120 Carrs Drive Yamba

Traffic Impact Assessment

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5 September 2023

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Document Issue History

Report File Name	Prepared	Reviewed	Issued	Date	Issued to
P5271.001R 120 Carrs Drive Yamba TIA - DRAFT	R. Tuputala / A. Payne	B. James	A. Payne	14/06/2022	Andrew Smith andrew@md-engineer.com.au
P5271.001R 120 Carrs Drive Yamba TIA	R. Tuputala / A. Payne	B. James	A. Payne	20/07/2022	Andrew Smith andrew@md-engineer.com.au
P5271.002R 120 Carrs Drive Yamba TIA	R. Tuputala / A. Payne	B. James	A. Payne	16/09/2022	Andrew Smith andrew@md-engineer.com.au
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INFORMATION REQUEST RESPONSE

This response has been prepared in response to the Information Request (IR) issues by Clarence Valley Council (Council) in relation to the proposed manufactured home estate development located at 120 Carrs Drive, Yamba.

Specifically, the below provides a response summary to Items 13-18 of Council's IR with the following traffic report updated to reflect required responses.

Item 13

The 2015 and 2018 traffic data used in the TIA is not current. More recent traffic data shall be provided, noting that an adjoining development's TIA prepared by the same consultant is based on 2022 data.

Response:

Updated 2022 traffic survey data has been sourced from the applicant of the adjacent development with SIDRA Intersection assessments revised accordingly. As shown in Section 3 of the updated report below, with updated count data, peak hour development traffic is not expected to result in adverse impacts to the surrounding road network.

Item 14

Seasonal traffic impacts shall be assessed for peak holiday periods.

Response:

The traffic assessment has been revised to include sensitivity test SIDRA's with an 11% seasonality factor applied. As shown in Section 3 of the revised report below, peak hour development traffic is not expected to result in adverse impacts to the surrounding road network during the peak summer season.

Item 15

The site access to Carrs Drive shall be assessed to identify any upgrade requirements.

Response:

The proposed development abuts the southern boundary of the West Yamba Urban Release Area and as such, notable redevelopment south of the site access is not permissible based on current planning. With only a small number of existing residential dwellings (<10 dwellings) present south of the site access, through traffic volumes past the site access are negligible. As there is no notable opposing traffic movements, turn treatments at the proposed site access are not deemed warranted.

Item 16

The TIA shall be updated to include background + development traffic for Carrs Drive in terms of AADT.

Response:

As detailed in Section 3.4, the proposed development is forecast to generate in the order of 454 daily vehicle trips. The forecast daily traffic generation of the subject site, combined with the few existing dwelling to the south, will not exceed the daily capacity of the local road type (2,000vpd). The existing road width of 7m is also consistent with minimum width requirements for a local road cross-section and therefore the existing form of Carrs Drive is considered suitable to cater for expected daily traffic generation of the proposed development.

Item 17

The assumed development traffic distribution (Table 3.3 of the submitted TIA) indicates a peak PM traffic rate of 70 vehicles per hour. Further detail is required on the gated access to the site to demonstrate that the peak traffic into the development will not lead to queuing on Carrs Drive.

Response:

A typo was identified in Table 3.3 with the report below revised to show the correct PM peak arrival rate of 61 vehicles per hour. To determine expected queuing at the gate, a queuing assessment was undertaken in accordance with the Austroads Guide to Traffic Management Part 2 as follows:

- **Arrival rate:** 61 veh/hr
- **Conservatively assumed service time:** 10 seconds
- **Average service rate:** 300 veh/hr
- **Utilisation factor:** 0.169 (16.9%)
- **Probability of 2 or less vehicles queued:** 97.14%
- **Probability of 3 or less vehicles queued:** 99.5%

As shown above, 95th percentile vehicle queues in the PM peak hour is less than two vehicles. It is noted that this queuing assessment is highly conservative as it is expected that residents will remotely trigger the entry gate before stopping their vehicle and as such are not typically expected to be required to 10 seconds to entre.

Sufficient queue length is proposed to cater for two vehicles wholly within the subject site and three vehicles without queuing impacts onto Carrs Drive. As the proposed storage length can cater for 95th percentile vehicle queues (adopting a conservative service rate), peak hour traffic is not expected to result in queuing onto Carrs Drive.

Item 18

Through connection to Golding Street intersection shall be assessed for the fully developed West Yamba Urban Release Area (WYURA) scenario.

Response:

Assessment of the future Golding Street connection and the fully developed WYURA scenario is not warranted as a part of this development application noting the following:

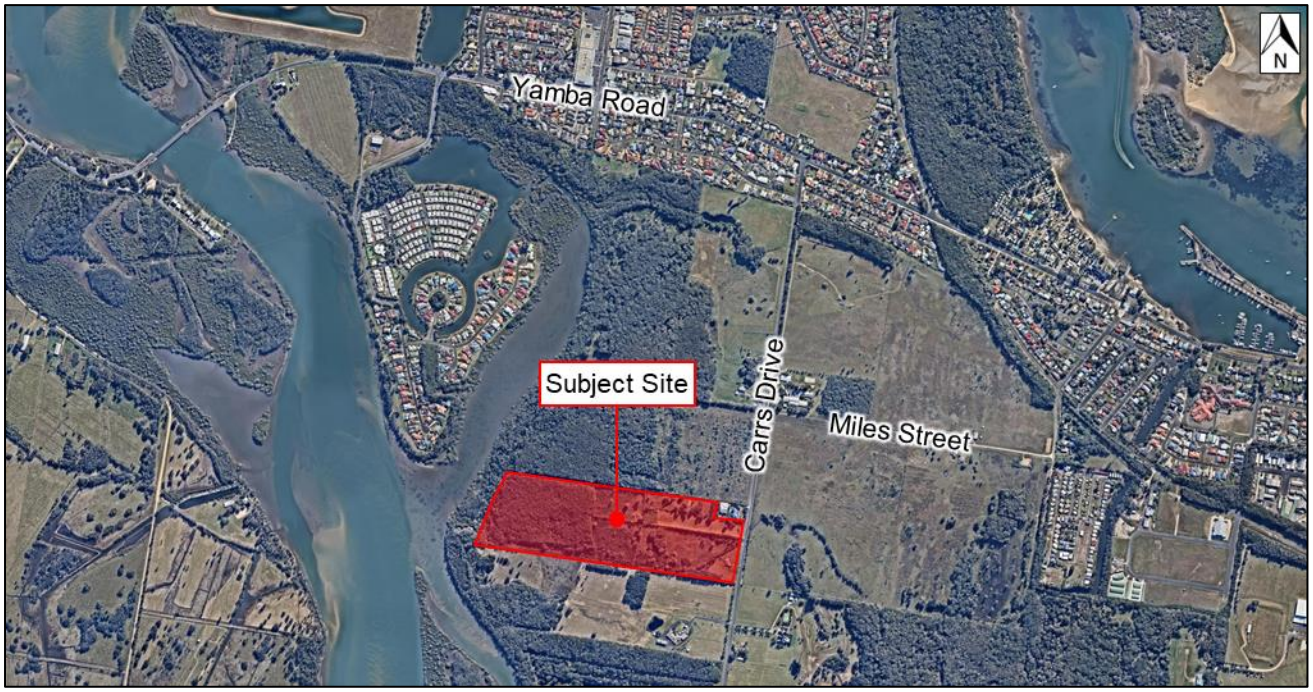
- As shown in Section 3 of the revised report below, development traffic in combination with currently approved WYURA developments, is not expected to result in adverse impacts to the existing road network. As such, no external works are warranted as a result of the proposed development and there is subsequently no need to assess the provisions of the Golding Street connection
- Detailed information of road network design and all development yields proposed for adjacent development sites are not publicly available information at this stage. As such, an accurate assessment of full WYURA traffic impacts would not be possible as a part of this application
- The future connection to Golding Street via Miles Street will impact land owned by the adjacent developers / landowners and is therefore subject to the relevant applications / assessments for these sites. It is not considered appropriate to assess future links that will be constructed by others as a part of this development application
- It is understood that traffic assessment and determination of trigger points for the Golding Street connection have already been conducted as a part of development application works for other, larger WYURA locations. Any response to Item 18 as a part of this application would therefore simply be a repeat of assessments already known to Council.

1. INTRODUCTION

1.1 Background

Bitzios Consulting (Bitzios) has been engaged by Clifton Yamba Pty Ltd (Client) to prepare a Traffic Impact Assessment (TIA) for a proposed 216-Lot manufactured home estate located at 120 Carrs Drive, Yamba formally described as Lot 2 on DP1279485.

The location of the subject site is illustrated in Figure 1.1.



Source: Nearmap (edited by Bitzios)

Figure 1.1: Subject Site Location

1.2 Proposed Development

The proposal is for a housing estate comprised of:

- 216-Lot manufactured home estate
- Vehicular access via Carrs Drive.

The development plans are provided at **Appendix A**.

1.3 Scope

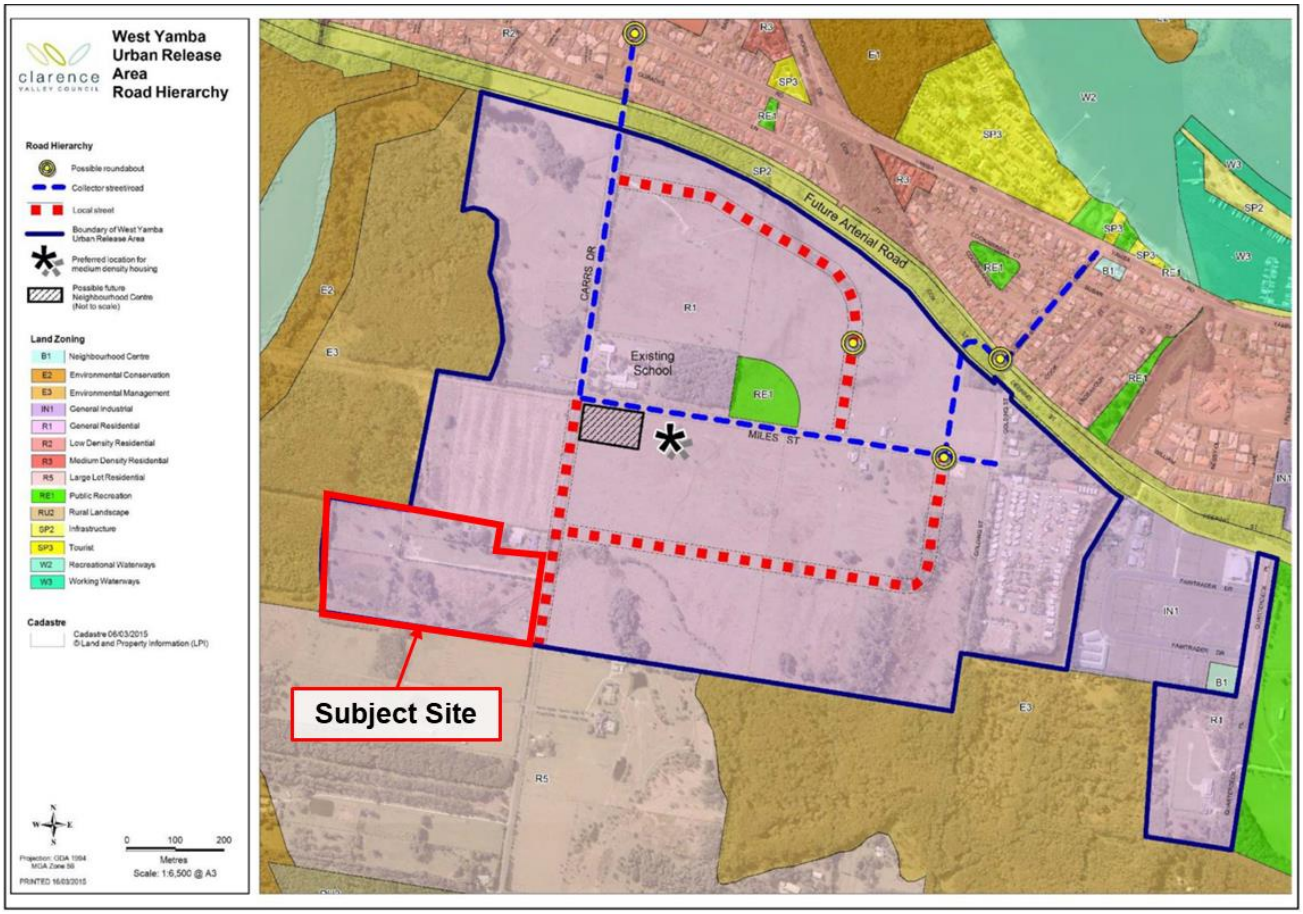
The scope of this assessment included:

- Reviewing the existing conditions of the site and its surrounds relevant to traffic and transport
- Estimating the proposed development's traffic generation and distribution on the surrounding road network
- Detailed assessment of the development's traffic impacts on the surrounding road network
- Review the on-site road layout against Council's DCP and the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2021
- Review the proposed access arrangements against Council's requirements and AS2890
- Review the servicing / refuse collection arrangements Council's requirements and AS2890.

2. EXISTING CONDITIONS

2.1 Subject Site Zoning & Planning Context

The subject site is located on General Residential (R1) zoned land within the West Yamba Urban Release Area (WYURA). WYURA zoning and high-level road planning is shown in Figure 2.1.



SOURCE: Clarence Valley Council Development Control Plan

Figure 2.1: West Yamba Urban Release Area

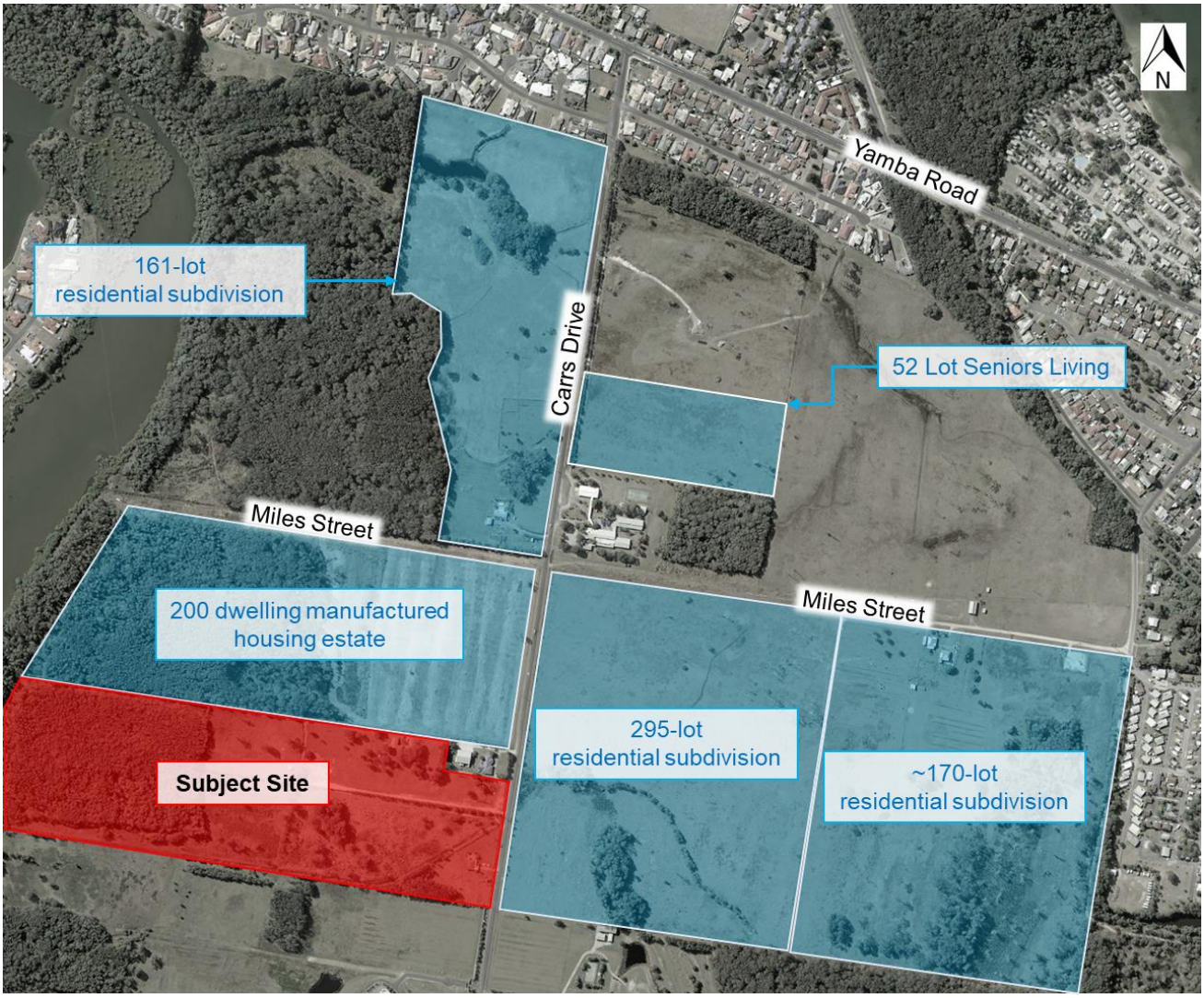
As shown, the proposed development is consistent with planned uses for the WYURA. A future road connection via Miles Street and Golding Street is also proposed.

Key upgrades to Yamba Road have recently been completed with roundabouts constructed at the following intersections:

- Yamba Road / Treelands Drive
- Yamba Road / Carrs Drive
- Yamba Road / Shores Drive

These roundabout upgrades were implemented to both ameliorate existing issues at these intersections as well as cater for future growth within the area, including development within the WYURA.

As shown above, the area around the subject site is earmarked for significant development. Individual development applications recognised by Council are shown in Figure 2.2.



SOURCE: Nearmap (edited by Bitzios)

Figure 2.2: Recognised Development Applications

2.2 Road Network

Details of the road network surrounding the subject site are outlined in Table 2.1.

Table 2.1: Surrounding Road Network

Road Name	Jurisdiction	No. of Lanes	Hierarchy	Divided	Posted Speed
Carrs Drive	Council	2	Large Lot Residential Road	No	60km/h
Yamba Road	Council	2	Sub-Arterial	No	50km/h

The surrounding key intersections are shown in Table 2.2.

Table 2.2: Key Intersections

Intersection	Jurisdiction	Type
Yamba Road / Treelands Drive	Council	Roundabout
Yamba Road / Orion Drive	Council	Roundabout
Yamba Road / Shores Drive	Council	Roundabout

2.3 Public Transport

Limited public transport accessibility is available to the current site with the closest bus stops located on Yamba Road approximately 2km from the subject site. This low level of public transport connectivity is consistent with developments of a similar nature in this location.

Furthermore, with future development of the WYURA, Miles Street and the northern portion of Carrs Drive will be upgraded to a collector road standard allowing for the facilitation of a future bus route servicing the WYURA as required.

2.4 Active Transport

The portion of Carrs Drive fronting the subject site is currently consistent with a Large Lot Residential Access Road cross-section with no dedicated active transport facilities present. However, with development of the WYURA it is expected that Carrs Drive and Miles Street will be upgraded to be consistent with urban residential road cross-sections (including footpaths) provided as specified in the *Northern Rivers Local Government Development Design and Construction Manual*.

3. TRAFFIC ASSESSMENT

3.1 Background Traffic

3.1.1 Traffic Surveys

Intersection traffic surveys were undertaken on Wednesday 20 July 2022 at the following intersections:

- Yamba Road / Treelands Drive
- Yamba Road / Carrs Drive
- Yamba Road / Shores Drive

Based on the survey data collected, the following network peak hours were determined:

- AM peak hour: 8:00am – 9:00am
- PM peak hour: 3:15pm – 4:15pm

Detailed traffic survey data is provided at **Appendix B**.

3.1.2 Background Traffic Growth

A compounding growth rate of 1.5% per annum was applied to surveyed traffic volumes to forecast future year traffic. This growth rate is consistent with other residential development application assessments in the region and is considered conservative as:

- This growth rate excludes traffic generated by developments within the WYURA which will be added separately, as detailed further later in this document
- This exceeds the historical population growth of 0.8% p.a. in the Yamba area as specified by *profile.id*.

Surveyed peak hour traffic volumes with the above growth rate applied for the year of opening are provided at **Appendix C** (Sheet 1).

3.1.3 WYURA Traffic Growth

To consider traffic impacts associated with known approved developments within the WYURA, forecast traffic generation for recognised development applications in the area were also added to background traffic volumes. The Transport for NSW (formerly Roads and Maritime Services) *Guide to Traffic Generating Developments: Technical Direction* (2013) was used to source trip generation rates for these future developments. Table 3.1 details trip generation rates and the expected increase in traffic generation associated with the proposed developments.

Table 3.1: WYURA Background Traffic Generation

Land Use	Quantity	Traffic Generation Rate		Peak Trips	
		AM	PM	AM	PM
Low-Density Residential	161 Lots	0.71 trips / lot	0.78 trips / lot	115	126
Low-Density Residential	465 Lots[1]	0.71 trips / lot	0.78 trips / lot	166	182
Seniors Living (MHE)	200 lots	0.4 trips / lot		80	80
Seniors Living	52 lots	0.4 trips / lot		21	21
			Net Existing Trips	**366**	**430**

[1] *50% of development trips via Carrs Drive*

Assumptions relating to the above neighbouring traffic generation are as follows:

- It is not expected that the above developments will be constructed by 2024 however for the purposes of this assessment all trips have been conservatively included
- With future development of the WYURA, Miles Street will be upgraded to a Collector Street standard connecting to Golding Street. As such, 50% of the development accessed off Miles Street (465 Lots) are estimated to use the Golding Street connection instead of Carrs Drive
- Traffic volumes to / from all other future developments considered are conservatively assumed to be via Carrs Drive.

As shown, other planned WYURA developments are estimated to result in an increase of 366 vehicle trips in the AM peak hour and 430 vehicle trips in the PM peak hour.

Distribution of WYURA development trips on the wider network was determined based on the proportional turn volumes surveyed at each intersection and is detailed at **Appendix C** (Sheet 2). Applying this distribution, a network diagram illustrating the WYURA peak hour traffic generation is provided at **Appendix C** (Sheet 3).

Background traffic volumes are therefore the sum of surveyed traffic volumes with growth rates applied plus WYURA development trips. Year of opening (2024) and 10-year design horizon (2034) background volumes, as shown at **Appendix C** (Sheet 4 & 5).

3.2 Design Traffic

3.2.1 Development Traffic Generation

The Transport for NSW (formerly Roads and Maritime Services) *Guide to Traffic Generating Developments: Technical Direction* (2013) Guide was used to source trip generation rates for the existing and proposed development. Consistent with the adjacent, approved 200-Lot manufactured home estate, a 'Seniors Living' traffic generation rate was adopted. This rate is considered to provide a more accurate representation for a development of this type than typical housing rates.

Table 3.2 details the above trip generation rates and the net increase in traffic generation associated with the proposed development.

Table 3.2: Proposed Development Traffic Generation

Land Use	Quantity	Traffic Generation Rate		Peak Trips	
		AM	PM	AM	PM
Seniors Living	216 lots	0.4 trips / Lot	0.4 trips / Lot	87	87

As shown, the proposed development is expected to generate in the order of 87 peak hour trips in the AM and PM peak hours. Under uniform flow, this increase in traffic equates to 1.5 additional trips every minute in the AM and PM peak hour. Distribution of these trips across the network is detailed at **Appendix C** (Sheet 6).

3.2.2 Development Trip Directionality

A typical residential 'IN:OUT' split was adopted for the expected directionality of forecast traffic to / from the proposed development on the surrounding road network. The 'IN:OUT' trip distribution is summarised in Table 3.3.

Table 3.3: Development Distribution

Land Use	AM Trip Split		PM Tips Split		AM Trips (veh/h)		PM Trips (veh/h)	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Residential	20%	80%	70%	30%	17	70	61	26

3.2.3 Design Traffic

Peak hour design traffic volumes (background plus development trips) are subsequently detailed at **Appendix C** (Sheet 7 & 8) for the expected year of opening (2024) and 10-year design horizon (2034).

3.2.4 Seasonality

It is acknowledged that coastal areas in northern New South Wales are subject to increased traffic demands during holiday periods, especially the summer peaks. To determine the seasonal traffic impacts on traffic volumes, data was sourced from the TfNSW traffic counter site located on the Pacific Highway at the Clarence River bridge (station HWDSTC). This site provided year-round traffic data in 2018 with average daily traffic volumes by month illustrated in Figure 3.1.

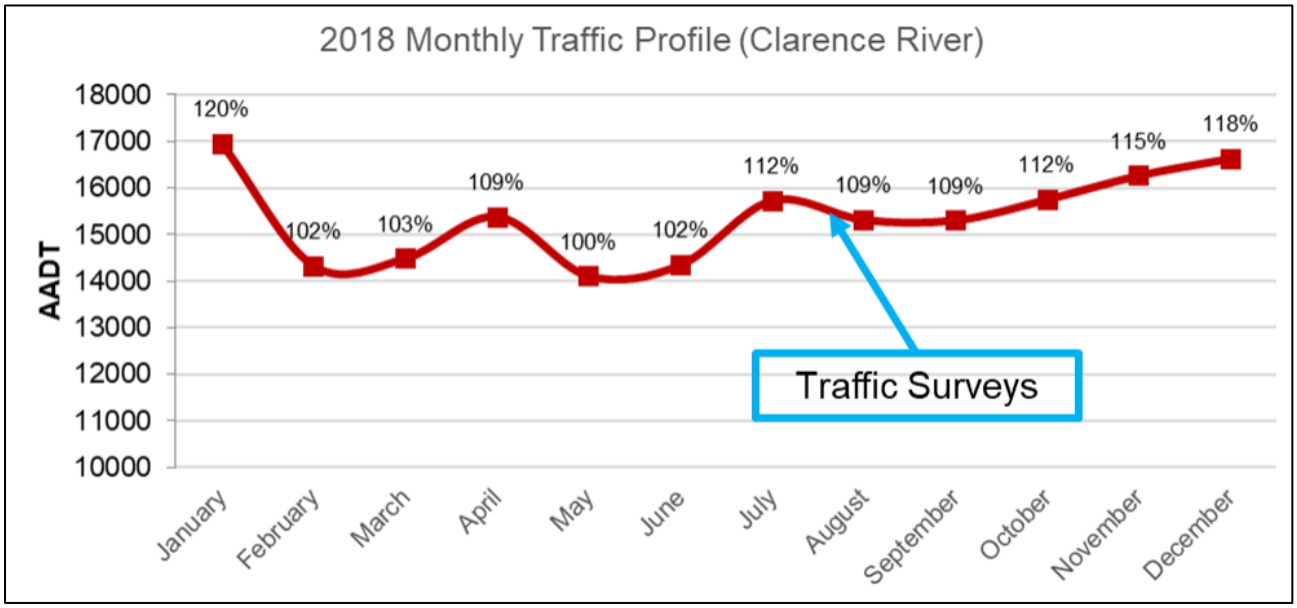


Figure 3.1: Seasonal Traffic Volumes

As expected, peak traffic volumes occur in the months of December and January coinciding with summer holiday periods. Smaller increase in average daily traffic volumes were also observed in April and July corresponding with Easter and school holiday peridos.

