MANUFACTURED HOME ESTATE / LIFESTYLE RESORT

LOT 100 DP1286524 & LOT 11 DP615229
40 – 80 & 82 CHAPMANS ROAD, TUNCURRY

PREPARED FOR: ALLAM MHE DEVELOPMENTS NO. 2 P/L

DECEMBER 2024

24/004

TRAFFIC & PARKING ASSESSMENT
ALLAM MHE DEVELOPMENTS NO.2 PTY LTD

MANUFACTURED HOME ESTATE / LIFESTYLE RESORT
LOT 100 DP1286524 & LOT11 DP615229
40 – 80 & 82 CHAPMANS ROAD, TUNCURRY

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QUALITY ASSURANCE

This document has been prepared, checked, and released in accordance with the Quality Control Standards established by Intersect Traffic Pty Ltd.

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A	17/08/24	Draft	JG
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C	20/09/24	Final Proof/Client Amendments	JG
D	28/11/24	Updated Masterplan / Community Consultation results / Approved	JG
E	10/12/24	Client corrections / Approved	JG

This document has been authorised by

Date 10th December 2024

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1.0 INTRODUCTION

Intersect Traffic Pty Ltd (Intersect Traffic) was engaged by Allam MHE Developments No. 2 Pty Ltd (Allam) to prepare a Traffic and Parking Assessment Report for a proposed manufactured home estate / lifestyle resort on Lot 100 DP1286524 & Lot 11 DP615229, 40 – 80 & 82 Chapmans Road, Tuncurry. The resort yields 283 manufactured home sites. Allam recently received approval for an 86-lot manufactured home estate / lifestyle resort on part of the site Lot 100 DP1286524 (40 – 80 Chapmans Road). The development will include a community clubhouse, and recreational facilities located in the middle of the site and will have an entrance directly off Chapmans Road approximately mid-block on Lot 100 DP1286524 (40 – 80 Chapmans Road. The development concept site plan is shown in ***Attachment A***.

This report is required to support a development application to MidCoast Council and presents the findings of the traffic and parking assessment including the following:

1. An outline of the existing situation in the vicinity of the site.
2. An assessment of the impact of the proposed development including the predicted traffic generation and its impact on existing road and intersection capacities.
3. Reviews parking, public transport, pedestrian, and cycle way requirements for the proposed development, including assessment against Council, Local Government Regulations, Australian Standards and Transport for NSW (TfNSW) standards and requirements; and
4. Presentation of conclusions and recommendations.

2.0 SITE DESCRIPTION

The subject site is shown in ***Figure 1*** below. It is located on the southern and eastern sides of Chapmans Road, Tuncurry approximately 520 metres west of The Lakes Way. The site is near Tuncurry racecourse and is approximately 2.7 km's and 3.8 km's north-east of the Tuncurry and Forster CBD areas, respectively.

The site is currently vacant and is addressed as 40 – 80 & 82 Chapmans Road, Tuncurry. The property is titled Lot 100 DP1286524 & Lot 11 DP615229 and has a total area of approximately 22.4 ha's however the development footprint is only 18.2 ha's. The site is currently zoned R2 – Low Density Residential and C2 – Environmental Conservation pursuant to the Great Lakes LEP (2014). The site currently is serviced by a 5-metre-wide sealed access crossing to Chapmans Road located approximately 400 metres west of Grandis Drive. The development site and the existing access from Chapmans Road are shown in ***Photographs 1 & 2*** below.

Figure 1 – Site Location

Photograph 1 – Development site from Chapmans Road

Photograph 2 – Existing vehicular access from Chapmans Road

3.0 EXISTING ROAD NETWORK

3.1 The Lakes Way

The Lakes Way is part of the classified state road network (MR692) under the care and control of the TfNSW. It is a major sub-arterial road in the region connecting Forster to the Pacific Motorway at Nabiac to the north and south via the Lakes Way (MR111) to Bulahdelah.

In the vicinity of the site The Lakes Way is a two-lane two-way urban road with sealed shoulders, grass verges and table drains along its length. Travel lane widths are between 3.3 and 3.5 metres while sealed shoulders between 1 and 3 metres wide exists on both sides of the road. Additional turning lanes are provided at major intersections including at Chapmans Road which is constructed with both a right turn protected deceleration lane and a left turn protected deceleration lane i.e. (CHR/AUL). A 50 km/h speed limit applies to this section of road and at the time of inspection The Lakes Way was observed to be in good condition. ***Photograph 3*** shows The Lakes Way near Chapmans Road.

Photograph 3 – The Lakes Way south of Chapmans Road.

3.2 Chapmans Road

Chapmans Road near the site is a local collector road providing access to The Lakes Way at a give-way controlled T-intersection. The roads' main function is to collect traffic from the residential areas west of The Lakes Way providing access to The Lakes Way as well as providing vehicular access to properties along its length. As a local road Chapmans Road is under the care and control of MidCoast Council. Near the site it is a two-lane two-way sealed urban road with kerb and gutter along the developed sections of the road. The total sealed carriageway width near The

Lakes Way is approximately 9 metres which allows a single lane of travel in each direction as well as some on-street car parking. West of Grandis Drive, including along the site frontage Chapmans Road becomes a rural standard road with a pavement width of 7 metres with grassed table drains. A 50 km/h speed limit zone applies to this section of road and at the time of inspection Chapmans Road was observed to be in good condition. (See ***Photograph 4***).

Photograph 4 – Chapmans Road near Grandis Drive.

3.3 Grandis Drive

The roads' main function is to collect traffic from the residential area south of Chapmans Road and west of The Lakes Way and distribute it to the sub-arterial road network at The Lakes Way as well as providing vehicular access to properties along its length. Intersect Traffic has collected evidence that indicates 35% of outbound traffic on Chapmans Road uses Grandis Drive to avoid the Chapmans Road / The Lakes Way intersection during peak traffic periods and connect to The Lakes Way at the signalised intersection of The Lakes Way and Grandis Drive. As a local road Grandis Drive is under the care and control of MidCoast Council. Near the site it is a two-lane two-way sealed urban road with kerb and gutter. The total sealed carriageway width is approximately 11 metres which allows a single lane of travel in each direction as well as on-street car parking. A 50 km/h speed limit zone applies to Grandis Drive and at the time of inspection Grandis Drive was observed to be in good condition. (See ***Photograph 5***).

Photograph 5 – Grandis Drive near Chapmans Road.

4.0 ROAD NETWORK IMPROVEMENTS

It is understood that the intersection of The Lakes Way and Chapmans Road is to be upgraded in the future from a priority-controlled give way intersection to a roundabout. This is to be funded by developer contributions for which the subject development will be liable. Construction of the roundabout therefore will be dependant on the rate of contribution collection i.e. development in the area and with no certainty as to when the roundabout is to be constructed this upgrade has initially been ignored in this assessment. The roundabout will in future however increase the capacity of the local road network by providing additional capacity within the intersection. It is understood that a major residential development by Landcom is proposed on The Lakes Way opposite Chapmans Road which will require the upgrading of The Lakes Way / Chapmans Road intersection to a roundabout as well as the widening of The Lakes Way to a four-lane two-way road. At this stage there is no clear timeframe known to the client for this work therefore for this assessment these works have been ignored. It is assumed however that this development would also be required to contribute to these works.

5.0 TRAFFIC VOLUMES

Northern Transport Planning on behalf of Intersect Traffic undertook manual traffic counts at the Lakes Way / Chapmans Road give way-controlled T-intersection and The Lakes Way (Manning Street) / Grandis Drive / The Northern Parkway signalised cross intersection on Tuesday 13th August 2024. These counts were undertaken between 7 am – 9 am and 3 pm to 6 pm as they represent the periods when the peak road network traffic flows would occur. The peak hour periods identified by the count were 8 am – 9 am and 3.15 pm to 4.15 pm. The results of these traffic counts are provided in ***Attachment B.*** Further on request of the client Northern Transport Planning undertook traffic counts at The Lakes Way / Chapmans Road give way-controlled T-intersection and the entrance to Tuncurry Racecourse off Chapmans Road on January 20th, 2024, which coincided with a race meeting and school holiday traffic. In terms of The Lakes Way / Chapmans Road intersection the peak traffic periods were 11.45 am to 12.45 pm and 3 pm to 4 pm. The results of these counts are also provided in ***Attachment B.***

The resulting two-way mid-block traffic volumes calculated from these counts for the weekday peaks are shown in ***Table 1*** below with future 2034 traffic predicted using a 1.5 % per annum background traffic growth recommended by TfNSW. ***Table 2*** below shows the 2024 two-way mid-block peaks for the Saturday counts undertaken during the January school holidays when a race meeting was being conducted at the Tuncurry race course. These existing and future volumes have been adopted in this assessment.

Table 1 – Existing and future weekday peak traffic volumes near the site.

Road	Section	2024		2034 @ 1.5% p.a.	
		AM (vtph)	PM (vtph)	AM (vtph)	PM (vtph)
The Lakes Way	north of Chapmans Road	1461	1377	1696	1598
The Lakes Way	south of Chapmans Road	1504	1435	1745	1665
Chapmans Road	west of The Lakes Way	137	134	159	156
Grandis Drive	south of Chapmans Road	85	126	99	146

Table 2 – Peak Traffic volumes January school holidays plus race meeting.

Road	Section	2024		
		AM (vtph)	Mid (vtph)	PM (vtph)
The Lakes Way	north of Chapmans Road	885	1387	1041
The Lakes Way	south of Chapmans Road	919	1483	1098
Chapmans Road	west of The Lakes Way	102	296	195
Tuncurry racecourse	entry road	21	273	410

Intersect Traffic also undertook traffic counts at the Chapman's Road / Grandis Drive intersection on Monday 19th June 2023 as a result of a Council RFI, to determine what percentage of Chapmans Road traffic was using Grandis Drive as an alternate route to and from town rather than using the Lakes Way / Chapman's Road intersection. These counts are also shown in ***Attachment B*** and showed approximately 35 % of outbound Chapmans Road traffic used this alternate route via Grandis Drive. The peak hour two-way mid-block traffic volumes on Grandis Drive were also determined to be up to 84 vtph in the AM peak and 124 vtph in the PM peak from data sourced from TfNSW from the traffic detectors at the Lakes Way / Grandis Drive traffic signals. The mid-block peaks for Grandis Drive are also included in ***Table 1***.

6.0 ROAD CAPACITY

The capacity of urban roads is generally determined by the capacity of intersections. However, Table 4.3 of the *RTA's* '*Guide to Traffic Generating Developments*' provides some guidance on mid-block capacities for urban roads for a level of service (LoS) C. This table is reproduced below.

Table 4.3
Typical mid-block capacities for urban roads with interrupted flow

Type of Road	One-Way Mid-block Lane Capacity (pcu/hr)	
Median or inner lane:	Divided Road	1,000
	Undivided Road	900
Outer or kerb lane:	With Adjacent Parking Lane	900
	Clearway Conditions	900
	Occasional Parked Cars	600
4 lane undivided:	Occasional Parked Cars	1,500
	Clearway Conditions	1,800
4 lane divided:	Clearway Conditions	1,900

Source: - RTA's Guide to Traffic Generating Developments (2002).

Based on this table it is considered that both The Lakes Way and Chapmans Road would have a two-way mid-block capacity of up to 1,800 vtph on the assumption that a LoS C or better was desirable on urban roads, as both are two-way undivided roads with single lane capacities of 900 vtph. However, as a major sub-arterial road it would still be acceptable for a LoS D to be operating on The Lakes Way which equates to a one lane capacity of 1,100 vtph per lane or a two-way mid-block capacity of 2,200 vtph.

However, in regard to a local road network (Chapmans Road) which may contain many residential dwellings it is considered that the environmental road capacity thresholds provided within Table 4.6 of the *RTA's* '*Guide to Traffic Generating Developments*' (reproduced below) is of more relevance when considering the local road networks capacity to cater for additional traffic.

Table 4.6
Environmental capacity performance standards on residential streets

Road class	Road type	Maximum Speed (km/hr)	Maximum peak hour volume (veh/hr)
Local	Access way	25	100
	Street	40	200 environmental goal
			300 maximum
Collector	Street	50	300 environmental goal
			500 maximum

Note: Maximum speed relates to the appropriate design maximum speeds in new residential developments. In existing areas maximum speed relates to 85th percentile speed.

Source: - RTA's Guide to Traffic Generating Developments (2002).

Chapmans Road and Grandis Drive as local collector roads would therefore have an environmental road capacity of up to 500 vtph. The road capacities adopted in this assessment for the sub-arterial and local road network impacted by this development are shown below in ***Table 3***.

Table 3 - Adopted Road Capacities

Street	Two Way Mid-Block Road Capacity
The Lakes Way	2,200 vtph
Chapmans Road	500 vtph
Grandis Drive	500 vtph

From the traffic volume data provided in ***Section 5*** above, for this assessment it can be seen that as existing peak traffic volumes for The Lakes Way, Chapmans Road and Grandis Drive are less than the determined road capacities (***Table 2***) there is existing spare capacity within the state and local road network to cater for additional traffic generated by developments in the area.

7.0 ALTERNATE TRANSPORT MODES

7.1 Public Transport

Forster Buslines run public transport (bus) services in the area from Forster passing through Tuncurry with Town routes 303 & 304 (Stockland Forster – Forster – Tuncurry) as well as regional route 308 (Forster to Gloucester). The route locations are shown on the maps included as ***Attachment 3.***

The nearest bus stops to the site are located in Chapmans Road approximately 440 metres east of the proposed site entry (see ***Photograph 6)*** and on The Lakes Way 70 metres south of Chapmans Road.

Photograph 6 – Existing Bus Stop on Chapmans Road

7.2 Pedestrians & Bicycles

There is no provision for cyclists on-road however a suitable shared pedestrian / bicycle path exists on the western footpath of The Lakes Way and the southern footpath of Chapmans Road to a location approximately 300 metres east of the proposed site entrance as shown in ***Photograph 5*** below. This footpath extends to the intersection of The Lakes Way and Grandis Drive 470 metres south of Chapmans Road.

Beside the above shared pathway some concrete footpaths are provided within the residential estates around the site generally on one side of the road only however there is no real continuous network with footpaths appearing to be provided sporadically and haphazardly within the road network.

8.0 DEVELOPMENT PROPOSAL

The development proposal is to construct a 283-site manufactured home estate / lifestyle resort on existing vacant land at Lot 100 DP1286524 & Lot 11 DP615229, 40 – 80 & 82 Chapmans Road, Tuncurry.

Specifically, the proposal includes the following:

- Bulk earthworks.
- Provision of a total of 283 long term manufactured home sites.
- Community clubhouse facility and recreational facilities.
- Internal road network with a ring road and nine internal roads.
- New vehicular access to Chapmans Road approximately 470 metres west of Grandis Drive (70 metres west of existing site access).
- 48 on-site visitor car parking spaces including 4 accessible spaces within eight (8) separate car parking areas as well as 25 RV/caravan spaces within a storage area; and
- Drainage and landscaping including provision of on-site detention basins.

The development concept plans are shown in ***Appendix 1***.

9.0 TRAFFIC GENERATION

As the Lifestyle Resort is to be an over 55's resort the applicable traffic generation rate for the development has been sourced from the latest TfNSW data for seniors housing contained in their *Technical Direction TDT 13/04.*

The rates nominated in this document for housing for seniors is as follows;

Weekday Daily vehicle trips = 2.1 per dwelling; and
Weekday Peak hour trips = 0.4 per dwelling.

The seniors housing traffic rate is considered appropriate as car ownership rates for the Village will be similar to a seniors housing development and many of the occupants will be retired. Whilst the document states that while the morning peak hour site traffic does not coincide with the morning road network peak hour for this assessment it has been assumed that they do coincide. This ensures a robust assessment of the traffic impacts of the development. In justifying this rate reference is also made to survey work undertaken by Intersect Traffic at two lifestyle village resorts at Nelson Bay a similar tourist / retirement area as Tuncurry. Intersect Traffic undertook traffic generation surveys at the entrances to these villages Ingenia Communities Latitude One Lifestyle Village and Hometown's Sunrise Lifestyle Village at Anna Bay and Bobs Farm respectively. The resulting peak traffic generation rates at these Lifestyle Villages were found to be as follows;

- Latitude One – 0.23 vtph per dwelling in the AM peak and 0.26 vtph per dwelling in the PM peak; and
- Sunrise – 0.18 vtph per dwelling in the AM peak and 0.21 vtph per dwelling in the PM peak.

Therefore, adoption of a peak hour traffic generation of 0.4 vtph per dwelling for this development will result in a robust worst-case assessment of the impact of the development. The peak hour traffic generation from the site therefore can be calculated as follows;

AM & PM Peak Hour

Traffic Generation = 0.4 vehicle trips per dwelling x 283 dwellings

= **114 vtph**. (rounded up)

Daily Trips

Traffic Generation = 2.1 vehicle trips per dwelling x 290 dwellings
= **595 vtpd**.

10.0 TRIP DISTRIBUTION

Before considering the traffic impacts of the development, the traffic generated by the development needs to be distributed onto the local road network. In this regard assumptions need to be made in relation to origins and destinations of trips and the nature of the trips to and from the site.

Based on likely origin / destinations for residents the assumptions used in distributing the traffic generated by the development are listed below.

Weekday AM peaks & PM peaks

- 30% of trips will arrive / depart via The Lakes Way to the north.
- 70 % of trips will arrive / depart via The Lakes Way to the south.
- In the AM 70% of the trips will be outbound and 30% of trips will be inbound; and
- In the PM 70% of the trips will be inbound and 30% of the trips outbound.
- 35 % of outbound traffic will utilise the Grandis Drive route to The Lakes Way rather than use Chapmans Road.

The resulting trip distribution onto the road network is therefore likely to be as shown below in ***Figure 2.***

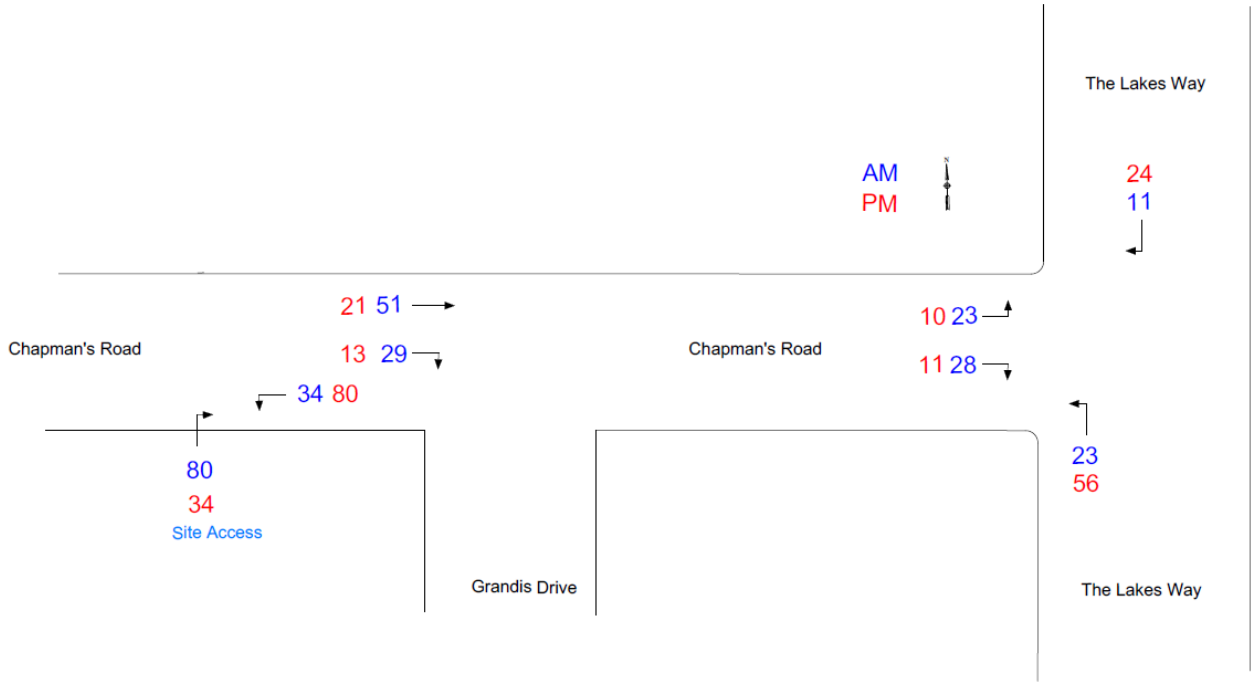


Figure 2 – Development Traffic Distribution

11.0 TRAFFIC IMPACTS OF DEVELOPMENT

11.1 Road Network Two-way Mid-Block Capacity

It has previously been shown in ***Section 6*** of this report that the local road network is currently operating well within its technical and environmental two-way mid-block capacity as relevant. The Lifestyle Resort is likely to generate the following additional traffic (maximum) on the local road network based on the trip distributions shown in ***Figure 3***.

- The Lakes Way – north of Chapmans Road – 34 vtph (AM and PM peak).
- The Lakes Way – south of Chapmans Road – 51 vtph (AM peak) & 67 vtph (PM peak).
- Chapmans Road – west of The Lakes Way – 114 vtph (AM peak & PM peak); and
- Grandis Drive – west of Chapmans Road – 29 vtph (AM peak) & 13 vtph (PM peak).

The addition of this traffic onto the 2024 two-way mid-block traffic volumes determined in ***Section 5*** will not result in the capacity thresholds for the local road network determined in ***Section 6*** to be reached. Even with the predicted 2034 two-way mid-block traffic volumes these road capacity thresholds are not reached. This is demonstrated in ***Table 4*** below.

The post development traffic flows are lower than the determined road capacities through to at least 2034 and as such the local and state road network has sufficient spare capacity to cater for the proposed development, whilst maintaining suitable residential amenity for dwellings near the site.

Table 4 - Road Capacity Assessment

Road	Section	Capacity	2024		2034 @ 1.5% p.a.		Development traffic	
		vtph	AM (vtph)	PM (vtph)	AM (vtph)	PM (vtph)	AM	PM
The Lakes Way	north of Chapmans Road	1800	1495	1411	1730	1632	34	34
The Lakes Way	south of Chapmans Road	1800	1555	1502	1796	1732	51	67
Chapmans Road	west of The Lakes Way	500	199	240	273	270	114	114
Grandis Drive	south of Chapmans Road	500	113	137	128	159	29	13

11.2 Intersection Capacity

The main intersections impacted by the development are The Lakes Way / Chapmans Road CHR/AUL give way-controlled T-intersection (see ***Photograph 7***), The Lakes Way / Grandis Drive / The Northern Parkway traffic signals and the site access off Chapmans Road.

Traffic volumes on Chapmans Road and the site access are low and as such uninterrupted flow conditions would prevail at this intersection with little or no delay for motorists on Chapmans Road and the site entry. No additional intersection analysis is required for the access.

By observation traffic volumes on The Lakes Way are high enough for traffic using Chapmans Road, particularly those exiting Chapmans Road to be delayed therefore analysis of the impact of the additional traffic on this intersection is required to be undertaken using the SIDRA INTERSECTION 9 intersection modelling software. The Lakes Way / Grandis Drive / The Northern Parkway traffic signals will also be modelled in this assessment. The SIDRA INTERSECTION 9 software package predicts likely delays, queue lengths and thus levels of service that will occur at intersections. Assessment is then based on the level of service requirements of TfNSW shown below in *Table 4.2 of RTA's Guide to Traffic Generating Developments 2002.*

Table 4.2
Level of service criteria for intersections

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

Source: - RTA's Guide to Traffic Generating Developments (2002).

