

# **TRAFFIC IMPACT ASSESSMENT**

MIXED USE DEVELOPMENT HOMEMAKERS CENTRE

LOT 1 IN DP 1228883 202 BUSHLAND DRIVE, TAREE

PREPARED FOR: ANDRES PROPERTY GROUP

**MAY 2025** 



24/050

#### TRAFFIC IMPACT ASSESSMENT ANDRES PROPERTY GROUP

#### MIXED USE DEVELOPMENT HOMEMAKERS CENTRE

#### LOT 1 IN DP 1228883 202 BUSHLAND DRIVE, TAREE

Intersect Traffic Pty Ltd (ABN: 43 112 606 952)

#### Address: 16 Mount Harris Drive Maitland Vale NSW 2320 PO Box 268 East Maitland NSW 2323

Contact: (Mob) 0423 324 188 Email: jeff@intersecttraffic.com.au

#### QUALITY ASSURANCE

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

Issue	Date	Description	Ву
А	30/01/25	Draft	JG
В	22/05/25	Edit	JG
С	23/05/25	Final Proof / Amended Plans	JG
D	24/05/25	Approved	JG

Copyright © Intersect Traffic Pty Ltd

This document has been authorised by

*C. Geersey* ate 24<sup>10</sup> May 2025 Date

#### Disclaimer

This report has been prepared based on the information supplied by the client and investigation undertaken by Intersect Traffic Pty Ltd & other consultants. Recommendations are based on Intersect Traffic's professional judgement only and whilst every effort has been taken to provide accurate advice, Council and any other regulatory authorities may not concur with the recommendations expressed within this report. This document and the information are solely for the use of the authorised recipient and this document may not be used, copied or reproduced in whole or part for any purpose other than that for which it was supplied by Intersect Traffic Pty Ltd. Intersect Traffic makes no representation, undertakes no duty and accepts no responsibility to any third party who may use or rely upon this document or the information.

#### **Confidentiality Statement**

All information, concepts, ideas, strategies, commercial data and all other information whatsoever contained within this document as well as all ideas and concepts described during the presentation are provided on a commercial in confidence basis and remain the intellectual property and Copyright of Intersect Traffic Pty Ltd and affiliated entities.



### **CONTENTS**

1.0	INTRODUCTION	1
2.0	SITE DESCRIPTION	2
3.0	EXISTING ROAD NETWORK	4
	3.1 BUSHLAND DRIVE	4
	3.2 Wingham Road	4
	3.3 Grey Gum Road	6
4.0	ROAD NETWORK IMPROVEMENTS	6
5.0	TRAFFIC VOLUMES	7
6.0	ROAD CAPACITY	8
7.0	ALTERNATIVE TRANSPORT MODES	9
8.0	DEVELOPMENT PROPOSAL	11
9.0	TRAFFIC GENERATION	11
10.0	TRIP DISTRIBUTION	12
11.0	TRAFFIC IMPACTS OF DEVELOPMENT	14
	11.1 ROAD NETWORK CAPACITY	14
	11.2 INTERSECTION CAPACITY	14
	11.2 INTERSECTION CAPACITY 11.3 Access	14 16
	11.3 Access	16
	11.3 Access 11.4 Off-Street Car Parking	16 18
12.0	<ul><li>11.3 Access</li><li>11.4 Off-Street Car Parking</li><li>11.5 Servicing</li></ul>	16 18 19
-	<ul><li>11.3 Access</li><li>11.4 Off-Street Car Parking</li><li>11.5 Servicing</li><li>11.6 Construction Traffic</li></ul>	16 18 19 19
13.0	<ul> <li>11.3 Access</li> <li>11.4 OFF-STREET CAR PARKING</li> <li>11.5 SERVICING</li> <li>11.6 CONSTRUCTION TRAFFIC</li> <li>PEDESTRIAN &amp; CYCLE FACILITIES</li> </ul>	16 18 19 19 19

## **ATTACHMENTS**

ATTACHMENT A	DEVELOPMENT PLAN
ATTACHMENT B	TRAFFIC DATA
ATTACHMENT C	SIDRA MOVEMENT TABLES

### **FIGURES**

Figure 1 – Site Location	2
Figure 2 – Eggins Comfort Coaches – bus routes	
near site.	10
Figure 3 – Development Traffic Trip Distribution	13
Figure 4 – Concept CHR & AUL treatments for	
access intersection.	17

## **PHOTOGRAPHS**

Photograph 1 – Development site from Bushland	
Drive near proposed vehicular access.	3
Photograph 2 – Development site from Grey Gum	
Road.	3
Photograph 3 – Bushland Drive west of the site	4
Photograph 4 – Wingham Road / Bushland Drive	
roundabout.	5
Photograph 5 – Wingham Road south of Bushland	
Drive.	5
Photograph 6 – Grey Gum Road south of Bushland	
Drive.	6
Photograph 7 – Bus stop Wingham Road, south of	
Bushland Drive.	9

### TABLES

Table 1 – 2024 peak hour traffic volume results	
(Classifier Counts June 2024).	7
Table 2 – Predicted 2025 & 2035 peak daily and	
hourly traffic volumes (Classifier counts).	7
Table 3 – Predicted 2025 & 2035 peak hour traffic	
volumes (Intersection Counts).	8
Table 4 – Road Network Capacity Assessment	14
Table 5 – Wingham Rd / Bushland Dr / Woola Rd	
roundabout – Sidra Results Summary	15
Table 6 –Bushland Dr / Grey Gum Rd stop T-	
intersection – Sidra Results Summary	16
Table 7 – Wingham Rd / Bunnings Access urban	
seagull – Sidra Results Summary	16
Table 8 – Wingham Rd / Kolodong Rd give way T-	
intersection – Sidra Results Summary	16
Table 9 – Bushland Drive / Site Access give way T-	
intersection (CHR/AUL) – Sidra Results	
Summary	17



## **1.0 INTRODUCTION**

Intersect Traffic Pty Ltd (Intersect Traffic) has been engaged by Andres Property Group to undertake a traffic impact assessment for a proposed Homemakers Centre (mixed use development) containing a 24 hour gymnasium (Tenancy 15) and fifteen (15) "Specialised Retail" large format retail tenancies on Lot 1 in DP 1228883 – 202 Bushland Drive, Taree. The development includes a subdivision of the existing lot into 4 lots with proposed lot 1 containing the gymnasium, lot 2 being a vacant future development lot, Lot 3 containing all the large format retail tenancies and the stormwater detention infrastructure and lot 4 to be dedicated as public road. The site is located within the Mid-Coast Local Government Area (Mid-Coast LGA). The proposed site plan and access proposal off Bushland Drive is shown in *Attachment A*.

Access to Bushland Drive is proposed as a single CHR / AUL give way controlled T-intersection and public road to an entry roundabout providing access to all the newly created development lots. The roundabout also acts as a traffic calming measure for vehicles before they enter the private car parks on the site. All new road infrastructure and private car parks and circulation roads within the Centre will be constructed to Mid-Coast Council requirements.

This report presents the findings of the traffic assessment and includes the following.

- 1. An outline of the existing situation near the site.
- 2. An assessment of the traffic impact of the proposed development including the predicted traffic generation and its impact on existing road and intersection capacities.
- 3. Reviews on-site parking, public transport, pedestrian, and cycle way requirements for the proposed development, including assessment against Council's DCP and Australian Standard requirements.
- 4. Presentation of conclusions and recommendations.



### **2.0 SITE DESCRIPTION**

The subject site is located on the south-eastern corner of Bushland Drive and Grey Gum Road, Taree. The site is immediately to the east of the existing Taree Bunnings and immediately north of the Club Taree golf course. It is approximately 2.7 kms north-west of the Taree CBD and 500 metres east of Wingham Road. The site contains some shed structures but is currently not occupied therefore is considered vacant industrial land. The site is currently accessed off Bushland Drive approximately 500 metres east of Wingham Road. The subject site in context with the surrounding properties is shown in *Figure 1*.



Figure 1 – Site Location

The site has the following property descriptors:

- Formal title of Lot 1 in DP 1228883;
- Street Address of 202 Bushland Drive, Taree;
- Area of approximately 8.53 ha; and
- Zoning of E4 General Industrial, E3 productivity support and C2 Environmental Conservation pursuant to Greater Taree Local Environmental Plan 2010; and
- The site has small frontages to Bushland Drive and Grey Gum Road and is bordered to the south by the North Coast Rail Line and Club Taree Golf Course. Vehicular access to the site is proposed to be via the Bushland Drive frontage of the site approximately 500 metres east of Wingham Road.

**Photographs 1 & 2** below show the existing site conditions from Bushland Drive and Grey Gum Road Note- it is proposed to utilise the small Bushland Drive frontage of the development for vehicular access to the development as shown in Attachment A.





Photograph 1 – Development site from Bushland Drive near proposed vehicular access.



Photograph 2 – Development site from Grey Gum Road.



## **3.0 EXISTING ROAD NETWORK**

### 3.1 Bushland Drive

Bushland Drive under a functional road hierarchy is a local urban collector road that collects traffic from the northern areas of Taree to the sub-arterial road network at Wingham Road in the vicinity of the site. As such it is under the care and control of Mid-Coast Council. Near the site, Bushland Drive is generally a two-way two-lane urban road approximately 12.5 metres wide which allows travel lanes, one per direction of 3.5 metres and some on-street car parking or additional turn lanes at major intersections. A 60 km/h speed limit exists on Bushland Drive adjacent to the site and it is centre line marked. At the time of inspection, Bushland Drive was observed to be in good condition as shown in *Photograph 3* below. Bushland Drive intersects with Wingham Road via a single lane roundabout with a bypass lane for through traffic on Wingham Road as shown in *Photograph 4* below.



Photograph 3 – Bushland Drive west of the site

### 3.2 Wingham Road

Wingham Road under a functional road hierarchy is a sub-arterial road which connects Taree to Wingham in the north. As a sub-arterial road it is a classified Regional Road under the care and control of Mid-Coast Council but with funding assistance from Transport for NSW (TfNSW). Near the site, Wingham Road is generally a two-way two-lane urban road approximately 12 metres wide which allows travel lanes, one per direction of 3.5 metres and some on-street car parking or additional turn lanes at major intersections. A 60 km/h speed limit exists on Wingham Road adjacent to the site and it is centre line and edge line marked. At the time of inspection, Wingham Road was observed to be in good condition as shown in **Photograph 5** below.



Photograph 4 – Wingham Road / Bushland Drive roundabout.



Photograph 5 – Wingham Road south of Bushland Drive.



### 3.3 Grey Gum Road

Grey Gum Road under a functional road hierarchy is a local urban road providing vehicular access to residential and industrial developments south of Bushland Drive and east of Wingham Road. As a local urban road it is under the care and control of Mid-Coast Council. Near the site, Grey Gum Road is a two-way two-lane urban road approximately 12 metres wide which allows travel lanes, one per direction of 3.5 metres and some on-street car parking. A 60 km/h speed limit exists on Grey Gum Road adjacent to the site and it is centre line marked. At the time of inspection, Grey Gum Road was observed to be in good condition as shown in *Photograph 6* below. Grey Gum Road connects to Bushland Drive via a stop sign priority controlled T-intersection constructed as a BAR/BAL intersection with Bushland Drive traffic having priority.



Photograph 6 – Grey Gum Road south of Bushland Drive.

## 4.0 ROAD NETWORK IMPROVEMENTS

There are no known road network upgrades planned for the area that will result in increased capacity of the local and state road network around the site. As such it is expected that the capacity of the local and state road network is likely to remain the same for at least the next 10 years.

Maintenance and rehabilitation of the local and state road network will however occur regularly in the future in line with Mid-Coast Council and TfNSW strategic works plans.



## **5.0 TRAFFIC VOLUMES**

As part of the development planning and assessment Intersect Traffic originally engaged Northern Transport Planning and Engineering (NTPE) to undertake traffic classifier counts on the road network around the site. These counts were undertaken between Thursday 27<sup>th</sup> June 2024 and Wednesday 3<sup>rd</sup> July 2024 at the following locations;

- Bushland Drive west of Grey Gum Road (site frontage);
- Grey Gum Road south of Bushland Drive (site frontage); and
- Wingham Road south of Bushland Drive (near Bunnings entrance).

The recorded peak hour two-way mid-block traffic volumes, peak times and percentage heavy vehicles from these counts are summarised below in *Table 1*. Note 2025 and 2035 predicted two-way mid-block traffic volumes are shown in *Table 2* below based on a 2% per annum compound background traffic growth rate as advised by TfNSW as relevant for this area. The traffic classifier count summaries are provided in *Attachment B*.