Traffic surveys were undertaken in July after the school holiday period. As such, and based on the above, seasonal peak traffic volumes in January are expected to be approximately 11% higher than surveyed. An 11% increase was therefore applied to forecast background volumes to determine expected seasonal peak volumes. Background and design volumes, with the seasonality factor applied, are provided at **Appendix C** (Sheet 9 – Sheet 12) for the expected year of opening (2024) and 10-year design horizon (2034).

3.3 SIDRA Assessment

3.3.1 Methodology

The key intersections outlined in Section 2.1 were assessed using SIDRA Intersection 9 to determine the impact of development trips on the surrounding road network. The key intersections assessed are as follows:

- Yamba Road / Treelands Drive (Roundabout)
- Yamba Road / Carrs Drive (Roundabout)
- Yamba Road / Shores Drive (Roundabout)
- Yamba Road / Miles Street (Priority-Controlled)

The assessment was undertaken for the weekday AM and PM peak hours. Detailed SIDRA outputs for with and without development scenarios at the expected year of opening (2024) and 10-year design horizon (2034) are provided at **Appendix D**.

3.3.2 Yamba Road / Treelands Drive

The Yamba Road / Treelands Drive intersection layout as assessed in SIDRA is shown in Figure 3.2.

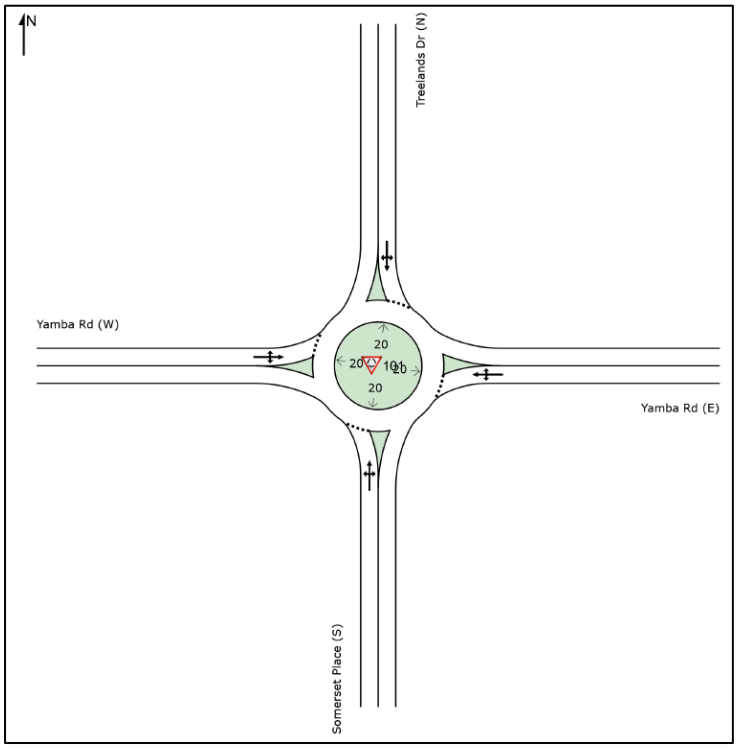


Figure 3.2: Yamba Road / Treelands Drive SIDRA Intersection Layout

Table 3.4 summarises the SIDRA results for the Yamba Road / Treelands Drive intersection for AM and PM peak hours.

Table 3.4: Yamba Road / Treelands Drive SIDRA Results Summary

Year	Background				Design			
	DOS (v/c)	Delay (sec)	LOS	Queue (m)	DOS (v/c)	Delay (sec)	LOS	Queue (m)
Survey Peak Period (July)								
2024 AM	0.48	7	A	29	0.50	7	A	30
2024 PM	0.47	7	A	26	0.49	7	A	27
2034 AM	0.58	7	A	39	0.60	8	A	42
2034 PM	0.58	8	A	38	0.59	8	A	41
Seasonal Peak Period (January)								
2024 AM	0.55	7	A	35	0.57	7	A	37
2024 PM	0.54	8	A	32	0.55	8	A	34
2034 AM	0.66	8	A	51	0.68	8	A	56
2034 PM	0.68	9	A	55	0.70	10	A	60

As shown, the Yamba Road / Treelands Drive intersection is expected to operate within acceptable performance limits at the expected 10-year design horizon (2034) with or without the proposed development and seasonality factors applied. Furthermore, the introduction of development trips is expected to have a negligible impact on intersection performance with overall average intersection delay shown to increase by less than one second in all scenarios tested.

3.3.3 Yamba Road / Carrs Drive

The Yamba Road / Carrs Drive intersection layout as assessed in SIDRA is shown in Figure 3.3.

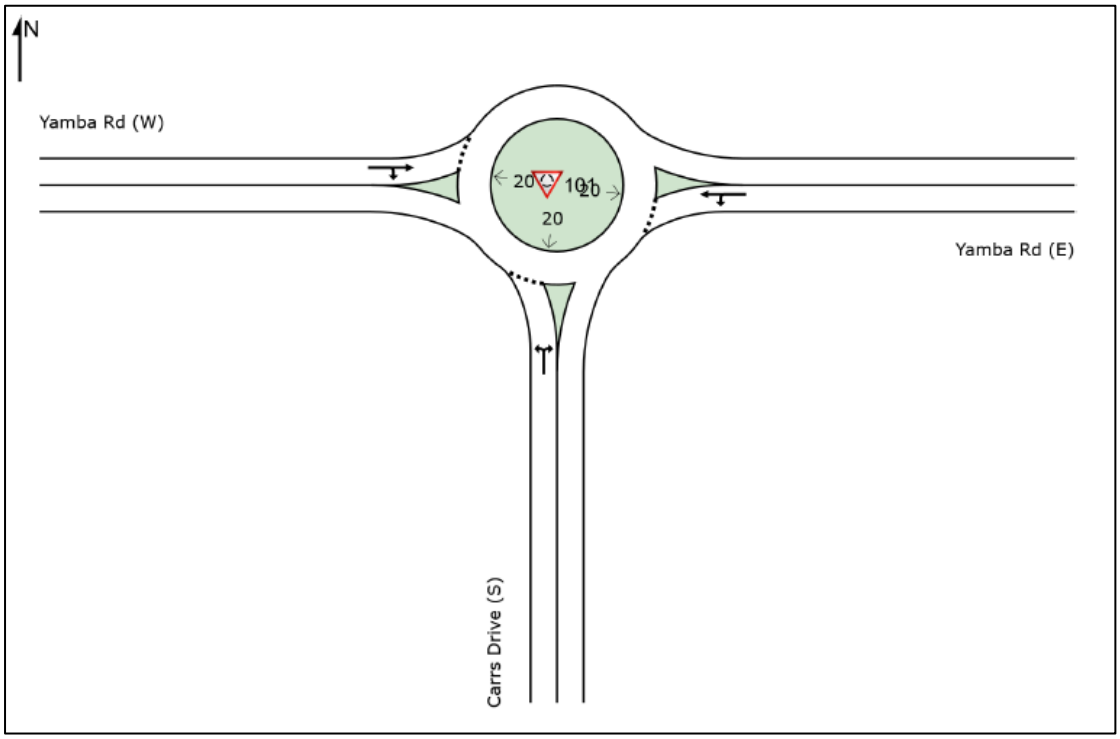


Figure 3.3: Yamba Road / Carrs Drive SIDRA Intersection Layout

Table 3.5 summarises the SIDRA results for the Yamba Road / Carrs Drive intersection for AM and PM peak hours.

Table 3.5: Yamba Road / Carrs Drive SIDRA Results Summary

Year	Background				Design			
	DOS (v/c)	Delay (sec)	LOS	Queue (m)	DOS (v/c)	Delay (sec)	LOS	Queue (m)
Survey Peak Period (July)								
2024 AM	0.51	7	A	30	0.55	8	A	35
2024 PM	0.51	6	A	31	0.56	6	A	36
2034 AM	0.61	8	A	45	0.66	9	A	55
2034 PM	0.59	6	A	40	0.64	7	A	46
Seasonal Peak Period (January)								
2024 AM	0.59	8	A	41	0.64	9	A	49
2024 PM	0.58	6	A	38	0.63	7	A	44
2034 AM	0.71	9	A	66	0.77	11	A	81
2034 PM	0.66	7	A	50	0.71	7	A	59

As shown, the Yamba Road / Carrs Drive intersection is expected to operate within acceptable performance limits at the expected 10-year design horizon (2034) with or without the proposed development and seasonality factors applied. Furthermore, the introduction of development trips is expected to have a negligible impact on intersection performance with overall average intersection delay shown to increase by less than one second in all scenarios tested.

3.3.4 Yamba Road / Shores Drive

The Yamba Road / Shores Drive intersection layout as assessed in SIDRA is shown in Figure 3.4.

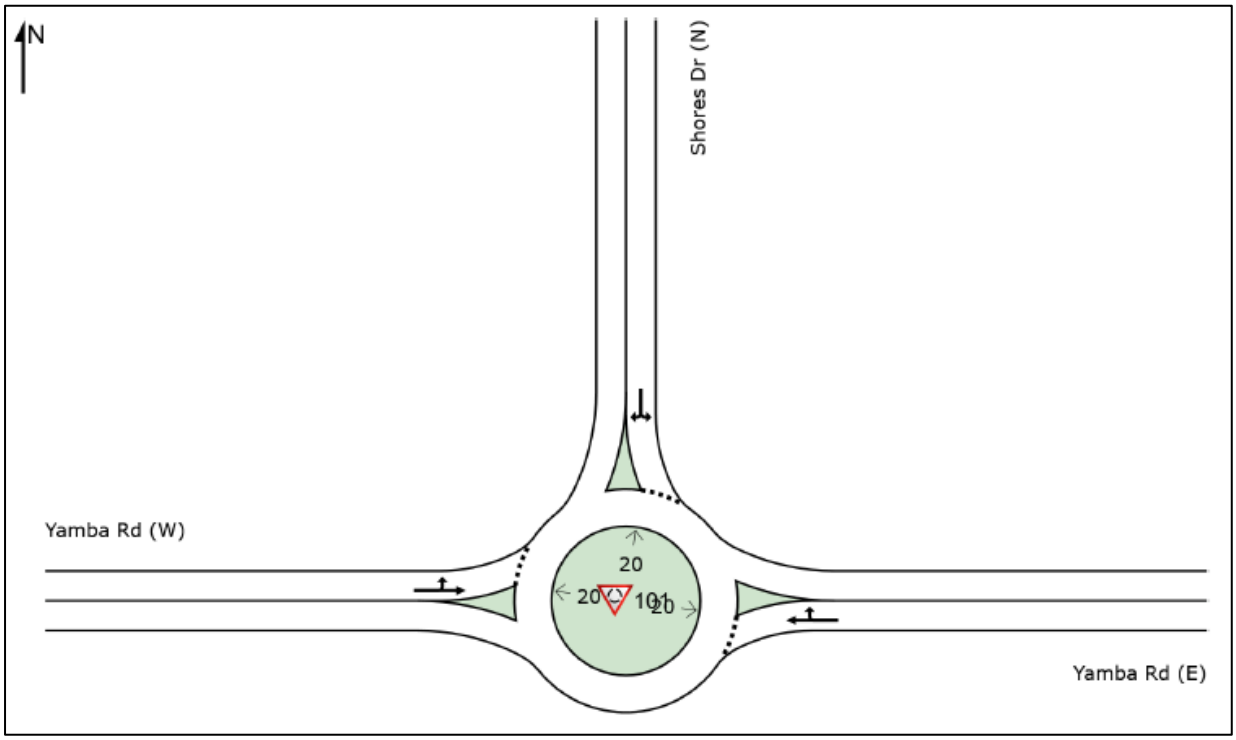


Figure 3.4: Yamba Road / Shores Drive SIDRA Intersection Layout

Table 3.6 summarises the SIDRA results for the Yamba Road / Shores Drive intersection for AM and PM peak hours.

Table 3.6: Yamba Road / Shores Drive SIDRA Results Summary

Year	Background				Design			
	DOS (v/c)	Delay (sec)	LOS	Queue (m)	DOS (v/c)	Delay (sec)	LOS	Queue (m)
Survey Peak Period (July)								
2024 AM	0.55	6	A	34	0.59	6	A	38
2024 PM	0.48	5	A	33	0.51	5	A	36
2034 AM	0.64	6	A	46	0.68	7	A	51
2034 PM	0.56	6	A	43	0.58	6	A	48
Seasonal Peak Period (January)								
2024 AM	0.62	6	A	42	0.65	6	A	48
2024 PM	0.54	6	A	40	0.56	6	A	44
2034 AM	0.73	7	A	59	0.75	8	A	64
2034 PM	0.64	6	A	55	0.65	6	A	61

As shown, the Yamba Road / Shores Drive intersection is expected to operate within acceptable performance limits at the expected 10-year design horizon (2034) with or without the proposed development and seasonality factors applied. Furthermore, the introduction of development trips is expected to have a negligible impact on intersection performance with overall average intersection delay shown to increase by less than one second in all scenarios tested.

3.3.5 Carrs Drive / Miles Street

The Carrs Drive / Miles Street intersection layout as assessed in SIDRA is shown in Figure 3.5.

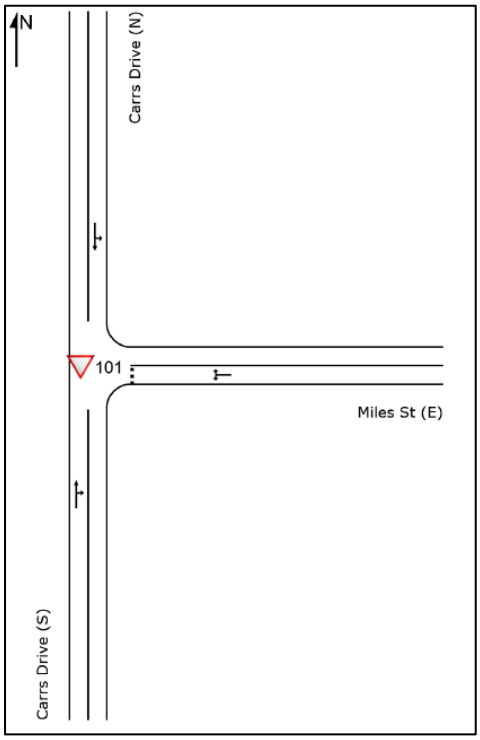


Figure 3.5: Carrs Drive / Miles Street SIDRA Intersection Layout

It is noted that the intersection was not assessed in 2024 as Miles Street is yet to be constructed and unlikely to be constructed prior to the expected opening of the proposed development. Table 3.7 summarises the SIDRA results for the Carrs Drive / Miles Street intersection for AM and PM peak hours.

Table 3.7: Carrs Drive / Miles Street SIDRA Results Summary

Approach	Design			
	DOS (v/c)	Delay (sec)	LOS	Queue (m)
2034 AM Peak				
Carrs Drive (S)	0.076	0.0	NA	0.0
Miles Street (E)	0.132	6.3	A	3.2
Carrs Drive (N)	0.039	2.8	NA	0.0
All Approaches	**0.132**	**3.0**	**NA**	**3.2**
2034 PM Peak				
Carrs Drive (S)	0.030	0.1	NA	0.1
Miles Street (E)	0.058	6.4	A	1.3
Carrs Drive (N)	0.139	3.0	NA	1.3
All Approaches	**0.139**	**3.0**	**NA**	**1.3**

As shown, the Carrs Drive / Miles Street intersection is expected to operate within acceptable performance limits at the expected 10-year design horizon (2034). Importantly, assessment shows that development trips are not expected to have a notable impact on the operations of the Carrs Drive / Miles Street intersection if delivered by others as a part of WYURA development.

3.3.6 SIDRA Results Summary

The assessment detailed above indicates that the existing road network and key intersections surrounding the subject site are currently operating within capacity and will continue to do so for the foreseeable future. Peak hour vehicle trips associated with the proposed development are also expected to have a negligible impact on the performance of the surrounding network and key intersections. As such, the proposed development does not warrant any external mitigation measures or trigger any upgrades to external intersections.

3.4 Daily Traffic Analysis

The Transport for NSW (formerly Roads and Maritime Services) *Guide to Traffic Generating Developments: Technical Direction (2013)* was used to source daily trip generation rates for the proposed development. Adopting the guide's rate of 2.1 daily trips per dwelling, the proposed development is forecast to generate in the order of 454 daily vehicle trips.

As per the planning for the West Yamba Urban Release Area, the section of Carrs Drive fronting the subject site is planned as a local road, changing to a collector road to the north of the site. The forecast daily traffic generation of the subject site, combined with the few existing dwelling to the south, will not exceed the daily capacity of the local road type (2,000vpd). The existing road width of 7m is also consistent with minimum width requirements for a local road cross-section as per the Northern Rivers Design Manual.

Based on the above, the existing form of Carrs Drive is considered suitable to cater for expected daily traffic generation of the proposed development, with no road widening required. As shown on development plans, it is however proposed that the western edge of Carrs Drive, fronting the subject site, be upgraded to kerb and channel consistent with the planned urbanisation of the urban release area.

4. PARKING & LAYOUT ASSESSMENT

4.1 Car Parking Provision

The car parking provision has been assessed against the relevant requirements of the *Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation* (2021). As per the regulation, the development shall provide an area for at least one car to park on each Lot.

Table 4.1 also details the visitor car parking requirements and provision for the proposed development.

Table 4.1: Car Parking Requirement and Provision

Land Use	Type	Code	Quantity	Parking Rate	Required	Proposed
Manufactured Home Estate	Visitor	Local Government Regulation	216 Lots	20 spaces + 1 per 7 dwellings > 140	31 spaces	49 spaces
	PWD			1 per 100 dwellings	3 spaces	4 spaces
				Total	**34 spaces**	**53 spaces**

As shown, the proposed development's parking provisions exceed the requirements of the Local Government Regulation (2021).

4.2 Bicycle Parking Provision

Neither Council's DCP nor the Local Government Regulation (2021) specify bicycle parking requirements for a manufactured home estate. It is expected that, if required, residents will be able to securely store their bicycle within their property and as such no resident bicycle parking is required.

4.3 Internal Geometric Layout

The on-site parking geometric layout has been assessed in accordance with the relevant requirements of Council's DCP, Local Government Regulation (2021) and AS2890. The outcomes of the assessment are summarised in Table 4.2.

Table 4.2: Internal Geometric Layout Assessment

Design Element	Requirements	Provided	Compliant
Entrance Roads (Divided)	5m sealed width on each side of median	5m sealed width on each side of median	**See Note**
Road Reserve	Major Access Road: 8.5m	Min. 8.5m width	**Yes**
Sealed Portion of Access Road	Major Access Road: 6m	Min. 6m width	**Yes**
Visitor Car Parking Bays (Angle Parking)	2.5m x 5.4m	2.5m x 5.4m	**Yes**
Visitor Car Parking Bays (Other)	2.5m x 6.1m	2.5m x 6.1m	**Yes**
PWD Car Parking Bays	2.4m x 5.4m with adjacent shared area of the same size	2.4m x 5.4m with adjacent shared area of the same size	**Yes**

Note, the width of the proposed entrance road is 5m on each side of the median in line with the Local Government Regulation (2001). The proposed sliding gate does however result in a minor 'pinch-

point' at the entrance to the site with 3.7m width at the gate location but proposed entrance / exit widths are compliant with minimum requirements specified in AS2890 at all locations

Noting the above, and as shown in Table 4.2, the on-site internal geometric layout is therefore considered compliant with the relevant requirements of Council's DCP, Local Government Regulation (2021) and AS2890.

5. SERVICING ASSESSMENT

5.1 Refuse Collection

Refuse collection is proposed to occur for each lot individually by a side-loading refuse collection vehicle (RCV) on the internal roadway. Where refuse vehicles cannot turn around in short, 'dead-end' aisles, a nearby bin collection location is identified for the relevant Lots. A swept path assessment has been provided at **Appendix E** to demonstrate that a side-loading RCV can safely and efficiently access these collection points

5.2 Servicing

It is expected that servicing will be undertaken by an 8.8m MRV (i.e. removal truck). As RCVs can safely manoeuvre the site, it is expected that an 8.8m MRV can safely and efficiently service the site.

6. ACCESS ASSESSMENT

6.1 Vehicular Access

The development proposes a single, all-movements crossover on Carrs Drive. This design and construction of this crossover shall comply with the relevant requirements of AS2890.1 and the Northern Rivers Design Manuel as summarised in Table 6.1.

Table 6.1: Vehicular Access

Design Element	Standard	Details	Requirement
Access Facility Category	Australian Standards AS2890.1	Type 2 as per AS2890.1 - Primarily User Class 1A, 100-301 parking spaces (including resident spaces on Lots) and local road frontage	Min. 3m width on entry and exit measured at the property boundary
Crossover Form	Northern Rivers Design Manual	Units on Local Streets	As per Standard Drawing R-05
Pedestrian Sight Line Triangle	Australian Standards AS2890.1	Pedestrian sight line triangle provided on the exit side of the driveway to be kept clear of all obstructions to visibility.	2.0m along the property boundary and 2.5m into site as per Figure 3.3 in AS2890.1.

6.2 Sight Distance

A sight distance assessment for the proposed development was undertaken in accordance with AS2890.1 as outlined in Table 6.2

Table 6.2: Sight Distance Review

Access	Direction	Posted Speed	Sight Distance		Compliant
			Available	Required	
Carrs Drive	North	60km/h	200m+	83m	Yes
	South				

The available sight distance at vehicle driver eye-height (i.e. 1.2m) is shown in Figure 6.1.

Figure 6.1: Available Sight Distance

As shown, Carrs Drive is straight and flat in the vicinity of the proposed access location with no notable obstructions to sight lines. An aerial of the available sight distance is shown in Figure 6.2.

Source: Nearmap (edited by Bitzios)

Figure 6.2: Aerial Sight Distance Review

The proposed development's vehicular access location complies with sight distance requirements and is therefore not expected to introduce any adverse road safety conditions.

7. SUMMARY AND CONCLUSIONS

The key findings of the TIA for the proposed Manufactured Housing Estate development at 120 Carrs Drive, Yamba are as follows:

- The proposal is for a manufactured housing estate comprising of 216 lots
- The development site currently has limited access to alternate transport services however facilities are expected to improve with future development of the WYURA
- The proposed development is estimated to generate in the order of 87 vehicle trips in the AM and PM peak hours
- SIDRA assessment demonstrates that nearby intersections are expected to operate within acceptable performance limits for the 10-year design horizon, with or without the proposed development and consideration to seasonal peaks. Development trips are also shown to have a negligible impact on intersection performance
- With the provision of a resident car parking area on each Lot, proposed parking provisions meet the relevant requirements of the Local Government Regulation (2021)
- Bicycle parking spaces are not specified in Council's DCP nor the Local Government Regulation 2021), it is expected residents will securely store their bicycles within their property
- The on-site internal geometric layout is considered compliant with the relevant requirements of Council's DCP, Local Government Regulation (2021) and AS2890
- Refuse collection is proposed on-street by a side-loading RCV, swept paths demonstrate that the RCV can safely and efficiently manoeuvre the site
- Infrequent servicing is proposed to occur on-site by an MRV (removalist truck)
- Ample sight lines are present in both directions from the proposed access location as per the requirements of AS2890.

Based on the above assessment, it is concluded that there are no significant traffic or transport impacts associated with the proposed development to preclude its approval and relevant conditioning on transport planning grounds.

