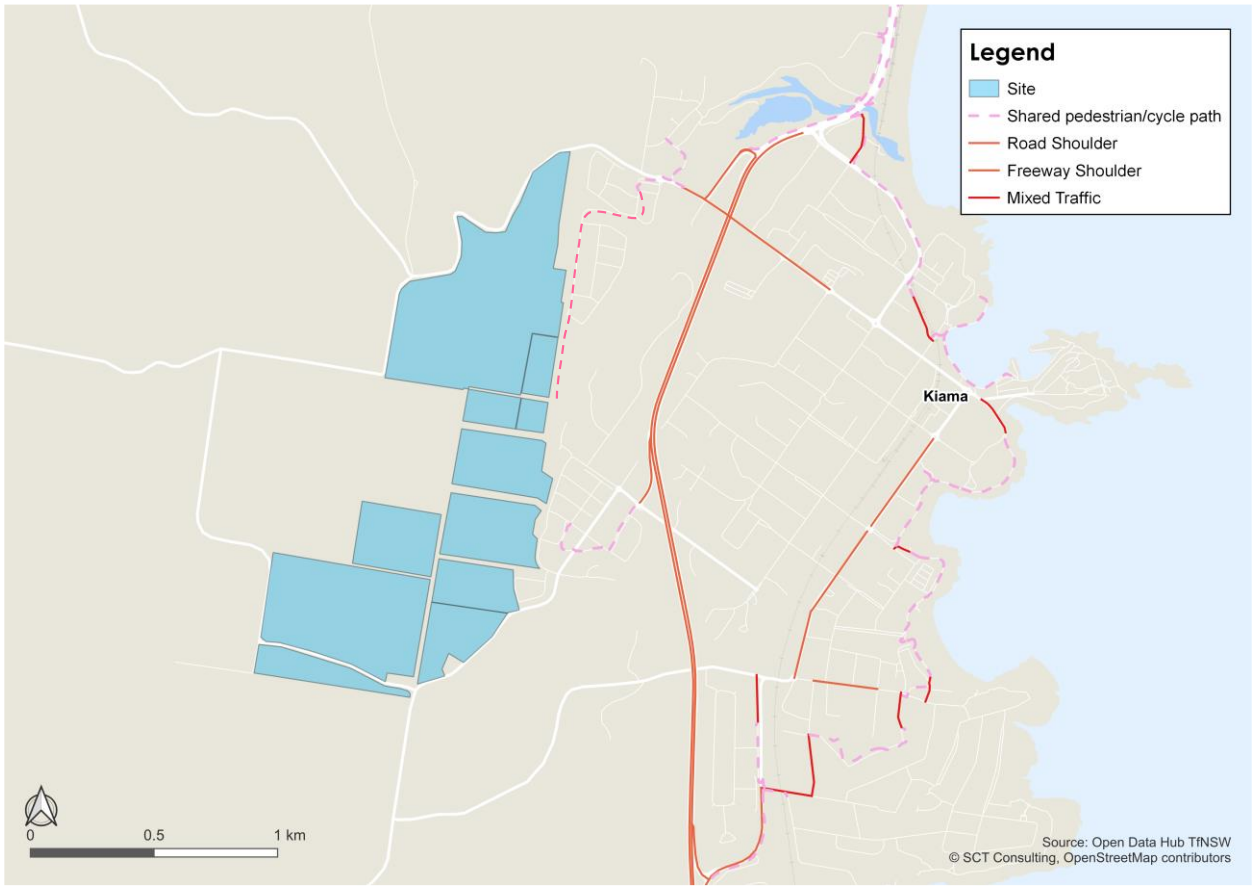
Figure 3–3 Public transport route and stop locations



3.5 Active transport

The existing cycleways are shown in **Figure 3–4**. There is a shared path in the northeastern subdivision that connects Jamberoo Road and a short section to the east as part of local natural reserves. However, the rest of the cycle facilities close to the site are usually on-road cycleway that mixes with other vehicular traffic. Together with hilly topography, this caused an obstacle to promote the bicycle mode share.

Figure 3–4 Cycleway locations and types

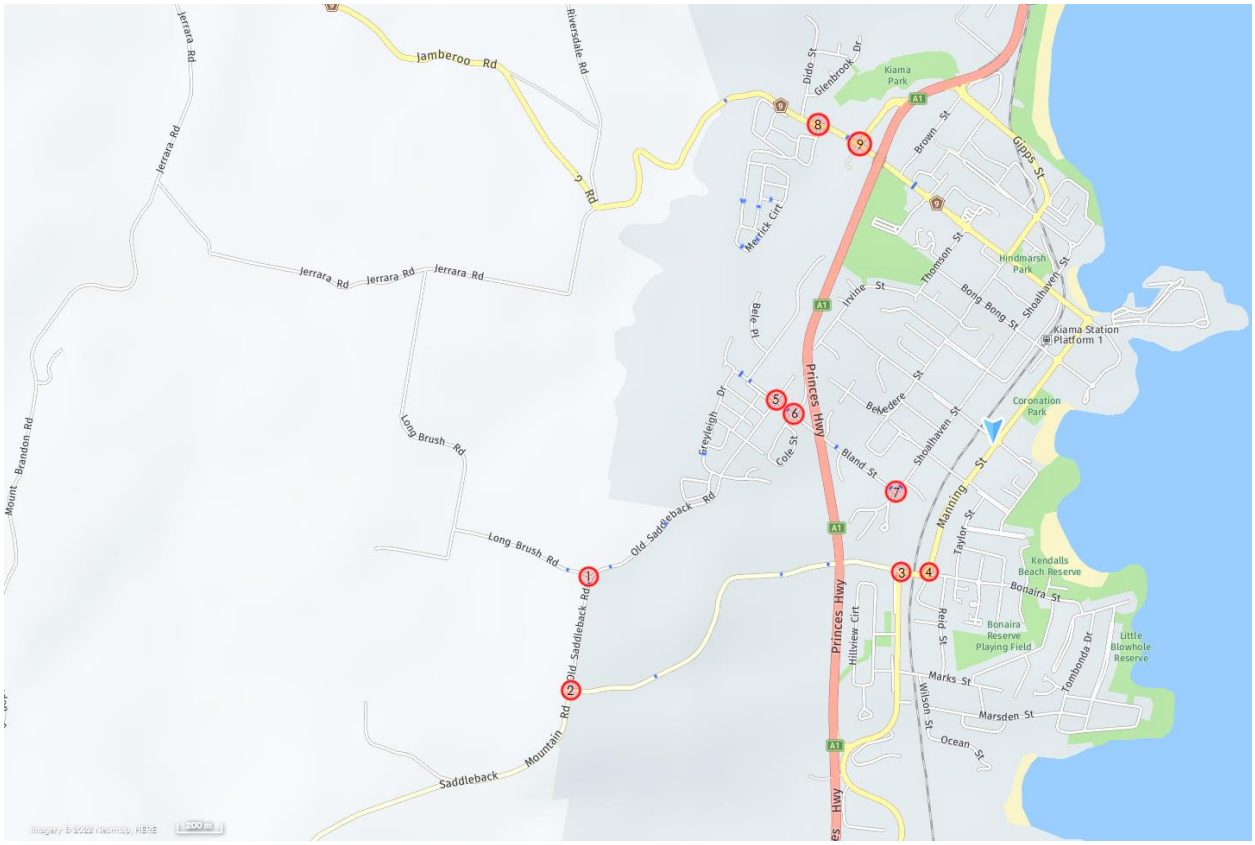


3.6 Intersection performance

A SIDRA model has been prepared for the critical intersections around the precinct to understand the existing network performance and to test the impacts associated with the proposal. Intersection performance has been assessed for the weekday AM and PM peak hours for the intersections including (**Figure 3–5**):

1. Long Brush Road / Old Saddleback Road
2. Old Saddleback Road / Saddleback Mountain Road
3. Saddleback Mountain Road / South Kiama Drive
4. South Kiama Drive / Manning Street
5. Bland Street / Old Saddleback Road
6. Bland Street / Eugene Street
7. Bland Street / Shoalhaven Street
8. Jamberoo Road / Banksia Drive
9. Jamberoo Road / Terralong Street / Spring Creek Road

Figure 3–5 Location of the modelled intersections



Source: Nearmap with SCT annotation, 2022

3.6.1 Key assumptions for base year model

Key assumptions used to develop the base year models are discussed below:

3.6.1.1 Traffic data

Traffic turning counts for the nine intersections for the base year were collected on 21 July 2022. Based on the highest network traffic volume, the peak hours for the data are specified below:

– Weekday AM peak hour: 8:15 am to 9:15 am

– Weekday PM peak hour: 3:00 pm to 4:00 pm.

3.6.1.2 Site layouts

Intersection layouts were derived from a combination of the Nearmap imagery and Google Streetview.

3.6.2 Model calibration

The intersection models were calibrated using the input data to reflect observations of traffic behaviours on site. One of the key goals is to calibrate the models such that the degree of saturation of all movements was 1.0 or below. This is a standard procedure to ensure that the models are not over-predicting congestion under current conditions.

3.6.3 Intersection level of service

Intersection Level of Service (LoS) is a typical design tool used by traffic engineers to identify when roads are congested. The Level of Service as defined in TfNSW Traffic Modelling Guidelines is provided in **Table 3-2**.

Table 3-2 Level of Service definitions

Level of Service	Average delay per vehicle (seconds)	Performance explanation
A	Less than 14.5	Good operation
B	14.5 to 28.4	Good with acceptable delays and spare capacity
C	28.5 to 42.4	Satisfactory
D	42.5 to 56.4	Operating near capacity
E	56.5 to 70.4	At capacity, at signals incidents will cause excessive delays. Roundabouts require other control method.
F	70.5 or greater	At capacity, at signals incidents will cause excessive delays. Roundabouts require other control method.

Source: Roads and Maritime Services (2002), Traffic Modelling Guidelines

In addition, **Degree of Saturation (DoS)** is included to complement Level of Service. It is a measure of the volume/capacity for the worst turning movement at the intersection. DoS is one implies that the turning movement is at capacity.

3.6.4 2022 intersection performance

The outcomes of the intersection modelling are presented in **Table 3-3** based on a modelling assessment by SIDRA 9 software.

Table 3-3 Existing (2022) intersection performance

Intersection	Weekday AM peak			Weekday PM peak		
	DoS	Delay	LoS	DoS	Delay	LoS
Old Saddleback Road and Long brush Road	0.01	5.6	A	0.02	5.6	A
Old Saddleback Road and Saddleback Mountain Road	0.02	5.6	A	0.02	5.6	A
South Kiama Drive and Saddleback Mountain Road	0.28	8.9	A	0.19	7.5	A
South Kiama Drive and Manning Street	0.47	9.2	A	0.35	9.1	A
Bland Street and Old Saddleback Road	0.06	8.8	A	0.08	8.5	A
Bland Street and Eugene Street	0.25	10.5	A	0.27	10.9	A
Shoalhaven Street and Bland Street	0.24	7.8	A	0.21	7.7	A
Jamberoo Road and Banksia Drive	0.11	10.1	A	0.13	10.1	A
Jamberoo Road and Spring Creek Road	0.16	8.9	A	0.24	10.4	A

The SIDRA results show that the network currently performs at a Level of Service A with sufficient remaining capacity to accommodate additional trips.

A summary of the detailed SIDRA modelling outputs is included in **Appendix A**.

4.0 The proposed development

4.1 Proposed master plan of Kiama West

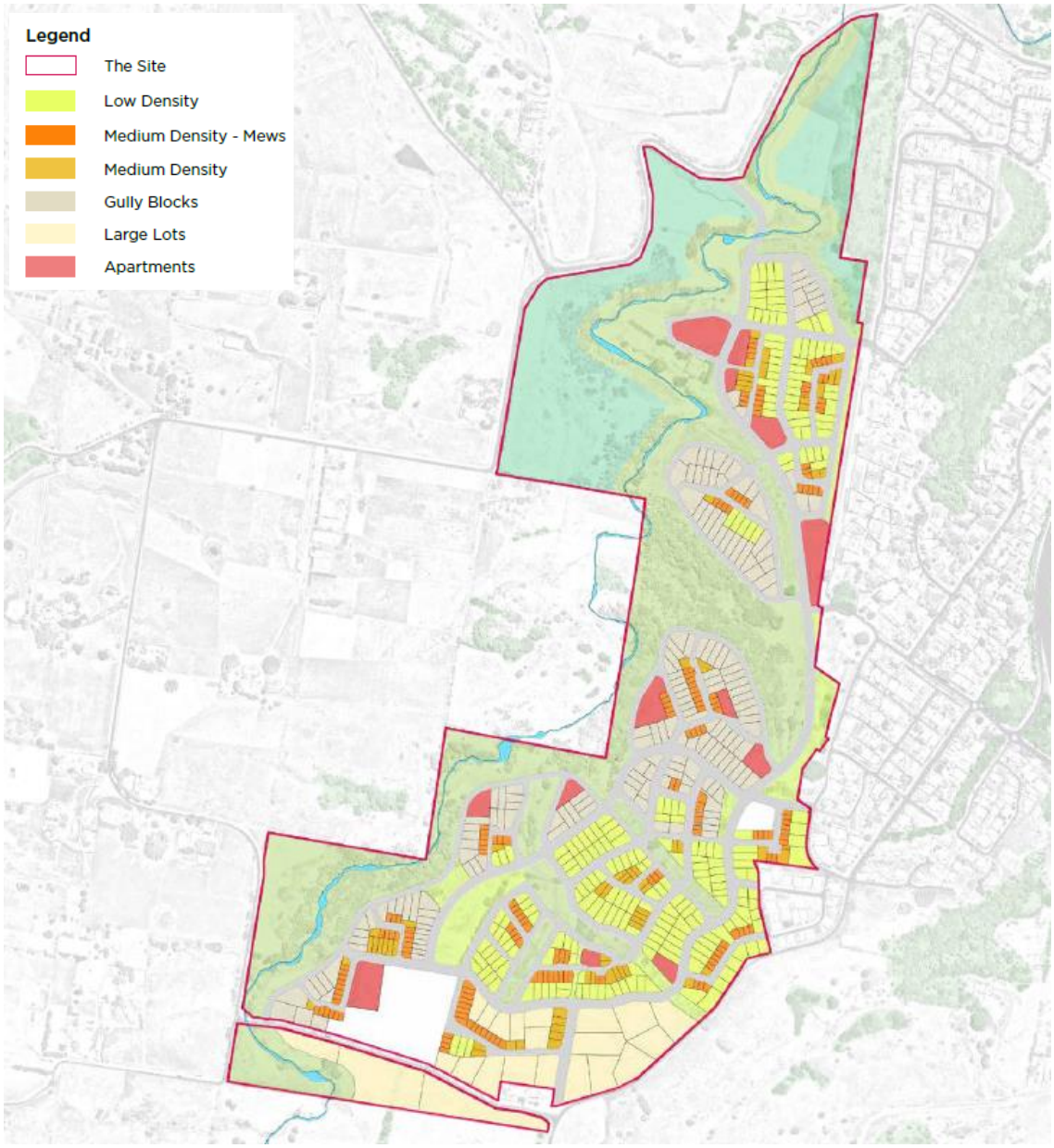
Located about 1.5km away from the Kiama town centre, the subject site is envisaged to be a thriving, sustainable and well-serviced mixed-use development at Kiama West, providing a diverse mix of housing opportunities nestled within a scenic landscape setting.

The site is proposed to have higher intensity land use along Spring Creek and provide place activation of small-scale retail, food and beverage with a focus on local produce, hotel and school.

Due to the topography of the site, the edges and interface are visually sensitive. The master plan proposes to make these areas as open as possible and respond to the particular situation with large lots, open space or other uses that complement the immediate locality and view.

The master plan is shown in **Figure 4-1** which indicates a wide range of residential types across the site.

Figure 4-1 Proposed master plan



Source: E8urban, 2022

4.2 Development yield

The total property area would be about 1,205,591m^2 for the entire development. **Table 4-1** shows a breakdown of 1,103 dwellings by different types of housing. There would also be some supplementary/ancillary non-residential uses including homesteads, local centres and colleges on-site to service future residents.

Table 4-1 Development yield

Residential type	Proposed yield for the site
Large lots	22 dwellings
Low-density house	233 dwellings
Gully block	175 dwellings
Medium density - Mews	181 dwellings
Medium density	67 dwellings
Apartments	425 dwellings
Total	**1,103 dwellings**

Source: E8urban, 2022

4.3 Road network and hierarchy

The proposed street network aims at increasing the site's permeability with a tier of proposed streets considering, as shown in **Figure 4-2**:

- Distribution of vehicular traffic across multiple access points for greater connectivity to the external and existing road network
- A north-south spine from Jamberoo Road with a loop road to service the southern part of the site
- Local roads to further augment the permeability of the developable blocks
- Access roads within the community titles
- Bushfire roads are mainly located to the west which has frontages to the rural land area.

Table 4-2 compares the proposed cross-section and the DCP requirement. The proposed cross-sections are detailed in **Figure 4-5**.

Figure 4-2 Street typologies

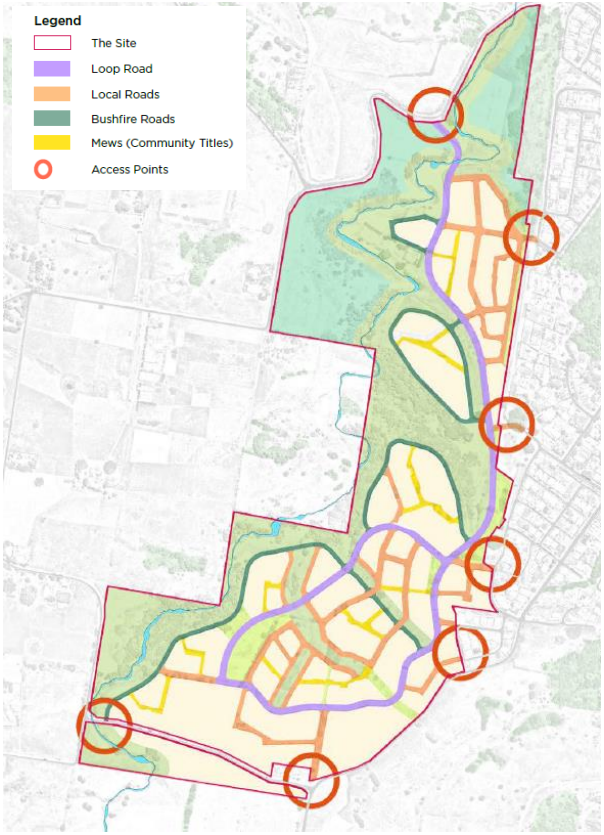


Figure 4-3 Active transport

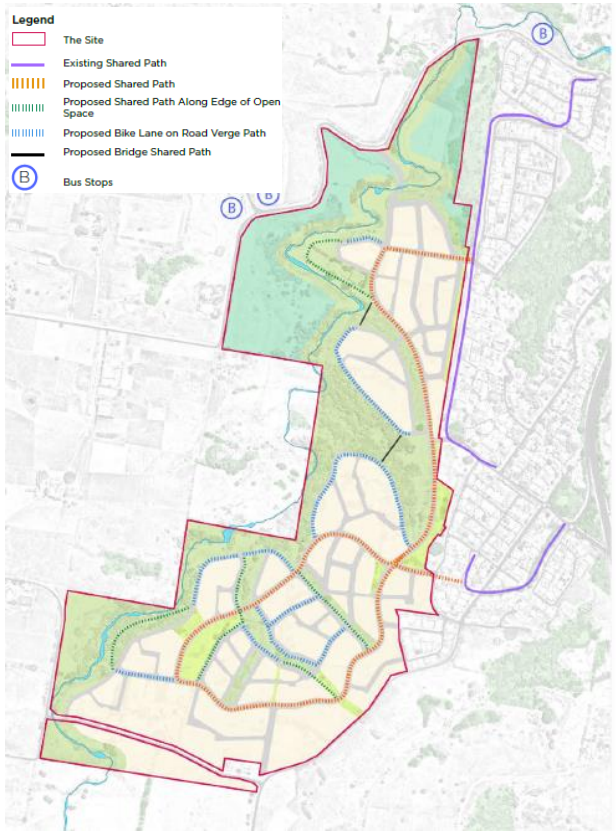
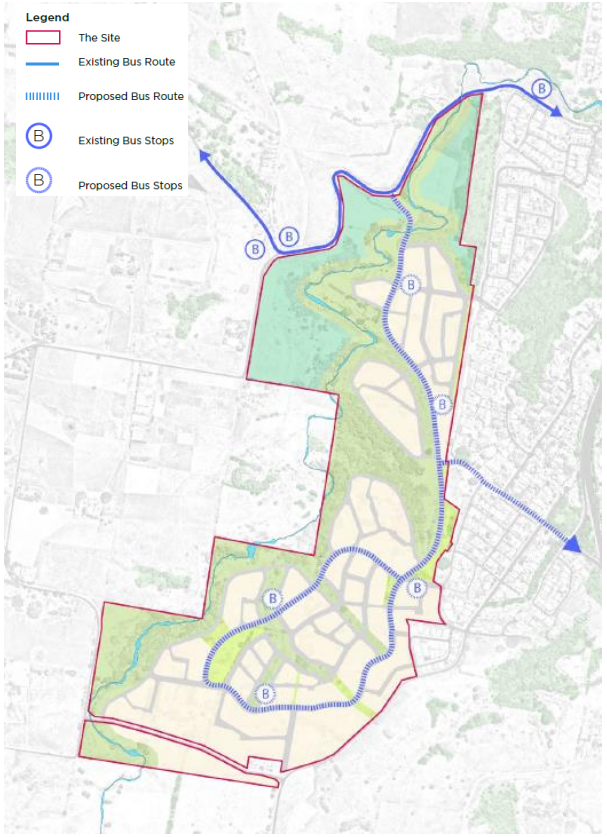