#### Table 1 – 2024 peak hour traffic volume results (Classifier Counts June 2024).

		Daily Peak Peak hour - 2024		Peak hour periods		Percentage	
Road	Section	2024 (vtpd)	AM (vtph)	PM (vtph)	AM (vtph)	PM (vtph)	Heavy Vehicles
Wingham Road	south of Bushland Drive	11369	1077	1191	8 am - 9 am	3 pm - 4 pm	3%
<b>Bushland Drive</b>	west of Grey Gum Road	7677	796	887	8 am - 9 am	3 pm - 4 pm	3%
Grey Gum Road	south of Butea Drive	4345	411	590	8 am - 9 am	3 pm - 4 pm	3%

#### Table 2 – Predicted 2025 & 2035 peak daily and hourly traffic volumes (Classifier counts).

		Daily Peak	Peak hour - 2025		Daily Peak	Peak hour - 2035	
Road	Section	2025 (vtpd)	AM (vtph)	PM (vtph)	2035 (vtpd)	AM (vtph)	PM (vtph)
Wingham Road	south of Bushland Drive	11596	1099	1215	14136	1339	1481
Bushland Drive	west of Grey Gum Road	7831	812	905	9545	990	1103
Grey Gum Road	south of Butea Drive	4432	419	602	5402	511	734

To aid with intersection analysis in this assessment NTPE and Intersect Traffic carried out intersection counts at the following intersections on Wednesday 11<sup>th</sup> December 2024 (PM peak period) and Thursday 12<sup>th</sup> December 2024 (AM peak) at the following intersections.

- Bushland Drive / Grey Gum Road T-intersection.
- Wingham Road / Bushland Drive / Woola Road roundabout.
- Wingham Road / Bunnings Access T-intersection; and
- Wingham Road / Kolodong Road T-intersection.

The recorded results for these counts are provided in *Attachment B* while a summary of the extracted two-way mid-block traffic volumes from these counts is shown in *Table 3* below.

These traffic volumes recorded around the site have been adopted in this assessment.



		Peak hour - 2025		Peak hour - 2035	
Road	Section	AM (vtph)	PM (vtph)	AM (vtph)	PM (vtph)
Wingham Road	south of Bushland Drive	974	1090	1187	1329
Wingham Road	north of Bushland Drive	1362	1568	1660	1911
<b>Bushland Drive</b>	east of Wingham Road	686	770	836	939
<b>Bushland Drive</b>	west of Grey Gum Drive	739	848	901	1034
<b>Bushland Drive</b>	east of Grey Gum Road	489	513	596	625
Grey Gum Road	south of Bushland Drive	386	485	471	591
Wingham Road	south of Bunnings access	1081	1213	1318	1479
Bunnings access	east of Wingham Road	179	219	179	219
Wingham Road	south of Kolodong Road	1083	1221	1320	1488
Kolodong Road	west of Wingham Road	36	44	44	54

#### Table 3 – Predicted 2025 & 2035 peak hour traffic volumes (Intersection Counts).

# 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 midblock capacities for urban roads and likely levels of service. This table is reproduced below.

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

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

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

Based on this table and noting the local road network as a two-lane two-way undivided road the one-way mid-block capacity is 900 vtph or the two-way mid-block capacity is 1,800 vtph. However, as a sub-arterial road, Wingham Road would be expected to carry more vehicles with a resulting lower LoS D. Lane capacities of at least up to 1,100 vtph would be expected on this road for LoS D therefore the likely two-way mid-block capacity of Wingham Road adopted in this assessment is 2,200 vtph. Therefore, the adopted road capacities in this assessment are as follows;

- Wingham Road 2,200 vtph (LoS D).
- Bushland Drive, Grey Gum Road 1,800 vtph (LoS C).

From the traffic data collected in **Section 5** and noting that even 2035 traffic volumes are below the adopted road capacities there is some spare capacity within the adjoining local and state road network to cater for additional development in the area.



## 7.0 ALTERNATIVE TRANSPORT MODES

Eggins Comfort Coaches provide public transport (bus) services in the area. A review of the route maps and timetables for the service indicates that the site has limited access to public transport with the nearest public bus routes being Route' 319 - Taree - Wingham as well as Routes 311 - 312 - Taree to Taree North & Chatham and Taree to Cundletown via Taree North and Chatham.

Route 319 runs along Wingham Road with the nearest bus stop (see *Photograph 7* below) being located south of Bushland Drive some 500 metres west of the site. Routes 311 and 312 travel along Bushland Drive east of the site but only reach Barton Street as shown in the bus route extract shown in *Figure 2*, with the nearest bus stop being 1 km from the site. It is noted school bus services do service the residential area near Grey Gum Road with a school bus stop on Grey Gum Road in front of the site opposite Grandis Parade. Overall the local bus services are not considered convenient to the site though Route 319 may be used by staff at the Homemakers Centre if they had no other means of transport to the site.

There were no pedestrian pathways or on or off-road cycleways observed in close proximity to the site. It is therefore concluded that existing pedestrian and cycle facilities in the vicinity of the site are non-existent and thus travel to the site would need to be via the grassed footpaths or the parking lanes / travel lanes on the road network where they would share with all the vehicular traffic on the road network.



Photograph 7 – Bus stop Wingham Road, south of Bushland Drive.





Figure 2 – Eggins Comfort Coaches – bus routes near site.



## **8.0 DEVELOPMENT PROPOSAL**

The proposal is to construct a mixed-use development (Homemakers Centre) on Lot 1 DP1228883 – 202 Bushland Drive, Taree, including a 4 lot subdivision to separate the proposed 24 hour gymnasium from the fifteen (15) large format retail tenancies, provide for a future development lot at the front of the site and dedicate public road for the vehicular access to the site. Vehicular access to the associated on-site car parking for the development will be off Bushland Drive approximately 470 metres east of Wingham Road and 110 metres west of Grey Gum Road and be constructed as an at-grade give way controlled T-intersection and public road access to an entry roundabout (also public road) to all the proposed development lots.

Specifically, the development involves the following:

- Clearing, demolition of all structures and bulk earthworks;
- Construction of a 24 hour gymnasium tenancy (1,500 m<sup>2</sup> GLA);
- Construction of fifteen (15) large format retail tenancies ranging in size from 630 m<sup>2</sup> GLA to 2,400 m<sup>2</sup> GLA with a total GLA of 17,090 m<sup>2</sup>;
- Construction of an at-grade T-intersection, public access road and roundabout access to the on-site car parking off Bushland Drive;
- 492 on-site car parking bays including 13 accessible spaces, 42 staff bicycle storage spaces and 10 visitor bicycle racks;
- Drive through service road around the site providing access to allow rear servicing for the large format retail tenancies; and
- Landscaping and drainage to Mid-Coast Council requirements.

The public road access road and intersections, internal roads and car parks are to be constructed to Mid-Coast Council requirements. Whilst no tenants for the large format retail tenancies have been locked in for this assessment it is assumed operating hours for these tenancies will align with the neighbouring Bunnings Warehouse which are 6.30 am - 9 pm.

## 9.0 TRAFFIC GENERATION

The recently released TfNSW Guide to Transport Impact Assessment provides the most recent advice on the traffic generation potential of different land-use. In regard to this development the relevant advice within the Guide is as follows.

#### Fitness Centres

Table 5.51. Fitness centres weekday and weekend sample summary

Rates	Weekday	Weekend			
Person trips (person trips/100m <sup>2</sup> GFA)					
Site peak hour	8.5	6.7			
Daily	37.7	22.8			
Vehicle trips (vehicle trips/100m <sup>2</sup> GFA)					
Site peak hour	3.6	2.9			
Daily	16.9	10.4			

#### Bulky Goods Retail

Table 5.39. Bulky goods stores sample summary (weekend)

Weekend rates	Sydney	Regional	Combined			
Person trips (person trips/100m <sup>2</sup> GLFA)						
Site peak hour	7.90	8.67	8.28			
Network peak hour	4.36	5.49	4.92			
Daily	33.72	42.37	38.05			
Vehicle trips (vehicle trips	Vehicle trips (vehicle trips/100m <sup>2</sup> GLFA)					
Site peak hour	3.75	3.94	3.85			
Network peak hour	2.24	2.72	2.48			
Daily	16.16	21.02	18.59			

There are no rates provided for self-storage facilities however Aurecon undertook a traffic and parking study of self-storage units around Australia in 2009 and produced a report for the Self-storage Association of Australia. This document provides relevant data for assessment of both traffic and parking impacts of a self-storage development and has been used in this assessment.

The report found a variation in results for these facilities due to size and location of the facilities but suggested the following rates would apply to self-storage facilities.

Based on the above advice the maximum peak hour traffic generation for the site during the road network peak, can be calculated as follows;

AM peak	= 3.6 x 1500/100 + 2.72 x 17090/100
	= 54 + 465
	= 519 vtph rounded up.
PM peak	= 3.6 x 1500/100 + 2.72 x 17090/100
	= 54 + 465
	= 519 vtph rounded up.

However, with a large development like this there are generally cross-use concessions for multi purpose trip making by customers. Normally these are in the range of 5% to 15% and based on previous experience a 10% concession is considered applicable for the size of this development. On this basis the peak traffic generation from the site is as follows;

AM and PM peak = 0.9 x 519 = 470 vtph approximately.

## **10.0 TRIP DISTRIBUTION**

Before carrying out any traffic assessment the additional peak hour traffic generated by the development needs to be distributed through the adjoining road network. This involves making a number of assumptions as to distribution patterns to and from the development based on likely origin / destinations of trips. Some variations to the assumptions may occur however their impact is considered insignificant. The trip distribution assumptions therefore are as follows based on the traffic data collection results presented in *Attachment B*:

Traffic will be distributed as 60% inbound and 40% outbound in the AM peak and 40% inbound and 60% outbound in the PM peak;



- Origin / destinations for traffic accessing the development at Bushland Drive will be 80% west and 20% west;
- Origin / destinations for development traffic at Wingham Road will be 80% north and 20% south; and
- Origin / destinations for development traffic at Grey Gum Road will be 70% east and 30% south.

The resulting predicted peak hour trip distributions for traffic generated by the development a is as shown below in *Figure 3.* 









## **11.0 TRAFFIC IMPACTS OF DEVELOPMENT**

The traffic impacts that developments have on the local road network include;

- The impact of the additional traffic generated by the development on the capacity of the road network;
- The road safety issues associated with the proposed access to the development; and
- The parking demand generated by the development.

### **11.1 Road Network Capacity**

It has previously been shown in **Section 6** of this report that the surrounding road network is currently operating within its technical capacity. Further the addition of ten years background traffic growth at 2% per annum would still only result in maximum peak hour traffic volumes on the road network below the technical two-way mid-block capacity of the road network.

The addition of up to 470 AM and PM peak hour vehicle trips resulting from this development will result in an additional 306 AM and 310 PM vehicle trips on Wingham Road north of Bushland Drive and 383 AM and 387 PM vehicle trips on Bushland Drive west of the site access. This additional development traffic will not result in the road network mid-block two-way capacity thresholds being reached in both 2025 and 2035. It is therefore reasonable to conclude the development will not adversely impact on the two-way mid-block traffic flows on the state and local road network. This is demonstrated in **Table 4** below.

		Peak hour - 2025		Peak hour - 2035		Development Traffic		<b>Road Capacity</b>
Road	Section	AM (vtph)	PM (vtph)	AM (vtph)	PM (vtph)	AM (vtph)	PM (vtph)	(vtph)
Wingham Road	south of Bushland Drive	1051	1167	1264	1406	77	77	2200
Wingham Road	north of Bushland Drive	1668	1878	1966	2221	306	310	2200
<b>Bushland Drive</b>	east of Wingham Road	1069	1157	1219	1326	383	387	1800
Bushland Drive	west of Grey Gum Drive	834	944	996	1130	95	96	1800
<b>Bushland Drive</b>	east of Grey Gum Road	556	581	663	693	67	68	1800
Grey Gum Road	south of Bushland Drive	414	513	499	619	28	28	1800
Wingham Road	south of Bunnings access	1158	1290	1395	1556	77	77	2200
Bunnings access	east of Wingham Road	179	219	179	219	0	0	1800
Wingham Road	south of Kolodong Road	1160	1298	1397	1565	77	77	2200
Kolodong Road	west of Wingham Road	36	44	44	54	0	0	1800

#### Table 2 – Road Network Capacity Assessment

### **11.2 Intersection Capacity**

The existing road network intersections considered critical for this assessment are the following intersections adjacent to the site.

- Wingham Road / Bushland Drive / Woola Road roundabout.
- Bushland Drive / Grey Gum Road stop-controlled T-intersection (BAR / BAL).
- Wingham Road / Bunnings access give way urban seagull intersection; and
- Wingham Road / Kolodong Road give way-controlled T-intersection (CHR/AUL).