Appendix A: Development Plans

10 5 0 10 20 30 40
Horizontal Scale 1:600 (A1)
1:1200 (A3)

PLANS TO BE PRINTED IN COLOUR

PRELIMINARY FOR SITE PLANNING PURPOSES ONLY
NOT FOR CONSTRUCTION

REVISION 8 - MASTERPLAN YAMBA 2 & 3

06th SEPT 2022

MASTERPLAN FOR DA

MIX OF PRODUCT

- LOTS 9.4m WIDTH = 42 LOTS (20%)
- LOTS 9.9m WIDTH = 58 LOTS (26%)
- LOTS 11.3m WIDTH = 32 LOTS (15%)
- LOTS 12.5m WIDTH = 84 LOTS (39%)

24 x RV / CARAVAN STORAGE BAYS
50 x VISITOR CAR PARKING

ALL DWELLING ENTITLEMENTS DEPTHS AT 20.70m

SITE YIELD = 216 LOTS

LEGEND

- CADASTRAL BOUNDARY
- NEW INTERNAL CONCRETE ROAD PAVEMENT
- NEW INTERNAL CONCRETE INTERSECTION TREATMENTS & DRIVEWAYS
- NEW 2.5m WIDE SHARED PATH WITHIN SITE BOUNDARY
- MHE BOUNDARY SETBACK 3m WIDE 'NO BUILD ZONE'
- MHE BOUNDARY SETBACK 10m WIDE 'NO BUILD ZONE'
- PROPOSED MHE ALLOTMENT 9.4m LOT WIDTH
- PROPOSED MHE ALLOTMENT 9.9m LOT WIDTH
- PROPOSED MHE ALLOTMENT 11.3m LOT WIDTH
- PROPOSED MHE ALLOTMENT 12.5m LOT WIDTH
- PROPOSED MHE ALLOTMENT 12.5m LOT WIDTH CORNER SITE

ISSUE	DESCRIPTION	DATE
8	MASTERPLAN LAYOUT FOR DEVELOPMENT APPLICATION	06.09.2022
7	MASTERPLAN LAYOUT RE-ISSUED FOR CLIENT REVIEW	20.06.2022
6	MASTERPLAN LAYOUT RE-ISSUED FOR CLIENT REVIEW	12.05.2022
5	MASTERPLAN LAYOUT RE-ISSUED FOR CLIENT REVIEW	11.05.2022
4	MASTERPLAN LAYOUT RE-ISSUED FOR CLIENT REVIEW	02.05.2022
3	MASTERPLAN LAYOUT RE-ISSUED FOR CLIENT REVIEW	07.12.2021
2	MASTERPLAN LAYOUT RE-ISSUED FOR CLIENT REVIEW	18.08.2021

DESIGNED: T.RYDEN
DRAWN: A.SCHMID
SURVEYING:
DATE: SEPTEMBER 2022
SCALE: AS SHOWN
SHEET SIZE: A1

NOT FOR CONSTRUCTION

MDE Manage Design Engineer
www.md-engineer.com.au

CLIENT: CLIFTON YAMBA LAND PTY LTD

TITLE: PROPOSED MANUFACTURED HOUSING ESTATE

CLIFTON YAMBA

PROJECT: PROPOSED MHE DEVELOPMENT
CARRS DRIVE
YAMBA NSW 2464
LOT 2 DP 733507

MASTERPLAN

DRAWING TITLE: CONCEPT PLAN

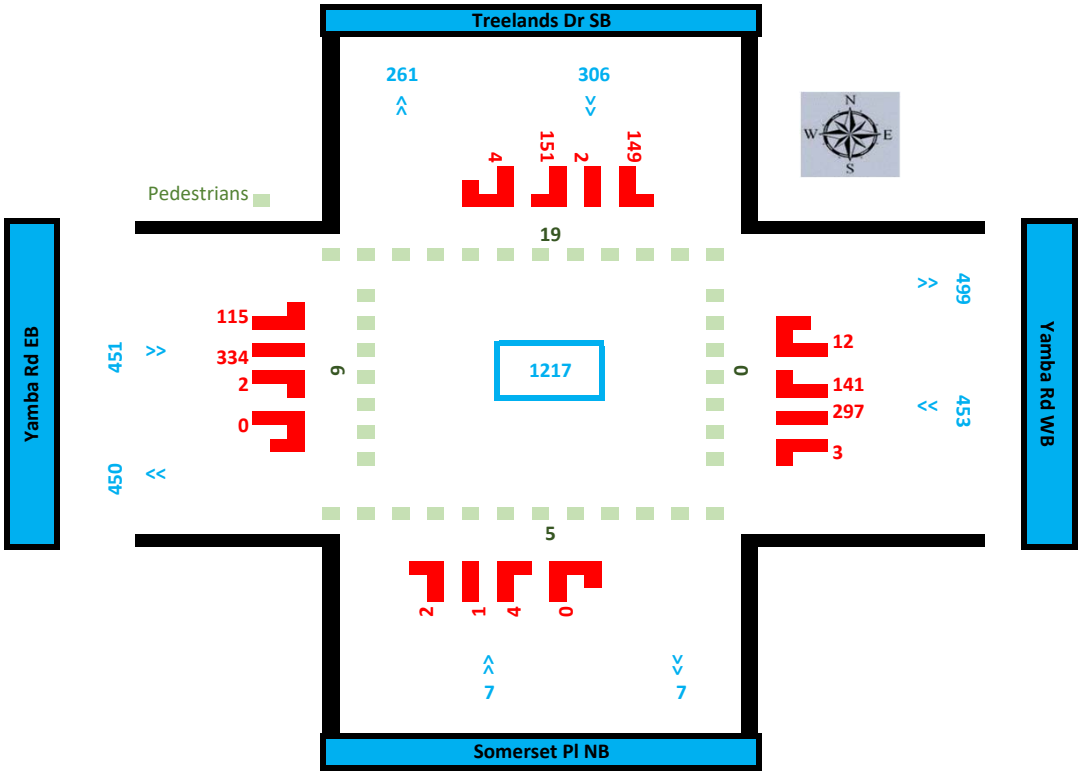
MDE ADDITIONAL LOTS - YAMBA 2-3 URBAN DESIGN

DWG No: SK03 | SHEET: 1 OF 1 | REV: 8

Appendix B: Traffic Survey Data

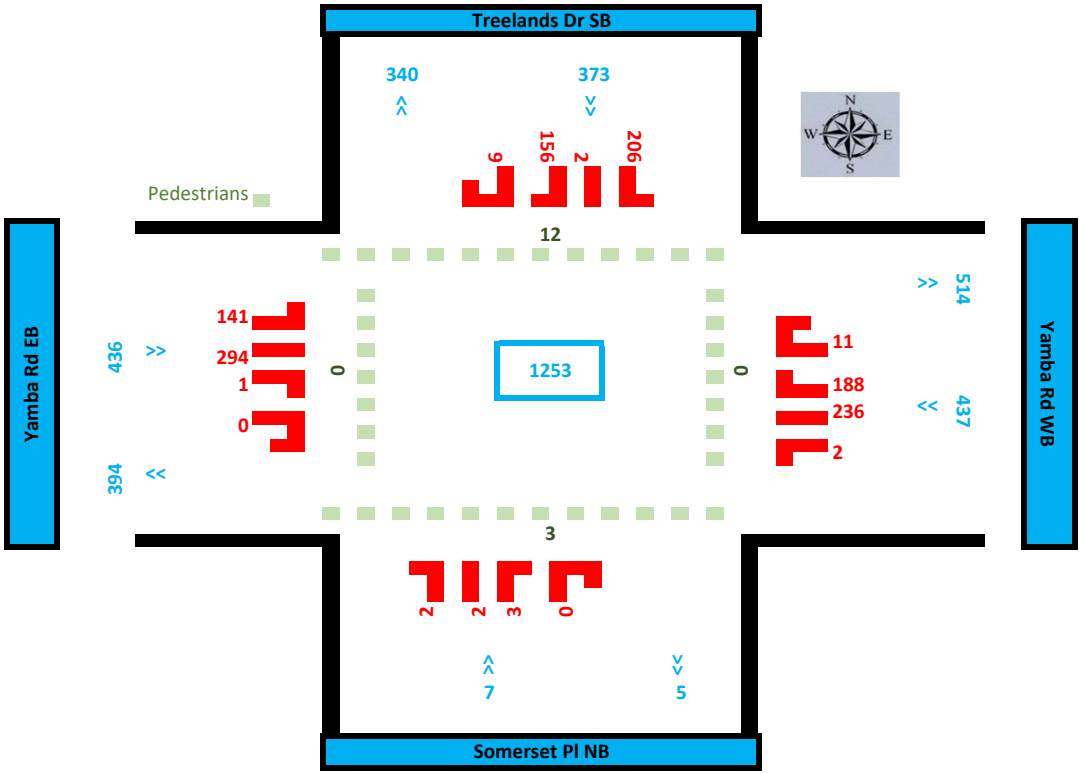
Turning Movement Count Summary

Site ID:	1
Location:	Yamba Rd & Treelands Dr/Somerset Pl, Yamba
Date:	20-July-2022
Surveyed Time:	6:00 AM to 9:00 AM
Weather:	Fine
Data for hour starting:	8:00 AM to 9:00 AM
Vehicle Class:	ALL VEHICLES



Turning Movement Count Summary

Site ID:	1
Location:	Yamba Rd & Treelands Dr/Somerset Pl, Yamba
Date:	20-July-2022
Surveyed Time:	3:00 PM to 6:00 PM
Weather:	Fine
Data for hour starting:	3:15 PM to 4:15 PM
Vehicle Class:	ALL VEHICLES



Turning Movement Count Summary

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Location:	Yamba Rd & Carrs Dr, Yamba
Date:	20-July-2022
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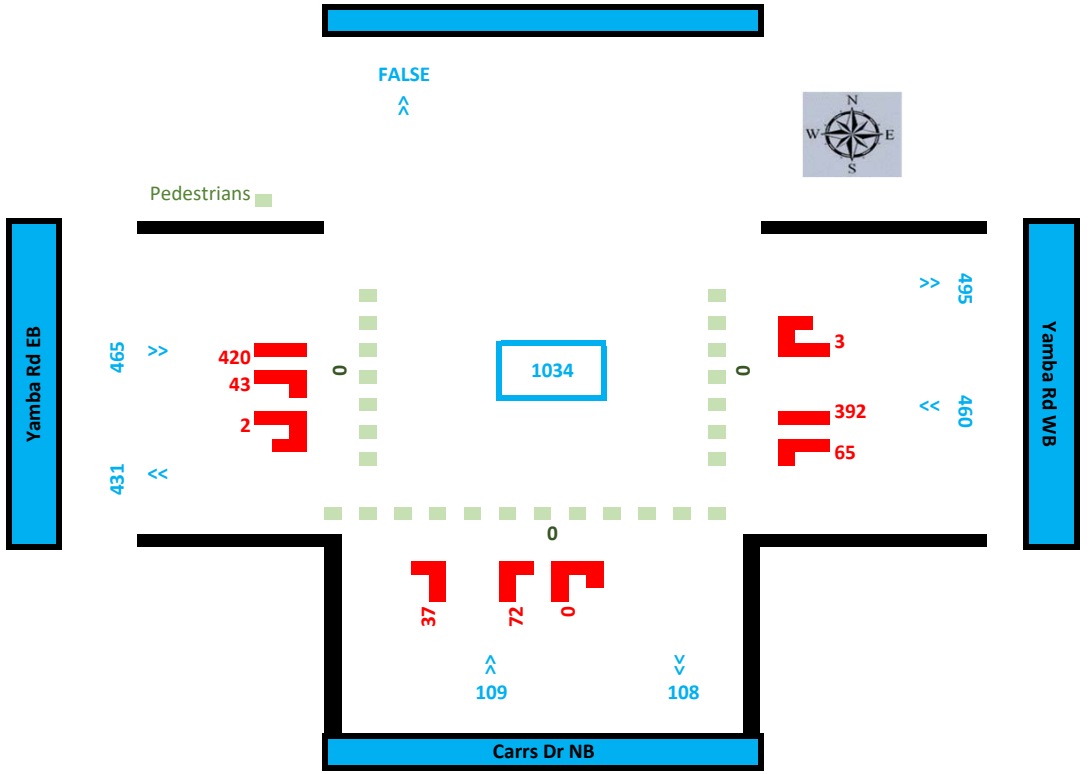
Weather:	Fine
Data for hour starting:	8:00 AM to 9:00 AM
Vehicle Class:	ALL VEHICLES



Turning Movement Count Summary

Site ID:	2
Location:	Yamba Rd & Carrs Dr, Yamba
Date:	20-July-2022
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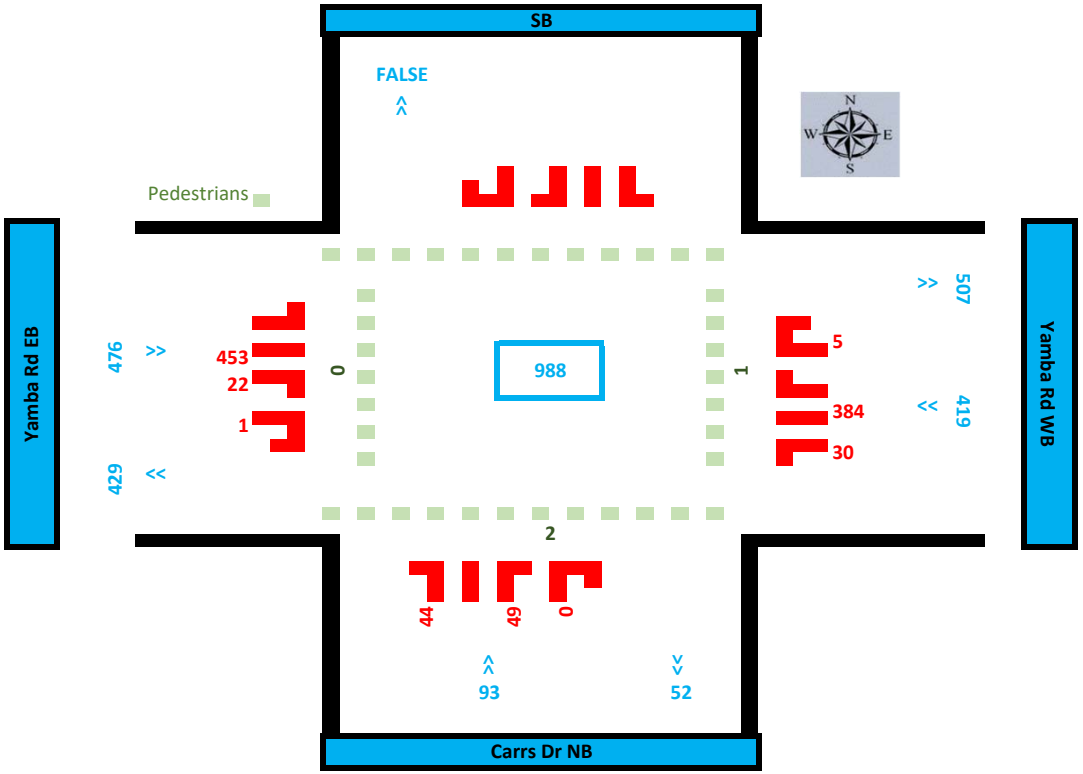
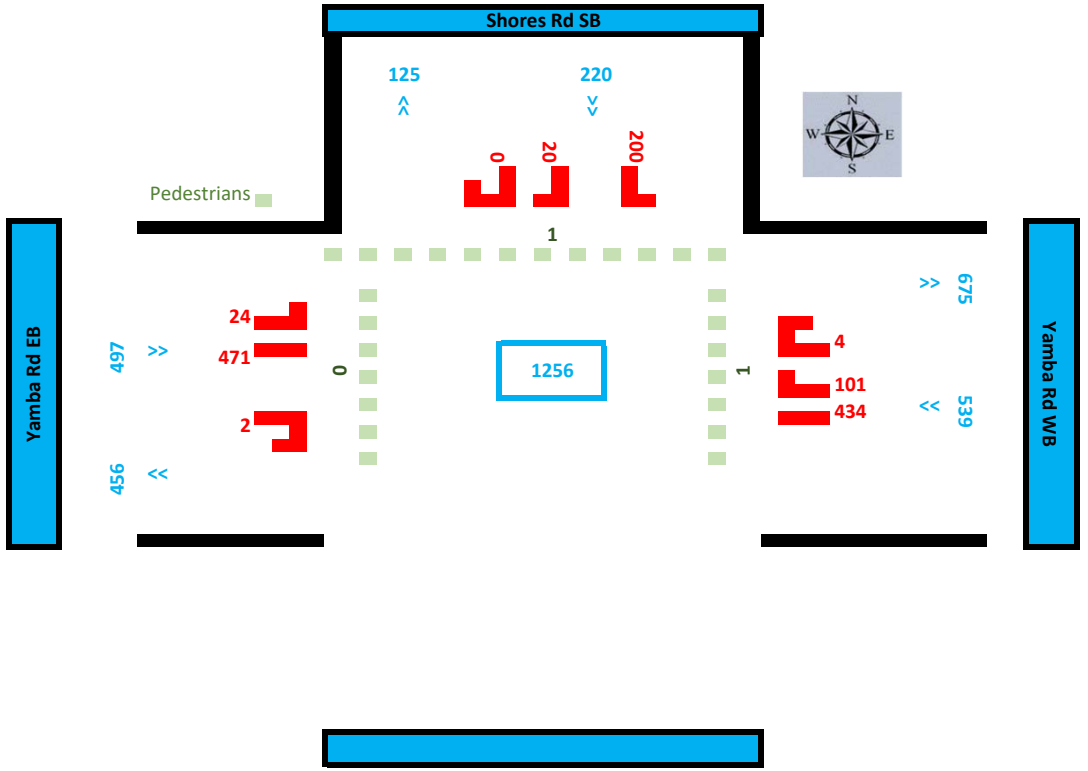
Weather:	Fine
Data for hour starting:	3:15 PM to 4:15 PM
Vehicle Class:	ALL VEHICLES



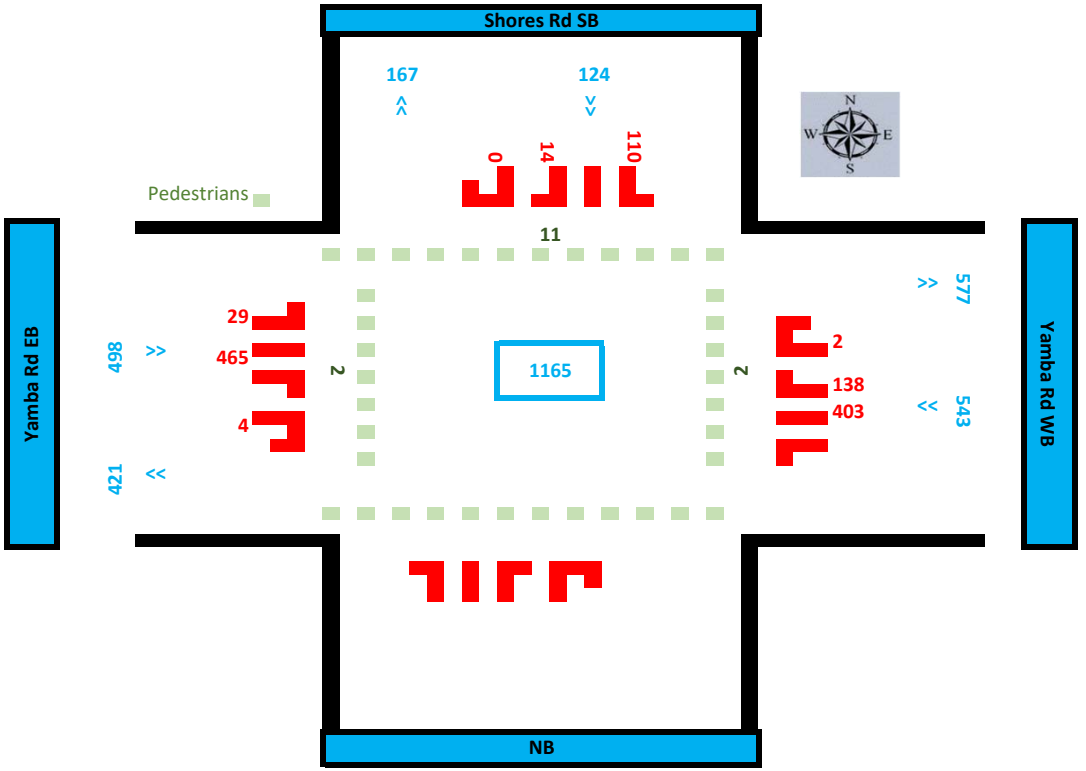
Turning Movement Count Summary

Site ID:	3
Location:	Yamba Rd & Shores Dr, Yamba
Date:	20-July-2022
Surveyed Time:	6:00 AM to 9:00 AM
Weather:	Fine
Data for hour starting:	8:00 AM to 9:00 AM
Vehicle Class:	ALL VEHICLES



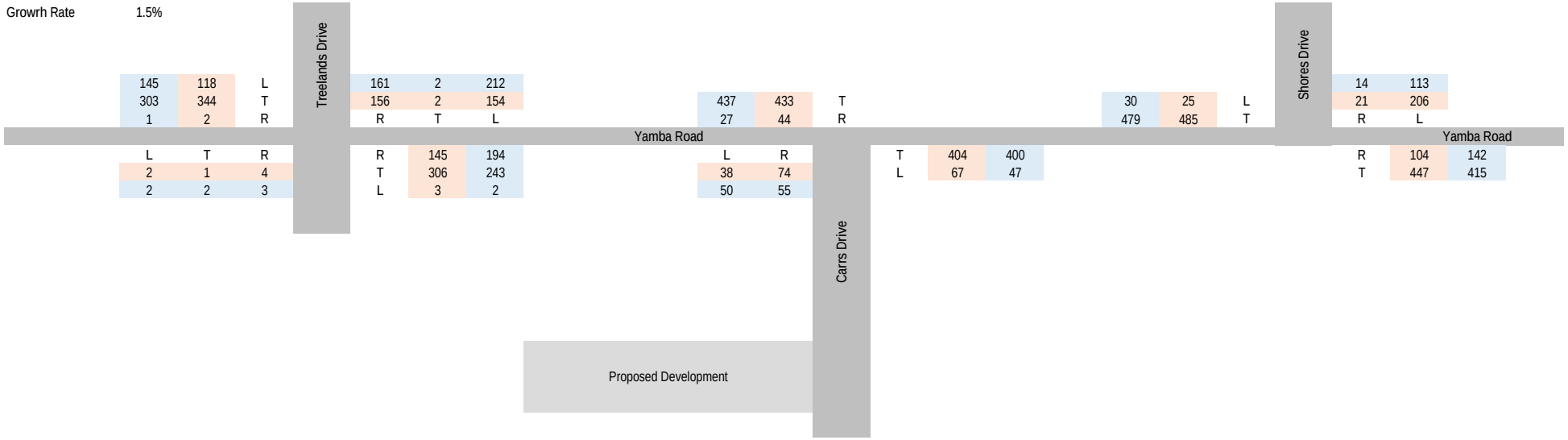
Turning Movement Count Summary

Site ID:	3
Location:	Yamba Rd & Shores Dr, Yamba
Date:	20-July-2022
Surveyed Time:	3:00 PM to 6:00 PM
Weather:	Fine
Data for hour starting:	3:15 PM to 4:15 PM
Vehicle Class:	ALL VEHICLES



Appendix C: Network Diagrams

AM
PM



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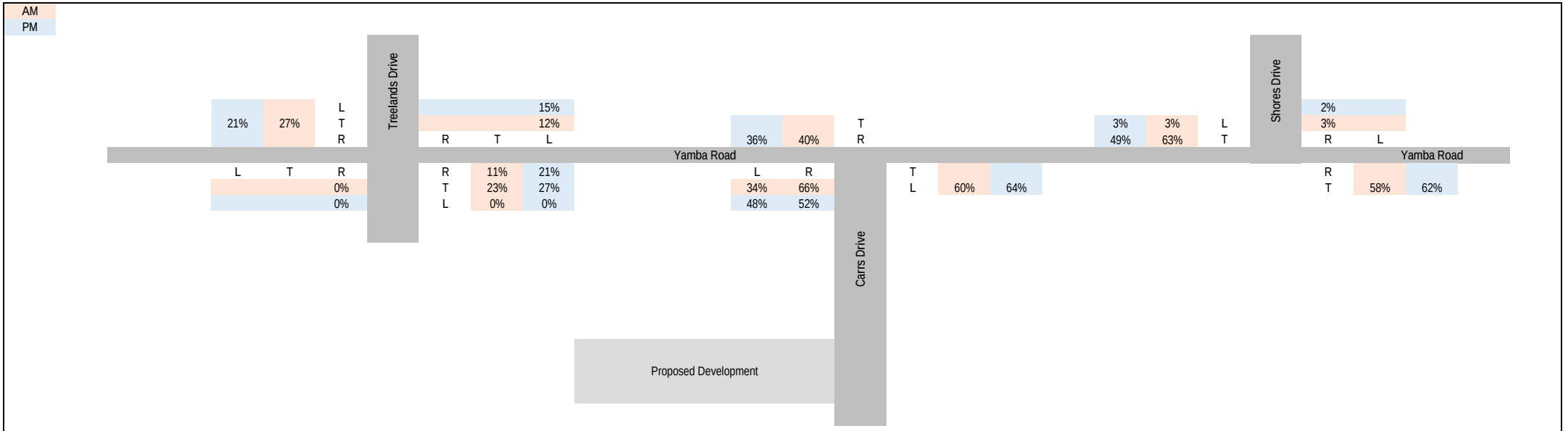
	Proejct Name: 120 Carrs Drive Yamba TIA	Date: 03/09/2023



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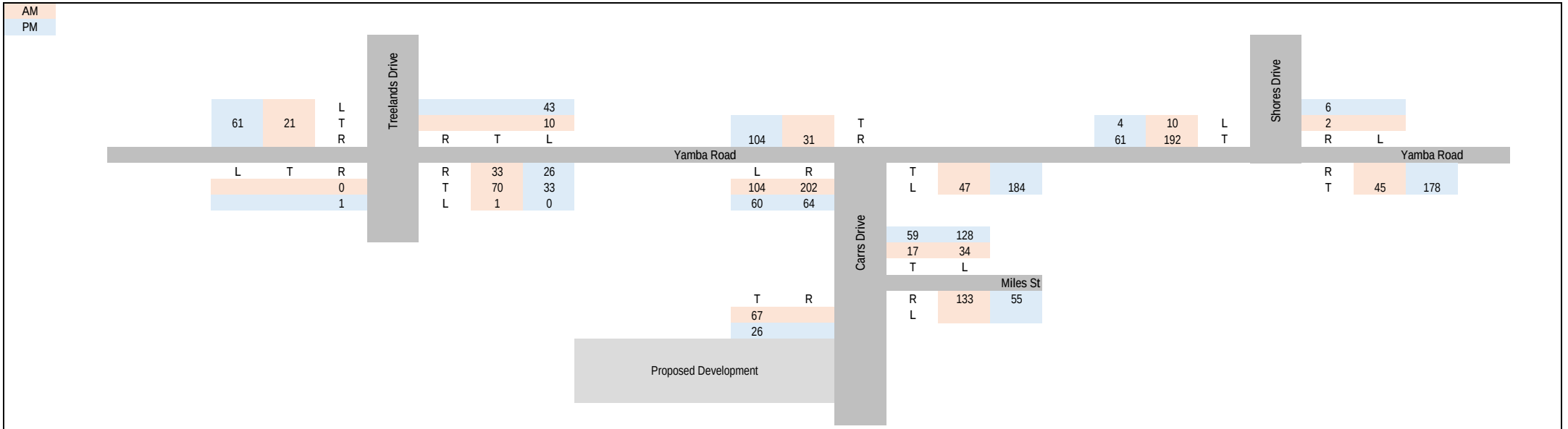
	Proejct Name: 120 Carrs Drive Yamba TIA	Date: 03/09/2023



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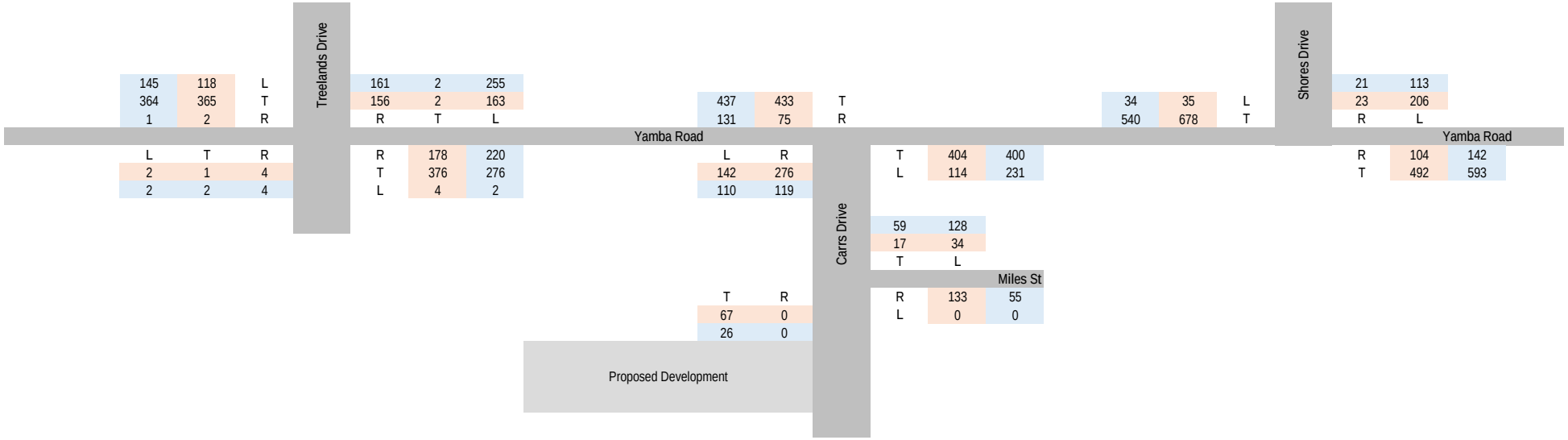
	Proejct Name: 120 Carrs Drive Yamba TIA	Date: 03/09/2023

