

CHP

Proposed Health Hub Facility

Showground Rd, Gosford

Traffic Impact Assessment

Prepared by

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213301

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QUALITY ASSURANCE

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1. Introduction

Northern Transport Planning and Engineering Pty Ltd have been engaged by CHP to assess the traffic impacts of the following proposed Health Hub at 60 -64 Showground Rd, Gosford.

The proposed facility will accommodate:

Basement Parking
GP/Pharmacy/Imaging/Retail
Medical/Specialist Suites
SDA Housing

Three Levels
Ground Floor
Four Levels
Level 5

225 parking spaces
886 m² Nett Lettable Area
6080 m² Nett Lettable Area
2 x One Bed Units
5 x two Bed Units

2. Site and Access

The site and general layout of the proposed Facility is presented below in Figure 2-1:

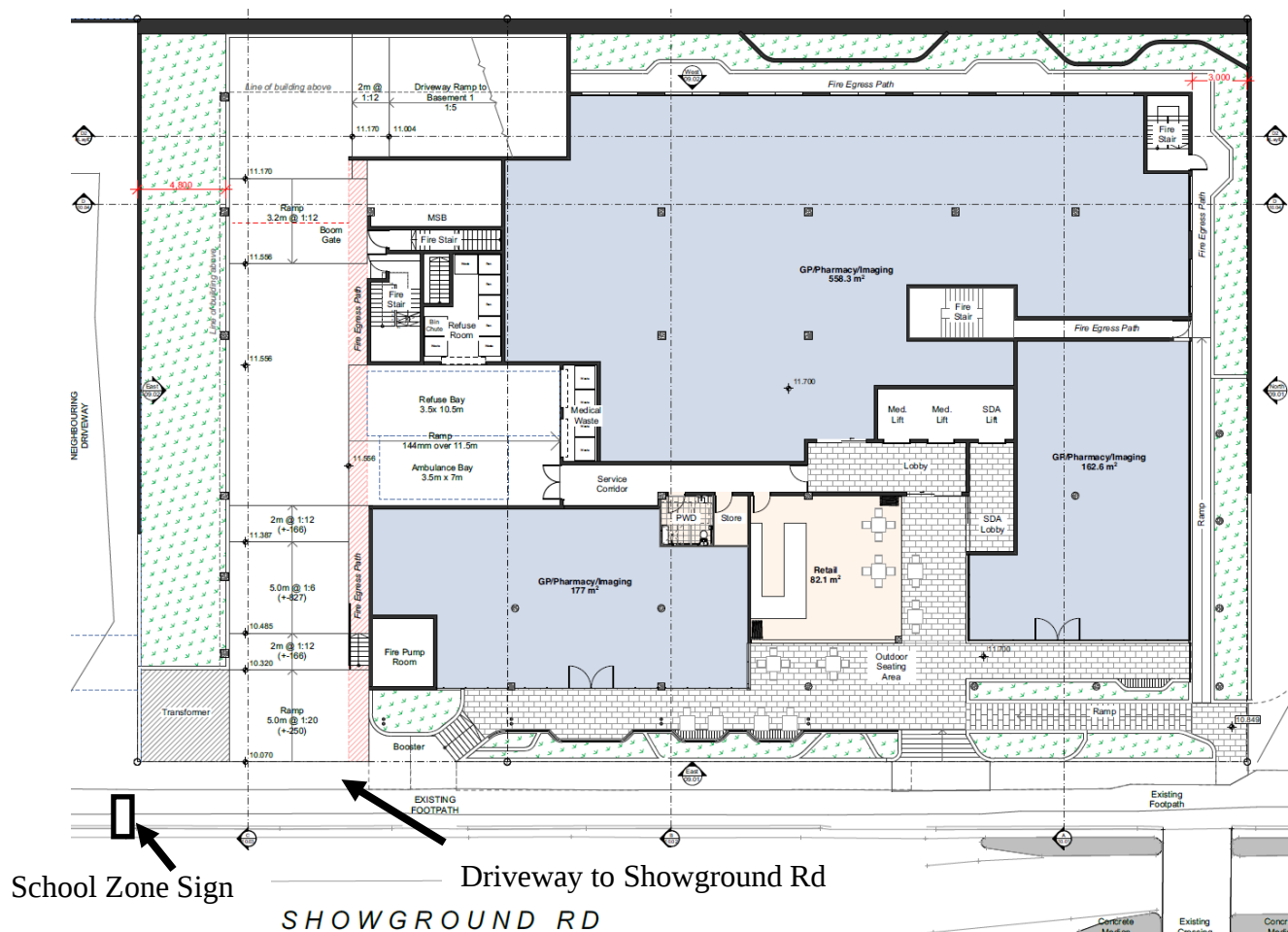


Figure 2-1: Proposed Medical Centre – Ground Floor Site Layout and Driveway

Discussion

The access driveway to Showground Rd will be 6.5 m wide at the boundary widening out to 9.5 m at the kerb. It is considered that the School Zone Sign is far enough away from the construction area and will not need to be relocated. However, this issue may need to be reviewed when hoardings and other site works commence.

3. Existing Traffic

NTPE has carried out the following surveys of existing traffic flows on Showground Road and at the intersections of Showground Rd/Racecourse Rd and Racecourse Rd/Faunce St:

Automatic Count

Showground Rd Nth of Faunce St 15th May 2021 to 21st May 2021

Intersection Counts

Showground Rd / Racecourse Rd 16th June 7am - 9am and 3pm - 6pm, 15th June 10am - 2pm

Showground Rd / Faunce St 16th June 7am - 9am and 3pm - 6pm, 15th May 10am - 2pm

A full report of the results of these surveys is attached as Appendix A and B of this report.

A review of these automatic count results indicates that the average weekday peak hour traffic flows on Showground Road occurred between 8am-9am in AM Peak and 4pm-5pm in PM Peak.

A review of these intersection count results, indicate the following weekday peak hours:

Showground Rd / Racecourse Rd	AM Peak Hr	8:00am – 9:00am	PM Peak Hr	4:30pm – 5:30pm
Showground Rd / Faunce St	AM Peak Hr	7:15am – 8:15am	PM Peak Hr	4:15pm – 5:15pm

A summary of the results of the Automatic Vehicle Counts on Showground Road are presented in Table 3-1 below:

Table 3-1: Average Weekday Traffic Flows – 15th May 2021 to 21st May 2021

Street	Location	Direction	AM Peak 7am - 8am	PM Peak 4pm - 5pm	SAT Peak 11am-12noon	Daily
Showground Rd	North of Faunce St	Northbound	434	347	278	4782
		Southbound	297	332	290	4246

A summary of the results of the Intersection Counts are presented in Table 3-2 below:

Table 3-2: Intersection Counts - Showground Rd / Racecourse Rd & Showground Rd / Faunce St

Showground Rd / Racecourse Rd 16th June 2021																	
Peak Hour		Nthb				Wstb				Sthb				Estb			
		Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn
AM	Light	72	154	104	7	119	354	121	3	172	174	109	12	74	280	33	7
	Heavy	2	6	2	0	2	20	7	7	14	3	6	0	5	19	6	0
PM	Light	53	197	201	5	105	364	191	2	171	128	93	2	104	374	23	2
	Heavy	0	2	0	0	0	4	5	5	8	0	0	0	1	5	0	0
SAT	Light	38	145	99	4	142	344	112	3	123	172	85	0	78	341	26	5
	Heavy	0	2	2	0	1	6	3	3	1	2	4	0	1	5	0	0

Showground Rd / Faunce St 16th June 2021																	
Peak Hour		Nthb				Wstb				Sthb				Estb			
		Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn
AM	Light	28	292	6	27	0	0	0	0	7	224	49	1	82	6	123	0
	Heavy	0	11	0	1	0	0	0	0	0	5	1	0	0	0	0	0
PM	Light	32	250	30	40	0	0	0	0	11	260	38	9	99	1	58	1
	Heavy	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SAT	Light	16	224	16	27	0	0	0	0	12	286	30	2	59	1	43	1
	Heavy	0	4	0	0	0	0	0	0	0	3	0	0	0	0	0	0

4. Components of the Proposed Health Hub

The Medical related facilities to be accommodated at the proposed Health Hub are listed below in Table 4-1:

Table 4-1: Components of the Health Hub

Medical Services (total area 6966m ²)	Ground Floor	General Practice/Pharmacy/Imaging		886m ²
	Level 1	Specialist Consulting Rooms	20	1528.7m ²
	Level 2	Specialist Consulting Rooms	20	1527.2m ²
	Level 3	Specialist Consulting Rooms	20	1528.6m ²
	Level 4	Specialist Consulting Rooms	20	1495.2m ²
Retailing	Ground Floor	Café		82.19m ²
Residential	Level 5	2 Bedroom Units	5	
		1 Bedroom Units	2	

Discussion

The total area of the Medical Services to be included in the proposed development is 6966 m². It is anticipated that these services will accommodate approximately 95 consulting rooms which will operate between 7am and 6pm Monday to Saturday.