To determine the impact of this development on these intersections they have been analysed using the network feature within the SIDRA INTERSECTION 9 modelling software to determine if they will continue to operate satisfactorily post development. The Sidra 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 in Table 4.2 sourced from the RTA's Guide to Traffic Generating Developments (2002) shown below:

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Signs
А	< <b>1</b> 4	Good operation	Good operation
В	15 to 28	Good with acceptable delays & spare capacity	Acceptable delays & spare capacity
С	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	At capacity, requires other control mode
		Roundabouts require other control mode	

Table 4.2						
Level of serv	ice criteria f	for intersections				

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

Assumptions made in this modelling were.

- The intersections were modelled as a local network (including the proposed site access) as currently constructed i.e. no upgrading.
- The proposed access was modelled as a CHR / AUL intersection due to the high volumes of turning traffic at the intersection.
- 2025 and 2035 post development models were developed based on the intersection traffic count data collected in December 2024 by NTPE and Intersect Traffic.
- Heavy vehicle percentage of 3 % was adopted based on existing road network data and applied to the site access traffic and the data collected at the Bushland Drive / Grey Gum Road intersection where heavy vehicle numbers were not recorded.
- 2035 traffic volumes were calculated using a 2% compound per annum background traffic growth rate as recommended by TfNSW for use in the area; and
- Gap Acceptance data was in accordance with minimum values recommended by Sidra Solutions and Austroads.

A summary of the results of this modelling for each intersection are presented below in **Tables 5** – **8** below for the worst movement in regard to average delay, LoS and 95% back of queue length. The full Sidra Movement Summary Tables for each modelled scenario is provided in **Attachment C**.

Model	Degree of Saturation (v/c)	Average Delay (s)	Level of Service	95 % back of queue length (cars)
2025 AM + development	0.459	13.9	А	1.3
2025 PM + development	0.567	15.3	В	2.1
2035 AM + development	0.567	17.1	В	2.0
2035 PM + development	0.737	21.5	В	4.1

#### Table 5 – Wingham Rd / Bushland Dr / Woola Rd roundabout – Sidra Results Summary

#### Table 6 – Bushland Dr / Grey Gum Rd stop T-intersection – Sidra Results Summary

Model	Degree of Saturation (v/c)	Average Delay (s)	Level of Service	95 % back of queue length (cars)
2025 AM + development	0.275	10.8	А	0.5
2025 PM + development	0.289	10.7	А	0.5
2035 AM + development	0.339	12.3	А	0.7
2035 PM + development	0.368	12.1	А	0.8

#### Table 7 – Wingham Rd / Bunnings Access urban seagull – Sidra Results Summary

Model	Degree of Saturation (v/c)	Average Delay (s)	Level of Service	95 % back of queue length (cars)
2025 AM + development	0.365	12.7	А	0.2
2025 PM + development	0.355	14.6	В	0.2
2035 AM + development	0.441	17.7	В	0.2
2035 PM + development	0.427	21.1	В	0.3

#### Table 8 – Wingham Rd / Kolodong Rd give way T-intersection – Sidra Results Summary

Model	Degree of Saturation (v/c)	Average Delay (s)	Level of Service	95 % back of queue length (cars)
2025 AM + development	0.407	19.1	В	0.1
2025 PM + development	0.406	22.8	В	0.1
2035 AM + development	0.492	30.6	С	0.2
2035 PM + development	0.490	39.3	С	0.2

The modelling shows that the road network around the site continues to operate satisfactorily post development and through to at least 2035. Average delays, LoS and 95% back of queue lengths for all movements remain within the acceptable limits set by TfNSW for all intersections. The critical intersection within the network is the Wingham Road / Bushland Drive / Woola Road roundabout which the modelling shows would still only be operating at 74 % capacity in the 2035 PM peak post development. Therefore, there is still some available capacity for other future development in the area.

It is therefore concluded that the proposed development does not adversely impact on the adjacent local and state road network and no upgrading of external intersections is required resulting from the development.

### 11.3 Access

The development plans for the site show a new at-grade intersection connection to Bushland Drive and a new public road access to a public road roundabout providing access to the on-site car park and service delivery lane within the site. With significant turning volumes into the site from the west and east, a turn lane warrant assessment of this intersection requires both a protected channelised right turn bay and deceleration lane and an auxiliary left turn and deceleration lane i.e. CHR / AUL Intersection layout as shown conceptively below in *Figure 4.* 

Under Austroads *Guide to Road Design Part 4A – Unsignalised and Signalised Intersections* (2020) new intersections should provide the following sight distances:

- Safe Intersection Sight Distance (SISD) 123 metres desirable or 114 metres minimum (60 km/h speed zone); and
- Approach Sight Distance (ASD) 55 metres desirable or 48 metres minimum (50 km/h speed zone).



By observation on site the available sight distances at the development access roads would exceed 200 metres. This would need to be verified at the construction stage of the development. Therefore, the location is considered suitable such that an at-grade intersection in accordance with Austroads *Guide to Road Design Part 4A – Unsignalised and Signalised Intersections (2020)* could be constructed to the site off Bushland Drive.



Figure 4 – Concept CHR & AUL treatments for access intersection.

The access intersection was modelled as a CHR/AUL intersection in the SIDRA INTERSECTION network model developed for the road network around the site to determine if it operated satisfactorily during road network peak periods. The modelling results for the access intersection are presented in **Table 9** below for the worst movement average delay, LoS and 95% back of queue length. The Sidra Movement Summary Tables for each scenario modelled are reproduced in **Attachment C**.

able 9 – Bushland Drive / Site Access give way T-intersection (Chk/AOL) – Sidia Results Summary					
Model	Degree of Saturation (v/c)	Average Delay (s)	Level of Service	95 % back of queue length (cars)	
2025 AM + development	0.271	15.8	В	0.5	
2025 PM + development	0.333	17.7	В	0.6	
2035 AM + development	0.302	21.3	В	0.6	
2035 PM + development	0.396	28.2	В	0.7	

Table 9 – Bushland Drive / Site Access give way T-intersection (CHR/AUL) – Sidra Results Summary

This modelling shows the site access intersection will operate satisfactorily within the local road network through to at least 2035 with average delays, LoS and 95% back of queue lengths well within the thresholds set by TfNSW for satisfactory performance. Even by 2035 there is significant spare capacity within the intersection as it is only operating at 40% capacity at this time.



With the site supporting up to 492 car parks (Class 3A short term parking) and being accessed off a local road Table 3.1 of Australian Standard AS2890.1-2004 Parking facilities – Part 1 – Off-street car parking requires the access to the site to be a Category 4 access facility. Table 3.2 of the Standard then describes a Category 4 access facility as separate entry and exit driveways minimum 6 metres wide per entry and exit lanes with a minimum separation (median) 1 metre wide. It is noted however that the access to the site will be an at grade public road roundabout constructed to Mid Coast Council's requirements therefore would be Australian Standard compliant as it is a higher standard of access than a Category 4 access.

It is therefore concluded that subject to the site access off Bushland Drive being constructed as an at grade CHR/AUL give way-controlled T-intersection with connecting public road to a public road roundabout all to Mid Coast Council requirements it would be a suitably safe and efficient access to the site.

#### **11.4 Off-Street Car Parking**

Under the Greater Taree DCP (2010) Part G Car Parking and Access the following parking requirements apply to the development.

<u>Gymnasium</u>

1 car space per 25 m<sup>2</sup> floor area;

#### Bulky Goods Retail

1 car space per 50 m<sup>2</sup> floor area plus spaces for car and trailers.

Therefore, the DCP compliant car parking requirement for the site is as follows.

Car parking = 1500/25 + 17090/50 = 60 + 341.8 = **402 car parks** rounded up.

Whilst the DCP does not specify requirements for bicycle and accessible spaces it is recommended some bicycle racks be provided throughout the development and particularly in front of the gymnasium. Accessible parking should also be provided at the rate of at least 1 per 50 car parks i.e. a minimum 8 accessible spaces should be provided.

In reviewing the plans, the development provides 492 on-site car parking spaces including 13 accessible spaces. The development also provides suitable staff and visitor bicycle storage / parking facilities within the site. Whilst no motorcycle parking is provided there is an excess of on-site car parking which could be used by motorcycles, so no specific motorcycle parking is required. It is therefore concluded that there is more than sufficient on-site car parking proposed to meet the likely peak parking demand of the development.

In regard to the on-site car parking, it should be designed in accordance with the requirements of Australian Standard *AS2890.1-2004 Parking facilities – Part 1 – Off-street car parking* for Class 3A short term parking. Therefore, parking modules should be 2.6 metres wide by 5.4 metres long with aisle widths of 6 to 6.6 metres. The plans have been reviewed, and the car parking has been assessed as being compliant with Australian Standard *AS2890.1-2004 Parking facilities – Part 1 – Off-street car parking facilities – Part 1 – Off-street car parking* ensuring convenient forward entry and exit from all car parking areas to the public road network.

Overall, it is concluded that sufficient and suitable parking has been provided within the development to meet the requirements of both Mid-Coast Council and Australian Standards.



### 11.5 Servicing

The site has been designed to be serviced via a separate one-way service road that runs around the perimeter of the site with servicing of tenancies being provided either at the rear of the tenancy or the side of the tenancy well clear of the light vehicle aisles and car parking. This access allows convenient and safe servicing of all tenancies for up to AV vehicle size. All service vehicles will be able to enter and exit the site in a forward direction.

It is therefore concluded that the proposed servicing arrangements for the site are suitable for the safe and efficient servicing of the development. Swept turning paths for critical service vehicles are provided within the plans in *Attachment A.* 

#### **11.6 Construction Traffic**

Construction traffic associated with the road works required of this development would be minimal compared to the operational traffic volumes generated by the fully developed planning proposal. Likely peak hour traffic volumes would be in the order of 30 to 50 vtph and would be well less than 10% of existing traffic volumes on the road network therefore would not have a noticeable impact on traffic flows on the road network. It would be expected that a construction traffic management plan be part of the environmental management system put in place for any of the construction works required by condition of consent.

# 12.0 PEDESTRIAN & CYCLE FACILITIES

The proposal has the potential to generate some external pedestrian and cycle traffic however this additional demand is not considered to be sufficient to provide a nexus to provide external pedestrian and cycle infrastructure, particularly as there is little existing infrastructure in the area. Internal infrastructure would be designated within Mid Coast Council's standards and conditioned on any consent though it is noted suitable internal pedestrian linkages are shown on the development concept plans in *Attachment A* and bicycle racks are to be provided around the site.

# 13.0 PUBLIC TRANSPORT FACILITIES

The proposed development may generate some demand for public transport services however this would not be considered to be significant enough to require improvements to the current public transport (bus) services to the site which is considered limited.

## 14.0 CONCLUSIONS

This traffic impact assessment for a proposed Homemakers Centre (mixed use development) containing a 24-hour gymnasium, self-storage facility and fourteen (14) large format retail tenancies on Lot 1 in DP 1228883 – 202 Bushland Drive, Taree has concluded.

- Existing two-way mid-block traffic volumes on the local and state road network are within the technical capacity standards determined by Austroads and TfNSW.
- The proposed development is likely to generate 470 vtph in the AM and PM peak trading periods as additional traffic on the local and state road network.
- The adjoining local and state road network has sufficient spare two-way mid-block capacity to cater for the development traffic generated by this proposal without adversely impacting on the current levels of service experienced by motorists on the road.



- Sidra Intersection modelling shows that the road network around the site continues to operate satisfactorily post development and through to at least 2035. Average delays, LoS and 95% back of queue lengths for all movements remain within the acceptable limits set by TfNSW for all intersections. The critical intersection within the network is the Wingham Road / Bushland Drive / Woola Road roundabout which the modelling shows would still only be operating at 74 % capacity in the 2035 PM peak post development. Therefore, there is still some available capacity for other future development in the area.
- The proposed development therefore does not adversely impact on the adjacent local and state road network and no upgrading of external intersections is required resulting from the development.
- With large turning volumes into the site the site access off Bushland Drive will need to be constructed as a CHR/AUL intersection. Sidra modelling of this access has shown that it will operate satisfactorily through to at least 2035 where it will still only be operating at 40% capacity.
- Therefore, subject to the site access being constructed as an at grade CHR/AUL give waycontrolled T-intersection it would be a suitably safe and efficient access to the site.
- Sufficient and suitable car parking has been provided within the development to more than meet the requirements of both Mid Coast Council and Australian Standards.
- The proposed servicing arrangements for the site are suitable for the safe and efficient servicing of the development.
- Construction traffic will not adversely impact on the local and state road network.
- The proposal is unlikely to generate a significant enough increase in pedestrian and cycle traffic to establish a nexus to provide external pedestrian and cycle infrastructure given the lack of existing infrastructure in the area. Internal pedestrian linkages and bicycle racks will be provided to Mid-Coast Council's requirements conditioned on any consent issued for the development.
- The proposed development may generate some demand for public transport services however this would not be considered to be significant enough to require improvements to the current public transport (bus) services to the site which is considered limited.