AM
PM



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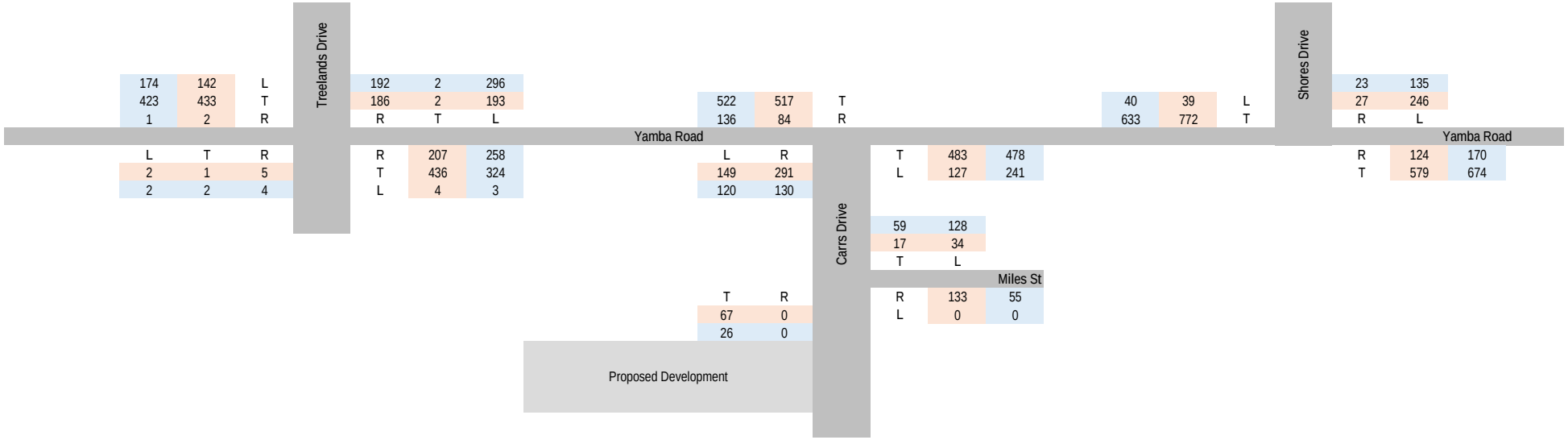
AM
PM



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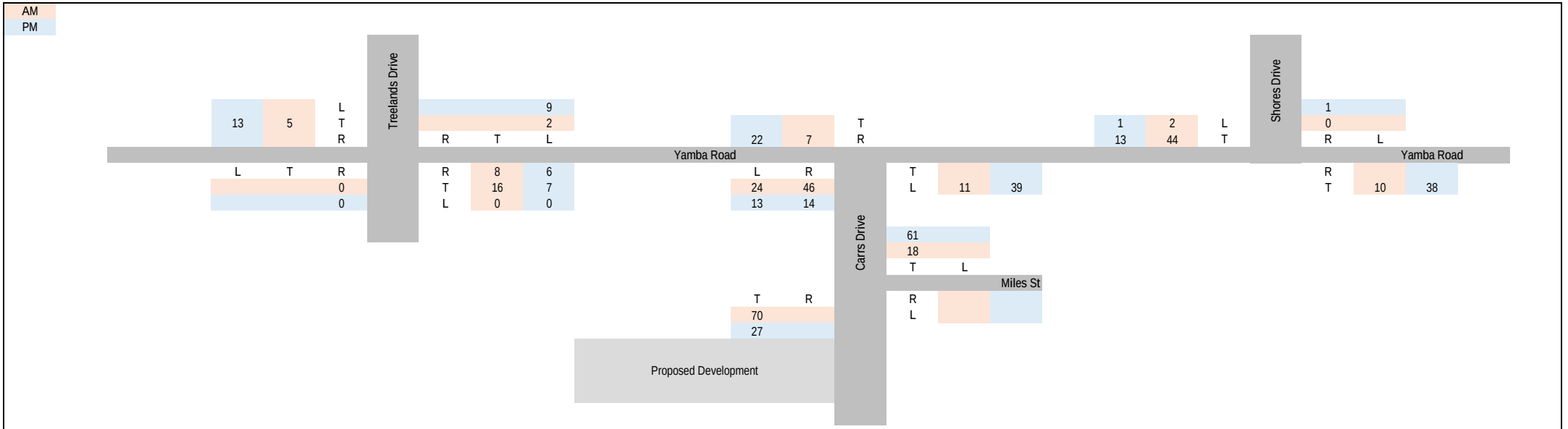
	Proejct Name: 120 Carrs Drive Yamba TIA	Date: 03/09/2023



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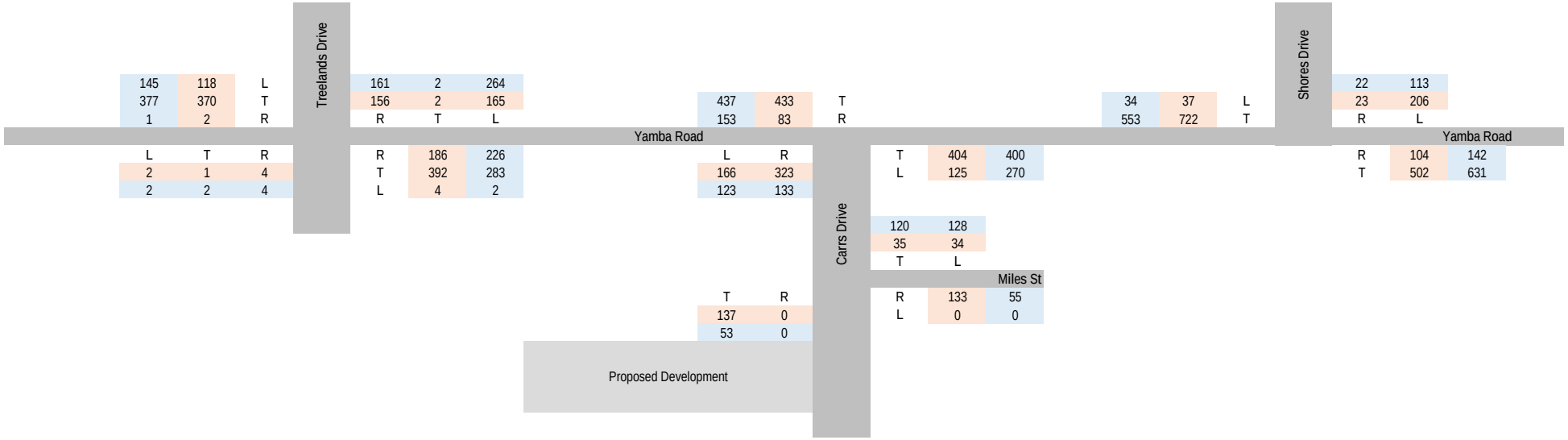
	Proejct Name: 120 Carrs Drive Yamba TIA	Date: 03/09/2023

AM
PM



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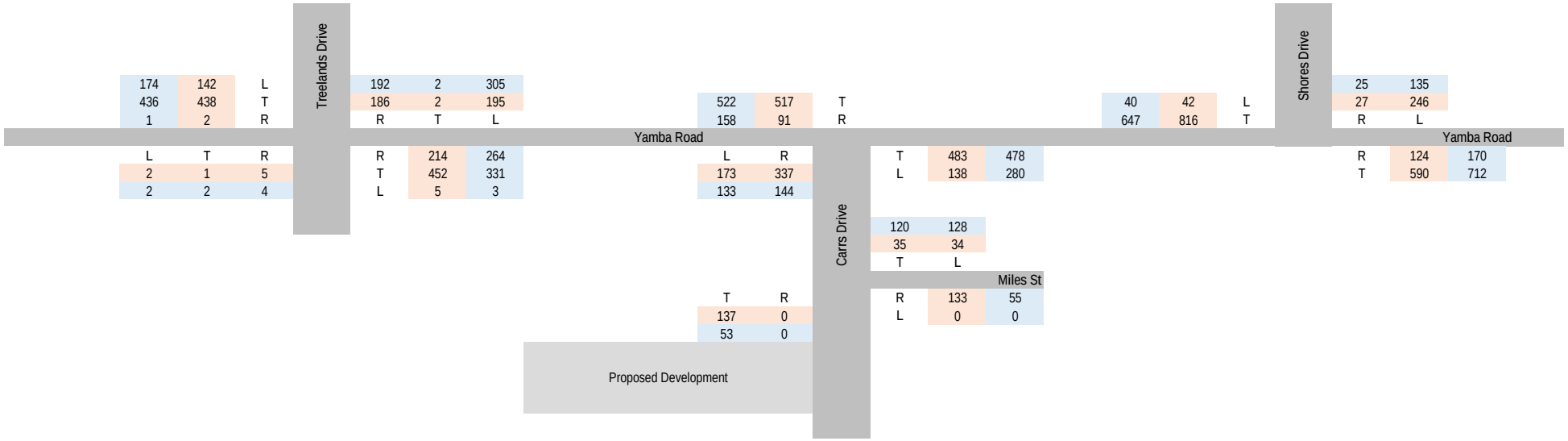
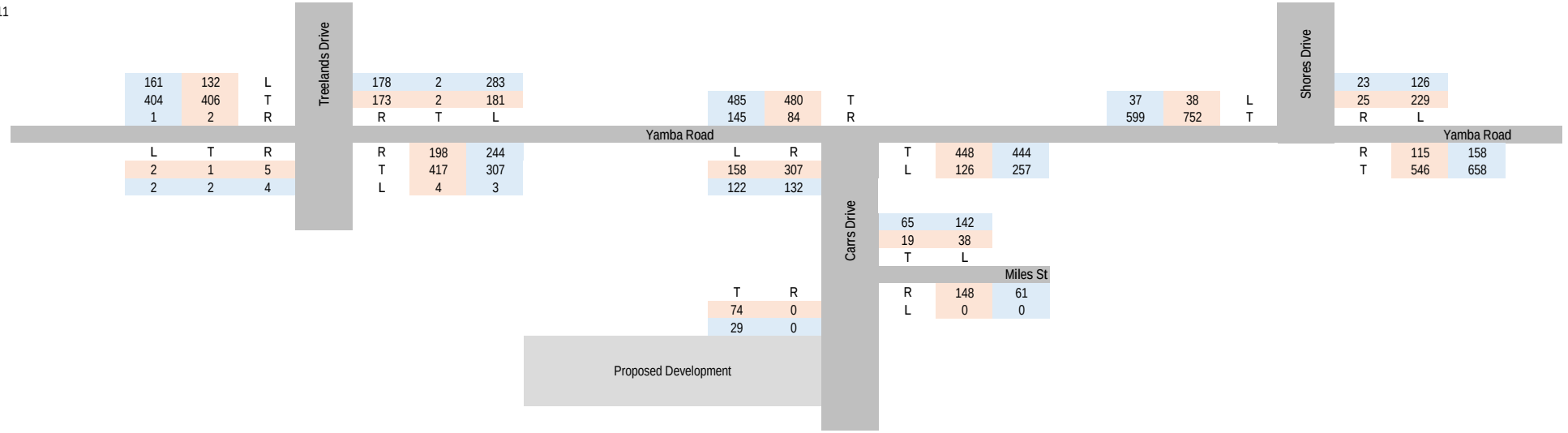
PM



Sheet Name: 2034 Design Traffic Volumes	Sheet Number 8 of 12
Proejct Name: 120 Carrs Drive Yamba TIA	Date: 03/09/2023

AM
PM
Seasonality 1.11



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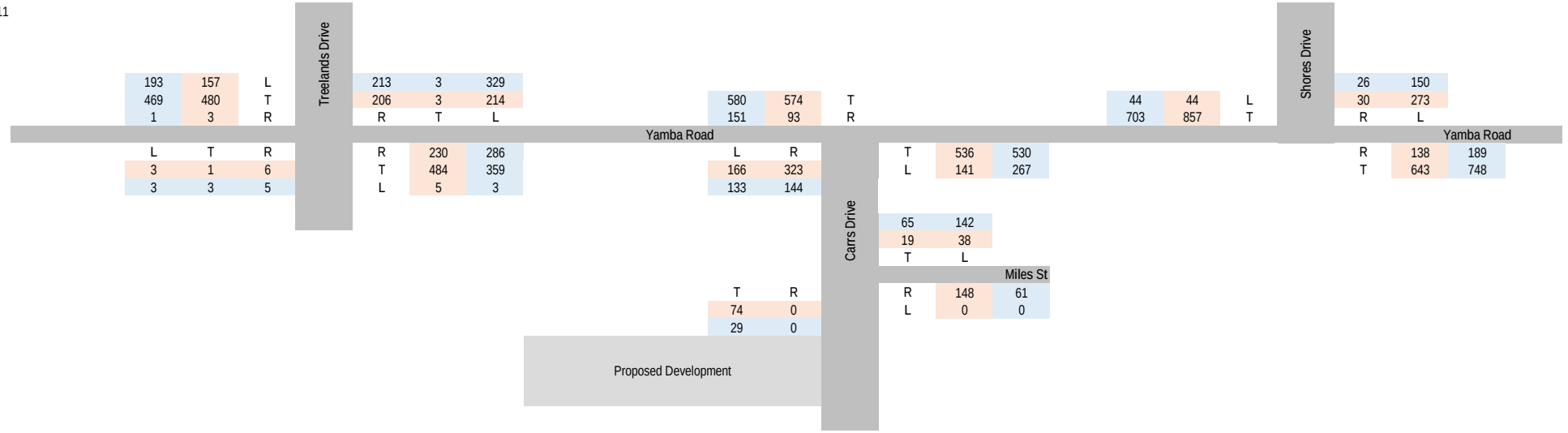
AM
PM
Seasonality 1.11



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	Proejct Name: 120 Carrs Drive Yamba TIA	Date: 03/09/2023

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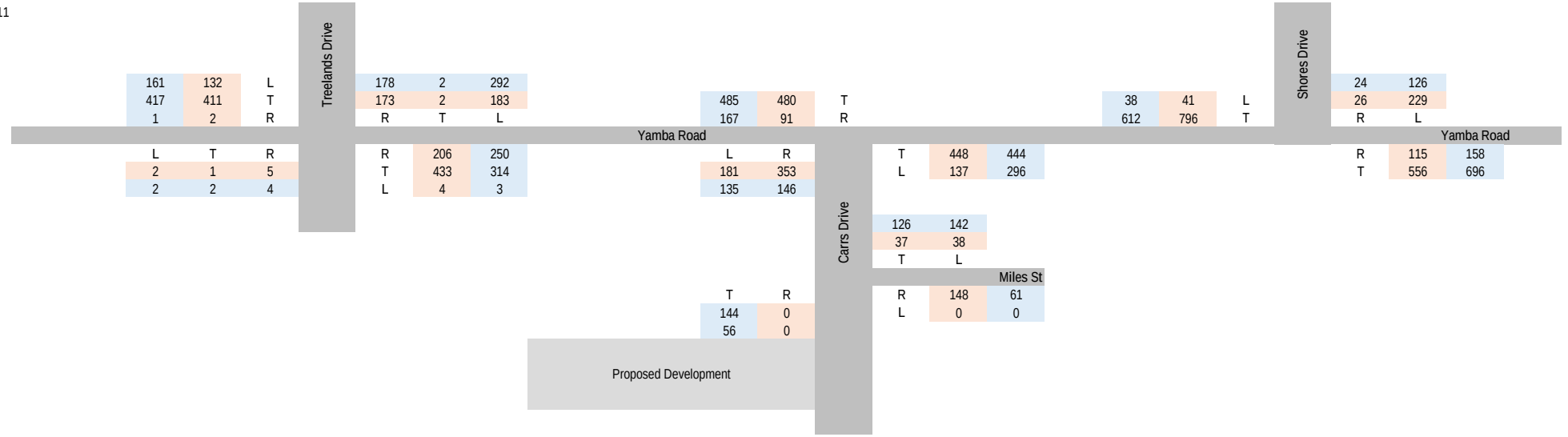
PM
Seasonality 1.11



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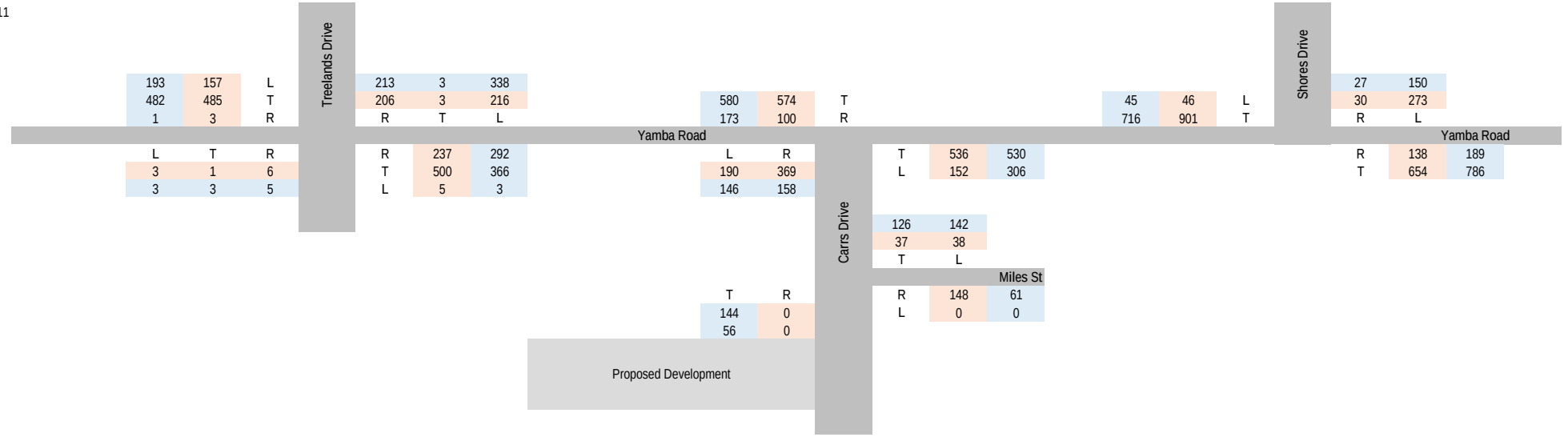
PM
Seasonality 1.11



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	Proejct Name: 120 Carrs Drive Yamba TIA	Date: 03/09/2023

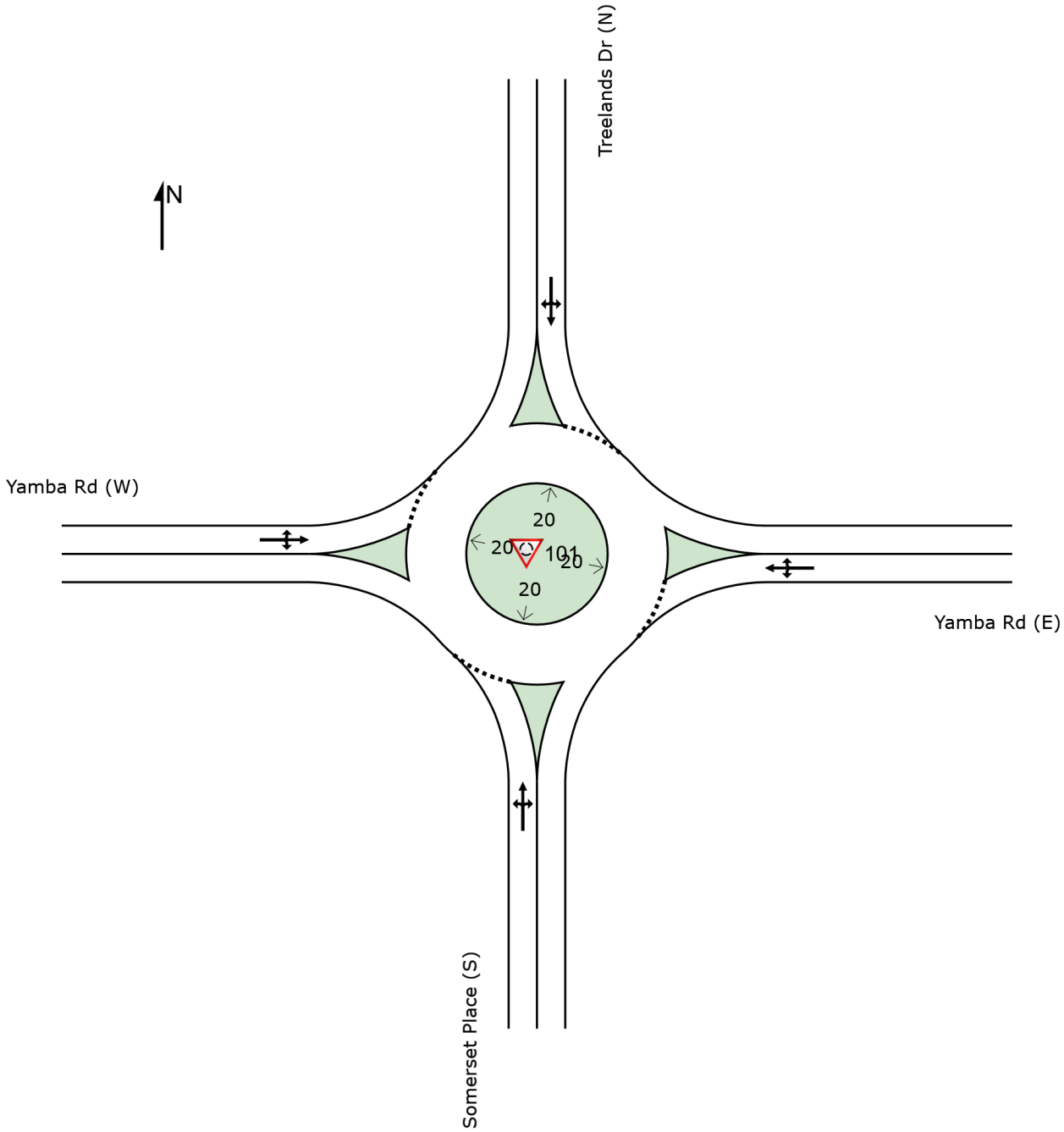
Appendix D: SIDRA Outputs

SITE LAYOUT

Site: 101 [2024 BG AM (Site Folder: General)]

Yamba Road / Treelands Drive
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 101 [2024 BG AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Treelands Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Somerset Place (S)															
1	L2	All MCs	2	0.0	2	0.0	0.010	7.0	LOS A	0.1	0.4	0.71	0.62	0.71	41.1
2	T1	All MCs	1	0.0	1	0.0	0.010	6.9	LOS A	0.1	0.4	0.71	0.62	0.71	23.6
3	R2	All MCs	4	0.0	4	0.0	0.010	11.4	LOS A	0.1	0.4	0.71	0.62	0.71	37.9
Approach			7	0.0	7	0.0	0.010	9.5	LOS A	0.1	0.4	0.71	0.62	0.71	36.9
East: Yamba Rd (E)															
4	L2	All MCs	4	0.0	4	0.0	0.481	5.0	LOS A	3.9	28.6	0.52	0.53	0.52	41.5
5	T1	All MCs	396	6.4	396	6.4	0.481	5.4	LOS A	3.9	28.6	0.52	0.53	0.52	47.6
6	R2	All MCs	187	0.7	187	0.7	0.481	9.9	LOS A	3.9	28.6	0.52	0.53	0.52	37.4
Approach			587	4.5	587	4.5	0.481	6.8	LOS A	3.9	28.6	0.52	0.53	0.52	44.8
North: Treelands Dr (N)															
7	L2	All MCs	172	4.0	172	4.0	0.353	6.5	LOS A	2.3	16.9	0.65	0.66	0.65	40.4
8	T1	All MCs	2	0.0	2	0.0	0.353	6.6	LOS A	2.3	16.9	0.65	0.66	0.65	34.0
9	R2	All MCs	164	4.0	164	4.0	0.353	11.3	LOS A	2.3	16.9	0.65	0.66	0.65	42.5
Approach			338	4.0	338	4.0	0.353	8.8	LOS A	2.3	16.9	0.65	0.66	0.65	41.4
West: Yamba Rd (W)															
10	L2	All MCs	124	6.1	124	6.1	0.433	5.3	LOS A	3.2	23.7	0.51	0.50	0.51	45.5
11	T1	All MCs	384	6.0	384	6.0	0.433	5.5	LOS A	3.2	23.7	0.51	0.50	0.51	48.2
12	R2	All MCs	2	0.0	2	0.0	0.433	10.0	LOS A	3.2	23.7	0.51	0.50	0.51	44.8
Approach			511	6.0	511	6.0	0.433	5.4	LOS A	3.2	23.7	0.51	0.50	0.51	47.6
All Vehicles			1443	4.9	1443	4.9	0.481	6.8	LOS A	3.9	28.6	0.55	0.55	0.55	45.1

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

MOVEMENT SUMMARY

Site: 101 [2024 BG PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Treelands Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Somerset Place (S)															
1	L2	All MCs	2	0.0	2	0.0	0.011	6.4	LOS A	0.1	0.4	0.68	0.60	0.68	41.9
2	T1	All MCs	2	0.0	2	0.0	0.011	6.4	LOS A	0.1	0.4	0.68	0.60	0.68	24.0
3	R2	All MCs	4	0.0	4	0.0	0.011	10.9	LOS A	0.1	0.4	0.68	0.60	0.68	38.7
Approach			8	0.0	8	0.0	0.011	8.7	LOS A	0.1	0.4	0.68	0.60	0.68	36.0
East: Yamba Rd (E)															
4	L2	All MCs	2	0.0	2	0.0	0.430	5.0	LOS A	3.3	24.0	0.51	0.55	0.51	41.2
5	T1	All MCs	291	3.8	291	3.8	0.430	5.3	LOS A	3.3	24.0	0.51	0.55	0.51	47.4
6	R2	All MCs	232	1.1	232	1.1	0.430	9.9	LOS A	3.3	24.0	0.51	0.55	0.51	37.2
Approach			524	2.6	524	2.6	0.430	7.3	LOS A	3.3	24.0	0.51	0.55	0.51	43.4
North: Treelands Dr (N)															
7	L2	All MCs	268	1.5	268	1.5	0.454	6.6	LOS A	3.3	23.6	0.70	0.66	0.70	41.1
8	T1	All MCs	2	0.0	2	0.0	0.454	6.8	LOS A	3.3	23.6	0.70	0.66	0.70	34.2
9	R2	All MCs	169	3.2	169	3.2	0.454	11.5	LOS A	3.3	23.6	0.70	0.66	0.70	42.7
Approach			440	2.1	440	2.1	0.454	8.5	LOS A	3.3	23.6	0.70	0.66	0.70	41.7
West: Yamba Rd (W)															
10	L2	All MCs	153	6.4	153	6.4	0.471	5.7	LOS A	3.6	25.8	0.58	0.53	0.58	45.0
11	T1	All MCs	383	2.7	383	2.7	0.471	5.8	LOS A	3.6	25.8	0.58	0.53	0.58	48.3
12	R2	All MCs	1	0.0	1	0.0	0.471	10.3	LOS A	3.6	25.8	0.58	0.53	0.58	44.4
Approach			537	3.7	537	3.7	0.471	5.8	LOS A	3.6	25.8	0.58	0.53	0.58	47.5
All Vehicles			1509	2.9	1509	2.9	0.471	7.1	LOS A	3.6	25.8	0.59	0.58	0.59	44.5