CPH has advised that based on experience at similar facilities it is anticipated that only 75% of the consulting rooms will be active at any one time. Therefore, it is assumed that there will only be 71 active consulting rooms and also the active floor area of Medical Services can be reduced to 5225 m².

5. Gosford City Centre Parking Requirements

Gosford City Centre Development Control Plan (NSW Gov 2018) sets out the following requirements for parking related to Medical Centres:

Medical Services	3 spaces per consulting room plus 1 space per employee
Residential Units	1.2 spaces per 2-bedroom unit 1 space per 1 bedroom unit
Retail	1 space per 40m ² (or 2.5 per 100m ²)
Accessible Parking	4% of total parking

Based on these parking rates the parking requirements for development are set out in Table 5-1 below:

Table 5-1: Parking Requirement based on Gosford City Centre DCP

		Number	Rate	Parking Requirement
Medical Services	Consulting Rooms	71	3 per room	213
	Employees	125	1 per employee	125
Residential Units	1 Bed	2	1 per Unit	2
	2 Bed	5	1.2 per Unit	6
	Visitor	7	0.2 per Unit	1.4
Retail	Area	82.19	Rate	
			2.5 per 100 m2	2
Total				349

Discussion

Experience with other similar facilities operated by CHP suggests that these parking numbers exceed the actual requirement for this type of development. Research carried out by TforNSW also suggests that parking requirements are lower as shown in the following section.

6. Medical Centre Characteristics Based on RTA Research

In 2015 RTA (now Transport for NSW) commissioned a survey of 20 typical Medical Centres in Sydney and Regional Areas. The results of this survey were subsequently published under the Title “Trip Generation Surveys Medical Centres – Analysis Report”.

Some of the key outcomes reported from the surveys are summarized below in Table 6-1:

Table 6-1: Key Characteristics Derived from TforNSW Research

Regional Sites	Min	Max	Average
Peak Parking Accumulation per 100m ² of total GFA	2.4	7.2	4.3
Vehicle Trips per 100m ² of Total GFA – AM Peak Hr	1.3	17	7.4
Vehicle Trips per 100m ² of Total GFA – PM Peak Hr	1.9	12.4	5.9
GFA per Staff member (m ²)	26.8	67.5	41.7

These survey results observed by TforNSW have been used to derive the key characteristics for the proposed 5225 m² Medical Services associated with the development set out in Table 6-2 below:

Table 6-2: Key Characteristics for Medical Centres based on TforNSW Research

Component	Area m2	Rate	Unit	Requirement	
Number of Medical Staff	5225	41.7	each	125	people
AM Peak Hour Trip Generation	5225	7.35	per 100m2	384	Trips
PM Peak Hour Trip Generation	5225	6	per 100m2	314	Trips
Parking Spaces	5225	2.4	per 100m2	125	spaces (Min)
	5225	7.2	per 100m2	376	spaces (Max)
	5225	4.3	per 100m2	225	spaces (Average)

Discussion

As shown in Table 6-2 the parking requirement for the active Medical Centre area using the TforNSW rates would indicate that the parking requirement varies from a minimum of 125 to a maximum of 376.

The parking requirement based on Gosford City Centre DCP Parking Rates (349) is closer to the Maximum requirement of 376 based on TforNSW rates.

However, it is considered that based on the average TforNSW parking rate of 4.3 spaces per 100m² giving 225 parking spaces relating Medical Services is more realistic. The additional parking requirement for Residential (9.4) and Retail (2) activities brings the total parking requirement to 236.4 (237) parking spaces.

7. Proposed Parking Provision

It is proposed that the site will provide a total of 225 parking spaces being made up of 210 for Medical Services, 10 Residential, 2 Retails plus 3 Drop Off parking spaces as shown in Table 7-1 below:

Table 7-1: Parking Provision

<i>Level</i>	Medical Service	Residential	Retail	Drop Off
<i>Basement 1</i>	45		2	3
<i>Basement 2</i>	70			
<i>Basement 3</i>	70			
<i>Basement 4</i>	25	10		
<i>Total</i>	210	10	2	3

The parking provisions for the Medical Service area will also include 6 accessible parking spaces.

The 10 Residential parking spaces include 2 visitor parking spaces available on Basement 4.

The 3-short stay visitor parking spaces will be provided on Basement Level 1 as shown on Architect plans for the development. These short stay visitor parking spaces will be available for use for passenger drop-off, Taxis and Community Buses.

The provision of 225 parking spaces will leave a deficiency of 12 parking spaces compared with the requirement of 237 parking spaces detailed in Section 6 of this report.

However, it is considered that this deficiency is not likely to be realized based on recent research carried by CHP at similar facilities in Queensland, Canberra and Sydney, which have parking rates ranging from 4.8 space per 100m² to 1.9 space per 100m² and an average rate of 3.1 space per 100m².

A parking rate of 3.1 spaces per 100m² for the proposed Medical Services to be included in the proposed development would reduce the overall parking requirement from 237 to 173.

It is considered that being located adjacent to the Gosford Hospital combined with the mix of Medical Services to be provided will result in the delivery of multiple services per trip to the proposed development, which will result in a significant reduction in the parking requirement.

Recent changes to the delivery of health services such as Telehealth will also significantly reduce the number of trips and therefore the need for parking spaces required in the future.

8. Trip Generation – Health Hub and Residential Units

As noted in Section 6 it is predicted that the Health Hub will generate 384 and 314 trips in the AM and PM Peak Hour retrospectively based on average trip rates derived from RTA research.

Trip generation rates for high density residential units based on TforNSW TDT 2013 04A are 0.53 per unit in the AM peak hour and 0.35 per unit in the PM peak hour.

Therefore, the trip generation from the 7 residential units would be 4 (.53*7) in the AM Peak and 3 (.35*7) in the PM Peak Hour.

Total trip generation for the Health Hub and Residential Units would be 388 in the AM Peak hour and 317 in the PM Peak Hour.

9. Trip Distribution – Health Hub and Residential Units

The predicted trip generation for the Health Hub and Residential Units have been assessed based on the trip distribution presented in Figure 9-1 below:

Health Hub Trip Distribution

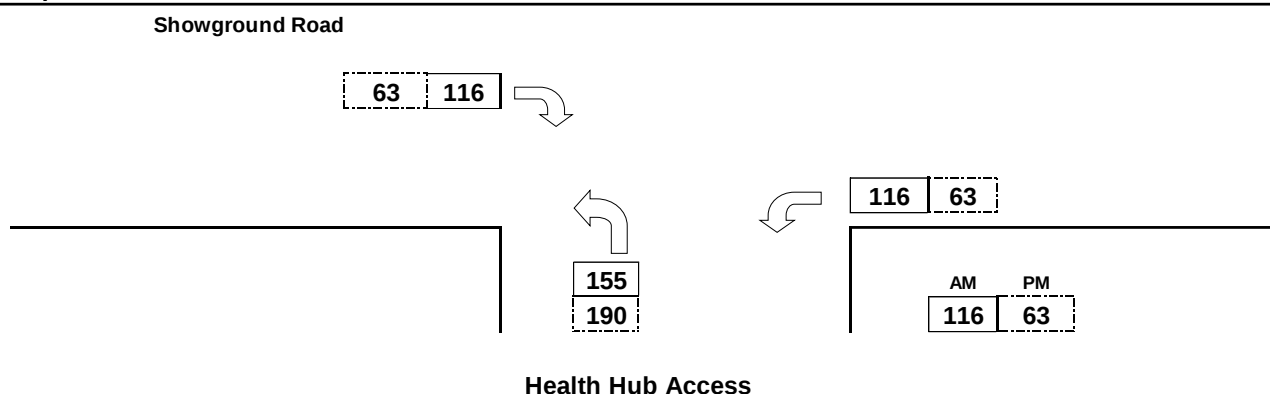


Figure 9-1: Predicted Trip Distribution for Proposed Health Hub

10. Predicted Traffic Flows with the Proposed Health Hub

Existing traffic flows combined with the predicted traffic flows are detailed in Figure 10-1 below:

Predicted Trip Flows with Health Hub

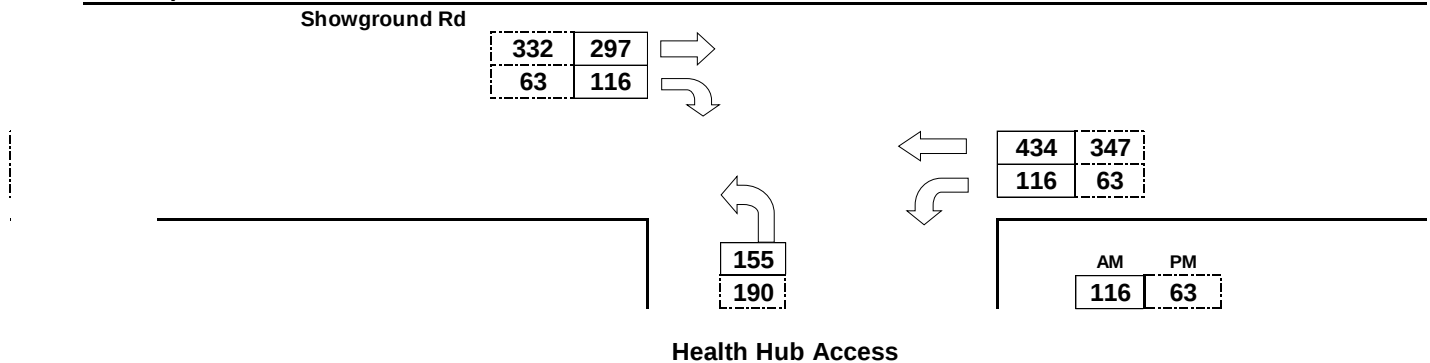


Figure 10-1: Predicted Traffic Flows with Proposed Health Hub

11. SIDRA Analysis: Access/ Showground Rd

The impact of the predicted traffic flows generated by the proposed development has been assessed using the Intersection Analysis tool SIDRA. Level of Service at an intersection is based on the average delay per vehicle and can be applied to both an individual movement and the entire intersection. The concept is the same for both signalised and un-signalised intersections. Levels of service are ranked for A to F as summarised below in Table 11-1.