# 15.0 **RECOMMENDATION**

Having carried out this traffic impact assessment for a proposed Homemakers Centre (mixed use development) including a 4 lot subdivision and containing a 24 hour gymnasium and fifteen (15) large format retail tenancies on Lot 1 in DP 1228883 – 202 Bushland Drive, Taree, it is recommended that the proposal can be supported from a traffic impact perspective as it will not adversely impact on the local and state road network and complies with all relevant Mid-Coast Council, Austroads and TfNSW requirements.

d. barry

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



# ATTACHMENT A DEVELOPMENT PLAN







In ersect raffic



In ersect raffic









In ersect raffic -






































# ATTACHMENT B TRAFFIC DATA



ite 3	WINGHAM	RD S OF BL	JSHLAND D	R [60]		-		Northbound	b	
Day	Thu	Fri	Sat	Sun	Mon	Tue	Wed	W/Day	W/End	7 Day
Time	27/06/24	28/06/2024	29/06/2024	30/06/2024	1/07/2024	2/07/2024	3/07/2024	Ave.	Ave.	Ave
0:00	8	8	11	18	2	11	7	7	15	9
1:00	2	6	11	13	2	8	7	5	12	7
2:00	8	5	6	7	7	2	9	6	7	6
:00	20	18	10	4	19	19	16	18	7	15
1:00	37	44	21	6	44	41	44	42	14	34
5:00	118	124	52	30	110	112	107	114	41	93
5:00	221	222	75	49	202	204	181	206	62	165
7:00	265	233	109	72	206	270	248	244	91	200
3:00	389	437	204	130	397	389	406	404	167	336
0:00	385	373	289	258	357	340	343	360	274	335
0:00	366	374	394	282	394	323	346	361	338	354
1:00	368	366	408	346	352	400	369	371	377	373
2:00	378	380	376	302	395	400	340	379	339	367
3:00	362	374	289	328	347	349	352	357	309	343
4:00	450	436	321	280	420	433	436	435	301	397
5:00	472	420	252	226	436	414	441	437	239	380
6:00	400	394	248	249	402	412	392	400	249	357
7:00	377	413	241	162	391	382	408	394	202	339
8:00	246	267	182	100	181	177	214	217	141	195
9:00	153	148	111	81	124	97	135	131	96	121
0:00	101	134	87	55	60	95	84	95	71	88
1:00	85	119	74	48	63	53	55	75	61	71
2:00	45	60	79	28	39	34	35	43	54	46
3:00	21	29	27	17	14	20	22	21	22	21
`otal	5277	5384	3877	3091	4964	4985	4997	5121	3484	4654
							Summary			
		Average Wo	eek Day				from	to		
500			•							437
450 +						AM Peak	8:00 AM	9:00 AM		437
400			$ \rightarrow $							
						PM Peak	3:00 PM	4:00 PM		472
300 + 250 +										
₹ <sup>200</sup> +				<u> </u>			Week	Day Average		5121
150 -		/		<u> </u>	—			- 0		
100 50							Weekend	Day Average		3484
0 +								,		
1	1 2 3 4 5 6	7 8 9 10 11	12 13 14 15 16 17	18 19 20 21 22 2	23 24		7	Day Average		4654



100

0

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 Time Weekend Day Average

7 Day Average

4220

5862

Site 3	WINGHAM	RD S OF BL	JSHLAND D	R [60]		-		Southbour		
Day	Thu	Fri	Sat	Sun	Mon	Tue	Wed	W/Day	W/End	7 Day
<sup>r</sup> ime	27/06/24	28/06/2024	29/06/2024	30/06/2024	1/07/2024	2/07/2024	3/07/2024	Ave.	Ave.	Ave
0:00	8	7	10	14	7	8	13	9	12	10
:00	7	8	7	10	5	5	10	7	9	7
2:00	10	4	7	8	7	7	7	7	8	7
3:00	12	17	8	13	14	13	16	14	11	13
4:00	30	32	19	15	36	37	29	33	17	28
5:00	94	93	55	22	87	88	91	91	39	76
5:00	259	257	90	66	233	251	231	246	78	198
7:00	391	403	187	88	388	378	363	385	138	314
8:00	688	594	342	182	630	642	596	630	262	525
9:00	578	575	411	361	531	561	558	561	386	511
10:00	503	513	509	365	508	486	538	510	437	489
11:00	519	571	538	500	503	475	451	504	519	508
12:00	538	533	495	388	494	490	483	508	442	489
3:00	470	522	396	376	435	461	404	458	386	438
14:00	510	624	328	350	509	525	491	532	339	477
15:00	719	709	307	255	673	678	685	693	281	575
16:00	532	449	284	228	454	448	472	471	256	410
17:00	388	390	287	160	334	317	316	349	224	313
18:00	202	252	159	90	158	158	188	192	125	172
19:00	143	138	89	64	110	100	103	119	77	107
20:00	83	117	90	66	78	72	75	85	78	83
21:00	53	86	47	43	37	55	46	55	45	52
22:00	23	50	45	14	20	27	20	28	30	28
23:00	36	33	30	22	33	39	27	34	26	31
Fotal	6796	6977	4740	3700	6284	6321	6213	6518	4220	5862
							Summary			
		Average W	eek Day				from	to		
800						AM Peak	8:00 AM	9:00 AM		688
700 -			$\wedge$							
600 -		$\sim$	/ \			PM Peak	3:00 PM	4:00 PM		719
e <sup>500</sup>				<b>\</b>		1 WI I Cak	5.00 F W	4.00 F M		(1)
aunio 400 -					— I		***	<b>D</b> 4		(210
\$ 300 -							Week	a Day Average		6518
200 -		-/								



Day Fime D:00 1:00 2:00 3:00	<u>Thu</u> 27/06/24 5 1	Fri 28/06/2024 8	Sat 29/06/2024	Sun 30/06/2024	Mon	Tue	Wed	W/Dav	W/End	7.0
0:00 1:00 2:00	5 1		29/06/2024	30/06/2024		1000	rreu	w/Day	W/Ena	7 Day
1:00 2:00	1	8			1/07/2024	2/07/2024	3/07/2024	Ave.	Ave.	Ave
1:00 2:00	1	8								
2:00	-		7	10	2	6	4	5	9	6
		3	4	6	2	4	4	3	5	3
8.00	4	4	4	6	2	3	6	4	5	4
	14	10	3	3	8	10	10	10	3	8
:00	13	11	3	2	11	14	14	13	3	10
5:00	69	61	27	9	47	48	47	54	18	44
5:00	168	156	34	29	174	150	157	161	32	124
:00	242	237	77	49	237	271	238	245	63	193
2:00	411	371	189	84	348	336	350	363	137	298
2:00	298	306	217	127	296	324	245	294	172	259
0:00	261	272	254	173	244	243	252	254	214	243
1:00	259	270	279	209	265	272	215	256	244	253
2:00	222	272	210	202	201	242	208	229	206	222
3:00	235	244	189	162	196	243	228	229	176	214
4:00	285	335	177	171	257	221	264	272	174	244
5:00	374	373	175	103	339	378	346	362	139	298
5:00	260	270	125	117	223	250	235	248	121	211
7:00	211	192	127	82	164	159	136	172	105	153
8:00	92	127	110	49	88	104	83	99	80	93
9:00	63	72	70	41	60	49	48	58	56	58
0:00	48	43	41	30	26	45	43	41	36	39
1:00	38	32	53	26	25	20	29	29	40	32
2:00	14	26	24	10	13	15	21	18	17	18
3:00	14	21	18	13	25	17	22	20	16	19
otal	3601	3716	2417	1713	3253	3424	3205	3440	2065	3047
400 1		Average W	eek Day				Summary from	to		





7 Day Average

3698

ite 2	BUSHLAN	D DR W OF	GREY GUM	RD [60]				Westbound		
Day	Thu	Fri	Sat	Sun	Mon	Tue	Wed	W/Day	W/End	7 Day
ïme	27/06/24	28/06/2024	29/06/2024	30/06/2024	1/07/2024	2/07/2024	3/07/2024	Ave.	Ave.	Ave
0:00	10	3	7	9	5	2	5	5	8	6
:00	2	2	3	3	1	1	2	2	3	2
2:00	3	0	2	8	3	1	4	2	5	3
:00	10	5	3	6	2	7	8	6	5	6
:00	23	21	10	4	18	20	13	19	7	16
:00	72	53	17	9	61	65	70	64	13	50
:00	117	120	27	29	128	125	119	122	28	95
:00	196	185	77	41	194	189	172	187	59	151
:00	385	409	157	72	370	374	359	379	115	304
:00	344	360	223	151	337	332	299	334	187	292
0:00	322	327	313	189	321	292	299	312	251	295
1:00	327	348	353	247	321	341	293	326	300	319
2:00	299	356	326	206	321	317	283	315	266	301
3:00	343	382	230	220	321	322	297	333	225	302
4:00	433	395	246	204	337	403	386	391	225	343
5:00	513	487	196	158	460	457	463	476	177	391
5:00	426	441	149	147	335	387	363	390	148	321
7:00	302	265	123	77	259	282	239	269	100	221
8:00	112	107	72	48	96	79	101	99	60	88
0:00	96	82	73	41	73	55	48	71	57	67
0:00	60	93	62	24	44	45	50	58	43	54
1:00	39	55	26	32	30	51	35	42	29	38
2:00	23	31	49	14	14	13	24	21	32	24
3:00	16	6	11	5	11	11	14	12	8	11
otal	4473	4533	2755	1944	4062	4171	3946	4237	2350	3698
		Arrows as W	a alz Davy				Summary			
500		Average W	еек Day				from	to		
500 450			<u> </u>			AM Peak	8:00 AM	9:00 AM		409
400 -										
350 - ع 300 -		$ \longrightarrow $				PM Peak	3:00 PM	4:00 PM		513
300 - 250 - 200 -				<u> </u>	_		Weel	k Day Average		4237
150 - 100 - 50 -		/					Weeken	d Day Average		2350
0	1 2 3 4 5	6 7 8 9 10 11	12 13 14 15 16 17	7 18 19 20 21 22 2	23. 24					
			10 1					7 Day Average		3698

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 Time



te 1			UTEA DR [					Northbound	-	
Day	Thu	Fri	Sat	Sun	Mon	Tue	Wed	W/Day	W/End	7 Day
Time	27/06/24	28/06/2024	29/06/2024	30/06/2024	1/07/2024	2/07/2024	3/07/2024	Ave.	Ave.	Ave
0:00	2	0	1	3	2	1	1	1	2	1
1:00	0	0	1	1	1	1	1	1	1	1
2:00	0	0	1	1	0	0	2	0	1	1
3:00	3	1	1	1	0	2	2	2	1	1
4:00	1	1	2	1	3	2	1	2	2	2
5:00	20	10	4	1	15	17	20	16	3	12
5:00	44	42	9	7	48	47	37	44	8	33
7:00	103	106	25	14	98	106	103	103	20	79
8:00	187	218	80	39	90 190	179	103	103	60	155
2:00	230	218	00 141	39 73	207	208	193	207	107	155
0:00	230	207	141	114	207	195	184	207	150	179
1:00	211	201	187	114	198	257	212	201	164	206
2:00	224	223	210	140	214	257	212	223	164	206
3:00	233	255	136	142	214	219	230	233	141	205
4:00	233	265	130	98	213	232	230	253	141	200
5:00	345	304	101	81	301	305	312	313	91	213
6:00	277	304	83	85	236	272	267	271	84	230
7:00	213	177	62	46	188	196	180	191	54	152
8:00	73	61	45	40	57	55	56	60	36	53
9:00	40	46	45 31	17	49	29	24	38	24	34
0:00	27	40 60	28	24	49	29	18	29	24	28
1:00	16	20	7	16	16	17	22	18	12	16
2:00	2	11	22	4	4	7	6	6	12	8
3:00	4	2	3	2	3	6	4	4	3	3
Fotal	2748	2750	1496	1082	2484	2617	2522	2624	1289	2243
otai	2740	2750	1470	1002	2404			2024	1207	2243
		Average Wo	eek Dav				Summary			
350		8	v				from	to		
300			<u>A</u>			AM Peak	11:00 AM	12:00 PM		257
250										
			$\sim$	$\backslash$		PM Peak	3:00 PM	4:00 PM		345
₹ <sup>150</sup> +				1	— I		Week	a Day Average		2624
100					— I					
50							Weekend	l Day Average		1289
0					<u> </u>			. 0		
1	2 3 4 5 6		12 13 14 15 16 17 <b>Time</b>	18 19 20 21 22 2	3 24		7	Day Average		2243