Assumptions made in this modelling were:

- The intersection layouts will remain as per current conditions.
- Traffic volumes used in the modelling were as described in ***Section 5*** above.
- Traffic generated by the development is distributed as per ***Figure 3***.
- Future traffic growth predicted using a 1.5 % per annum background traffic growth rate as recommended by TfNSW;
- While observing The Lakes Way / Grandis Drive / The Northern Parkways signalised intersection during peak operating periods it was noted it was operating on a two-phase sequence with a cycle time of 120 seconds, and this was adopted in the modelling for the phasing and cycle time; and
- When calibrating the model to reflect observed delays and queue lengths it was found the best calibration was with a gap acceptance for the right turn movement out of Chapmans Road of 6.0 seconds with a follow up headway of 3.5 seconds rather than the default 7 seconds and 4 seconds respectively.

The summarised results of the modelling with the worst average delays and LoS recorded for the sign-controlled intersection and the 'all vehicles' results for the signalised intersection are provided in ***Tables 5 & 6*** below. The full Sidra Movement Summary Tables are provided in ***Attachment D.***

Photograph 7 – The Lakes Way / Chapmans Road give way T-intersection

Table 5 – The Lakes Way / Chapmans Road – Sidra Results Summary

Modelled Peak	Degree of Saturation (v/c)	Worst Average Delay (s)	Worst Level of Service	95% back of queue length (cars)
2024 AM	0.477	35.3	C	0.3
2024 PM	0.424	25.1	B	0.2
2024 AM plus development	0.497	45.5	D	0.7
2024 PM plus development	0.424	29.1	C	0.3
2034 AM plus development	0.980	174.0	F	2.2
2034 PM plus development	0.493	54.2	D	0.6

Table 6 – The Lakes Way / Grandis Drive signals – Sidra Results Summary

Modelled Peak	Degree of Saturation (v/c)	Average Delay (s)	Average Level of Service	95% back of queue length (cars)
2024 AM	0.749	17.9	B	8.6
2024 PM	0.609	21.7	B	14.1
2024 AM plus development	0.780	20.1	B	9.2
2024 PM plus development	0.642	22.0	B	15.6
2034 AM plus development	1.248	54.4	D	25.3
2034 PM plus development	0.760	26.5	B	21.8

The modelling shows that The Lakes Way / Chapman's Road intersection will operate satisfactorily during both the AM and PM peak periods post development with satisfactory degree of saturation

and queue lengths. Average delay is also satisfactory for all movements except the right turn out movement from Chapman Road where motorists will experience long delays and difficulty in undertaking this movement. The LoS on this movement changes from a satisfactory LoS C to LoS D at approximately 160 occupied sites in the development (see ***Attachment D***) for Sidra Movement Summary Tables for 160 and 170 sites). Therefore, it would be recommended that an intersection upgrade would be required upon occupation of 160 sites within the development to reduce the accident risk at the intersection. With background traffic through to 2034 the delays for the right turn movement out of the Chapmans Road would continue to increase and as such so would the traffic accident risk.

The Lakes Way / Grandis Drive traffic signals can accommodate the development traffic without any loss of average LoS at the intersection in both the AM and PM peak periods with the impact of the development being an increase in average delay by only 3 seconds and increased queue length being less than 2 vehicles. With background traffic growth to 2034 the signals as currently phased would reach capacity in the AM peak but still operate satisfactorily in the PM peak. Therefore by 2034 TfNSW may need to review the phasing and cycle times for the signals and implement changes if required.

It was noted during the community consultation undertaken for this project that many residents raised the issue at the signals of not being able to get through the signals from Grandis Drive within 1 cycle time during the school peak traffic periods. Certainly, this is not obvious within the Sidra results obtained indicating that this is only likely to be occurring for a short time thus is not reflected in the peak hour period results. There is however a perception of the residents of Grandis Drive that they are disadvantaged by the current phasing and cycling at the signals and TfNSW may consider reviewing the current operation of the signals to determine the extent of the problem and whether it needs to be remedied.

There are three obvious options for upgrading The Lakes Way / Chapman's Road intersection being as follows;

1. Prohibit the right turn movement out of Chapman Road with channelisation works at the intersection. This option would work satisfactorily as there is an alternate route via Grandis Drive to The Lakes Way where southbound traffic could turn relatively safely at The Lakes Way / Grandis Drive traffic signals. This would be a relatively cheap and quick option to upgrade the intersection safety as a temporary measure until funding and further upgrading needs exist as a result of other development in the area. However, it is unlikely to be popular with residents of Grandis Drive even though the additional traffic on Grandis Drive would not be sufficient for the traffic on Grandis Drive to exceed its environmental capacity thus identifying that the residential amenity for the residents of Grandis Drive would still be an acceptable level.
2. Conversion of the intersection to a three-legged roundabout. Sidra modelling has shown this upgrade would be extremely efficient and result in excellent levels of service and road safety. It is however likely to be the most expensive option and would probably take the longest period to construct but would be efficient for both peak and non-peak periods. It provides the best results for minimising delay and queuing for the main traffic flow on The Lakes Way; and
3. Conversion of the intersection to signals co-ordinated with the signals at The Lakes Way / Grandis Drive intersection. Again, a relatively expensive option it does have the advantage of improving pedestrian safety at the intersection by providing pedestrian phases within the signals. It would work efficiently during peak periods but would result in longer delays for the main traffic flow on The Lakes Way during non-peak periods. These delays however would not be considered unsatisfactory.

The three options have been modelled for the post development traffic through to 2034 and the summary results for the modelling shown below in ***Table 7*** for The Lakes Way / Chapman Road intersection and ***Table 8*** for The Lakes Way / Grandis Drive traffic signals. When considering

prohibiting the right turn out of Chapmans Road it was assumed all the existing and development traffic would use Grandis Drive to access The Lakes Way and this is how this option was modelled.

Table 7 – The Lakes Way / Chapmans Road upgrade options – Sidra Results.

Modelled Peak	Degree of Saturation (v/c)	Worst Average Delay (s)	Worst Level of Service	95% back of queue length (cars)
2024 AM + development - channelisation	0.477	9.3	A	0.1
2024 AM + development - roundabout	0.580	10.2	A	2.4
2024 AM + development - signals	0.597	6.3	A	9.2
2034 AM + development - channelisation	0.554	10.4	A	0.1
2034 AM + development - roundabout	0.676	11.1	A	3.4
2034 AM + development - signals	0.687	11.1	A	16.8
2024 PM + development - channelisation	0.424	12.6	A	0.1
2024 PM + development - roundabout	0.499	12.6	A	1.5
2024 PM + development – signals	0.631	6.4	A	5.8
2034 PM + development - channelisation	0.493	16.6	B	0.2
2034 PM + development - roundabout	0.579	15.5	B	2.0
2034 PM + development - signals	0.759	7.5	A	9.2

Table 8 – Lakes Way / Grandis Dr – Sidra Results (Chapmans Rd upgrade options).

Modelled Peak	Degree of Saturation (v/c)	Worst Average Delay (s)	Worst Level of Service	95% back of queue length (cars)
2024 AM + development - channelisation	0.850	27.4	B	10.6
2024 AM + development - roundabout	0.780	20.1	B	9.2
2024 AM + development - signals	0.928	24.5	B	10.0
2034 AM + development - channelisation	1.229	68.4	E	24.7
2034 AM + development - roundabout	1.248	54.4	D	25.3
2034 AM + development - signals	1.264	68.6	E	28.3
2024 PM + development - channelisation	0.675	25.1	B	17.4
2024 PM + development - roundabout	0.642	22.0	B	15.6
2024 PM + development – signals	0.814	21.1	B	15.7
2034 PM + development - channelisation	0.811	30.9	C	24.8
2034 PM + development - roundabout	0.760	26.5	B	21.8
2034 PM + development - signals	0.875	26.2	B	22.9

As Chapmans Road also connects to the entrance to Tuncurry Racecourse, Council has requested assessment of the impact of the development and race day traffic on The Lakes Way / Chapmans Road intersection. Historically the largest race day attendances at the Racecourse have occurred during the December / January school holiday period when many holiday makers increase the population of the area significantly. Therefore, Intersect Traffic arranged for traffic counts to be undertaken at The Lakes Way / Chapmans Road intersection on Saturday 20th January 2024 which coincided with a school holiday race meeting. The counts determined the peak periods were 11.45 am to 12.45 pm (Mid-day) hour and 5.45 pm to 6.45 pm (PM) hour. The results for these peak periods are provided in ***Attachment B***. The two-way mid-block peak traffic volumes for these periods are provided in ***Table 2*** above in ***Section 5***.

The intersection operation during these periods has been analysed using the SIDRA Intersection model with the results shown below in ***Table 9***. Being a weekend when traffic volumes historically are 75 % of weekday traffic the traffic generation from the development site has been assumed as 75% of peak volumes. The AM peak traffic generation for the development have been assigned to the mid-day traffic counts for the exercise which again ensures a robust assessment. The Sidra Movement Summary sheets for this modelling are provided in ***Attachment D***.

Table 9 – The Lakes Way / Chapmans Road Holiday Raceday – Sidra Results.

Modelled Peak	Degree of Saturation (v/c)	Worst Average Delay (s)	Worst Level of Service	95% back of queue length (cars)
2024 Mid	0.413	34.7	C	1.4
2024 PM	0.312	10.0	A	1.4
2024 Mid plus development	0.560	39.9	C	2.0
2024 PM plus development	0.343	10.7	A	1.6
2034 Mid plus development	1.042	169.1	F	7.9
2034 Mid plus development - roundabout	0.560	11.3	A	5.5
2034 Mid plus development - signals	0.789	22.4	B	15.6
2034 PM plus development	0.463	13.6	A	2.4

The modelling showed that the intersection continued to operate satisfactorily during the peak traffic periods post development on a holiday race day however with background traffic growth the intersection failed in the mid-day peak period prior to 2034. However, with a suitable intersection upgrade prior to 2034 the intersection would continue to operate satisfactorily beyond 2034.

Overall, this intersection analysis has determined that;

- The Lakes Way / Chapmans Road intersection will need to be upgraded prior to more than 160 sites being provided within the proposed development; and
- Cycle and phase changes may be required prior to 2034 at The Lakes Way / Grandis Drive / The Northern Parkway traffic signals.

Based on the analysis undertaken it is considered the most efficient option for both peak hour and non-peak hour periods would be the construction of a single lane roundabout at The Lakes Way / Chapmans Road intersection as it minimises both delays and queuing on the local and state road network. It would also perform a traffic calming function for traffic entering Tuncurry from the north and reduce the impact of the development on Grandis Drive. However, noting Council is already collecting developer contributions for the roundabout, if there were insufficient funding for the roundabout then channelisation of the intersection to prohibit the right turn movement out of Chapmans Road could be considered due to the availability of an alternate and safer connection to The Lakes Way via Grandis Drive. It would however be recommended on the basis of it being temporary works until such time as funding for a roundabout was available.

If Council was to condition the roundabout on this development's consent, then there will need to be an agreement between Council and the developer in regard to payment of developer contributions as works in kind and payment to the developer of future monies collected for the roundabout for the requirement to be considered fair and reasonable as required by the Environmental Planning and Assessment Act.

The requirement for provision of the intersection upgrade prior to there being more than 160 sites provided in the development is likely to mean that the upgrade will not be required until approximately 2027 providing sufficient time for Council or the developer to plan, design and construct the roundabout.

It is therefore concluded that subject to The Lakes Way / Chapmans Road intersection being suitably upgraded prior to more than 160 sites being occupied within the development the proposed development would not adversely impact on the local and state road network.

11.3 Access

The proposed development is to be accessed directly from Chapmans Road approximately 470 metres west of Grandis Drive. Access to the site and individual sites would be required to meet the requirements of the *Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2021* as well as Australian Standard *AS2890.1-2004 Parking facilities Part 1: Off-street car parking.*

In regard to the regulation the important requirements and an assessment of compliance are:

- A dwelling site must have access to an access road – Proposal is compliant.
- An entry road to a manufactured home estate must be a minimum of 8 metres wide. In the case of a divided entrance and exit road the width of the sealed road on either side of the median must be at least 5 metres. – Proposal is compliant.
- The width of an access road (internal) must be 6 metres for two-way flow or 4 metres for one way flow and one way flow needs to be indicated by a conspicuous sign. The proposal complies with this requirement as all roads are 6 metres wide except for the perimeter road which is 8 metres wide therefore suitable for two-way flow.

Overall, it is therefore considered reasonable to conclude the proposed internal access roads are suitable for two-way flow of vehicles.

Sight distance along Chapmans Road at the proposed new access would comply with Austroads requirements for a public road intersection being greater than 97 metres for a 50 km/h speed zoning *(Table 3.2 of Guide to Road Design Part 4A – Unsignalised and signalised Intersections (2020))*. By observation on site the sight distance at this access is in excess of 200 metres and thus compliant with Austroads requirements.

Chapmans Road is also to be upgraded to Mid-Coast Council's requirement as part of the development works ensuring the connection to the site from the existing kerb and guttered section of Chapmans Road is kerb and guttered on the southern (development) side of the road and that half road construction 4 metres wide is undertaken for this section of road.

Therefore, it is considered the proposed access arrangements to the site and within the site are suitable being compliant with Austroad, Council and Local Government Regulations requirements.

11.4 Off-Street Parking

The proposed development will generate an on-site parking demand. Therefore, on-site parking in accordance with the *Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2021* will need to be provided. The relevant requirements within the Regulation are:

Resident Parking

1 resident parking space per dwelling site

Visitor Parking

For developments with more than 105 sites – 20 spaces plus 1 space per every 7 sites above 140 sites.

Accessible Parking

1 visitor accessible parking space per 100 sites or fraction of 100 sites

Resident and visitor parking is to be 6.1 metres x 2.5 metres while the accessible visitor car parks are to comply with Australian Standard AS2890.6-2009 Parking facilities Part 6: Off-street parking for people with disabilities.

Noting that on completion of the development a total of 283 long term sites would exist within the park the following on-site parking is required to be provided to meet the regulation:

- Resident Parking – 283 car parks
- Visitor Car Parking – 41 car parks
- Accessible Visitor Car Parking 283 / 100 = 2 - 3 accessible car parks (within the 41 visitor car parks to be provided).

On examination of the plans, it was found that the development is compliant:

- As each site has an area in excess of 150 m^2 it is considered there is sufficient room on each site to provide an on-site resident car park; and
- More than 283 resident car parking spaces will been provided as some future manufactured homes will have double garages; and
- 48 visitor car parking spaces including 4 accessible spaces are shown on the plans as well as a storage area for up to 25 caravans / RVs.

Therefore, the plans show that the development is more than compliant with the caravan park regulations. Whilst not dimensioned there is adequate space for the visitor (including accessible) car parking spaces to be provide on-site to the dimensioned requirements and this can be conditioned on the consent.

It is therefore concluded that in regard to on-site car parking the proposal would meet the requirements of the *Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2021.*

11.5 Servicing

The site will be serviced by a medium rigid sized waste collection vehicle that can enter the site in a forward direction and proceed to collect bins from in front of each site before exiting the site in a forward direction. Therefore, on assessment it is concluded that the servicing arrangements for the proposed Lifestyle Resort are satisfactory.

12.0 PEDESTRIAN FACILITIES

The proposed development may generate some external pedestrian traffic. Therefore, it is considered there is sufficient nexus for the development to be required to extend the existing off-road shared pathway (pedestrian and cycle) on the southern side of Chapmans Road to the site. Internal pedestrian paths will also need to be provided to facilitate the safe passage of pedestrians around the site.

13.0 ALTERNATE TRANSPORT MODE FACILITIES

The proposed development may generate an increased demand for public transport however it is not expected that this demand would be sufficient to require changes to the existing public transport in the area. It is concluded that no changes to the existing public transport services is required as a result of this development and no additional infrastructure would be required. However, it is also considered that the provision of a private bus shuttle within the development is likely to be of particular benefit to residents and should be considered by the operator of the Lifestyle Resort.

The development will not generate any significant additional bicycle traffic therefore no nexus for the provision of additional cycle ways in the vicinity of the site is necessary as a result of the development noting that it is recommended that the off-road shared pathway in Chapmans Road be extended to the site.

14.0 CONCLUSIONS

This traffic and parking assessment for a proposed manufactured home estate / lifestyle resort on Lot 100 DP1286524 & Lot 11 DP615229, 40 – 80 & 82 Chapmans Road, Tuncurry has determined the following:

- Current traffic volumes on the local and state road network are below the technical and environmental mid-block capacities of the roads and as such there is spare capacity within the road network to cater for development in the area.
- It is expected that the additional traffic generated by the development will be up to 114 vtph in the AM and PM peak or 595 vtpd.
- The local road network has sufficient spare two-way mid-block capacity to cater for the additional development traffic without adversely impacting on current level of service (LoS) experienced by motorists on the road network or the residential amenity for adjoining residences.
- SIDRA Intersection modelling has shown that The Lakes Way / Chapmans Road intersection will need to be upgraded prior to more than 160 sites being provided within the proposed development; and cycle and phase changes may be required prior to 2034 at The Lakes Way / Grandis Drive / The Northern Parkway traffic signals.
- Based on the analysis undertaken it is considered the most efficient option for both peak hour and non-peak hour periods would be the construction of a single lane roundabout at The Lakes Way / Chapmans Road intersection as it minimises both delays and queuing on the local and state road network. It would also perform a traffic calming function for traffic entering Tuncurry from the north and reduce the impact of the development on Grandis Drive.
- Noting Council is already collecting developer contributions for the roundabout, if there were insufficient funding for the roundabout then channelisation of the intersection to prohibit the right turn movement out of Chapmans Road could be considered due to the availability of an alternate and safer connection to The Lakes Way via Grandis Drive. It would however be recommended on the basis of it being temporary works until such time as funding for a roundabout was available.
- If Council was to condition the roundabout on this development's consent, then there will need to be an agreement between Council and the developer in regard to payment of developer contributions as works in kind and payment to the developer of future monies collected for the roundabout for the requirement to be considered fair and reasonable as required by the Environmental Planning and Assessment Act.

- Therefore, subject to The Lakes Way / Chapmans Road intersection being suitably upgraded prior to more than 160 sites being occupied within the development the proposed development would not adversely impact on the local and state road network.
- The proposed Landcom development on The Lakes Way near Chapmans Road has the potential to accelerate the upgrading of The Lakes Way / Chapmans Road intersection therefore this development may only be required to contribute to the road upgrading requirements in accordance with a suitable contributions plan.
- The proposed access arrangements to the site and within the site are suitable being compliant with Austroad, Council and Local Government Regulations requirements. Chapmans Road from Grandis Drive to the site access will need to be upgraded to Mid-Coast Council requirements to provide kerb and gutter on the southern (frontage) side of the development and to extend the existing shared pathway through to the site access.
- In regard to on-site car parking the proposal would meet the requirements of the *Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2021.*
- Waste collection vehicles would be able to enter the site in a forward direction and collect bins from in front of sites before exiting the site in a forward direction. Therefore, the site is able to be safely and conveniently serviced for waste collection.
- There is sufficient nexus for the development to be required to extend the existing off-road shared pathway (pedestrian and cycle) on the southern side of Chapman Street to the site. Internal pedestrian paths will also need to be provided to facilitate the safe passage of pedestrians around the site.
- No changes to the existing public transport services are required as a result of this development and no additional infrastructure would be required. However, it is also considered that the provision of a private bus shuttle within the development is likely to be of particular benefit to residents and should be considered by the operator of the Lifestyle Resort; and
- No nexus for the provision of additional cycle ways in the vicinity of the site is necessary as a result of the development noting that it is recommended that the off-road shared pathway in Chapmans Road be extended to the site.

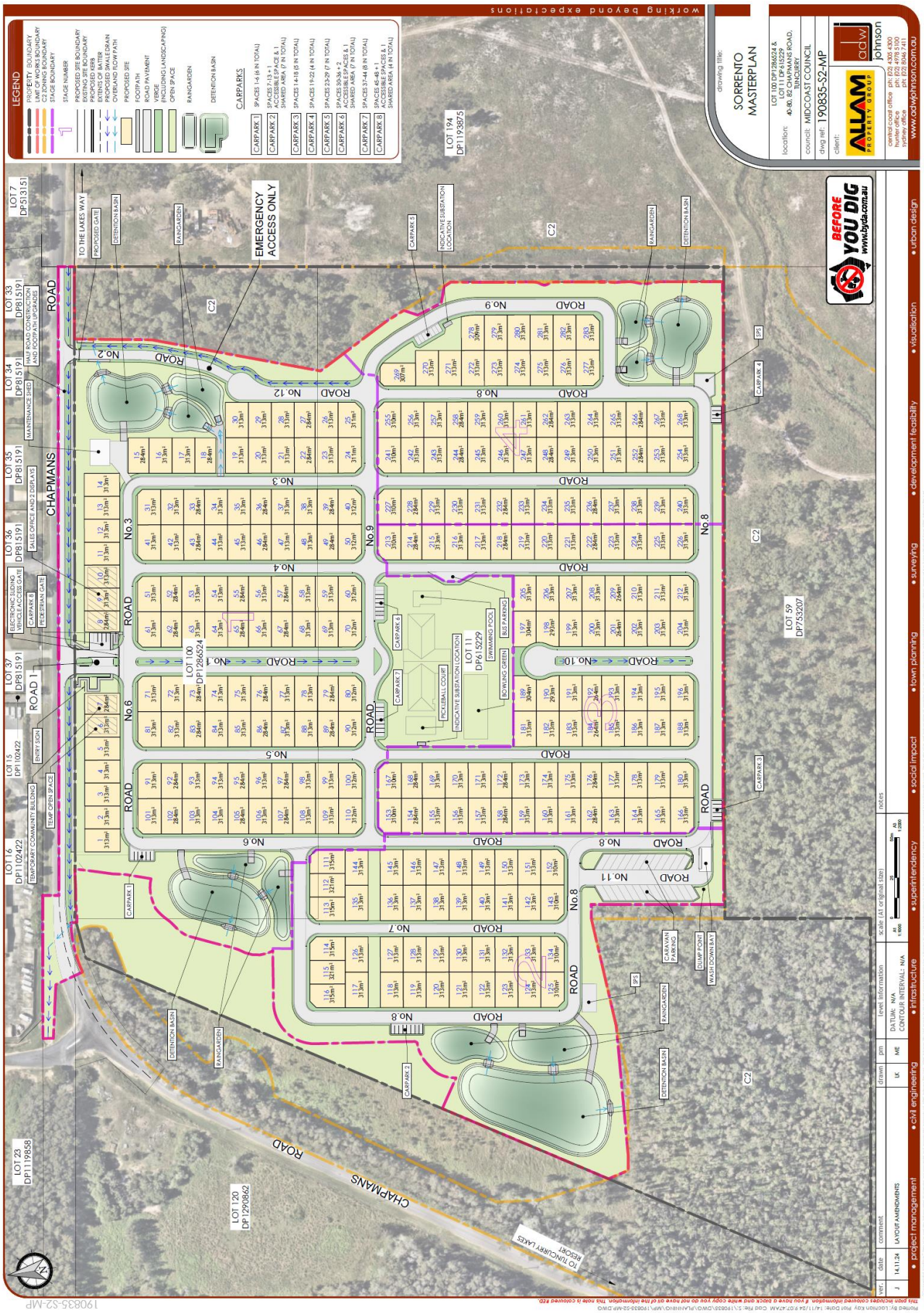
15.0 RECOMMENDATION

Having carried out this traffic and parking assessment for a proposed manufactured home estate / lifestyle resort on Lot 100 DP1286524 & Lot 11 DP615229, 40 – 80 & 82 Chapmans Road, Tuncurry it is recommended that the proposal can be supported from a traffic and parking impact perspective as it will not adversely impact on the local and state road network and complies with all relevant MidCoast Council, Australian Standard, Austroad and TfNSW requirements as well as *Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2021*.