Table 11-1: Intersection Level of Service Performance Categories

	Control Delay per Vehicle	
Level of Service	All Intersection Types	Description
A	$d \leq 14.5$	Excellent
B	$14.5 < d \leq 28.5$	Very Good
C	$28.5 < d \leq 42.5$	Good
D	$42.5 < d \leq 56.5$	Acceptable
E	$56.5 < d \leq 70.5$	Poor
F	$70.5 < d$	Very Poor

Further SIDRA Analysis has been carried out based on the revised layout detailed in Figure 11-1 below:

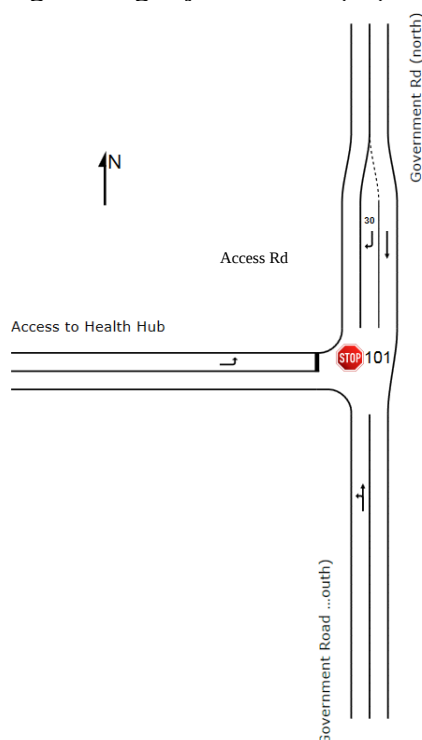


Figure 11-1: Proposed Intersection Layout – Left In and Right In / Left Out Only

Discussion

The proposed layout will allow right and left turn movements into the Health Hub access using a layout similar to the Gosford Hospital Access. However, right turn out of the site will not be permitted in order to avoid long delays and queuing on the exit driveway.

12. SIDRA RESULTS: Access/ Showground Rd

The summary of the SIDRA Results for the intersection of the Access Road and Showground Rd is presented in Table 12-1 below:

Table 12-1: SIDRA Results- Access/ Showground Rd

Period	Leg Performance				Intersection Performance		
	Critical Leg	Degree of Saturation	Average Delay (s)	LOS	Degree of Saturation	Average Delay (s)	LOS
2021 AM	Left Out (Access Leg)	0.188	10.6	A	0.303	2.9	A
2021 PM	Left Out (Access Leg)	0.205	10	A	0.225	2.7	A
2031 AM	Left Out (Access Leg)	0.23	11.9	A	0.374	2.7	A
2031 PM	Left Out (Access Leg)	0.236	10.8	A	0.282	2.5	A

The full report of movement summary is attached as Appendix F.

Discussion

The access to Showground Road will perform at LOS A for all movements during both the AM and PM Peak hour in 2021 and 2031.

13. Impact on Surrounding Road Network

Trips generated by the proposed Health Hub at the intersection of Racecourse Rd/Showground Rd and the intersection of Faunce St/Showground Rd are detailed in Table 13-1 below:

Table 13-1: Health Hub Trips at Nearby Intersections

Showground Rd / Racecourse Rd		Health Hub Trips															
		Nthb				Wstb				Sthb				Estb			
Peak Hour		Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn
AM	Light	54	54	47		41					41					35	
	Heavy																
PM	Light	67	67	57		22					22					19	
	Heavy																
SAT	Light																
	Heavy																

Showground Rd / Faunce St		Health Hub Trips															
		Nthb								Sthb				Estb			
Peak Hour		Left	Thru	Right	U-Turn					Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn
AM	Light		58											58			
	Heavy																
PM	Light		32											32			
	Heavy																
SAT	Light																
	Heavy																

These trips have been combined with existing traffic flows to derive the predicted turning movements with the proposed Health Hub shown in Table 13-2 below:

Table 13-2: Traffic Flows at Nearby Intersections combined with Health Hub trips

Showground Rd / Racecourse Rd		2021 Existing Traffic Plus Trips Generated by Health Hub Development															
		Nthb				Wstb				Sthb				Estb			
Peak Hour		Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn
AM	Light	126	208	151	7	160	354	121	3	172	215	109	12	74	280	68	7
	Heavy	2	6	2	0	2	20	7	7	14	3	6	0	5	19	6	0
PM	Light	120	264	258	5	127	364	191	2	171	150	93	2	104	374	42	2
	Heavy	0	2	0	0	0	4	5	5	8	0	0	0	1	5	0	0
SAT	Light	38	145	99	4	142	344	112	3	123	172	85	0	78	341	26	5
	Heavy	0	2	2	0	1	6	3	3	1	2	4	0	1	5	0	0

Showground Rd / Faunce St		2021 Existing Traffic Plus Trips Generated by Health Hub Development															
		Nthb								Sthb				Estb			
Peak Hour		Left	Thru	Right	U-Turn					Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn
AM	Light	28	350	6	27					7	224	49	1	140	6	123	0
	Heavy	0	11	0	1					0	5	1	0	0	0	0	0
PM	Light	32	282	30	40					11	260	38	9	131	1	58	1
	Heavy	0	3	0	0					0	0	0	0	0	0	0	0
SAT	Light	16	224	16	27					12	286	30	2	59	1	43	1
	Heavy	0	4	0	0					0	3	0	0	0	0	0	0

These traffic flows have been used to assess the performance of the intersections of Showground Rd/Racecourse Rd and Showground Rd/Faunce St using SIDRA.

14. SIDRA Analysis and Results

Showground Rd / Racecourse Rd

SIDRA Analysis has been carried out based on the layout detailed in Figure 14-1 below:

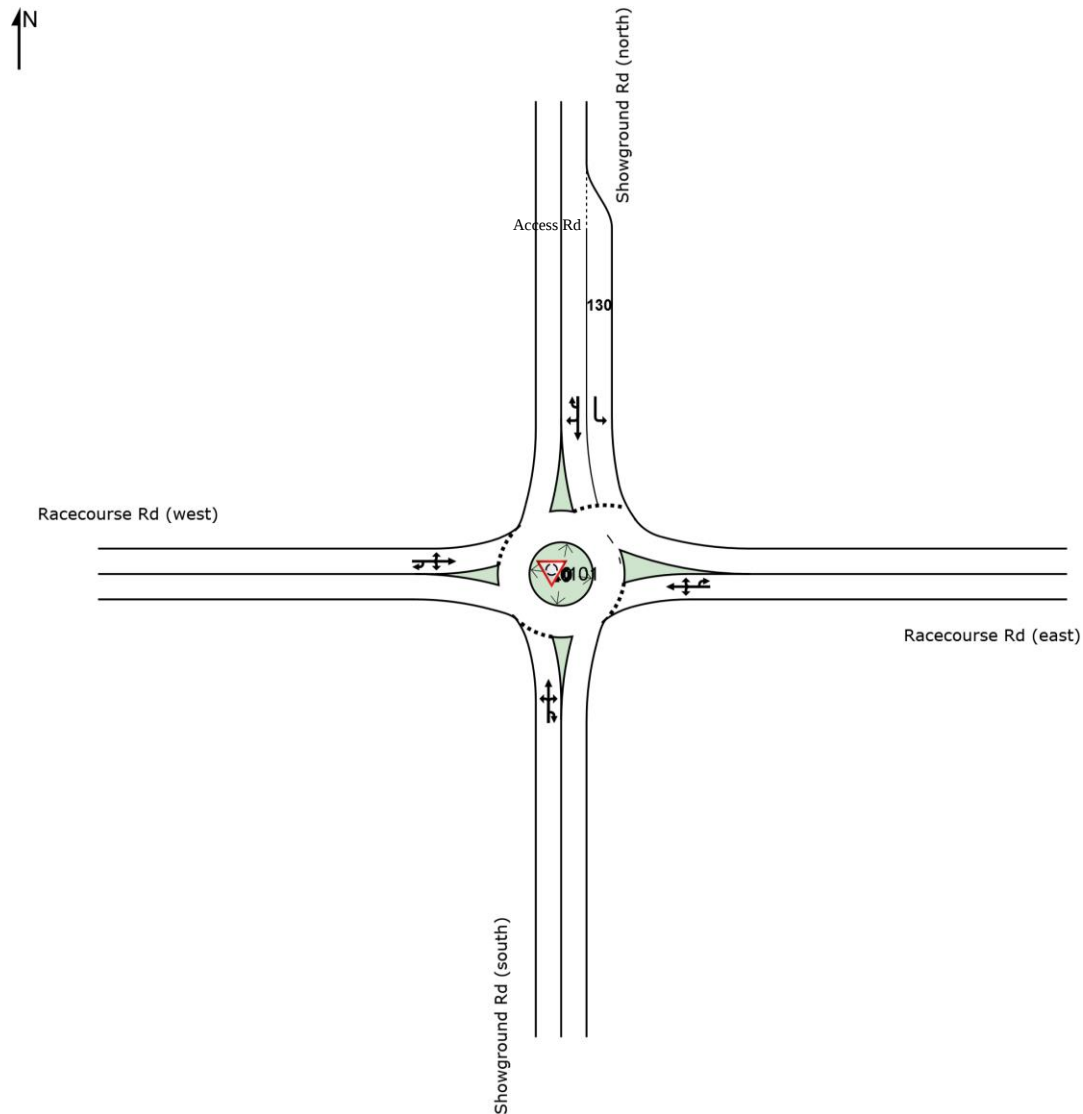


Figure 14-1: Existing Intersection Layout – Showground Rd / Racecourse Rd

The summary of the SIDRA Results for the intersection of the Showground Rd / Racecourse Rd is presented in Table 14-1 below:

Table 14-1: SIDRA Results – Showground Road/Racecourse Rd

Period		Leg Performance				Intersection Performance		
		Critical Leg	Degree of Average Saturation Delay (s)		LOS	Degree of Average Saturation Delay (s)	LOS	
Without Dev 2021	AM	Racecourse Rd East Leg	0.72	14.6	B	0.72	11.4	A
	PM	Racecourse Rd West Leg	0.747	20.1	B	0.747	13.5	A
With Dev 2021	AM	Racecourse Rd East Leg	0.806	19.3	B	0.806	14.7	B
	PM	Showground Rd South Leg	1.029	79.1	F	1.029	35.3	C
Without Dev 2031	AM	Racecourse Rd East Leg	1.028	68.7	E	1.028	35.9	C
	PM	Showground Rd South Leg	1.314	312.2	F	1.314	100.7	F
Without Dev 2031	AM	Racecourse Rd East Leg	1.18	187.6	F	1.18	88.6	F
	PM	Showground Rd South Leg	1.73	682.1	F	1.733	217.9	F

The full report of movement summary is attached as Appendix D.

Discussion

In the AM Peak Period, 2021 without development, the overall intersection will perform at LOS A. The critical approach is Racecourse Rd East with 0.72 degree of saturation, 14.6 secs average delay and LOS B.

In the PM Peak Period, 2021 without development, the overall intersection will perform at LOS A. The critical leg is Racecourse Rd West with 0.747 degree of saturation, 20.1 secs average delay and LOS B.

In the AM Peak Period, 2021 with development, the overall intersection will perform at LOS B. The critical approach is Racecourse Rd East with 0.806 degree of saturation, 19.3 secs average delay and LOS B. The degree of saturation has increased from 0.72 to 0.806 in this leg with the traffic generated by the proposed development.

In the PM Peak Period, 2021 with development, the overall intersection will perform at LOS C. However, the critical approach is Showground Rd South with 1.029 degree of saturation and LOS F. This leg was approaching saturation point without the development traffic.

In the AM Peak Period, 2031 without development, the critical leg would be Racecourse Rd East Leg with 1.028 degree of saturation, 68.7 secs average delay and LOS E. The overall intersection will perform at LOS C.

In the PM Peak Period, 2031 without development, the overall intersection will fail with LOS F. The critical approach being Showground Rd South with 1.31 degree of saturation, 312 secs average delay and LOS F.

In the AM Peak Period, 2031 with development, the overall intersection also fails with LOS F. The critical approach being Racecourse Rd East with 1.18 degree of saturation, 187.6 secs average delay and LOS F.

In the PM Peak Period, 2031 with development, the overall intersection also fails with LOS F. The critical leg is Showground Rd South with very high degree of saturation and long delays.

In summary, it is noted that the intersection of Showground Rd/ Racecourse Road will already be near to the saturation point in both AM and PM Peak Hour in 2031. This is a clear indication that the intersection will require a major upgrade in the near future.

It is acknowledged that the proposed development will add to the congestion at this intersection during Peak Hours. However, it is considered the upgrade of this intersection will be required in order to reduce this peak hour congestion.

Showground Rd / Faunce St

SIDRA Analysis has been carried out based on the layout detailed in Figure 14-2 below:

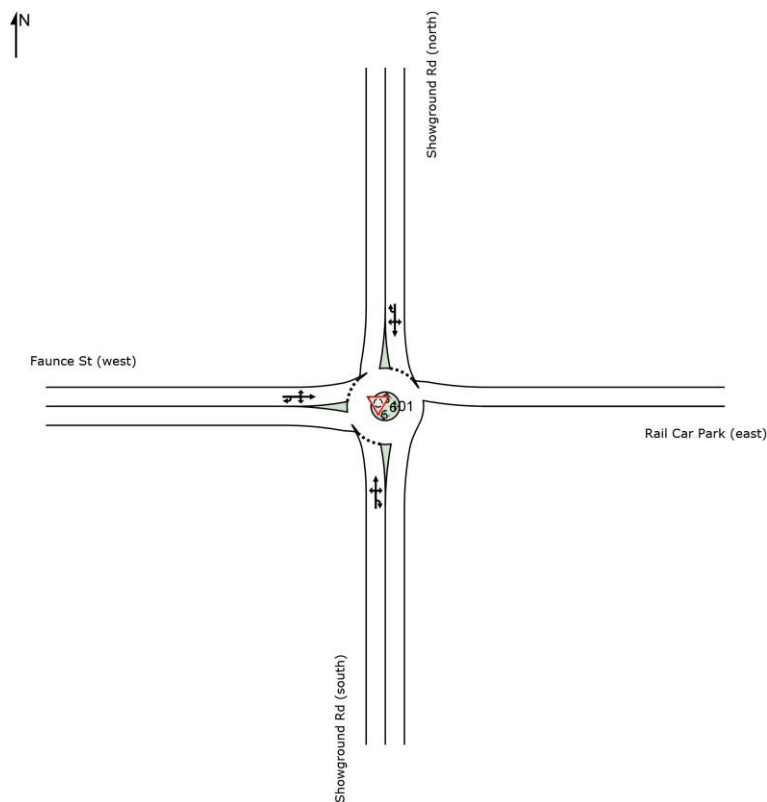


Figure 14-2: Existing Intersection Layout – Showground Rd / Faunce St

The summary of the SIDRA Results for the intersection of the Showground Rd / Faunce St is presented in Table 14-2 below:

Table 14-2: SIDRA Results – Showground Road/Faunce St

Period		Leg Performance				Intersection Performance		
		Critical Leg	Degree of Average Saturation Delay (s)		LOS	Degree of Average Saturation Delay (s)		LOS
Without Dev 2021	AM	Showground Rd South Leg	0.288	7.9	A	0.288	6.7	A
	PM	Showground Rd South Leg	0.274	7.9	A	0.284	6.4	A
With Dev 2021	AM	Showground Rd South Leg	0.33	7.9	A	0.33	6.8	A
	PM	Showground Rd South Leg	0.297	7.9	A	0.297	6.5	A
Without Dev 2031	AM	Showground Rd South Leg	0.381	8.1	A	0.381	7.2	A
	PM	Showground Rd North Leg	0.384	8.9	A	0.384	6.8	A
Without Dev 2031	AM	Faunce St West Leg	0.442	12.1	A	0.442	7.5	A
	PM	Showground Rd South Leg	0.387	8	A	0.387	6.9	A

The full report of movement summary is attached as Appendix E.

Discussion

The intersection of Showground Rd/ Faunce St will perform at LOS A for all movements during both the AM and PM Peak hour in 2021 and 2031.

15. Parking Design and Vehicle Turning Path Requirements

The parking layout provides aisle widths at a minimum of 6m. The site will provide a range of parking bays which will be allocated to the appropriate user group as detailed below:

- Residential and Employee Parking - 2.4m wide by 5.4m parking bays based on User Class 1A drivers in accordance with Figure 2.2 of AS2890.1 2004.
- Long Term and City Centre parking - 2.5m wide by 5.4m parking bays based on User Class 2 drivers in accordance with Figure 2.2 of AS2890.1 2004.

The parking layout conforms with Austroads NZ/AS 2890.1 2004. Vehicle turning paths for typical parking bays are detailed in Appendix C.