te 1 (	GREY GUN	RD S OF B	UTEA DR [	50]			;	Southboun	d	
Day	Thu	Fri	Sat	Sun	Mon	Tue	Wed	W/Day	W/End	7 Day
ïme	27/06/24	28/06/2024	29/06/2024	30/06/2024	1/07/2024	2/07/2024	3/07/2024	Ave.	Ave.	Ave
):00	3	3	3	1	0	1	3	2	2	2
:00	0	2	0	1	1	1	0	1	1	1
2:00	1	2	3	1	0	2	2	1	2	2
3:00 B:00	6	7	1	3	3	4	4	5	2	4
4:00	10	8	3	1	9	4	9	9	2	7
:00	25	31	11	3	23	25	22	25	7	20
5:00	101	87	11	10	23 96	101	103	98	11	73
7:00	148	126	36	10	90 155	152	103	90 142	27	109
3:00	210	120	86	38	133	132	191	193	62	109
0:00	177	193	120		184	100	191	193	97	130
0:00	145	171	120	74	184	178	137	109	97 92	149
1:00	145	143	100	73	140	155	124	143	95	130
2:00	140	145	76	86	140	133	124	142	81	113
3:00	137	133	70	61	100	129	138	123	66	113
4:00	137	146	72	54	110	123	130	132	63	110
5:00	145	140	49	43	150	136	134	129	46	116
6:00	145	128	43	43 39	96	99	102	109	40	89
7:00	68	74	35	25	63	59	55	64	30	54
8:00	24	45	33	23	32	40	25	33	29	34
9:00	18	18	26	19	32	13	26	21	23	22
0:00	10	12	17	8	10	13	12	12	13	12
1:00	14	8	14	11	10	8	9	9	13	12
2:00	2	9	7	4	7	6	10	7	6	6
3:00	2	2	5	4	5	5	4	4	5	4
otal	1749	1819	950	674	1682	1707	1650	1721	812	1462
otai				0/4	1002		Summary	1721	612	1402
		Average Wo	eek Day				from	to		
250						AM Peak	8:00 AM	9:00 AM		210
200						ANTECak	8:00 AM	9:00 AM		210
200		$\wedge$								155
u 150 -						PM Peak	12:00 PM	1:00 PM		155
150 - 100 -				<u></u>			Week	Day Average		1721
50 -		/		<u> </u>			Weekand	Day Average		812
0	2 3 4 5 6	7 8 9 10 11	12 13 14 15 16 17	18 19 20 21 22 3	23 24					
1	2 3 4 3 0		<b>Time</b>	10 17 20 21 22 2			7	Day Average		1462



## **Intersection Peak Hour**

Location:Bush land Drive at Grey Gum Road, TareeGPS Coordinates:Lat=-31.898396, Lon=152.421799Date:2024-12-12Day of week:ThursdayWeather:FineAnalyst:Mick



## **Intersection Peak Hour**

08:00 - 09:00

	So	outhBou	Ind	W	estbour	nd	No	orthbou	nd	Ea	astbour	d	Total
	Left	Thru	Right	Total									
Vehicle Total	37	184	0	165	0	31	0	237	153	0	0	0	807
Factor	0.77	0.79	0.00	0.81	0.00	0.78	0.00	0.80	0.80	0.00	0.00	0.00	0.84
Approach Factor		0.79			0.86			0.87			0.00		



## **Intersection Peak Hour**

Location:Bush land Drive at Grey Gum Road, TareeGPS Coordinates:Lat=-31.898396, Lon=152.421799Date:2024-12-11Day of week:WednesdayWeather:Hot And SunnyAnalyst:Mick



## **Intersection Peak Hour**

15:00 - 16:00

	Sc	outhBou	Ind	W	estbour	d	No	rthbou	nd	Ea	astboun	d	Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	TOtal
Vehicle Total	39	187	4	296	4	32	0	247	114	0	0	0	923
Factor	0.75	0.87	0.50	0.78	0.50	0.80	0.00	0.86	0.95	0.00	0.00	0.00	0.89
Approach Factor					0.78			0.89			0.00		



























# ATTACHMENT C SIDRA SUMMARY TABLES



V Site: 101 [Wingham\_Bushland 2025AM + development (Site Folder: General)] Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2025AM + development (Network Folder: General)]

Wingham Road / Bushland Drive roundabout 2024 counts Site Category: (None) Roundabout

Vehic	le M	ovement	Perfo	orma	nce										
Mov ID	Tum	Mov Class	Dem	nand lows		rival ows	Deg. Satn	Aver.	Level of Service	Aver. Back	Of Queue	Prop. Que	Eff. Stop	Aver.	Aver.
U					ا⊣   Total آ		Sath	Delay	Service	ſ Veh.	Dist 1	Que	Rate	No. of Cycles	Speed
			veh/h		veh/h	%	v/c	sec		veh	m			-,	km/h
South	: Roa	dName													
2	T1	All MCs	268	7.1	268	7.1	0.139	5.4	LOS A	0.0	0.0	0.00	0.43	0.00	52.8
3a	R1	All MCs	3	0.0	3	0.0	0.118	9.1	LOS A	0.3	2.2	0.57	0.66	0.57	42.2
3b	R3	All MCs	121	7.8	121	7.8	0.118	11.2	LOS A	0.3	2.2	0.57	0.66	0.57	34.8
3u	U	All MCs	3	33.3	3	33.3	0.118	12.9	LOS A	0.3	2.2	0.57	0.66	0.57	34.8
Appro	ach		396	7.4	396	7.4	0.139	7.3	LOS A	0.3	2.2	0.18	0.51	0.18	49.1
South	East:	Bushland	Drive												
21b	L3	All MCs	103	10.2	103	10.2	0.173	9.8	LOS A	0.4	2.9	0.70	0.73	0.70	45.5
23a	R1	All MCs	382	6.1	382	6.1	0.402	11.3	LOS A	1.2	8.6	0.77	0.72	0.77	48.9
23	R2	All MCs	1	0.0	1	0.0	0.402	12.0	LOS A	1.2	8.6	0.77	0.72	0.77	45.9
23u	U	All MCs	1	0.0	1	0.0	0.402	13.9	LOS A	1.2	8.6	0.77	0.72	0.77	44.4
Appro	ach		487	6.9	487	6.9	0.402	11.0	LOS A	1.2	8.6	0.76	0.72	0.76	48.5
North	East: 1	Woola Ro	ad												
24	L2	All MCs	11	0.0	11	0.0	0.049	7.2	LOS A	0.1	0.5	0.64	0.78	0.64	41.2
24a	L1	All MCs	12	0.0	12	0.0	0.049	6.8	LOS A	0.1	0.5	0.64	0.78	0.64	41.2
26b	R3	All MCs	3	0.0	3	0.0	0.049	12.1	LOS A	0.1	0.5	0.64	0.78	0.64	47.1
26u	U	All MCs	2	0.0	2	0.0	0.049	12.9	LOS A	0.1	0.5	0.64	0.78	0.64	44.1
Appro	ach		27	0.0	27	0.0	0.049	8.0	LOS A	0.1	0.5	0.64	0.78	0.64	42.6
North	Wing	jham Roa	d												
7b	L3	All MCs	2	0.0	2	0.0	0.426	5.4	LOS A	1.1	8.2	0.39	0.48	0.39	49.2
7a	L1	All MCs	505	5.0	505	5.0	0.426	4.8	LOS A	1.1	8.2	0.39	0.48	0.39	50.6
8	T1	All MCs	593	4.8	593	4.8	0.459	5.1	LOS A	1.3	9.3	0.40	0.47	0.40	49.7
9u	U	All MCs	1	0.0	1	0.0	0.459	11.1	LOS A	1.3	9.3	0.40	0.47	0.40	52.3
Appro	ach		1101	4.9	1101	4.9	0.459	4.9	LOS A	1.3	9.3	0.39	0.47	0.39	50.1
All Ve	hicles		2012	5.8	2012	<b>5.8</b>	0.459	6.9	LOS A	1.3	9.3	0.44	0.54	0.44	49.2

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

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

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

Roundabout Capacity Model: SIDRA Standard.

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

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

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

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

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

SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:02:40 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



V Site: 101 [Wingham\_Bushland 2025PM + development (Site Folder: General)] Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2025PM + development (Network Folder: General)]

Wingham Road / Bushland Drive roundabout 2024 counts Site Category: (None) Roundabout

Vehio	cle M	ovement	t Perfo	orma	nce										
Mov ID	Tum	Mov	Dem	and lows		rival	Deg. Satn	Aver.	Level of	Aver. Bacl	c Of Queue		Eff.	Aver.	Aver.
U		Class			n ا Total H آ	ows -IV 1	Saur	Delay	Service	í Veh.	Dist ]	Que	Stop Rate	No. of Cycles	Speed
			veh/h		veh/h	%	v/c	sec		veh	m			-,	km/h
South	: Roa	dName													
2	T1	All MCs	422	4.0	422	4.0	0.214	6.4	LOS A	0.0	0.0	0.00	0.43	0.00	52.9
3a	R1	All MCs	4	0.0	4	0.0	0.104	10.1	LOS A	0.3	2.1	0.70	0.70	0.70	41.9
3b	R3	All MCs	86	4.9	86	4.9	0.104	12.1	LOS A	0.3	2.1	0.70	0.70	0.70	34.1
3u	U	All MCs	4	25.0	42	25.0	0.104	13.8	LOS A	0.3	2.1	0.70	0.70	0.70	34.1
Appro	ach		517	4.3	517	4.3	0.214	7.5	LOS A	0.3	2.1	0.13	0.48	0.13	50.8
South	East:	Bushland	Drive												
21b	L3	All MCs	137	5.4	137	5.4	0.217	9.5	LOS A	0.5	3.5	0.69	0.72	0.69	45.9
23a	R1	All MCs	567	4.3	567		0.567	12.7	LOS A	2.1	15.6	0.82	0.79	0.95	48.1
23	R2	All MCs	5	20.0	52	20.0	0.567	14.3	LOS A	2.1	15.6	0.82	0.79	0.95	44.9
23u	U	All MCs	1	0.0	1	0.0	0.567	15.3	LOS B	2.1	15.6	0.82	0.79	0.95	43.1
Appro	ach		711	4.6	711	4.6	0.567	12.1	LOS A	2.1	15.6	0.80	0.77	0.90	47.8
North	East:	Woola Ro	ad												
24	L2	All MCs	4	0.0	4	0.0	0.017	6.6	LOS A	0.0	0.2	0.59	0.69	0.59	41.7
24a	L1	All MCs	4	0.0	4	0.0	0.017	6.2	LOS A	0.0	0.2	0.59	0.69	0.59	41.7
26b	R3	All MCs	1	0.0	1	0.0	0.017	11.5	LOS A	0.0	0.2	0.59	0.69	0.59	47.4
26u	U	All MCs	1	0.0	1	0.0	0.017	12.3	LOS A	0.0	0.2	0.59	0.69	0.59	44.4
Appro	ach		11	0.0	11	0.0	0.017	7.5	LOS A	0.0	0.2	0.59	0.69	0.59	43.0
North	: Wing	iham Roa	d												
7b	L3	All MCs	4	0.0	4	0.0	0.351	5.2	LOS A	0.9	6.3	0.33	0.46	0.33	49.4
7a	L1	All MCs	416	3.8	416	3.8	0.351	4.5	LOS A	0.9	6.3	0.33	0.46	0.33	51.0
8	T1	All MCs	566	2.4			0.419	4.8	LOS A	1.2	8.3	0.34	0.44	0.34	50.1
9u	U	All MCs	1	0.0	1	0.0	0.419	10.9	LOS A	1.2	8.3	0.34	0.44	0.34	52.5
Appro	ach		987	3.0	987	3.0	0.419	4.7	LOS A	1.2	8.3	0.33	0.45	0.33	50.5
All Ve	hicles		2225	3.8	2225	3.8	0.567	7.7	LOS A	2.1	15.6	0.44	0.56	0.47	49.3

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

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

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

Roundabout Capacity Model: SIDRA Standard.