JR Garry BE (Civil), Masters of Traffic
Director
Intersect Traffic Pty Ltd

ATTACHMENT A

Development Plans


LEGEND
PROPERTY BOUNDARY
LMC CP WORKS BOUNDARY
C2 ZONING BOUNDARY
STAGE BOUNDARY
STAGE NUMBER
PROPOSED SITE BOUNDARY
EXISTING SITE BOUNDARY
PROPOSED KERB
EXISTING KERB
PROPOSED SWALE DRAIN
OVERLAND FLOW PATH
PROPOSED SITE
FOOTPATH
ROAD PAVEMENT
VERGE (INCLUDING LANDSCAPING)
OPEN SPACE
RAINGARDEN
DETENTION BASIN
CARPARKS
CARPARK 1 9SPACES 1-6 (6 IN TOTAL)
CARPARK 2 9SPACES 7-13 + 1 ACCESSIBLE SPACE & 1 SHARED AREA (7 IN TOTAL)
CARPARK 3 9SPACES 14-18 (5 IN TOTAL)
CARPARK 4 9SPACES 19-22 (4 IN TOTAL)
CARPARK 5 9SPACES 23-29 (7 IN TOTAL)
CARPARK 6 9SPACES 30-36 + 2 ACCESSIBLE SPACES & 1 SHARED AREA (9 IN TOTAL)
CARPARK 7 9SPACES 37-44 (8 IN TOTAL)
CARPARK 8 9SPACES 45-48 + 1 ACCESSIBLE SPACE & 1 SHARED AREA (4 IN TOTAL)
working beyond expectations
drawing title:
SORRENTO MASTERPLAN
location:
LOT 100 DP1286524 & LOT 11 DP615229
40-80, 82 CHAPMANS ROAD, TUNCURRY
council: MIDCOAST COUNCIL
dwg ref: 190835-S2-MP
client:
ALLAM PROPERTY GROUP
adw johnson
central coast office ph: (02) 4305 4300
hunter office ph: (02) 4978 5100
sydney office ph: (02) 8046 7411
www.adwjohnson.com.au
EMERGENCY ACCESS ONLY
TO THE LAKES WAY
CHAPMANS ROAD
TO TUNCURRY LAKES RESORT
LOT 194 DP1193875
LOT 59 DP753207
LOT 120 DP1290862
LOT 23 DP1119858
LOT 116 DP1102422
LOT 15 DP1102422
LOT 37 DP815191
LOT 36 DP815191
LOT 35 DP815191
LOT 34 DP815191
LOT 33 DP815191
LOT 7 DP513151
LOT 100 DP1286524
LOT 11 DP615229
ROAD 1
No.1
No.2
No.3
No.4
No.5
No.6
No.7
No.8
No.9
No.10
No.11
No.12
C2
RAINGARDEN
DETENTION BASIN
CARPARK 1
CARPARK 2
CARPARK 3
CARPARK 4
CARPARK 5
CARPARK 6
CARPARK 7
CARPARK 8
CARAVAN PARKING
DUMP POINT
WASH DOWN BAY
SWIMMING POOL
BOWLING GREEN
PICKLEBALL COURT
BUS PARKING
INDICATIVE SUBSTATION LOCATION
MAINTENANCE SHED
SALES OFFICE AND 2 DISPLAYS
ELECTRONIC SLIDING VEHICULAR ACCESS GATE
PEDESTRIAN GATE
TEMP OPEN SPACE
TEMPORARY COMMUNITY BUILDING
ENTRY SIGN
PROPOSED GATE
PAVE ROAD CONSTRUCTION AND FOOTPATH UPGRADES
BEFORE YOU DIG www.byda.com.au
project management
civil engineering
infrastructure
superintendency
social impact
town planning
surveying
development feasibility
visualisation
urban design
LAYOUT AMENDMENTS
14.11.24
drawn
chkd
level information
DATUM: N/A
CONTOUR INTERVAL: N/A
scale (at original size)
notes
This plan including coloured information & you have a paper and write copy you do not have all of the information. This note is coloured RED.
190835-S2-MP

ATTACHMENT B

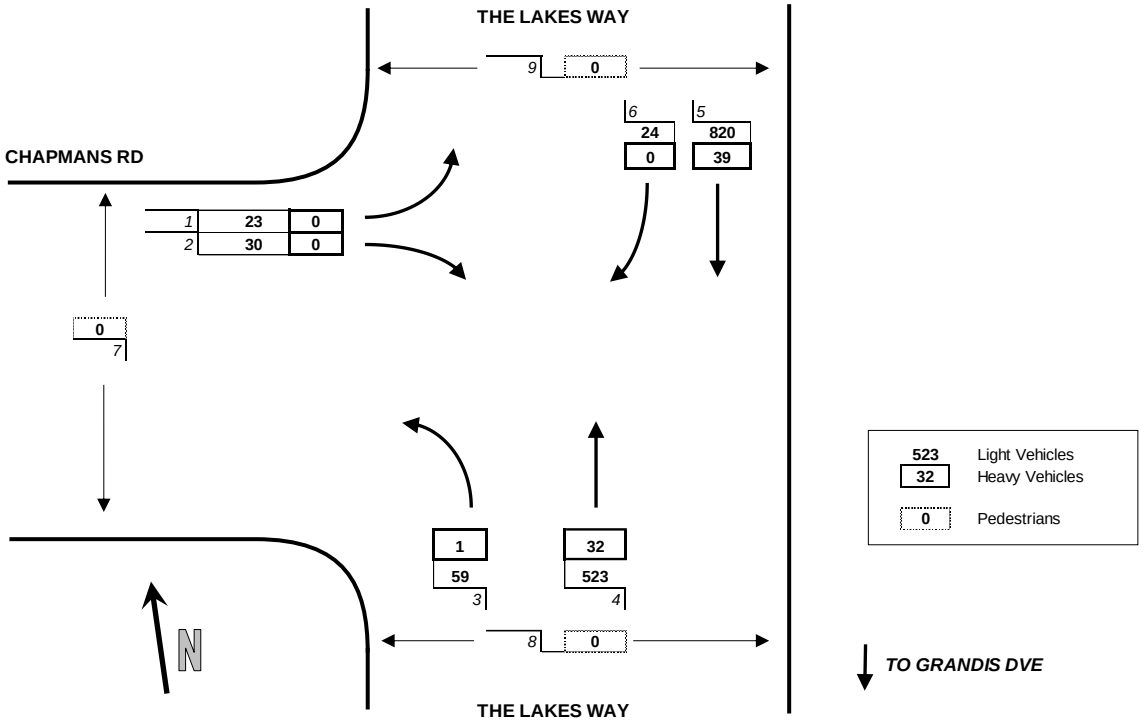
Traffic Data

13/8/2024 - THE LAKES WAY / CHAPMANS RD, TUNCURRY

8:45 <<< HOUR ENDING **Tuesday**

Summary:	THE LAKES WAY / CHAPMANS RD
1479	Total Light Vehicles
72	Total Heavy Vehicles
0	Total Pedestrians

Quality Surveys
253915

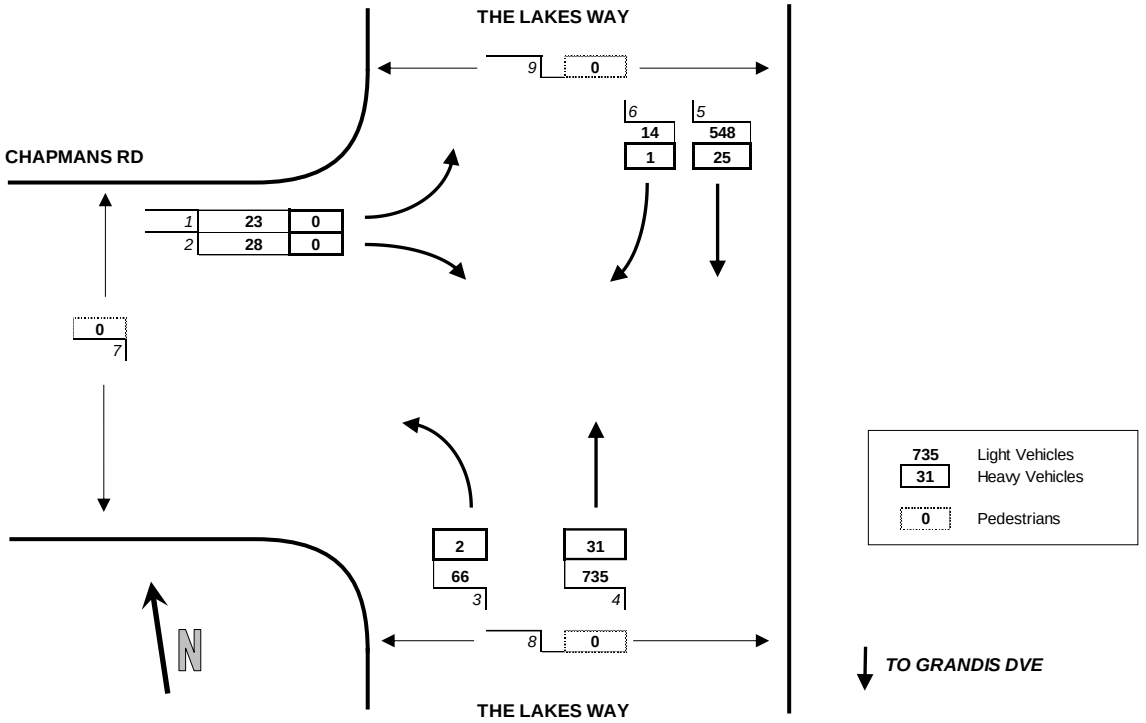


12/8/2024 - THE LAKES WAY / CHAPMANS RD, TUNCURRY

16:00 <<< HOUR ENDING **Monday**

Summary:	THE LAKES WAY / CHAPMANS RD
1414	Total Light Vehicles
59	Total Heavy Vehicles
0	Total Pedestrians

Quality Surveys 253915

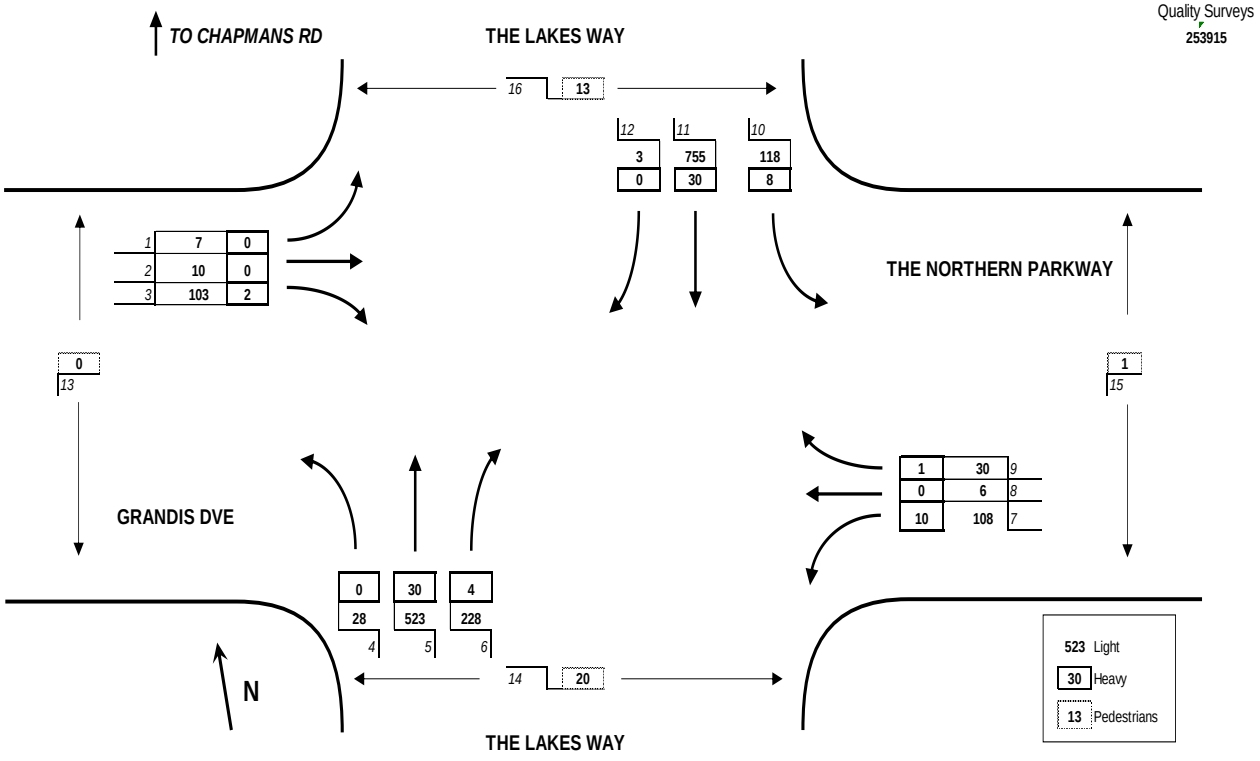


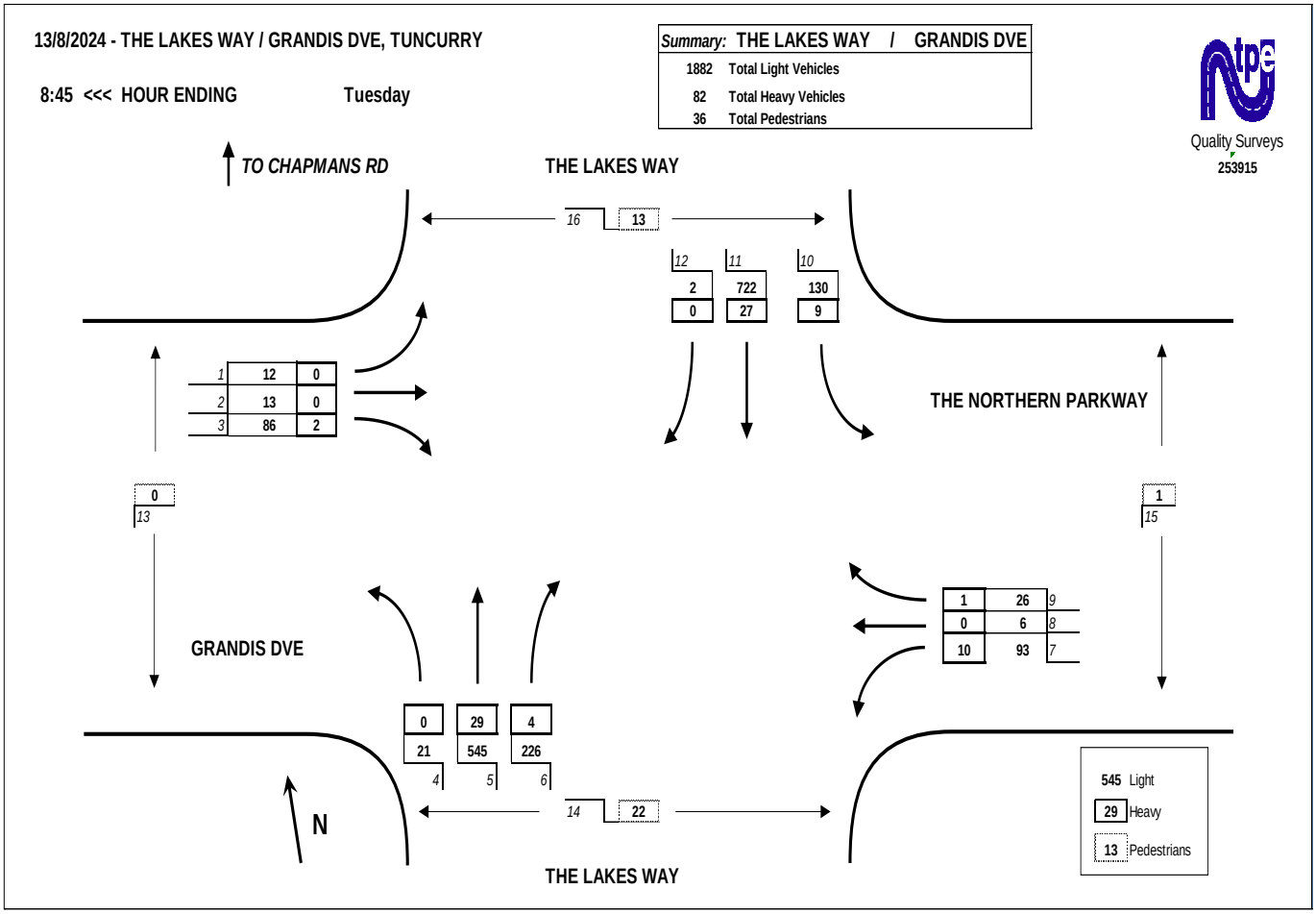
13/8/2024 - THE LAKES WAY / GRANDIS DVE, TUNCURRY

9:00 <<< HOUR ENDING **Tuesday**

Summary:	THE LAKES WAY / GRANDIS DVE
1919	Total Light Vehicles
85	Total Heavy Vehicles
34	Total Pedestrians

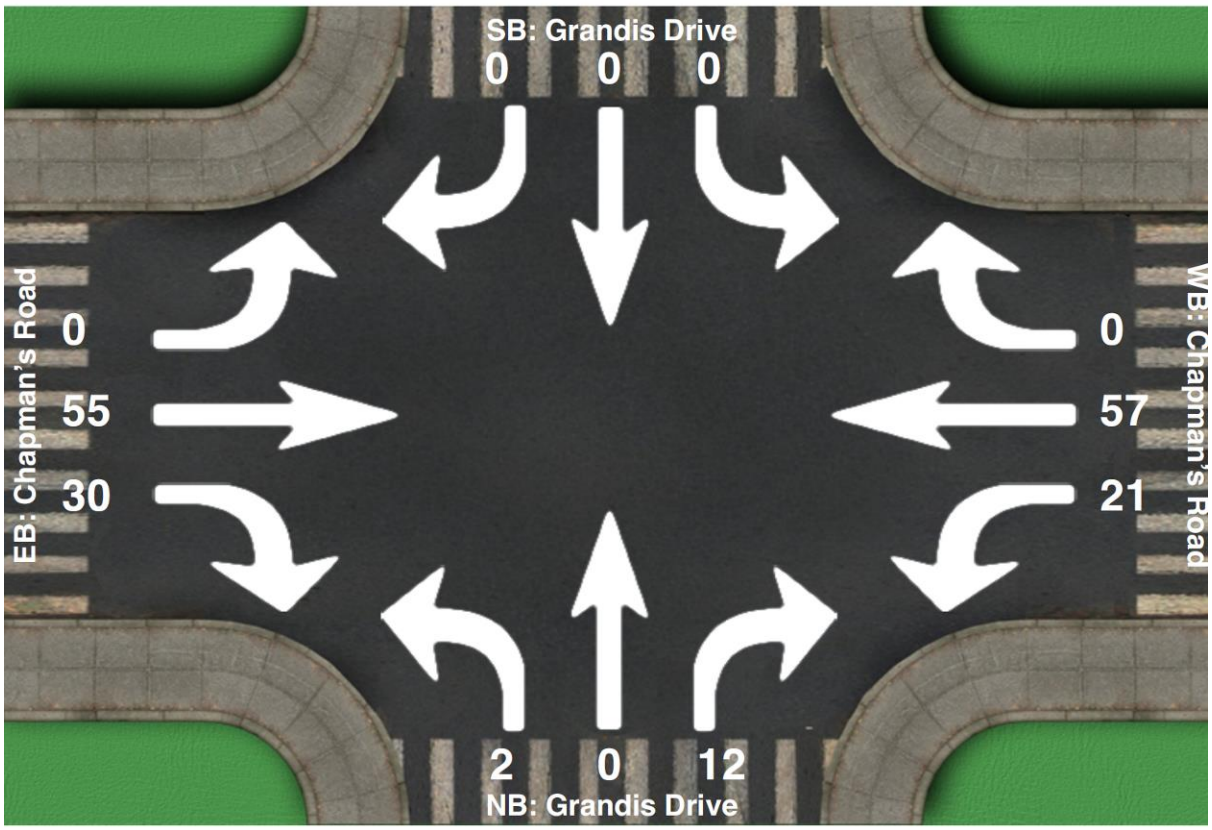
Quality Surveys 253915




13/8/2024 - THE LAKES WAY / GRANDIS DVE, TUNCURRY
8:45 <<< HOUR ENDING
Tuesday
Summary: THE LAKES WAY / GRANDIS DVE
1882 Total Light Vehicles
82 Total Heavy Vehicles
36 Total Pedestrians
Quality Surveys
253915
TO CHAPMANS RD
THE LAKES WAY
THE NORTHERN PARKWAY
GRANDIS DVE
THE LAKES WAY
N
545 Light
29 Heavy
13 Pedestrians

Intersection Peak Hour

Location: Grandis Drive at Chapman's Road, Tuncurry
GPS Coordinates: Lat=-32.156784, Lon=152.487741
Date: 2023-06-19
Day of week: Monday
Weather:
Analyst: Jeff



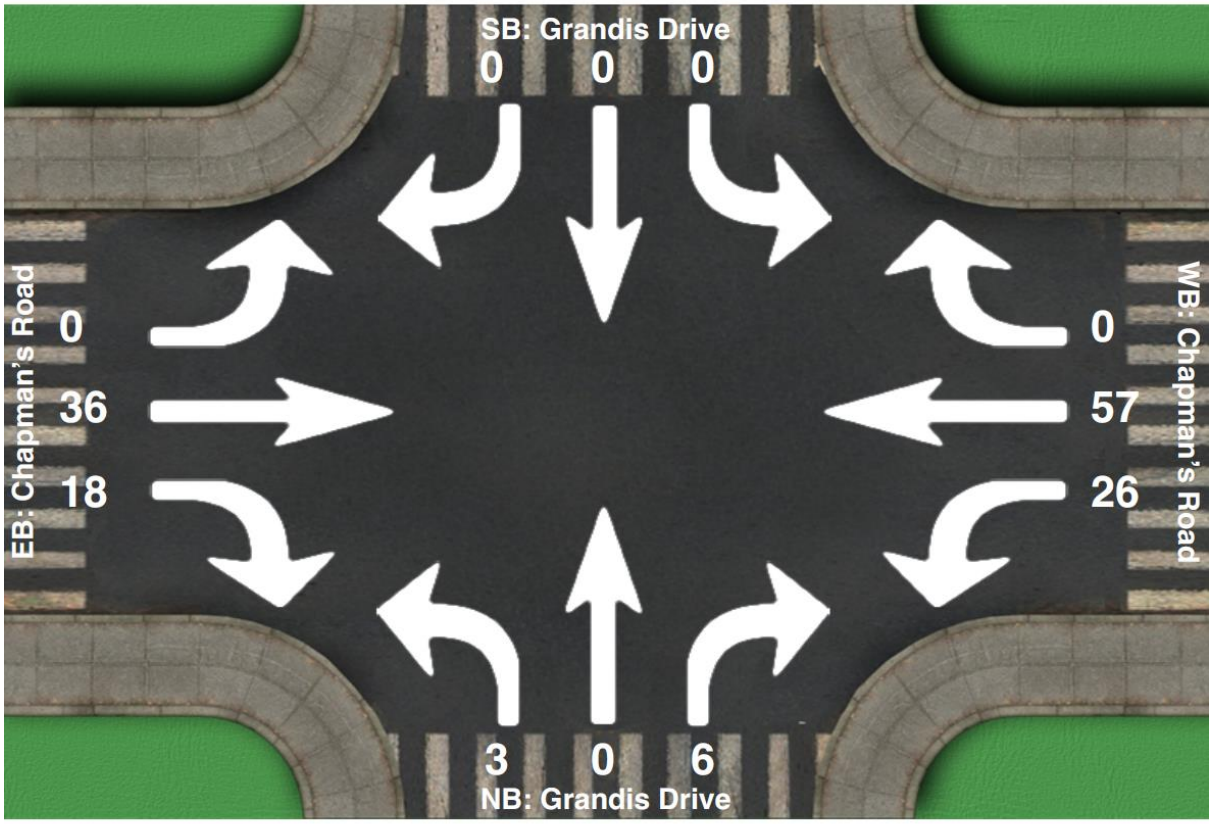
Intersection Peak Hour

08:00 - 09:00

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	0	0	0	21	57	0	2	0	12	0	55	30	177
Factor	0.00	0.00	0.00	0.66	0.65	0.00	0.50	0.00	0.60	0.00	0.72	0.75	0.79
Approach Factor	0.00			0.67			0.58			0.92			