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

MOVEMENT SUMMARY

Site: 101 [2034 BG AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Treelands Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Somerset Place (S)															
1	L2	All MCs	2	0.0	2	0.0	0.014	8.3	LOS A	0.1	0.6	0.80	0.66	0.80	39.6
2	T1	All MCs	1	0.0	1	0.0	0.014	8.3	LOS A	0.1	0.6	0.80	0.66	0.80	22.7
3	R2	All MCs	5	0.0	5	0.0	0.014	12.8	LOS A	0.1	0.6	0.80	0.66	0.80	36.4
Approach			8	0.0	8	0.0	0.014	11.1	LOS A	0.1	0.6	0.80	0.66	0.80	35.6
East: Yamba Rd (E)															
4	L2	All MCs	4	0.0	4	0.0	0.579	5.4	LOS A	5.3	38.7	0.64	0.57	0.64	40.8
5	T1	All MCs	459	6.4	459	6.4	0.579	5.8	LOS A	5.3	38.7	0.64	0.57	0.64	47.0
6	R2	All MCs	218	0.7	218	0.7	0.579	10.3	LOS A	5.3	38.7	0.64	0.57	0.64	36.8
Approach			681	4.5	681	4.5	0.579	7.3	LOS A	5.3	38.7	0.64	0.57	0.64	44.2
North: Treelands Dr (N)															
7	L2	All MCs	203	4.0	203	4.0	0.454	7.3	LOS A	3.3	24.0	0.75	0.70	0.76	39.5
8	T1	All MCs	2	0.0	2	0.0	0.454	7.4	LOS A	3.3	24.0	0.75	0.70	0.76	32.9
9	R2	All MCs	196	4.0	196	4.0	0.454	12.1	LOS A	3.3	24.0	0.75	0.70	0.76	41.6
Approach			401	4.0	401	4.0	0.454	9.7	LOS A	3.3	24.0	0.75	0.70	0.76	40.6
West: Yamba Rd (W)															
10	L2	All MCs	149	6.1	149	6.1	0.533	5.7	LOS A	4.5	32.8	0.62	0.54	0.62	44.7
11	T1	All MCs	456	6.0	456	6.0	0.533	5.9	LOS A	4.5	32.8	0.62	0.54	0.62	47.6
12	R2	All MCs	2	0.0	2	0.0	0.533	10.4	LOS A	4.5	32.8	0.62	0.54	0.62	44.1
Approach			607	6.0	607	6.0	0.533	5.9	LOS A	4.5	32.8	0.62	0.54	0.62	47.0
All Vehicles			1698	4.9	1698	4.9	0.579	7.3	LOS A	5.3	38.7	0.66	0.59	0.66	44.4

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

MOVEMENT SUMMARY

Site: 101 [2034 BG PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Treelands Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Somerset Place (S)															
1	L2	All MCs	2	0.0	2	0.0	0.013	7.6	LOS A	0.1	0.5	0.76	0.64	0.76	40.8
2	T1	All MCs	2	0.0	2	0.0	0.013	7.5	LOS A	0.1	0.5	0.76	0.64	0.76	23.3
3	R2	All MCs	4	0.0	4	0.0	0.013	12.0	LOS A	0.1	0.5	0.76	0.64	0.76	37.6
Approach			8	0.0	8	0.0	0.013	9.8	LOS A	0.1	0.5	0.76	0.64	0.76	35.1
East: Yamba Rd (E)															
4	L2	All MCs	3	0.0	3	0.0	0.525	5.4	LOS A	4.6	32.7	0.61	0.57	0.61	40.6
5	T1	All MCs	341	3.8	341	3.8	0.525	5.7	LOS A	4.6	32.7	0.61	0.57	0.61	46.9
6	R2	All MCs	272	1.1	272	1.1	0.525	10.2	LOS A	4.6	32.7	0.61	0.57	0.61	36.7
Approach			616	2.6	616	2.6	0.525	7.7	LOS A	4.6	32.7	0.61	0.57	0.61	42.9
North: Treelands Dr (N)															
7	L2	All MCs	312	1.5	312	1.5	0.571	8.4	LOS A	5.3	37.5	0.82	0.75	0.92	39.0
8	T1	All MCs	2	0.0	2	0.0	0.571	8.6	LOS A	5.3	37.5	0.82	0.75	0.92	31.9
9	R2	All MCs	202	3.2	202	3.2	0.571	13.3	LOS A	5.3	37.5	0.82	0.75	0.92	40.9
Approach			516	2.2	516	2.2	0.571	10.3	LOS A	5.3	37.5	0.82	0.75	0.92	39.8
West: Yamba Rd (W)															
10	L2	All MCs	183	6.4	183	6.4	0.576	6.3	LOS A	5.0	36.0	0.70	0.59	0.70	44.3
11	T1	All MCs	445	2.7	445	2.7	0.576	6.4	LOS A	5.0	36.0	0.70	0.59	0.70	47.7
12	R2	All MCs	1	0.0	1	0.0	0.576	10.9	LOS A	5.0	36.0	0.70	0.59	0.70	43.6
Approach			629	3.8	629	3.8	0.576	6.4	LOS A	5.0	36.0	0.70	0.59	0.70	46.8
All Vehicles			1769	2.9	1769	2.9	0.576	8.0	LOS A	5.3	37.5	0.70	0.63	0.73	43.5

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

MOVEMENT SUMMARY

Site: 101 [2024 DES AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Treelands Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Somerset Place (S)															
1	L2	All MCs	2	0.0	2	0.0	0.010	7.2	LOS A	0.1	0.4	0.73	0.62	0.73	41.0
2	T1	All MCs	1	0.0	1	0.0	0.010	7.1	LOS A	0.1	0.4	0.73	0.62	0.73	23.4
3	R2	All MCs	4	0.0	4	0.0	0.010	11.6	LOS A	0.1	0.4	0.73	0.62	0.73	37.7
Approach			7	0.0	7	0.0	0.010	9.7	LOS A	0.1	0.4	0.73	0.62	0.73	36.8
East: Yamba Rd (E)															
4	L2	All MCs	4	0.0	4	0.0	0.495	5.1	LOS A	4.1	29.6	0.53	0.53	0.53	41.5
5	T1	All MCs	413	3.8	413	3.8	0.495	5.4	LOS A	4.1	29.6	0.53	0.53	0.53	47.7
6	R2	All MCs	196	1.1	196	1.1	0.495	9.9	LOS A	4.1	29.6	0.53	0.53	0.53	37.4
Approach			613	2.9	613	2.9	0.495	6.8	LOS A	4.1	29.6	0.53	0.53	0.53	44.8
North: Treelands Dr (N)															
7	L2	All MCs	174	1.5	174	1.5	0.351	6.4	LOS A	2.3	16.7	0.64	0.66	0.64	40.9
8	T1	All MCs	2	0.0	2	0.0	0.351	6.6	LOS A	2.3	16.7	0.64	0.66	0.64	34.1
9	R2	All MCs	164	3.2	164	3.2	0.351	11.3	LOS A	2.3	16.7	0.64	0.66	0.64	42.6
Approach			340	2.3	340	2.3	0.351	8.7	LOS A	2.3	16.7	0.64	0.66	0.64	41.7
West: Yamba Rd (W)															
10	L2	All MCs	124	6.4	124	6.4	0.436	5.3	LOS A	3.2	23.4	0.52	0.50	0.52	45.4
11	T1	All MCs	389	2.7	389	2.7	0.436	5.5	LOS A	3.2	23.4	0.52	0.50	0.52	48.6
12	R2	All MCs	2	0.0	2	0.0	0.436	10.0	LOS A	3.2	23.4	0.52	0.50	0.52	44.7
Approach			516	3.6	516	3.6	0.436	5.5	LOS A	3.2	23.4	0.52	0.50	0.52	47.9
All Vehicles			1476	3.0	1476	3.0	0.495	6.8	LOS A	4.1	29.6	0.56	0.55	0.56	45.3

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

MOVEMENT SUMMARY

Site: 101 [2024 DES PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Treelands Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Somerset Place (S)															
1	L2	All MCs	2	0.0	2	0.0	0.011	6.6	LOS A	0.1	0.5	0.69	0.61	0.69	41.8
2	T1	All MCs	2	0.0	2	0.0	0.011	6.5	LOS A	0.1	0.5	0.69	0.61	0.69	24.0
3	R2	All MCs	4	0.0	4	0.0	0.011	11.0	LOS A	0.1	0.5	0.69	0.61	0.69	38.6
Approach			8	0.0	8	0.0	0.011	8.8	LOS A	0.1	0.5	0.69	0.61	0.69	35.9
East: Yamba Rd (E)															
4	L2	All MCs	2	0.0	2	0.0	0.441	5.0	LOS A	3.5	25.0	0.51	0.55	0.51	41.1
5	T1	All MCs	298	3.8	298	3.8	0.441	5.3	LOS A	3.5	25.0	0.51	0.55	0.51	47.4
6	R2	All MCs	238	1.1	238	1.1	0.441	9.9	LOS A	3.5	25.0	0.51	0.55	0.51	37.1
Approach			538	2.6	538	2.6	0.441	7.3	LOS A	3.5	25.0	0.51	0.55	0.51	43.4
North: Treelands Dr (N)															
7	L2	All MCs	278	1.5	278	1.5	0.470	6.7	LOS A	3.5	24.7	0.72	0.67	0.72	41.0
8	T1	All MCs	2	0.0	2	0.0	0.470	6.9	LOS A	3.5	24.7	0.72	0.67	0.72	34.0
9	R2	All MCs	169	3.2	169	3.2	0.470	11.6	LOS A	3.5	24.7	0.72	0.67	0.72	42.7
Approach			449	2.1	449	2.1	0.470	8.6	LOS A	3.5	24.7	0.72	0.67	0.72	41.6
West: Yamba Rd (W)															
10	L2	All MCs	153	6.4	153	6.4	0.486	5.7	LOS A	3.7	27.0	0.59	0.54	0.59	44.9
11	T1	All MCs	397	2.7	397	2.7	0.486	5.9	LOS A	3.7	27.0	0.59	0.54	0.59	48.2
12	R2	All MCs	1	0.0	1	0.0	0.486	10.4	LOS A	3.7	27.0	0.59	0.54	0.59	44.3
Approach			551	3.7	551	3.7	0.486	5.8	LOS A	3.7	27.0	0.59	0.54	0.59	47.4
All Vehicles			1546	2.8	1546	2.8	0.486	7.2	LOS A	3.7	27.0	0.60	0.58	0.60	44.4

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

MOVEMENT SUMMARY

Site: 101 [2034 DES AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Treelands Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Somerset Place (S)															
1	L2	All MCs	2	0.0	2	0.0	0.014	8.6	LOS A	0.1	0.6	0.81	0.67	0.81	39.3
2	T1	All MCs	1	0.0	1	0.0	0.014	8.6	LOS A	0.1	0.6	0.81	0.67	0.81	22.5
3	R2	All MCs	5	0.0	5	0.0	0.014	13.1	LOS A	0.1	0.6	0.81	0.67	0.81	36.1
Approach			8	0.0	8	0.0	0.014	11.4	LOS A	0.1	0.6	0.81	0.67	0.81	35.3
East: Yamba Rd (E)															
4	L2	All MCs	5	0.0	5	0.0	0.599	5.5	LOS A	5.7	41.3	0.66	0.57	0.66	40.7
5	T1	All MCs	476	6.4	476	6.4	0.599	5.9	LOS A	5.7	41.3	0.66	0.57	0.66	46.9
6	R2	All MCs	225	0.7	225	0.7	0.599	10.4	LOS A	5.7	41.3	0.66	0.57	0.66	36.7
Approach			706	4.5	706	4.5	0.599	7.3	LOS A	5.7	41.3	0.66	0.57	0.66	44.1
North: Treelands Dr (N)															
7	L2	All MCs	205	4.0	205	4.0	0.463	7.4	LOS A	3.5	25.2	0.77	0.71	0.78	39.3
8	T1	All MCs	2	0.0	2	0.0	0.463	7.5	LOS A	3.5	25.2	0.77	0.71	0.78	32.8
9	R2	All MCs	196	4.0	196	4.0	0.463	12.3	LOS A	3.5	25.2	0.77	0.71	0.78	41.5
Approach			403	4.0	403	4.0	0.463	9.8	LOS A	3.5	25.2	0.77	0.71	0.78	40.4
West: Yamba Rd (W)															
10	L2	All MCs	149	61.0	149	61.0	0.586	7.5	LOS A	5.1	41.6	0.68	0.56	0.68	42.1
11	T1	All MCs	461	6.0	461	6.0	0.586	6.1	LOS A	5.1	41.6	0.68	0.56	0.68	47.1
12	R2	All MCs	2	0.0	2	0.0	0.586	10.5	LOS A	5.1	41.6	0.68	0.56	0.68	43.5
Approach			613	19.4	613	19.4	0.586	6.4	LOS A	5.1	41.6	0.68	0.56	0.68	46.0
All Vehicles			1731	9.6	1731	9.6	0.599	7.6	LOS A	5.7	41.6	0.69	0.60	0.70	44.0

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

MOVEMENT SUMMARY

Site: 101 [2034 DES PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Treelands Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Somerset Place (S)															
1	L2	All MCs	2	0.0	2	0.0	0.013	7.7	LOS A	0.1	0.6	0.77	0.64	0.77	40.7
2	T1	All MCs	2	0.0	2	0.0	0.013	7.7	LOS A	0.1	0.6	0.77	0.64	0.77	23.3
3	R2	All MCs	4	0.0	4	0.0	0.013	12.2	LOS A	0.1	0.6	0.77	0.64	0.77	37.5
Approach			8	0.0	8	0.0	0.013	10.0	LOS A	0.1	0.6	0.77	0.64	0.77	34.9
East: Yamba Rd (E)															
4	L2	All MCs	3	0.0	3	0.0	0.536	5.4	LOS A	4.8	34.0	0.62	0.58	0.62	40.5
5	T1	All MCs	348	3.8	348	3.8	0.536	5.7	LOS A	4.8	34.0	0.62	0.58	0.62	46.9
6	R2	All MCs	278	1.1	278	1.1	0.536	10.3	LOS A	4.8	34.0	0.62	0.58	0.62	36.6
Approach			629	2.6	629	2.6	0.536	7.7	LOS A	4.8	34.0	0.62	0.58	0.62	42.8
North: Treelands Dr (N)															
7	L2	All MCs	321	1.5	321	1.5	0.591	8.9	LOS A	5.7	40.5	0.84	0.77	0.96	38.5
8	T1	All MCs	2	0.0	2	0.0	0.591	9.0	LOS A	5.7	40.5	0.84	0.77	0.96	31.3
9	R2	All MCs	202	3.2	202	3.2	0.591	13.8	LOS A	5.7	40.5	0.84	0.77	0.96	40.5
Approach			525	2.1	525	2.1	0.591	10.8	LOS A	5.7	40.5	0.84	0.77	0.96	39.3
West: Yamba Rd (W)															
10	L2	All MCs	183	6.4	183	6.4	0.593	6.6	LOS A	5.4	38.7	0.71	0.60	0.73	44.1
11	T1	All MCs	459	2.7	459	2.7	0.593	6.7	LOS A	5.4	38.7	0.71	0.60	0.73	47.5
12	R2	All MCs	1	0.0	1	0.0	0.593	11.2	LOS A	5.4	38.7	0.71	0.60	0.73	43.5
Approach			643	3.7	643	3.7	0.593	6.6	LOS A	5.4	38.7	0.71	0.60	0.73	46.7
All Vehicles			1806	2.9	1806	2.9	0.593	8.2	LOS A	5.7	40.5	0.72	0.64	0.76	43.3

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

MOVEMENT SUMMARY

Site: 101 [2024 BG AM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Treelands Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Somerset Place (S)															
1	L2	All MCs	2	0.0	2	0.0	0.013	7.8	LOS A	0.1	0.6	0.77	0.65	0.77	40.1
2	T1	All MCs	1	0.0	1	0.0	0.013	7.8	LOS A	0.1	0.6	0.77	0.65	0.77	23.0
3	R2	All MCs	5	0.0	5	0.0	0.013	12.3	LOS A	0.1	0.6	0.77	0.65	0.77	36.9
Approach			8	0.0	8	0.0	0.013	10.6	LOS A	0.1	0.6	0.77	0.65	0.77	36.1
East: Yamba Rd (E)															
4	L2	All MCs	4	0.0	4	0.0	0.545	5.3	LOS A	4.8	35.0	0.60	0.55	0.60	41.1
5	T1	All MCs	439	6.4	439	6.4	0.545	5.7	LOS A	4.8	35.0	0.60	0.55	0.60	47.3
6	R2	All MCs	208	0.7	208	0.7	0.545	10.1	LOS A	4.8	35.0	0.60	0.55	0.60	37.0
Approach			652	4.5	652	4.5	0.545	7.1	LOS A	4.8	35.0	0.60	0.55	0.60	44.4
North: Treelands Dr (N)															
7	L2	All MCs	191	4.0	191	4.0	0.411	6.9	LOS A	2.9	20.8	0.71	0.68	0.71	39.9
8	T1	All MCs	2	0.0	2	0.0	0.411	7.0	LOS A	2.9	20.8	0.71	0.68	0.71	33.4
9	R2	All MCs	182	4.0	182	4.0	0.411	11.8	LOS A	2.9	20.8	0.71	0.68	0.71	42.0
Approach			375	4.0	375	4.0	0.411	9.3	LOS A	2.9	20.8	0.71	0.68	0.71	41.0
West: Yamba Rd (W)															
10	L2	All MCs	139	6.1	139	6.1	0.494	5.5	LOS A	3.9	29.0	0.58	0.52	0.58	45.0
11	T1	All MCs	427	6.0	427	6.0	0.494	5.7	LOS A	3.9	29.0	0.58	0.52	0.58	47.8
12	R2	All MCs	2	0.0	2	0.0	0.494	10.2	LOS A	3.9	29.0	0.58	0.52	0.58	44.3
Approach			568	6.0	568	6.0	0.494	5.7	LOS A	3.9	29.0	0.58	0.52	0.58	47.2
All Vehicles			1603	4.9	1603	4.9	0.545	7.1	LOS A	4.8	35.0	0.62	0.57	0.62	44.7

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

MOVEMENT SUMMARY

Site: 101 [2024 BG PM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Treelands Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Somerset Place (S)															
1	L2	All MCs	2	0.0	2	0.0	0.012	7.1	LOS A	0.1	0.5	0.73	0.62	0.73	41.3
2	T1	All MCs	2	0.0	2	0.0	0.012	7.1	LOS A	0.1	0.5	0.73	0.62	0.73	23.6
3	R2	All MCs	4	0.0	4	0.0	0.012	11.6	LOS A	0.1	0.5	0.73	0.62	0.73	38.1
Approach			8	0.0	8	0.0	0.012	9.3	LOS A	0.1	0.5	0.73	0.62	0.73	35.5
East: Yamba Rd (E)															
4	L2	All MCs	3	0.0	3	0.0	0.488	5.2	LOS A	4.1	29.2	0.57	0.56	0.57	40.8
5	T1	All MCs	323	3.8	323	3.8	0.488	5.5	LOS A	4.1	29.2	0.57	0.56	0.57	47.1
6	R2	All MCs	257	1.1	257	1.1	0.488	10.1	LOS A	4.1	29.2	0.57	0.56	0.57	36.9
Approach			583	2.6	583	2.6	0.488	7.5	LOS A	4.1	29.2	0.57	0.56	0.57	43.1
North: Treelands Dr (N)															
7	L2	All MCs	298	1.5	298	1.5	0.525	7.6	LOS A	4.4	31.3	0.77	0.71	0.82	40.0
8	T1	All MCs	2	0.0	2	0.0	0.525	7.8	LOS A	4.4	31.3	0.77	0.71	0.82	32.9
9	R2	All MCs	187	3.2	187	3.2	0.525	12.5	LOS A	4.4	31.3	0.77	0.71	0.82	41.8
Approach			487	2.1	487	2.1	0.525	9.5	LOS A	4.4	31.3	0.77	0.71	0.82	40.7
West: Yamba Rd (W)															
10	L2	All MCs	169	6.4	169	6.4	0.536	6.0	LOS A	4.4	31.6	0.65	0.56	0.65	44.6
11	T1	All MCs	425	2.7	425	2.7	0.536	6.1	LOS A	4.4	31.6	0.65	0.56	0.65	47.9
12	R2	All MCs	1	0.0	1	0.0	0.536	10.7	LOS A	4.4	31.6	0.65	0.56	0.65	43.9
Approach			596	3.7	596	3.7	0.536	6.1	LOS A	4.4	31.6	0.65	0.56	0.65	47.1
All Vehicles			1675	2.9	1675	2.9	0.536	7.6	LOS A	4.4	31.6	0.66	0.61	0.67	44.0

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

MOVEMENT SUMMARY

Site: 101 [2034 BG AM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Treelands Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Somerset Place (S)															
1	L2	All MCs	3	0.0	3	0.0	0.020	9.7	LOS A	0.1	1.0	0.86	0.70	0.86	38.5
2	T1	All MCs	1	0.0	1	0.0	0.020	9.7	LOS A	0.1	1.0	0.86	0.70	0.86	21.9
3	R2	All MCs	6	0.0	6	0.0	0.020	14.2	LOS A	0.1	1.0	0.86	0.70	0.86	35.2
Approach			11	0.0	11	0.0	0.020	12.4	LOS A	0.1	1.0	0.86	0.70	0.86	35.0
East: Yamba Rd (E)															
4	L2	All MCs	5	0.0	5	0.0	0.661	6.1	LOS A	7.0	51.1	0.75	0.61	0.76	40.1
5	T1	All MCs	509	6.4	509	6.4	0.661	6.5	LOS A	7.0	51.1	0.75	0.61	0.76	46.5
6	R2	All MCs	242	0.7	242	0.7	0.661	11.0	LOS A	7.0	51.1	0.75	0.61	0.76	36.3
Approach			757	4.5	757	4.5	0.661	7.9	LOS A	7.0	51.1	0.75	0.61	0.76	43.6
North: Treelands Dr (N)															
7	L2	All MCs	225	4.0	225	4.0	0.534	8.8	LOS A	4.6	33.5	0.83	0.77	0.93	37.9
8	T1	All MCs	3	0.0	3	0.0	0.534	8.8	LOS A	4.6	33.5	0.83	0.77	0.93	31.1
9	R2	All MCs	217	4.0	217	4.0	0.534	13.6	LOS A	4.6	33.5	0.83	0.77	0.93	40.1
Approach			445	4.0	445	4.0	0.534	11.1	LOS A	4.6	33.5	0.83	0.77	0.93	39.0
West: Yamba Rd (W)															
10	L2	All MCs	165	6.4	165	6.4	0.600	6.1	LOS A	5.5	39.6	0.70	0.57	0.70	44.2
11	T1	All MCs	505	2.7	505	2.7	0.600	6.2	LOS A	5.5	39.6	0.70	0.57	0.70	47.6
12	R2	All MCs	3	0.0	3	0.0	0.600	10.7	LOS A	5.5	39.6	0.70	0.57	0.70	43.5
Approach			674	3.6	674	3.6	0.600	6.2	LOS A	5.5	39.6	0.70	0.57	0.70	46.8
All Vehicles			1886	4.0	1886	4.0	0.661	8.1	LOS A	7.0	51.1	0.75	0.63	0.78	43.8

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

MOVEMENT SUMMARY

Site: 101 [2034 BG PM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Treelands Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Somerset Place (S)															
1	L2	All MCs	3	0.0	3	0.0	0.020	8.7	LOS A	0.1	0.9	0.82	0.68	0.82	39.9
2	T1	All MCs	3	0.0	3	0.0	0.020	8.7	LOS A	0.1	0.9	0.82	0.68	0.82	22.7
3	R2	All MCs	5	0.0	5	0.0	0.020	13.2	LOS A	0.1	0.9	0.82	0.68	0.82	36.7
Approach			12	0.0	12	0.0	0.020	10.7	LOS A	0.1	0.9	0.82	0.68	0.82	34.0
East: Yamba Rd (E)															
4	L2	All MCs	3	0.0	3	0.0	0.600	5.7	LOS A	5.7	41.0	0.71	0.60	0.71	40.1
5	T1	All MCs	378	3.8	378	3.8	0.600	6.0	LOS A	5.7	41.0	0.71	0.60	0.71	46.5
6	R2	All MCs	304	1.1	304	1.1	0.600	10.6	LOS A	5.7	41.0	0.71	0.60	0.71	36.2
Approach			685	2.6	685	2.6	0.600	8.0	LOS A	5.7	41.0	0.71	0.60	0.71	42.4
North: Treelands Dr (N)															
7	L2	All MCs	346	1.5	346	1.5	0.677	10.9	LOS A	7.8	55.3	0.92	0.85	1.17	36.4
8	T1	All MCs	3	0.0	3	0.0	0.677	11.1	LOS A	7.8	55.3	0.92	0.85	1.17	29.0
9	R2	All MCs	224	3.2	224	3.2	0.677	15.9	LOS B	7.8	55.3	0.92	0.85	1.17	38.5
Approach			574	2.2	574	2.2	0.677	12.9	LOS A	7.8	55.3	0.92	0.85	1.17	37.2
West: Yamba Rd (W)															
10	L2	All MCs	203	6.4	203	6.4	0.664	7.9	LOS A	7.3	52.7	0.80	0.68	0.89	43.4
11	T1	All MCs	494	2.7	494	2.7	0.664	8.0	LOS A	7.3	52.7	0.80	0.68	0.89	46.9
12	R2	All MCs	1	2.0	1	2.0	0.664	12.6	LOS A	7.3	52.7	0.80	0.68	0.89	42.7
Approach			698	3.8	698	3.8	0.664	8.0	LOS A	7.3	52.7	0.80	0.68	0.89	46.0
All Vehicles			1968	2.9	1968	2.9	0.677	9.4	LOS A	7.8	55.3	0.80	0.70	0.91	42.3