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

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

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

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

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

SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:02:56 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



V Site: 101 [Wingham\_Bushland 2035AM + development (Site Folder: General)] Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2035AM + development (Network Folder: General)]

Wingham Road / Bushland Drive roundabout 2024 counts Site Category: (None) Roundabout

Vehic	le Mo	ovement	Perfo	orma	nce										
Mov	Tum	Mov Class	Dem	nand lows		rival ows	Deg.	Aver.	Level of	Aver. Back	Of Queue		Eff.	Aver.	Aver.
ID					۱٦ Total I آ		Satn	Delay	Service	[ Veh.	Dist 1	Que	Stop Rate	No. of Cycles	Speed
			veh/h		veh/h	%	v/c	sec		veh	m		1 13110		km/h
South	: Roa	dName													
2	T1	All MCs	327	7.1	327	7.1	0.169	5.7	LOS A	0.0	0.0	0.00	0.43	0.00	52.8
3a	R1	All MCs	4	0.0	4	0.0	0.144	9.4	LOS A	0.4	2.9	0.64	0.68	0.64	42.0
3b	R3	All MCs	137	8.5	137	8.5	0.144	11.6	LOS A	0.4	2.9	0.64	0.68	0.64	34.5
3u	U	All MCs	3	33.3	33	33.3	0.144	13.3	LOS A	0.4	2.9	0.64	0.68	0.64	34.5
Appro	ach		472	7.6	472	7.6	0.169	7.5	LOS A	0.4	2.9	0.20	0.51	0.20	49.2
South	East:	Bushland	Drive												
21b	L3	All MCs	119	10.6	119 1	10.6	0.231	11.4	LOSA	0.5	4.1	0.79	0.77	0.79	43.8
23a	R1	All MCs	438	6.3	438	6.3	0.533	14.5	LOS B	2.0	14.9	0.91	0.83	1.08	46.9
23	R2	All MCs	1	0.0	1	0.0	0.533	15.2	LOS B	2.0	14.9	0.91	0.83	1.08	44.2
23u	U	All MCs	1	0.0	1	0.0	0.533	17.1	LOS B	2.0	14.9	0.91	0.83	1.08	41.4
Appro	ach		559	7.2	559	7.2	0.533	13.9	LOS A	2.0	14.9	0.89	0.82	1.01	46.5
North	East: \	Woola Ro	ad												
24	L2	All MCs	13	0.0	13	0.0	0.067	7.9	LOS A	0.1	0.7	0.69	0.83	0.69	40.6
24a	L1	All MCs	14	0.0	14	0.0	0.067	7.6	LOS A	0.1	0.7	0.69	0.83	0.69	40.6
26b	R3	All MCs	4	0.0	4	0.0	0.067	12.8	LOS A	0.1	0.7	0.69	0.83	0.69	46.6
26u	U	All MCs	2	0.0	2	0.0	0.067	13.7	LOS A	0.1	0.7	0.69	0.83	0.69	43.7
Appro	ach		33	0.0	33	0.0	0.067	8.8	LOS A	0.1	0.7	0.69	0.83	0.69	42.0
North:	Wing	jham Roa	d												
7b	L3	All MCs	2	0.0	2	0.0	0.500	5.6	LOS A	1.4	10.6	0.46	0.49	0.46	49.0
7a	L1	All MCs	574	5.1	574	5.1	0.500	5.0	LOS A	1.4	10.6	0.46	0.49	0.46	50.1
8	T1	All MCs	722	4.8	722	4.8	0.567	5.3	LOS A	1.8	13.4	0.49	0.49	0.49	49.1
9u	U	All MCs	1	0.0	1	0.0	0.567	11.3	LOS A	1.8	13.4	0.49	0.49	0.49	51.9
Appro	ach		1299	4.9	1299	4.9	0.567	5.2	LOS A	1.8	13.4	0.48	0.49	0.48	49.5
All Ve	hicles		2362	5.9	2362	5.9	0.567	7.7	LOS A	2.0	14.9	0.52	0.58	0.55	48.3

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

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

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

Roundabout Capacity Model: SIDRA Standard.

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

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

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

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

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

#### SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:02:48 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



V Site: 101 [Wingham\_Bushland 2035PM + development (Site Folder: General)] Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2035PM + development (Network Folder: General)]

Wingham Road / Bushland Drive roundabout 2024 counts Site Category: (None) Roundabout

Vehio	le M	ovement	l Perfo	orma	nce										
Mov ID	Tum	Mov Class	Dem	nand lows		rival ows	Deg.	Aver.	Level of	Aver. Bacl	<pre>&lt; Of Queue</pre>		Eff. Stop	Aver.	Aver.
טו					۱۱   Total آ		Satn	Delay	Service	[Veh.	Dist ]	Que	Rate	No. of Cycles	Speed
			veh/h	%	veh/h	%	v/c	sec		veh	m			,	km/h
South	: Roa	dName													
2	T1	All MCs	515	4.1	515	4.1	0.261	7.3	LOS A	0.0	0.0	0.00	0.43	0.00	52.9
3a	R1	All MCs	5	0.0	5	0.0	0.138	10.7	LOS A	0.4	3.0	0.80	0.72	0.80	41.6
3b	R3	All MCs	99	5.3	99	5.3	0.138	12.7	LOS A	0.4	3.0	0.80	0.72	0.80	33.7
3u	U	All MCs	5	20.0	52	20.0	0.138	14.3	LOS A	0.4	3.0	0.80	0.72	0.80	33.7
Appro	ach		624	4.4	624	4.4	0.261	8.3	LOS A	0.4	3.0	0.14	0.48	0.14	50.8
South	East:	Bushland	Drive												
21b	L3	All MCs	159	7.3	159	7.3	0.289	11.1	LOS A	0.7	5.1	0.78	0.77	0.78	44.2
23a	R1	All MCs	649	4.4	649	4.4	0.737	18.8	LOS B	4.1	30.1	0.99	1.00	1.48	44.5
23	R2	All MCs	6	16.7	61	16.7	0.737	20.5	LOS B	4.1	30.1	0.99	1.00	1.48	41.8
23u	U	All MCs	1	0.0	1	0.0	0.737	21.5	LOS B	4.1	30.1	0.99	1.00	1.48	37.8
Appro	ach		816	<b>5.0</b>	816	5.0	0.737	17.3	LOS B	4.1	30.1	0.95	0.96	1.35	44.5
North	East: 1	Woola Ro	ad												
24	L2	All MCs	5	0.0	5	0.0	0.023	7.3	LOS A	0.0	0.3	0.65	0.74	0.65	41.2
24a	L1	All MCs	5	0.0	5	0.0	0.023	7.0	LOS A	0.0	0.3	0.65	0.74	0.65	41.2
26b	R3	All MCs	1	0.0	1	0.0	0.023	12.2	LOS A	0.0	0.3	0.65	0.74	0.65	47.0
26u	U	All MCs	1	0.0	1	0.0	0.023	13.1	LOS A	0.0	0.3	0.65	0.74	0.65	44.1
Appro	ach		13	0.0	13	0.0	0.023	8.1	LOS A	0.0	0.3	0.65	0.74	0.65	42.3
North	Wing	jham Roa	d												
7b	L3	All MCs	5	0.0	5	0.0	0.416	5.3	LOS A	1.1	8.1	0.39	0.47	0.39	49.2
7a	L1	All MCs	478	3.7	478	3.7	0.416	4.7	LOS A	1.1	8.1	0.39	0.47	0.39	50.6
8	T1	All MCs	691	2.4	691	2.4	0.518	5.0	LOS A	1.7	11.8	0.42	0.46	0.42	49.5
9u	U	All MCs	1	0.0	1	0.0	0.518	11.0	LOS A	1.7	11.8	0.42	0.46	0.42	52.2
Appro	ach		1175	3.0	1175	3.0	0.518	4.9	LOS A	1.7	11.8	0.41	0.46	0.41	50.0
All Ve	hicles		2627	3.9	2627	3.9	0.737	9.6	LOS A	4.1	30.1	0.51	0.62	0.64	47.6

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.

SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:03:04 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



Site: 101 [Bushland\_Grey Gum 2025AM + development (Site Folder: General)]
Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2025AM + development (Network Folder: General)]

Bushland Drive / Grey Gum Road Stop T-intersection December 2024 counts Site Category: (None) Stop (Two-Way)

Vehic	cle Mo	ovemen	t Perfo	rma	nce _										
Mov ID	Tum	Mov Class		ows	FI	rival ows	Deg. Satn	Aver. Delay	Level of Service		Of Queue	Prop. Que	Eff. Stop	Aver. No. of	Aver. Speed
			[ Total   veh/h		l lotal   veh/h	HV J %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South	: Grey	Gum Ro	oad												
1	L2	All MCs	192	3.0	192	3.0	0.172	8.7	LOS A	0.3	2.1	0.37	0.88	0.37	41.3
3	R2	All MCs	33	3.0	33	3.0	0.044	10.8	LOS A	0.1	0.5	0.60	0.91	0.60	45.7
Appro	ach		224	3.0	224	3.0	0.172	9.0	LOS A	0.3	2.1	0.40	0.89	0.40	42.3
East:	Bushla	and Drive	Э												
4	L2	All MCs	39	3.0	39	3.0	0.145	5.6	LOS A	0.0	0.0	0.00	0.08	0.00	56.6
5	T1	All MCs	236	3.0	236	3.0	0.145	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	58.4
Appro	ach		275	3.0	275	3.0	0.145	0.8	NA	0.0	0.0	0.00	0.08	0.00	58.0
West:	Bush	and Driv	e												
11	T1	All MCs	278	3.0	278	3.0	0.275	0.7	LOS A	0.5	3.7	0.33	0.36	0.33	54.9
12	R2	All MCs	173	3.0	173	3.0	0.275	6.7	LOS A	0.5	3.7	0.33	0.36	0.33	45.8
Appro	bach		451	3.0	451	3.0	0.275	3.0	NA	0.5	3.7	0.33	0.36	0.33	51.0
All Ve	hicles		949	3.0	949	3.0	0.275	3.8	NA	0.5	3.7	0.25	0.41	0.25	50.3

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.

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.

SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:02:40 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



Site: 101 [Bushland\_Grey Gum 2025PM + development (Site Folder: General)] Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2025PM + development (Network Folder: General)]

Bushland Drive / Grey Gum Road Stop T-intersection December 2024 counts Site Category: (None) Stop (Two-Way)

Vehic	le Mo	ovemen	t Perfo	rma	nce										
Mov ID	Tum	Mov Class		ows	FI	rival ows	Deg. Satn	Aver. Delay	Level of Service		COF Queue	Prop. Que	Eff. Stop	Aver. No. of	Aver. Speed
			[ Total   veh/h		[ Total   veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South	: Grey	Gum Ro	bad												
1	L2	All MCs	323	3.0	323	3.0	0.289	8.8	LOS A	0.5	3.9	0.40	0.87	0.40	41.2
3	R2	All MCs	38	3.0	38	3.0	0.050	10.7	LOS A	0.1	0.6	0.60	0.91	0.60	45.8
Appro	ach		361	3.0	361	3.0	0.289	9.0	LOS A	0.5	3.9	0.42	0.88	0.42	42.0
East:	Bushla	and Drive	Э												
4	L2	All MCs	41	3.0	41	3.0	0.143	5.6	LOS A	0.0	0.0	0.00	0.09	0.00	56.6
5	T1	All MCs	229	3.0	229	3.0	0.143	0.0	LOS A	0.0	0.0	0.00	0.09	0.00	58.3
Appro	ach		271	3.0	271	3.0	0.143	0.9	NA	0.0	0.0	0.00	0.09	0.00	57.9
West:	Bush	land Driv	е												
11	T1	All MCs	303	3.0	303	3.0	0.262	0.6	LOS A	0.4	3.1	0.28	0.31	0.28	55.6
12	R2	All MCs	138	3.0	138	3.0	0.262	6.7	LOS A	0.4	3.1	0.28	0.31	0.28	46.4
Appro	ach		441	3.0	441	3.0	0.262	2.5	NA	0.4	3.1	0.28	0.31	0.28	52.4
All Ve	hicles		1073	3.0	1073	3.0	0.289	4.3	NA	0.5	3.9	0.26	0.44	0.26	49.6

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.

SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:02:56 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



Site: 101 [Bushland\_Grey Gum 2035AM + development (Site Folder: General)] Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2035AM + development (Network Folder: General)]

Bushland Drive / Grey Gum Road Stop T-intersection December 2024 counts Site Category: (None) Stop (Two-Way)

Vehic	cle M	ovemen	t Perfo	rma	nce										
Mov ID	Tum	Mov Class		ows	FI	rival ows	Deg. Satn	Aver. Delay	Level of Service		Of Queue	Prop. Que	Eff. Stop	Aver. No. of	Aver. Speed
			[ Total   veh/h		[ Total   veh/h	HV ] <u>%</u>	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South	: Grey	Gum Ro	bad												
1	L2	All MCs	229	3.0	229	3.0	0.217	9.0	LOS A	0.4	2.7	0.42	0.89	0.42	41.1
3	R2	All MCs	40	3.0	40	3.0	0.066	12.3	LOS A	0.1	0.7	0.65	0.96	0.65	45.0
Appro	ach		269	3.0	269	3.0	0.217	9.5	LOS A	0.4	2.7	0.45	0.90	0.45	42.0
East:	Bushl	and Drive	e												
4	L2	All MCs	47	3.0	47	3.0	0.171	5.6	LOS A	0.0	0.0	0.00	0.09	0.00	56.6
5	T1	All MCs	278	3.0	278	3.0	0.171	0.0	LOS A	0.0	0.0	0.00	0.09	0.00	58.4
Appro	ach		325	3.0	325	3.0	0.171	0.9	NA	0.0	0.0	0.00	0.09	0.00	57.9
West:	Bush	land Driv	е												
11	T1	All MCs	333	3.0	333	3.0	0.339	1.0	LOS A	0.7	4.9	0.38	0.41	0.38	54.6
12	R2	All MCs	208	3.0	208	3.0	0.339	7.1	LOS A	0.7	4.9	0.38	0.41	0.38	45.6
Appro	ach		541	3.0	541	3.0	0.339	3.3	NA	0.7	4.9	0.38	0.41	0.38	50.7
All Ve	hicles		1136	3.0	1136	3.0	0.339	4.1	NA	0.7	4.9	0.29	0.43	0.29	50.1

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.