Figure 4-4 Bus route

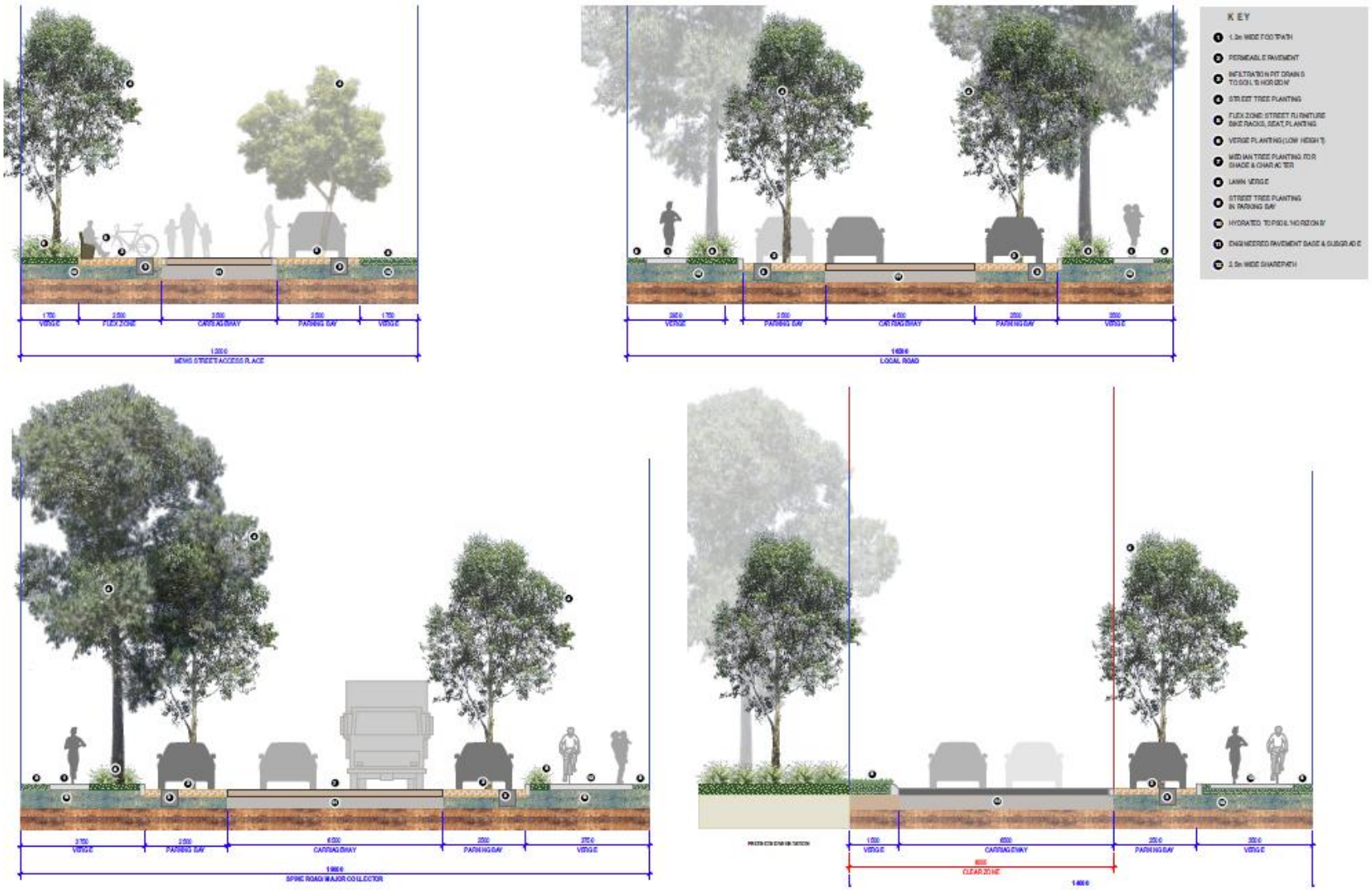


Source: E8urban, 2022

Table 4-2 Cross-section changes and justifications

Road Name	DCP / proposal	Cross section (m)					Justification
		Verge	Parking	Carriageway	Parking	Verge	
Access Place/ Mew Street	Kiama DCP	3.5	-	3.5	-	3.5	– Adopting a 2.5m wide parking space is acceptable which provides more generous space for the passengers and doors swinging out. – The proposed width of the carriageway is the same as the DCP's width. – The proposed road reserve is wider than DCP mainly due to the varied flexi zones/ parking. A total of 1.5m deviations is durable
		Total road reserve: 10.5					
	Proposed design	1.75	2.5	3.5	2.5	1.75	
		Total road reserve: 12					
Local Road	Kiama DCP	3.5	9.5			3.5	– Adopting a 2.5m wide parking space is acceptable which provides more generous space for the passengers and doors swinging out. – The proposed widths of the carriageway and road reserve are the same as the DCP's width. – A 1.2m wide footpath is provided on both sides of the verge, which is consistent with the DCP.
		Total road reserve: 16.5					
	Proposed design	3.5	2.5	4.5	2.5	3.5	
		Total road reserve: 16.5					
Major Collector/ Spine Road	Kiama DCP	Min 3.5	11.5			Min 3.5	– Adopting a 2.5m wide parking space is acceptable which provides more generous space for the passengers and doors swinging out. – The proposed width of the carriageway is the same as the DCP's width, which satisfies two-way traffic and two parking lanes. – The proposed road reserve satisfies the DCP where a wider verge will accommodate a 1.2m footpath and 2.5m shared path. – There is a variation to a 14m road reserve which deals with protected vegetation on one side. The widths of the carriageway and verge are consistent with the DCP.
		Total road reserve: Min 18.5					
	Proposed design	3.75	2.5	6.5	2.5	3.75	
		Total road reserve: 19					

Figure 4-5 Proposed cross-section design



Source: E8urban, 2022

4.4 Active transport connections

According to **Figure 4-3**, the proposed active transport facility and network would contain a mixture of:

– A shared path on the loop road

– A shared path on edge of an open space

– Shared path bike lane on road verge path

– Bridge shared path.

The proposed shared path system would connect with the existing shared path to the east of the site to facilitate cyclists to access the facilities and destinations.

4.5 Public transport connections

The proposed loop road has been designed to be bus capable and a total of five bus stops would be provided for coverage of the whole development. The bus coverage would facilitate the residents to use public transport. The future bus routes could connect with Bland Street to the east and Jamberoo Road to the north (**Figure 4-4**).

5.0 Traffic and transport impact appraisal

5.1 Trip generation

The trip generation rates for Kiama West were derived based on the RMS '*Guide to Traffic Generating Developments (2013)*', which are shown in **Table 5-1**.

Table 5-1 Regional average trip generation rates

Time period	Trips rates for low-density housing
AM Peak hour	0.71 vehicle trips per dwelling
PM Peak hour	0.78 vehicle trips per dwelling

Source: Guide to Traffic Generating Developments (2013), Roads & Maritime Services

It is noted that the trip rates for high-density apartments in regional NSW are 0.53 and 0.32 vehicle trips per dwelling for AM and PM peak hours, which are lower than those for low-density residential dwellings. Considering the public transport availability and the locality of the site, the trip rates for low-density housing have been applied to all dwelling types such that the worst-case scenario can be assessed. Therefore, the vehicle trips generated associated with the proposal during the AM and PM peak periods are shown in **Table 5-2**:

Table 5-2 Trip generation

Residential type	Yield	AM Trip rate	PM Trip rate	AM Trips	PM Trips
Mews	181 dwellings	0.71 vehicle trips per dwelling	0.78 vehicle trips per dwelling	128 trips	141 trips
Medium density	67 dwellings			47 trips	52 trips
Low density	233 dwellings			165 trips	181 trips
Gully	175 dwellings			124 trips	136 trips
Apartment	425 dwellings			301 trips	331 trips
Large lots	22 dwellings			15 trips	17 trips
Total	**1,103 dwellings**	**-**	**-**	**783 trips**	**860 trips**

Therefore, a total of 783 and 860 vehicle trips could be generated as a result of the proposed development during the AM and PM peak hours respectively. Additionally, per the *Kiama South Sub-division TIA* (Bitzios 2018), it assumed that there is a directional split of 30% in and 70% out in the AM peak and vice versa in the PM peak.

5.2 Trip distribution

There are seven access points for the development to connect with the existing road network. The origin and destination pairs were identified based on potential dwelling locations, routing options and major destinations. The assumptions include:

– The split of residential dwellings in the northern part and southern parts is about 30%:70%.

– Given the access routes and the locations of the on-ramp/off-ramp of A1, the split of development traffic using Jamberoo Road, Bland Street and Longbrush Road are assumed to be 20%, 60% and 20%, respectively.

– According to the TRACKS model obtained in *Kiama South Sub-division* (Bitzios, 2018), the residents of Kiama are mainly heading to destinations to the north of Kiama such as Wollongong, Kiama town centre and destinations to the north of Kiama such as Nowra and Bomaderry. In particular, the distributions are shown below:

  - 51% to/from the north (such as Wollongong)
  - 33% to/from the east (Kiama town centre)

- 16% to/from the south (such as Nowra)

– The vehicle trips to the network are distributed at each turning movement in line with the modelled intersections.

5.3 Road network impact

5.3.1 Modelling scenarios

Modelling was undertaken for 2036 AM peak and PM peak hours which assesses a 10-year horizon year after the development is opened (estimated in 2026). The scenarios for the future year include:

– Future year base case (including Kiama South planning proposal)

– Future base case with the Kiama West planning proposal.

5.3.2 Future year base case

5.3.2.1 Background growth

From the traffic volume counters (Station ID: 07804), an average annual growth rate of 1.4 per cent was derived to forecast the 2036 background traffic volumes. This results in a total background growth of about 21 per cent from 2022 to 2036.

5.3.2.2 Kiama South Planning Proposal

It is noted that an approved planning proposal close to the subject development would have a cumulative impact on the road network in the vicinity of the site, which is an approved subdivision for 455 lots located to the south of the proposal. The predicted traffic generation was taken into consideration as part of the future year base case.

Bitzios Consulting estimated the trip generation for Kiama South subdivision as shown in **Table 5-3**.

Table 5-3 Trip generation for Kiama South Planning Proposal

Yield	AM Trip rate	PM Trip rate	AM Trips	PM Trips
740 dwellings	0.71 vehicle trips per dwelling	0.78 vehicle trips per dwelling	525 trips	577 trips

Source: Kiama South Sub-Division Revised Traffic Impact Assessment, 2018

Hence, the vehicle trips associated with Kiama South subdivision were assigned at relevant modelled intersections to understand the cumulative impact on top of the background traffic growth.

5.3.3 Intersection performance

All intersections are expected to still operate at an acceptable level of service during the peak hours in 2036, including future background traffic growth, Kiama South Planning Proposal and proposed Kiama West (the subject proposal) as shown in **Table 5-4**. Only at the intersection of South Kiama Drive and Saddleback Mountain Road, the level of service indicates one level drop for both peak hours. However, the performance of LoS C and B are still acceptable from a capacity perspective.

A summary of the detailed SIDRA modelling outputs is included in **Appendix A**.

Table 5-4 Intersection performance

Intersection	Future year base (2036)			Future year base with development (2036)		
	DoS	Delay	LoS	DoS	Delay	LoS
Weekday AM Peak						
Old Saddleback Road and Long brush Road	0.01	5.6	A	0.05	5.7	A
Old Saddleback Road and Saddleback Mountain Road	0.02	5.6	A	0.08	5.8	A
South Kiama Drive and Saddleback Mountain Road	0.45	18.7	B	0.62	29.3	C
South Kiama Drive and Manning Street	0.88	16.5	B	0.91	19.4	B
Bland Street and Old Saddleback Road	0.07	8.9	A	0.30	11.3	A
Bland Street and Eugene Street	0.30	11.4	A	0.60	13.5	A
Shoalhaven Street and Bland Street	0.29	8.2	A	0.35	8.9	A
Jamberoo Road and Banksia Drive	0.13	10.1	A	0.22	10.1	A
Jamberoo Road and Spring Creek Road	0.20	10.1	A	0.23	11.3	A
Weekday PM Peak						
Old Saddleback Road and Long brush Road	0.02	5.6	A	0.13	6.0	A
Old Saddleback Road and Saddleback Mountain Road	0.02	5.6	A	0.15	5.6	A
South Kiama Drive and Saddleback Mountain Road	0.34	14.2	A	0.41	20.7	B
South Kiama Drive and Manning Street	0.58	10.8	A	0.59	11.2	A
Bland Street and Old Saddleback Road	0.09	8.6	A	0.32	9.8	A
Bland Street and Eugene Street	0.33	11.8	A	0.53	16.3	B
Shoalhaven Street and Bland Street	0.21	7.7	A	0.37	9.7	A
Jamberoo Road and Banksia Drive	0.16	10.1	A	0.24	10.1	A
Jamberoo Road and Spring Creek Road	0.30	12.6	A	0.31	15.0	B

5.4 Public transport impact

As stated in **Section 4.5**, the loop road within the site would be bus capable, enabling the site to be covered by bus services. With the connection of bus service to Bland Street and Jamberoo Road, it is expected that the bus attractiveness would increase.

The on-demand minibus service would link the users of the development closely with the public transport hub, activity centres and services. This would not only facilitate the public transport user group but also encourage the mode shift of those car users to sustainable transport. It is envisaged that the minibus passengers would use online booking or mobile applications to ensure access to the service.

The public transport network is expected to be able to cope with the additional trips generated by the proposed development given a relatively low net increase in the public transport demand.

5.5 Active transport impact

Active transport can be one of the most convenient modes for short-distance trips given the provision of the non-residential components within the development. The road network within the site is generally slow-speed and cyclist-friendly, providing numerous crossing opportunities and reducing travel distance between residential areas and the town centre.

The major north-south spine, the loop road and bush fire roads are proposed to accommodate cycle paths, which facilitate the site residents to cycle to a wider area.

6.0 Conclusion

The planning proposal would see an uplift of 1,103 residential dwellings of various housing products located to the west of the existing Kiama township and town centre at Kiama West. In summary:

– The rezoning of the site responds to the population growth and housing target set out in the LSPS.

– There are plans in place that work towards improving the public transport system and active transport to reduce dependence on private vehicles and support a sustainable outcome associated with the proposal.

– The proposed development would generate a net increase of over 783 and 860 vehicle trips during AM and PM peak hours respectively.

– A SIDRA modelling confirms that the network would operate at satisfactory levels in all modelled periods including a future year with development and does not require any upgrades given sufficient remaining capacity on the local road network.

– The major road network within the site would be bus-capable whereas the internal street network increases permeability and accessibility for active transport, encouraging green transport use for the site.

APPENDIX A

SIDRA model output

MOVEMENT SUMMARY

Site: 1AM [OLD_LON_22_AM_X (Site Folder: Base Year AM)]

8:15AM - 9:15AM 2022
Site Category: BASE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Old Saddleback Road (S)														
1	L2	5	0.0	5	0.0	0.012	5.5	LOS A	0.0	0.0	0.00	0.14	0.00	57.1
2	T1	16	6.3	17	6.3	0.012	0.0	LOS A	0.0	0.0	0.00	0.14	0.00	58.7
Approach		21	4.8	22	4.8	0.012	1.3	NA	0.0	0.0	0.00	0.14	0.00	58.3
North: Old Saddleback Road (N)														
8	T1	19	0.0	20	0.0	0.012	0.0	LOS A	0.0	0.1	0.02	0.08	0.02	59.2
9	R2	3	0.0	3	0.0	0.012	5.5	LOS A	0.0	0.1	0.02	0.08	0.02	57.0
Approach		22	0.0	23	0.0	0.012	0.8	NA	0.0	0.1	0.02	0.08	0.02	58.9
West: Long Brush Road														
10	L2	1	0.0	1	0.0	0.010	5.6	LOS A	0.0	0.2	0.06	0.58	0.06	53.5
12	R2	14	0.0	15	0.0	0.010	5.5	LOS A	0.0	0.2	0.06	0.58	0.06	53.0
Approach		15	0.0	16	0.0	0.010	5.5	LOS A	0.0	0.2	0.06	0.58	0.06	53.0
All Vehicles		58	1.7	61	1.7	0.012	2.2	NA	0.0	0.2	0.03	0.23	0.03	57.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 2AM [OLD_SAD_22_AM_X (Site Folder: Base Year AM)]

8:15AM - 9:15AM 2022 BASE YEAR
Site Category: BASE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Saddleback Mountain Road (S)														
2	T1	4	0.0	4	0.0	0.004	0.0	LOS A	0.0	0.1	0.08	0.25	0.08	57.5
3	R2	3	0.0	3	0.0	0.004	5.5	LOS A	0.0	0.1	0.08	0.25	0.08	55.4
Approach		7	0.0	7	0.0	0.004	2.4	NA	0.0	0.1	0.08	0.25	0.08	56.6
East: Saddleback Mountain Road (E)														
4	L2	3	0.0	3	0.0	0.014	5.6	LOS A	0.0	0.3	0.03	0.59	0.03	53.6
6	R2	18	5.6	19	5.6	0.014	5.5	LOS A	0.0	0.3	0.03	0.59	0.03	52.8
Approach		21	4.8	22	4.8	0.014	5.5	LOS A	0.0	0.3	0.03	0.59	0.03	52.9
North: Old Saddleback Road														
7	L2	29	0.0	31	0.0	0.019	5.5	LOS A	0.0	0.0	0.00	0.51	0.00	54.2
8	T1	4	0.0	4	0.0	0.019	0.0	LOS A	0.0	0.0	0.00	0.51	0.00	55.6
Approach		33	0.0	35	0.0	0.019	4.9	NA	0.0	0.0	0.00	0.51	0.00	54.3
All Vehicles		61	1.6	64	1.6	0.019	4.8	NA	0.0	0.3	0.02	0.51	0.02	54.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3AM [SOU_SAD_22_AM_X (Site Folder: Base Year AM)]

8:15AM - 9:15AM 2022 Base Year
Site Category: BASE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: South Kiama Drive (S)														
1a	L1	157	2	165	1.3	0.278	3.1	LOS A	0.0	0.0	0.00	0.46	0.00	38.4
3	R2	319	15	336	4.7	0.278	3.6	LOS A	0.0	0.0	0.00	0.46	0.00	37.6
Approach		476	17	501	3.6	0.278	3.4	NA	0.0	0.0	0.00	0.46	0.00	38.0
East: South Kiama Drive (E)														
4	L2	184	10	194	5.4	0.111	3.4	LOS A	0.0	0.0	0.00	0.45	0.00	37.8
6a	R1	75	1	79	1.3	0.045	3.6	LOS A	0.2	1.6	0.42	0.49	0.42	37.0
Approach		259	11	273	4.2	0.111	3.5	NA	0.2	1.6	0.12	0.46	0.12	37.6
NorthWest: Saddleback Mountain Road														
27a	L1	161	1	169	0.6	0.107	4.0	LOS A	0.5	3.5	0.40	0.53	0.40	36.8
29a	R1	51	0	54	0.0	0.110	8.9	LOS A	0.4	2.8	0.62	0.79	0.62	36.3
Approach		212	1	223	0.5	0.110	5.2	LOS A	0.5	3.5	0.46	0.59	0.46	36.6
All Vehicles		947	29	997	3.1	0.278	3.8	NA	0.5	3.5	0.14	0.49	0.14	37.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 4AM [SOU_MAN_22_AM_X (Site Folder: Base Year AM)]

8:15AM - 9:15AM BASE
Site Category: BASE YEAR
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Henley Avenue														
1	L2	17	0.0	18	0.0	0.045	4.9	LOS A	0.2	1.6	0.54	0.55	0.54	34.6
2	T1	16	0.0	17	0.0	0.045	4.5	LOS A	0.2	1.6	0.54	0.55	0.54	37.9
3	R2	3	0.0	3	0.0	0.045	7.9	LOS A	0.2	1.6	0.54	0.55	0.54	35.9
3u	U	1	0.0	1	0.0	0.045	9.2	LOS A	0.2	1.6	0.54	0.55	0.54	38.0
Approach		37	0.0	39	0.0	0.045	5.1	LOS A	0.2	1.6	0.54	0.55	0.54	36.7
East: Bonaira Street														
4	L2	13	0.0	14	0.0	0.224	4.2	LOS A	1.3	9.1	0.50	0.64	0.50	33.2
5	T1	34	5.9	36	5.9	0.224	4.0	LOS A	1.3	9.1	0.50	0.64	0.50	31.0
6	R2	159	2.5	167	2.5	0.224	7.3	LOS A	1.3	9.1	0.50	0.64	0.50	36.6
6u	U	1	0.0	1	0.0	0.224	8.6	LOS A	1.3	9.1	0.50	0.64	0.50	15.8
Approach		207	2.9	218	2.9	0.224	6.6	LOS A	1.3	9.1	0.50	0.64	0.50	35.9
North: Manning Street														
7	L2	94	4.3	99	4.3	0.288	2.9	LOS A	1.9	14.0	0.29	0.51	0.29	36.3
8	T1	23	4.3	24	4.3	0.288	2.5	LOS A	1.9	14.0	0.29	0.51	0.29	37.8
9	R2	206	4.4	217	4.4	0.288	6.0	LOS A	1.9	14.0	0.29	0.51	0.29	37.2
9u	U	25	4.0	26	4.0	0.288	7.3	LOS A	1.9	14.0	0.29	0.51	0.29	38.8
Approach		348	4.3	366	4.3	0.288	5.0	LOS A	1.9	14.0	0.29	0.51	0.29	37.2
West: South Kiama Drive														
10	L2	412	2.9	434	2.9	0.469	4.2	LOS A	3.5	25.0	0.56	0.57	0.56	36.9
11	T1	51	5.9	54	5.9	0.469	3.9	LOS A	3.5	25.0	0.56	0.57	0.56	33.6
12	R2	15	6.7	16	6.7	0.469	7.3	LOS A	3.5	25.0	0.56	0.57	0.56	36.5
12u	U	2	0.0	2	0.0	0.469	8.5	LOS A	3.5	25.0	0.56	0.57	0.56	36.2
Approach		480	3.3	505	3.3	0.469	4.3	LOS A	3.5	25.0	0.56	0.57	0.56	36.8
All Vehicles		1072	3.5	1128	3.5	0.469	5.0	LOS A	3.5	25.0	0.46	0.56	0.46	36.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 5AM [BLA_OLD_22_AM_X (Site Folder: Base Year AM)]