16. Waste Collection Bay and Ambulance Bay

Waste collection will be managed on-site with provision made on the ground floor using the service bay provided for a Medium Rigid truck as detailed in Figure 16-1 below:

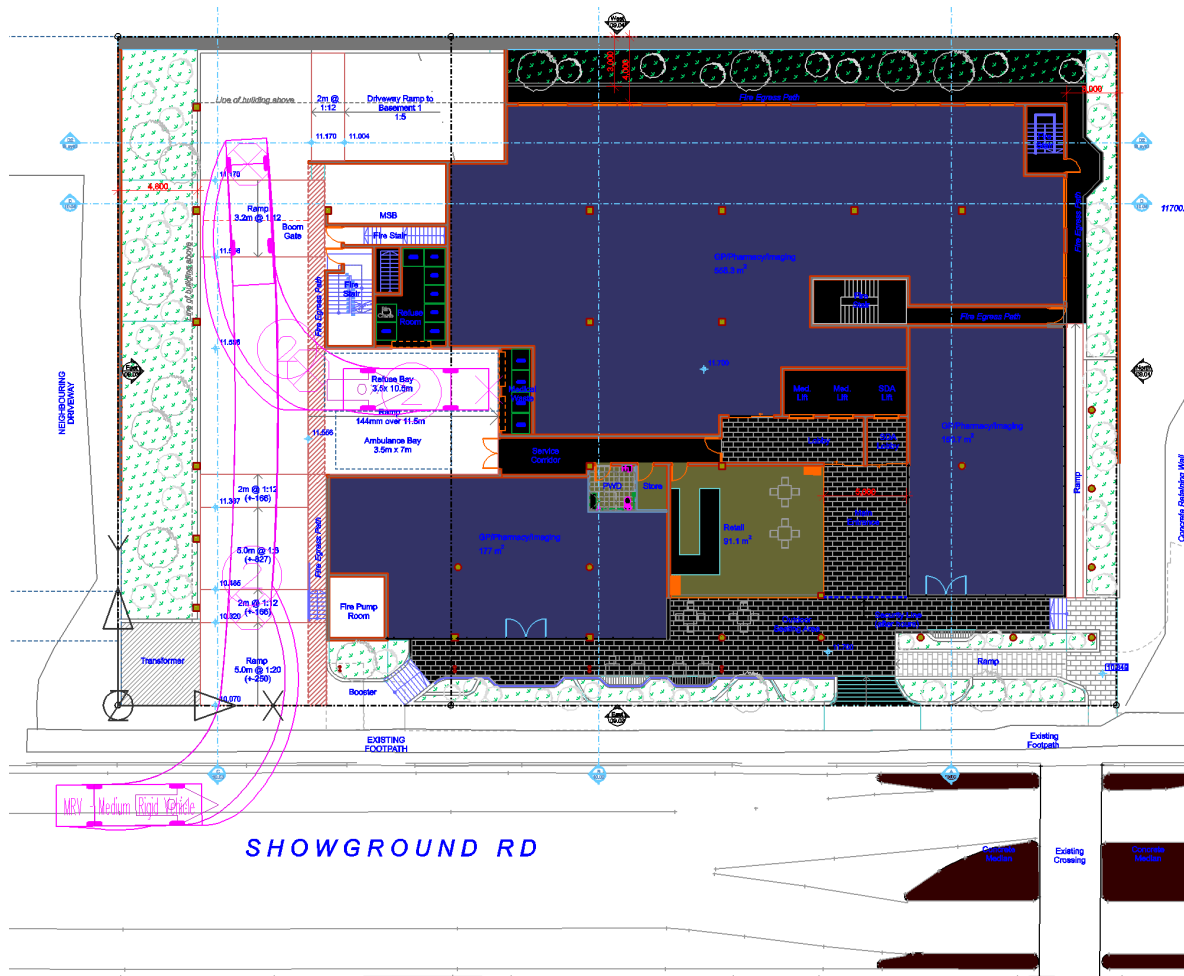


Figure 16-1: Waste Collection using Service Bay on Ground Level - Medium Rigid Garbage Truck

Discussion

Waste collection vehicles will enter in a forward direction and reverse into the Refuse Bay while operating flashing lights and reversing alarms. Bins will then be wheeled out and emptied into the waste collection vehicle. The Waste collection vehicle will be able to leave the bay in a forward direction.

Ambulance vehicles will normally access the ambulance bay in a forward direction and then activate an on-site warning signal that will instruct other drivers to keep the driveway clear as they reverse out onto the ramp.

17. Recommendation

Based on this assessment it is expected that the proposed development will offer a convenient and efficient integrated range of medical services that will augment the facilities provide at the Gosford District Hospital.

The parking provisions are considered reasonable as they align with the requirement for similar developments operated by CHP.

It is acknowledged that the proposed development will add to congestion on the surrounding road network and put an extra load on the intersection of Racecourse Rd / Government Rd. However, the SIDRA analysis presented in this report also indicates that this intersection will require upgrading even if the development did not proceed.

Accordingly, it is recommended that the proposed development be approved.

Appendix A

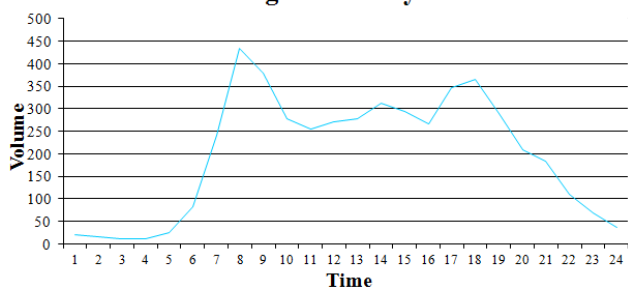
Automatic Count

Showground Rd adjacent to No.64

15th May to 21st May 2021

Site 1 Showground Rd Nth of Faunce St [50]
Northbound

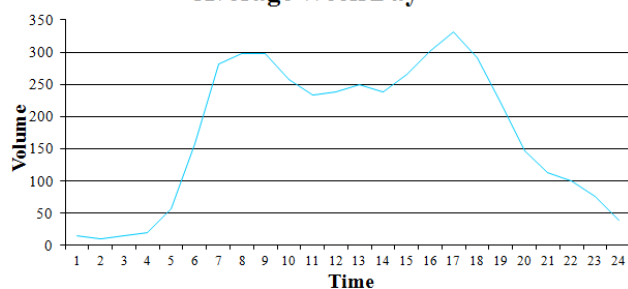
Day Time	Sat 15/05/21	Sun 16/05/2021	Mon 17/05/2021	Tue 18/05/2021	Wed 19/05/2021	Thu 20/05/2021	Fri 21/05/2021	W/Day Ave.	W/End Ave.	7 Day Ave
0:00	41	26	14	19	27	17	30	21	34	25
1:00	26	24	19	9	13	17	20	16	25	18
2:00	18	20	7	10	14	12	10	11	19	13
3:00	18	22	10	8	17	9	10	11	20	13
4:00	4	12	20	20	28	27	27	24	8	20
5:00	32	24	89	86	89	79	70	83	28	67
6:00	104	96	225	235	261	228	254	241	100	200
7:00	122	127	438	470	445	418	398	434	125	345
8:00	165	152	397	390	379	356	378	380	159	317
9:00	249	205	313	250	268	293	267	278	227	264
10:00	277	245	239	238	273	234	291	255	261	257
11:00	287	235	288	243	293	266	265	271	261	268
12:00	279	206	256	290	264	268	310	278	243	268
13:00	293	269	316	306	278	316	341	311	281	303
14:00	275	223	258	290	326	305	297	295	249	282
15:00	248	247	296	248	253	289	248	267	248	261
16:00	211	173	344	361	338	357	333	347	192	302
17:00	224	191	343	384	371	351	379	366	208	320
18:00	187	128	250	302	292	282	316	288	158	251
19:00	117	91	179	195	166	186	318	209	104	179
20:00	114	73	81	119	128	157	429	183	94	157
21:00	103	63	93	111	96	113	134	109	83	102
22:00	83	64	56	71	62	68	83	68	74	70
23:00	50	25	34	33	32	35	51	37	38	37
Total	3527	2941	4565	4688	4713	4683	5259	4782	3234	4339

Average Week Day

Summary

	from	to	
AM Peak	7:00 AM	8:00 AM	470
PM Peak	5:00 PM	6:00 PM	384
Week Day Average			4782
Weekend Day Average			3234
7 Day Average			4339