Intersection Peak Hour

Location: Grandis Drive at Chapman's Road, Tuncurry
GPS Coordinates: Lat=-32.156615, Lon=152.487024
Date: 2023-06-19
Day of week: Monday
Weather:
Analyst: Jeff



Intersection Peak Hour

15:15 - 16:15

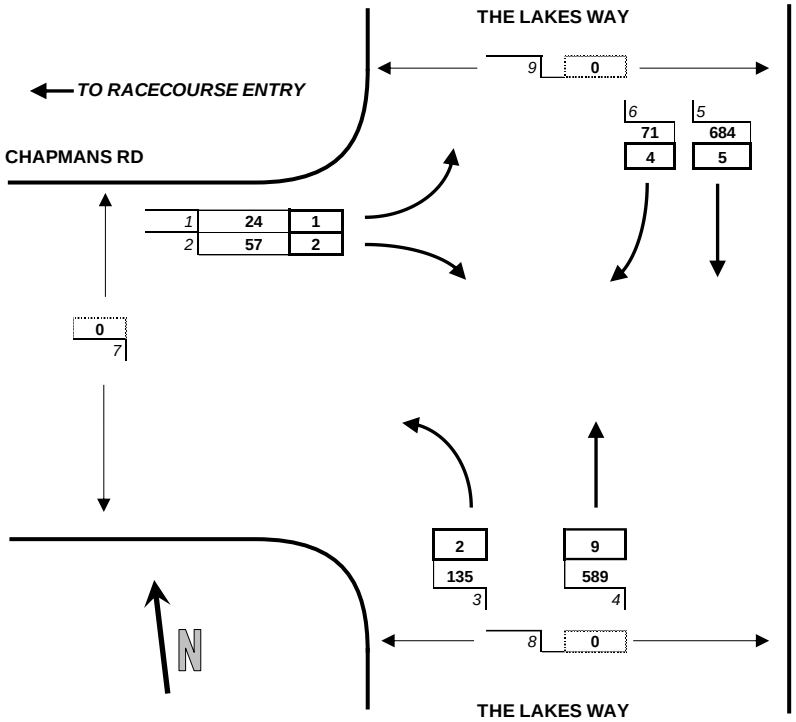
	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	0	0	0	26	57	0	3	0	6	0	36	18	146
Factor	0.00	0.00	0.00	0.81	0.89	0.00	0.38	0.00	0.50	0.00	0.75	0.45	0.73
Approach Factor	0.00			0.86			0.45			0.61			

20/1/2024 - THE LAKES WAY / CHAPMANS RD, TUNCURRY

12:45 <<< HOUR ENDING **Saturday**

Summary: THE LAKES WAY / CHAPMANS RD	
1560	Total Light Vehicles
23	Total Heavy Vehicles
0	Total Pedestrians

Quality Surveys
243801



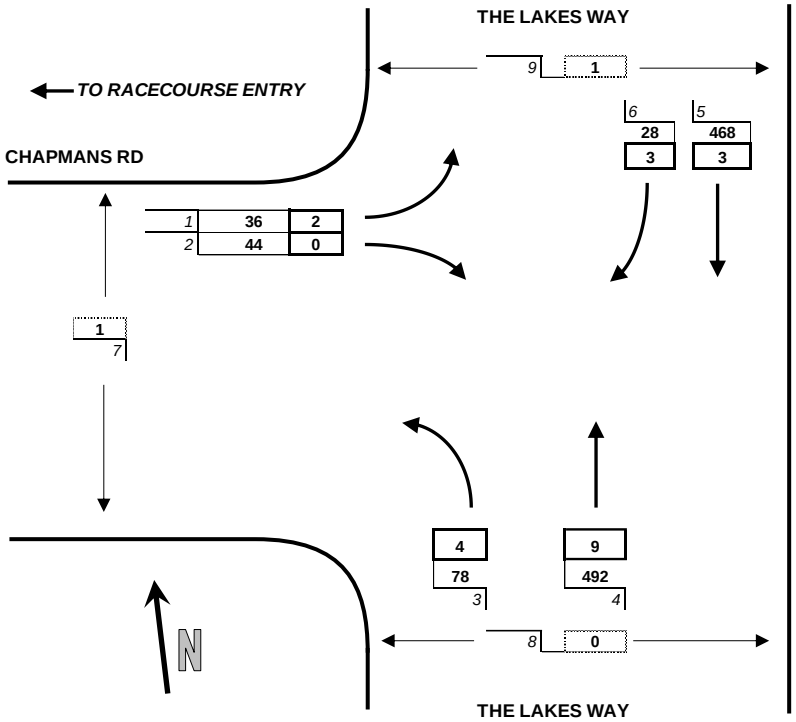
589	Light Vehicles
9	Heavy Vehicles
0	Pedestrians

20/1/2024 - THE LAKES WAY / CHAPMANS RD, TUNCURRY

16:00 <<< HOUR ENDING **Saturday**

Summary: THE LAKES WAY / CHAPMANS RD	
1146	Total Light Vehicles
21	Total Heavy Vehicles
2	Total Pedestrians

Quality Surveys
243801

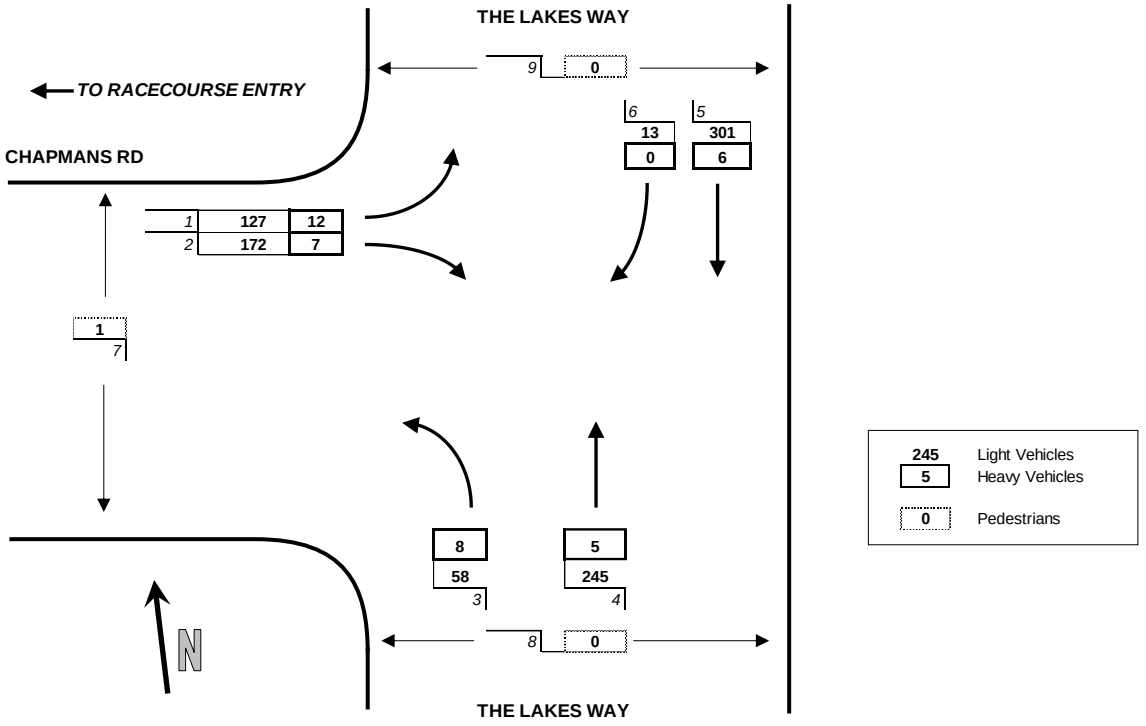


20/1/2024 - THE LAKES WAY / CHAPMANS RD, TUNCURRY

18:45 <<< HOUR ENDING **Saturday**

Quality Surveys
243801

Summary: THE LAKES WAY / CHAPMANS RD	
916	Total Light Vehicles
38	Total Heavy Vehicles
1	Total Pedestrians

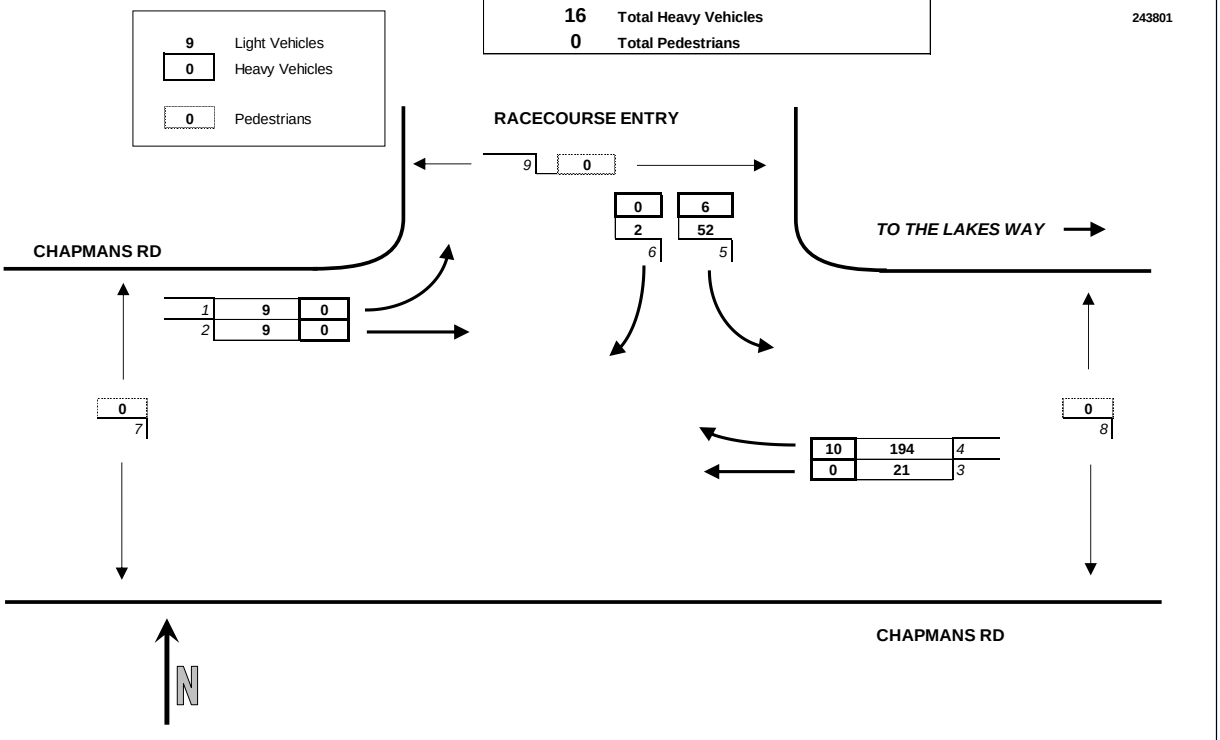


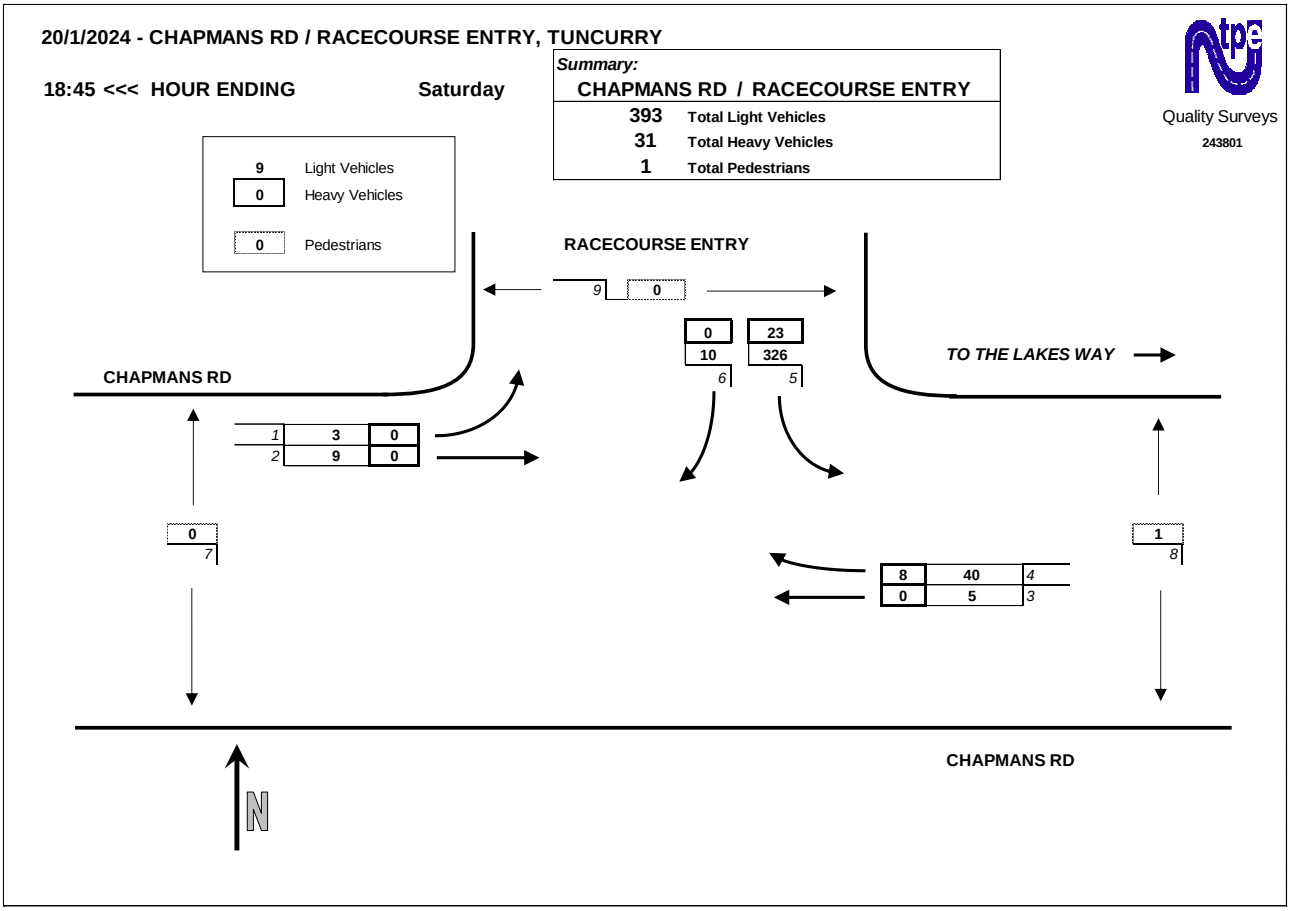
20/1/2024 - CHAPMANS RD / RACECOURSE ENTRY, TUNCURRY

13:45 <<< HOUR ENDING **Saturday**

Quality Surveys
243801

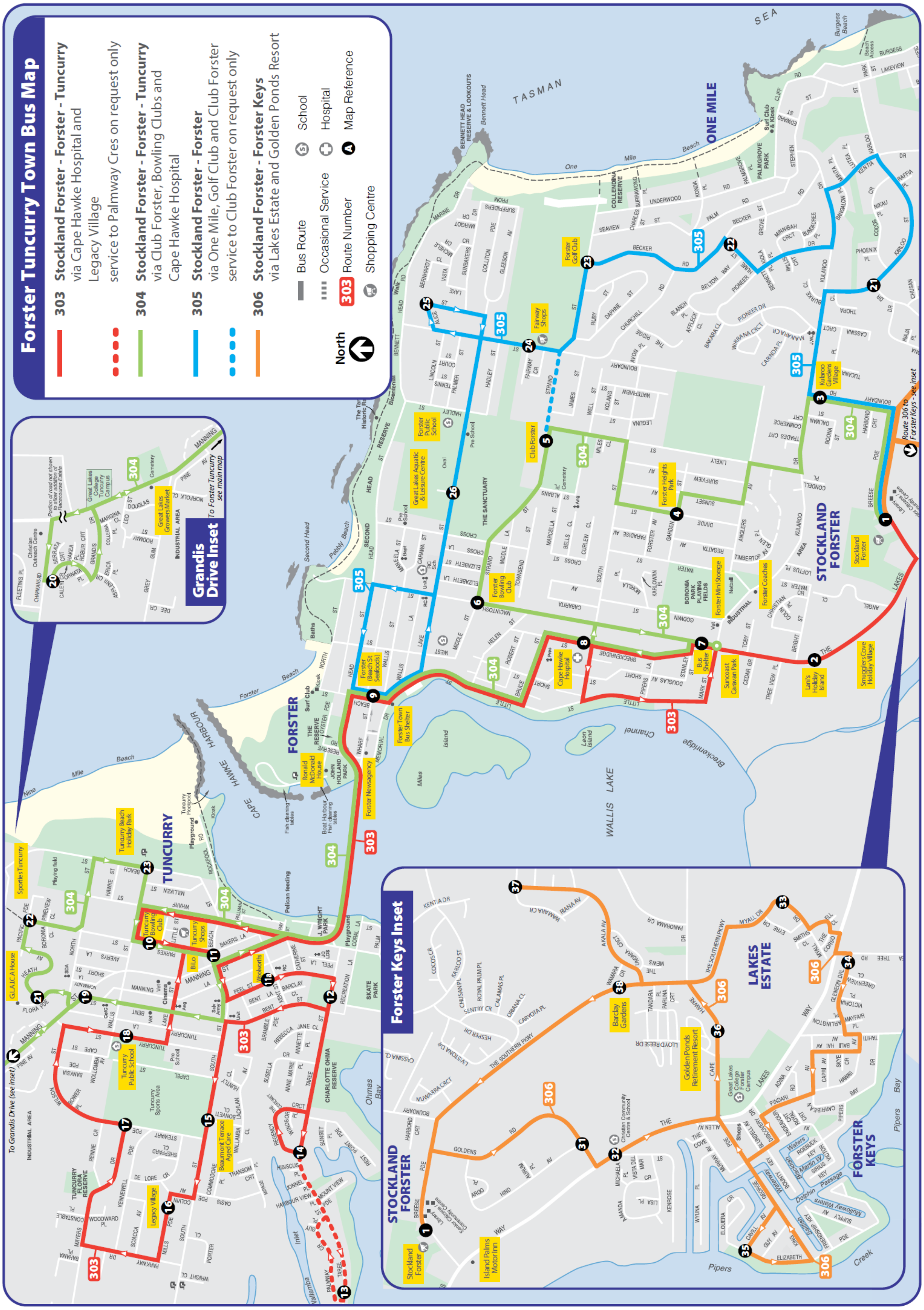
Summary: CHAPMANS RD / RACECOURSE ENTRY	
287	Total Light Vehicles
16	Total Heavy Vehicles
0	Total Pedestrians



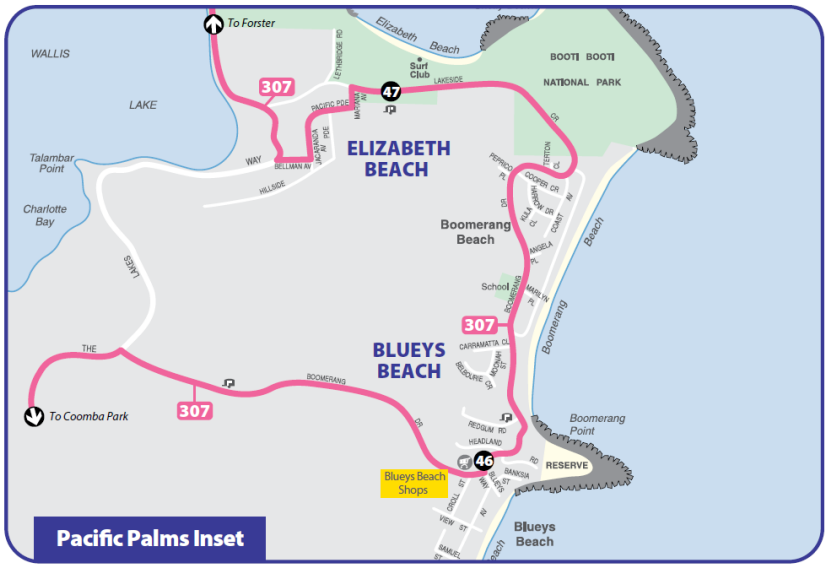

20/1/2024 - CHAPMANS RD / RACECOURSE ENTRY, TUNCURRY
18:45 <<< HOUR ENDING
Saturday
Summary:
CHAPMANS RD / RACECOURSE ENTRY
393 Total Light Vehicles
31 Total Heavy Vehicles
1 Total Pedestrians
Quality Surveys
243801
9 Light Vehicles
0 Heavy Vehicles
0 Pedestrians
RACECOURSE ENTRY
CHAPMANS RD
TO THE LAKES WAY
CHAPMANS RD
N