8:15AM - 9:15AM 2022
Site Category: BASE YEAR
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Old Saddleback Road (S)														
1	L2	2	0.0	2	0.0	0.058	4.0	LOS A	0.3	2.0	0.15	0.60	0.15	34.5
2	T1	1	0.0	1	0.0	0.058	3.7	LOS A	0.3	2.0	0.15	0.60	0.15	35.1
3	R2	63	4.8	66	4.8	0.058	6.9	LOS A	0.3	2.0	0.15	0.60	0.15	29.3
3u	U	1	0.0	1	0.0	0.058	8.3	LOS A	0.3	2.0	0.15	0.60	0.15	29.3
Approach		67	4.5	71	4.5	0.058	6.8	LOS A	0.3	2.0	0.15	0.60	0.15	29.6
East: Bland Street (E)														
4	L2	35	5.7	37	5.7	0.052	3.9	LOS A	0.3	1.8	0.07	0.48	0.07	34.7
5	T1	27	3.7	28	3.7	0.052	3.6	LOS A	0.3	1.8	0.07	0.48	0.07	40.1
6	R2	4	25.0	4	25.0	0.052	6.9	LOS A	0.3	1.8	0.07	0.48	0.07	35.7
6u	U	2	0.0	2	0.0	0.052	8.2	LOS A	0.3	1.8	0.07	0.48	0.07	32.2
Approach		68	5.9	72	5.9	0.052	4.1	LOS A	0.3	1.8	0.07	0.48	0.07	37.1
North: Old Saddleback Road (N)														
7	L2	8	12.5	8	12.5	0.011	4.7	LOS A	0.1	0.4	0.29	0.51	0.29	34.8
8	T1	1	0.0	1	0.0	0.011	4.2	LOS A	0.1	0.4	0.29	0.51	0.29	37.0
9	R2	1	0.0	1	0.0	0.011	7.4	LOS A	0.1	0.4	0.29	0.51	0.29	39.1
9u	U	1	0.0	1	0.0	0.011	8.8	LOS A	0.1	0.4	0.29	0.51	0.29	39.6
Approach		11	9.1	12	9.1	0.011	5.3	LOS A	0.1	0.4	0.29	0.51	0.29	35.9
West: Bland Street (W)														
10	L2	1	0.0	1	0.0	0.058	4.3	LOS A	0.3	2.0	0.22	0.45	0.22	39.3
11	T1	57	1.8	60	1.8	0.058	3.9	LOS A	0.3	2.0	0.22	0.45	0.22	39.2
12	R2	5	0.0	5	0.0	0.058	7.1	LOS A	0.3	2.0	0.22	0.45	0.22	35.9
12u	U	1	0.0	1	0.0	0.058	8.5	LOS A	0.3	2.0	0.22	0.45	0.22	42.0
Approach		64	1.6	67	1.6	0.058	4.3	LOS A	0.3	2.0	0.22	0.45	0.22	39.0
All Vehicles		210	4.3	221	4.3	0.058	5.1	LOS A	0.3	2.0	0.15	0.51	0.15	35.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 6AM [BLA_EUG_22_AM_X (Site Folder: Base Year AM)]

8:15AM - 9:15AM 2022
Site Category: BASE YEAR
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Eugene Street														
1	L2	1	0.0	1	0.0	0.029	6.2	LOS A	0.2	1.2	0.61	0.62	0.61	27.3
2	T1	10	10.0	11	10.0	0.029	6.4	LOS A	0.2	1.2	0.61	0.62	0.61	35.2
3	R2	9	0.0	9	0.0	0.029	9.1	LOS A	0.2	1.2	0.61	0.62	0.61	33.3
3u	U	1	0.0	1	0.0	0.029	10.5	LOS A	0.2	1.2	0.61	0.62	0.61	22.3
Approach		21	4.8	22	4.8	0.029	7.8	LOS A	0.2	1.2	0.61	0.62	0.61	33.7
East: Bland Street (E)														
4	L2	9	0.0	9	0.0	0.246	3.9	LOS A	1.6	11.3	0.05	0.60	0.05	33.7
5	T1	65	6.2	68	6.2	0.246	3.6	LOS A	1.6	11.3	0.05	0.60	0.05	37.3
6	R2	300	2.7	316	2.7	0.246	6.7	LOS A	1.6	11.3	0.05	0.60	0.05	40.3
6u	U	1	0.0	1	0.0	0.246	8.1	LOS A	1.6	11.3	0.05	0.60	0.05	40.5
Approach		375	3.2	395	3.2	0.246	6.1	LOS A	1.6	11.3	0.05	0.60	0.05	39.8
West: Bland Street (W)														
10	L2	68	5.9	72	5.9	0.155	6.1	LOS A	0.8	5.7	0.49	0.61	0.49	37.3
11	T1	63	3.2	66	3.2	0.155	5.7	LOS A	0.8	5.7	0.49	0.61	0.49	37.5
12	R2	1	0.0	1	0.0	0.155	8.8	LOS A	0.8	5.7	0.49	0.61	0.49	27.6
12u	U	2	0.0	2	0.0	0.155	10.2	LOS A	0.8	5.7	0.49	0.61	0.49	25.8
Approach		134	4.5	141	4.5	0.155	6.0	LOS A	0.8	5.7	0.49	0.61	0.49	37.2
All Vehicles		530	3.6	558	3.6	0.246	6.1	LOS A	1.6	11.3	0.18	0.60	0.18	39.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 7AM [SHO_BLA_22_AM_X (Site Folder: Base Year AM)]

8:15AM - 9:15AM 2022
Site Category: BASE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Shoalhaven Street (S)														
1	L2	29	17.2	31	17.2	0.044	3.5	LOS A	0.0	0.1	0.01	0.20	0.01	38.4
2	T1	40	20.0	42	20.0	0.044	0.0	LOS A	0.0	0.1	0.01	0.20	0.01	34.8
3	R2	1	0.0	1	0.0	0.044	6.5	LOS A	0.0	0.1	0.01	0.20	0.01	15.0
Approach		70	18.6	74	18.6	0.044	1.5	NA	0.0	0.1	0.01	0.20	0.01	36.8
East: Access Road														
4	L2	1	0.0	1	0.0	0.016	0.2	LOS A	0.0	0.3	0.28	0.20	0.28	12.9
5	T1	6	0.0	6	0.0	0.016	1.1	LOS A	0.0	0.3	0.28	0.20	0.28	23.8
6	R2	11	0.0	12	0.0	0.016	0.8	LOS A	0.0	0.3	0.28	0.20	0.28	13.2
Approach		18	0.0	19	0.0	0.016	0.9	LOS A	0.0	0.3	0.28	0.20	0.28	17.9
North: Shoalhaven Street (N)														
7	L2	26	0.0	27	0.0	0.238	7.4	LOS A	1.5	10.5	0.21	0.36	0.21	14.6
8	T1	104	10.6	109	10.6	0.238	0.2	LOS A	1.5	10.5	0.21	0.36	0.21	29.8
9	R2	343	2.3	361	2.3	0.238	3.6	LOS A	1.5	10.5	0.21	0.36	0.21	36.6
Approach		473	4.0	498	4.0	0.238	3.1	NA	1.5	10.5	0.21	0.36	0.21	34.6
West: Bland Street														
10	L2	73	4.1	77	4.1	0.054	3.5	LOS A	0.2	1.6	0.09	0.46	0.09	36.0
11	T1	3	0.0	3	0.0	0.054	7.8	LOS A	0.2	1.6	0.09	0.46	0.09	24.6
12	R2	11	0.0	12	0.0	0.054	5.1	LOS A	0.2	1.6	0.09	0.46	0.09	34.7
Approach		87	3.4	92	3.4	0.054	3.9	LOS A	0.2	1.6	0.09	0.46	0.09	35.3
All Vehicles		648	5.4	682	5.4	0.238	2.9	NA	1.5	10.5	0.18	0.35	0.18	34.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 8AM [JAM_BAN_22_AM_X (Site Folder: Base Year AM)]

8:15AM - 9:15AM
Site Category: BASE YEAR
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Banksia Drive														
1	L2	3	0.0	3	0.0	0.082	2.8	LOS A	0.4	2.8	0.23	0.59	0.23	23.3
3	R2	91	1.1	96	1.1	0.082	6.4	LOS A	0.4	2.8	0.23	0.59	0.23	39.5
3u	U	1	0.0	1	0.0	0.082	8.1	LOS A	0.4	2.8	0.23	0.59	0.23	25.5
Approach		95	1.1	100	1.1	0.082	6.3	LOS A	0.4	2.8	0.23	0.59	0.23	39.0
East: Jamberoo Road (E)														
4	L2	54	1.9	57	1.9	0.090	4.2	LOS A	0.5	3.2	0.04	0.48	0.04	41.7
5	T1	78	1.3	82	1.3	0.090	4.4	LOS A	0.5	3.2	0.04	0.48	0.04	38.4
6u	U	4	0.0	4	0.0	0.090	10.1	LOS A	0.5	3.2	0.04	0.48	0.04	50.8
Approach		136	1.5	143	1.5	0.090	4.5	LOS A	0.5	3.2	0.04	0.48	0.04	40.0
West: Jamberoo Road (W)														
11	T1	120	1.7	126	1.7	0.108	3.9	LOS A	0.6	3.9	0.27	0.45	0.27	46.0
12	R2	2	0.0	2	0.0	0.108	7.6	LOS A	0.6	3.9	0.27	0.45	0.27	31.6
12u	U	1	0.0	1	0.0	0.108	9.4	LOS A	0.6	3.9	0.27	0.45	0.27	25.2
Approach		123	1.6	129	1.6	0.108	4.0	LOS A	0.6	3.9	0.27	0.45	0.27	45.7
All Vehicles		354	1.4	373	1.4	0.108	4.8	LOS A	0.6	3.9	0.17	0.50	0.17	41.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 9AM [JAM_SPR_22_AM_X (Site Folder: Base Year AM)]

8:15AM-9:15AM
Site Category: BASE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Hutchinson Street														
1	L2	1	0.0	1	0.0	0.004	4.8	LOS A	0.0	0.1	0.30	0.52	0.30	44.9
2	T1	1	0.0	1	0.0	0.004	5.8	LOS A	0.0	0.1	0.30	0.52	0.30	47.3
3	R2	1	0.0	1	0.0	0.004	8.1	LOS A	0.0	0.1	0.30	0.52	0.30	45.4
Approach		3	0.0	3	0.0	0.004	6.2	LOS A	0.0	0.1	0.30	0.52	0.30	46.0
East: Terralong Street														
4	L2	1	0.0	1	0.0	0.060	5.5	LOS A	0.0	0.0	0.00	0.01	0.00	57.7
5	T1	109	0.9	115	0.9	0.060	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.9
6	R2	297	1.7	313	1.7	0.159	6.2	LOS A	0.9	6.5	0.36	0.56	0.36	48.2
Approach		407	1.5	428	1.5	0.159	4.5	NA	0.9	6.5	0.26	0.41	0.26	50.3
North: Spring Creek Drive														
7	L2	101	1.0	106	1.0	0.058	6.0	LOS A	0.3	1.9	0.27	0.55	0.27	48.4
8	T1	1	0.0	1	0.0	0.042	6.8	LOS A	0.1	1.0	0.50	0.72	0.50	46.3
9	R2	25	4.0	26	4.0	0.042	8.9	LOS A	0.1	1.0	0.50	0.72	0.50	45.3
Approach		127	1.6	134	1.6	0.058	6.6	LOS A	0.3	1.9	0.32	0.58	0.32	47.8
West: Jamberoo Road														
10	L2	48	2.1	51	2.1	0.120	5.6	LOS A	0.0	0.1	0.00	0.13	0.00	54.8
11	T1	167	1.2	176	1.2	0.120	0.0	LOS A	0.0	0.1	0.00	0.13	0.00	57.2
12	R2	1	0.0	1	0.0	0.120	5.7	LOS A	0.0	0.1	0.00	0.13	0.00	49.7
Approach		216	1.4	227	1.4	0.120	1.3	NA	0.0	0.1	0.00	0.13	0.00	56.5
All Vehicles		753	1.5	793	1.5	0.159	4.0	NA	0.9	6.5	0.20	0.36	0.20	51.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 1PM [OLD_LON_22_PM_X (Site Folder: Base Year PM)]

3:00PM - 4:00PM
Site Category: BASE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Old Saddleback Road (S)														
1	L2	11	0.0	12	0.0	0.018	5.5	LOS A	0.0	0.0	0.00	0.20	0.00	56.7
2	T1	22	0.0	23	0.0	0.018	0.0	LOS A	0.0	0.0	0.00	0.20	0.00	58.2
Approach		33	0.0	35	0.0	0.018	1.9	NA	0.0	0.0	0.00	0.20	0.00	57.7
North: Old Saddleback Road (N)														
8	T1	9	0.0	9	0.0	0.008	0.0	LOS A	0.0	0.2	0.09	0.25	0.09	57.4
9	R2	7	0.0	7	0.0	0.008	5.5	LOS A	0.0	0.2	0.09	0.25	0.09	55.3
Approach		16	0.0	17	0.0	0.008	2.4	NA	0.0	0.2	0.09	0.25	0.09	56.5
West: Long Brush Road														
10	L2	7	0.0	7	0.0	0.011	5.6	LOS A	0.0	0.2	0.07	0.57	0.07	53.5
12	R2	11	9.1	12	9.1	0.011	5.6	LOS A	0.0	0.2	0.07	0.57	0.07	52.5
Approach		18	5.6	19	5.6	0.011	5.6	LOS A	0.0	0.2	0.07	0.57	0.07	52.9
All Vehicles		67	1.5	71	1.5	0.018	3.0	NA	0.0	0.2	0.04	0.31	0.04	56.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 2PM [OLD_SAD_22_PM_X (Site Folder: Base Year PM)]

3:00PM - 4:00PM
Site Category: BASE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Saddleback Mountain Road (S)														
2	T1	11	0.0	12	0.0	0.010	0.0	LOS A	0.0	0.3	0.06	0.26	0.06	57.4
3	R2	9	0.0	9	0.0	0.010	5.5	LOS A	0.0	0.3	0.06	0.26	0.06	55.4
Approach		20	0.0	21	0.0	0.010	2.5	NA	0.0	0.3	0.06	0.26	0.06	56.5
East: Saddleback Mountain Road (E)														
4	L2	11	0.0	12	0.0	0.021	5.6	LOS A	0.1	0.4	0.02	0.58	0.02	53.6
6	R2	22	0.0	23	0.0	0.021	5.5	LOS A	0.1	0.4	0.02	0.58	0.02	53.1
Approach		33	0.0	35	0.0	0.021	5.5	LOS A	0.1	0.4	0.02	0.58	0.02	53.2
North: Old Saddleback Road														
7	L2	16	0.0	17	0.0	0.011	5.5	LOS A	0.0	0.0	0.00	0.47	0.00	54.5
8	T1	4	0.0	4	0.0	0.011	0.0	LOS A	0.0	0.0	0.00	0.47	0.00	55.9
Approach		20	0.0	21	0.0	0.011	4.4	NA	0.0	0.0	0.00	0.47	0.00	54.8
All Vehicles		73	0.0	77	0.0	0.021	4.4	NA	0.1	0.4	0.03	0.46	0.03	54.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3PM [SOU_SAD_22_PM_X (Site Folder: Base Year PM)]

3:00PM - 4:00PM
Site Category: BASE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: South Kiama Drive (S)														
1a	L1	47	0	49	0.0	0.195	3.1	LOS A	0.0	0.0	0.00	0.47	0.00	38.4
3	R2	288	9	303	3.1	0.195	3.6	LOS A	0.0	0.0	0.00	0.47	0.00	37.6
Approach		335	9	353	2.7	0.195	3.5	NA	0.0	0.0	0.00	0.47	0.00	37.8
East: South Kiama Drive (E)														
4	L2	212	13	223	6.1	0.129	3.4	LOS A	0.0	0.0	0.00	0.45	0.00	37.8
6a	R1	41	0	43	0.0	0.023	3.5	LOS A	0.1	0.8	0.39	0.46	0.39	37.1
Approach		253	13	266	5.1	0.129	3.5	NA	0.1	0.8	0.06	0.45	0.06	37.7
NorthWest: Saddleback Mountain Road														
27a	L1	68	0	72	0.0	0.044	3.8	LOS A	0.2	1.4	0.37	0.49	0.37	36.9
29a	R1	42	0	44	0.0	0.078	7.5	LOS A	0.3	2.0	0.57	0.71	0.57	36.9
Approach		110	0	116	0.0	0.078	5.2	LOS A	0.3	2.0	0.44	0.58	0.44	36.9
All Vehicles		698	22	735	3.2	0.195	3.7	NA	0.3	2.0	0.09	0.48	0.09	37.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 4PM [SOU_MAN_22_PM_X (Site Folder: Base Year PM)]

3:00PM - 4:00PM
Site Category: BASE YEAR
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Henley Avenue														
1	L2	21	0.0	22	0.0	0.054	4.7	LOS A	0.3	1.9	0.52	0.55	0.52	34.7
2	T1	20	0.0	21	0.0	0.054	4.3	LOS A	0.3	1.9	0.52	0.55	0.52	38.0
3	R2	4	0.0	4	0.0	0.054	7.8	LOS A	0.3	1.9	0.52	0.55	0.52	36.0
3u	U	1	0.0	1	0.0	0.054	9.1	LOS A	0.3	1.9	0.52	0.55	0.52	38.1
Approach		46	0.0	48	0.0	0.054	4.9	LOS A	0.3	1.9	0.52	0.55	0.52	36.8
East: Bonaira Street														
4	L2	10	0.0	11	0.0	0.190	4.3	LOS A	1.0	7.4	0.50	0.64	0.50	33.1
5	T1	21	0.0	22	0.0	0.190	3.9	LOS A	1.0	7.4	0.50	0.64	0.50	30.9
6	R2	142	2.1	149	2.1	0.190	7.4	LOS A	1.0	7.4	0.50	0.64	0.50	36.5
6u	U	2	0.0	2	0.0	0.190	8.6	LOS A	1.0	7.4	0.50	0.64	0.50	15.8
Approach		175	1.7	184	1.7	0.190	6.8	LOS A	1.0	7.4	0.50	0.64	0.50	35.9
North: Manning Street														
7	L2	98	0.0	103	0.0	0.294	2.9	LOS A	1.9	14.0	0.28	0.51	0.28	36.5
8	T1	33	0.0	35	0.0	0.294	2.5	LOS A	1.9	14.0	0.28	0.51	0.28	37.8
9	R2	208	5.8	219	5.8	0.294	6.0	LOS A	1.9	14.0	0.28	0.51	0.28	37.2
9u	U	22	0.0	23	0.0	0.294	7.2	LOS A	1.9	14.0	0.28	0.51	0.28	38.9
Approach		361	3.3	380	3.3	0.294	4.9	LOS A	1.9	14.0	0.28	0.51	0.28	37.3
West: South Kiama Drive														
10	L2	295	2.7	311	2.7	0.349	3.9	LOS A	2.3	16.3	0.48	0.53	0.48	37.1
11	T1	42	2.4	44	2.4	0.349	3.5	LOS A	2.3	16.3	0.48	0.53	0.48	34.0
12	R2	19	0.0	20	0.0	0.349	6.8	LOS A	2.3	16.3	0.48	0.53	0.48	36.8
12u	U	3	0.0	3	0.0	0.349	8.2	LOS A	2.3	16.3	0.48	0.53	0.48	36.6
Approach		359	2.5	378	2.5	0.349	4.0	LOS A	2.3	16.3	0.48	0.53	0.48	36.9
All Vehicles		941	2.6	991	2.6	0.349	4.9	LOS A	2.3	16.3	0.41	0.54	0.41	36.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 5PM [BLA_OLD_22_PM_X (Site Folder: Base Year PM)]

3:00PM - 4:00PM
Site Category: BASE YEAR
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Old Saddleback Road (S)														
1	L2	2	0.0	2	0.0	0.041	4.2	LOS A	0.2	1.4	0.19	0.59	0.19	34.4
2	T1	1	0.0	1	0.0	0.041	3.8	LOS A	0.2	1.4	0.19	0.59	0.19	34.9
3	R2	42	2.4	44	2.4	0.041	7.0	LOS A	0.2	1.4	0.19	0.59	0.19	29.2
3u	U	1	0.0	1	0.0	0.041	8.4	LOS A	0.2	1.4	0.19	0.59	0.19	29.1
Approach		46	2.2	48	2.2	0.041	6.9	LOS A	0.2	1.4	0.19	0.59	0.19	29.6
East: Bland Street (E)														
4	L2	49	0.0	52	0.0	0.076	3.9	LOS A	0.4	2.6	0.06	0.47	0.06	35.2
5	T1	48	6.3	51	6.3	0.076	3.6	LOS A	0.4	2.6	0.06	0.47	0.06	40.2
6	R2	6	0.0	6	0.0	0.076	6.7	LOS A	0.4	2.6	0.06	0.47	0.06	39.2
6u	U	1	0.0	1	0.0	0.076	8.1	LOS A	0.4	2.6	0.06	0.47	0.06	32.4
Approach		104	2.9	109	2.9	0.076	3.9	LOS A	0.4	2.6	0.06	0.47	0.06	38.0
North: Old Saddleback Road (N)														
7	L2	5	0.0	5	0.0	0.007	4.3	LOS A	0.0	0.2	0.22	0.51	0.22	35.6
8	T1	1	0.0	1	0.0	0.007	3.9	LOS A	0.0	0.2	0.22	0.51	0.22	37.2
9	R2	1	0.0	1	0.0	0.007	7.1	LOS A	0.0	0.2	0.22	0.51	0.22	39.3
9u	U	1	0.0	1	0.0	0.007	8.5	LOS A	0.0	0.2	0.22	0.51	0.22	39.8
Approach		8	0.0	8	0.0	0.007	5.1	LOS A	0.0	0.2	0.22	0.51	0.22	36.9
West: Bland Street (W)														
10	L2	2	0.0	2	0.0	0.036	4.1	LOS A	0.2	1.3	0.18	0.45	0.18	39.4
11	T1	33	9.1	35	9.1	0.036	3.9	LOS A	0.2	1.3	0.18	0.45	0.18	39.0
12	R2	3	0.0	3	0.0	0.036	7.0	LOS A	0.2	1.3	0.18	0.45	0.18	36.1
12u	U	1	0.0	1	0.0	0.036	8.4	LOS A	0.2	1.3	0.18	0.45	0.18	42.1
Approach		39	7.7	41	7.7	0.036	4.2	LOS A	0.2	1.3	0.18	0.45	0.18	38.9
All Vehicles		197	3.6	207	3.6	0.076	4.7	LOS A	0.4	2.6	0.12	0.50	0.12	36.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 6PM [BLA_EUG_22_PM_X (Site Folder: Base Year PM)]