Site 1 Showground Rd Nth of Faunce St [50]
Southbound

Day Time	Sat 15/05/21	Sun 16/05/2021	Mon 17/05/2021	Tue 18/05/2021	Wed 19/05/2021	Thu 20/05/2021	Fri 21/05/2021	W/Day Ave.	W/End Ave.	7 Day Ave
0:00	24	27	14	15	19	12	14	15	26	18
1:00	26	20	7	11	10	9	11	10	23	13
2:00	16	15	14	13	20	15	12	15	16	15
3:00	22	20	17	22	17	23	17	19	21	20
4:00	17	18	49	52	55	67	54	55	18	45
5:00	46	25	174	164	177	147	123	157	36	122
6:00	84	55	277	314	303	286	228	282	70	221
7:00	144	126	312	314	305	290	265	297	135	251
8:00	211	188	274	312	311	293	295	297	200	269
9:00	274	258	261	255	292	230	253	258	266	260
10:00	280	241	229	228	247	240	221	233	261	241
11:00	319	245	258	213	264	222	235	238	282	251
12:00	312	268	228	245	277	243	252	249	290	261
13:00	273	218	227	231	205	253	271	237	246	240
14:00	244	207	250	272	267	244	297	266	226	254
15:00	238	208	306	317	309	293	290	303	223	280
16:00	219	182	360	340	339	333	289	332	201	295
17:00	215	157	264	287	255	281	366	291	186	261
18:00	192	124	223	194	256	232	199	221	158	203
19:00	118	112	143	161	144	150	136	147	115	138
20:00	87	76	99	103	114	109	135	112	82	103
21:00	102	66	80	117	83	106	109	99	84	95
22:00	68	47	63	84	67	81	80	75	58	70
23:00	38	25	37	30	43	33	49	38	32	36
Total	3569	2928	4166	4294	4379	4192	4201	4246	3249	3961

Average Week Day

Summary

	from	to	
AM Peak	6:00 AM	7:00 AM	314
PM Peak	5:00 PM	6:00 PM	366
Week Day Average			4246
Weekend Day Average			3249
7 Day Average			3961

Appendix B

Intersection Counts

Site 01 - Showground Rd & Racecourse Rd

Sat 15/05/2021 10:00-14:00
Weds 16/06/2021 07:00-10:00
Weds 16/06/2021 15:00-18:00

Site 02 - Showground Rd & Faunce St West

Sat 15/05/2021 10:00-14:00
Weds 16/06/2021 07:00-10:00
Weds 16/06/2021 15:00-18:00



16/6/2021 - SHOWGROUND RD / RACECOURSE RD, GOSFORD

09:00 <<< HOUR ENDING

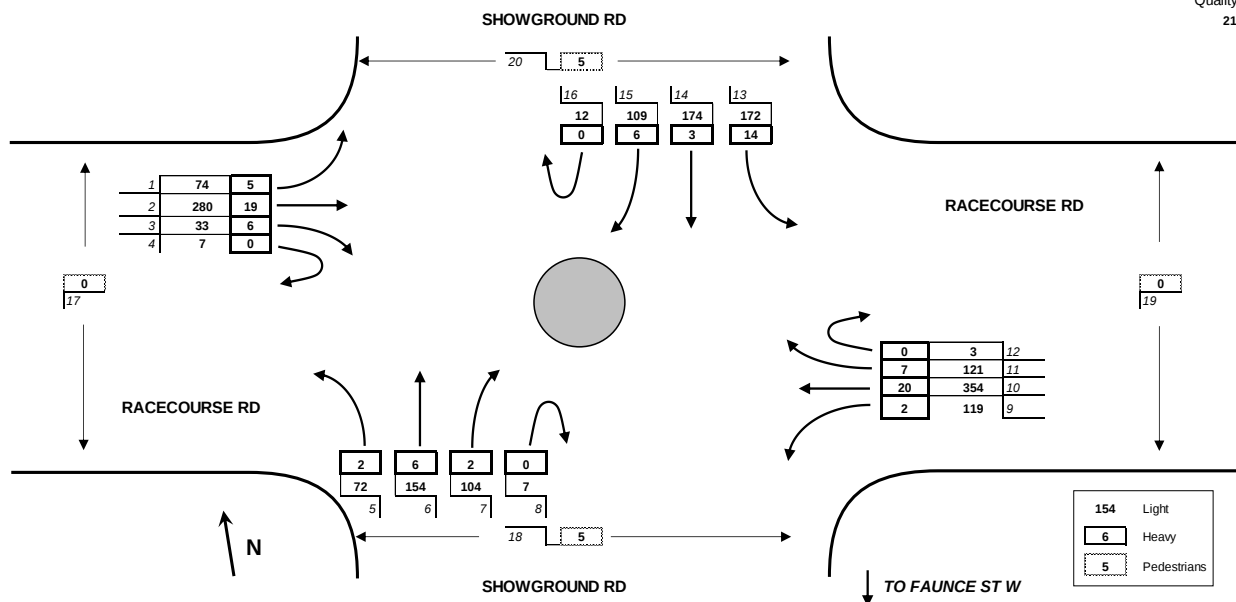
Wednesday

Summary: SHOWGROUND RD / RACECOURSE RD

1795	Total Light Vehicles
92	Total Heavy Vehicles
10	Total Pedestrians



Quality Surveys
213309



16/6/2021 - SHOWGROUND RD / RACECOURSE RD, GOSFORD

Light Vehicles

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total Vehicles 15 MIN	Hour	Pedestrians 17	18	19	20
07:15	10	49	2	1	17	30	19	0	46	57	17	0	10	51	33	1	343		0	0	0	0
07:30	17	62	12	1	21	29	17	0	32	81	26	0	14	58	24	4	398		0	2	0	3
07:45	20	49	12	1	28	42	19	2	47	68	24	0	25	52	42	5	436		0	2	0	0
08:00	17	80	11	2	24	49	21	1	43	90	30	0	20	42	32	5	467	1644	0	0	0	0
08:15	14	71	10	3	28	49	27	2	33	88	29	1	44	44	27	1	471	1772	0	0	0	1
08:30	17	76	8	1	19	34	21	2	31	87	30	2	35	47	21	2	433	1807	0	0	0	2
08:45	17	70	6	2	16	38	22	1	31	101	20	0	41	41	21	1	428	1799	0	2	0	0
09:00	26	63	9	1	9	33	34	2	24	78	42	0	52	42	40	8	463	1795	0	3	0	2
09:15	17	82	5	0	17	30	33	4	26	72	33	0	40	43	17	0	419	1743	0	2	0	0
09:30	14	71	8	1	12	16	23	2	36	62	21	0	25	36	15	1	343	1653	0	3	0	1
09:45	10	60	8	1	10	29	21	0	18	57	24	0	22	38	18	1	317	1542	0	1	0	2
10:00	20	81	5	0	14	27	37	2	39	85	29	3	28	35	15	2	422	1501	0	3	0	0

Heavy Vehicles

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total Vehicles 15 MIN	Hour				
07:15	1	2	0	0	0	1	0	0	1	2	3	0	2	0	1	0	13					
07:30	0	6	0	0	1	1	0	0	0	4	0	0	1	2	2	0	17					
07:45	2	2	0	0	1	0	0	0	2	0	6	0	0	0	0	0	13					
08:00	0	3	0	0	0	1	0	0	0	0	3	0	6	2	2	0	17	60				
08:15	4	5	2	0	1	1	0	0	0	2	1	0	5	1	1	0	23	70				
08:30	0	6	1	0	0	4	0	0	0	8	3	0	1	0	0	0	23	76				
08:45	0	3	3	0	1	0	0	1	0	6	1	0	4	1	4	0	25	88				
09:00	1	5	0	0	0	1	1	0	1	4	2	0	4	1	1	0	21	92				
09:15	2	3	0	0	1	0	0	0	0	2	3	0	3	2	1	0	17	86				
09:30	1	3	0	0	0	3	0	0	1	2	1	0	3	1	3	0	18	81				
09:45	0	2	1	0	1	0	0	0	0	3	0	0	4	1	2	0	14	70				
10:00	1	6	0	0	0	1	1	0	0	0	4	0	2	2	0	0	17	66				

All Vehicles

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total Vehicles 15 MIN	Hour				
07:15	11	51	2	1	17	31	19	0	47	59	20	0	12	51	34	1	356					
07:30	17	68	12	1	22	30	17	0	32	85	26	0	15	60	26	4	415					
07:45	22	51	12	1	29	42	19	2	49	68	30	0	25	52	42	5	449					
08:00	17	83	11	2	24	50	21	1	43	90	33	0	26	44	34	5	484	1704				
08:15	18	76	12	3	29	50	27	2	33	90	30	1	49	45	28	1	494	1842				
08:30	17	82	9	1	19	38	21	2	31	95	33	2	36	47	21	2	456	1883				
08:45	17	73	9	2	17	38	23	1	32	107	21	0	45	42	25	1	453	1887				
09:00	27	68	9	1	9	34	35	2	25	82	44	0	56	43	41	8	484	1887				
09:15	19	85	5	0	18	30	33	4	26	74	36	0	43	45	18	0	436	1829				
09:30	15	74	8	1	12	19	23	2	37	64	22	0	28	37	18	1	361	1734				
09:45	10	62	9	1	11	29	21	0	18	60	24	0	26	39	20	1	331	1612				
10:00	21	87	5	0	14	28	38	2	39	85	33	3	30	37	15	2	439	1567				