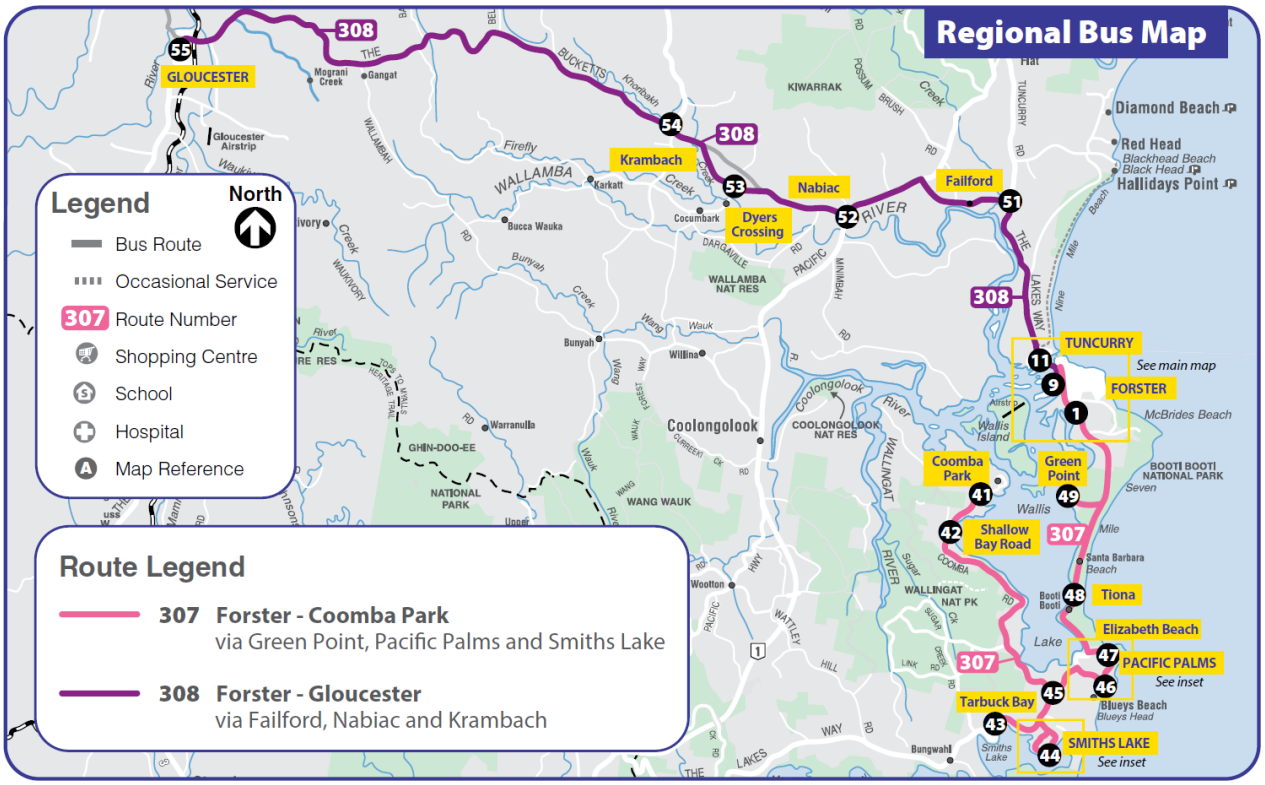
ATTACHMENT C

Forster Buslines Routes


Forster Tuncurry Town Bus Map
303 Stockland Forster - Forster - Tuncurry
via Cape Hawke Hospital and Legacy Village
service to Palmway Cres on request only
304 Stockland Forster - Forster - Tuncurry
via Club Forster, Bowling Clubs and Cape Hawke Hospital
305 Stockland Forster - Forster
via One Mile, Golf Club and Club Forster
service to Club Forster on request only
306 Stockland Forster - Forster Keys
via Lakes Estate and Golden Ponds Resort
Bus Route
Occasional Service
Route Number
Shopping Centre
School
Hospital
Map Reference
North
Grandis Drive Inset
Forster Keys Inset


via The Lakes Way to Forster
To Tarbuck Bay
SMITHS LAKE
307
RESERVE
SMITHS LAKE
Simons Point
DE BERT RESERVE
Smiths Lake Inset


To Forster
WALLIS LAKE
Elizabeth Beach
Surf Club
BOOTI BOOTI NATIONAL PARK
307
47
ELIZABETH BEACH
Talambar Point
Charlotte Bay
Boomerang Beach
School
BLUEYS BEACH
To Coomba Park
Boomerang Point
RESERVE
46
Blueys Beach Shops
Bluey Beach
Pacific Palms Inset


Regional Bus Map
Legend
North
Bus Route
Occasional Service
307 Route Number
Shopping Centre
School
Hospital
Map Reference
Route Legend
307 Forster - Coomba Park
via Green Point, Pacific Palms and Smiths Lake
308 Forster - Gloucester
via Failford, Nabiac and Krambach
GLOUCESTER
Gloucester Airstrip
Mograni Creek
Gangat
Krambach
Nabiac
Dyers Crossing
Failford
Bucca Wauka
Cocumbark
Karkatt
WALLAMBA NAT RES
KIWARRAK
Diamond Beach
Red Head
Blackhead Beach
Black Head
Hallidays Point
TUNCURRY
See main map
FORSTER
McBrides Beach
Wallis Island
Coomba Park
Green Point
BOOTI BOOTI NATIONAL PARK
Wallis Seven Mile
Shallow Bay Road
Santa Barbara Beach
Tiona
Elizabeth Beach
PACIFIC PALMS
See inset
Tarbuck Bay
Bluey Beach
Blueys Head
SMITHS LAKE
See inset
Bungwahl
Smiths Lake
Coolongolook
COOLONGOLOOK NAT RES
WALLINGAT NAT PK
Wootton
Willina
Bunyah
Warranulla
GHIN-DOO-EE NATIONAL PARK
WANG WAUK

ATTACHMENT D

Sidra Summary Tables

MOVEMENT SUMMARY

Site: 101 [2024 AM Chapmans Rd (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024AM (Network Folder: General)]

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	63	1.7	63	1.7	0.034	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.7
2	T1	All MCs	584	5.8	584	5.8	0.311	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			647	5.4	647	5.4	0.311	0.6	NA	0.0	0.0	0.00	0.06	0.00	59.0
North: The Lakes Way															
8	T1	All MCs	904	4.5	904	4.5	0.477	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
9	R2	All MCs	25	0.0	25	0.0	0.037	9.1	LOS A	0.1	0.4	0.56	0.73	0.56	46.8
Approach			929	4.4	929	4.4	0.477	0.4	NA	0.1	0.4	0.02	0.02	0.02	58.8
West: Chapmans Road															
10	L2	All MCs	24	0.0	24	0.0	0.036	7.8	LOS A	0.0	0.3	0.52	0.69	0.52	47.1
12	R2	All MCs	32	0.0	32	0.0	0.247	35.3	LOS C	0.3	2.2	0.92	0.99	1.00	25.6
Approach			56	0.0	56	0.0	0.247	23.4	LOS B	0.3	2.2	0.75	0.86	0.79	35.3
All Vehicles			1633	4.6	1633	4.6	0.477	1.3	NA	0.3	2.2	0.03	0.06	0.04	57.6

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:05:20 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101 [2024 PM Chapmans Road (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024PM (Network Folder: General)]

The Lakes Way / Chapmans Road T-intersection Tuncurry
June 2022 counts
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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	72	2.9	72	2.9	0.039	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.6
2	T1	All MCs	806	4.0	806	4.0	0.424	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Approach			878	4.0	878	4.0	0.424	0.6	NA	0.0	0.0	0.00	0.05	0.00	59.0
North: The Lakes Way															
8	T1	All MCs	599	3.7	599	3.7	0.315	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
9	R2	All MCs	16	6.7	16	6.7	0.036	12.5	LOS A	0.0	0.4	0.68	0.83	0.68	44.8
Approach			615	3.8	615	3.8	0.315	0.4	NA	0.0	0.4	0.02	0.02	0.02	58.8
West: Chapmans Road															
10	L2	All MCs	24	0.0	24	0.0	0.050	10.3	LOS A	0.1	0.5	0.65	0.82	0.65	45.7
12	R2	All MCs	29	0.0	29	0.0	0.168	25.1	LOS B	0.2	1.5	0.88	0.95	0.90	29.8
Approach			54	0.0	54	0.0	0.168	18.4	LOS B	0.2	1.5	0.78	0.89	0.78	38.0
All Vehicles			1546	3.7	1546	3.7	0.424	1.1	NA	0.2	1.5	0.03	0.07	0.03	58.0

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:05:24 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101 [2024 AM Chapmans Rd +development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024AM + development (Network Folder: General)]

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	87	1.2	87	1.2	0.047	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.7
2	T1	All MCs	584	5.8	584	5.8	0.311	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			672	5.2	672	5.2	0.311	0.8	NA	0.0	0.0	0.00	0.07	0.00	58.8
North: The Lakes Way															
8	T1	All MCs	904	4.5	904	4.5	0.477	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
9	R2	All MCs	37	0.0	37	0.0	0.055	9.4	LOS A	0.1	0.6	0.57	0.76	0.57	46.7
Approach			941	4.4	941	4.4	0.477	0.6	NA	0.1	0.6	0.02	0.03	0.02	58.4
West: Chapmans Road															
10	L2	All MCs	48	0.0	48	0.0	0.071	7.9	LOS A	0.1	0.7	0.53	0.73	0.53	47.0
12	R2	All MCs	61	0.0	61	0.0	0.497	45.5	LOS D	0.7	4.8	0.95	1.05	1.23	22.4
Approach			109	0.0	109	0.0	0.497	28.9	LOS C	0.7	4.8	0.76	0.91	0.92	33.0
All Vehicles			1722	4.4	1722	4.4	0.497	2.5	NA	0.7	4.8	0.06	0.10	0.07	55.8

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:05:49 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101 [2024 PM Chapmans Road + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024PM + development (Network Folder: General)]

The Lakes Way / Chapmans Road T-intersection Tuncurry
June 2022 counts
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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	131	1.6	131	1.6	0.071	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.6
2	T1	All MCs	806	4.0	806	4.0	0.424	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Approach			937	3.7	937	3.7	0.424	0.9	NA	0.0	0.0	0.00	0.08	0.00	58.6
North: The Lakes Way															
8	T1	All MCs	599	3.7	599	3.7	0.315	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
9	R2	All MCs	41	2.6	41	2.6	0.093	12.9	LOS A	0.1	0.9	0.71	0.88	0.71	44.7
Approach			640	3.6	640	3.6	0.315	0.9	NA	0.1	0.9	0.05	0.06	0.05	57.5
West: Chapmans Road															
10	L2	All MCs	35	0.0	35	0.0	0.071	10.4	LOS A	0.1	0.7	0.65	0.83	0.65	45.6
12	R2	All MCs	41	0.0	41	0.0	0.253	29.1	LOS C	0.3	2.3	0.90	0.98	0.99	28.0
Approach			76	0.0	76	0.0	0.253	20.5	LOS B	0.3	2.3	0.79	0.91	0.84	36.9
All Vehicles			1653	3.5	1653	3.5	0.424	1.8	NA	0.3	2.3	0.05	0.11	0.06	56.9

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:05:52 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101 [2034 AM Chapmans Rd + dev (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2034AM + development (Network Folder: General)]

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	97	1.1	97	1.1	0.053	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.7
2	T1	All MCs	678	5.7	678	5.7	0.361	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			775	5.2	775	5.2	0.361	0.8	NA	0.0	0.0	0.00	0.07	0.00	58.8
North: The Lakes Way															
8	T1	All MCs	1049	4.5	1049	4.5	0.554	0.3	LOS A	0.0	0.0	0.00	0.00	0.00	59.5
9	R2	All MCs	41	0.0	41	0.0	0.071	10.5	LOS A	0.1	0.7	0.62	0.82	0.62	46.0
Approach			1091	4.3	1091	4.3	0.554	0.6	NA	0.1	0.7	0.02	0.03	0.02	58.3
West: Chapmans Road															
10	L2	All MCs	53	0.0	53	0.0	0.089	9.0	LOS A	0.1	0.9	0.58	0.79	0.58	46.4
12	R2	All MCs	66	0.0	66	0.0	0.980	174.0	LOS F	2.2	15.1	1.00	1.39	2.53	8.8
Approach			119	0.0	119	0.0	0.980	101.0	LOS F	2.2	15.1	0.81	1.13	1.67	17.4
All Vehicles			1984	4.4	1984	4.4	0.980	6.7	NA	2.2	15.1	0.06	0.11	0.11	51.2

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:05:55 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101 [2034 PM Chapmans Road + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2034PM + development (Network Folder: General)]

The Lakes Way / Chapmans Road T-intersection Tuncurry
June 2022 counts
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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	228	0.9	228	0.9	0.124	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.7
2	T1	All MCs	936	4.0	936	4.0	0.493	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
Approach			1164	3.4	1164	3.4	0.493	1.3	NA	0.0	0.0	0.00	0.11	0.00	58.1
North: The Lakes Way															
8	T1	All MCs	695	3.6	695	3.6	0.365	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
9	R2	All MCs	43	2.4	43	2.4	0.140	17.0	LOS B	0.2	1.3	0.80	0.92	0.80	42.5
Approach			738	3.6	738	3.6	0.365	1.1	NA	0.2	1.3	0.05	0.05	0.05	57.2
West: Chapmans Road															
10	L2	All MCs	39	0.0	39	0.0	0.100	12.7	LOS A	0.1	0.9	0.73	0.87	0.73	44.4
12	R2	All MCs	45	0.0	45	0.0	0.462	54.2	LOS D	0.6	4.3	0.96	1.04	1.18	20.3
Approach			84	0.0	84	0.0	0.462	35.0	LOS C	0.6	4.3	0.85	0.96	0.97	30.8
All Vehicles			1986	3.3	1986	3.3	0.493	2.6	NA	0.6	4.3	0.05	0.13	0.06	56.0

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:05:59 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101 [2024 AM Chapmans Rd +development - No right turn out (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024AM + development - channelisation (Network Folder: General)]

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	87	1.2	87	1.2	0.047	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.7
2	T1	All MCs	584	5.8	584	5.8	0.311	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			672	5.2	672	5.2	0.311	0.8	NA	0.0	0.0	0.00	0.07	0.00	58.8
North: The Lakes Way															
8	T1	All MCs	904	4.5	904	4.5	0.477	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
9	R2	All MCs	37	0.0	37	0.0	0.055	9.3	LOS A	0.1	0.6	0.57	0.76	0.57	46.6
Approach			941	4.4	941	4.4	0.477	0.5	NA	0.1	0.6	0.02	0.03	0.02	58.4
West: Chapmans Road															
10	L2	All MCs	48	0.0	48	0.0	0.070	7.9	LOS A	0.1	0.7	0.53	0.72	0.53	47.1
Approach			48	0.0	48	0.0	0.070	7.9	LOS A	0.1	0.7	0.53	0.72	0.53	47.1
All Vehicles			1661	4.6	1661	4.6	0.477	0.9	NA	0.1	0.7	0.03	0.07	0.03	58.0

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:06:02 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101v [2024 AM Chapmans Rd +development - Conversion (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024AM + development - roundabout (Network Folder: General)]

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	87	1.2	87	1.2	0.086	3.8	LOS A	0.2	1.1	0.16	0.42	0.16	50.7
2	T1	All MCs	584	5.8	584	5.8	0.366	3.7	LOS A	1.0	7.0	0.16	0.34	0.16	55.0
Approach			672	5.2	672	5.2	0.366	3.8	LOS A	1.0	7.0	0.16	0.35	0.16	54.4
North: The Lakes Way															
8	T1	All MCs	904	4.5	904	4.5	0.580	4.0	LOS A	2.4	17.4	0.35	0.36	0.35	51.0
9	R2	All MCs	37	0.0	37	0.0	0.039	9.6	LOS A	0.1	0.5	0.23	0.59	0.23	47.1
Approach			941	4.4	941	4.4	0.580	4.2	LOS A	2.4	17.4	0.34	0.37	0.34	50.7
West: Chapmans Road															
10	L2	All MCs	48	0.0	48	0.0	0.056	5.7	LOS A	0.1	0.9	0.61	0.57	0.61	49.3
12	R2	All MCs	61	0.0	61	0.0	0.060	10.2	LOS A	0.1	1.0	0.60	0.65	0.60	39.9
Approach			109	0.0	109	0.0	0.060	8.2	LOS A	0.1	1.0	0.60	0.62	0.60	44.9
All Vehicles			1722	4.4	1722	4.4	0.580	4.3	LOS A	2.4	17.4	0.29	0.38	0.29	52.1

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:06:14 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101v [2024 AM Chapmans Rd +development - Conversion (2) (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024AM + development signals (Network Folder: General)]

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	87	1.2	87	1.2	0.059	6.7	LOS A	0.3	1.8	0.12	0.60	0.12	48.3
2	T1	All MCs	584	5.8	584	5.8	0.397	1.4	LOS A	2.5	18.5	0.18	0.16	0.18	58.7
Approach			672	5.2	672	5.2	0.397	2.1	LOS A	2.5	18.5	0.17	0.22	0.17	57.0
North: The Lakes Way															
8	T1	All MCs	904	4.5	904	4.5	*0.597	3.7	LOS A	9.2	66.7	0.42	0.38	0.42	53.6
9	R2	All MCs	37	0.0	37	0.0	0.069	8.6	LOS A	0.3	1.8	0.27	0.64	0.27	47.2
Approach			941	4.4	941	4.4	0.597	3.8	LOS A	9.2	66.7	0.41	0.39	0.41	53.1
West: Chapmans Road															
10	L2	All MCs	48	0.0	48	0.0	0.391	52.4	LOS D	1.3	9.4	0.99	0.74	0.99	30.2
12	R2	All MCs	61	0.0	61	0.0	*0.505	52.9	LOS D	1.7	12.0	1.00	0.76	1.00	20.8
Approach			109	0.0	109	0.0	0.505	52.7	LOS D	1.7	12.0	1.00	0.75	1.00	25.4
All Vehicles			1722	4.4	1722	4.4	0.597	6.3	LOS A	9.2	66.7	0.35	0.35	0.35	51.3

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

* Critical Movement (Signal Timing)

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:06:27 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101 [2034 AM Chapmans Rd + dev - no right turn out (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2034AM + development - channelisation (Network Folder: General)]

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	97	1.1	97	1.1	0.053	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.7
2	T1	All MCs	678	5.7	678	5.7	0.361	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			775	5.2	775	5.2	0.361	0.8	NA	0.0	0.0	0.00	0.07	0.00	58.8
North: The Lakes Way															
8	T1	All MCs	1049	4.5	1049	4.5	0.554	0.3	LOS A	0.0	0.0	0.00	0.00	0.00	59.5
9	R2	All MCs	41	0.0	41	0.0	0.071	10.4	LOS A	0.1	0.7	0.62	0.83	0.62	45.9
Approach			1091	4.3	1091	4.3	0.554	0.6	NA	0.1	0.7	0.02	0.03	0.02	58.2
West: Chapmans Road															
10	L2	All MCs	53	0.0	53	0.0	0.089	8.9	LOS A	0.1	0.9	0.58	0.79	0.58	46.4
Approach			53	0.0	53	0.0	0.089	8.9	LOS A	0.1	0.9	0.58	0.79	0.58	46.4
All Vehicles			1918	4.6	1918	4.6	0.554	0.9	NA	0.1	0.9	0.03	0.07	0.03	58.0

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:06:08 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101v [2034 AM Chapmans Rd + dev - Conversion (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2034AM + development - roundabout (Network Folder: General)]

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	97	1.1	97	1.1	0.096	3.9	LOS A	0.2	1.3	0.16	0.42	0.16	50.7
2	T1	All MCs	678	5.7	678	5.7	0.426	3.8	LOS A	1.2	8.7	0.19	0.35	0.19	54.9
Approach			775	5.2	775	5.2	0.426	3.8	LOS A	1.2	8.7	0.18	0.36	0.18	54.3
North: The Lakes Way															
8	T1	All MCs	1049	4.5	1049	4.5	0.676	4.1	LOS A	3.4	24.6	0.44	0.38	0.44	50.2
9	R2	All MCs	41	0.0	41	0.0	0.044	9.7	LOS A	0.1	0.6	0.24	0.59	0.24	47.1
Approach			1091	4.3	1091	4.3	0.676	4.3	LOS A	3.4	24.6	0.43	0.39	0.43	50.0
West: Chapmans Road															
10	L2	All MCs	53	0.0	53	0.0	0.067	6.6	LOS A	0.2	1.1	0.67	0.60	0.67	48.7
12	R2	All MCs	66	0.0	66	0.0	0.070	11.1	LOS A	0.2	1.3	0.67	0.67	0.67	39.5
Approach			119	0.0	119	0.0	0.070	9.1	LOS A	0.2	1.3	0.67	0.64	0.67	44.4
All Vehicles			1984	4.4	1984	4.4	0.676	4.4	LOS A	3.4	24.6	0.35	0.39	0.35	51.8

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:06:20 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101v [2034 AM Chapmans Rd + dev - Conversion (2) (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2034AM + development signals (Network Folder: General)]

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	97	1.1	97	1.1	0.062	7.2	LOS A	0.3	2.4	0.09	0.60	0.09	48.3
2	T1	All MCs	678	5.7	678	5.7	0.454	1.9	LOS A	3.9	28.6	0.14	0.13	0.14	58.8
Approach			775	5.2	775	5.2	0.454	2.6	LOS A	3.9	28.6	0.14	0.19	0.14	56.6
North: The Lakes Way															
8	T1	All MCs	1049	4.5	1049	4.5	*0.687	5.9	LOS A	16.8	122.0	0.40	0.37	0.40	52.5
9	R2	All MCs	41	0.0	41	0.0	0.088	10.5	LOS A	0.4	2.8	0.23	0.64	0.23	46.9
Approach			1091	4.3	1091	4.3	0.687	6.1	LOS A	16.8	122.0	0.40	0.38	0.40	50.0
West: Chapmans Road															
10	L2	All MCs	53	0.0	53	0.0	0.545	110.9	LOS F	2.4	16.6	1.00	0.76	1.01	24.5
12	R2	All MCs	66	0.0	66	0.0	*0.668	112.9	LOS F	3.1	21.4	1.00	0.82	1.10	15.6
Approach			119	0.0	119	0.0	0.668	112.0	LOS F	3.1	21.4	1.00	0.79	1.06	16.2
All Vehicles			1984	4.4	1984	4.4	0.687	11.1	LOS A	16.8	122.0	0.33	0.33	0.33	46.9

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

* Critical Movement (Signal Timing)

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:06:33 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101 [2024 PM Chapmans Road + development - no right turn out (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024PM + development + channelisation (Network Folder: General)]

The Lakes Way / Chapmans Road T-intersection Tuncurry
June 2022 counts
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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	131	1.6	131	1.6	0.071	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.6
2	T1	All MCs	806	4.0	806	4.0	0.424	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Approach			937	3.7	937	3.7	0.424	0.9	NA	0.0	0.0	0.00	0.08	0.00	58.6
North: The Lakes Way															
8	T1	All MCs	599	3.7	599	3.7	0.315	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
9	R2	All MCs	41	2.6	41	2.6	0.091	12.6	LOS A	0.1	0.9	0.70	0.88	0.70	44.6
Approach			640	3.6	640	3.6	0.315	0.9	NA	0.1	0.9	0.04	0.06	0.04	57.5
West: Chapmans Road															
10	L2	All MCs	35	0.0	35	0.0	0.070	10.3	LOS A	0.1	0.7	0.64	0.83	0.64	45.6
Approach			35	0.0	35	0.0	0.070	10.3	LOS A	0.1	0.7	0.64	0.83	0.64	45.6
All Vehicles			1612	3.6	1612	3.6	0.424	1.1	NA	0.1	0.9	0.03	0.09	0.03	57.9

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:06:05 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101v [2024 PM Chapmans Road + development - Conversion (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024PM + development - roundabout (Network Folder: General)]

The Lakes Way / Chapmans Road T-intersection Tuncurry
June 2022 counts
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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	131	1.6	131	1.6	0.128	3.9	LOS A	0.2	1.7	0.16	0.42	0.16	50.7
2	T1	All MCs	806	4.0	806	4.0	0.499	3.8	LOS A	1.5	10.8	0.19	0.35	0.19	54.9
Approach			937	3.7	937	3.7	0.499	3.8	LOS A	1.5	10.8	0.19	0.36	0.19	54.3
North: The Lakes Way															
8	T1	All MCs	599	3.7	599	3.7	0.377	3.7	LOS A	1.2	8.9	0.22	0.34	0.22	52.1
9	R2	All MCs	41	2.6	41	2.6	0.043	9.5	LOS A	0.1	0.6	0.19	0.59	0.19	47.2
Approach			640	3.6	640	3.6	0.377	4.1	LOS A	1.2	8.9	0.22	0.36	0.22	51.4
West: Chapmans Road															
10	L2	All MCs	35	0.0	35	0.0	0.049	8.3	LOS A	0.1	1.0	0.76	0.62	0.76	47.7
12	R2	All MCs	41	0.0	41	0.0	0.048	12.6	LOS A	0.1	1.0	0.77	0.66	0.77	38.3
Approach			76	0.0	76	0.0	0.049	10.6	LOS A	0.1	1.0	0.76	0.64	0.76	43.4
All Vehicles			1653	3.5	1653	3.5	0.499	4.2	LOS A	1.5	10.8	0.23	0.37	0.23	52.9