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

MOVEMENT SUMMARY

Site: 101 [2024 DES AM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Treelands Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Somerset Place (S)															
1	L2	All MCs	2	0.0	2	0.0	0.013	8.1	LOS A	0.1	0.6	0.79	0.66	0.79	39.8
2	T1	All MCs	1	0.0	1	0.0	0.013	8.1	LOS A	0.1	0.6	0.79	0.66	0.79	22.8
3	R2	All MCs	5	0.0	5	0.0	0.013	12.6	LOS A	0.1	0.6	0.79	0.66	0.79	36.6
Approach			8	0.0	8	0.0	0.013	10.9	LOS A	0.1	0.6	0.79	0.66	0.79	35.8
East: Yamba Rd (E)															
4	L2	All MCs	4	0.0	4	0.0	0.566	5.3	LOS A	5.1	37.3	0.61	0.56	0.61	41.0
5	T1	All MCs	456	6.4	456	6.4	0.566	5.7	LOS A	5.1	37.3	0.61	0.56	0.61	47.2
6	R2	All MCs	217	0.7	217	0.7	0.566	10.2	LOS A	5.1	37.3	0.61	0.56	0.61	37.0
Approach			677	4.5	677	4.5	0.566	7.1	LOS A	5.1	37.3	0.61	0.56	0.61	44.3
North: Treelands Dr (N)															
7	L2	All MCs	193	4.0	193	4.0	0.418	7.0	LOS A	2.9	21.3	0.72	0.68	0.72	39.9
8	T1	All MCs	3	0.0	3	0.0	0.418	7.1	LOS A	2.9	21.3	0.72	0.68	0.72	33.4
9	R2	All MCs	182	4.0	182	4.0	0.418	11.8	LOS A	2.9	21.3	0.72	0.68	0.72	42.0
Approach			378	4.0	378	4.0	0.418	9.3	LOS A	2.9	21.3	0.72	0.68	0.72	40.9
West: Yamba Rd (W)															
10	L2	All MCs	139	6.1	139	6.1	0.504	5.6	LOS A	4.0	29.8	0.60	0.53	0.60	44.9
11	T1	All MCs	433	6.0	433	6.0	0.504	5.8	LOS A	4.0	29.8	0.60	0.53	0.60	47.7
12	R2	All MCs	2	0.0	2	0.0	0.504	10.3	LOS A	4.0	29.8	0.60	0.53	0.60	44.2
Approach			574	6.0	574	6.0	0.504	5.8	LOS A	4.0	29.8	0.60	0.53	0.60	47.1
All Vehicles			1637	4.9	1637	4.9	0.566	7.2	LOS A	5.1	37.3	0.63	0.58	0.63	44.6

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

MOVEMENT SUMMARY

Site: 101 [2024 DES PM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Treelands Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Somerset Place (S)															
1	L2	All MCs	2	0.0	2	0.0	0.012	7.3	LOS A	0.1	0.5	0.73	0.63	0.73	41.2
2	T1	All MCs	2	0.0	2	0.0	0.012	7.2	LOS A	0.1	0.5	0.73	0.63	0.73	23.6
3	R2	All MCs	4	0.0	4	0.0	0.012	11.7	LOS A	0.1	0.5	0.73	0.63	0.73	38.0
Approach			8	0.0	8	0.0	0.012	9.5	LOS A	0.1	0.5	0.73	0.63	0.73	35.4
East: Yamba Rd (E)															
4	L2	All MCs	3	0.0	3	0.0	0.500	5.2	LOS A	4.2	30.4	0.58	0.56	0.58	40.8
5	T1	All MCs	331	3.8	331	3.8	0.500	5.5	LOS A	4.2	30.4	0.58	0.56	0.58	47.1
6	R2	All MCs	263	1.1	263	1.1	0.500	10.1	LOS A	4.2	30.4	0.58	0.56	0.58	36.8
Approach			597	2.6	597	2.6	0.500	7.5	LOS A	4.2	30.4	0.58	0.56	0.58	43.1
North: Treelands Dr (N)															
7	L2	All MCs	307	1.5	307	1.5	0.545	8.0	LOS A	4.8	33.9	0.79	0.73	0.87	39.6
8	T1	All MCs	2	0.0	2	0.0	0.545	8.2	LOS A	4.8	33.9	0.79	0.73	0.87	32.4
9	R2	All MCs	187	3.2	187	3.2	0.545	12.9	LOS A	4.8	33.9	0.79	0.73	0.87	41.4
Approach			497	2.1	497	2.1	0.545	9.8	LOS A	4.8	33.9	0.79	0.73	0.87	40.3
West: Yamba Rd (W)															
10	L2	All MCs	169	6.4	169	6.4	0.553	6.1	LOS A	4.6	33.1	0.67	0.57	0.67	44.4
11	T1	All MCs	439	2.7	439	2.7	0.553	6.2	LOS A	4.6	33.1	0.67	0.57	0.67	47.8
12	R2	All MCs	1	0.0	1	0.0	0.553	10.7	LOS A	4.6	33.1	0.67	0.57	0.67	43.8
Approach			609	3.7	609	3.7	0.553	6.2	LOS A	4.6	33.1	0.67	0.57	0.67	47.0
All Vehicles			1712	2.8	1712	2.8	0.553	7.7	LOS A	4.8	33.9	0.67	0.62	0.69	43.8

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

MOVEMENT SUMMARY

Site: 101 [2034 DES AM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Treelands Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Somerset Place (S)															
1	L2	All MCs	3	0.0	3	0.0	0.021	10.1	LOS A	0.1	1.0	0.88	0.71	0.88	38.1
2	T1	All MCs	1	0.0	1	0.0	0.021	10.1	LOS A	0.1	1.0	0.88	0.71	0.88	21.6
3	R2	All MCs	6	0.0	6	0.0	0.021	14.6	LOS B	0.1	1.0	0.88	0.71	0.88	34.9
Approach			11	0.0	11	0.0	0.021	12.8	LOS A	0.1	1.0	0.88	0.71	0.88	34.6
East: Yamba Rd (E)															
4	L2	All MCs	5	0.0	5	0.0	0.682	6.3	LOS A	7.7	55.9	0.77	0.62	0.80	39.9
5	T1	All MCs	526	6.4	526	6.4	0.682	6.8	LOS A	7.7	55.9	0.77	0.62	0.80	46.3
6	R2	All MCs	249	0.7	249	0.7	0.682	11.2	LOS A	7.7	55.9	0.77	0.62	0.80	36.1
Approach			781	4.5	781	4.5	0.682	8.2	LOS A	7.7	55.9	0.77	0.62	0.80	43.5
North: Treelands Dr (N)															
7	L2	All MCs	227	4.0	227	4.0	0.546	9.1	LOS A	4.9	35.2	0.85	0.78	0.96	37.5
8	T1	All MCs	3	0.0	3	0.0	0.546	9.2	LOS A	4.9	35.2	0.85	0.78	0.96	30.7
9	R2	All MCs	217	4.0	217	4.0	0.546	14.0	LOS A	4.9	35.2	0.85	0.78	0.96	39.8
Approach			447	4.0	447	4.0	0.546	11.5	LOS A	4.9	35.2	0.85	0.78	0.96	38.7
West: Yamba Rd (W)															
10	L2	All MCs	165	6.1	165	6.1	0.620	6.4	LOS A	6.0	44.2	0.73	0.60	0.75	44.0
11	T1	All MCs	511	6.0	511	6.0	0.620	6.6	LOS A	6.0	44.2	0.73	0.60	0.75	46.9
12	R2	All MCs	3	0.0	3	0.0	0.620	11.1	LOS A	6.0	44.2	0.73	0.60	0.75	43.4
Approach			679	6.0	679	6.0	0.620	6.6	LOS A	6.0	44.2	0.73	0.60	0.75	46.3
All Vehicles			1918	4.9	1918	4.9	0.682	8.4	LOS A	7.7	55.9	0.77	0.65	0.82	43.5

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

MOVEMENT SUMMARY

Site: 101 [2034 DES PM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Treelands Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Somerset Place (S)															
1	L2	All MCs	3	0.0	3	0.0	0.020	8.9	LOS A	0.1	0.9	0.83	0.68	0.83	39.8
2	T1	All MCs	3	0.0	3	0.0	0.020	8.8	LOS A	0.1	0.9	0.83	0.68	0.83	22.6
3	R2	All MCs	5	0.0	5	0.0	0.020	13.3	LOS A	0.1	0.9	0.83	0.68	0.83	36.5
Approach			12	0.0	12	0.0	0.020	10.9	LOS A	0.1	0.9	0.83	0.68	0.83	33.8
East: Yamba Rd (E)															
4	L2	All MCs	3	0.0	3	0.0	0.610	5.7	LOS A	5.9	42.4	0.72	0.60	0.72	40.0
5	T1	All MCs	385	3.8	385	3.8	0.610	6.0	LOS A	5.9	42.4	0.72	0.60	0.72	46.4
6	R2	All MCs	307	1.1	307	1.1	0.610	10.6	LOS A	5.9	42.4	0.72	0.60	0.72	36.2
Approach			696	2.6	696	2.6	0.610	8.1	LOS A	5.9	42.4	0.72	0.60	0.72	42.4
North: Treelands Dr (N)															
7	L2	All MCs	356	1.5	356	1.5	0.699	11.7	LOS A	8.4	59.9	0.95	0.88	1.23	35.7
8	T1	All MCs	3	0.0	3	0.0	0.699	11.9	LOS A	8.4	59.9	0.95	0.88	1.23	28.3
9	R2	All MCs	224	3.2	224	3.2	0.699	16.6	LOS B	8.4	59.9	0.95	0.88	1.23	37.8
Approach			583	2.1	583	2.1	0.699	13.6	LOS A	8.4	59.9	0.95	0.88	1.23	36.5
West: Yamba Rd (W)															
10	L2	All MCs	203	6.4	203	6.4	0.679	8.2	LOS A	7.7	56.0	0.82	0.69	0.92	43.2
11	T1	All MCs	507	2.7	507	2.7	0.679	8.3	LOS A	7.7	56.0	0.82	0.69	0.92	46.7
12	R2	All MCs	1	0.0	1	0.0	0.679	12.8	LOS A	7.7	56.0	0.82	0.69	0.92	42.6
Approach			712	3.8	712	3.8	0.679	8.2	LOS A	7.7	56.0	0.82	0.69	0.92	45.9
All Vehicles			2002	2.9	2002	2.9	0.699	9.8	LOS A	8.4	59.9	0.82	0.72	0.94	42.0

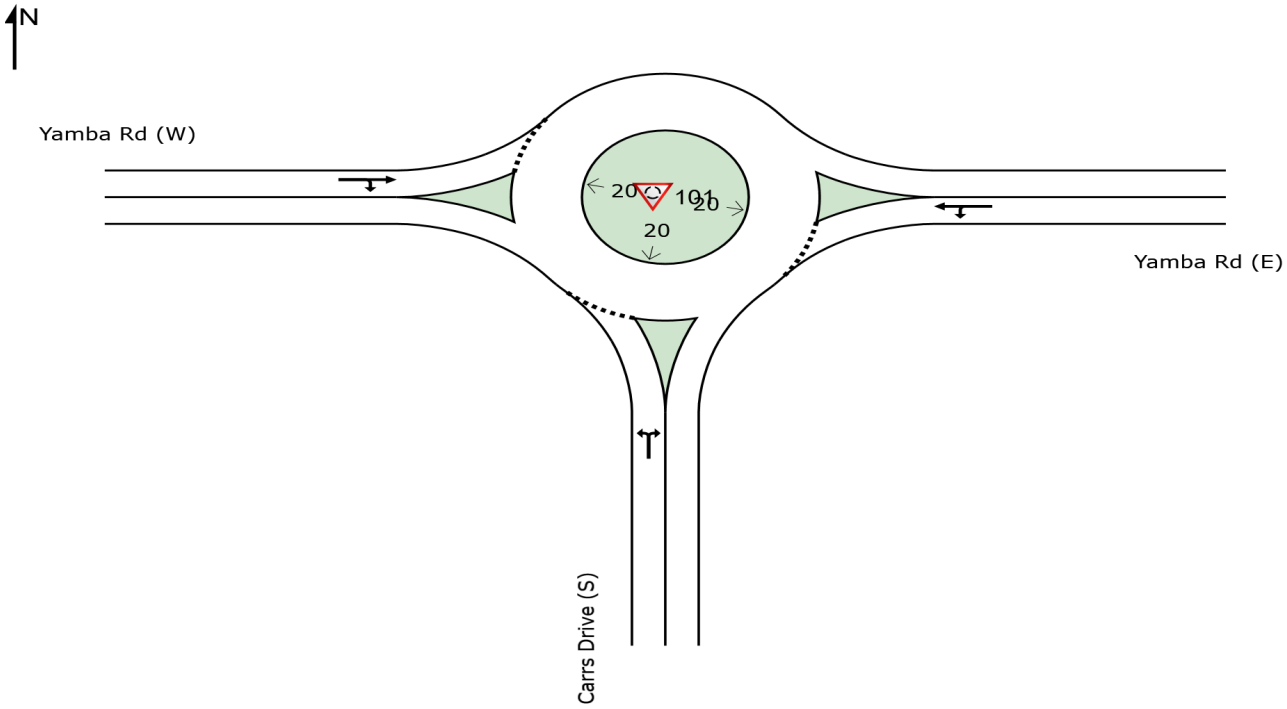
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout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

SITE LAYOUT

Site: 101 [2024 BG AM (Site Folder: General)]

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 101 [2024 BG AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Carrs Drive (S)															
1	L2	All MCs	149	10.8	149	10.8	0.471	7.3	LOS A	3.3	24.7	0.71	0.70	0.72	37.9
3	R2	All MCs	291	4.2	291	4.2	0.471	12.0	LOS A	3.3	24.7	0.71	0.70	0.72	42.8
Approach			440	6.4	440	6.4	0.471	10.4	LOS A	3.3	24.7	0.71	0.70	0.72	41.3
East: Yamba Rd (E)															
4	L2	All MCs	120	1.5	120	1.5	0.395	4.4	LOS A	3.1	22.6	0.34	0.42	0.34	48.3
5	T1	All MCs	425	4.3	425	4.3	0.395	4.7	LOS A	3.1	22.6	0.34	0.42	0.34	50.4
Approach			545	3.7	545	3.7	0.395	4.6	LOS A	3.1	22.6	0.34	0.42	0.34	50.0
West: Yamba Rd (W)															
11	T1	All MCs	456	4.8	456	4.8	0.512	6.3	LOS A	4.1	30.3	0.68	0.59	0.68	48.3
12	R2	All MCs	79	14.0	79	14.0	0.512	11.3	LOS A	4.1	30.3	0.68	0.59	0.68	40.3
Approach			535	6.2	535	6.2	0.512	7.1	LOS A	4.1	30.3	0.68	0.59	0.68	47.5
All Vehicles			1520	5.4	1520	5.4	0.512	7.1	LOS A	4.1	30.3	0.57	0.56	0.57	46.7

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

MOVEMENT SUMMARY

Site: 101 [2024 BG PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Carrs Drive (S)															
1	L2	All MCs	116	8.2	116	8.2	0.257	6.5	LOS A	1.6	11.6	0.62	0.66	0.62	39.6
3	R2	All MCs	125	1.9	125	1.9	0.257	11.2	LOS A	1.6	11.6	0.62	0.66	0.62	44.2
Approach			241	4.9	241	4.9	0.257	8.9	LOS A	1.6	11.6	0.62	0.66	0.62	42.2
East: Yamba Rd (E)															
4	L2	All MCs	243	4.3	243	4.3	0.512	5.0	LOS A	4.3	30.8	0.48	0.47	0.48	47.4
5	T1	All MCs	421	3.1	421	3.1	0.512	5.2	LOS A	4.3	30.8	0.48	0.47	0.48	49.9
Approach			664	3.5	664	3.5	0.512	5.1	LOS A	4.3	30.8	0.48	0.47	0.48	49.1
West: Yamba Rd (W)															
11	T1	All MCs	460	1.4	460	1.4	0.454	4.9	LOS A	3.7	26.3	0.44	0.49	0.44	49.5
12	R2	All MCs	138	3.8	138	3.8	0.454	9.6	LOS A	3.7	26.3	0.44	0.49	0.44	42.1
Approach			598	2.0	598	2.0	0.454	6.0	LOS A	3.7	26.3	0.44	0.49	0.44	48.3
All Vehicles			1503	3.1	1503	3.1	0.512	6.1	LOS A	4.3	30.8	0.48	0.51	0.48	47.8

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

MOVEMENT SUMMARY

Site: 101 [2034 BG AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Carrs Drive (S)															
1	L2	All MCs	157	10.8	157	10.8	0.535	9.1	LOS A	4.5	33.3	0.79	0.77	0.90	36.1
3	R2	All MCs	306	4.2	306	4.2	0.535	13.7	LOS A	4.5	33.3	0.79	0.77	0.90	41.1
Approach			463	6.4	463	6.4	0.535	12.2	LOS A	4.5	33.3	0.79	0.77	0.90	39.7
East: Yamba Rd (E)															
4	L2	All MCs	134	1.5	134	1.5	0.470	4.5	LOS A	4.2	30.0	0.41	0.43	0.41	47.8
5	T1	All MCs	508	4.3	508	4.3	0.470	4.8	LOS A	4.2	30.0	0.41	0.43	0.41	50.0
Approach			642	3.7	642	3.7	0.470	4.7	LOS A	4.2	30.0	0.41	0.43	0.41	49.6
West: Yamba Rd (W)															
11	T1	All MCs	544	4.8	544	4.8	0.614	7.4	LOS A	6.1	44.8	0.77	0.65	0.83	47.8
12	R2	All MCs	88	14.0	88	14.0	0.614	12.4	LOS A	6.1	44.8	0.77	0.65	0.83	39.6
Approach			633	6.1	633	6.1	0.614	8.1	LOS A	6.1	44.8	0.77	0.65	0.83	47.0
All Vehicles			1738	5.3	1738	5.3	0.614	7.9	LOS A	6.1	44.8	0.64	0.60	0.69	46.1

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

MOVEMENT SUMMARY

Site: 101 [2034 BG PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Carrs Drive (S)															
1	L2	All MCs	126	8.2	126	8.2	0.306	7.2	LOS A	2.0	14.5	0.70	0.69	0.70	38.8
3	R2	All MCs	137	1.9	137	1.9	0.306	11.9	LOS A	2.0	14.5	0.70	0.69	0.70	43.5
Approach			263	4.9	263	4.9	0.306	9.6	LOS A	2.0	14.5	0.70	0.69	0.70	41.5
East: Yamba Rd (E)															
4	L2	All MCs	254	4.3	254	4.3	0.585	5.1	LOS A	5.5	39.5	0.54	0.49	0.54	47.0
5	T1	All MCs	503	3.1	503	3.1	0.585	5.3	LOS A	5.5	39.5	0.54	0.49	0.54	49.5
Approach			757	3.5	757	3.5	0.585	5.3	LOS A	5.5	39.5	0.54	0.49	0.54	48.8
West: Yamba Rd (W)															
11	T1	All MCs	549	1.4	549	1.4	0.532	5.1	LOS A	4.8	34.4	0.51	0.50	0.51	49.2
12	R2	All MCs	143	3.8	143	3.8	0.532	9.8	LOS A	4.8	34.4	0.51	0.50	0.51	41.7
Approach			693	1.9	693	1.9	0.532	6.1	LOS A	4.8	34.4	0.51	0.50	0.51	48.1
All Vehicles			1713	3.1	1713	3.1	0.585	6.3	LOS A	5.5	39.5	0.55	0.52	0.55	47.5

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

MOVEMENT SUMMARY

Site: 101 [2024 DES AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Carrs Drive (S)															
1	L2	All MCs	175	10.8	175	10.8	0.552	8.3	LOS A	4.7	34.6	0.76	0.74	0.84	36.9
3	R2	All MCs	340	4.2	340	4.2	0.552	12.9	LOS A	4.7	34.6	0.76	0.74	0.84	41.9
Approach			515	6.4	515	6.4	0.552	11.4	LOS A	4.7	34.6	0.76	0.74	0.84	40.4
East: Yamba Rd (E)															
4	L2	All MCs	132	1.5	132	1.5	0.410	4.5	LOS A	3.3	24.1	0.37	0.43	0.37	48.1
5	T1	All MCs	425	4.3	425	4.3	0.410	4.7	LOS A	3.3	24.1	0.37	0.43	0.37	50.2
Approach			557	3.6	557	3.6	0.410	4.7	LOS A	3.3	24.1	0.37	0.43	0.37	49.8
West: Yamba Rd (W)															
11	T1	All MCs	456	4.8	456	4.8	0.551	7.2	LOS A	4.8	35.3	0.75	0.65	0.78	47.9
12	R2	All MCs	87	14.0	87	14.0	0.551	12.2	LOS A	4.8	35.3	0.75	0.65	0.78	39.7
Approach			543	6.3	543	6.3	0.551	8.0	LOS A	4.8	35.3	0.75	0.65	0.78	46.9
All Vehicles			1615	5.4	1615	5.4	0.552	7.9	LOS A	4.8	35.3	0.62	0.60	0.66	46.0

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

MOVEMENT SUMMARY

Site: 101 [2024 DES PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Carrs Drive (S)															
1	L2	All MCs	129	8.2	129	8.2	0.290	6.6	LOS A	1.9	13.5	0.64	0.66	0.64	39.5
3	R2	All MCs	140	1.9	140	1.9	0.290	11.3	LOS A	1.9	13.5	0.64	0.66	0.64	44.1
Approach			269	4.9	269	4.9	0.290	9.0	LOS A	1.9	13.5	0.64	0.66	0.64	42.1
East: Yamba Rd (E)															
4	L2	All MCs	284	4.3	284	4.3	0.559	5.2	LOS A	4.9	35.5	0.55	0.50	0.55	47.0
5	T1	All MCs	421	3.1	421	3.1	0.559	5.4	LOS A	4.9	35.5	0.55	0.50	0.55	49.6
Approach			705	3.6	705	3.6	0.559	5.3	LOS A	4.9	35.5	0.55	0.50	0.55	48.6
West: Yamba Rd (W)															
11	T1	All MCs	460	1.4	460	1.4	0.480	5.1	LOS A	4.0	28.7	0.48	0.50	0.48	49.2
12	R2	All MCs	161	3.8	161	3.8	0.480	9.8	LOS A	4.0	28.7	0.48	0.50	0.48	41.7
Approach			621	2.0	621	2.0	0.480	6.3	LOS A	4.0	28.7	0.48	0.50	0.48	47.8
All Vehicles			1596	3.2	1596	3.2	0.559	6.3	LOS A	4.9	35.5	0.54	0.53	0.54	47.3

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

MOVEMENT SUMMARY

Site: 101 [2034 DES AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Carrs Drive (S)															
1	L2	All MCs	182	10.8	182	10.8	0.626	10.7	LOS A	6.3	46.5	0.85	0.83	1.06	34.8
3	R2	All MCs	355	4.2	355	4.2	0.626	15.2	LOS B	6.3	46.5	0.85	0.83	1.06	39.9
Approach			537	6.4	537	6.4	0.626	13.7	LOS A	6.3	46.5	0.85	0.83	1.06	38.3
East: Yamba Rd (E)															
4	L2	All MCs	145	1.5	145	1.5	0.486	4.6	LOS A	4.4	32.0	0.44	0.44	0.44	47.6
5	T1	All MCs	508	4.3	508	4.3	0.486	4.9	LOS A	4.4	32.0	0.44	0.44	0.44	49.8
Approach			654	3.7	654	3.7	0.486	4.8	LOS A	4.4	32.0	0.44	0.44	0.44	49.4
West: Yamba Rd (W)															
11	T1	All MCs	544	4.8	544	4.8	0.663	8.8	LOS A	7.4	54.6	0.85	0.73	0.98	47.2
12	R2	All MCs	96	14.0	96	14.0	0.663	13.9	LOS A	7.4	54.6	0.85	0.73	0.98	38.9
Approach			640	6.2	640	6.2	0.663	9.6	LOS A	7.4	54.6	0.85	0.73	0.98	46.3
All Vehicles			1831	5.4	1831	5.4	0.663	9.1	LOS A	7.4	54.6	0.70	0.66	0.81	45.2

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

MOVEMENT SUMMARY

Site: 101 [2034 DES PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Carrs Drive (S)															
1	L2	All MCs	140	8.2	140	8.2	0.343	7.3	LOS A	2.3	16.9	0.72	0.70	0.72	38.8
3	R2	All MCs	152	1.9	152	1.9	0.343	11.9	LOS A	2.3	16.9	0.72	0.70	0.72	43.4
Approach			292	4.9	292	4.9	0.343	9.7	LOS A	2.3	16.9	0.72	0.70	0.72	41.4
East: Yamba Rd (E)															
4	L2	All MCs	295	4.3	295	4.3	0.635	5.4	LOS A	6.3	45.6	0.62	0.52	0.62	46.5
5	T1	All MCs	503	3.1	503	3.1	0.635	5.6	LOS A	6.3	45.6	0.62	0.52	0.62	49.1
Approach			798	3.5	798	3.5	0.635	5.6	LOS A	6.3	45.6	0.62	0.52	0.62	48.3
West: Yamba Rd (W)															
11	T1	All MCs	549	1.4	549	1.4	0.560	5.3	LOS A	5.3	37.4	0.56	0.52	0.56	48.9
12	R2	All MCs	166	3.8	166	3.8	0.560	10.0	LOS A	5.3	37.4	0.56	0.52	0.56	41.3
Approach			716	2.0	716	2.0	0.560	6.4	LOS A	5.3	37.4	0.56	0.52	0.56	47.6
All Vehicles			1805	3.1	1805	3.1	0.635	6.5	LOS A	6.3	45.6	0.61	0.55	0.61	47.0

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

MOVEMENT SUMMARY

Site: 101 [2024 BG AM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Carrs Drive (S)															
1	L2	All MCs	166	10.8	166	10.8	0.548	8.9	LOS A	4.7	34.5	0.78	0.76	0.88	36.4
3	R2	All MCs	323	4.2	323	4.2	0.548	13.5	LOS A	4.7	34.5	0.78	0.76	0.88	41.4
Approach			489	6.4	489	6.4	0.548	11.9	LOS A	4.7	34.5	0.78	0.76	0.88	39.9
East: Yamba Rd (E)															
4	L2	All MCs	133	1.5	133	1.5	0.444	4.5	LOS A	3.8	27.3	0.39	0.43	0.39	47.9
5	T1	All MCs	472	4.3	472	4.3	0.444	4.8	LOS A	3.8	27.3	0.39	0.43	0.39	50.1
Approach			604	3.7	604	3.7	0.444	4.7	LOS A	3.8	27.3	0.39	0.43	0.39	49.7
West: Yamba Rd (W)															
11	T1	All MCs	505	4.8	505	4.8	0.589	7.3	LOS A	5.5	40.8	0.77	0.65	0.81	47.8
12	R2	All MCs	88	14.0	88	14.0	0.589	12.3	LOS A	5.5	40.8	0.77	0.65	0.81	39.6
Approach			594	6.2	594	6.2	0.589	8.1	LOS A	5.5	40.8	0.77	0.65	0.81	46.9
All Vehicles			1687	5.4	1687	5.4	0.589	8.0	LOS A	5.5	40.8	0.64	0.61	0.68	46.0

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

MOVEMENT SUMMARY

Site: 101 [2024 BG PM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Carrs Drive (S)															
1	L2	All MCs	128	8.2	128	8.2	0.301	6.9	LOS A	1.9	14.2	0.67	0.68	0.67	39.1
3	R2	All MCs	139	1.9	139	1.9	0.301	11.6	LOS A	1.9	14.2	0.67	0.68	0.67	43.7
Approach			267	4.9	267	4.9	0.301	9.4	LOS A	1.9	14.2	0.67	0.68	0.67	41.8
East: Yamba Rd (E)															
4	L2	All MCs	271	4.3	271	4.3	0.578	5.2	LOS A	5.3	38.2	0.55	0.50	0.55	46.9
5	T1	All MCs	467	3.1	467	3.1	0.578	5.4	LOS A	5.3	38.2	0.55	0.50	0.55	49.5
Approach			738	3.5	738	3.5	0.578	5.3	LOS A	5.3	38.2	0.55	0.50	0.55	48.7
West: Yamba Rd (W)															
11	T1	All MCs	511	1.4	511	1.4	0.512	5.1	LOS A	4.5	32.0	0.50	0.50	0.50	49.2
12	R2	All MCs	153	3.8	153	3.8	0.512	9.8	LOS A	4.5	32.0	0.50	0.50	0.50	41.7
Approach			663	2.0	663	2.0	0.512	6.2	LOS A	4.5	32.0	0.50	0.50	0.50	47.9
All Vehicles			1668	3.1	1668	3.1	0.578	6.3	LOS A	5.3	38.2	0.55	0.53	0.55	47.4