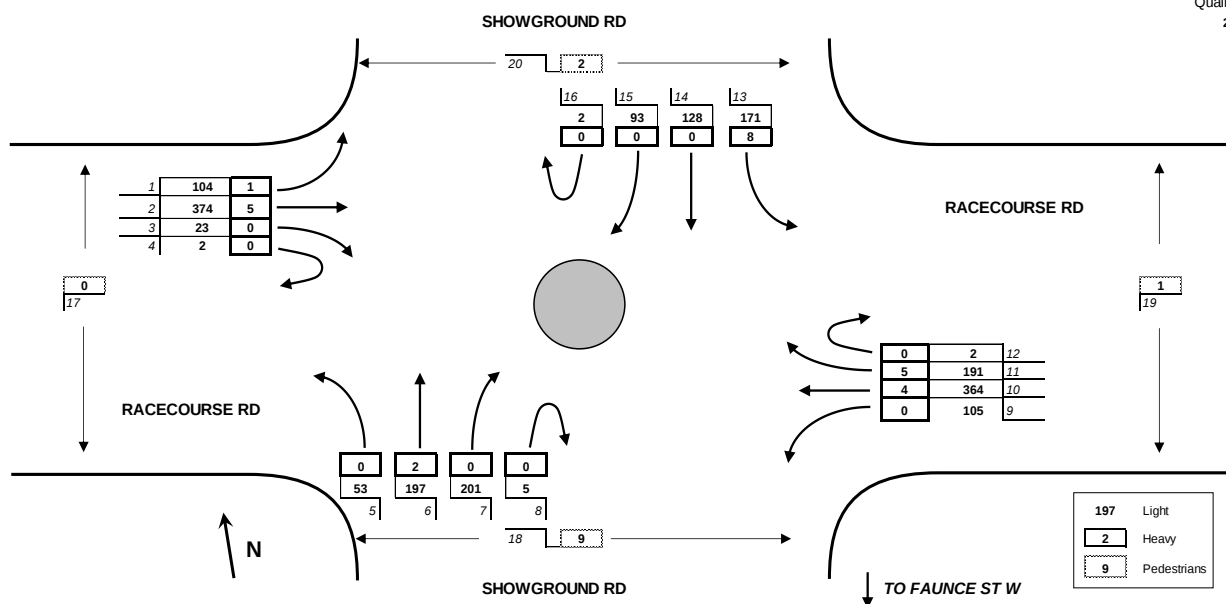
Note: Arrows "<" indicate the end time for the peak hour for each turning movement.

16/6/2021 - SHOWGROUND RD / RACECOURSE RD, GOSFORD

17:30 <<< HOUR ENDING

Wednesday

Summary: SHOWGROUND RD / RACECOURSE RD		
2015	Total Light Vehicles	
25	Total Heavy Vehicles	
12	Total Pedestrians	



16/6/2021 - SHOWGROUND RD / RACECOURSE RD, GOSFORD

Light Vehicles

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total Vehicles 15 MIN	Hour	Pedestrians			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			17	18	19	20
15:15	23	97	6	1	14	51	34	0	28	92	43	0	43	34	23	1	490		0	0	0	1
15:30	19	81	6	1	5	36	48	0	21	93	49	0	36	41	22	1	459		0	2	0	5
15:45	12	73	3	0	10	52	44	0	26	64	35	1	55	25	21	3	424		0	0	0	0
16:00	27	70	4	0	18	58	47	3	30	66	43	1	49	33	21	0	470	1843	0	0	0	0
16:15	23	92	3	0	12	51	66	0	21	94	39	0	52	31	16	2	502	1855	0	3	0	0
16:30	19	85	3	0	13	47	46	2	22	68	53	0	52	29	22	1	462	1858	1	2	1	0
16:45	25	96	5	0	9	40	46	1	30	93	40	0	47	32	23	1	488	1922	0	3	0	0
17:00	22	98	6	0	23	56	58	1	34	87	40	0	45	32	17	1	520	1972	0	1	0	0
17:15	29	86	8	0	9	46	50	2	13	98	61	1	44	40	30	0	517	1987	0	1	0	0
17:30	28	94	4	2	12	55	47	1	28	86	50	1	35	24	23	0	490	2015	0	4	1	2
17:45	27	85	2	0	6	62	53	0	25	77	31	0	39	32	18	1	458	1985	0	2	0	1
18:00	21	89	4	2	12	46	47	0	21	57	28	1	31	32	21	0	412	1877	0	2	0	2

Heavy Vehicles

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total Vehicles 15 MIN	Hour				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16						
15:15	1	1	0	0	0	3	0	0	0	3	1	0	0	2	0	0	11					
15:30	0	3	0	0	2	1	0	0	0	6	3	0	5	2	2	0	24					
15:45	4	3	0	0	0	3	0	0	1	5	1	0	6	2	2	0	27					
16:00	3	2	0	0	0	0	0	0	0	3	2	0	1	1	0	0	12	74				
16:15	1	0	0	0	0	1	2	0	0	2	0	0	2	0	1	0	9	72				
16:30	1	3	0	0	0	1	2	0	1	2	1	0	1	0	0	0	12	60				
16:45	1	1	0	0	0	1	0	0	0	2	3	0	2	0	0	0	10	43				
17:00	0	1	0	0	0	0	0	0	0	0	1	0	2	0	0	0	4	35				
17:15	0	2	0	0	0	0	0	0	0	1	0	0	2	0	0	0	5	31				
17:30	0	1	0	0	0	1	0	0	0	1	1	0	2	0	0	0	6	25				
17:45	0	3	0	0	0	0	1	0	0	2	0	0	0	0	0	0	6	21				
18:00	0	2	0	0	1	1	0	0	0	2	1	0	2	0	0	0	9	26				

All Vehicles

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total Vehicles 15 MIN	Hour				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16						
15:15	24	98	6	1	14	54	34	0	28	95	44	0	43	36	23	1	501					
15:30	19	84	6	1	7	37	48	0	21	99	52	0	41	43	24	1	483					
15:45	16	76	3	0	10	55	44	0	27	69	36	1	61	27	23	3	451					
16:00	30	72	4	0	18	58	47	3	30	69	45	1	50	34	21	0	482	1917				
16:15	24	92	3	0	12	52	68	0	21	96	39	0	54	31	17	2	511	1927				
16:30	20	88	3	0	13	48	48	2	23	70	54	0	53	29	22	1	474	1918				
16:45	26	97	5	0	9	41	46	1	30	95	43	0	49	32	23	1	498	1965				
17:00	22	99	6	0	23	56	58	1	34	87	41	0	47	32	17	1	524	2007				
17:15	29	88	8	0	9	46	50	2	13	99	61	1	46	40	30	0	522	2018				
17:30	28	95	4	2	12	56	47	1	28	87	51	1	37	24	23	0	496	2040				
17:45	27	88	2	0	6	62	54	0	25	79	31	0	39	32	18	1	464	2006				
18:00	21	91	4	2	13	47	47	0	21	59	29	1	33	32	21	0	421	1903				

Note: Arrows "<" indicate the end time for the peak hour for each turning movement.

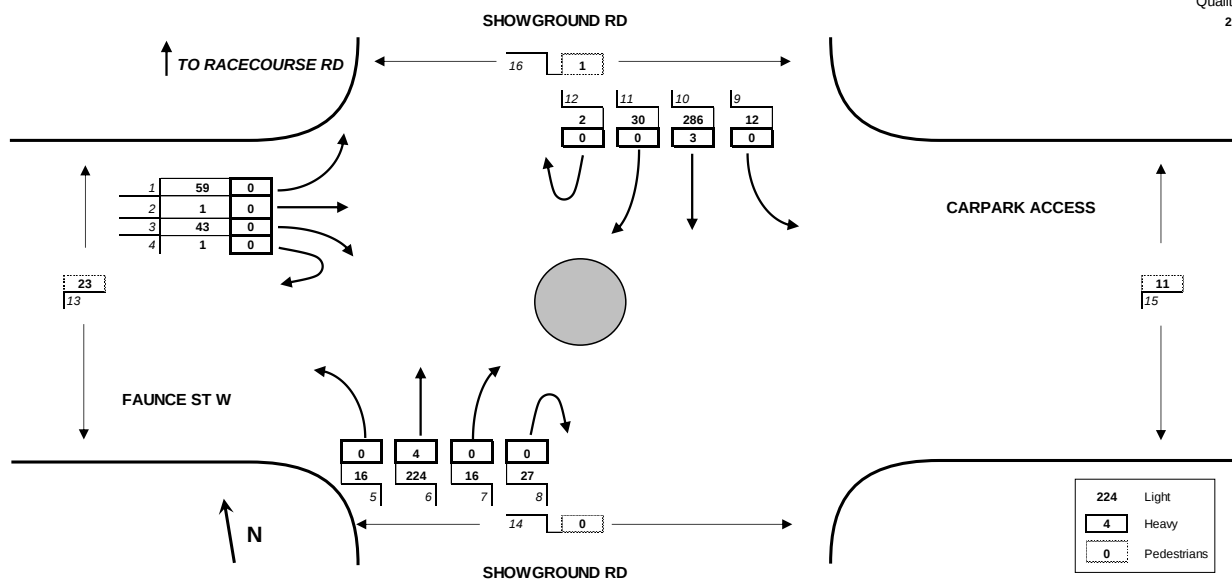
15/5/2021 - SHOWGROUND RD / FAUNCE ST W, GOSFORD