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:06:17 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101v [2024 PM Chapmans Road + development - Conversion (2) (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024PM + development signals (Network Folder: General)]

The Lakes Way / Chapmans Road T-intersection Tuncurry
June 2022 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 70 seconds (Network Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	131	1.6	131	1.6	0.096	9.2	LOS A	0.5	3.5	0.19	0.62	0.19	47.8
2	T1	All MCs	806	4.0	806	4.0	*0.631	4.7	LOS A	5.8	42.2	0.38	0.34	0.38	57.4
Approach			937	3.7	937	3.7	0.631	5.3	LOS A	5.8	42.2	0.35	0.38	0.35	54.2
North: The Lakes Way															
8	T1	All MCs	599	3.7	599	3.7	0.423	3.6	LOS A	4.7	33.7	0.40	0.36	0.40	53.7
9	R2	All MCs	41	2.6	41	2.6	0.127	12.8	LOS A	0.4	2.9	0.47	0.69	0.47	44.7
Approach			640	3.6	640	3.6	0.423	4.2	LOS A	4.7	33.7	0.41	0.38	0.41	52.4
West: Chapmans Road															
10	L2	All MCs	35	0.0	35	0.0	0.218	38.9	LOS C	0.7	5.1	0.96	0.72	0.96	33.6
12	R2	All MCs	41	0.0	41	0.0	*0.258	39.1	LOS C	0.9	6.0	0.97	0.73	0.97	24.3
Approach			76	0.0	76	0.0	0.258	39.0	LOS C	0.9	6.0	0.97	0.72	0.97	29.4
All Vehicles			1653	3.5	1653	3.5	0.631	6.4	LOS A	5.8	42.2	0.40	0.40	0.40	51.9

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

* Critical Movement (Signal Timing)

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:06:30 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101 [2034 PM Chapmans Road + development - no right turn out (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2034PM + development - channelisation (Network Folder: General)]

The Lakes Way / Chapmans Road T-intersection Tuncurry
June 2022 counts
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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	228	0.9	228	0.9	0.124	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.7
2	T1	All MCs	936	4.0	936	4.0	0.493	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
Approach			1164	3.4	1164	3.4	0.493	1.3	NA	0.0	0.0	0.00	0.11	0.00	58.1
North: The Lakes Way															
8	T1	All MCs	695	3.6	695	3.6	0.365	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
9	R2	All MCs	43	2.4	43	2.4	0.135	16.6	LOS B	0.2	1.3	0.79	0.92	0.79	42.6
Approach			738	3.6	738	3.6	0.365	1.1	NA	0.2	1.3	0.05	0.05	0.05	57.2
West: Chapmans Road															
10	L2	All MCs	39	0.0	39	0.0	0.098	12.5	LOS A	0.1	0.9	0.72	0.87	0.72	44.4
Approach			39	0.0	39	0.0	0.098	12.5	LOS A	0.1	0.9	0.72	0.87	0.72	44.4
All Vehicles			1941	3.4	1941	3.4	0.493	1.4	NA	0.2	1.3	0.03	0.11	0.03	57.4

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:06:11 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101v [2034 PM Chapmans Road + development - Conversion (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2034PM + development - roundabout (Network Folder: General)]

The Lakes Way / Chapmans Road T-intersection Tuncurry
June 2022 counts
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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	228	0.9	228	0.9	0.217	3.9	LOS A	0.4	3.0	0.17	0.42	0.17	50.6
2	T1	All MCs	936	4.0	936	4.0	0.579	3.9	LOS A	2.0	14.7	0.21	0.35	0.21	54.8
Approach			1164	3.4	1164	3.4	0.579	3.9	LOS A	2.0	14.7	0.21	0.37	0.21	53.9
North: The Lakes Way															
8	T1	All MCs	695	3.6	695	3.6	0.439	3.8	LOS A	1.6	11.7	0.26	0.34	0.26	51.7
9	R2	All MCs	43	2.4	43	2.4	0.046	9.6	LOS A	0.1	0.7	0.21	0.59	0.21	47.2
Approach			738	3.6	738	3.6	0.439	4.1	LOS A	1.6	11.7	0.26	0.36	0.26	51.2
West: Chapmans Road															
10	L2	All MCs	39	0.0	39	0.0	0.063	11.4	LOS A	0.2	1.5	0.88	0.66	0.88	45.8
12	R2	All MCs	45	0.0	45	0.0	0.060	15.5	LOS B	0.2	1.6	0.90	0.66	0.90	36.3
Approach			84	0.0	84	0.0	0.063	13.6	LOS A	0.2	1.6	0.89	0.66	0.89	41.5
All Vehicles			1986	3.3	1986	3.3	0.579	4.4	LOS A	2.0	14.7	0.26	0.38	0.26	52.6

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:06:23 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101v [2034 PM Chapmans Road + development - Conversion (2) (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2034PM + development - signals (Network Folder: General)]

The Lakes Way / Chapmans Road T-intersection Tuncurry
June 2022 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 80 seconds (Network Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	228	0.9	228	0.9	0.160	10.1	LOS A	1.0	6.8	0.19	0.63	0.19	47.9
2	T1	All MCs	936	4.0	936	4.0	*0.759	6.1	LOS A	9.2	66.6	0.45	0.42	0.45	56.9
Approach			1164	3.4	1164	3.4	0.759	6.9	LOS A	9.2	66.6	0.40	0.46	0.40	52.5
North: The Lakes Way															
8	T1	All MCs	695	3.6	695	3.6	0.471	3.4	LOS A	5.8	42.0	0.38	0.35	0.38	54.1
9	R2	All MCs	43	2.4	43	2.4	0.192	16.4	LOS B	0.6	4.0	0.54	0.71	0.54	42.8
Approach			738	3.6	738	3.6	0.471	4.2	LOS A	5.8	42.0	0.39	0.37	0.39	52.5
West: Chapmans Road															
10	L2	All MCs	39	0.0	39	0.0	0.280	44.9	LOS D	0.9	6.6	0.98	0.73	0.98	31.9
12	R2	All MCs	45	0.0	45	0.0	*0.325	45.1	LOS D	1.1	7.7	0.98	0.73	0.98	22.5
Approach			84	0.0	84	0.0	0.325	45.0	LOS D	1.1	7.7	0.98	0.73	0.98	27.6
All Vehicles			1986	3.3	1986	3.3	0.759	7.5	LOS A	9.2	66.6	0.42	0.44	0.42	50.8

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

* Critical Movement (Signal Timing)

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:06:37 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101 [2024AM Grandis Drive (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024AM (Network Folder: General)]

The Lakes Way / Grandis Drive / The Northern Parkway signals
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Manning Street / The Lakes Way															
1	L2	All MCs	22	0.0	22	0.0	0.016	10.9	LOS A	0.2	1.5	0.29	0.54	0.29	36.2
2	T1	All MCs	604	5.1	604	5.1	0.448	9.8	LOS A	8.6	63.1	0.44	0.40	0.44	34.7
3	R2	All MCs	242	1.7	242	1.7	*0.749	30.4	LOS C	7.2	51.1	0.77	0.85	0.86	30.3
Approach			868	4.0	868	4.0	0.749	15.6	LOS B	8.6	63.1	0.53	0.53	0.55	31.6
East: The Northern Parkway															
4	L2	All MCs	108	9.7	108	9.7	0.357	52.3	LOS D	3.5	26.4	0.92	0.77	0.92	25.5
5	T1	All MCs	6	0.0	6	0.0	0.135	45.0	LOS D	1.1	7.7	0.88	0.70	0.88	25.9
6	R2	All MCs	28	3.7	28	3.7	0.135	49.3	LOS D	1.1	7.7	0.88	0.70	0.88	19.6
Approach			143	8.1	143	8.1	0.357	51.4	LOS D	3.5	26.4	0.91	0.76	0.91	24.7
North: Manning Street / The Lakes Way															
7	L2	All MCs	146	6.5	146	6.5	0.283	9.4	LOS A	4.6	33.6	0.37	0.44	0.37	36.6
8	T1	All MCs	788	3.6	788	3.6	0.404	10.0	LOS A	7.6	54.5	0.41	0.40	0.41	37.1
9	R2	All MCs	2	0.0	2	0.0	0.005	17.4	LOS B	0.0	0.2	0.41	0.53	0.41	34.3
Approach			937	4.0	937	4.0	0.404	9.9	LOS A	7.6	54.5	0.40	0.40	0.40	36.1
West: Grandis Drive															
10	L2	All MCs	13	0.0	13	0.0	0.079	50.1	LOS D	0.8	5.5	0.87	0.66	0.87	19.6
11	T1	All MCs	14	0.0	14	0.0	0.079	46.1	LOS D	0.8	5.5	0.87	0.66	0.87	26.4
12	R2	All MCs	93	2.3	93	2.3	*0.513	59.9	LOS E	3.2	23.1	0.98	0.78	0.98	24.0
Approach			119	1.8	119	1.8	0.513	57.3	LOS E	3.2	23.1	0.96	0.76	0.96	23.7
All Vehicles			2067	4.2	2067	4.2	0.749	17.9	LOS B	8.6	63.1	0.52	0.50	0.53	32.4

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Manning Street / The Lakes Way											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
East: The Northern Parkway											

MOVEMENT SUMMARY

Site: 101 [2024PM Grandis Drive (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024PM (Network Folder: General)]

The Lakes Way / Grandis Drive / The Northern Parkway signals
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Manning Street / The Lakes Way															
1	L2	All MCs	54	2.0	54	2.0	0.042	15.1	LOS B	0.6	4.1	0.32	0.56	0.32	35.9
2	T1	All MCs	768	4.2	768	4.2	*0.605	15.8	LOS B	14.1	102.0	0.56	0.52	0.56	33.0
3	R2	All MCs	40	15.8	40	15.8	0.095	18.2	LOS B	0.6	4.6	0.42	0.60	0.42	34.6
Approach			862	4.6	862	4.6	0.605	15.8	LOS B	14.1	102.0	0.54	0.53	0.54	30.5
East: The Northern Parkway															
4	L2	All MCs	208	2.0	208	2.0	*0.609	56.5	LOS E	6.9	49.2	0.96	0.82	0.96	25.5
5	T1	All MCs	3	0.0	3	0.0	0.352	49.9	LOS D	3.2	24.1	0.91	0.77	0.91	25.9
6	R2	All MCs	100	7.4	100	7.4	0.352	53.3	LOS D	3.2	24.1	0.91	0.77	0.91	19.6
Approach			312	3.7	312	3.7	0.609	55.4	LOS D	6.9	49.2	0.94	0.80	0.94	23.2
North: Manning Street / The Lakes Way															
7	L2	All MCs	12	0.0	12	0.0	0.201	10.0	LOS A	3.3	23.6	0.37	0.33	0.37	36.8
8	T1	All MCs	632	4.2	632	4.2	0.287	9.2	LOS A	4.9	35.8	0.39	0.35	0.39	37.1
9	R2	All MCs	4	0.0	4	0.0	0.015	23.5	LOS B	0.1	0.6	0.54	0.58	0.54	32.0
Approach			647	4.1	647	4.1	0.287	9.3	LOS A	4.9	35.8	0.39	0.35	0.39	36.4
West: Grandis Drive															
10	L2	All MCs	4	0.0	4	0.0	0.021	45.7	LOS D	0.2	1.7	0.83	0.61	0.83	20.2
11	T1	All MCs	3	33.3	3	33.3	0.021	41.2	LOS C	0.2	1.7	0.83	0.61	0.83	26.9
12	R2	All MCs	58	3.6	58	3.6	0.426	61.9	LOS E	2.1	15.0	0.99	0.76	0.99	23.5
Approach			65	4.8	65	4.8	0.426	59.9	LOS E	2.1	15.0	0.97	0.74	0.97	23.5
All Vehicles			1886	4.3	1886	4.3	0.609	21.7	LOS B	14.1	102.0	0.57	0.52	0.57	30.5

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Manning Street / The Lakes Way											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
East: The Northern Parkway											

MOVEMENT SUMMARY

Site: 101 [2024AM Grandis Drive + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024AM + development - roundabout (Network Folder: General)]

The Lakes Way / Grandis Drive / The Northern Parkway signals
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Manning Street / The Lakes Way															
1	L2	All MCs	22	0.0	22	0.0	0.016	11.2	LOS A	0.2	1.5	0.29	0.54	0.29	36.2
2	T1	All MCs	628	4.9	628	4.9	0.466	10.3	LOS A	9.2	66.8	0.45	0.41	0.45	34.6
3	R2	All MCs	242	1.7	242	1.7	*0.780	35.9	LOS C	7.9	55.8	0.80	0.89	0.94	29.2
Approach			893	3.9	893	3.9	0.780	17.3	LOS B	9.2	66.8	0.54	0.54	0.58	30.9
East: The Northern Parkway															
4	L2	All MCs	108	9.7	108	9.7	0.357	52.5	LOS D	3.5	26.4	0.92	0.77	0.92	25.5
5	T1	All MCs	6	0.0	6	0.0	0.135	45.0	LOS D	1.1	7.7	0.88	0.70	0.88	25.9
6	R2	All MCs	28	3.7	28	3.7	0.135	49.3	LOS D	1.1	7.7	0.88	0.70	0.88	19.6
Approach			143	8.1	143	8.1	0.357	51.5	LOS D	3.5	26.4	0.91	0.76	0.91	24.7
North: Manning Street / The Lakes Way															
7	L2	All MCs	146	6.5	146	6.5	0.291	9.5	LOS A	4.8	34.8	0.37	0.44	0.37	36.5
8	T1	All MCs	816	3.5	816	3.5	0.415	10.2	LOS A	7.9	56.7	0.41	0.40	0.41	37.1
9	R2	All MCs	2	0.0	2	0.0	0.005	18.0	LOS B	0.0	0.2	0.42	0.53	0.42	34.2
Approach			964	3.9	964	3.9	0.415	10.2	LOS A	7.9	56.7	0.40	0.41	0.40	36.1
West: Grandis Drive															
10	L2	All MCs	13	0.0	13	0.0	0.079	62.3	LOS E	0.8	5.5	0.87	0.66	0.87	19.6
11	T1	All MCs	14	0.0	14	0.0	0.079	58.2	LOS E	0.8	5.5	0.87	0.66	0.87	26.4
12	R2	All MCs	121	1.7	121	1.7	*0.695	75.1	LOS F	4.4	31.6	1.00	0.87	1.10	23.5
Approach			147	1.4	147	1.4	0.695	72.4	LOS F	4.4	31.6	0.98	0.83	1.06	21.6
All Vehicles			2147	4.0	2147	4.0	0.780	20.1	LOS B	9.2	66.8	0.53	0.52	0.56	31.7

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Manning Street / The Lakes Way											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

MOVEMENT SUMMARY

Site: 101 [2024PM Grandis Drive + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024PM + development (Network Folder: General)]

The Lakes Way / Grandis Drive / The Northern Parkway signals
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Manning Street / The Lakes Way															
1	L2	All MCs	54	2.0	54	2.0	0.041	15.1	LOS B	0.6	4.0	0.32	0.56	0.32	36.0
2	T1	All MCs	827	3.9	827	3.9	*0.642	16.1	LOS B	15.6	112.6	0.58	0.54	0.58	33.0
3	R2	All MCs	40	15.8	40	15.8	0.095	17.8	LOS B	0.5	4.4	0.40	0.59	0.40	34.9
Approach			921	4.3	921	4.3	0.642	16.1	LOS B	15.6	112.6	0.56	0.54	0.56	30.3
East: The Northern Parkway															
4	L2	All MCs	208	2.0	208	2.0	*0.639	58.2	LOS E	7.0	49.9	0.97	0.82	0.97	25.3
5	T1	All MCs	3	0.0	3	0.0	0.366	51.5	LOS D	3.3	24.4	0.91	0.77	0.91	25.7
6	R2	All MCs	100	7.4	100	7.4	0.366	54.8	LOS D	3.3	24.4	0.91	0.77	0.91	19.4
Approach			312	3.7	312	3.7	0.639	57.1	LOS E	7.0	49.9	0.95	0.80	0.95	23.0
North: Manning Street / The Lakes Way															
7	L2	All MCs	12	0.0	12	0.0	0.203	9.7	LOS A	3.2	23.5	0.36	0.33	0.36	36.9
8	T1	All MCs	643	4.1	643	4.1	0.289	8.8	LOS A	4.9	35.6	0.38	0.34	0.38	37.2
9	R2	All MCs	4	0.0	4	0.0	0.016	24.6	LOS B	0.1	0.6	0.56	0.58	0.56	31.7
Approach			659	4.0	659	4.0	0.289	8.9	LOS A	4.9	35.6	0.38	0.34	0.38	36.6
West: Grandis Drive															
10	L2	All MCs	4	0.0	4	0.0	0.022	46.8	LOS D	0.2	1.7	0.84	0.61	0.84	20.0
11	T1	All MCs	3	33.3	3	33.3	0.022	42.1	LOS C	0.2	1.7	0.84	0.61	0.84	26.7
12	R2	All MCs	72	2.9	72	2.9	0.573	64.2	LOS E	2.6	18.9	1.00	0.79	1.03	23.1
Approach			79	4.0	79	4.0	0.573	62.4	LOS E	2.6	18.9	0.98	0.78	1.01	23.2
All Vehicles			1971	4.1	1971	4.1	0.642	22.0	LOS B	15.6	112.6	0.58	0.52	0.58	30.4

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Manning Street / The Lakes Way											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

MOVEMENT SUMMARY

Site: 101 [2034AM Grandis Drive + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2034AM + development (Network Folder: General)]

The Lakes Way / Grandis Drive / The Northern Parkway signals
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Manning Street / The Lakes Way															
1	L2	All MCs	25	0.0	25	0.0	0.019	12.3	LOS A	0.2	1.7	0.29	0.54	0.29	36.2
2	T1	All MCs	725	4.9	725	4.9	0.540	19.4	LOS B	11.5	84.0	0.49	0.45	0.49	34.2
3	R2	All MCs	281	1.9	281	1.9	*1.248	302.4	LOS F	25.3	180.1	1.00	1.96	2.74	9.5
Approach			1032	4.0	1032	4.0	1.248	96.3	LOS F	25.3	180.1	0.62	0.86	1.10	15.3
East: The Northern Parkway															
4	L2	All MCs	126	10.0	126	10.0	0.416	53.7	LOS D	4.1	31.2	0.94	0.78	0.94	25.3
5	T1	All MCs	7	0.0	7	0.0	0.156	45.2	LOS D	1.2	8.9	0.88	0.71	0.88	25.9
6	R2	All MCs	33	3.2	33	3.2	0.156	49.5	LOS D	1.2	8.9	0.88	0.71	0.88	19.6
Approach			166	8.2	166	8.2	0.416	52.5	LOS D	4.1	31.2	0.92	0.77	0.92	24.6
North: Manning Street / The Lakes Way															
7	L2	All MCs	169	6.2	169	6.2	0.336	9.8	LOS A	5.8	42.0	0.39	0.45	0.39	36.4
8	T1	All MCs	942	3.5	942	3.5	0.480	11.6	LOS A	9.7	70.3	0.44	0.43	0.44	36.9
9	R2	All MCs	2	0.0	2	0.0	0.006	21.2	LOS B	0.0	0.2	0.46	0.55	0.46	33.4
Approach			1114	3.9	1114	3.9	0.480	11.3	LOS A	9.7	70.3	0.43	0.43	0.43	35.8
West: Grandis Drive															
10	L2	All MCs	15	0.0	15	0.0	0.092	67.9	LOS E	0.9	6.4	0.87	0.67	0.87	19.6
11	T1	All MCs	16	0.0	16	0.0	0.092	63.6	LOS E	0.9	6.4	0.87	0.67	0.87	26.3
12	R2	All MCs	136	1.6	136	1.6	*0.858	89.5	LOS F	5.5	39.0	1.00	1.03	1.33	22.2
Approach			166	1.3	166	1.3	0.858	85.1	LOS F	5.5	39.0	0.98	0.96	1.25	19.9
All Vehicles			2478	4.0	2478	4.0	1.248	54.4	LOS D	25.3	180.1	0.58	0.67	0.80	23.4

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Manning Street / The Lakes Way											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

MOVEMENT SUMMARY

Site: 101 [2034PM Grandis Drive + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2034PM + development (Network Folder: General)]

The Lakes Way / Grandis Drive / The Northern Parkway signals
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Manning Street / The Lakes Way															
1	L2	All MCs	62	1.7	62	1.7	0.049	18.6	LOS B	0.7	4.9	0.34	0.57	0.34	35.7
2	T1	All MCs	951	4.0	951	4.0	*0.760	21.8	LOS B	21.8	157.6	0.71	0.65	0.71	31.4
3	R2	All MCs	46	15.9	46	15.9	0.132	23.7	LOS B	0.7	5.8	0.46	0.62	0.46	34.0
Approach			1059	4.4	1059	4.4	0.760	21.7	LOS B	21.8	157.6	0.68	0.64	0.68	28.0
East: The Northern Parkway															
4	L2	All MCs	242	2.2	242	2.2	0.736	65.5	LOS E	8.5	60.4	0.99	0.87	1.06	25.0
5	T1	All MCs	3	0.0	3	0.0	0.392	55.5	LOS D	3.8	27.9	0.91	0.78	0.91	26.0
6	R2	All MCs	116	7.3	116	7.3	0.392	58.9	LOS E	3.8	27.9	0.91	0.78	0.91	19.7
Approach			361	3.8	361	3.8	0.736	63.3	LOS E	8.5	60.4	0.96	0.84	1.01	22.0
North: Manning Street / The Lakes Way															
7	L2	All MCs	14	0.0	14	0.0	0.241	10.6	LOS A	4.1	29.7	0.40	0.36	0.40	36.5
8	T1	All MCs	744	4.1	744	4.1	0.344	11.0	LOS A	6.3	45.4	0.42	0.38	0.42	36.8
9	R2	All MCs	5	0.0	5	0.0	0.030	35.6	LOS C	0.1	0.9	0.68	0.62	0.68	29.1
Approach			763	4.0	763	4.0	0.344	11.1	LOS A	6.3	45.4	0.42	0.38	0.42	35.9
West: Grandis Drive															
10	L2	All MCs	5	0.0	5	0.0	0.023	45.5	LOS D	0.2	1.8	0.82	0.62	0.82	20.4
11	T1	All MCs	3	33.3	3	33.3	0.023	40.3	LOS C	0.2	1.8	0.82	0.62	0.82	27.1
12	R2	All MCs	81	2.6	81	2.6	*0.750	69.2	LOS E	3.1	22.5	1.00	0.91	1.21	22.4
Approach			89	3.5	89	3.5	0.750	66.8	LOS E	3.1	22.5	0.98	0.88	1.17	22.5
All Vehicles			2273	4.1	2273	4.1	0.760	26.5	LOS B	21.8	157.6	0.65	0.59	0.66	29.0

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Manning Street / The Lakes Way											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

MOVEMENT SUMMARY

Site: 101 [2024AM Grandis Drive + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024AM + development - roundabout (Network Folder: General)]