3:00PM - 4:00PM
Site Category: BASE YEAR
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Eugene Street														
1	L2	1	0.0	1	0.0	0.018	6.5	LOS A	0.1	0.7	0.62	0.59	0.62	27.7
2	T1	8	0.0	8	0.0	0.018	6.4	LOS A	0.1	0.7	0.62	0.59	0.62	35.9
3	R2	3	0.0	3	0.0	0.018	9.4	LOS A	0.1	0.7	0.62	0.59	0.62	33.8
3u	U	1	0.0	1	0.0	0.018	10.9	LOS A	0.1	0.7	0.62	0.59	0.62	22.7
Approach		13	0.0	14	0.0	0.018	7.4	LOS A	0.1	0.7	0.62	0.59	0.62	34.2
East: Bland Street (E)														
4	L2	13	0.0	14	0.0	0.273	3.9	LOS A	1.8	12.9	0.06	0.58	0.06	34.0
5	T1	104	2.9	109	2.9	0.273	3.5	LOS A	1.8	12.9	0.06	0.58	0.06	37.8
6	R2	297	2.7	313	2.7	0.273	6.7	LOS A	1.8	12.9	0.06	0.58	0.06	40.6
6u	U	1	0.0	1	0.0	0.273	8.1	LOS A	1.8	12.9	0.06	0.58	0.06	40.8
Approach		415	2.7	437	2.7	0.273	5.9	LOS A	1.8	12.9	0.06	0.58	0.06	39.9
West: Bland Street (W)														
10	L2	41	0.0	43	0.0	0.095	5.7	LOS A	0.5	3.4	0.47	0.59	0.47	37.6
11	T1	38	10.5	40	10.5	0.095	5.6	LOS A	0.5	3.4	0.47	0.59	0.47	37.4
12	R2	1	0.0	1	0.0	0.095	8.6	LOS A	0.5	3.4	0.47	0.59	0.47	27.7
12u	U	3	0.0	3	0.0	0.095	10.0	LOS A	0.5	3.4	0.47	0.59	0.47	20.9
Approach		83	4.8	87	4.8	0.095	5.9	LOS A	0.5	3.4	0.47	0.59	0.47	36.7
All Vehicles		511	2.9	538	2.9	0.273	5.9	LOS A	1.8	12.9	0.14	0.59	0.14	39.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 7PM [SHO_BLA_22_PM_X (Site Folder: Base Year PM)]

3:00PM - 4:00PM
Site Category: BASE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Shoalhaven Street (S)														
1	L2	71	8.5	75	8.5	0.071	3.4	LOS A	0.0	0.1	0.00	0.29	0.00	37.7
2	T1	44	20.5	46	20.5	0.071	0.0	LOS A	0.0	0.1	0.00	0.29	0.00	33.0
3	R2	1	0.0	1	0.0	0.071	6.3	LOS A	0.0	0.1	0.00	0.29	0.00	14.8
Approach		116	12.9	122	12.9	0.071	2.2	NA	0.0	0.1	0.00	0.29	0.00	36.6
East: Access Road														
4	L2	3	0.0	3	0.0	0.018	0.1	LOS A	0.0	0.3	0.17	0.11	0.17	12.9
5	T1	5	0.0	5	0.0	0.018	1.1	LOS A	0.0	0.3	0.17	0.11	0.17	23.9
6	R2	14	0.0	15	0.0	0.018	0.7	LOS A	0.0	0.3	0.17	0.11	0.17	13.3
Approach		22	0.0	23	0.0	0.018	0.7	LOS A	0.0	0.3	0.17	0.11	0.17	16.6
North: Shoalhaven Street (N)														
7	L2	17	0.0	18	0.0	0.207	7.5	LOS A	1.2	9.1	0.27	0.40	0.27	14.4
8	T1	50	26.0	53	26.0	0.207	0.4	LOS A	1.2	9.1	0.27	0.40	0.27	28.7
9	R2	341	1.5	359	1.5	0.207	3.7	LOS A	1.2	9.1	0.27	0.40	0.27	36.0
Approach		408	4.4	429	4.4	0.207	3.5	NA	1.2	9.1	0.27	0.40	0.27	34.7
West: Bland Street														
10	L2	44	6.8	46	6.8	0.033	3.6	LOS A	0.1	1.0	0.10	0.47	0.10	35.9
11	T1	3	0.0	3	0.0	0.033	7.7	LOS A	0.1	1.0	0.10	0.47	0.10	24.5
12	R2	4	50.0	4	50.0	0.033	6.2	LOS A	0.1	1.0	0.10	0.47	0.10	34.1
Approach		51	9.8	54	9.8	0.033	4.0	LOS A	0.1	1.0	0.10	0.47	0.10	34.8
All Vehicles		597	6.4	628	6.4	0.207	3.2	NA	1.2	9.1	0.20	0.38	0.20	34.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 8PM [JAM_BAN_22_PM_X (Site Folder: Base Year PM)]

3:00PM - 4:00PM
Site Category: BASE YEAR
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Banksia Drive														
1	L2	4	0.0	4	0.0	0.044	3.0	LOS A	0.2	1.4	0.29	0.59	0.29	23.2
3	R2	43	2.3	45	2.3	0.044	6.7	LOS A	0.2	1.4	0.29	0.59	0.29	39.3
3u	U	1	0.0	1	0.0	0.044	8.3	LOS A	0.2	1.4	0.29	0.59	0.29	25.4
Approach		48	2.1	51	2.1	0.044	6.4	LOS A	0.2	1.4	0.29	0.59	0.29	37.9
East: Jamberoo Road (E)														
4	L2	70	1.4	74	1.4	0.133	4.2	LOS A	0.7	5.0	0.05	0.48	0.05	41.6
5	T1	125	2.4	132	2.4	0.133	4.4	LOS A	0.7	5.0	0.05	0.48	0.05	38.3
6u	U	6	0.0	6	0.0	0.133	10.1	LOS A	0.7	5.0	0.05	0.48	0.05	50.6
Approach		201	2.0	212	2.0	0.133	4.5	LOS A	0.7	5.0	0.05	0.48	0.05	39.8
West: Jamberoo Road (W)														
11	T1	98	7.1	103	7.1	0.086	3.6	LOS A	0.4	3.2	0.19	0.44	0.19	45.4
12	R2	4	0.0	4	0.0	0.086	7.3	LOS A	0.4	3.2	0.19	0.44	0.19	32.2
12u	U	1	0.0	1	0.0	0.086	9.1	LOS A	0.4	3.2	0.19	0.44	0.19	25.6
Approach		103	6.8	108	6.8	0.086	3.8	LOS A	0.4	3.2	0.19	0.44	0.19	44.9
All Vehicles		352	3.4	371	3.4	0.133	4.6	LOS A	0.7	5.0	0.12	0.48	0.12	40.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 9PM [JAM_SPR_22_PM_X (Site Folder: Base Year PM)]

3:00PM - 4:00PM
Site Category: BASE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Hutchinson Street														
1	L2	1	0.0	1	0.0	0.004	4.9	LOS A	0.0	0.1	0.39	0.55	0.39	44.1
2	T1	1	0.0	1	0.0	0.004	6.9	LOS A	0.0	0.1	0.39	0.55	0.39	46.7
3	R2	1	0.0	1	0.0	0.004	9.6	LOS A	0.0	0.1	0.39	0.55	0.39	44.7
Approach		3	0.0	3	0.0	0.004	7.2	LOS A	0.0	0.1	0.39	0.55	0.39	45.3
East: Terralong Street														
4	L2	1	0.0	1	0.0	0.094	5.5	LOS A	0.0	0.0	0.00	0.00	0.00	57.7
5	T1	168	2.4	177	2.4	0.094	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
6	R2	472	2.3	497	2.3	0.238	6.1	LOS A	1.5	10.7	0.31	0.54	0.31	48.4
Approach		641	2.3	675	2.3	0.238	4.5	NA	1.5	10.7	0.23	0.40	0.23	50.4
North: Spring Creek Drive														
7	L2	72	4.2	76	4.2	0.040	5.8	LOS A	0.2	1.4	0.20	0.53	0.20	48.2
8	T1	1	0.0	1	0.0	0.058	8.0	LOS A	0.2	1.3	0.59	0.81	0.59	45.3
9	R2	28	0.0	29	0.0	0.058	10.4	LOS A	0.2	1.3	0.59	0.81	0.59	44.2
Approach		101	3.0	106	3.0	0.058	7.1	LOS A	0.2	1.4	0.31	0.61	0.31	47.1
West: Jamberoo Road														
10	L2	48	2.1	51	2.1	0.085	5.6	LOS A	0.0	0.1	0.01	0.20	0.01	53.8
11	T1	98	7.1	103	7.1	0.085	0.0	LOS A	0.0	0.1	0.01	0.20	0.01	55.8
12	R2	1	0.0	1	0.0	0.085	5.9	LOS A	0.0	0.1	0.01	0.20	0.01	49.0
Approach		147	5.4	155	5.4	0.085	1.9	NA	0.0	0.1	0.01	0.20	0.01	55.0
All Vehicles		892	2.9	939	2.9	0.238	4.4	NA	1.5	10.7	0.20	0.39	0.20	50.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 1AMFY [OLD_LON_36_AM_FY (Site Folder: Future Year w South Kiama AM)]

8:15AM - 9:15AM Future year w South Kiama Dev
Site Category: FUTURE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Old Saddleback Road (S)														
1	L2	6	0.0	6	0.0	0.014	5.5	LOS A	0.0	0.0	0.00	0.14	0.00	57.1
2	T1	19	5.3	20	5.3	0.014	0.0	LOS A	0.0	0.0	0.00	0.14	0.00	58.7
Approach		25	4.0	26	4.0	0.014	1.3	NA	0.0	0.0	0.00	0.14	0.00	58.3
North: Old Saddleback Road (N)														
8	T1	23	0.0	24	0.0	0.014	0.0	LOS A	0.0	0.1	0.03	0.09	0.03	59.1
9	R2	4	0.0	4	0.0	0.014	5.5	LOS A	0.0	0.1	0.03	0.09	0.03	56.9
Approach		27	0.0	28	0.0	0.014	0.8	NA	0.0	0.1	0.03	0.09	0.03	58.8
West: Long Brush Road														
10	L2	1	0.0	1	0.0	0.012	5.6	LOS A	0.0	0.2	0.07	0.58	0.07	53.5
12	R2	17	0.0	18	0.0	0.012	5.5	LOS A	0.0	0.2	0.07	0.58	0.07	52.9
Approach		18	0.0	19	0.0	0.012	5.5	LOS A	0.0	0.2	0.07	0.58	0.07	53.0
All Vehicles		70	1.4	74	1.4	0.014	2.2	NA	0.0	0.2	0.03	0.23	0.03	57.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 2AMFY [OLD_SAD_36_AM_FY (Site Folder: Future Year w South Kiama AM)]

8:15AM - 9:15AM Future year w South Kiama Dev
Site Category: FUTURE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Saddleback Mountain Road (S)														
2	T1	5	0.0	5	0.0	0.005	0.1	LOS A	0.0	0.1	0.10	0.25	0.10	57.3
3	R2	4	0.0	4	0.0	0.005	5.5	LOS A	0.0	0.1	0.10	0.25	0.10	55.3
Approach		9	0.0	9	0.0	0.005	2.5	NA	0.0	0.1	0.10	0.25	0.10	56.4
East: Saddleback Mountain Road (E)														
4	L2	4	0.0	4	0.0	0.017	5.6	LOS A	0.0	0.3	0.04	0.58	0.04	53.6
6	R2	22	4.5	23	4.5	0.017	5.5	LOS A	0.0	0.3	0.04	0.58	0.04	52.8
Approach		26	3.8	27	3.8	0.017	5.5	LOS A	0.0	0.3	0.04	0.58	0.04	52.9
North: Old Saddleback Road														
7	L2	35	0.0	37	0.0	0.023	5.5	LOS A	0.0	0.0	0.00	0.51	0.00	54.2
8	T1	5	0.0	5	0.0	0.023	0.0	LOS A	0.0	0.0	0.00	0.51	0.00	55.6
Approach		40	0.0	42	0.0	0.023	4.9	NA	0.0	0.0	0.00	0.51	0.00	54.3
All Vehicles		75	1.3	79	1.3	0.023	4.8	NA	0.0	0.3	0.02	0.50	0.02	54.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3AMFY [SOU_SAD_36_AM_FY (Site Folder: Future Year w South Kiama AM)]

8:15AM - 9:15AM Future year w South Kiama Dev
Site Category: FUTURE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: South Kiama Drive (S)														
1a	L1	230	2	242	0.9	0.445	3.2	LOS A	0.0	0.0	0.00	0.46	0.00	38.3
3	R2	541	18	569	3.3	0.445	3.7	LOS A	0.0	0.0	0.00	0.46	0.00	37.5
Approach		771	20	812	2.6	0.445	3.6	NA	0.0	0.0	0.00	0.46	0.00	37.8
East: South Kiama Drive (E)														
4	L2	223	12	235	5.4	0.135	3.4	LOS A	0.0	0.0	0.00	0.45	0.00	37.8
6a	R1	143	1	151	0.7	0.110	4.6	LOS A	0.5	3.8	0.56	0.63	0.56	36.7
Approach		366	13	385	3.6	0.135	3.9	NA	0.5	3.8	0.22	0.52	0.22	37.4
NorthWest: Saddleback Mountain Road														
27a	L1	349	1	367	0.3	0.297	5.3	LOS A	1.5	10.5	0.58	0.73	0.61	36.3
29a	R1	62	0	65	0.0	0.260	18.7	LOS B	0.9	6.6	0.84	0.95	0.94	33.1
Approach		411	1	433	0.2	0.297	7.3	LOS A	1.5	10.5	0.62	0.76	0.66	35.5
All Vehicles		1548	34	1629	2.2	0.445	4.6	NA	1.5	10.5	0.22	0.56	0.23	37.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 4AMFY [SOU_MAN_36_AM_FY (Site Folder: Future Year w South Kiama AM)]

8:15AM - 9:15AM Future year w South Kiama Dev
Site Category: FUTURE YEAR
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Henley Avenue														
1	L2	17	0.0	18	0.0	0.051	6.0	LOS A	0.3	1.9	0.63	0.61	0.63	33.7
2	T1	16	0.0	17	0.0	0.051	5.6	LOS A	0.3	1.9	0.63	0.61	0.63	37.4
3	R2	3	0.0	3	0.0	0.051	9.0	LOS A	0.3	1.9	0.63	0.61	0.63	34.9
3u	U	1	0.0	1	0.0	0.051	10.3	LOS A	0.3	1.9	0.63	0.61	0.63	37.2
Approach		37	0.0	39	0.0	0.051	6.2	LOS A	0.3	1.9	0.63	0.61	0.63	36.1
East: Bonaira Street														
4	L2	16	0.0	17	0.0	0.302	5.2	LOS A	1.8	13.2	0.62	0.72	0.62	32.5
5	T1	41	4.9	43	4.9	0.302	4.9	LOS A	1.8	13.2	0.62	0.72	0.62	29.9
6	R2	193	2.6	203	2.6	0.302	8.3	LOS A	1.8	13.2	0.62	0.72	0.62	36.0
6u	U	1	0.0	1	0.0	0.302	9.5	LOS A	1.8	13.2	0.62	0.72	0.62	15.5
Approach		251	2.8	264	2.8	0.302	7.6	LOS A	1.8	13.2	0.62	0.72	0.62	35.3
North: Manning Street														
7	L2	114	4.4	120	4.4	0.399	3.1	LOS A	3.3	23.9	0.40	0.53	0.40	36.0
8	T1	28	3.6	29	3.6	0.399	2.7	LOS A	3.3	23.9	0.40	0.53	0.40	37.5
9	R2	302	3.6	318	3.6	0.399	6.1	LOS A	3.3	23.9	0.40	0.53	0.40	36.9
9u	U	30	3.3	32	3.3	0.399	7.4	LOS A	3.3	23.9	0.40	0.53	0.40	38.6
Approach		474	3.8	499	3.8	0.399	5.3	LOS A	3.3	23.9	0.40	0.53	0.40	36.9
West: South Kiama Drive														
10	L2	810	1.9	853	1.9	0.880	12.3	LOS A	19.2	137.0	1.00	1.02	1.37	32.7
11	T1	62	6.5	65	6.5	0.880	12.1	LOS A	19.2	137.0	1.00	1.02	1.37	24.2
12	R2	18	5.6	19	5.6	0.880	15.5	LOS B	19.2	137.0	1.00	1.02	1.37	29.9
12u	U	2	0.0	2	0.0	0.880	16.5	LOS B	19.2	137.0	1.00	1.02	1.37	26.1
Approach		892	2.2	939	2.2	0.880	12.3	LOS A	19.2	137.0	1.00	1.02	1.37	32.4
All Vehicles		1654	2.7	1741	2.7	0.880	9.5	LOS A	19.2	137.0	0.76	0.82	0.96	34.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 5AMFY [BLA_OLD_36_AM_FY (Site Folder: Future Year w South Kiama AM)]

8:15AM - 9:15AM Future year w South Kiama Dev
Site Category: FUTURE YEAR
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Old Saddleback Road (S)														
1	L2	2	0.0	2	0.0	0.070	4.1	LOS A	0.3	2.4	0.16	0.59	0.16	34.4
2	T1	1	0.0	1	0.0	0.070	3.7	LOS A	0.3	2.4	0.16	0.59	0.16	35.0
3	R2	77	5.2	81	5.2	0.070	7.0	LOS A	0.3	2.4	0.16	0.59	0.16	29.2
3u	U	1	0.0	1	0.0	0.070	8.4	LOS A	0.3	2.4	0.16	0.59	0.16	29.2
Approach		81	4.9	85	4.9	0.070	6.9	LOS A	0.3	2.4	0.16	0.59	0.16	29.4
East: Bland Street (E)														
4	L2	42	4.8	44	4.8	0.063	3.9	LOS A	0.3	2.2	0.07	0.47	0.07	34.7
5	T1	33	3.0	35	3.0	0.063	3.6	LOS A	0.3	2.2	0.07	0.47	0.07	40.1
6	R2	5	20.0	5	20.0	0.063	6.9	LOS A	0.3	2.2	0.07	0.47	0.07	36.3
6u	U	2	0.0	2	0.0	0.063	8.2	LOS A	0.3	2.2	0.07	0.47	0.07	32.2
Approach		82	4.9	86	4.9	0.063	4.1	LOS A	0.3	2.2	0.07	0.47	0.07	37.2
North: Old Saddleback Road (N)														
7	L2	8	12.5	8	12.5	0.011	4.9	LOS A	0.1	0.4	0.33	0.52	0.33	34.6
8	T1	1	0.0	1	0.0	0.011	4.3	LOS A	0.1	0.4	0.33	0.52	0.33	36.8
9	R2	1	0.0	1	0.0	0.011	7.5	LOS A	0.1	0.4	0.33	0.52	0.33	38.9
9u	U	1	0.0	1	0.0	0.011	8.9	LOS A	0.1	0.4	0.33	0.52	0.33	39.5
Approach		11	9.1	12	9.1	0.011	5.4	LOS A	0.1	0.4	0.33	0.52	0.33	35.7
West: Bland Street (W)														
10	L2	1	0.0	1	0.0	0.071	4.4	LOS A	0.3	2.4	0.25	0.46	0.25	39.1
11	T1	69	1.4	73	1.4	0.071	4.0	LOS A	0.3	2.4	0.25	0.46	0.25	39.1
12	R2	6	0.0	6	0.0	0.071	7.2	LOS A	0.3	2.4	0.25	0.46	0.25	35.8
12u	U	1	0.0	1	0.0	0.071	8.6	LOS A	0.3	2.4	0.25	0.46	0.25	41.8
Approach		77	1.3	81	1.3	0.071	4.3	LOS A	0.3	2.4	0.25	0.46	0.25	38.8
All Vehicles		251	4.0	264	4.0	0.071	5.1	LOS A	0.3	2.4	0.17	0.51	0.17	35.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 6AMFY [BLA_EUG_36_AM_FY (Site Folder: Future Year w South Kiama AM)]

8:15AM - 9:15AM Future year w South Kiama Dev
Site Category: FUTURE YEAR
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Eugene Street														
1	L2	1	0.0	1	0.0	0.031	7.0	LOS A	0.2	1.3	0.65	0.65	0.65	26.1
2	T1	10	10.0	11	10.0	0.031	7.3	LOS A	0.2	1.3	0.65	0.65	0.65	34.1
3	R2	9	0.0	9	0.0	0.031	10.0	LOS A	0.2	1.3	0.65	0.65	0.65	32.2
3u	U	1	0.0	1	0.0	0.031	11.4	LOS A	0.2	1.3	0.65	0.65	0.65	21.3
Approach		21	4.8	22	4.8	0.031	8.6	LOS A	0.2	1.3	0.65	0.65	0.65	32.6
East: Bland Street (E)														
4	L2	11	0.0	12	0.0	0.298	3.9	LOS A	2.1	14.8	0.05	0.60	0.05	33.7
5	T1	79	6.3	83	6.3	0.298	3.6	LOS A	2.1	14.8	0.05	0.60	0.05	37.2
6	R2	365	2.7	384	2.7	0.298	6.7	LOS A	2.1	14.8	0.05	0.60	0.05	40.3
6u	U	1	0.0	1	0.0	0.298	8.1	LOS A	2.1	14.8	0.05	0.60	0.05	40.5
Approach		456	3.3	480	3.3	0.298	6.1	LOS A	2.1	14.8	0.05	0.60	0.05	39.7
West: Bland Street (W)														
10	L2	83	6.0	87	6.0	0.198	6.7	LOS A	1.0	7.5	0.55	0.65	0.55	36.6
11	T1	76	2.6	80	2.6	0.198	6.2	LOS A	1.0	7.5	0.55	0.65	0.55	36.7
12	R2	1	0.0	1	0.0	0.198	9.4	LOS A	1.0	7.5	0.55	0.65	0.55	26.8
12u	U	2	0.0	2	0.0	0.198	10.8	LOS A	1.0	7.5	0.55	0.65	0.55	25.3
Approach		162	4.3	171	4.3	0.198	6.5	LOS A	1.0	7.5	0.55	0.65	0.55	36.5
All Vehicles		639	3.6	673	3.6	0.298	6.3	LOS A	2.1	14.8	0.20	0.62	0.20	38.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 7AMFY [SHO_BLA_36_AM_FY (Site Folder: Future Year w South Kiama AM)]