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

MOVEMENT SUMMARY

Site: 101 [2034 BG AM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Carrs Drive (S)															
1	L2	All MCs	175	10.8	175	10.8	0.635	11.7	LOS A	6.5	48.3	0.89	0.87	1.13	33.9
3	R2	All MCs	340	4.2	340	4.2	0.635	16.3	LOS B	6.5	48.3	0.89	0.87	1.13	39.0
Approach			515	6.4	515	6.4	0.635	14.7	LOS B	6.5	48.3	0.89	0.87	1.13	37.5
East: Yamba Rd (E)															
4	L2	All MCs	148	1.5	148	1.5	0.530	4.6	LOS A	5.2	37.3	0.47	0.44	0.47	47.4
5	T1	All MCs	564	4.3	564	4.3	0.530	4.9	LOS A	5.2	37.3	0.47	0.44	0.47	49.6
Approach			713	3.7	713	3.7	0.530	4.9	LOS A	5.2	37.3	0.47	0.44	0.47	49.2
West: Yamba Rd (W)															
11	T1	All MCs	604	4.8	604	4.8	0.713	9.5	LOS A	9.0	66.1	0.89	0.76	1.06	46.9
12	R2	All MCs	98	14.0	98	14.0	0.713	14.5	LOS B	9.0	66.1	0.89	0.76	1.06	38.6
Approach			702	6.1	702	6.1	0.713	10.2	LOS A	9.0	66.1	0.89	0.76	1.06	46.1
All Vehicles			1929	5.3	1929	5.3	0.713	9.4	LOS A	9.0	66.1	0.74	0.67	0.86	45.0

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

MOVEMENT SUMMARY

Site: 101 [2034 BG PM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Carrs Drive (S)															
1	L2	All MCs	140	8.2	140	8.2	0.362	7.8	LOS A	2.5	18.2	0.76	0.71	0.76	38.2
3	R2	All MCs	152	1.9	152	1.9	0.362	12.4	LOS A	2.5	18.2	0.76	0.71	0.76	42.9
Approach			292	4.9	292	4.9	0.362	10.2	LOS A	2.5	18.2	0.76	0.71	0.76	40.9
East: Yamba Rd (E)															
4	L2	All MCs	281	4.3	281	4.3	0.661	5.4	LOS A	6.9	50.1	0.64	0.52	0.64	46.4
5	T1	All MCs	558	3.1	558	3.1	0.661	5.6	LOS A	6.9	50.1	0.64	0.52	0.64	49.0
Approach			839	3.5	839	3.5	0.661	5.6	LOS A	6.9	50.1	0.64	0.52	0.64	48.2
West: Yamba Rd (W)															
11	T1	All MCs	611	1.4	611	1.4	0.601	5.4	LOS A	6.0	42.8	0.59	0.52	0.59	48.8
12	R2	All MCs	159	3.8	159	3.8	0.601	10.0	LOS A	6.0	42.8	0.59	0.52	0.59	41.1
Approach			769	1.9	769	1.9	0.601	6.3	LOS A	6.0	42.8	0.59	0.52	0.59	47.7
All Vehicles			1900	3.1	1900	3.1	0.661	6.6	LOS A	6.9	50.1	0.64	0.55	0.64	47.0

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

MOVEMENT SUMMARY

Site: 101 [2024 DES AM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Carrs Drive (S)															
1	L2	All MCs	191	10.8	191	10.8	0.633	10.2	LOS A	6.4	47.4	0.84	0.82	1.03	35.1
3	R2	All MCs	372	4.2	372	4.2	0.633	14.8	LOS B	6.4	47.4	0.84	0.82	1.03	40.2
Approach			562	6.4	562	6.4	0.633	13.3	LOS A	6.4	47.4	0.84	0.82	1.03	38.7
East: Yamba Rd (E)															
4	L2	All MCs	144	1.5	144	1.5	0.459	4.6	LOS A	4.0	29.1	0.42	0.44	0.42	47.8
5	T1	All MCs	472	4.3	472	4.3	0.459	4.8	LOS A	4.0	29.1	0.42	0.44	0.42	49.9
Approach			616	3.6	616	3.6	0.459	4.8	LOS A	4.0	29.1	0.42	0.44	0.42	49.5
West: Yamba Rd (W)															
11	T1	All MCs	505	4.8	505	4.8	0.636	8.7	LOS A	6.7	49.4	0.84	0.73	0.96	47.2
12	R2	All MCs	96	14.0	96	14.0	0.636	13.7	LOS A	6.7	49.4	0.84	0.73	0.96	39.0
Approach			601	6.3	601	6.3	0.636	9.5	LOS A	6.7	49.4	0.84	0.73	0.96	46.3
All Vehicles			1779	5.4	1779	5.4	0.636	9.1	LOS A	6.7	49.4	0.70	0.66	0.79	45.1

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

MOVEMENT SUMMARY

Site: 101 [2024 DES PM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Carrs Drive (S)															
1	L2	All MCs	142	8.2	142	8.2	0.336	7.0	LOS A	2.3	16.4	0.70	0.68	0.70	39.1
3	R2	All MCs	154	1.9	154	1.9	0.336	11.7	LOS A	2.3	16.4	0.70	0.68	0.70	43.7
Approach			296	4.9	296	4.9	0.336	9.4	LOS A	2.3	16.4	0.70	0.68	0.70	41.7
East: Yamba Rd (E)															
4	L2	All MCs	312	4.3	312	4.3	0.628	5.5	LOS A	6.1	44.0	0.63	0.53	0.63	46.5
5	T1	All MCs	467	3.1	467	3.1	0.628	5.7	LOS A	6.1	44.0	0.63	0.53	0.63	49.1
Approach			779	3.6	779	3.6	0.628	5.6	LOS A	6.1	44.0	0.63	0.53	0.63	48.2
West: Yamba Rd (W)															
11	T1	All MCs	511	1.4	511	1.4	0.539	5.3	LOS A	4.9	34.8	0.54	0.52	0.54	48.9
12	R2	All MCs	176	3.8	176	3.8	0.539	9.9	LOS A	4.9	34.8	0.54	0.52	0.54	41.3
Approach			686	2.0	686	2.0	0.539	6.5	LOS A	4.9	34.8	0.54	0.52	0.54	47.5
All Vehicles			1761	3.2	1761	3.2	0.628	6.6	LOS A	6.1	44.0	0.61	0.55	0.61	46.9

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

MOVEMENT SUMMARY

Site: 101 [2034 DES AM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Carrs Drive (S)															
1	L2	All MCs	200	10.8	200	10.8	0.730	14.3	LOS A	9.2	67.9	0.95	0.96	1.36	31.9
3	R2	All MCs	388	4.2	388	4.2	0.730	18.8	LOS B	9.2	67.9	0.95	0.96	1.36	37.1
Approach			588	6.4	588	6.4	0.730	17.3	LOS B	9.2	67.9	0.95	0.96	1.36	35.6
East: Yamba Rd (E)															
4	L2	All MCs	160	1.5	160	1.5	0.545	4.7	LOS A	5.5	39.6	0.51	0.45	0.51	47.2
5	T1	All MCs	564	4.3	564	4.3	0.545	5.0	LOS A	5.5	39.6	0.51	0.45	0.51	49.5
Approach			724	3.7	724	3.7	0.545	4.9	LOS A	5.5	39.6	0.51	0.45	0.51	49.0
West: Yamba Rd (W)															
11	T1	All MCs	604	4.8	604	4.8	0.766	11.7	LOS A	11.0	81.0	0.97	0.86	1.26	45.0
12	R2	All MCs	105	14.0	105	14.0	0.766	16.8	LOS B	11.0	81.0	0.97	0.86	1.26	36.3
Approach			709	6.2	709	6.2	0.766	12.5	LOS A	11.0	81.0	0.97	0.86	1.26	44.0
All Vehicles			2022	5.4	2022	5.4	0.766	11.2	LOS A	11.0	81.0	0.80	0.74	1.02	43.3

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

MOVEMENT SUMMARY

Site: 101 [2034 DES PM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Carrs Drive (S)															
1	L2	All MCs	154	8.2	154	8.2	0.406	7.9	LOS A	2.9	21.2	0.80	0.72	0.80	38.1
3	R2	All MCs	166	1.9	166	1.9	0.406	12.5	LOS A	2.9	21.2	0.80	0.72	0.80	42.8
Approach			320	4.9	320	4.9	0.406	10.3	LOS A	2.9	21.2	0.80	0.72	0.80	40.8
East: Yamba Rd (E)															
4	L2	All MCs	322	4.3	322	4.3	0.714	5.9	LOS A	8.2	59.1	0.73	0.56	0.74	45.8
5	T1	All MCs	558	3.1	558	3.1	0.714	6.1	LOS A	8.2	59.1	0.73	0.56	0.74	48.5
Approach			880	3.5	880	3.5	0.714	6.0	LOS A	8.2	59.1	0.73	0.56	0.74	47.7
West: Yamba Rd (W)															
11	T1	All MCs	611	1.4	611	1.4	0.631	5.5	LOS A	6.6	46.6	0.64	0.54	0.64	48.5
12	R2	All MCs	182	3.8	182	3.8	0.631	10.2	LOS A	6.6	46.6	0.64	0.54	0.64	40.7
Approach			793	2.0	793	2.0	0.631	6.6	LOS A	6.6	46.6	0.64	0.54	0.64	47.2
All Vehicles			1993	3.1	1993	3.1	0.714	7.0	LOS A	8.2	59.1	0.71	0.58	0.71	46.5

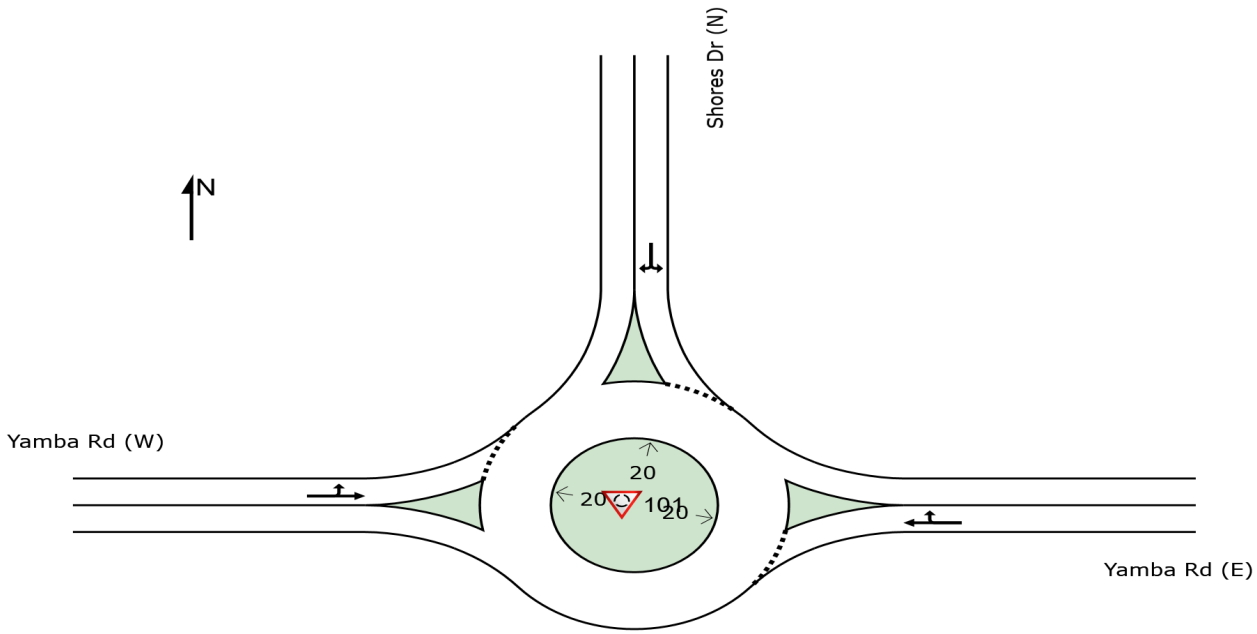
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout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

SITE LAYOUT

Site: 101 [2024 BG AM (Site Folder: General)]

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 101 [2024 BG AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yamba Rd (E)															
5	T1	All MCs	518	4.1	518	4.1	0.400	4.3	LOS A	3.5	25.4	0.18	0.43	0.18	53.2
6	R2	All MCs	109	4.0	109	4.0	0.400	8.9	LOS A	3.5	25.4	0.18	0.43	0.18	52.2
Approach			627	4.1	627	4.1	0.400	5.1	LOS A	3.5	25.4	0.18	0.43	0.18	53.0
North: Shores Dr (N)															
7	L2	All MCs	217	1.5	217	1.5	0.328	8.9	LOS A	2.2	15.7	0.80	0.73	0.80	49.9
9	R2	All MCs	24	0.0	24	0.0	0.328	13.7	LOS A	2.2	15.7	0.80	0.73	0.80	48.4
Approach			241	1.3	241	1.3	0.328	9.4	LOS A	2.2	15.7	0.80	0.73	0.80	49.8
West: Yamba Rd (W)															
10	L2	All MCs	37	4.2	37	4.2	0.553	4.8	LOS A	4.7	34.1	0.43	0.44	0.43	51.3
11	T1	All MCs	714	4.7	714	4.7	0.553	5.0	LOS A	4.7	34.1	0.43	0.44	0.43	52.5
Approach			751	4.7	751	4.7	0.553	5.0	LOS A	4.7	34.1	0.43	0.44	0.43	52.5
All Vehicles			1619	4.0	1619	4.0	0.553	5.7	LOS A	4.7	34.1	0.39	0.48	0.39	52.2

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

MOVEMENT SUMMARY

Site: 101 [2024 BG PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yamba Rd (E)															
5	T1	All MCs	624	2.2	624	2.2	0.481	4.3	LOS A	4.6	32.6	0.18	0.44	0.18	53.1
6	R2	All MCs	149	2.2	149	2.2	0.481	8.9	LOS A	4.6	32.6	0.18	0.44	0.18	52.2
Approach			774	2.2	774	2.2	0.481	5.1	LOS A	4.6	32.6	0.18	0.44	0.18	52.9
North: Shores Dr (N)															
7	L2	All MCs	119	2.7	119	2.7	0.168	7.2	LOS A	1.0	7.2	0.67	0.66	0.67	51.0
9	R2	All MCs	22	0.0	22	0.0	0.168	11.9	LOS A	1.0	7.2	0.67	0.66	0.67	49.6
Approach			141	2.3	141	2.3	0.168	7.9	LOS A	1.0	7.2	0.67	0.66	0.67	50.8
West: Yamba Rd (W)															
10	L2	All MCs	36	3.4	36	3.4	0.467	5.0	LOS A	3.4	24.6	0.44	0.46	0.44	51.3
11	T1	All MCs	568	2.4	568	2.4	0.467	5.2	LOS A	3.4	24.6	0.44	0.46	0.44	52.5
Approach			604	2.5	604	2.5	0.467	5.1	LOS A	3.4	24.6	0.44	0.46	0.44	52.4
All Vehicles			1519	2.3	1519	2.3	0.481	5.4	LOS A	4.6	32.6	0.33	0.47	0.33	52.5

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

MOVEMENT SUMMARY

Site: 101 [2034 BG AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yamba Rd (E)															
5	T1	All MCs	609	4.1	609	4.1	0.475	4.3	LOS A	4.7	34.4	0.22	0.43	0.22	52.9
6	R2	All MCs	131	4.0	131	4.0	0.475	8.9	LOS A	4.7	34.4	0.22	0.43	0.22	52.0
Approach			740	4.1	740	4.1	0.475	5.1	LOS A	4.7	34.4	0.22	0.43	0.22	52.8
North: Shores Dr (N)															
7	L2	All MCs	259	1.5	259	1.5	0.452	11.5	LOS A	3.6	25.7	0.91	0.82	1.01	48.0
9	R2	All MCs	28	0.0	28	0.0	0.452	16.2	LOS B	3.6	25.7	0.91	0.82	1.01	46.4
Approach			287	1.4	287	1.4	0.452	12.0	LOS A	3.6	25.7	0.91	0.82	1.01	47.9
West: Yamba Rd (W)															
10	L2	All MCs	41	4.2	41	4.2	0.643	5.1	LOS A	6.3	45.6	0.53	0.47	0.53	50.8
11	T1	All MCs	813	4.7	813	4.7	0.643	5.4	LOS A	6.3	45.6	0.53	0.47	0.53	52.0
Approach			854	4.7	854	4.7	0.643	5.4	LOS A	6.3	45.6	0.53	0.47	0.53	51.9
All Vehicles			1881	3.9	1881	3.9	0.643	6.3	LOS A	6.3	45.6	0.47	0.51	0.49	51.6

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

MOVEMENT SUMMARY

Site: 101 [2034 BG PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yamba Rd (E)															
5	T1	All MCs	709	2.2	709	2.2	0.553	4.3	LOS A	6.1	43.2	0.22	0.43	0.22	52.9
6	R2	All MCs	179	2.2	179	2.2	0.553	8.9	LOS A	6.1	43.2	0.22	0.43	0.22	52.0
Approach			888	2.2	888	2.2	0.553	5.2	LOS A	6.1	43.2	0.22	0.43	0.22	52.7
North: Shores Dr (N)															
7	L2	All MCs	142	2.7	142	2.7	0.222	8.1	LOS A	1.4	10.2	0.75	0.70	0.75	50.3
9	R2	All MCs	24	0.0	24	0.0	0.222	12.8	LOS A	1.4	10.2	0.75	0.70	0.75	48.9
Approach			166	2.3	166	2.3	0.222	8.8	LOS A	1.4	10.2	0.75	0.70	0.75	50.1
West: Yamba Rd (W)															
10	L2	All MCs	42	3.4	42	3.4	0.563	5.4	LOS A	4.7	33.4	0.54	0.50	0.54	50.8
11	T1	All MCs	666	2.4	666	2.4	0.563	5.6	LOS A	4.7	33.4	0.54	0.50	0.54	52.0
Approach			708	2.5	708	2.5	0.563	5.5	LOS A	4.7	33.4	0.54	0.50	0.54	52.0
All Vehicles			1763	2.3	1763	2.3	0.563	5.7	LOS A	6.1	43.2	0.40	0.48	0.40	52.2

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

MOVEMENT SUMMARY

Site: 101 [2024 DES AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yamba Rd (E)															
5	T1	All MCs	528	4.1	528	4.1	0.407	4.3	LOS A	3.6	26.3	0.18	0.43	0.18	53.1
6	R2	All MCs	109	4.0	109	4.0	0.407	8.9	LOS A	3.6	26.3	0.18	0.43	0.18	52.1
Approach			638	4.1	638	4.1	0.407	5.1	LOS A	3.6	26.3	0.18	0.43	0.18	53.0
North: Shores Dr (N)															
7	L2	All MCs	217	1.5	217	1.5	0.346	9.4	LOS A	2.4	17.0	0.83	0.74	0.83	49.5
9	R2	All MCs	24	0.0	24	0.0	0.346	14.2	LOS A	2.4	17.0	0.83	0.74	0.83	48.0
Approach			241	1.3	241	1.3	0.346	9.9	LOS A	2.4	17.0	0.83	0.74	0.83	49.4
West: Yamba Rd (W)															
10	L2	All MCs	39	4.2	39	4.2	0.587	4.8	LOS A	5.2	38.2	0.45	0.45	0.45	51.2
11	T1	All MCs	760	4.7	760	4.7	0.587	5.1	LOS A	5.2	38.2	0.45	0.45	0.45	52.4
Approach			799	4.7	799	4.7	0.587	5.1	LOS A	5.2	38.2	0.45	0.45	0.45	52.4
All Vehicles			1678	4.0	1678	4.0	0.587	5.8	LOS A	5.2	38.2	0.40	0.48	0.40	52.1

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

MOVEMENT SUMMARY

Site: 101 [2024 DES PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yamba Rd (E)															
5	T1	All MCs	664	2.2	664	2.2	0.506	4.3	LOS A	5.0	35.8	0.19	0.43	0.19	53.1
6	R2	All MCs	149	2.2	149	2.2	0.506	8.9	LOS A	5.0	35.8	0.19	0.43	0.19	52.1
Approach			814	2.2	814	2.2	0.506	5.1	LOS A	5.0	35.8	0.19	0.43	0.19	52.9
North: Shores Dr (N)															
7	L2	All MCs	119	2.7	119	2.7	0.171	7.3	LOS A	1.0	7.4	0.68	0.67	0.68	50.9
9	R2	All MCs	23	0.0	23	0.0	0.171	12.0	LOS A	1.0	7.4	0.68	0.67	0.68	49.5
Approach			142	2.3	142	2.3	0.171	8.1	LOS A	1.0	7.4	0.68	0.67	0.68	50.7
West: Yamba Rd (W)															
10	L2	All MCs	36	3.4	36	3.4	0.477	5.0	LOS A	3.6	25.6	0.45	0.46	0.45	51.2
11	T1	All MCs	582	2.4	582	2.4	0.477	5.2	LOS A	3.6	25.6	0.45	0.46	0.45	52.5
Approach			618	2.5	618	2.5	0.477	5.2	LOS A	3.6	25.6	0.45	0.46	0.45	52.4
All Vehicles			1574	2.3	1574	2.3	0.506	5.4	LOS A	5.0	35.8	0.34	0.47	0.34	52.5

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

MOVEMENT SUMMARY

Site: 101 [2034 DES AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yamba Rd (E)															
5	T1	All MCs	621	4.1	621	4.1	0.482	4.3	LOS A	4.9	35.6	0.23	0.43	0.23	52.9
6	R2	All MCs	131	4.0	131	4.0	0.482	8.9	LOS A	4.9	35.6	0.23	0.43	0.23	51.9
Approach			752	4.1	752	4.1	0.482	5.1	LOS A	4.9	35.6	0.23	0.43	0.23	52.8
North: Shores Dr (N)															
7	L2	All MCs	259	1.5	259	1.5	0.484	13.0	LOS A	4.1	29.1	0.94	0.86	1.10	47.0
9	R2	All MCs	28	0.0	28	0.0	0.484	17.7	LOS B	4.1	29.1	0.94	0.86	1.10	45.4
Approach			287	1.4	287	1.4	0.484	13.5	LOS A	4.1	29.1	0.94	0.86	1.10	46.9
West: Yamba Rd (W)															
10	L2	All MCs	44	4.2	44	4.2	0.678	5.2	LOS A	7.1	51.3	0.57	0.48	0.57	50.6
11	T1	All MCs	859	4.7	859	4.7	0.678	5.5	LOS A	7.1	51.3	0.57	0.48	0.57	51.8
Approach			903	4.7	903	4.7	0.678	5.5	LOS A	7.1	51.3	0.57	0.48	0.57	51.8
All Vehicles			1942	4.0	1942	4.0	0.678	6.5	LOS A	7.1	51.3	0.49	0.52	0.52	51.4

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

MOVEMENT SUMMARY

Site: 101 [2034 DES PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yamba Rd (E)															
5	T1	All MCs	749	2.2	749	2.2	0.580	4.3	LOS A	6.7	47.6	0.24	0.43	0.24	52.9
6	R2	All MCs	179	2.2	179	2.2	0.580	8.9	LOS A	6.7	47.6	0.24	0.43	0.24	51.9
Approach			928	2.2	928	2.2	0.580	5.2	LOS A	6.7	47.6	0.24	0.43	0.24	52.7
North: Shores Dr (N)															
7	L2	All MCs	142	2.7	142	2.7	0.228	8.2	LOS A	1.5	10.7	0.76	0.71	0.76	50.2
9	R2	All MCs	26	0.0	26	0.0	0.228	13.0	LOS A	1.5	10.7	0.76	0.71	0.76	48.7
Approach			168	2.3	168	2.3	0.228	9.0	LOS A	1.5	10.7	0.76	0.71	0.76	50.0
West: Yamba Rd (W)															
10	L2	All MCs	42	3.4	42	3.4	0.574	5.4	LOS A	4.9	34.8	0.55	0.50	0.55	50.7
11	T1	All MCs	681	2.4	681	2.4	0.574	5.6	LOS A	4.9	34.8	0.55	0.50	0.55	52.0
Approach			723	2.5	723	2.5	0.574	5.6	LOS A	4.9	34.8	0.55	0.50	0.55	51.9
All Vehicles			1820	2.3	1820	2.3	0.580	5.7	LOS A	6.7	47.6	0.41	0.48	0.41	52.1

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

MOVEMENT SUMMARY

Site: 101 [2024 DES AM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yamba Rd (E)															
5	T1	All MCs	575	4.1	575	4.1	0.445	4.3	LOS A	4.2	30.7	0.20	0.43	0.20	53.0
6	R2	All MCs	121	4.0	121	4.0	0.445	8.9	LOS A	4.2	30.7	0.20	0.43	0.20	52.0
Approach			696	4.1	696	4.1	0.445	5.1	LOS A	4.2	30.7	0.20	0.43	0.20	52.9
North: Shores Dr (N)															
7	L2	All MCs	241	1.5	241	1.5	0.405	10.3	LOS A	3.0	21.2	0.88	0.78	0.91	48.9
9	R2	All MCs	26	0.0	26	0.0	0.405	15.1	LOS B	3.0	21.2	0.88	0.78	0.91	47.3
Approach			267	1.4	267	1.4	0.405	10.8	LOS A	3.0	21.2	0.88	0.78	0.91	48.7
West: Yamba Rd (W)															
10	L2	All MCs	40	4.2	40	4.2	0.619	5.0	LOS A	5.8	42.4	0.50	0.46	0.50	51.0
11	T1	All MCs	792	4.7	792	4.7	0.619	5.2	LOS A	5.8	42.4	0.50	0.46	0.50	52.2
Approach			832	4.7	832	4.7	0.619	5.2	LOS A	5.8	42.4	0.50	0.46	0.50	52.1
All Vehicles			1795	4.0	1795	4.0	0.619	6.0	LOS A	5.8	42.4	0.44	0.50	0.44	51.9