The Lakes Way / Grandis Drive / The Northern Parkway signals
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Manning Street / The Lakes Way															
1	L2	All MCs	22	0.0	22	0.0	0.016	11.2	LOS A	0.2	1.5	0.29	0.54	0.29	36.2
2	T1	All MCs	628	4.9	628	4.9	0.466	10.3	LOS A	9.2	66.8	0.45	0.41	0.45	34.6
3	R2	All MCs	242	1.7	242	1.7	*0.780	35.9	LOS C	7.9	55.8	0.80	0.89	0.94	29.2
Approach			893	3.9	893	3.9	0.780	17.3	LOS B	9.2	66.8	0.54	0.54	0.58	30.9
East: The Northern Parkway															
4	L2	All MCs	108	9.7	108	9.7	0.357	52.5	LOS D	3.5	26.4	0.92	0.77	0.92	25.5
5	T1	All MCs	6	0.0	6	0.0	0.135	45.0	LOS D	1.1	7.7	0.88	0.70	0.88	25.9
6	R2	All MCs	28	3.7	28	3.7	0.135	49.3	LOS D	1.1	7.7	0.88	0.70	0.88	19.6
Approach			143	8.1	143	8.1	0.357	51.5	LOS D	3.5	26.4	0.91	0.76	0.91	24.7
North: Manning Street / The Lakes Way															
7	L2	All MCs	146	6.5	146	6.5	0.291	9.5	LOS A	4.8	34.8	0.37	0.44	0.37	36.5
8	T1	All MCs	816	3.5	816	3.5	0.415	10.2	LOS A	7.9	56.7	0.41	0.40	0.41	37.1
9	R2	All MCs	2	0.0	2	0.0	0.005	18.0	LOS B	0.0	0.2	0.42	0.53	0.42	34.2
Approach			964	3.9	964	3.9	0.415	10.2	LOS A	7.9	56.7	0.40	0.41	0.40	36.1
West: Grandis Drive															
10	L2	All MCs	13	0.0	13	0.0	0.079	62.3	LOS E	0.8	5.5	0.87	0.66	0.87	19.6
11	T1	All MCs	14	0.0	14	0.0	0.079	58.2	LOS E	0.8	5.5	0.87	0.66	0.87	26.4
12	R2	All MCs	121	1.7	121	1.7	*0.695	75.1	LOS F	4.4	31.6	1.00	0.87	1.10	23.5
Approach			147	1.4	147	1.4	0.695	72.4	LOS F	4.4	31.6	0.98	0.83	1.06	21.6
All Vehicles			2147	4.0	2147	4.0	0.780	20.1	LOS B	9.2	66.8	0.53	0.52	0.56	31.7

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Manning Street / The Lakes Way											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

MOVEMENT SUMMARY

Site: 101 [2024AM Grandis Drive + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024AM + development signals (Network Folder: General)]

The Lakes Way / Grandis Drive / The Northern Parkway signals
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 90 seconds (Network Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Manning Street / The Lakes Way															
1	L2	All MCs	22	0.0	22	0.0	0.018	13.1	LOS A	0.2	1.5	0.37	0.56	0.37	35.8
2	T1	All MCs	628	4.9	628	4.9	0.524	12.8	LOS A	9.0	65.5	0.58	0.52	0.58	33.4
3	R2	All MCs	242	1.7	242	1.7	* 0.928	68.6	LOS E	9.6	68.5	1.00	1.23	1.59	23.1
Approach			893	3.9	893	3.9	0.928	27.9	LOS B	9.6	68.5	0.69	0.71	0.85	27.1
East: The Northern Parkway															
4	L2	All MCs	108	9.7	108	9.7	0.281	36.7	LOS C	2.5	18.7	0.87	0.75	0.87	28.6
5	T1	All MCs	6	0.0	6	0.0	0.105	30.5	LOS C	0.8	5.4	0.83	0.68	0.83	29.2
6	R2	All MCs	28	3.7	28	3.7	0.105	33.9	LOS C	0.8	5.4	0.83	0.68	0.83	23.4
Approach			143	8.1	143	8.1	0.281	35.8	LOS C	2.5	18.7	0.86	0.74	0.86	27.9
North: Manning Street / The Lakes Way															
7	L2	All MCs	146	6.5	146	6.5	0.328	14.4	LOS A	6.3	46.0	0.65	0.51	0.65	34.8
8	T1	All MCs	816	3.5	816	3.5	0.467	17.8	LOS B	10.0	72.3	0.69	0.51	0.69	35.1
9	R2	All MCs	2	0.0	2	0.0	0.006	27.9	LOS B	0.0	0.3	0.69	0.59	0.69	32.0
Approach			964	3.9	964	3.9	0.467	17.3	LOS B	10.0	72.3	0.69	0.51	0.69	33.7
West: Grandis Drive															
10	L2	All MCs	13	0.0	13	0.0	0.062	33.9	LOS C	0.6	3.9	0.82	0.64	0.82	23.4
11	T1	All MCs	14	0.0	14	0.0	0.062	29.8	LOS C	0.6	3.9	0.82	0.64	0.82	29.6
12	R2	All MCs	121	1.7	121	1.7	* 0.473	40.7	LOS C	3.1	21.7	0.94	0.78	0.94	27.3
Approach			147	1.4	147	1.4	0.473	39.1	LOS C	3.1	21.7	0.92	0.76	0.92	27.3
All Vehicles			2147	4.0	2147	4.0	0.928	24.5	LOS B	10.0	72.3	0.72	0.63	0.78	30.3

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Manning Street / The Lakes Way											
P1	Full	53	39.3	LOS D	0.1	0.1	0.94	0.94	193.1	200.0	1.04

MOVEMENT SUMMARY

Site: 101 [2024AM Grandis Drive + development - channelisation (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024AM + development - channelisation (Network Folder: General)]

The Lakes Way / Grandis Drive / The Northern Parkway signals
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Manning Street / The Lakes Way															
1	L2	All MCs	22	0.0	22	0.0	0.017	14.4	LOS A	0.2	1.7	0.33	0.55	0.33	35.7
2	T1	All MCs	628	4.9	628	4.9	0.496	15.4	LOS B	10.6	77.1	0.52	0.47	0.52	33.1
3	R2	All MCs	242	1.7	242	1.7	* 0.850	54.8	LOS D	9.7	69.0	0.90	1.01	1.17	25.8
Approach			893	3.9	893	3.9	0.850	26.1	LOS B	10.6	77.1	0.62	0.62	0.69	27.7
East: The Northern Parkway															
4	L2	All MCs	108	9.7	108	9.7	0.288	47.6	LOS D	3.3	24.9	0.88	0.76	0.88	26.4
5	T1	All MCs	6	0.0	6	0.0	0.109	40.2	LOS C	1.0	7.2	0.84	0.69	0.84	26.9
6	R2	All MCs	28	3.7	28	3.7	0.109	44.4	LOS D	1.0	7.2	0.84	0.69	0.84	20.7
Approach			143	8.1	143	8.1	0.288	46.6	LOS D	3.3	24.9	0.87	0.74	0.87	25.6
North: Manning Street / The Lakes Way															
7	L2	All MCs	146	6.5	146	6.5	0.301	11.4	LOS A	5.3	38.8	0.43	0.48	0.43	35.8
8	T1	All MCs	788	3.6	788	3.6	0.428	13.5	LOS A	8.7	62.9	0.47	0.45	0.47	36.3
9	R2	All MCs	2	0.0	2	0.0	0.006	23.4	LOS B	0.0	0.2	0.49	0.55	0.49	32.9
Approach			937	4.0	937	4.0	0.428	13.2	LOS A	8.7	62.9	0.46	0.45	0.46	35.0
West: Grandis Drive															
10	L2	All MCs	13	0.0	13	0.0	0.064	68.4	LOS E	0.7	5.2	0.83	0.64	0.83	20.7
11	T1	All MCs	14	0.0	14	0.0	0.064	64.3	LOS E	0.7	5.2	0.83	0.64	0.83	27.3
12	R2	All MCs	180	1.2	180	1.2	* 0.800	86.4	LOS F	6.9	48.5	1.00	0.95	1.19	23.4
Approach			206	1.0	206	1.0	0.800	83.8	LOS F	6.9	48.5	0.98	0.91	1.14	20.2
All Vehicles			2179	4.0	2179	4.0	0.850	27.4	LOS B	10.6	77.1	0.60	0.58	0.65	29.5

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Manning Street / The Lakes Way											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

MOVEMENT SUMMARY

Site: 101 [2024PM Grandis Drive + development - Channelisation (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024PM + development + channelisation (Network Folder: General)]

The Lakes Way / Grandis Drive / The Northern Parkway signals
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Manning Street / The Lakes Way															
1	L2	All MCs	54	2.0	54	2.0	0.043	18.3	LOS B	0.6	4.5	0.35	0.57	0.35	35.5
2	T1	All MCs	827	3.9	827	3.9	*0.675	20.4	LOS B	17.4	125.9	0.65	0.60	0.65	31.6
3	R2	All MCs	40	15.8	40	15.8	0.099	21.9	LOS B	0.6	4.9	0.45	0.61	0.45	34.1
Approach			921	4.3	921	4.3	0.675	20.3	LOS B	17.4	125.9	0.62	0.60	0.62	28.5
East: The Northern Parkway															
4	L2	All MCs	208	2.0	208	2.0	0.532	51.9	LOS D	6.6	47.3	0.93	0.81	0.93	26.0
5	T1	All MCs	3	0.0	3	0.0	0.316	45.5	LOS D	3.1	23.3	0.88	0.76	0.88	26.5
6	R2	All MCs	100	7.4	100	7.4	0.316	48.9	LOS D	3.1	23.3	0.88	0.76	0.88	20.2
Approach			312	3.7	312	3.7	0.532	50.9	LOS D	6.6	47.3	0.91	0.79	0.91	24.1
North: Manning Street / The Lakes Way															
7	L2	All MCs	12	0.0	12	0.0	0.209	11.2	LOS A	3.5	25.7	0.40	0.36	0.40	36.3
8	T1	All MCs	632	4.2	632	4.2	0.298	11.0	LOS A	5.4	38.8	0.42	0.37	0.42	36.6
9	R2	All MCs	4	0.0	4	0.0	0.018	30.0	LOS C	0.1	0.6	0.62	0.60	0.62	30.5
Approach			647	4.1	647	4.1	0.298	11.1	LOS A	5.4	38.8	0.42	0.38	0.42	35.8
West: Grandis Drive															
10	L2	All MCs	4	0.0	4	0.0	0.019	53.9	LOS D	0.2	1.6	0.80	0.60	0.80	20.8
11	T1	All MCs	3	33.3	3	33.3	0.019	49.3	LOS D	0.2	1.6	0.80	0.60	0.80	27.5
12	R2	All MCs	113	1.9	113	1.9	*0.666	71.8	LOS F	4.1	29.3	1.00	0.85	1.08	23.6
Approach			120	2.6	120	2.6	0.666	70.6	LOS F	4.1	29.3	0.99	0.83	1.06	22.0
All Vehicles			2000	4.1	2000	4.1	0.675	25.1	LOS B	17.4	125.9	0.63	0.57	0.63	29.4

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Manning Street / The Lakes Way											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

MOVEMENT SUMMARY

Site: 101 [2024PM Grandis Drive + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024PM + development - roundabout (Network Folder: General)]

The Lakes Way / Grandis Drive / The Northern Parkway signals
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Manning Street / The Lakes Way															
1	L2	All MCs	54	2.0	54	2.0	0.041	15.1	LOS B	0.6	4.0	0.32	0.56	0.32	36.0
2	T1	All MCs	827	3.9	827	3.9	*0.642	16.1	LOS B	15.6	112.6	0.58	0.54	0.58	33.0
3	R2	All MCs	40	15.8	40	15.8	0.095	17.8	LOS B	0.5	4.4	0.40	0.59	0.40	34.9
Approach			921	4.3	921	4.3	0.642	16.1	LOS B	15.6	112.6	0.56	0.54	0.56	30.3
East: The Northern Parkway															
4	L2	All MCs	208	2.0	208	2.0	*0.639	58.2	LOS E	7.0	49.9	0.97	0.82	0.97	25.3
5	T1	All MCs	3	0.0	3	0.0	0.366	51.5	LOS D	3.3	24.4	0.91	0.77	0.91	25.7
6	R2	All MCs	100	7.4	100	7.4	0.366	54.8	LOS D	3.3	24.4	0.91	0.77	0.91	19.4
Approach			312	3.7	312	3.7	0.639	57.1	LOS E	7.0	49.9	0.95	0.80	0.95	23.0
North: Manning Street / The Lakes Way															
7	L2	All MCs	12	0.0	12	0.0	0.203	9.7	LOS A	3.2	23.5	0.36	0.33	0.36	36.9
8	T1	All MCs	643	4.1	643	4.1	0.289	8.8	LOS A	4.9	35.6	0.38	0.34	0.38	37.2
9	R2	All MCs	4	0.0	4	0.0	0.016	24.6	LOS B	0.1	0.6	0.56	0.58	0.56	31.7
Approach			659	4.0	659	4.0	0.289	8.9	LOS A	4.9	35.6	0.38	0.34	0.38	36.6
West: Grandis Drive															
10	L2	All MCs	4	0.0	4	0.0	0.022	46.8	LOS D	0.2	1.7	0.84	0.61	0.84	20.0
11	T1	All MCs	3	33.3	3	33.3	0.022	42.1	LOS C	0.2	1.7	0.84	0.61	0.84	26.7
12	R2	All MCs	72	2.9	72	2.9	0.573	64.2	LOS E	2.6	18.9	1.00	0.79	1.03	23.1
Approach			79	4.0	79	4.0	0.573	62.4	LOS E	2.6	18.9	0.98	0.78	1.01	23.2
All Vehicles			1971	4.1	1971	4.1	0.642	22.0	LOS B	15.6	112.6	0.58	0.52	0.58	30.4

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Manning Street / The Lakes Way											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

MOVEMENT SUMMARY

Site: 101 [2024PM Grandis Drive + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024PM + development signals (Network Folder: General)]

The Lakes Way / Grandis Drive / The Northern Parkway signals
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 70 seconds (Network Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Manning Street / The Lakes Way															
1	L2	All MCs	54	2.0	54	2.0	0.053	18.7	LOS B	0.5	3.6	0.48	0.61	0.48	35.3
2	T1	All MCs	827	3.9	827	3.9	*0.814	25.0	LOS B	15.7	113.3	0.88	0.86	0.96	29.2
3	R2	All MCs	40	15.8	40	15.8	0.118	22.8	LOS B	0.5	4.1	0.62	0.66	0.62	33.6
Approach			921	4.3	921	4.3	0.814	24.5	LOS B	15.7	113.3	0.84	0.84	0.92	26.9
East: The Northern Parkway															
4	L2	All MCs	208	2.0	208	2.0	*0.419	27.4	LOS B	3.7	26.2	0.87	0.78	0.87	30.7
5	T1	All MCs	3	0.0	3	0.0	0.251	22.1	LOS B	1.7	12.9	0.82	0.73	0.82	31.2
6	R2	All MCs	100	7.4	100	7.4	0.251	25.5	LOS B	1.7	12.9	0.82	0.73	0.82	25.9
Approach			312	3.7	312	3.7	0.419	26.7	LOS B	3.7	26.2	0.85	0.76	0.85	29.7
North: Manning Street / The Lakes Way															
7	L2	All MCs	12	0.0	12	0.0	0.256	12.7	LOS A	3.1	22.6	0.59	0.51	0.59	35.8
8	T1	All MCs	643	4.1	643	4.1	0.366	12.5	LOS A	4.7	34.3	0.61	0.53	0.61	36.1
9	R2	All MCs	4	0.0	4	0.0	0.024	32.5	LOS C	0.1	0.5	0.84	0.63	0.84	29.8
Approach			659	4.0	659	4.0	0.366	12.6	LOS A	4.7	34.3	0.61	0.53	0.61	35.3
West: Grandis Drive															
10	L2	All MCs	4	0.0	4	0.0	0.016	24.8	LOS B	0.1	0.9	0.75	0.58	0.75	26.6
11	T1	All MCs	3	33.3	3	33.3	0.016	20.1	LOS B	0.1	0.9	0.75	0.58	0.75	32.0
12	R2	All MCs	72	2.9	72	2.9	0.274	31.0	LOS C	1.4	9.7	0.90	0.74	0.90	29.4
Approach			79	4.0	79	4.0	0.274	30.3	LOS C	1.4	9.7	0.88	0.73	0.88	29.5
All Vehicles			1971	4.1	1971	4.1	0.814	21.1	LOS B	15.7	113.3	0.77	0.72	0.80	30.7

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Manning Street / The Lakes Way											
P1	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09

MOVEMENT SUMMARY

Site: 101 [2034AM Grandis Drive + development - channelisation (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2034AM + development - channelisation (Network Folder: General)]

The Lakes Way / Grandis Drive / The Northern Parkway signals
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Manning Street / The Lakes Way															
1	L2	All MCs	25	0.0	25	0.0	0.019	13.0	LOS A	0.3	1.8	0.30	0.54	0.30	36.1
2	T1	All MCs	725	4.9	725	4.9	0.547	19.3	LOS B	11.9	86.6	0.51	0.46	0.51	33.9
3	R2	All MCs	281	1.9	281	1.9	* 1.229	286.3	LOS F	24.7	175.5	1.00	1.91	2.66	9.9
Approach			1032	4.0	1032	4.0	1.229	91.9	LOS F	24.7	175.5	0.63	0.86	1.09	15.7
East: The Northern Parkway															
4	L2	All MCs	126	10.0	126	10.0	0.397	52.7	LOS D	4.1	30.9	0.93	0.78	0.93	25.5
5	T1	All MCs	7	0.0	7	0.0	0.149	44.2	LOS D	1.2	8.8	0.88	0.71	0.88	26.1
6	R2	All MCs	33	3.2	33	3.2	0.149	48.5	LOS D	1.2	8.8	0.88	0.71	0.88	19.8
Approach			166	8.2	166	8.2	0.397	51.5	LOS D	4.1	30.9	0.91	0.76	0.91	24.8
North: Manning Street / The Lakes Way															
7	L2	All MCs	169	6.2	169	6.2	0.332	10.1	LOS A	5.8	41.9	0.40	0.46	0.40	36.3
8	T1	All MCs	915	3.6	915	3.6	0.474	12.1	LOS A	9.7	69.8	0.45	0.43	0.45	36.8
9	R2	All MCs	2	0.0	2	0.0	0.006	21.9	LOS B	0.0	0.2	0.47	0.55	0.47	33.2
Approach			1086	4.0	1086	4.0	0.474	11.8	LOS A	9.7	69.8	0.44	0.44	0.44	35.6
West: Grandis Drive															
10	L2	All MCs	15	0.0	15	0.0	0.087	78.7	LOS F	0.9	6.4	0.86	0.67	0.86	19.8
11	T1	All MCs	16	0.0	16	0.0	0.087	74.4	LOS F	0.9	6.4	0.86	0.67	0.86	26.5
12	R2	All MCs	200	1.1	200	1.1	* 1.179	267.7	LOS F	14.8	104.5	1.00	1.71	2.43	10.9
Approach			231	0.9	231	0.9	1.179	242.4	LOS F	14.8	104.5	0.98	1.57	2.23	10.5
All Vehicles			2515	4.0	2515	4.0	1.229	68.4	LOS E	24.7	175.5	0.60	0.74	0.90	21.1

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Manning Street / The Lakes Way											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

MOVEMENT SUMMARY

Site: 101 [2034AM Grandis Drive + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2034AM + development - roundabout (Network Folder: General)]

The Lakes Way / Grandis Drive / The Northern Parkway signals
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Manning Street / The Lakes Way															
1	L2	All MCs	25	0.0	25	0.0	0.019	12.3	LOS A	0.2	1.7	0.29	0.54	0.29	36.2
2	T1	All MCs	725	4.9	725	4.9	0.540	19.4	LOS B	11.5	84.0	0.49	0.45	0.49	34.2
3	R2	All MCs	281	1.9	281	1.9	*1.248	302.4	LOS F	25.3	180.1	1.00	1.96	2.74	9.5
Approach			1032	4.0	1032	4.0	1.248	96.3	LOS F	25.3	180.1	0.62	0.86	1.10	15.3
East: The Northern Parkway															
4	L2	All MCs	126	10.0	126	10.0	0.416	53.7	LOS D	4.1	31.2	0.94	0.78	0.94	25.3
5	T1	All MCs	7	0.0	7	0.0	0.156	45.2	LOS D	1.2	8.9	0.88	0.71	0.88	25.9
6	R2	All MCs	33	3.2	33	3.2	0.156	49.5	LOS D	1.2	8.9	0.88	0.71	0.88	19.6
Approach			166	8.2	166	8.2	0.416	52.5	LOS D	4.1	31.2	0.92	0.77	0.92	24.6
North: Manning Street / The Lakes Way															
7	L2	All MCs	169	6.2	169	6.2	0.336	9.8	LOS A	5.8	42.0	0.39	0.45	0.39	36.4
8	T1	All MCs	942	3.5	942	3.5	0.480	11.6	LOS A	9.7	70.3	0.44	0.43	0.44	36.9
9	R2	All MCs	2	0.0	2	0.0	0.006	21.2	LOS B	0.0	0.2	0.46	0.55	0.46	33.4
Approach			1114	3.9	1114	3.9	0.480	11.3	LOS A	9.7	70.3	0.43	0.43	0.43	35.8
West: Grandis Drive															
10	L2	All MCs	15	0.0	15	0.0	0.092	67.9	LOS E	0.9	6.4	0.87	0.67	0.87	19.6
11	T1	All MCs	16	0.0	16	0.0	0.092	63.6	LOS E	0.9	6.4	0.87	0.67	0.87	26.3
12	R2	All MCs	136	1.6	136	1.6	*0.858	89.5	LOS F	5.5	39.0	1.00	1.03	1.33	22.2
Approach			166	1.3	166	1.3	0.858	85.1	LOS F	5.5	39.0	0.98	0.96	1.25	19.9
All Vehicles			2478	4.0	2478	4.0	1.248	54.4	LOS D	25.3	180.1	0.58	0.67	0.80	23.4

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Manning Street / The Lakes Way											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

MOVEMENT SUMMARY

Site: 101 [2034AM Grandis Drive + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2034AM + development signals (Network Folder: General)]

The Lakes Way / Grandis Drive / The Northern Parkway signals
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Manning Street / The Lakes Way															
1	L2	All MCs	25	0.0	25	0.0	0.018	11.0	LOS A	0.3	1.8	0.24	0.53	0.24	36.5
2	T1	All MCs	725	4.9	725	4.9	0.506	20.5	LOS B	11.8	86.0	0.41	0.37	0.41	35.0
3	R2	All MCs	281	1.9	281	1.9	*1.264	325.2	LOS F	28.3	201.5	1.00	1.82	2.46	9.1
Approach			1032	4.0	1032	4.0	1.264	103.3	LOS F	28.3	201.5	0.56	0.77	0.96	14.6
East: The Northern Parkway															
4	L2	All MCs	126	10.0	126	10.0	0.497	69.8	LOS E	5.3	40.3	0.97	0.80	0.97	22.8
5	T1	All MCs	7	0.0	7	0.0	0.190	60.8	LOS E	1.6	11.5	0.92	0.72	0.92	23.2
6	R2	All MCs	33	3.2	33	3.2	0.190	66.0	LOS E	1.6	11.5	0.92	0.72	0.92	16.7
Approach			166	8.2	166	8.2	0.497	68.6	LOS E	5.3	40.3	0.96	0.78	0.96	21.9
North: Manning Street / The Lakes Way															
7	L2	All MCs	169	6.2	169	6.2	0.315	8.4	LOS A	5.6	40.7	0.31	0.39	0.31	37.0
8	T1	All MCs	942	3.5	942	3.5	0.450	9.3	LOS A	9.5	68.2	0.34	0.35	0.34	37.5
9	R2	All MCs	2	0.0	2	0.0	0.006	17.3	LOS B	0.0	0.2	0.36	0.52	0.36	34.4
Approach			1114	3.9	1114	3.9	0.450	9.2	LOS A	9.5	68.2	0.34	0.36	0.34	36.5
West: Grandis Drive															
10	L2	All MCs	15	0.0	15	0.0	0.109	99.0	LOS F	1.2	8.3	0.90	0.69	0.90	16.8
11	T1	All MCs	16	0.0	16	0.0	0.109	94.7	LOS F	1.2	8.3	0.90	0.69	0.90	23.7
12	R2	All MCs	136	1.6	136	1.6	*1.176	286.8	LOS F	11.0	78.1	1.00	1.53	2.19	10.4
Approach			166	1.3	166	1.3	1.176	251.9	LOS F	11.0	78.1	0.98	1.38	1.95	10.1
All Vehicles			2478	4.0	2478	4.0	1.264	68.6	LOS E	28.3	201.5	0.52	0.62	0.75	21.1