8:15AM - 9:15AM Future year w South Kiama Dev
Site Category: FUTURE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Shoalhaven Street (S)														
1	L2	29	17.2	31	17.2	0.044	3.5	LOS A	0.0	0.1	0.01	0.20	0.01	38.4
2	T1	40	20.0	42	20.0	0.044	0.0	LOS A	0.0	0.1	0.01	0.20	0.01	34.8
3	R2	1	0.0	1	0.0	0.044	6.6	LOS A	0.0	0.1	0.01	0.20	0.01	15.0
Approach		70	18.6	74	18.6	0.044	1.5	NA	0.0	0.1	0.01	0.20	0.01	36.7
East: Access Road														
4	L2	1	0.0	1	0.0	0.020	0.3	LOS A	0.0	0.3	0.32	0.25	0.32	12.8
5	T1	7	0.0	7	0.0	0.020	1.4	LOS A	0.0	0.3	0.32	0.25	0.32	23.7
6	R2	13	0.0	14	0.0	0.020	1.1	LOS A	0.0	0.3	0.32	0.25	0.32	13.1
Approach		21	0.0	22	0.0	0.020	1.2	LOS A	0.0	0.3	0.32	0.25	0.32	17.8
North: Shoalhaven Street (N)														
7	L2	32	0.0	34	0.0	0.289	7.4	LOS A	1.9	13.5	0.22	0.36	0.22	14.6
8	T1	126	10.3	133	10.3	0.289	0.2	LOS A	1.9	13.5	0.22	0.36	0.22	29.7
9	R2	417	2.4	439	2.4	0.289	3.6	LOS A	1.9	13.5	0.22	0.36	0.22	36.6
Approach		575	4.0	605	4.0	0.289	3.1	NA	1.9	13.5	0.22	0.36	0.22	34.6
West: Bland Street														
10	L2	89	4.5	94	4.5	0.068	3.5	LOS A	0.3	2.0	0.09	0.47	0.09	36.0
11	T1	4	0.0	4	0.0	0.068	8.2	LOS A	0.3	2.0	0.09	0.47	0.09	24.6
12	R2	13	0.0	14	0.0	0.068	5.6	LOS A	0.3	2.0	0.09	0.47	0.09	34.6
Approach		106	3.8	112	3.8	0.068	4.0	LOS A	0.3	2.0	0.09	0.47	0.09	35.2
All Vehicles		772	5.2	813	5.2	0.289	3.0	NA	1.9	13.5	0.19	0.35	0.19	34.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 8AMFY [JAM_BAN_36_AM_FY (Site Folder: Future Year w South Kiama AM)]

8:15AM - 9:15AM Future year w South Kiama Dev
Site Category: FUTURE YEAR
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Banksia Drive														
1	L2	3	0.0	3	0.0	0.084	2.9	LOS A	0.4	2.8	0.26	0.60	0.26	23.2
3	R2	91	1.1	96	1.1	0.084	6.5	LOS A	0.4	2.8	0.26	0.60	0.26	39.4
3u	U	1	0.0	1	0.0	0.084	8.2	LOS A	0.4	2.8	0.26	0.60	0.26	25.4
Approach		95	1.1	100	1.1	0.084	6.4	LOS A	0.4	2.8	0.26	0.60	0.26	38.8
East: Jamberoo Road (E)														
4	L2	65	1.5	68	1.5	0.108	4.2	LOS A	0.6	4.0	0.04	0.48	0.04	41.7
5	T1	95	1.1	100	1.1	0.108	4.4	LOS A	0.6	4.0	0.04	0.48	0.04	38.4
6u	U	5	0.0	5	0.0	0.108	10.1	LOS A	0.6	4.0	0.04	0.48	0.04	50.7
Approach		165	1.2	174	1.2	0.108	4.5	LOS A	0.6	4.0	0.04	0.48	0.04	40.0
West: Jamberoo Road (W)														
11	T1	145	1.4	153	1.4	0.128	3.9	LOS A	0.7	4.8	0.27	0.45	0.27	46.0
12	R2	2	0.0	2	0.0	0.128	7.6	LOS A	0.7	4.8	0.27	0.45	0.27	31.5
12u	U	1	0.0	1	0.0	0.128	9.4	LOS A	0.7	4.8	0.27	0.45	0.27	25.2
Approach		148	1.4	156	1.4	0.128	4.0	LOS A	0.7	4.8	0.27	0.45	0.27	45.8
All Vehicles		408	1.2	429	1.2	0.128	4.8	LOS A	0.7	4.8	0.17	0.50	0.17	41.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 9AMFY [JAM_SPR_36_AM_FY (Site Folder: Future Year w South Kiama AM)]

8:15AM - 9:15AM Future year w South Kiama Dev
Site Category: FUTURE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Hutchinson Street														
1	L2	1	0.0	1	0.0	0.004	4.8	LOS A	0.0	0.1	0.35	0.54	0.35	44.3
2	T1	1	0.0	1	0.0	0.004	6.5	LOS A	0.0	0.1	0.35	0.54	0.35	46.8
3	R2	1	0.0	1	0.0	0.004	9.4	LOS A	0.0	0.1	0.35	0.54	0.35	44.9
Approach		3	0.0	3	0.0	0.004	6.9	LOS A	0.0	0.1	0.35	0.54	0.35	45.4
East: Terralong Street														
4	L2	1	0.0	1	0.0	0.073	5.5	LOS A	0.0	0.0	0.00	0.00	0.00	57.7
5	T1	132	0.8	139	0.8	0.073	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
6	R2	361	1.7	380	1.7	0.202	6.4	LOS A	1.2	8.4	0.41	0.58	0.41	48.0
Approach		494	1.4	520	1.4	0.202	4.7	NA	1.2	8.4	0.30	0.43	0.30	50.1
North: Spring Creek Drive														
7	L2	122	0.8	128	0.8	0.072	6.1	LOS A	0.3	2.4	0.30	0.56	0.30	48.3
8	T1	1	0.0	1	0.0	0.059	7.6	LOS A	0.2	1.4	0.57	0.79	0.57	45.6
9	R2	30	3.3	32	3.3	0.059	10.1	LOS A	0.2	1.4	0.57	0.79	0.57	44.2
Approach		153	1.3	161	1.3	0.072	6.9	LOS A	0.3	2.4	0.36	0.60	0.36	47.5
West: Jamberoo Road														
10	L2	58	1.7	61	1.7	0.144	5.6	LOS A	0.0	0.1	0.00	0.13	0.00	54.8
11	T1	202	1.0	213	1.0	0.144	0.0	LOS A	0.0	0.1	0.00	0.13	0.00	57.2
12	R2	1	0.0	1	0.0	0.144	5.8	LOS A	0.0	0.1	0.00	0.13	0.00	49.7
Approach		261	1.1	275	1.1	0.144	1.3	NA	0.0	0.1	0.00	0.13	0.00	56.5
All Vehicles		911	1.3	959	1.3	0.202	4.1	NA	1.2	8.4	0.23	0.37	0.23	51.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 1PMFY [OLD_LON_36_PM_FY (Site Folder: Future Year w South Kiama PM)]

3:00PM - 4:00PM Future year with South Kiama
Site Category: FUTURE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Old Saddleback Road (S)														
1	L2	13	0.0	14	0.0	0.022	5.5	LOS A	0.0	0.0	0.00	0.19	0.00	56.7
2	T1	27	0.0	28	0.0	0.022	0.0	LOS A	0.0	0.0	0.00	0.19	0.00	58.3
Approach		40	0.0	42	0.0	0.022	1.8	NA	0.0	0.0	0.00	0.19	0.00	57.8
North: Old Saddleback Road (N)														
8	T1	11	0.0	12	0.0	0.010	0.1	LOS A	0.0	0.3	0.10	0.26	0.10	57.3
9	R2	9	0.0	9	0.0	0.010	5.5	LOS A	0.0	0.3	0.10	0.26	0.10	55.2
Approach		20	0.0	21	0.0	0.010	2.5	NA	0.0	0.3	0.10	0.26	0.10	56.4
West: Long Brush Road														
10	L2	9	0.0	9	0.0	0.014	5.6	LOS A	0.0	0.3	0.07	0.57	0.07	53.4
12	R2	13	7.7	14	7.7	0.014	5.6	LOS A	0.0	0.3	0.07	0.57	0.07	52.6
Approach		22	4.5	23	4.5	0.014	5.6	LOS A	0.0	0.3	0.07	0.57	0.07	52.9
All Vehicles		82	1.2	86	1.2	0.022	3.0	NA	0.0	0.3	0.04	0.31	0.04	56.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 2PMFY [OLD_SAD_36_PM_FY (Site Folder: Future Year w South Kiama PM)]

3:00PM - 4:00PM Future year with South Kiama
Site Category: FUTURE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Saddleback Mountain Road (S)														
2	T1	13	0.0	14	0.0	0.012	0.0	LOS A	0.0	0.3	0.07	0.27	0.07	57.4
3	R2	11	0.0	12	0.0	0.012	5.5	LOS A	0.0	0.3	0.07	0.27	0.07	55.3
Approach		24	0.0	25	0.0	0.012	2.5	NA	0.0	0.3	0.07	0.27	0.07	56.4
East: Saddleback Mountain Road (E)														
4	L2	13	0.0	14	0.0	0.025	5.6	LOS A	0.1	0.5	0.03	0.58	0.03	53.6
6	R2	27	0.0	28	0.0	0.025	5.5	LOS A	0.1	0.5	0.03	0.58	0.03	53.0
Approach		40	0.0	42	0.0	0.025	5.5	LOS A	0.1	0.5	0.03	0.58	0.03	53.2
North: Old Saddleback Road														
7	L2	19	0.0	20	0.0	0.013	5.5	LOS A	0.0	0.0	0.00	0.46	0.00	54.5
8	T1	5	0.0	5	0.0	0.013	0.0	LOS A	0.0	0.0	0.00	0.46	0.00	56.0
Approach		24	0.0	25	0.0	0.013	4.4	NA	0.0	0.0	0.00	0.46	0.00	54.8
All Vehicles		88	0.0	93	0.0	0.025	4.4	NA	0.1	0.5	0.03	0.46	0.03	54.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3PMFY [SOU_SAD_36_PM_FY (Site Folder: Future Year w South Kiama PM)]

3:00PM - 4:00PM Future year with South Kiama
Site Category: FUTURE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: South Kiama Drive (S)														
1a	L1	162	0	171	0.0	0.336	3.2	LOS A	0.0	0.0	0.00	0.46	0.00	38.4
3	R2	423	11	445	2.6	0.336	3.6	LOS A	0.0	0.0	0.00	0.46	0.00	37.6
Approach		585	11	616	1.9	0.336	3.5	NA	0.0	0.0	0.00	0.46	0.00	37.9
East: South Kiama Drive (E)														
4	L2	258	16	272	6.2	0.157	3.4	LOS A	0.0	0.0	0.00	0.45	0.00	37.8
6a	R1	183	0	193	0.0	0.121	4.1	LOS A	0.6	4.4	0.50	0.57	0.50	36.8
Approach		441	16	464	3.6	0.157	3.7	NA	0.6	4.4	0.21	0.50	0.21	37.4
NorthWest: Saddleback Mountain Road														
27a	L1	155	0	163	0.0	0.114	4.3	LOS A	0.5	3.6	0.47	0.58	0.47	36.6
29a	R1	51	0	54	0.0	0.175	14.2	LOS A	0.6	4.2	0.78	0.88	0.78	34.5
Approach		206	0	217	0.0	0.175	6.8	LOS A	0.6	4.2	0.54	0.66	0.54	35.8
All Vehicles		1232	27	1297	2.2	0.336	4.1	NA	0.6	4.4	0.17	0.51	0.17	37.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 4PMFY [SOU_MAN_36_PM_FY (Site Folder: Future Year w South Kiama PM)]

3:00PM - 4:00PM Future year with South Kiama
Site Category: FUTURE YEAR
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Henley Avenue														
1	L2	21	0.0	22	0.0	0.066	6.5	LOS A	0.4	2.5	0.66	0.65	0.66	33.3
2	T1	20	0.0	21	0.0	0.066	6.1	LOS A	0.4	2.5	0.66	0.65	0.66	37.2
3	R2	4	0.0	4	0.0	0.066	9.5	LOS A	0.4	2.5	0.66	0.65	0.66	34.4
3u	U	1	0.0	1	0.0	0.066	10.8	LOS A	0.4	2.5	0.66	0.65	0.66	36.9
Approach		46	0.0	48	0.0	0.066	6.7	LOS A	0.4	2.5	0.66	0.65	0.66	35.7
East: Bonaira Street														
4	L2	12	0.0	13	0.0	0.278	5.9	LOS A	1.7	12.0	0.67	0.76	0.67	31.8
5	T1	26	0.0	27	0.0	0.278	5.5	LOS A	1.7	12.0	0.67	0.76	0.67	29.0
6	R2	173	2.3	182	2.3	0.278	9.0	LOS A	1.7	12.0	0.67	0.76	0.67	35.6
6u	U	2	0.0	2	0.0	0.278	10.2	LOS A	1.7	12.0	0.67	0.76	0.67	15.2
Approach		213	1.9	224	1.9	0.278	8.4	LOS A	1.7	12.0	0.67	0.76	0.67	34.9
North: Manning Street														
7	L2	119	0.0	125	0.0	0.465	3.1	LOS A	3.9	28.1	0.39	0.53	0.39	36.1
8	T1	40	0.0	42	0.0	0.465	2.7	LOS A	3.9	28.1	0.39	0.53	0.39	37.5
9	R2	386	3.9	406	3.9	0.465	6.2	LOS A	3.9	28.1	0.39	0.53	0.39	36.9
9u	U	27	0.0	28	0.0	0.465	7.4	LOS A	3.9	28.1	0.39	0.53	0.39	38.6
Approach		572	2.6	602	2.6	0.465	5.3	LOS A	3.9	28.1	0.39	0.53	0.39	36.9
West: South Kiama Drive														
10	L2	504	2.0	531	2.0	0.577	4.6	LOS A	4.9	34.9	0.67	0.63	0.67	36.6
11	T1	51	2.0	54	2.0	0.577	4.2	LOS A	4.9	34.9	0.67	0.63	0.67	32.9
12	R2	23	0.0	24	0.0	0.577	7.6	LOS A	4.9	34.9	0.67	0.63	0.67	36.1
12u	U	4	0.0	4	0.0	0.577	8.9	LOS A	4.9	34.9	0.67	0.63	0.67	35.4
Approach		582	1.9	613	1.9	0.577	4.7	LOS A	4.9	34.9	0.67	0.63	0.67	36.5
All Vehicles		1413	2.1	1487	2.1	0.577	5.6	LOS A	4.9	34.9	0.56	0.61	0.56	36.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 5PMFY [BLA_OLD_36_PM_FY (Site Folder: Future Year w South Kiama PM)]

3:00PM - 4:00PM Future year with South Kiama
Site Category: FUTURE YEAR
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Old Saddleback Road (S)														
1	L2	2	0.0	2	0.0	0.050	4.3	LOS A	0.2	1.6	0.21	0.59	0.21	34.3
2	T1	1	0.0	1	0.0	0.050	3.9	LOS A	0.2	1.6	0.21	0.59	0.21	34.8
3	R2	51	2.0	54	2.0	0.050	7.1	LOS A	0.2	1.6	0.21	0.59	0.21	29.1
3u	U	1	0.0	1	0.0	0.050	8.5	LOS A	0.2	1.6	0.21	0.59	0.21	29.0
Approach		55	1.8	58	1.8	0.050	7.0	LOS A	0.2	1.6	0.21	0.59	0.21	29.4
East: Bland Street (E)														
4	L2	60	0.0	63	0.0	0.092	3.9	LOS A	0.5	3.3	0.06	0.47	0.06	35.2
5	T1	59	6.8	62	6.8	0.092	3.6	LOS A	0.5	3.3	0.06	0.47	0.06	40.2
6	R2	7	0.0	7	0.0	0.092	6.7	LOS A	0.5	3.3	0.06	0.47	0.06	39.2
6u	U	1	0.0	1	0.0	0.092	8.2	LOS A	0.5	3.3	0.06	0.47	0.06	32.3
Approach		127	3.1	134	3.1	0.092	3.9	LOS A	0.5	3.3	0.06	0.47	0.06	38.0
North: Old Saddleback Road (N)														
7	L2	5	0.0	5	0.0	0.007	4.4	LOS A	0.0	0.2	0.25	0.51	0.25	35.5
8	T1	1	0.0	1	0.0	0.007	4.0	LOS A	0.0	0.2	0.25	0.51	0.25	37.1
9	R2	1	0.0	1	0.0	0.007	7.2	LOS A	0.0	0.2	0.25	0.51	0.25	39.1
9u	U	1	0.0	1	0.0	0.007	8.6	LOS A	0.0	0.2	0.25	0.51	0.25	39.7
Approach		8	0.0	8	0.0	0.007	5.2	LOS A	0.0	0.2	0.25	0.51	0.25	36.7
West: Bland Street (W)														
10	L2	2	0.0	2	0.0	0.044	4.2	LOS A	0.2	1.6	0.21	0.45	0.21	39.3
11	T1	40	10.0	42	10.0	0.044	3.9	LOS A	0.2	1.6	0.21	0.45	0.21	38.8
12	R2	4	0.0	4	0.0	0.044	7.0	LOS A	0.2	1.6	0.21	0.45	0.21	35.9
12u	U	1	0.0	1	0.0	0.044	8.5	LOS A	0.2	1.6	0.21	0.45	0.21	42.0
Approach		47	8.5	49	8.5	0.044	4.3	LOS A	0.2	1.6	0.21	0.45	0.21	38.6
All Vehicles		237	3.8	249	3.8	0.092	4.8	LOS A	0.5	3.3	0.13	0.50	0.13	35.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 6PMFY [BLA_EUG_36_PM_FY (Site Folder: Future Year w South Kiama PM)]

3:00PM - 4:00PM Future year with South Kiama
Site Category: FUTURE YEAR
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Eugene Street														
1	L2	1	0.0	1	0.0	0.020	7.4	LOS A	0.1	0.8	0.67	0.62	0.67	26.4
2	T1	8	0.0	8	0.0	0.020	7.3	LOS A	0.1	0.8	0.67	0.62	0.67	34.7
3	R2	3	0.0	3	0.0	0.020	10.4	LOS A	0.1	0.8	0.67	0.62	0.67	32.5
3u	U	1	0.0	1	0.0	0.020	11.8	LOS A	0.1	0.8	0.67	0.62	0.67	21.5
Approach		13	0.0	14	0.0	0.020	8.4	LOS A	0.1	0.8	0.67	0.62	0.67	33.0
East: Bland Street (E)														
4	L2	16	0.0	17	0.0	0.333	3.9	LOS A	2.4	17.3	0.07	0.58	0.07	34.0
5	T1	127	3.1	134	3.1	0.333	3.5	LOS A	2.4	17.3	0.07	0.58	0.07	37.7
6	R2	361	2.8	380	2.8	0.333	6.8	LOS A	2.4	17.3	0.07	0.58	0.07	40.5
6u	U	1	0.0	1	0.0	0.333	8.1	LOS A	2.4	17.3	0.07	0.58	0.07	40.7
Approach		505	2.8	532	2.8	0.333	5.9	LOS A	2.4	17.3	0.07	0.58	0.07	39.8
West: Bland Street (W)														
10	L2	50	0.0	53	0.0	0.123	6.2	LOS A	0.6	4.5	0.52	0.63	0.52	37.0
11	T1	46	10.9	48	10.9	0.123	6.2	LOS A	0.6	4.5	0.52	0.63	0.52	36.7
12	R2	1	0.0	1	0.0	0.123	9.1	LOS A	0.6	4.5	0.52	0.63	0.52	27.0
12u	U	4	0.0	4	0.0	0.123	10.5	LOS A	0.6	4.5	0.52	0.63	0.52	20.6
Approach		101	5.0	106	5.0	0.123	6.4	LOS A	0.6	4.5	0.52	0.63	0.52	36.1
All Vehicles		619	3.1	652	3.1	0.333	6.0	LOS A	2.4	17.3	0.15	0.59	0.15	39.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 7PMFY [SHO_BLA_36_PM_FY (Site Folder: Future Year w South Kiama PM)]

3:00PM - 4:00PM Future year with South Kiama
Site Category: FUTURE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Shoalhaven Street (S)														
1	L2	86	8.1	91	8.1	0.086	3.4	LOS A	0.0	0.1	0.00	0.28	0.00	37.7
2	T1	54	20.4	57	20.4	0.086	0.0	LOS A	0.0	0.1	0.00	0.28	0.00	33.1
3	R2	1	0.0	1	0.0	0.086	6.3	LOS A	0.0	0.1	0.00	0.28	0.00	14.8
Approach		141	12.8	148	12.8	0.086	2.1	NA	0.0	0.1	0.00	0.28	0.00	36.7
East: Access Road														
4	L2	3	0.0	3	0.0	0.018	0.1	LOS A	0.0	0.3	0.18	0.11	0.18	12.9
5	T1	5	0.0	5	0.0	0.018	1.2	LOS A	0.0	0.3	0.18	0.11	0.18	23.8
6	R2	14	0.0	15	0.0	0.018	0.7	LOS A	0.0	0.3	0.18	0.11	0.18	13.3
Approach		22	0.0	23	0.0	0.018	0.7	LOS A	0.0	0.3	0.18	0.11	0.18	16.6
North: Shoalhaven Street (N)														
7	L2	17	0.0	18	0.0	0.211	7.6	LOS A	1.3	9.2	0.31	0.41	0.31	14.4
8	T1	50	26.0	53	26.0	0.211	0.4	LOS A	1.3	9.2	0.31	0.41	0.31	28.5
9	R2	341	1.5	359	1.5	0.211	3.8	LOS A	1.3	9.2	0.31	0.41	0.31	35.9
Approach		408	4.4	429	4.4	0.211	3.5	NA	1.3	9.2	0.31	0.41	0.31	34.6
West: Bland Street														
10	L2	54	7.4	57	7.4	0.039	3.6	LOS A	0.2	1.3	0.12	0.47	0.12	35.8
11	T1	4	0.0	4	0.0	0.039	7.7	LOS A	0.2	1.3	0.12	0.47	0.12	24.5
12	R2	4	50.0	4	50.0	0.039	6.3	LOS A	0.2	1.3	0.12	0.47	0.12	34.0
Approach		62	9.7	65	9.7	0.039	4.0	LOS A	0.2	1.3	0.12	0.47	0.12	34.6
All Vehicles		633	6.6	666	6.6	0.211	3.2	NA	1.3	9.2	0.22	0.38	0.22	34.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 8PMFY [JAM_BAN_36_PM_FY (Site Folder: Future Year w South Kiama PM)]