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

MOVEMENT SUMMARY

Site: 101 [2024 DES PM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yamba Rd (E)															
5	T1	All MCs	693	2.2	693	2.2	0.535	4.3	LOS A	5.6	40.1	0.21	0.43	0.21	53.0
6	R2	All MCs	166	2.2	166	2.2	0.535	8.9	LOS A	5.6	40.1	0.21	0.43	0.21	52.0
Approach			859	2.2	859	2.2	0.535	5.2	LOS A	5.6	40.1	0.21	0.43	0.21	52.8
North: Shores Dr (N)															
7	L2	All MCs	133	2.7	133	2.7	0.200	7.7	LOS A	1.3	9.0	0.72	0.69	0.72	50.6
9	R2	All MCs	24	0.0	24	0.0	0.200	12.5	LOS A	1.3	9.0	0.72	0.69	0.72	49.2
Approach			157	2.3	157	2.3	0.200	8.5	LOS A	1.3	9.0	0.72	0.69	0.72	50.4
West: Yamba Rd (W)															
10	L2	All MCs	39	3.4	39	3.4	0.526	5.2	LOS A	4.2	29.8	0.50	0.48	0.50	51.0
11	T1	All MCs	631	2.4	631	2.4	0.526	5.4	LOS A	4.2	29.8	0.50	0.48	0.50	52.2
Approach			669	2.5	669	2.5	0.526	5.4	LOS A	4.2	29.8	0.50	0.48	0.50	52.2
All Vehicles			1685	2.3	1685	2.3	0.535	5.6	LOS A	5.6	40.1	0.37	0.48	0.37	52.3

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

MOVEMENT SUMMARY

Site: 101 [2034 DES AM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yamba Rd (E)															
5	T1	All MCs	677	4.1	677	4.1	0.530	4.4	LOS A	5.9	42.7	0.26	0.42	0.26	52.8
6	R2	All MCs	145	4.0	145	4.0	0.530	9.0	LOS A	5.9	42.7	0.26	0.42	0.26	51.8
Approach			822	4.1	822	4.1	0.530	5.2	LOS A	5.9	42.7	0.26	0.42	0.26	52.6
North: Shores Dr (N)															
7	L2	All MCs	287	1.5	287	1.5	0.589	16.9	LOS B	5.8	41.3	1.00	0.95	1.33	44.5
9	R2	All MCs	32	0.0	32	0.0	0.589	21.6	LOS B	5.8	41.3	1.00	0.95	1.33	42.8
Approach			319	1.4	319	1.4	0.589	17.4	LOS B	5.8	41.3	1.00	0.95	1.33	44.4
West: Yamba Rd (W)															
10	L2	All MCs	46	4.2	46	4.2	0.725	5.5	LOS A	8.2	59.4	0.65	0.51	0.65	50.2
11	T1	All MCs	902	4.7	902	4.7	0.725	5.8	LOS A	8.2	59.4	0.65	0.51	0.65	51.5
Approach			948	4.7	948	4.7	0.725	5.8	LOS A	8.2	59.4	0.65	0.51	0.65	51.4
All Vehicles			2089	3.9	2089	3.9	0.725	7.3	LOS A	8.2	59.4	0.55	0.54	0.60	50.7

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

MOVEMENT SUMMARY

Site: 101 [2034 DES PM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yamba Rd (E)															
5	T1	All MCs	787	2.2	787	2.2	0.617	4.3	LOS A	7.7	55.1	0.27	0.43	0.27	52.7
6	R2	All MCs	199	2.2	199	2.2	0.617	9.0	LOS A	7.7	55.1	0.27	0.43	0.27	51.8
Approach			986	2.2	986	2.2	0.617	5.3	LOS A	7.7	55.1	0.27	0.43	0.27	52.5
North: Shores Dr (N)															
7	L2	All MCs	158	2.7	158	2.7	0.275	8.9	LOS A	1.9	13.4	0.82	0.74	0.82	49.7
9	R2	All MCs	27	0.0	27	0.0	0.275	13.6	LOS A	1.9	13.4	0.82	0.74	0.82	48.2
Approach			185	2.3	185	2.3	0.275	9.6	LOS A	1.9	13.4	0.82	0.74	0.82	49.5
West: Yamba Rd (W)															
10	L2	All MCs	46	3.4	46	3.4	0.637	5.7	LOS A	5.8	41.8	0.63	0.53	0.63	50.3
11	T1	All MCs	740	2.4	740	2.4	0.637	5.9	LOS A	5.8	41.8	0.63	0.53	0.63	51.6
Approach			786	2.5	786	2.5	0.637	5.9	LOS A	5.8	41.8	0.63	0.53	0.63	51.5
All Vehicles			1958	2.3	1958	2.3	0.637	5.9	LOS A	7.7	55.1	0.46	0.50	0.46	51.8

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

MOVEMENT SUMMARY

Site: 101 [2024 BG AM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yamba Rd (E)															
5	T1	All MCs	585	4.1	585	4.1	0.453	4.3	LOS A	4.4	31.8	0.21	0.43	0.21	53.0
6	R2	All MCs	121	4.0	121	4.0	0.453	8.9	LOS A	4.4	31.8	0.21	0.43	0.21	52.0
Approach			706	4.1	706	4.1	0.453	5.1	LOS A	4.4	31.8	0.21	0.43	0.21	52.8
North: Shores Dr (N)															
7	L2	All MCs	241	1.5	241	1.5	0.434	11.5	LOS A	3.4	24.1	0.91	0.81	0.99	48.0
9	R2	All MCs	27	0.0	27	0.0	0.434	16.3	LOS B	3.4	24.1	0.91	0.81	0.99	46.4
Approach			268	1.3	268	1.3	0.434	12.0	LOS A	3.4	24.1	0.91	0.81	0.99	47.8
West: Yamba Rd (W)															
10	L2	All MCs	43	4.2	43	4.2	0.654	5.1	LOS A	6.5	47.7	0.53	0.47	0.53	50.8
11	T1	All MCs	838	4.7	838	4.7	0.654	5.3	LOS A	6.5	47.7	0.53	0.47	0.53	52.0
Approach			881	4.7	881	4.7	0.654	5.3	LOS A	6.5	47.7	0.53	0.47	0.53	52.0
All Vehicles			1856	4.0	1856	4.0	0.654	6.2	LOS A	6.5	47.7	0.46	0.50	0.47	51.7

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

MOVEMENT SUMMARY

Site: 101 [2024 BG PM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yamba Rd (E)															
5	T1	All MCs	733	2.2	733	2.2	0.561	4.3	LOS A	6.2	44.0	0.22	0.43	0.22	53.0
6	R2	All MCs	166	2.2	166	2.2	0.561	8.9	LOS A	6.2	44.0	0.22	0.43	0.22	52.0
Approach			899	2.2	899	2.2	0.561	5.2	LOS A	6.2	44.0	0.22	0.43	0.22	52.8
North: Shores Dr (N)															
7	L2	All MCs	133	2.7	133	2.7	0.204	7.9	LOS A	1.3	9.2	0.73	0.69	0.73	50.5
9	R2	All MCs	25	0.0	25	0.0	0.204	12.6	LOS A	1.3	9.2	0.73	0.69	0.73	49.0
Approach			158	2.3	158	2.3	0.204	8.6	LOS A	1.3	9.2	0.73	0.69	0.73	50.3
West: Yamba Rd (W)															
10	L2	All MCs	40	3.4	40	3.4	0.537	5.2	LOS A	4.3	31.0	0.51	0.48	0.51	50.9
11	T1	All MCs	644	2.4	644	2.4	0.537	5.4	LOS A	4.3	31.0	0.51	0.48	0.51	52.2
Approach			684	2.5	684	2.5	0.537	5.4	LOS A	4.3	31.0	0.51	0.48	0.51	52.1
All Vehicles			1741	2.3	1741	2.3	0.561	5.6	LOS A	6.2	44.0	0.38	0.47	0.38	52.3

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

MOVEMENT SUMMARY

Site: 101 [2034 BG AM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yamba Rd (E)															
5	T1	All MCs	688	4.1	688	4.1	0.537	4.4	LOS A	6.1	43.8	0.27	0.42	0.27	52.8
6	R2	All MCs	145	4.0	145	4.0	0.537	9.0	LOS A	6.1	43.8	0.27	0.42	0.27	51.8
Approach			834	4.1	834	4.1	0.537	5.2	LOS A	6.1	43.8	0.27	0.42	0.27	52.6
North: Shores Dr (N)															
7	L2	All MCs	287	2.7	287	2.7	0.633	19.8	LOS B	6.6	47.4	1.00	1.02	1.42	42.8
9	R2	All MCs	32	0.0	32	0.0	0.633	24.4	LOS B	6.6	47.4	1.00	1.02	1.42	41.1
Approach			319	2.4	319	2.4	0.633	20.2	LOS B	6.6	47.4	1.00	1.02	1.42	42.7
West: Yamba Rd (W)															
10	L2	All MCs	48	3.4	48	3.4	0.751	5.6	LOS A	8.9	63.8	0.68	0.52	0.68	50.1
11	T1	All MCs	948	2.4	948	2.4	0.751	5.8	LOS A	8.9	63.8	0.68	0.52	0.68	51.4
Approach			997	2.4	997	2.4	0.751	5.8	LOS A	8.9	63.8	0.68	0.52	0.68	51.3
All Vehicles			2149	3.1	2149	3.1	0.751	7.7	LOS A	8.9	63.8	0.57	0.56	0.63	50.3

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

MOVEMENT SUMMARY

Site: 101 [2034 BG PM - Seasonality (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Yamba Road / Carrs Drive
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Yamba Rd (E)															
5	T1	All MCs	827	2.2	827	2.2	0.643	4.4	LOS A	8.5	60.6	0.29	0.43	0.29	52.7
6	R2	All MCs	199	2.2	199	2.2	0.643	9.0	LOS A	8.5	60.6	0.29	0.43	0.29	51.7
Approach			1026	2.2	1026	2.2	0.643	5.3	LOS A	8.5	60.6	0.29	0.43	0.29	52.5
North: Shores Dr (N)															
7	L2	All MCs	158	2.7	158	2.7	0.282	9.1	LOS A	1.9	13.9	0.83	0.74	0.83	49.6
9	R2	All MCs	28	0.0	28	0.0	0.282	13.8	LOS A	1.9	13.9	0.83	0.74	0.83	48.1
Approach			186	2.3	186	2.3	0.282	9.8	LOS A	1.9	13.9	0.83	0.74	0.83	49.4
West: Yamba Rd (W)															
10	L2	All MCs	47	3.4	47	3.4	0.649	5.7	LOS A	6.1	43.5	0.64	0.53	0.64	50.3
11	T1	All MCs	754	2.4	754	2.4	0.649	5.9	LOS A	6.1	43.5	0.64	0.53	0.64	51.6
Approach			801	2.5	801	2.5	0.649	5.9	LOS A	6.1	43.5	0.64	0.53	0.64	51.5
All Vehicles			2014	2.3	2014	2.3	0.649	5.9	LOS A	8.5	60.6	0.48	0.50	0.48	51.8

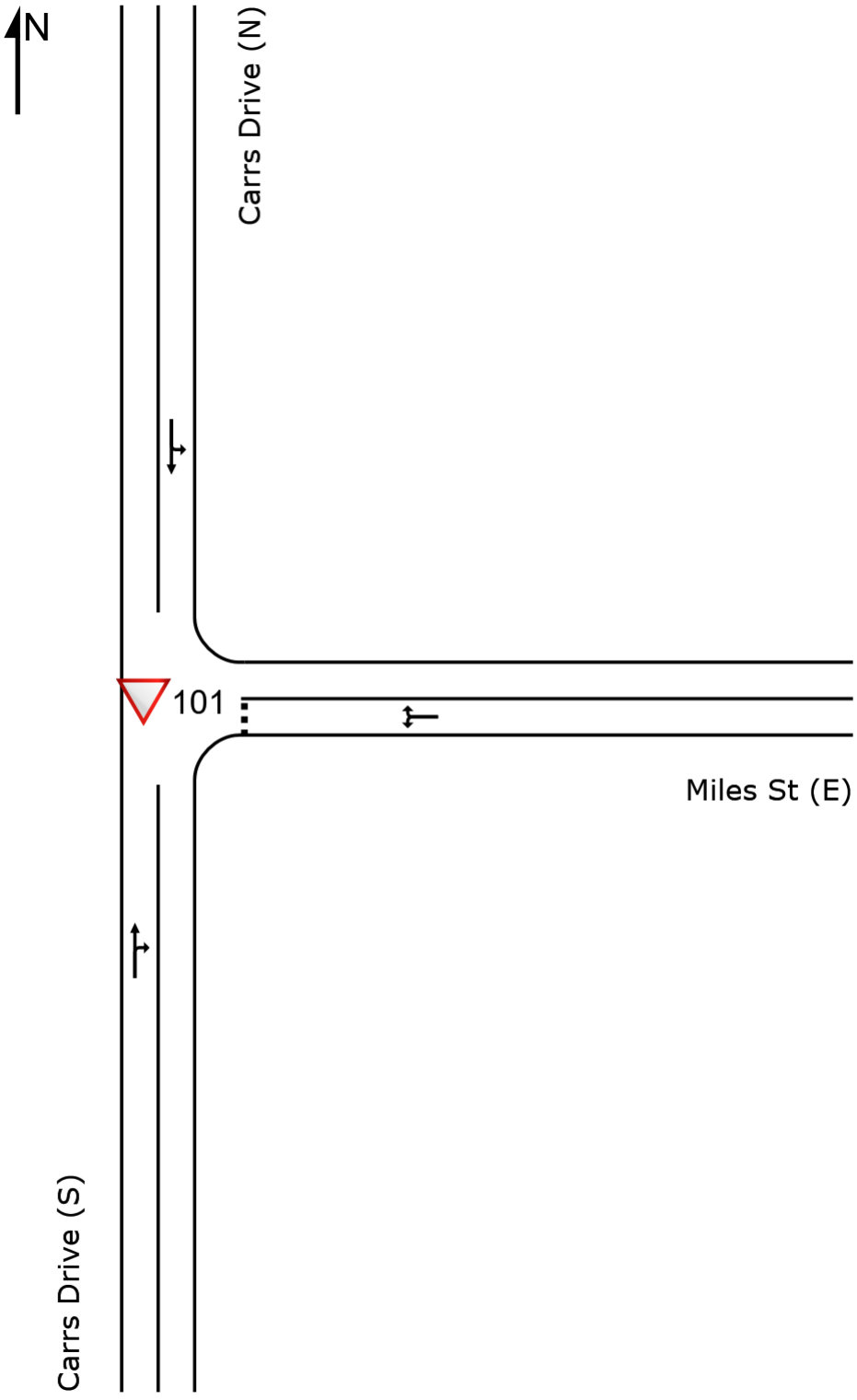
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout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

SITE LAYOUT

Site: 101 [2034 DES AM (Site Folder: General)]

Carrs Drive / Miles Street
Site Category: (None)
Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 101 [2034 DES AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

Carrs Drive / Miles Street
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Carrs Drive (S)															
2	T1	All MCs	144	2.0	144	2.0	0.076	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
3	R2	All MCs	1	2.0	1	2.0	0.076	5.5	LOS A	0.0	0.0	0.00	0.00	0.00	57.0
Approach			145	2.0	145	2.0	0.076	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.9
East: Miles St (E)															
4	L2	All MCs	1	2.0	1	2.0	0.132	5.7	LOS A	0.5	3.2	0.28	0.61	0.28	52.1
6	R2	All MCs	140	2.0	140	2.0	0.132	6.3	LOS A	0.5	3.2	0.28	0.61	0.28	51.8
Approach			141	2.0	141	2.0	0.132	6.3	LOS A	0.5	3.2	0.28	0.61	0.28	51.8
North: Carrs Drive (N)															
7	L2	All MCs	36	2.0	36	2.0	0.039	5.6	LOS A	0.0	0.0	0.00	0.29	0.00	55.0
8	T1	All MCs	37	2.0	37	2.0	0.039	0.0	LOS A	0.0	0.0	0.00	0.29	0.00	57.4
Approach			73	2.0	73	2.0	0.039	2.8	NA	0.0	0.0	0.00	0.29	0.00	56.2
All Vehicles			359	2.0	359	2.0	0.132	3.0	NA	0.5	3.2	0.11	0.30	0.11	55.8

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

MOVEMENT SUMMARY

Site: 101 [2034 DES PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

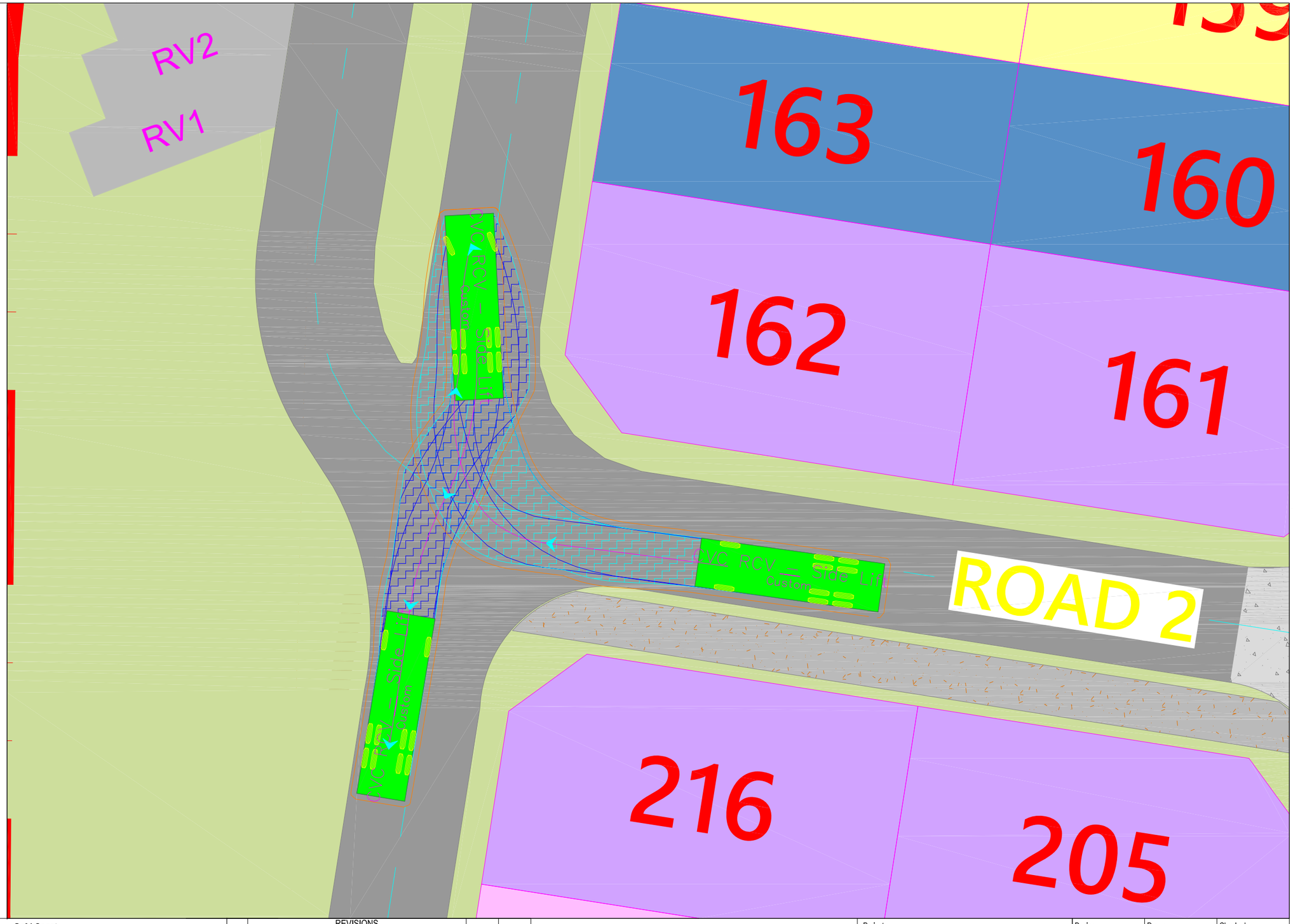
Carrs Drive / Miles Street
Site Category: (None)
Give-Way (Two-Way)

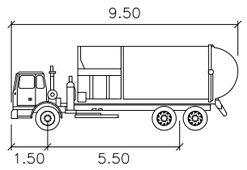
Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Carrs Drive (S)															
2	T1	All MCs	56	2.0	56	2.0	0.030	0.0	LOS A	0.0	0.1	0.02	0.02	0.02	59.8
3	R2	All MCs	1	2.0	1	2.0	0.030	6.5	LOS A	0.0	0.1	0.02	0.02	0.02	56.9
Approach			57	2.0	57	2.0	0.030	0.1	NA	0.0	0.1	0.02	0.02	0.02	59.8
East: Miles St (E)															
4	L2	All MCs	1	2.0	1	2.0	0.058	6.0	LOS A	0.2	1.3	0.30	0.61	0.30	52.0
6	R2	All MCs	58	2.0	58	2.0	0.058	6.4	LOS A	0.2	1.3	0.30	0.61	0.30	51.8
Approach			59	2.0	59	2.0	0.058	6.4	LOS A	0.2	1.3	0.30	0.61	0.30	51.8
North: Carrs Drive (N)															
7	L2	All MCs	135	2.0	135	2.0	0.139	5.6	LOS A	0.0	0.0	0.00	0.30	0.00	54.9
8	T1	All MCs	126	2.0	126	2.0	0.139	0.0	LOS A	0.0	0.0	0.00	0.30	0.00	57.2
Approach			261	2.0	261	2.0	0.139	2.9	NA	0.0	0.0	0.00	0.30	0.00	56.0
All Vehicles			377	2.0	377	2.0	0.139	3.0	NA	0.2	1.3	0.05	0.31	0.05	55.8

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

Appendix E: Swept Path Assessment





CVC RCV – Side Lift

meters

Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.5

DESIGN VEHICLE

Gold Coast
Suite 26, 58 Riverwalk Avenue, Robina QLD 4226
P: (07) 5562-5377
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Brisbane
Level 2, 428 Upper Edward Street, Spring Hill 4000
P: (07) 3831-4442
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Sydney
Studio 203, 3 Gladstone Street, Newtown NSW 2042
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REVISIONS

Issue	Revisions/Descriptions	Drawn	Date
001	Swept Path Assessment	A.P	20.07.22
002	Swept Path Assessment	A.P	16.09.22

Scale @ A3 — 0 2 4 6 8 10 — 1:200

Project: 120 Carrs Drive, Yamba

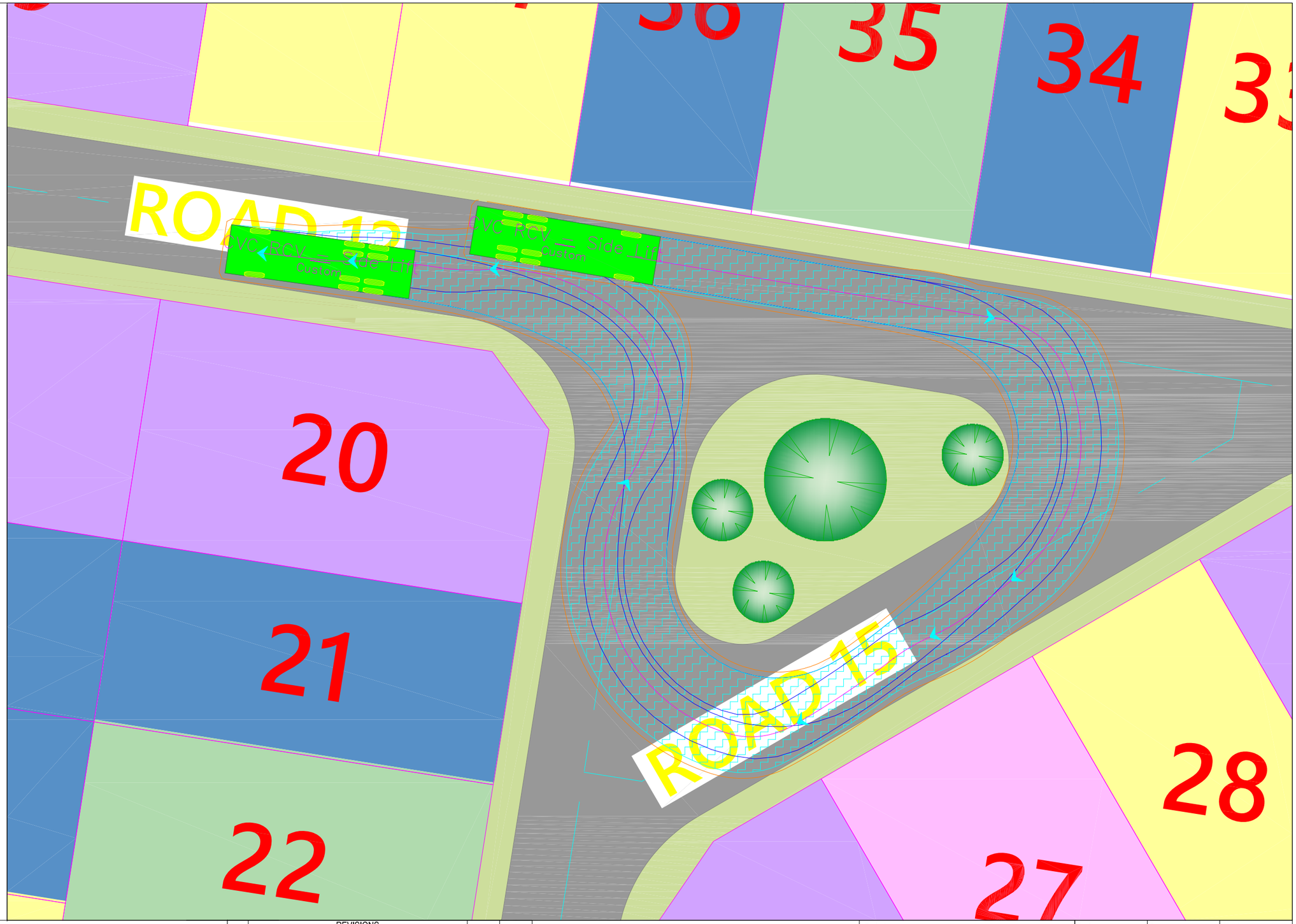
Title: Swept Path Assessment
RCV Bin Collection
Site West Manouevring

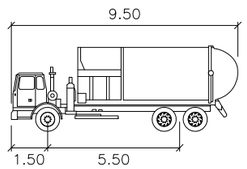
Design	Drawn	Checked
A.P	A.P	B.J

CONCEPT ONLY

Date: 16.09.22

Project Number	Sheet Number	Issue
P5271	1	002





CVC RCV – Side Lift

meters

Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.5

DESIGN VEHICLE

Gold Coast
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E: admin@bitziosconsulting.com.au
Sydney
Studio 203, 3 Gladstone Street, Newtown NSW 2042
P: (02) 9557 6202

REVISIONS

Issue	Revisions/Descriptions	Drawn	Date
001	Swept Path Assessment	A.P	20.07.22
002	Swept Path Assessment	A.P	16.09.22

Scale @ A3 0 2 4 6 8 10 1:200

Project: 120 Carrs Drive, Yamba

Title: Swept Path Assessment
RCV Bin Collection
Site East Manouevring

Design	Drawn	Checked
A.P	A.P	B.J

CONCEPT ONLY

Date: 16.09.22

Project Number	Sheet Number	Issue
P5271	2	002