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Manning Street / The Lakes Way											
P1	Full	53	69.3	LOS F	0.2	0.2	0.96	0.96	223.1	200.0	0.90

MOVEMENT SUMMARY

Site: 101 [2034PM Grandis Drive + development - Channelisation (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2034PM + development - channelisation (Network Folder: General)]

The Lakes Way / Grandis Drive / The Northern Parkway signals
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Manning Street / The Lakes Way															
1	L2	All MCs	62	1.7	62	1.7	0.052	23.5	LOS B	0.8	5.6	0.38	0.58	0.38	35.1
2	T1	All MCs	951	4.0	951	4.0	*0.811	28.6	LOS C	24.8	179.6	0.81	0.74	0.81	29.5
3	R2	All MCs	46	15.9	46	15.9	0.141	29.9	LOS C	0.8	6.6	0.51	0.64	0.51	33.1
Approach			1059	4.4	1059	4.4	0.811	28.4	LOS B	24.8	179.6	0.77	0.73	0.77	25.6
East: The Northern Parkway															
4	L2	All MCs	242	2.2	242	2.2	0.600	55.6	LOS D	7.7	55.0	0.94	0.82	0.94	26.3
5	T1	All MCs	3	0.0	3	0.0	0.331	47.9	LOS D	3.5	26.2	0.86	0.76	0.86	26.9
6	R2	All MCs	116	7.3	116	7.3	0.331	51.3	LOS D	3.5	26.2	0.86	0.76	0.86	20.7
Approach			361	3.8	361	3.8	0.600	54.1	LOS D	7.7	55.0	0.91	0.80	0.91	23.5
North: Manning Street / The Lakes Way															
7	L2	All MCs	14	0.0	14	0.0	0.253	12.7	LOS A	4.6	33.2	0.45	0.40	0.45	35.8
8	T1	All MCs	733	4.2	733	4.2	0.361	14.2	LOS A	7.0	50.6	0.47	0.42	0.47	36.0
9	R2	All MCs	5	0.0	5	0.0	0.036	45.2	LOS D	0.1	1.0	0.76	0.64	0.76	27.3
Approach			752	4.1	752	4.1	0.361	14.4	LOS A	7.0	50.6	0.48	0.42	0.48	34.8
West: Grandis Drive															
10	L2	All MCs	5	0.0	5	0.0	0.019	57.5	LOS E	0.2	1.7	0.78	0.60	0.78	21.4
11	T1	All MCs	3	33.3	3	33.3	0.019	52.3	LOS D	0.2	1.7	0.78	0.60	0.78	28.0
12	R2	All MCs	128	1.6	128	1.6	*0.789	82.0	LOS F	5.0	35.3	1.00	0.95	1.21	22.9
Approach			137	2.3	137	2.3	0.789	80.4	LOS F	5.0	35.3	0.99	0.93	1.19	20.8
All Vehicles			2308	4.1	2308	4.1	0.811	30.9	LOS C	24.8	179.6	0.71	0.65	0.72	27.8

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Manning Street / The Lakes Way											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

MOVEMENT SUMMARY

Site: 101 [2034PM Grandis Drive + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2034PM + development - roundabout (Network Folder: General)]

The Lakes Way / Grandis Drive / The Northern Parkway signals
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Manning Street / The Lakes Way															
1	L2	All MCs	62	1.7	62	1.7	0.049	18.6	LOS B	0.7	4.9	0.34	0.57	0.34	35.7
2	T1	All MCs	951	4.0	951	4.0	*0.760	21.8	LOS B	21.8	157.6	0.71	0.65	0.71	31.4
3	R2	All MCs	46	15.9	46	15.9	0.132	23.7	LOS B	0.7	5.8	0.46	0.62	0.46	34.0
Approach			1059	4.4	1059	4.4	0.760	21.7	LOS B	21.8	157.6	0.68	0.64	0.68	28.0
East: The Northern Parkway															
4	L2	All MCs	242	2.2	242	2.2	0.736	65.5	LOS E	8.5	60.4	0.99	0.87	1.06	25.0
5	T1	All MCs	3	0.0	3	0.0	0.392	55.5	LOS D	3.8	27.9	0.91	0.78	0.91	26.0
6	R2	All MCs	116	7.3	116	7.3	0.392	58.9	LOS E	3.8	27.9	0.91	0.78	0.91	19.7
Approach			361	3.8	361	3.8	0.736	63.3	LOS E	8.5	60.4	0.96	0.84	1.01	22.0
North: Manning Street / The Lakes Way															
7	L2	All MCs	14	0.0	14	0.0	0.241	10.6	LOS A	4.1	29.7	0.40	0.36	0.40	36.5
8	T1	All MCs	744	4.1	744	4.1	0.344	11.0	LOS A	6.3	45.4	0.42	0.38	0.42	36.8
9	R2	All MCs	5	0.0	5	0.0	0.030	35.6	LOS C	0.1	0.9	0.68	0.62	0.68	29.1
Approach			763	4.0	763	4.0	0.344	11.1	LOS A	6.3	45.4	0.42	0.38	0.42	35.9
West: Grandis Drive															
10	L2	All MCs	5	0.0	5	0.0	0.023	45.5	LOS D	0.2	1.8	0.82	0.62	0.82	20.4
11	T1	All MCs	3	33.3	3	33.3	0.023	40.3	LOS C	0.2	1.8	0.82	0.62	0.82	27.1
12	R2	All MCs	81	2.6	81	2.6	*0.750	69.2	LOS E	3.1	22.5	1.00	0.91	1.21	22.4
Approach			89	3.5	89	3.5	0.750	66.8	LOS E	3.1	22.5	0.98	0.88	1.17	22.5
All Vehicles			2273	4.1	2273	4.1	0.760	26.5	LOS B	21.8	157.6	0.65	0.59	0.66	29.0

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Manning Street / The Lakes Way											
P1	Full	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

MOVEMENT SUMMARY

Site: 101 [2034PM Grandis Drive + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2034PM + development - signals (Network Folder: General)]

The Lakes Way / Grandis Drive / The Northern Parkway signals
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 80 seconds (Network Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Manning Street / The Lakes Way															
1	L2	All MCs	62	1.7	62	1.7	0.056	20.0	LOS B	0.6	4.3	0.43	0.60	0.43	35.4
2	T1	All MCs	951	4.0	951	4.0	*0.875	32.5	LOS C	22.9	165.7	0.91	0.95	1.05	26.8
3	R2	All MCs	46	15.9	46	15.9	0.152	26.3	LOS B	0.7	5.3	0.61	0.66	0.61	33.3
Approach			1059	4.4	1059	4.4	0.875	31.5	LOS C	22.9	165.7	0.87	0.91	0.99	24.7
East: The Northern Parkway															
4	L2	All MCs	242	2.2	242	2.2	*0.530	33.2	LOS C	5.1	36.6	0.92	0.80	0.92	29.4
5	T1	All MCs	3	0.0	3	0.0	0.318	27.1	LOS B	2.4	17.7	0.86	0.75	0.86	29.9
6	R2	All MCs	116	7.3	116	7.3	0.318	30.4	LOS C	2.4	17.7	0.86	0.75	0.86	24.3
Approach			361	3.8	361	3.8	0.530	32.3	LOS C	5.1	36.6	0.90	0.79	0.90	28.2
North: Manning Street / The Lakes Way															
7	L2	All MCs	14	0.0	14	0.0	0.277	13.2	LOS A	4.2	30.3	0.60	0.49	0.60	35.6
8	T1	All MCs	744	4.1	744	4.1	0.394	14.5	LOS A	6.4	46.1	0.63	0.51	0.63	35.8
9	R2	All MCs	5	0.0	5	0.0	0.038	42.7	LOS D	0.1	0.8	0.92	0.66	0.92	27.8
Approach			763	4.0	763	4.0	0.394	14.7	LOS B	6.4	46.1	0.63	0.51	0.63	34.7
West: Grandis Drive															
10	L2	All MCs	5	0.0	5	0.0	0.019	29.5	LOS C	0.2	1.2	0.78	0.60	0.78	24.9
11	T1	All MCs	3	33.3	3	33.3	0.019	24.3	LOS B	0.2	1.2	0.78	0.60	0.78	30.8
12	R2	All MCs	81	2.6	81	2.6	0.399	39.3	LOS C	1.9	13.4	0.95	0.76	0.95	27.6
Approach			89	3.5	89	3.5	0.399	38.2	LOS C	1.9	13.4	0.94	0.75	0.94	27.6
All Vehicles			2273	4.1	2273	4.1	0.875	26.2	LOS B	22.9	165.7	0.80	0.75	0.85	29.1

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Manning Street / The Lakes Way											
P1	Full	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06

MOVEMENT SUMMARY

Site: 101 [2024 Mid holiday race Chapmans Rd (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
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: The Lakes Way															
1	L2	All MCs	72	2.9	72	2.9	0.039	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.6
2	T1	All MCs	629	1.5	629	1.5	0.326	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			701	1.7	701	1.7	0.326	0.7	NA	0.0	0.0	0.00	0.06	0.00	59.0
North: The Lakes Way															
8	T1	All MCs	725	0.7	725	0.7	0.374	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
9	R2	All MCs	79	5.3	79	5.3	0.135	10.5	LOS A	0.5	3.6	0.61	0.84	0.61	46.0
Approach			804	1.2	804	1.2	0.374	1.1	NA	0.5	3.6	0.06	0.08	0.06	58.0
West: Chapmans Road															
10	L2	All MCs	26	4.0	26	4.0	0.044	8.6	LOS A	0.1	1.0	0.54	0.73	0.54	46.6
12	R2	All MCs	62	3.4	62	3.4	0.413	34.7	LOS C	1.4	9.8	0.92	1.03	1.15	34.5
Approach			88	3.6	88	3.6	0.413	26.9	LOS B	1.4	9.8	0.81	0.94	0.97	37.4
All Vehicles			1594	1.5	1594	1.5	0.413	2.4	NA	1.4	9.8	0.08	0.12	0.08	56.7

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:03:45 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101 [2024 PM holiday race Chapmans Rd (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
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: The Lakes Way															
1	L2	All MCs	69	12.1	69	12.1	0.041	5.7	LOS A	0.0	0.0	0.00	0.57	0.00	52.2
2	T1	All MCs	263	2.0	263	2.0	0.137	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			333	4.1	333	4.1	0.137	1.2	NA	0.0	0.0	0.00	0.12	0.00	58.1
North: The Lakes Way															
8	T1	All MCs	323	2.0	323	2.0	0.168	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
9	R2	All MCs	14	0.0	14	0.0	0.013	6.9	LOS A	0.1	0.4	0.39	0.59	0.39	48.1
Approach			337	1.9	337	1.9	0.168	0.3	NA	0.1	0.4	0.02	0.02	0.02	59.3
West: Chapmans Road															
10	L2	All MCs	146	8.6	146	8.6	0.151	6.0	LOS A	0.6	4.3	0.37	0.60	0.37	47.9
12	R2	All MCs	188	3.9	188	3.9	0.312	10.0	LOS A	1.4	10.1	0.62	0.86	0.73	45.3
Approach			335	6.0	335	6.0	0.312	8.3	LOS A	1.4	10.1	0.51	0.75	0.57	46.4
All Vehicles			1004	4.0	1004	4.0	0.312	3.3	NA	1.4	10.1	0.18	0.30	0.20	53.9

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:03:46 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

▽ Site: 101 [2024 Mid holiday race Chapmans Rd + dev (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
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: The Lakes Way															
1	L2	All MCs	89	2.4	89	2.4	0.049	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.6
2	T1	All MCs	629	1.5	629	1.5	0.326	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			719	1.6	719	1.6	0.326	0.8	NA	0.0	0.0	0.00	0.07	0.00	58.8
North: The Lakes Way															
8	T1	All MCs	725	0.7	725	0.7	0.374	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
9	R2	All MCs	86	4.9	86	4.9	0.150	10.7	LOS A	0.5	4.0	0.62	0.84	0.62	45.8
Approach			812	1.2	812	1.2	0.374	1.2	NA	0.5	4.0	0.07	0.09	0.07	57.9
West: Chapmans Road															
10	L2	All MCs	44	2.4	44	2.4	0.072	8.5	LOS A	0.2	1.7	0.55	0.76	0.55	46.6
12	R2	All MCs	84	2.5	84	2.5	0.560	39.9	LOS C	2.0	14.5	0.94	1.08	1.34	32.9
Approach			128	2.5	128	2.5	0.560	29.1	LOS C	2.0	14.5	0.81	0.97	1.07	36.6
All Vehicles			1659	1.5	1659	1.5	0.560	3.2	NA	2.0	14.5	0.09	0.15	0.11	55.7

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:03:50 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101 [2024 PM holiday race Chapmans Rd + dev (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
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: The Lakes Way															
1	L2	All MCs	114	9.3	114	9.3	0.065	5.7	LOS A	0.0	0.0	0.00	0.57	0.00	52.3
2	T1	All MCs	263	2.0	263	2.0	0.137	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			377	4.2	377	4.2	0.137	1.7	NA	0.0	0.0	0.00	0.17	0.00	57.4
North: The Lakes Way															
8	T1	All MCs	323	2.0	323	2.0	0.168	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
9	R2	All MCs	32	0.0	32	0.0	0.032	7.2	LOS A	0.1	0.9	0.42	0.63	0.42	48.0
Approach			355	1.8	355	1.8	0.168	0.7	NA	0.1	0.9	0.04	0.06	0.04	58.6
West: Chapmans Road															
10	L2	All MCs	154	8.2	154	8.2	0.158	6.0	LOS A	0.6	4.5	0.37	0.60	0.37	47.9
12	R2	All MCs	197	3.7	197	3.7	0.343	10.7	LOS A	1.6	11.4	0.64	0.89	0.80	44.9
Approach			351	5.7	351	5.7	0.343	8.7	LOS A	1.6	11.4	0.52	0.77	0.61	46.2
All Vehicles			1082	3.9	1082	3.9	0.343	3.6	NA	1.6	11.4	0.18	0.33	0.21	53.5

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:03:47 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101 [2034 Mid holiday race Chapmans Rd + dev (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
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: The Lakes Way															
1	L2	All MCs	101	2.1	101	2.1	0.055	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.6
2	T1	All MCs	731	1.4	731	1.4	0.378	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			832	1.5	832	1.5	0.378	0.8	NA	0.0	0.0	0.00	0.07	0.00	58.8
North: The Lakes Way															
8	T1	All MCs	842	0.8	842	0.8	0.434	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
9	R2	All MCs	99	4.3	99	4.3	0.207	12.5	LOS A	0.8	5.5	0.70	0.89	0.73	44.8
Approach			941	1.1	941	1.1	0.434	1.5	NA	0.8	5.5	0.07	0.09	0.08	57.6
West: Chapmans Road															
10	L2	All MCs	48	2.2	48	2.2	0.093	9.8	LOS A	0.3	2.2	0.63	0.82	0.63	45.9
12	R2	All MCs	94	2.2	94	2.2	1.042	169.1	LOS F	7.9	56.5	1.00	1.70	3.63	15.0
Approach			142	2.2	142	2.2	1.042	114.8	LOS F	7.9	56.5	0.87	1.40	2.60	19.6
All Vehicles			1915	1.4	1915	1.4	1.042	9.6	NA	7.9	56.5	0.10	0.18	0.23	50.7

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:03:51 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101v [2034 Mid holiday race Chapmans Rd + dev - Conversion (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
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: The Lakes Way															
1	L2	All MCs	101	2.1	101	2.1	0.112	4.4	LOS A	0.6	4.0	0.30	0.45	0.30	50.2
2	T1	All MCs	731	1.4	731	1.4	0.489	4.1	LOS A	3.9	27.5	0.36	0.39	0.36	54.0
Approach			832	1.5	832	1.5	0.489	4.2	LOS A	3.9	27.5	0.35	0.39	0.35	53.6
North: The Lakes Way															
8	T1	All MCs	842	0.8	842	0.8	0.560	4.1	LOS A	5.5	38.9	0.43	0.39	0.43	53.7
9	R2	All MCs	99	4.3	99	4.3	0.112	10.0	LOS A	0.6	4.3	0.31	0.59	0.31	46.9
Approach			941	1.1	941	1.1	0.560	4.8	LOS A	5.5	38.9	0.42	0.41	0.42	52.9
West: Chapmans Road															
10	L2	All MCs	48	2.2	48	2.2	0.075	7.2	LOS A	0.4	3.0	0.70	0.66	0.70	48.3
12	R2	All MCs	94	2.2	94	2.2	0.110	11.3	LOS A	0.7	4.9	0.71	0.71	0.71	45.4
Approach			142	2.2	142	2.2	0.110	9.9	LOS A	0.7	4.9	0.71	0.69	0.71	46.3
All Vehicles			1915	1.4	1915	1.4	0.560	4.9	LOS A	5.5	38.9	0.41	0.43	0.41	52.6

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:03:52 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101v [2034 Mid holiday race Chapmans Rd + dev - Conversion (2) (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 40 seconds (Site Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	101	2.1	101	2.1	0.100	14.7	LOS B	1.0	6.8	0.50	0.68	0.50	46.0
2	T1	All MCs	731	1.4	731	1.4	0.754	14.3	LOS A	12.6	89.4	0.83	0.81	0.94	51.5
Approach			832	1.5	832	1.5	0.754	14.3	LOS A	12.6	89.4	0.79	0.79	0.88	47.7
North: The Lakes Way															
8	T1	All MCs	842	0.8	842	0.8	*0.789	11.0	LOS A	15.6	109.7	0.86	0.86	1.00	50.6
9	R2	All MCs	99	4.3	99	4.3	0.367	20.2	LOS B	1.8	12.7	0.87	0.77	0.87	41.0
Approach			941	1.1	941	1.1	0.789	12.0	LOS A	15.6	109.7	0.86	0.85	0.98	49.3
West: Chapmans Road															
10	L2	All MCs	48	2.2	48	2.2	0.177	21.8	LOS B	0.9	6.3	0.91	0.72	0.91	39.9
12	R2	All MCs	94	2.2	94	2.2	*0.342	22.4	LOS B	1.8	12.7	0.93	0.76	0.93	39.2
Approach			142	2.2	142	2.2	0.342	22.2	LOS B	1.8	12.7	0.92	0.74	0.92	39.4
All Vehicles			1915	1.4	1915	1.4	0.789	13.8	LOS A	15.6	109.7	0.83	0.82	0.94	47.7

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

* Critical Movement (Signal Timing)

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:03:52 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101 [2034 PM holiday race Chapmans Rd + dev (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: The Lakes Way															
1	L2	All MCs	132	9.3	132	9.3	0.076	5.7	LOS A	0.0	0.0	0.00	0.57	0.00	52.3
2	T1	All MCs	305	2.0	305	2.0	0.159	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			437	4.2	437	4.2	0.159	1.7	NA	0.0	0.0	0.00	0.17	0.00	57.4
North: The Lakes Way															
8	T1	All MCs	375	2.0	375	2.0	0.195	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
9	R2	All MCs	37	0.0	37	0.0	0.040	7.5	LOS A	0.2	1.1	0.46	0.66	0.46	47.8
Approach			412	1.8	412	1.8	0.195	0.7	NA	0.2	1.1	0.04	0.06	0.04	58.6
West: Chapmans Road															
10	L2	All MCs	178	8.2	178	8.2	0.193	6.4	LOS A	0.7	5.6	0.41	0.63	0.41	47.8
12	R2	All MCs	228	3.7	228	3.7	0.463	13.6	LOS A	2.4	17.1	0.74	1.00	1.08	43.4
Approach			407	5.7	407	5.7	0.463	10.4	LOS A	2.4	17.1	0.60	0.84	0.79	45.2
All Vehicles			1256	3.9	1256	3.9	0.463	4.2	NA	2.4	17.1	0.21	0.35	0.27	53.1

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Friday, 20 September 2024 5:03:48 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandisv2.sip9

MOVEMENT SUMMARY

Site: 101 [2024 AM Chapmans Rd +development - 160 sites (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
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: The Lakes Way															
1	L2	All MCs	78	1.4	78	1.4	0.042	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.7
2	T1	All MCs	584	5.8	584	5.8	0.311	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			662	5.2	662	5.2	0.311	0.7	NA	0.0	0.0	0.00	0.07	0.00	58.9
North: The Lakes Way															
8	T1	All MCs	904	4.5	904	4.5	0.477	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
9	R2	All MCs	32	0.0	32	0.0	0.048	9.4	LOS A	0.2	1.2	0.57	0.76	0.57	46.6
Approach			936	4.4	936	4.4	0.477	0.5	NA	0.2	1.2	0.02	0.03	0.02	59.1
West: Chapmans Road															
10	L2	All MCs	39	0.0	39	0.0	0.058	8.0	LOS A	0.2	1.4	0.52	0.73	0.52	47.0
12	R2	All MCs	46	0.0	46	0.0	0.390	42.3	LOS C	1.3	8.8	0.94	1.02	1.12	32.2
Approach			85	0.0	85	0.0	0.390	26.6	LOS B	1.3	8.8	0.75	0.89	0.85	37.7
All Vehicles			1683	4.5	1683	4.5	0.477	1.9	NA	1.3	8.8	0.05	0.09	0.05	57.3

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Wednesday, 21 August 2024 7:16:48 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandis.sip9

MOVEMENT SUMMARY

Site: 101 [2024 AM Chapmans Rd +development - 170 sites (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

The Lakes Way / Chapmans Road T-intersection Tuncurry
August 2024 counts
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: The Lakes Way															
1	L2	All MCs	79	1.3	79	1.3	0.043	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.7
2	T1	All MCs	584	5.8	584	5.8	0.311	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			663	5.2	663	5.2	0.311	0.7	NA	0.0	0.0	0.00	0.07	0.00	58.9
North: The Lakes Way															
8	T1	All MCs	904	4.5	904	4.5	0.477	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
9	R2	All MCs	32	0.0	32	0.0	0.048	9.4	LOS A	0.2	1.2	0.57	0.76	0.57	46.6
Approach			936	4.4	936	4.4	0.477	0.5	NA	0.2	1.2	0.02	0.03	0.02	59.1
West: Chapmans Road															
10	L2	All MCs	40	0.0	40	0.0	0.060	8.0	LOS A	0.2	1.4	0.53	0.73	0.53	47.0
12	R2	All MCs	47	0.0	47	0.0	0.399	42.6	LOS D	1.3	9.1	0.94	1.02	1.13	32.1
Approach			87	0.0	87	0.0	0.399	26.8	LOS B	1.3	9.1	0.75	0.89	0.85	37.6
All Vehicles			1686	4.5	1686	4.5	0.477	2.0	NA	1.3	9.1	0.05	0.09	0.05	57.3

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

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Wednesday, 21 August 2024 7:18:07 AM
Project: D:\Work\2024\24.004 - Allams Tuncurry Lifestyle Village Stage 2\Sidra\Lakes Way_Chapmans_Grandis.sip9