3:00PM - 4:00PM Future year with South Kiama
Site Category: FUTURE YEAR
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Banksia Drive														
1	L2	4	0.0	4	0.0	0.045	3.1	LOS A	0.2	1.5	0.32	0.60	0.32	23.1
3	R2	43	2.3	45	2.3	0.045	6.8	LOS A	0.2	1.5	0.32	0.60	0.32	39.1
3u	U	1	0.0	1	0.0	0.045	8.5	LOS A	0.2	1.5	0.32	0.60	0.32	25.2
Approach		48	2.1	51	2.1	0.045	6.6	LOS A	0.2	1.5	0.32	0.60	0.32	37.7
East: Jamberoo Road (E)														
4	L2	85	1.2	89	1.2	0.162	4.2	LOS A	0.9	6.2	0.06	0.47	0.06	41.6
5	T1	152	2.6	160	2.6	0.162	4.5	LOS A	0.9	6.2	0.06	0.47	0.06	38.3
6u	U	7	0.0	7	0.0	0.162	10.1	LOS A	0.9	6.2	0.06	0.47	0.06	50.6
Approach		244	2.0	257	2.0	0.162	4.5	LOS A	0.9	6.2	0.06	0.47	0.06	39.7
West: Jamberoo Road (W)														
11	T1	120	7.5	126	7.5	0.104	3.6	LOS A	0.5	4.0	0.19	0.44	0.19	45.3
12	R2	5	0.0	5	0.0	0.104	7.3	LOS A	0.5	4.0	0.19	0.44	0.19	32.1
12u	U	1	0.0	1	0.0	0.104	9.1	LOS A	0.5	4.0	0.19	0.44	0.19	25.5
Approach		126	7.1	133	7.1	0.104	3.8	LOS A	0.5	4.0	0.19	0.44	0.19	44.8
All Vehicles		418	3.6	440	3.6	0.162	4.5	LOS A	0.9	6.2	0.13	0.48	0.13	40.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 9PMFY [JAM_SPR_36_PM_FY (Site Folder: Future Year w South Kiama PM)]

3:00PM - 4:00PM Future year with South Kiama
Site Category: FUTURE YEAR
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Hutchinson Street														
1	L2	1	0.0	1	0.0	0.005	5.0	LOS A	0.0	0.1	0.46	0.59	0.46	43.2
2	T1	1	0.0	1	0.0	0.005	8.4	LOS A	0.0	0.1	0.46	0.59	0.46	45.8
3	R2	1	0.0	1	0.0	0.005	12.0	LOS A	0.0	0.1	0.46	0.59	0.46	43.8
Approach		3	0.0	3	0.0	0.005	8.4	LOS A	0.0	0.1	0.46	0.59	0.46	44.3
East: Terralong Street														
4	L2	1	0.0	1	0.0	0.114	5.6	LOS A	0.0	0.0	0.00	0.00	0.00	57.7
5	T1	204	2.5	215	2.5	0.114	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
6	R2	573	2.3	603	2.3	0.298	6.2	LOS A	1.9	13.9	0.37	0.56	0.37	48.2
Approach		778	2.3	819	2.3	0.298	4.6	NA	1.9	13.9	0.27	0.41	0.27	50.2
North: Spring Creek Drive														
7	L2	88	4.5	93	4.5	0.050	5.9	LOS A	0.2	1.7	0.23	0.54	0.23	48.0
8	T1	1	0.0	1	0.0	0.089	9.5	LOS A	0.3	1.9	0.69	0.86	0.69	43.9
9	R2	34	0.0	36	0.0	0.089	12.6	LOS A	0.3	1.9	0.69	0.86	0.69	42.1
Approach		123	3.3	129	3.3	0.089	7.8	LOS A	0.3	1.9	0.36	0.63	0.36	46.3
West: Jamberoo Road														
10	L2	58	1.7	61	1.7	0.104	5.6	LOS A	0.0	0.1	0.01	0.19	0.01	53.8
11	T1	120	7.5	126	7.5	0.104	0.0	LOS A	0.0	0.1	0.01	0.19	0.01	55.9
12	R2	1	0.0	1	0.0	0.104	6.0	LOS A	0.0	0.1	0.01	0.19	0.01	49.0
Approach		179	5.6	188	5.6	0.104	1.8	NA	0.0	0.1	0.01	0.19	0.01	55.0
All Vehicles		1083	3.0	1140	3.0	0.298	4.5	NA	1.9	13.9	0.24	0.40	0.24	50.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 1AME [OLD_LON_36_AM_E (Site Folder: Everything AM)]

8:15AM - 9:15AM Complete combination of conditions
Site Category: Future Conditions 1
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Old Saddleback Road (S)														
1	L2	55	0.0	58	0.0	0.055	5.6	LOS A	0.0	0.0	0.00	0.33	0.00	55.6
2	T1	43	2.3	45	2.3	0.055	0.0	LOS A	0.0	0.0	0.00	0.33	0.00	57.0
Approach		98	1.0	103	1.0	0.055	3.1	NA	0.0	0.0	0.00	0.33	0.00	56.2
North: Old Saddleback Road (N)														
8	T1	78	0.0	82	0.0	0.044	0.0	LOS A	0.0	0.2	0.02	0.03	0.02	59.6
9	R2	4	0.0	4	0.0	0.044	5.7	LOS A	0.0	0.2	0.02	0.03	0.02	57.4
Approach		82	0.0	86	0.0	0.044	0.3	NA	0.0	0.2	0.02	0.03	0.02	59.5
West: Long Brush Road														
10	L2	1	0.0	1	0.0	0.054	5.6	LOS A	0.1	0.9	0.14	0.59	0.14	53.3
12	R2	73	0.0	77	0.0	0.054	5.7	LOS A	0.1	0.9	0.14	0.59	0.14	52.7
Approach		74	0.0	78	0.0	0.054	5.7	LOS A	0.1	0.9	0.14	0.59	0.14	52.8
All Vehicles		254	0.4	267	0.4	0.055	3.0	NA	0.1	0.9	0.05	0.31	0.05	56.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 2AME [OLD_SAD_36_AM_E (Site Folder: Everything AM)]

8:15AM - 9:15AM Complete combination of conditions
Site Category: Future Conditions 1
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Saddleback Mountain Road (S)														
2	T1	5	0.0	5	0.0	0.005	0.2	LOS A	0.0	0.1	0.21	0.25	0.21	56.9
3	R2	4	0.0	4	0.0	0.005	5.8	LOS A	0.0	0.1	0.21	0.25	0.21	54.9
Approach		9	0.0	9	0.0	0.005	2.7	NA	0.0	0.1	0.21	0.25	0.21	56.0
East: Saddleback Mountain Road (E)														
4	L2	4	0.0	4	0.0	0.068	5.6	LOS A	0.2	1.1	0.07	0.59	0.07	53.5
6	R2	94	1.1	99	1.1	0.068	5.6	LOS A	0.2	1.1	0.07	0.59	0.07	52.9
Approach		98	1.0	103	1.0	0.068	5.6	LOS A	0.2	1.1	0.07	0.59	0.07	52.9
North: Old Saddleback Road														
7	L2	145	0.0	153	0.0	0.085	5.6	LOS A	0.0	0.0	0.00	0.56	0.00	53.7
8	T1	5	0.0	5	0.0	0.085	0.0	LOS A	0.0	0.0	0.00	0.56	0.00	55.1
Approach		150	0.0	158	0.0	0.085	5.4	NA	0.0	0.0	0.00	0.56	0.00	53.8
All Vehicles		257	0.4	271	0.4	0.085	5.4	NA	0.2	1.1	0.03	0.56	0.03	53.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3AME [SOU_SAD_36_AM_E (Site Folder: Everything AM)]

8:15AM - 9:15AM Complete combination of conditions
Site Category: Future Conditions 1
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: South Kiama Drive (S)														
1a	L1	286	2	301	0.7	0.476	3.3	LOS A	0.0	0.0	0.00	0.46	0.00	38.3
3	R2	541	18	569	3.3	0.476	3.7	LOS A	0.0	0.0	0.00	0.46	0.00	37.5
Approach		827	20	871	2.4	0.476	3.6	NA	0.0	0.0	0.00	0.46	0.00	37.9
East: South Kiama Drive (E)														
4	L2	223	12	235	5.4	0.135	3.4	LOS A	0.0	0.0	0.00	0.45	0.00	37.8
6a	R1	159	1	167	0.6	0.122	4.6	LOS A	0.6	4.2	0.57	0.63	0.57	36.7
Approach		382	13	402	3.4	0.135	3.9	NA	0.6	4.2	0.24	0.53	0.24	37.3
NorthWest: Saddleback Mountain Road														
27a	L1	387	1	407	0.3	0.329	5.5	LOS A	1.8	12.5	0.59	0.76	0.66	36.2
29a	R1	135	0	142	0.0	0.618	29.3	LOS C	2.9	20.5	0.92	1.17	1.51	30.2
Approach		522	1	549	0.2	0.618	11.6	LOS A	2.9	20.5	0.67	0.87	0.88	33.7
All Vehicles		1731	34	1822	2.0	0.618	6.1	NA	2.9	20.5	0.26	0.60	0.32	36.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 4AME [SOU_MAN_36_AM_E (Site Folder: Everything AM)]

8:15AM - 9:15AM Complete combination of conditions
Site Category: Future Conditions 1
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Henley Avenue														
1	L2	17	0.0	18	0.0	0.052	6.1	LOS A	0.3	1.9	0.63	0.62	0.63	33.6
2	T1	16	0.0	17	0.0	0.052	5.7	LOS A	0.3	1.9	0.63	0.62	0.63	37.4
3	R2	3	0.0	3	0.0	0.052	9.1	LOS A	0.3	1.9	0.63	0.62	0.63	34.7
3u	U	1	0.0	1	0.0	0.052	10.5	LOS A	0.3	1.9	0.63	0.62	0.63	37.1
Approach		37	0.0	39	0.0	0.052	6.3	LOS A	0.3	1.9	0.63	0.62	0.63	36.0
East: Bonaira Street														
4	L2	16	0.0	17	0.0	0.306	5.3	LOS A	1.9	13.5	0.64	0.73	0.64	32.4
5	T1	41	4.9	43	4.9	0.306	5.1	LOS A	1.9	13.5	0.64	0.73	0.64	29.8
6	R2	193	2.6	203	2.6	0.306	8.4	LOS A	1.9	13.5	0.64	0.73	0.64	36.0
6u	U	1	0.0	1	0.0	0.306	9.7	LOS A	1.9	13.5	0.64	0.73	0.64	15.4
Approach		251	2.8	264	2.8	0.306	7.7	LOS A	1.9	13.5	0.64	0.73	0.64	35.3
North: Manning Street														
7	L2	114	4.4	120	4.4	0.411	3.1	LOS A	3.5	25.0	0.40	0.53	0.40	36.0
8	T1	28	3.6	29	3.6	0.411	2.7	LOS A	3.5	25.0	0.40	0.53	0.40	37.5
9	R2	318	3.5	335	3.5	0.411	6.1	LOS A	3.5	25.0	0.40	0.53	0.40	36.9
9u	U	30	3.3	32	3.3	0.411	7.4	LOS A	3.5	25.0	0.40	0.53	0.40	38.6
Approach		490	3.7	516	3.7	0.411	5.3	LOS A	3.5	25.0	0.40	0.53	0.40	36.9
West: South Kiama Drive														
10	L2	847	1.8	892	1.8	0.914	15.2	LOS B	23.8	169.9	1.00	1.11	1.51	31.3
11	T1	62	6.5	65	6.5	0.914	15.0	LOS B	23.8	169.9	1.00	1.11	1.51	21.9
12	R2	18	5.6	19	5.6	0.914	18.4	LOS B	23.8	169.9	1.00	1.11	1.51	28.0
12u	U	2	0.0	2	0.0	0.914	19.4	LOS B	23.8	169.9	1.00	1.11	1.51	23.7
Approach		929	2.2	978	2.2	0.914	15.2	LOS B	23.8	169.9	1.00	1.11	1.51	31.0
All Vehicles		1707	2.6	1797	2.6	0.914	11.1	LOS A	23.8	169.9	0.77	0.88	1.04	33.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 5AME [BLA_OLD_36_AM_E (Site Folder: Everything AM)]

8:15AM - 9:15AM Complete combination of conditions
Site Category: Future Conditions 1
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Old Saddleback Road (S)														
1	L2	16	0.0	17	0.0	0.246	4.6	LOS A	1.4	10.0	0.33	0.61	0.33	33.8
2	T1	1	0.0	1	0.0	0.246	4.3	LOS A	1.4	10.0	0.33	0.61	0.33	34.2
3	R2	254	1.6	267	1.6	0.246	7.5	LOS A	1.4	10.0	0.33	0.61	0.33	28.6
3u	U	1	0.0	1	0.0	0.246	8.9	LOS A	1.4	10.0	0.33	0.61	0.33	28.5
Approach		272	1.5	286	1.5	0.246	7.3	LOS A	1.4	10.0	0.33	0.61	0.33	29.0
East: Bland Street (E)														
4	L2	93	2.2	98	2.2	0.165	4.1	LOS A	1.0	6.9	0.19	0.46	0.19	34.3
5	T1	105	1.0	111	1.0	0.165	3.7	LOS A	1.0	6.9	0.19	0.46	0.19	39.6
6	R2	5	20.0	5	20.0	0.165	7.1	LOS A	1.0	6.9	0.19	0.46	0.19	35.8
6u	U	2	0.0	2	0.0	0.165	8.4	LOS A	1.0	6.9	0.19	0.46	0.19	31.7
Approach		205	2.0	216	2.0	0.165	4.0	LOS A	1.0	6.9	0.19	0.46	0.19	37.3
North: Old Saddleback Road (N)														
7	L2	8	12.5	8	12.5	0.016	7.5	LOS A	0.1	0.6	0.60	0.62	0.60	31.6
8	T1	1	0.0	1	0.0	0.016	6.7	LOS A	0.1	0.6	0.60	0.62	0.60	33.4
9	R2	1	0.0	1	0.0	0.016	9.9	LOS A	0.1	0.6	0.60	0.62	0.60	36.0
9u	U	1	0.0	1	0.0	0.016	11.3	LOS A	0.1	0.6	0.60	0.62	0.60	36.2
Approach		11	9.1	12	9.1	0.016	8.0	LOS A	0.1	0.6	0.60	0.62	0.60	32.6
West: Bland Street (W)														
10	L2	1	0.0	1	0.0	0.301	5.8	LOS A	1.8	12.8	0.53	0.62	0.53	37.2
11	T1	236	0.4	248	0.4	0.301	5.5	LOS A	1.8	12.8	0.53	0.62	0.53	36.9
12	R2	38	0.0	40	0.0	0.301	8.7	LOS A	1.8	12.8	0.53	0.62	0.53	33.8
12u	U	1	0.0	1	0.0	0.301	10.1	LOS A	1.8	12.8	0.53	0.62	0.53	39.8
Approach		276	0.4	291	0.4	0.301	5.9	LOS A	1.8	12.8	0.53	0.62	0.53	36.4
All Vehicles		764	1.3	804	1.3	0.301	5.9	LOS A	1.8	12.8	0.37	0.57	0.37	33.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 6AME [BLA_EUG_36_AM_E (Site Folder: Everything AM)]

8:15AM - 9:15AM Complete combination of conditions
Site Category: Future Conditions 1
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Eugene Street														
1	L2	1	0.0	1	0.0	0.036	8.4	LOS A	0.2	1.5	0.71	0.69	0.71	24.3
2	T1	10	10.0	11	10.0	0.036	8.9	LOS A	0.2	1.5	0.71	0.69	0.71	32.4
3	R2	9	0.0	9	0.0	0.036	11.4	LOS A	0.2	1.5	0.71	0.69	0.71	30.4
3u	U	1	0.0	1	0.0	0.036	12.8	LOS A	0.2	1.5	0.71	0.69	0.71	19.7
Approach		21	4.8	22	4.8	0.036	10.1	LOS A	0.2	1.5	0.71	0.69	0.71	30.8
East: Bland Street (E)														
4	L2	11	0.0	12	0.0	0.375	3.9	LOS A	3.0	21.6	0.06	0.57	0.06	34.4
5	T1	202	2.5	213	2.5	0.375	3.5	LOS A	3.0	21.6	0.06	0.57	0.06	38.2
6	R2	365	2.7	384	2.7	0.375	6.7	LOS A	3.0	21.6	0.06	0.57	0.06	40.9
6u	U	1	0.0	1	0.0	0.375	8.1	LOS A	3.0	21.6	0.06	0.57	0.06	41.1
Approach		579	2.6	609	2.6	0.375	5.6	LOS A	3.0	21.6	0.06	0.57	0.06	40.0
West: Bland Street (W)														
10	L2	314	1.6	331	1.6	0.600	9.3	LOS A	5.4	38.0	0.75	0.86	0.89	33.6
11	T1	188	1.1	198	1.1	0.600	8.9	LOS A	5.4	38.0	0.75	0.86	0.89	33.2
12	R2	1	0.0	1	0.0	0.600	12.1	LOS A	5.4	38.0	0.75	0.86	0.89	23.4
12u	U	2	0.0	2	0.0	0.600	13.5	LOS A	5.4	38.0	0.75	0.86	0.89	22.8
Approach		505	1.4	532	1.4	0.600	9.2	LOS A	5.4	38.0	0.75	0.86	0.89	33.4
All Vehicles		1105	2.1	1163	2.1	0.600	7.3	LOS A	5.4	38.0	0.39	0.70	0.45	36.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 7AME [SHO_BLA_36_AM_E (Site Folder: Everything AM)]

8:15AM - 9:15AM Complete combination of conditions
Site Category: Future Conditions 1
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Shoalhaven Street (S)														
1	L2	29	17.2	31	17.2	0.044	3.5	LOS A	0.0	0.1	0.01	0.20	0.01	38.4
2	T1	40	20.0	42	20.0	0.044	0.0	LOS A	0.0	0.1	0.01	0.20	0.01	34.8
3	R2	1	0.0	1	0.0	0.044	6.6	LOS A	0.0	0.1	0.01	0.20	0.01	15.0
Approach		70	18.6	74	18.6	0.044	1.5	NA	0.0	0.1	0.01	0.20	0.01	36.7
East: Access Road														
4	L2	1	0.0	1	0.0	0.023	0.3	LOS A	0.1	0.4	0.37	0.32	0.37	12.6
5	T1	7	0.0	7	0.0	0.023	1.9	LOS A	0.1	0.4	0.37	0.32	0.37	23.5
6	R2	13	0.0	14	0.0	0.023	1.6	LOS A	0.1	0.4	0.37	0.32	0.37	13.0
Approach		21	0.0	22	0.0	0.023	1.7	LOS A	0.1	0.4	0.37	0.32	0.37	17.6
North: Shoalhaven Street (N)														
7	L2	32	0.0	34	0.0	0.346	7.4	LOS A	2.4	17.3	0.24	0.37	0.24	14.6
8	T1	126	10.3	133	10.3	0.346	0.3	LOS A	2.4	17.3	0.24	0.37	0.24	29.5
9	R2	540	1.9	568	1.9	0.346	3.6	LOS A	2.4	17.3	0.24	0.37	0.24	36.4
Approach		698	3.3	735	3.3	0.346	3.2	NA	2.4	17.3	0.24	0.37	0.24	34.8
West: Bland Street														
10	L2	201	2.0	212	2.0	0.128	3.5	LOS A	0.6	4.3	0.10	0.45	0.10	36.1
11	T1	4	0.0	4	0.0	0.128	8.9	LOS A	0.6	4.3	0.10	0.45	0.10	24.6
12	R2	13	0.0	14	0.0	0.128	6.6	LOS A	0.6	4.3	0.10	0.45	0.10	34.7
Approach		218	1.8	229	1.8	0.128	3.8	LOS A	0.6	4.3	0.10	0.45	0.10	35.7
All Vehicles		1007	4.0	1060	4.0	0.346	3.2	NA	2.4	17.3	0.19	0.37	0.19	34.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 8AME [JAM_BAN_36_AM_E (Site Folder: Everything AM)]

8:15AM - 9:15AM Complete combination of conditions
Site Category: Future Conditions 1
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Banksia Drive														
1	L2	3	0.0	3	0.0	0.087	3.1	LOS A	0.4	3.0	0.32	0.61	0.32	23.0
3	R2	91	1.1	96	1.1	0.087	6.8	LOS A	0.4	3.0	0.32	0.61	0.32	39.1
3u	U	1	0.0	1	0.0	0.087	8.4	LOS A	0.4	3.0	0.32	0.61	0.32	25.1
Approach		95	1.1	100	1.1	0.087	6.7	LOS A	0.4	3.0	0.32	0.61	0.32	38.5
East: Jamberoo Road (E)														
4	L2	65	1.5	68	1.5	0.138	4.2	LOS A	0.7	5.2	0.04	0.47	0.04	41.8
5	T1	143	0.7	151	0.7	0.138	4.4	LOS A	0.7	5.2	0.04	0.47	0.04	38.5
6u	U	5	0.0	5	0.0	0.138	10.1	LOS A	0.7	5.2	0.04	0.47	0.04	50.8
Approach		213	0.9	224	0.9	0.138	4.5	LOS A	0.7	5.2	0.04	0.47	0.04	39.7
West: Jamberoo Road (W)														
11	T1	259	0.8	273	0.8	0.219	3.9	LOS A	1.3	9.0	0.30	0.46	0.30	46.0
12	R2	2	0.0	2	0.0	0.219	7.6	LOS A	1.3	9.0	0.30	0.46	0.30	31.4
12u	U	1	0.0	1	0.0	0.219	9.4	LOS A	1.3	9.0	0.30	0.46	0.30	25.1
Approach		262	0.8	276	0.8	0.219	4.0	LOS A	1.3	9.0	0.30	0.46	0.30	45.9
All Vehicles		570	0.9	600	0.9	0.219	4.6	LOS A	1.3	9.0	0.20	0.49	0.20	42.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 9AME [JAM_SPR_36_AM_E (Site Folder: Everything AM)]