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.

SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:02:48 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



Site: 101 [Bushland\_Grey Gum 2035PM + development (Site Folder: General)] Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2035PM + development (Network Folder: General)]

Bushland Drive / Grey Gum Road Stop T-intersection December 2024 counts Site Category: (None) Stop (Two-Way)

Vehic	le M	ovemen	t Perfo	rma	nce										
Mov ID	Tum	Mov Class	Dem Fl	and ows		rival ows	Deg. Satn	Aver. Delay	Level of Service		COf Queue	Prop. Que	Eff. Stop	Aver. No. of	Aver. Speed
			[Total] veh/h		[ Total   veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South	: Grey	Gum Ro	bad												
1	L2	All MCs	392	3.0	392	3.0	0.368	9.4	LOS A	0.8	5.6	0.47	0.89	0.49	40.9
3	R2	All MCs	46	3.0	46	3.0	0.073	12.1	LOS A	0.1	0.8	0.64	0.96	0.64	45.1
Appro	ach		438	3.0	438	3.0	0.368	9.7	LOS A	0.8	5.6	0.49	0.90	0.51	41.6
East:	Bushl	and Drive	Э												
4	L2	All MCs	51	3.0	51	3.0	0.170	5.6	LOS A	0.0	0.0	0.00	0.09	0.00	56.5
5	T1	All MCs	273	3.0	273	3.0	0.170	0.0	LOS A	0.0	0.0	0.00	0.09	0.00	58.3
Appro	ach		323	3.0	323	3.0	0.170	0.9	NA	0.0	0.0	0.00	0.09	0.00	57.8
West:	Bush	land Driv	е												
11	T1	All MCs	360	3.0	360	3.0	0.319	0.8	LOS A	0.6	4.0	0.32	0.35	0.32	55.4
12	R2	All MCs	164	3.0	164	3.0	0.319	7.1	LOS A	0.6	4.0	0.32	0.35	0.32	46.2
Appro	ach		524	3.0	524	3.0	0.319	2.8	NA	0.6	4.0	0.32	0.35	0.32	52.1
All Ve	hicles		1285	3.0	1285	3.0	0.368	4.6	NA	0.8	5.6	0.30	0.47	0.30	49.3

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.

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.

SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:03:04 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



Site: 1 [Bunnings entrance Wingham Road 2025AM + development (Site Folder: General)] Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2025AM + development (Network Folder: General)]

Three-way intersection with 5-lane major road (Stop control) Site Category: (None) Stop (Two-Way)

Vehio	cle M	ovemen	t Perfo	orma	nce										
Mov ID	Tum	Mov Class	Dem Fl	nand Iows		rival Iows	Deg. Satn	Aver. Delay	Level of Service	Aver. Back		Prop. Que	Eff. Stop	Aver. No. of	Aver. Speed
			[ Total   veh/h		[ Total   veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South	: Mino	or Road													
2	T1	All MCs	383	7.7	383	7.7	0.206	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
2	R2	All MCs	65	1.6	65	1.6	0.082	9.1	LOS A	0.1	0.9	0.60	0.78	0.60	36.6
Appro	ach		448	6.8	448	6.8	0.206	1.3	NA	0.1	0.9	0.09	0.11	0.09	47.3
East:	Major	Road													
3	L2	All MCs	85	7.4	85	7.4	0.124	7.5	LOS A	0.2	1.3	0.59	0.77	0.59	34.5
6	R2	All MCs	13	0.0	13	0.0	0.030	12.7	LOS A	0.0	0.3	0.77	0.83	0.77	31.8
Appro	ach		98	6.5	98	6.5	0.124	8.1	LOS A	0.2	1.3	0.61	0.78	0.61	34.1
North	Road	dName													
7	L2	All MCs	25	0.0	25	0.0	0.016	5.8	LOS A	0.0	0.2	0.14	0.51	0.14	40.2
8	T1	All MCs	685	5.8	685	5.8	0.365	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Appro	ach		711	5.6	711	5.6	0.365	0.3	LOS A	0.0	0.2	0.01	0.02	0.01	56.9
All Ve	hicles		1257	6.1	1257	6.1	0.365	1.3	NA	0.2	1.3	0.08	0.11	0.08	48.9

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.

SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:02:40 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



Site: 1 [Bunnings entrance Wingham Road 2025PM + development (Site Folder: General)] Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2025PM + development (Network Folder: General)]

Three-way intersection with 5-lane major road (Stop control) Site Category: (None) Stop (Two-Way)

Vehi	cle M	ovemen	t Perfo	orma	nce										
Mov ID	Tum	Mov Class		ows	FI	rival ows	Deg. Satn	Aver. Delay	Level of Service	Aver. Back		e Prop. Que	Eff. Stop	Aver. No. of	Aver. Speed
			[ Total veh/h		[ Total   veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South	: Mino	or Road													
2	T1	All MCs	500	4.4	500	4.4	0.264	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
2	R2	All MCs	72	1.5	72	1.5	0.087	8.9	LOS A	0.1	1.0	0.59	0.78	0.59	36.7
Appro	ach		572	4.1	572	4.1	0.264	1.1	NA	0.1	1.0	0.07	0.10	0.07	48.3
East:	Major	Road													
3	L2	All MCs	108	2.9	108	2.9	0.145	7.1	LOS A	0.2	1.5	0.58	0.76	0.58	34.7
6	R2	All MCs	17	0.0	17	0.0	0.046	14.6	LOS B	0.1	0.5	0.80	0.89	0.80	30.9
Appro	ach		125	2.5	125	2.5	0.145	8.1	LOS A	0.2	1.5	0.61	0.78	0.61	34.2
North	: Road	dName													
7	L2	All MCs	34	0.0	34	0.0	0.022	5.8	LOS A	0.0	0.2	0.15	0.51	0.15	40.1
8	T1	All MCs	678	3.3	678	3.3	0.355	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Appro	ach		712	3.1	712	3.1	0.355	0.3	LOS A	0.0	0.2	0.01	0.02	0.01	56.1
All Ve	hicles		1408	3.4	1408	3.4	0.355	1.3	NA	0.2	1.5	0.09	0.12	0.09	48.2

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

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

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.

SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:02:56 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



Site: 1 [Bunnings entrance Wingham Road 2035AM + development (Site Folder: General)] Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2035AM + development (Network Folder: General)]

Three-way intersection with 5-lane major road (Stop control) Site Category: (None) Stop (Two-Way)

Vehi	cle M	ovemen	t Perfo	orma	nce										
Mov ID	Tum	Mov Class		ows	FI	rival ows	Deg. Satn	Aver. Delay	Level of Service	Aver. Back		Prop. Que	Eff. Stop	Aver. No. of	Aver. Speed
			l Iotal		[ Total   veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South	: Mino	or Road													
2	T1	All MCs	457	7.8	457	7.8	0.246	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
2	R2	All MCs	65	1.6	65	1.6	0.105	10.7	LOS A	0.2	1.1	0.67	0.86	0.67	35.7
Appro	ach		522	7.1	522	7.1	0.246	1.4	NA	0.2	1.1	0.08	0.11	0.08	47.7
East:	Major	Road													
3	L2	All MCs	85	7.4	85	7.4	0.162	9.4	LOS A	0.2	1.6	0.69	0.83	0.69	33.3
6	R2	All MCs	13	0.0	13	0.0	0.044	17.7	LOS B	0.1	0.5	0.85	0.92	0.85	29.3
Appro	ach		98	6.5	98	6.5	0.162	10.5	LOS A	0.2	1.6	0.71	0.84	0.71	32.7
North	Road	dName													
7	L2	All MCs	25	0.0	25	0.0	0.016	5.8	LOS A	0.0	0.2	0.14	0.51	0.14	40.2
8	T1	All MCs	828	5.8	828	5.8	0.441	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Appro	ach		854	5.7	854	5.7	0.441	0.2	LOS A	0.0	0.2	0.00	0.02	0.00	57.2
All Ve	hicles		1474	6.2	1474	6.2	0.441	1.3	NA	0.2	1.6	0.08	0.10	0.08	49.3

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.

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.

#### SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:02:48 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



Site: 1 [Bunnings entrance Wingham Road 2035PM + development (Site Folder: General)] Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2035PM + development (Network Folder: General)]

Three-way intersection with 5-lane major road (Stop control) Site Category: (None) Stop (Two-Way)

Vehi	cle M	ovemen	t Perfo	rma	nce										
Mov ID	Tum	Mov Class		ows	FI	rival ows	Deg. Satn	Aver. Delay	Level of Service	Aver. Back		Prop. Que	Eff. Stop	Aver. No. of	Aver. Speed
			[ Total veh/h		[ Total   veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South	: Mino	or Road													
2	T1	All MCs	602	4.4	602	4.4	0.318	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
2	R2	All MCs	72	1.5	72	1.5	0.110	10.4	LOS A	0.2	1.2	0.66	0.86	0.66	35.8
Appro	ach		674	4.1	674	4.1	0.318	1.1	NA	0.2	1.2	0.07	0.09	0.07	48.9
East:	Major	Road													
3	L2	All MCs	108	2.9	108	2.9	0.183	8.7	LOS A	0.3	1.9	0.67	0.82	0.67	33.7
6	R2	All MCs	17	0.0	17	0.0	0.071	21.1	LOS B	0.1	0.7	0.88	0.93	0.88	28.0
Appro	ach		125	2.5	125	2.5	0.183	10.3	LOS A	0.3	1.9	0.70	0.84	0.70	32.8
North	: Road	Name													
7	L2	All MCs	34	0.0	34	0.0	0.022	5.8	LOS A	0.0	0.2	0.15	0.51	0.15	40.1
8	T1	All MCs	816	3.2	816	3.2	0.427	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Appro	ach		849	3.1	849	3.1	0.427	0.3	LOS A	0.0	0.2	0.01	0.02	0.01	56.5
All Ve	hicles		1648	3.4	1648	3.4	0.427	1.4	NA	0.3	1.9	0.09	0.11	0.09	48.6

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.

SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:03:04 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



V Site: 101 [Wingham-Kolodong 2025AM + development (Site Folder: General)] Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2025AM + development (Network Folder: General)]

Wingham Road / Lolodong Road give way T December 2024 counts Site Category: (None) Give-Way (Two-Way)

Vehic	le M	ovemen	t Perfo	orma	nce										
Mov ID	Tum	Mov Class	Dem Fl	nand lows		rival ows	Deg. Satn	Aver. Delay	Level of Service		Of Queue	Prop. Que	Eff. Stop	Aver. No. of	Aver. Speed
			[ Total   veh/h		[ Total   veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South	: Wing	gham Roa	ad												
1	L2	All MCs	5	0.0	5	0.0	0.003	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	52.9
2	T1	All MCs	438	7.0	438	7.0	0.235	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Appro	ach		443	6.9	443	6.9	0.235	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.7
North	Wing	ham Roa	ad												
8	T1	All MCs	763	6.1	763	6.1	0.407	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
9	R2	All MCs	7	0.0	7	0.0	0.008	7.5	LOS A	0.0	0.1	0.46	0.62	0.46	42.8
Appro	ach		771	6.0	771	6.0	0.407	0.1	NA	0.0	0.1	0.00	0.01	0.00	59.5
West:	Koloo	long Roa	d												
10	L2	All MCs	11	0.0	11	0.0	0.068	6.7	LOS A	0.1	0.7	0.71	0.82	0.71	36.3
12	R2	All MCs	15	0.0	15	0.0	0.068	19.1	LOS B	0.1	0.7	0.71	0.82	0.71	43.6
Appro	ach		25	0.0	25	0.0	0.068	14.0	LOS A	0.1	0.7	0.71	0.82	0.71	41.4
All Ve	hicles		1239	6.2	1239	6.2	0.407	0.4	NA	0.1	0.7	0.02	0.02	0.02	58.8

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.

SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:02:40 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



♥ Site: 101 [Wingham-Kolodong 2025PM + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2025PM + development (Network Folder: General)]

Wingham Road / Lolodong Road give way T December 2024 counts Site Category: (None) Give-Way (Two-Way)

Vehic	cle Mo	ovemen	t Perfo	orma	nce										
Mov ID	Tum	Mov Class		ows	FI	rival ows	Deg. Satn	Aver. Delay	Level of Service		Of Queue	Prop. Que	Eff. Stop	Aver. No. of	Aver. Speed
			[ Total   veh/h		veh/h	HV J %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South	: Wing	gham Roa	ad												
1	L2	All MCs	16	6.7	16	6.7	0.009	5.6	LOS A	0.0	0.0	0.00	0.57	0.00	52.6
2	T1	All MCs	563	4.1	563	4.1	0.297	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Appro	ach		579	4.2	579	4.2	0.297	0.2	NA	0.0	0.0	0.00	0.02	0.00	59.4
North	Wing	ham Roa	ad												
8	T1	All MCs	776	3.3	776	3.3	0.406	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
9	R2	All MCs	11	0.0	11	0.0	0.014	8.5	LOS A	0.0	0.1	0.53	0.68	0.53	42.0
Appro	ach		786	3.2	786	3.2	0.406	0.2	NA	0.0	0.1	0.01	0.01	0.01	59.4
West:	Koloc	long Roa	d												
10	L2	All MCs	8	0.0	8	0.0	0.067	7.6	LOS A	0.1	0.6	0.77	0.89	0.77	34.6
12	R2	All MCs	12	0.0	12	0.0	0.067	22.8	LOS B	0.1	0.6	0.77	0.89	0.77	42.3
Appro	ach		20	0.0	20	0.0	0.067	16.4	LOS B	0.1	0.6	0.77	0.89	0.77	39.9
All Ve	hicles		1385	3.6	1385	3.6	0.406	0.4	NA	0.1	0.6	0.02	0.02	0.02	58.8

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.

SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:02:56 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



V Site: 101 [Wingham-Kolodong 2035AM + development (Site Folder: General)] Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2035AM + development (Network Folder: General)]

Wingham Road / Lolodong Road give way T December 2024 counts Site Category: (None) Give-Way (Two-Way)

Vehio	cle M	ovemen	t Perfo	rma	nce										
Mov ID	Tum	Mov Class		ows	F	rival lows	Deg. Satn	Aver. Delay	Level of Service		COF Queue	Prop. Que	Eff. Stop	Aver. No. of	Aver. Speed
			[ Total   veh/h		[ Total   veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South	: Wing	gham Ro	ad												
1	L2	All MCs	6	0.0	6	0.0	0.003	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	52.9
2	T1	All MCs	523	7.0	523	7.0	0.281	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Appro	ach		529	7.0	529	7.0	0.281	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.7
North	: Wing	ham Roa	ad												
8	T1	All MCs	923	6.0	923	6.0	0.492	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
9	R2	All MCs	9	0.0	9	0.0	0.012	8.2	LOS A	0.0	0.1	0.51	0.66	0.51	42.3
Appro	ach		933	6.0	933	6.0	0.492	0.1	NA	0.0	0.1	0.01	0.01	0.01	59.3
West:	Koloo	long Roa	d												
10	L2	All MCs	13	0.0	13	0.0	0.134	7.4	LOS A	0.2	1.3	0.82	0.92	0.82	31.9
12	R2	All MCs	18	0.0	18	0.0	0.134	30.6	LOS C	0.2	1.3	0.82	0.92	0.82	40.2
Appro	ach		31	0.0	31	0.0	0.134	21.0	LOS B	0.2	1.3	0.82	0.92	0.82	37.6
All Ve	hicles		1493	6.2	1493	6.2	0.492	0.6	NA	0.2	1.3	0.02	0.03	0.02	58.5

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.

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.

SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:02:48 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



V Site: 101 [Wingham-Kolodong 2035PM + development (Site Folder: General)] Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2035PM + development (Network Folder: General)]

Wingham Road / Lolodong Road give way T December 2024 counts Site Category: (None) Give-Way (Two-Way)

Vehic	le M	ovemen	t Perfo	orma	nce										
Mov ID	Tum	Mov Class		ows	FI	rival ows	Deg. Satn	Aver. Delay	Level of Service		Of Queue	Prop. Que	Eff. Stop	Aver. No. of	Aver. Speed
			[ Total   veh/h		[ Total   veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South	: Wing	gham Roa	ad												
1	L2	All MCs	19	5.6	19	5.6	0.011	5.6	LOS A	0.0	0.0	0.00	0.57	0.00	52.7
2	T1	All MCs	680	4.2	680	4.2	0.358	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Appro	ach		699	4.2	699	4.2	0.358	0.3	NA	0.0	0.0	0.00	0.02	0.00	59.3
North:	Wing	ham Roa	ad												
8	T1	All MCs	935	3.3	935	3.3	0.490	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
9	R2	All MCs	13	0.0	13	0.0	0.021	9.7	LOS A	0.0	0.2	0.58	0.74	0.58	41.1
Appro	ach		947	3.2	947	3.2	0.490	0.2	NA	0.0	0.2	0.01	0.01	0.01	59.3
West:	Koloc	dong Roa	d												
10	L2	All MCs	11	0.0	11	0.0	0.139	8.9	LOS A	0.2	1.3	0.87	0.94	0.87	29.3
12	R2	All MCs	14	0.0	14	0.0	0.139	39.3	LOS C	0.2	1.3	0.87	0.94	0.87	38.1
Appro	ach		24	0.0	24	0.0	0.139	26.1	LOS B	0.2	1.3	0.87	0.94	0.87	35.1
All Ve	hicles		1671	3.6	1671	3.6	0.490	0.6	NA	0.2	1.3	0.02	0.03	0.02	58.5

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.

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.

SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:03:04 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



V Site: 101 [Site Access 2025AM + development (Site Folder: General)] Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2025AM + development (Network Folder: General)]

Homemakers Centre access Bushland Drive December 2024 counts Site Category: (None) Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Tum	Mov Class		ows	FI	rival ows	Deg. Satn	Aver. Delay	Level of Service	Aver. Back		Prop. Que	Eff. Stop	Aver. No. of	Aver. Speed
			[ Total   veh/h		[ Total   veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South: Site Access															
1	L2	All MCs	162	3.0	162	3.0	0.183	5.4	LOS A	0.3	2.0	0.45	0.62	0.45	35.8
3	R2	All MCs	40	3.0	40	3.0	0.121	15.8	LOS B	0.2	1.4	0.80	0.90	0.80	29.8
Appro	ach		202	3.0	202	3.0	0.183	7.5	LOS A	0.3	2.0	0.52	0.67	0.52	34.4
East:	East: Bushland Drive														
4	L2	All MCs	60	3.0	60	3.0	0.033	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	49.1
5	T1	All MCs	367	3.0	367	3.0	0.192	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Appro	ach		427	3.0	427	3.0	0.192	0.8	NA	0.0	0.0	0.00	0.08	0.00	54.5
West:	Bush	land Driv	е												
11	T1	All MCs	411	3.0	411	3.0	0.215	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
12	R2	All MCs	241	3.0	241	3.0	0.271	8.1	LOS A	0.5	3.4	0.53	0.72	0.53	42.9
Appro	ach		652	3.0	652	3.0	0.271	3.0	NA	0.5	3.4	0.20	0.27	0.20	49.4
All Vel	hicles		1281	3.0	1281	3.0	0.271	3.0	NA	0.5	3.4	0.18	0.27	0.18	46.6

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.

SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:02:40 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



V Site: 101 [Site Access 2025PM + development (Site Folder: General)] Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2025PM + development (Network Folder: General)]

Homemakers Centre access Bushland Drive December 2024 counts Site Category: (None) Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Tum	Mov Class		ows	FI		Deg. Satn	Aver. Delay	Level of Service	Aver. Back		Prop. Que	Eff. Stop	Aver. No. of	Aver. Speed
			[ Total H' veh/h		[ Total   veh/h		v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South: Site Access															
1	L2	All MCs	244	3.0	244	3.0	0.333	7.4	LOS A	0.6	4.4	0.57	0.79	0.68	34.5
3	R2	All MCs	61	3.0	61	3.0	0.201	17.7	LOS B	0.3	2.4	0.83	0.92	0.86	28.9
Appro	bach		305	3.0	305	3.0	0.333	9.5	LOS A	0.6	4.4	0.62	0.81	0.72	33.2
East:	East: Bushland Drive														
4	L2	All MCs	40	3.0	40	3.0	0.022	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	49.1
5	T1	All MCs	508	3.0	508	3.0	0.266	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Appro	ach		548	3.0	548	3.0	0.266	0.4	NA	0.0	0.0	0.00	0.04	0.00	56.3
West	Bush	land Driv	е												
11	T1	All MCs	380	3.0	380	3.0	0.199	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
12	R2	All MCs	163	3.0	163	3.0	0.217	9.0	LOS A	0.3	2.5	0.57	0.78	0.57	42.4
Appro	bach		543	3.0	543	3.0	0.217	2.7	NA	0.3	2.5	0.17	0.23	0.17	50.4
All Ve	hicles		1397	3.0	1397	3.0	0.333	3.3	NA	0.6	4.4	0.20	0.29	0.22	45.0

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.

SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:02:56 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



∇ Site: 101 [Site Access 2035AM + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2035AM + development (Network Folder: General)]

Homemakers Centre access Bushland Drive December 2024 counts Site Category: (None) Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Tum	Mov Class		ows	FI	rival ows	Deg. Satn	Aver. Delay	Level of Service		Of Queue	Prop. Que	Eff. Stop	Aver. No. of	Aver. Speed
			[ Total   veh/h		[ Total   veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South: Site Access															
1	L2	All MCs	162	3.0	162	3.0	0.203	6.1	LOS A	0.3	2.2	0.50	0.67	0.50	35.4
3	R2	All MCs	40	3.0	40	3.0	0.169	21.3	LOS B	0.3	1.8	0.86	0.93	0.86	27.4
Appro	ach		202	3.0	202	3.0	0.203	9.1	LOS A	0.3	2.2	0.57	0.72	0.57	33.4
East:	Bushl	and Drive	•												
4	L2	All MCs	60	3.0	60	3.0	0.033	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	49.1
5	T1	All MCs	448	3.0	448	3.0	0.234	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Appro	ach		508	3.0	508	3.0	0.234	0.7	NA	0.0	0.0	0.00	0.07	0.00	55.0
West:	Bush	land Driv	е												
11	T1	All MCs	501	3.0	501	3.0	0.262	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
12	R2	All MCs	241	3.0	241	3.0	0.302	9.1	LOS A	0.6	4.1	0.58	0.79	0.64	42.4
Appro	ach		742	3.0	742	3.0	0.302	3.0	NA	0.6	4.1	0.19	0.26	0.21	49.8
All Ve	hicles		1453	3.0	1453	3.0	0.302	3.0	NA	0.6	4.1	0.18	0.26	0.19	47.0

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

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

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.

SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:02:48 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9



V Site: 101 [Site Access 2035PM + development (Site Folder: General)] Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [2035PM + development (Network Folder: General)]

Homemakers Centre access Bushland Drive December 2024 counts Site Category: (None) Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Tum	Mov Class		ows	FI	rival lows	Deg. Satn	Aver. Delay	Level of Service	Aver. Back		e Prop. Que	Eff. Stop	Aver. No. of	Aver. Speed
			[ Total   veh/h		[ Total   veh/h	HV ] %	v/c	sec		[ Veh. veh	Dist] m		Rate	Cycles	km/h
South: Site Access															
1	L2	All MCs	244	3.0	244	3.0	0.396	9.3	LOS A	0.7	5.4	0.65	0.90	0.87	33.4
3	R2	All MCs	61	3.0	61	3.0	0.302	28.2	LOS B	0.5	3.5	0.90	1.00	1.05	24.8
Appro	ach		305	3.0	305	3.0	0.396	13.1	LOS A	0.7	5.4	0.70	0.92	0.90	31.2
East:	Bushla	and Drive	<b>;</b>												
4	L2	All MCs	40	3.0	40	3.0	0.022	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	49.1
5	T1	All MCs	620	3.0	620	3.0	0.324	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Appro	ach		660	3.0	660	3.0	0.324	0.4	NA	0.0	0.0	0.00	0.03	0.00	56.7
West:	Bush	land Driv	е												
11	T1	All MCs	463	3.0	463	3.0	0.242	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
12	R2	All MCs	163	3.0	163	3.0	0.258	10.5	LOS A	0.4	3.1	0.62	0.86	0.68	41.7
Appro	ach		626	3.0	626	3.0	0.258	2.8	NA	0.4	3.1	0.16	0.22	0.18	50.8
All Ve	hicles		1592	3.0	1592	3.0	0.396	3.8	NA	0.7	5.4	0.20	0.28	0.24	44.8

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.

SIDRA INTERSECTION 9.1 | Copyright © 2000-2024 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: INTERSECT TRAFFIC PTY LTD | Licence: NETWORK / 1PC | Processed: Saturday, 1 February 2025 4:03:04 PM Project: D:\Work\2024\24.050 - Homemakers Centre - Bushland Drive Taree\2025DA\Sidra\Homemaker Centre network Taree.sip9