8:15AM - 9:15AM Complete combination of conditions
Site Category: Future Conditions 1
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Hutchinson Street														
1	L2	1	0.0	1	0.0	0.005	4.9	LOS A	0.0	0.1	0.41	0.56	0.41	43.8
2	T1	1	0.0	1	0.0	0.005	7.6	LOS A	0.0	0.1	0.41	0.56	0.41	46.3
3	R2	1	0.0	1	0.0	0.005	10.4	LOS A	0.0	0.1	0.41	0.56	0.41	44.4
Approach		3	0.0	3	0.0	0.005	7.6	LOS A	0.0	0.1	0.41	0.56	0.41	44.9
East: Terralong Street														
4	L2	1	0.0	1	0.0	0.095	5.5	LOS A	0.0	0.0	0.00	0.00	0.00	57.7
5	T1	173	0.6	182	0.6	0.095	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
6	R2	361	1.7	380	1.7	0.227	6.9	LOS A	1.3	9.1	0.50	0.64	0.50	47.6
Approach		535	1.3	563	1.3	0.227	4.6	NA	1.3	9.1	0.34	0.43	0.34	50.3
North: Spring Creek Drive														
7	L2	122	0.8	128	0.8	0.076	6.2	LOS A	0.4	2.5	0.35	0.57	0.35	48.1
8	T1	1	0.0	1	0.0	0.086	8.5	LOS A	0.3	2.0	0.63	0.84	0.63	44.7
9	R2	38	2.6	40	2.6	0.086	11.3	LOS A	0.3	2.0	0.63	0.84	0.63	43.0
Approach		161	1.2	169	1.2	0.086	7.5	LOS A	0.4	2.5	0.42	0.64	0.42	46.8
West: Jamberoo Road														
10	L2	116	0.9	122	0.9	0.207	5.6	LOS A	0.0	0.1	0.00	0.18	0.00	54.2
11	T1	258	0.8	272	0.8	0.207	0.0	LOS A	0.0	0.1	0.00	0.18	0.00	56.2
12	R2	1	0.0	1	0.0	0.207	6.0	LOS A	0.0	0.1	0.00	0.18	0.00	49.2
Approach		375	0.8	395	0.8	0.207	1.7	NA	0.0	0.1	0.00	0.18	0.00	55.5
All Vehicles		1074	1.1	1131	1.1	0.227	4.1	NA	1.3	9.1	0.23	0.38	0.23	51.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 1PME [OLD_LON_36_PM_E (Site Folder: Everything PM)]

3:00PM - 4:00PM Complete combination of conditions
Site Category: Future Conditions 1
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Old Saddleback Road (S)														
1	L2	138	0.0	145	0.0	0.125	5.6	LOS A	0.0	0.0	0.00	0.36	0.00	55.3
2	T1	87	0.0	92	0.0	0.125	0.0	LOS A	0.0	0.0	0.00	0.36	0.00	56.8
Approach		225	0.0	237	0.0	0.125	3.4	NA	0.0	0.0	0.00	0.36	0.00	55.9
North: Old Saddleback Road (N)														
8	T1	37	0.0	39	0.0	0.025	0.2	LOS A	0.1	0.4	0.14	0.12	0.14	58.4
9	R2	9	0.0	9	0.0	0.025	6.0	LOS A	0.1	0.4	0.14	0.12	0.14	56.2
Approach		46	0.0	48	0.0	0.025	1.3	NA	0.1	0.4	0.14	0.12	0.14	57.9
West: Long Brush Road														
10	L2	9	0.0	9	0.0	0.034	5.7	LOS A	0.1	0.6	0.16	0.58	0.16	53.2
12	R2	39	2.6	41	2.6	0.034	5.8	LOS A	0.1	0.6	0.16	0.58	0.16	52.6
Approach		48	2.1	51	2.1	0.034	5.8	LOS A	0.1	0.6	0.16	0.58	0.16	52.7
All Vehicles		319	0.3	336	0.3	0.125	3.5	NA	0.1	0.6	0.04	0.36	0.04	55.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 2PME [OLD_SAD_36_PM_E (Site Folder: Everything PM)]

3:00PM - 4:00PM Complete combination of conditions
Site Category: Future Conditions 1
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Saddleback Mountain Road (S)														
2	T1	13	0.0	14	0.0	0.012	0.1	LOS A	0.0	0.3	0.15	0.26	0.15	57.1
3	R2	11	0.0	12	0.0	0.012	5.6	LOS A	0.0	0.3	0.15	0.26	0.15	55.0
Approach		24	0.0	25	0.0	0.012	2.6	NA	0.0	0.3	0.15	0.26	0.15	56.1
East: Saddleback Mountain Road (E)														
4	L2	13	0.0	14	0.0	0.153	5.6	LOS A	0.4	2.8	0.06	0.59	0.06	53.5
6	R2	211	0.0	222	0.0	0.153	5.6	LOS A	0.4	2.8	0.06	0.59	0.06	53.0
Approach		224	0.0	236	0.0	0.153	5.6	LOS A	0.4	2.8	0.06	0.59	0.06	53.0
North: Old Saddleback Road														
7	L2	71	0.0	75	0.0	0.043	5.6	LOS A	0.0	0.0	0.00	0.54	0.00	53.9
8	T1	5	0.0	5	0.0	0.043	0.0	LOS A	0.0	0.0	0.00	0.54	0.00	55.3
Approach		76	0.0	80	0.0	0.043	5.2	NA	0.0	0.0	0.00	0.54	0.00	54.0
All Vehicles		324	0.0	341	0.0	0.153	5.3	NA	0.4	2.8	0.05	0.55	0.05	53.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3PME [SOU_SAD_36_PM_E (Site Folder: Everything PM)]

3:00PM - 4:00PM Complete combination of conditions
Site Category: Future Conditions 1
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: South Kiama Drive (S)														
1a	L1	306	0	322	0.0	0.415	3.2	LOS A	0.0	0.0	0.00	0.46	0.00	38.4
3	R2	423	11	445	2.6	0.415	3.7	LOS A	0.0	0.0	0.00	0.46	0.00	37.6
Approach		729	11	767	1.5	0.415	3.5	NA	0.0	0.0	0.00	0.46	0.00	38.0
East: South Kiama Drive (E)														
4	L2	258	16	272	6.2	0.157	3.4	LOS A	0.0	0.0	0.00	0.45	0.00	37.8
6a	R1	224	0	236	0.0	0.148	4.1	LOS A	0.8	5.4	0.51	0.58	0.51	36.8
Approach		482	16	507	3.3	0.157	3.8	NA	0.8	5.4	0.24	0.51	0.24	37.3
NorthWest: Saddleback Mountain Road														
27a	L1	173	0	182	0.0	0.127	4.4	LOS A	0.6	4.1	0.47	0.59	0.47	36.6
29a	R1	85	0	89	0.0	0.359	20.7	LOS B	1.4	9.8	0.86	1.00	1.07	32.5
Approach		258	0	272	0.0	0.359	9.8	LOS A	1.4	9.8	0.60	0.72	0.67	34.6
All Vehicles		1469	27	1546	1.8	0.415	4.7	NA	1.4	9.8	0.18	0.52	0.19	37.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 4PME [SOU_MAN_36_PM_E (Site Folder: Everything PM)]

3:00PM - 4:00PM Complete combination of conditions
Site Category: Future Conditions 1
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Henley Avenue														
1	L2	21	0.0	22	0.0	0.069	6.9	LOS A	0.4	2.7	0.68	0.67	0.68	33.0
2	T1	20	0.0	21	0.0	0.069	6.5	LOS A	0.4	2.7	0.68	0.67	0.68	37.0
3	R2	4	0.0	4	0.0	0.069	9.9	LOS A	0.4	2.7	0.68	0.67	0.68	34.0
3u	U	1	0.0	1	0.0	0.069	11.2	LOS A	0.4	2.7	0.68	0.67	0.68	36.6
Approach		46	0.0	48	0.0	0.069	7.1	LOS A	0.4	2.7	0.68	0.67	0.68	35.5
East: Bonaira Street														
4	L2	12	0.0	13	0.0	0.290	6.3	LOS A	1.8	12.7	0.70	0.78	0.70	31.5
5	T1	26	0.0	27	0.0	0.290	5.9	LOS A	1.8	12.7	0.70	0.78	0.70	28.5
6	R2	173	2.3	182	2.3	0.290	9.4	LOS A	1.8	12.7	0.70	0.78	0.70	35.3
6u	U	2	0.0	2	0.0	0.290	10.6	LOS A	1.8	12.7	0.70	0.78	0.70	15.1
Approach		213	1.9	224	1.9	0.290	8.8	LOS A	1.8	12.7	0.70	0.78	0.70	34.7
North: Manning Street														
7	L2	119	0.0	125	0.0	0.496	3.1	LOS A	4.4	31.4	0.41	0.53	0.41	36.0
8	T1	40	0.0	42	0.0	0.496	2.7	LOS A	4.4	31.4	0.41	0.53	0.41	37.5
9	R2	427	3.5	449	3.5	0.496	6.2	LOS A	4.4	31.4	0.41	0.53	0.41	36.8
9u	U	27	0.0	28	0.0	0.496	7.5	LOS A	4.4	31.4	0.41	0.53	0.41	38.6
Approach		613	2.4	645	2.4	0.496	5.4	LOS A	4.4	31.4	0.41	0.53	0.41	36.9
West: South Kiama Drive														
10	L2	522	1.9	549	1.9	0.594	4.7	LOS A	5.2	37.2	0.68	0.64	0.69	36.6
11	T1	51	2.0	54	2.0	0.594	4.3	LOS A	5.2	37.2	0.68	0.64	0.69	32.8
12	R2	23	0.0	24	0.0	0.594	7.7	LOS A	5.2	37.2	0.68	0.64	0.69	36.0
12u	U	4	0.0	4	0.0	0.594	9.0	LOS A	5.2	37.2	0.68	0.64	0.69	35.3
Approach		600	1.8	632	1.8	0.594	4.8	LOS A	5.2	37.2	0.68	0.64	0.69	36.5
All Vehicles		1472	2.0	1549	2.0	0.594	5.7	LOS A	5.2	37.2	0.57	0.62	0.57	36.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 5PME [BLA_OLD_36_PM_E (Site Folder: Everything PM)]

3:00PM - 4:00PM Complete combination of conditions
Site Category: Future Conditions 1
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Old Saddleback Road (S)														
1	L2	37	0.0	39	0.0	0.185	5.5	LOS A	1.0	6.9	0.46	0.66	0.46	33.6
2	T1	1	0.0	1	0.0	0.185	5.2	LOS A	1.0	6.9	0.46	0.66	0.46	34.0
3	R2	134	0.7	141	0.7	0.185	8.4	LOS A	1.0	6.9	0.46	0.66	0.46	28.4
3u	U	1	0.0	1	0.0	0.185	9.8	LOS A	1.0	6.9	0.46	0.66	0.46	28.2
Approach		173	0.6	182	0.6	0.185	7.8	LOS A	1.0	6.9	0.46	0.66	0.46	29.7
East: Bland Street (E)														
4	L2	191	0.0	201	0.0	0.316	4.0	LOS A	2.1	14.8	0.15	0.45	0.15	34.9
5	T1	242	1.7	255	1.7	0.316	3.6	LOS A	2.1	14.8	0.15	0.45	0.15	40.0
6	R2	7	0.0	7	0.0	0.316	6.8	LOS A	2.1	14.8	0.15	0.45	0.15	38.8
6u	U	1	0.0	1	0.0	0.316	8.3	LOS A	2.1	14.8	0.15	0.45	0.15	32.0
Approach		441	0.9	464	0.9	0.316	3.9	LOS A	2.1	14.8	0.15	0.45	0.15	38.0
North: Old Saddleback Road (N)														
7	L2	5	0.0	5	0.0	0.009	5.3	LOS A	0.0	0.3	0.43	0.54	0.43	34.4
8	T1	1	0.0	1	0.0	0.009	5.0	LOS A	0.0	0.3	0.43	0.54	0.43	35.9
9	R2	1	0.0	1	0.0	0.009	8.2	LOS A	0.0	0.3	0.43	0.54	0.43	38.1
9u	U	1	0.0	1	0.0	0.009	9.6	LOS A	0.0	0.3	0.43	0.54	0.43	38.6
Approach		8	0.0	8	0.0	0.009	6.2	LOS A	0.0	0.3	0.43	0.54	0.43	35.7
West: Bland Street (W)														
10	L2	2	0.0	2	0.0	0.139	4.8	LOS A	0.8	5.5	0.36	0.51	0.36	38.3
11	T1	119	3.4	125	3.4	0.139	4.5	LOS A	0.8	5.5	0.36	0.51	0.36	38.0
12	R2	19	0.0	20	0.0	0.139	7.6	LOS A	0.8	5.5	0.36	0.51	0.36	34.9
12u	U	1	0.0	1	0.0	0.139	9.0	LOS A	0.8	5.5	0.36	0.51	0.36	40.9
Approach		141	2.8	148	2.8	0.139	4.9	LOS A	0.8	5.5	0.36	0.51	0.36	37.5
All Vehicles		763	1.2	803	1.2	0.316	5.0	LOS A	2.1	14.8	0.26	0.51	0.26	35.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 6PME [BLA_EUG_36_PM_E (Site Folder: Everything PM)]

3:00PM - 4:00PM Complete combination of conditions
Site Category: Future Conditions 1
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Eugene Street														
1	L2	1	0.0	1	0.0	0.027	11.9	LOS A	0.2	1.2	0.81	0.72	0.81	21.5
2	T1	8	0.0	8	0.0	0.027	11.9	LOS A	0.2	1.2	0.81	0.72	0.81	29.8
3	R2	3	0.0	3	0.0	0.027	14.9	LOS B	0.2	1.2	0.81	0.72	0.81	27.5
3u	U	1	0.0	1	0.0	0.027	16.3	LOS B	0.2	1.2	0.81	0.72	0.81	17.3
Approach		13	0.0	14	0.0	0.027	12.9	LOS A	0.2	1.2	0.81	0.72	0.81	28.0
East: Bland Street (E)														
4	L2	16	0.0	17	0.0	0.530	3.9	LOS A	5.3	37.4	0.09	0.52	0.09	35.0
5	T1	441	0.9	464	0.9	0.530	3.5	LOS A	5.3	37.4	0.09	0.52	0.09	39.0
6	R2	361	2.8	380	2.8	0.530	6.8	LOS A	5.3	37.4	0.09	0.52	0.09	41.5
6u	U	1	0.0	1	0.0	0.530	8.2	LOS A	5.3	37.4	0.09	0.52	0.09	41.8
Approach		819	1.7	862	1.7	0.530	5.0	LOS A	5.3	37.4	0.09	0.52	0.09	40.2
West: Bland Street (W)														
10	L2	159	0.0	167	0.0	0.314	6.7	LOS A	1.8	12.9	0.59	0.69	0.59	36.5
11	T1	99	5.1	104	5.1	0.314	6.5	LOS A	1.8	12.9	0.59	0.69	0.59	36.4
12	R2	1	0.0	1	0.0	0.314	9.6	LOS A	1.8	12.9	0.59	0.69	0.59	26.5
12u	U	4	0.0	4	0.0	0.314	11.0	LOS A	1.8	12.9	0.59	0.69	0.59	20.3
Approach		263	1.9	277	1.9	0.314	6.7	LOS A	1.8	12.9	0.59	0.69	0.59	36.2
All Vehicles		1095	1.7	1153	1.7	0.530	5.5	LOS A	5.3	37.4	0.22	0.56	0.22	39.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 7PME [SHO_BLA_36_PM_E (Site Folder: Everything PM)]

3:00PM - 4:00PM Complete combination of conditions
Site Category: Future Conditions 1
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Shoalhaven Street (S)														
1	L2	86	8.1	91	8.1	0.086	3.4	LOS A	0.0	0.1	0.00	0.28	0.00	37.7
2	T1	54	20.4	57	20.4	0.086	0.0	LOS A	0.0	0.1	0.00	0.28	0.00	33.1
3	R2	1	0.0	1	0.0	0.086	6.3	LOS A	0.0	0.1	0.00	0.28	0.00	14.8
Approach		141	12.8	148	12.8	0.086	2.1	NA	0.0	0.1	0.00	0.28	0.00	36.7
East: Access Road														
4	L2	3	0.0	3	0.0	0.023	0.1	LOS A	0.1	0.4	0.20	0.16	0.20	12.7
5	T1	5	0.0	5	0.0	0.023	2.3	LOS A	0.1	0.4	0.20	0.16	0.20	23.5
6	R2	14	0.0	15	0.0	0.023	1.5	LOS A	0.1	0.4	0.20	0.16	0.20	13.0
Approach		22	0.0	23	0.0	0.023	1.5	LOS A	0.1	0.4	0.20	0.16	0.20	16.3
North: Shoalhaven Street (N)														
7	L2	17	0.0	18	0.0	0.366	7.7	LOS A	2.6	18.4	0.35	0.44	0.35	14.3
8	T1	50	26.0	53	26.0	0.366	0.5	LOS A	2.6	18.4	0.35	0.44	0.35	28.0
9	R2	655	0.8	689	0.8	0.366	3.9	LOS A	2.6	18.4	0.35	0.44	0.35	35.7
Approach		722	2.5	760	2.5	0.366	3.7	NA	2.6	18.4	0.35	0.44	0.35	35.0
West: Bland Street														
10	L2	107	3.7	113	3.7	0.072	3.6	LOS A	0.3	2.3	0.12	0.46	0.12	35.9
11	T1	4	0.0	4	0.0	0.072	9.0	LOS A	0.3	2.3	0.12	0.46	0.12	24.5
12	R2	4	50.0	4	50.0	0.072	9.7	LOS A	0.3	2.3	0.12	0.46	0.12	34.1
Approach		115	5.2	121	5.2	0.072	4.0	LOS A	0.3	2.3	0.12	0.46	0.12	35.3
All Vehicles		1000	4.2	1053	4.2	0.366	3.5	NA	2.6	18.4	0.27	0.41	0.27	34.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 8PME [JAM_BAN_36_PM_E (Site Folder: Everything PM)]

3:00PM - 4:00PM Complete combination of conditions
Site Category: Future Conditions 1
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Banksia Drive														
1	L2	4	0.0	4	0.0	0.050	3.8	LOS A	0.2	1.7	0.43	0.63	0.43	22.5
3	R2	43	2.3	45	2.3	0.050	7.5	LOS A	0.2	1.7	0.43	0.63	0.43	38.3
3u	U	1	0.0	1	0.0	0.050	9.1	LOS A	0.2	1.7	0.43	0.63	0.43	24.5
Approach		48	2.1	51	2.1	0.050	7.2	LOS A	0.2	1.7	0.43	0.63	0.43	36.9
East: Jamberoo Road (E)														
4	L2	85	1.2	89	1.2	0.240	4.2	LOS A	1.4	10.0	0.06	0.46	0.06	41.6
5	T1	277	1.4	292	1.4	0.240	4.4	LOS A	1.4	10.0	0.06	0.46	0.06	38.4
6u	U	7	0.0	7	0.0	0.240	10.1	LOS A	1.4	10.0	0.06	0.46	0.06	50.6
Approach		369	1.4	388	1.4	0.240	4.5	LOS A	1.4	10.0	0.06	0.46	0.06	39.3
West: Jamberoo Road (W)														
11	T1	173	5.2	182	5.2	0.144	3.6	LOS A	0.8	5.9	0.20	0.43	0.20	45.8
12	R2	5	0.0	5	0.0	0.144	7.3	LOS A	0.8	5.9	0.20	0.43	0.20	32.1
12u	U	1	0.0	1	0.0	0.144	9.1	LOS A	0.8	5.9	0.20	0.43	0.20	25.5
Approach		179	5.0	188	5.0	0.144	3.7	LOS A	0.8	5.9	0.20	0.43	0.20	45.5
All Vehicles		596	2.5	627	2.5	0.240	4.5	LOS A	1.4	10.0	0.13	0.47	0.13	40.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 9PME [JAM_SPR_36_PM_E (Site Folder: Everything PM)]

3:00PM - 4:00PM Complete combination of conditions
Site Category: Future Conditions 1
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Hutchinson Street														
1	L2	1	0.0	1	0.0	0.006	5.3	LOS A	0.0	0.1	0.57	0.64	0.57	42.3
2	T1	1	0.0	1	0.0	0.006	9.8	LOS A	0.0	0.1	0.57	0.64	0.57	45.0
3	R2	1	0.0	1	0.0	0.006	13.9	LOS A	0.0	0.1	0.57	0.64	0.57	42.9
Approach		3	0.0	3	0.0	0.006	9.7	LOS A	0.0	0.1	0.57	0.64	0.57	43.5
East: Terralong Street														
4	L2	1	0.0	1	0.0	0.172	5.6	LOS A	0.0	0.0	0.00	0.00	0.00	57.7
5	T1	309	1.6	325	1.6	0.172	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
6	R2	573	2.3	603	2.3	0.313	6.4	LOS A	2.0	14.4	0.42	0.58	0.42	47.9
Approach		883	2.0	929	2.0	0.313	4.2	NA	2.0	14.4	0.27	0.38	0.27	50.8
North: Spring Creek Drive														
7	L2	88	4.5	93	4.5	0.051	6.0	LOS A	0.2	1.7	0.25	0.54	0.25	47.9
8	T1	1	0.0	1	0.0	0.171	11.2	LOS A	0.5	3.7	0.76	0.90	0.77	42.5
9	R2	54	0.0	57	0.0	0.171	15.0	LOS B	0.5	3.7	0.76	0.90	0.77	40.1
Approach		143	2.8	151	2.8	0.171	9.4	LOS A	0.5	3.7	0.45	0.68	0.45	44.7
West: Jamberoo Road														
10	L2	85	1.2	89	1.2	0.133	5.6	LOS A	0.0	0.1	0.01	0.22	0.01	53.5
11	T1	146	6.2	154	6.2	0.133	0.0	LOS A	0.0	0.1	0.01	0.22	0.01	55.4
12	R2	1	0.0	1	0.0	0.133	6.4	LOS A	0.0	0.1	0.01	0.22	0.01	48.8
Approach		232	4.3	244	4.3	0.133	2.1	NA	0.0	0.1	0.01	0.22	0.01	54.6
All Vehicles		1261	2.5	1327	2.5	0.313	4.4	NA	2.0	14.4	0.25	0.38	0.25	50.5

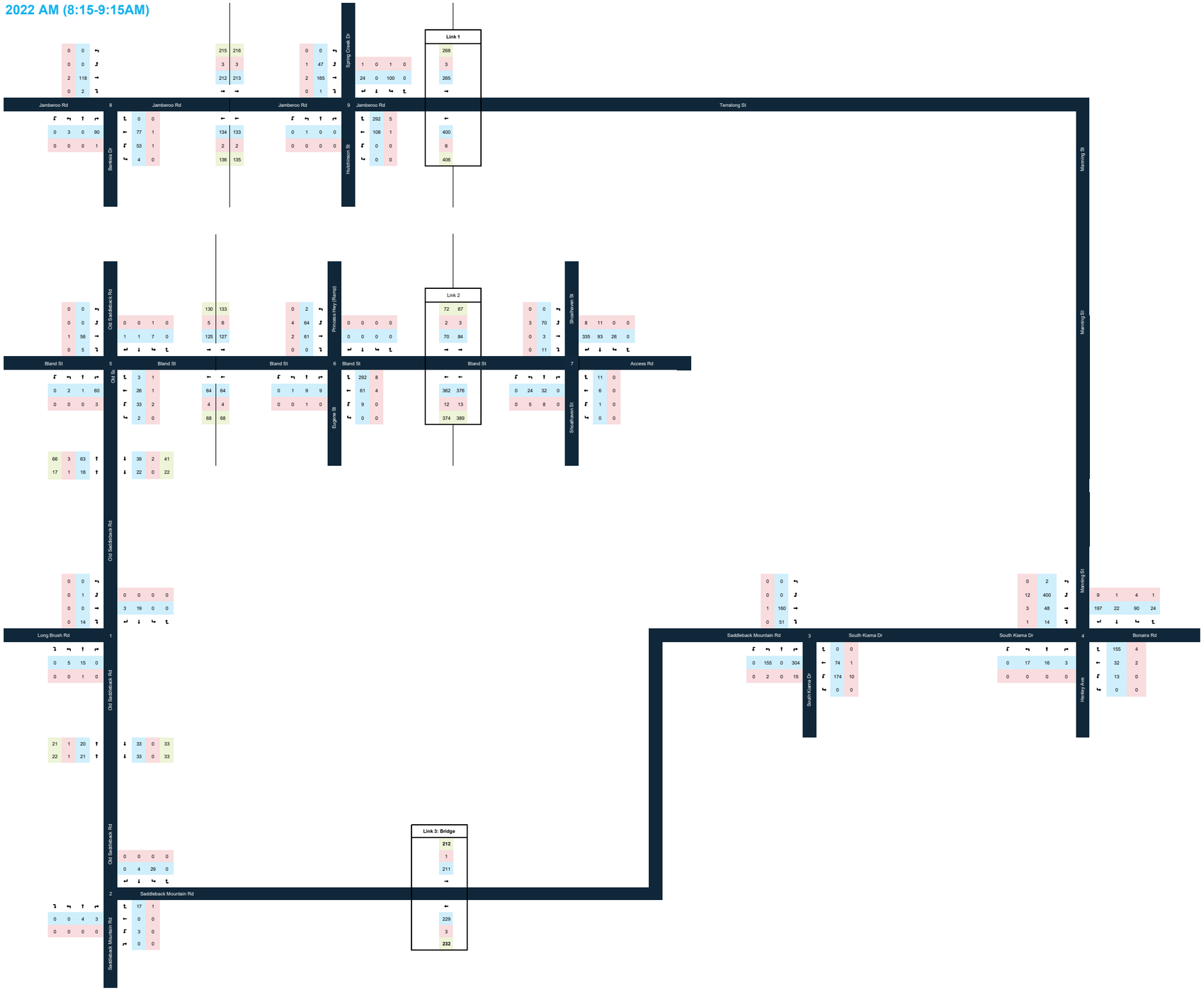
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

APPENDIX B

Network models

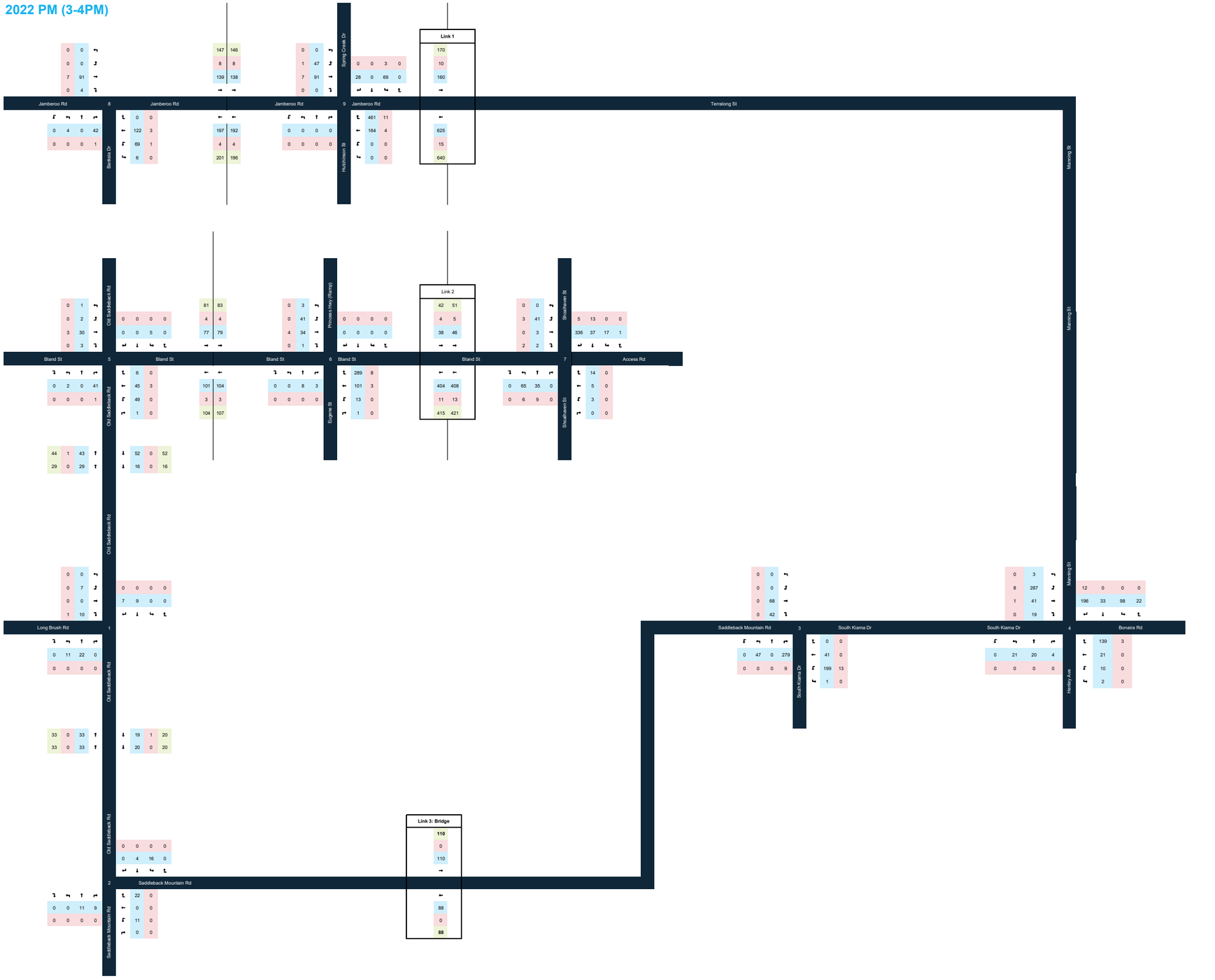
SCT Consulting

2022 AM (8:15-9:15AM)

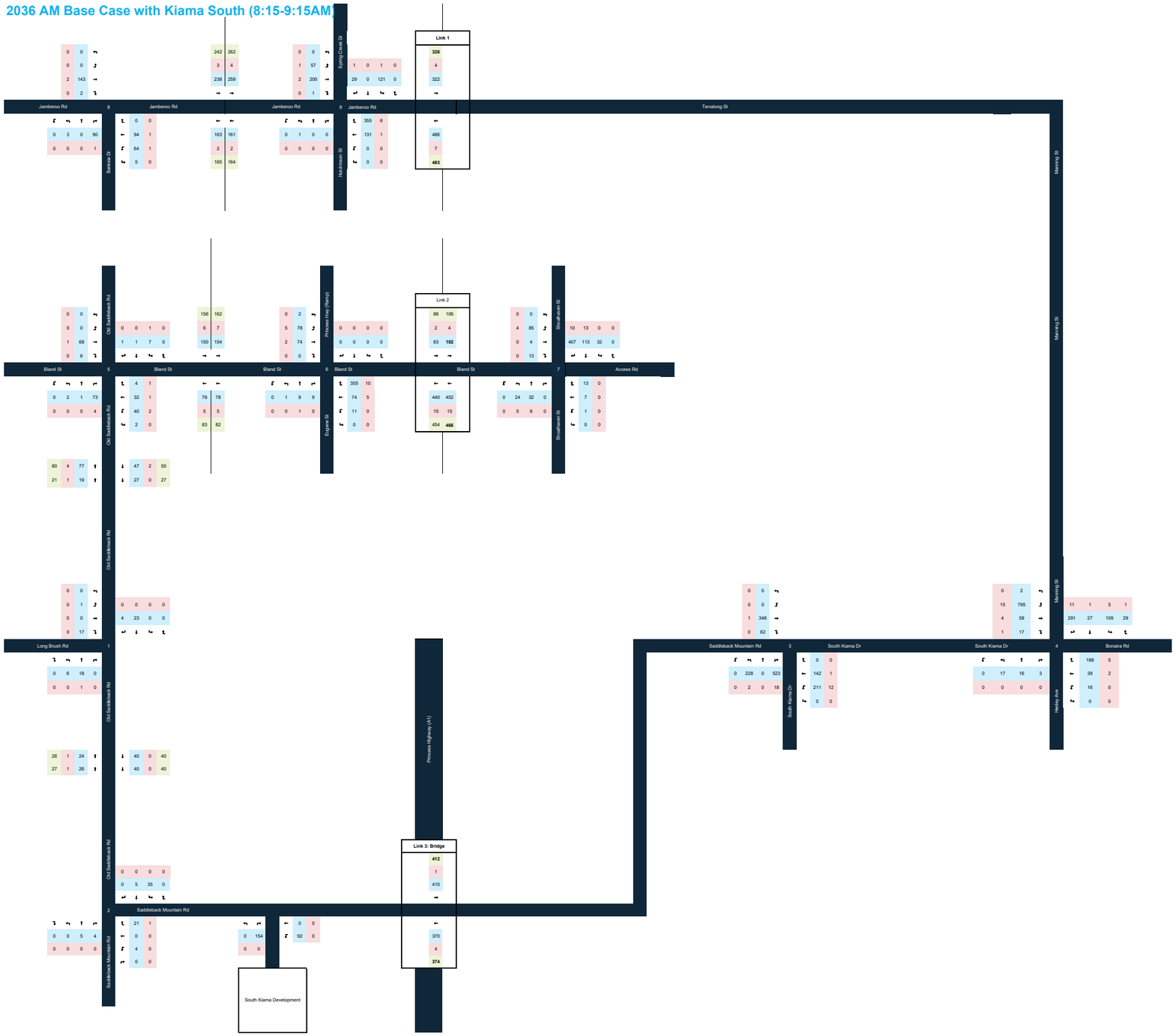


SCT Consulting

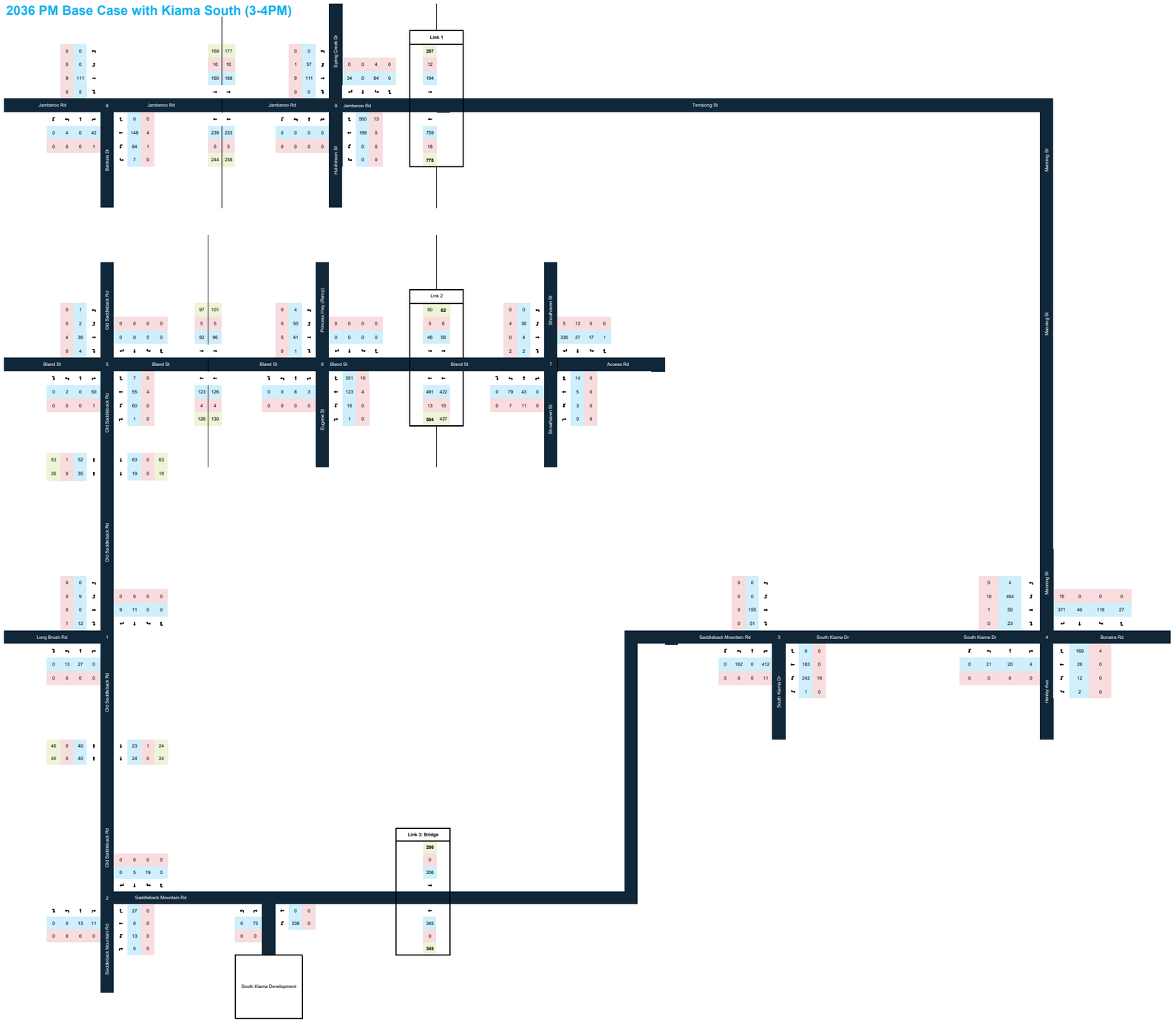
2022 PM (3-4PM)



2036 AM Base Case with Kiama South (8:15-9:15AM)



2036 PM Base Case with Kiama South (3-4PM)



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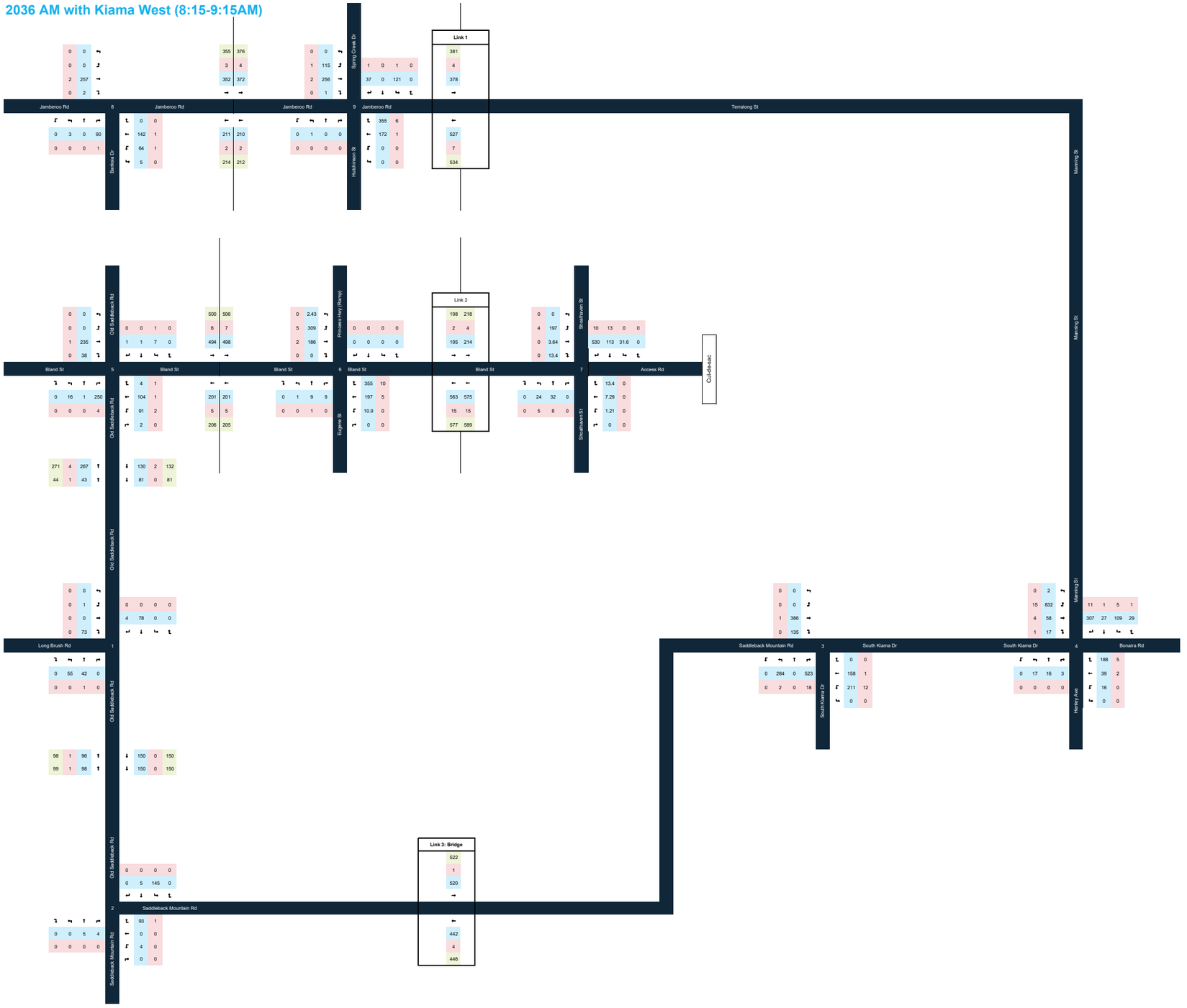
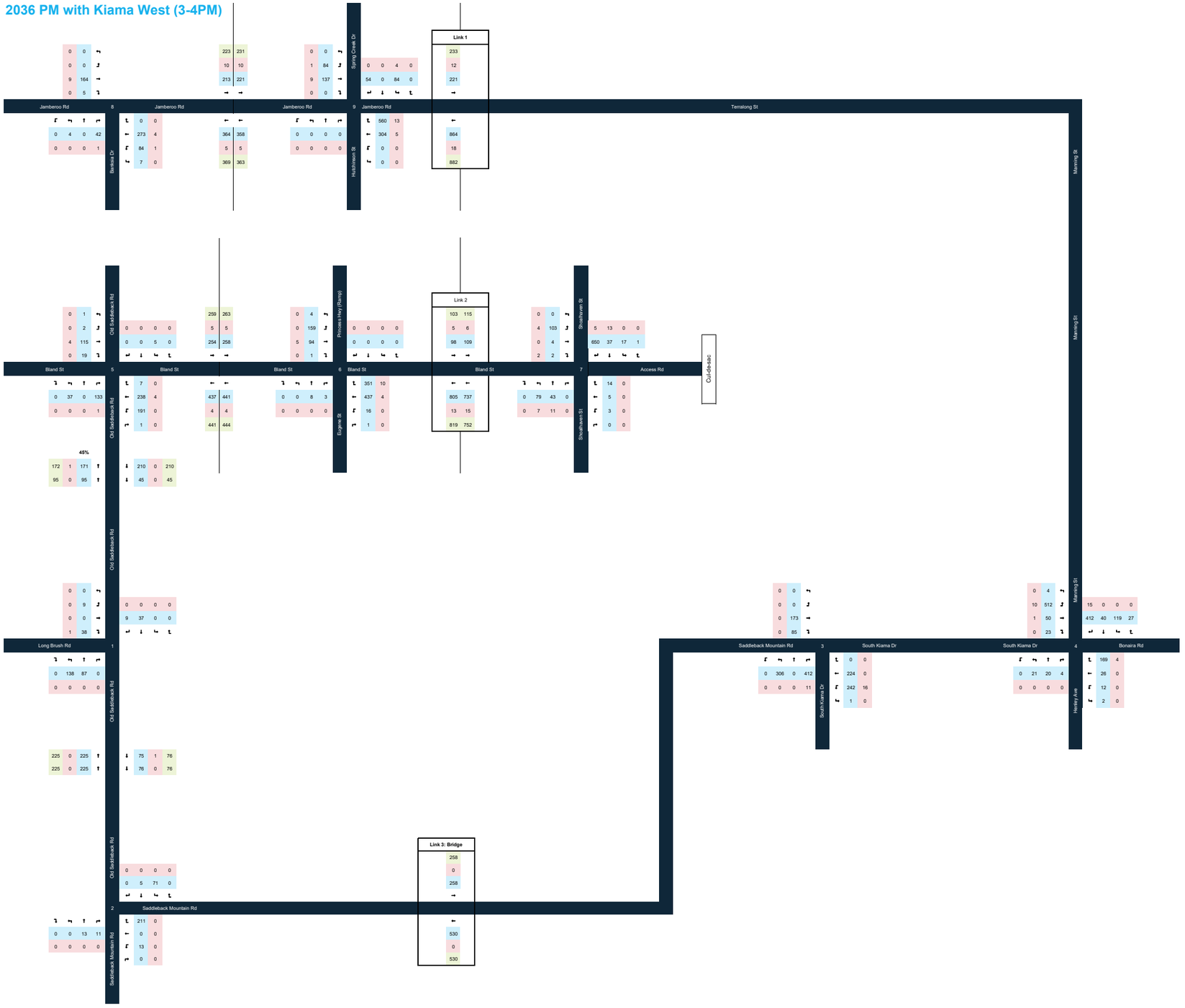


2036 PM with Kiama West (3-4PM)




SCT
Consulting