12:30 <<< HOUR ENDING

Saturday

Summary: SHOWGROUND RD / FAUNCE ST W

717 Total Light Vehicles
7 Total Heavy Vehicles
35 Total Pedestrians



15/5/2021 - SHOWGROUND RD / FAUNCE ST W, GOSFORD

Light Vehicles

	1	2	3	4	5	6	7	8	9	10	11	12	Total Vehicles 15 MIN	HOURLY	Pedestrians 13	14	15	16
10:15	11	0	8	0	6	56	3	7	3	52	6	0	152		1	0	5	3
10:30	8	0	8	0	4	64	3	6	3	51	5	0	152		5	0	1	0
10:45	5	0	8	1	3	51	1	7	3	67	7	1	154		10	0	7	0
11:00	6	0	13	0	2	69	9	9	1	74	8	1	192	650	3	0	6	<
11:15	8	0	5	0	8	52	3	11	1	70	12	1	171	669	4	0	0	0
11:30	10	0	14	0	4	64	1	7	3	62	5	0	170	687	2	0	4	0
11:45	17	0	9	0	4	62	4	6	3	72	7	0	184	717	6	0	3	1
12:00	18	0	14	0	4	52	4	11	5	71	5	0	184	709	6	0	3	0
12:15	13	0	11	<	0	6	38	5	0	73	11	1	163	701	4	0	0	0
12:30	11	<	1	<	9	1	2	72	3	5	4	70	186	717	7	<	0	5
12:45	9	0	<	6	0	7	66	2	11	6	<	6	173	706	2	0	0	0
13:00	8	0	<	3	0	2	54	1	8	1	64	9	150	672	1	0	3	0
13:15	11	0	<	11	0	5	55	3	3	0	43	12	143	652	2	0	4	0
13:30	7	0	14	0	4	62	7	10	1	86	3	1	195	661	9	0	4	0
13:45	11	1	<	11	1	4	54	2	11	1	52	10	159	647	5	0	3	0
14:00	17	0	<	11	1	<	2	77	<	2	7	1	184	681	1	0	4	0

Heavy Vehicles

	1	2	3	4	5	6	7	8	9	10	11	12	Total Vehicles 15 MIN	HOURLY	Pedestrians 13	14	15	16
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0					
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0					
10:45	0	0	1	0	0	1	0	0	0	1	0	0	3					
11:00	0	0	0	<	0	0	0	0	0	0	0	0	0	3				
11:15	0	0	0	<	0	0	0	0	0	1	0	0	1	4				
11:30	0	0	0	<	0	0	0	0	0	0	0	0	0	4				
11:45	0	0	0	0	0	1	0	0	0	1	0	0	2	3				
12:00	0	0	0	0	0	1	0	0	0	1	0	0	2	5				
12:15	0	0	0	0	0	1	0	0	0	1	0	0	2	6				
12:30	0	0	0	0	0	1	0	0	0	0	0	0	1	7				
12:45	0	0	1	<	0	0	1	0	0	1	<	3	6	11				
13:00	0	0	0	<	0	0	1	0	0	0	<	1	2	11				
13:15	0	0	0	<	0	0	2	<	0	0	<	1	3	12				
13:30	0	0	0	<	0	0	0	0	0	0	<	0	0	11				
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	5				
14:00	0	0	0	0	1	<	0	0	0	0	0	0	1	4				

All Vehicles

	1	2	3	4	5	6	7	8	9	10	11	12	Total Vehicles 15 MIN	HOURLY	Pedestrians 13	14	15	16
10:15	11	0	8	0	6	56	3	7	3	52	6	0	152					
10:30	8	0	8	0	4	64	3	6	3	51	5	0	152					
10:45	5	0	9	1	3	52	1	7	3	68	7	1	157					
11:00	6	0	13	0	2	69	9	9	1	74	8	1	192	653				
11:15	8	0	5	0	8	52	3	11	1	71	12	1	172	673				
11:30	10	0	14	0	4	64	1	7	3	62	5	0	170	691				
11:45	17	0	9	0	4	63	4	6	3	73	7	0	186	720				
12:00	18	0	14	0	4	53	4	11	5	72	5	0	186	714				
12:15	13	0	11	<	0	6	39	5	5	74	11	1	165	707				
12:30	11	<	1	<	9	1	2	73	3	5	4	70	187	724				
12:45	9	0	<	7	0	7	67	2	11	7	<	63	179	717				
13:00	8	0	<	3	0	2	55	1	8	1	65	9	152	683				
13:15	11	0	<	11	0	5	57	<	3	3	0	44	146	664				
13:30	7	0	14	0	4	62	7	10	1	86	3	1	195	672				
13:45	11	1	<	11	1	4	54	2	11	1	52	10	159	652				
14:00	17	0	<	11	1	<	3	77	2	7	1	55	185	685				

Note: Arrows "<" indicate the end time for the peak hour for each turning movement.

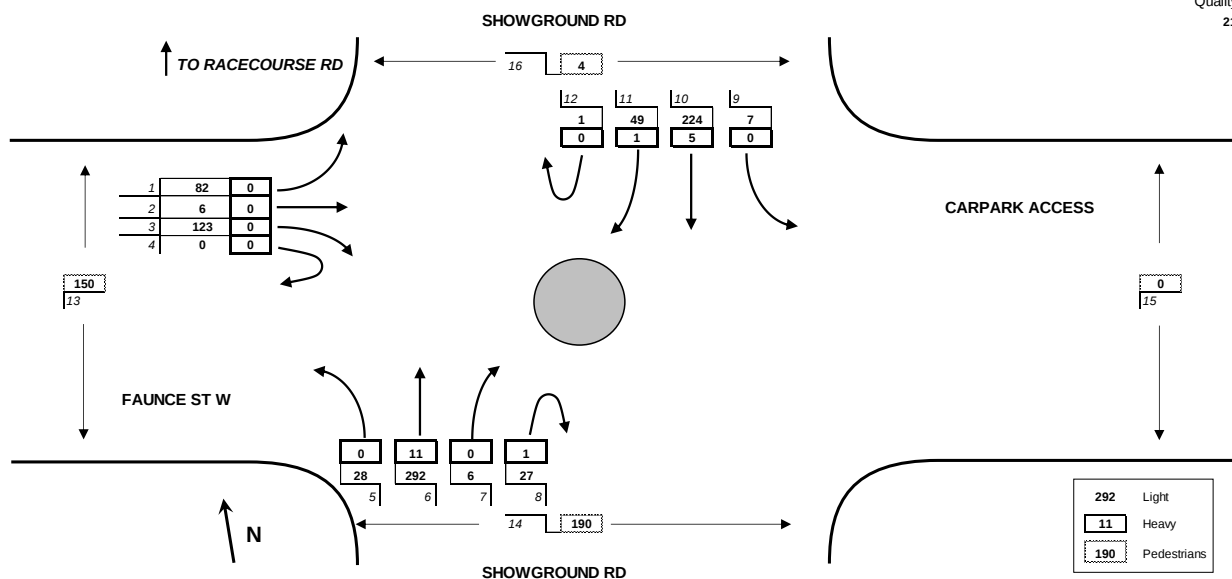
16/6/2021 - SHOWGROUND RD / FAUNCE ST W, GOSFORD

09:00 <<< HOUR ENDING

Wednesday

Summary: SHOWGROUND RD / FAUNCE ST W

845 Total Light Vehicles
18 Total Heavy Vehicles
344 Total Pedestrians



16/6/2021 - SHOWGROUND RD / FAUNCE ST W, GOSFORD

Light Vehicles

	1	2	3	4	5	6	7	8	9	10	11	12	Total Vehicles 15 MIN	HOURLY	Pedestrians 13	14	15	16
07:15	17	0	7	2	2	72	7	17	3	81	8	2	218		10	16	0	0
07:30	14	0	9	0	5	85	3	11	1	63	12	1	204		11	21	0	1
07:45	25	4	15	0	4	88	13	14	2	67	15	0	247		11	28	0	0
08:00	25	2	10	0	7	119	10	26	4	61	10	1	275	944	9	17	0	0
08:15	18	2	20	0	6	101	1	10	4	56	9	0	227	953	49	82	0	0
08:30	13	2	24	0	5	65	2	4	2	63	14	1	195	944	20	20	0	0
08:45	24	1	40	0	8	70	2	6	0	56	8	0	215	912	60	67	0	4
09:00	27	1	39	0	9	56	1	7	1	49	18	0	208	845	21	21	0	0
09:15	26	0	30	1	8	71	0	10	2	55	14	0	217	835	22	24	0	1
09:30	13	0	10	0	8	37	3	6	4	53	15	1	150	790	9	17	0	0
09:45	13	0	8	0	3	48	1	4	2	44	7	1	131	706	13	16	0	0
10:00	12	0	5	0	3	63	2	1	1	52	13	2	154	652	8	15	0	1

Heavy Vehicles

	1	2	3	4	5	6	7	8	9	10	11	12	Total Vehicles 15 MIN	HOURLY
07:15	0	0	0	0	0	3	0	0	0	1	0	0	4	
07:30	0	0	0	0	2	2	0	0	0	1	0	0	5	
07:45	0	0	0	0	0	0	0	0	0	2	0	0	2	
08:00	0	0	0	0	0	1	0	0	0	2	0	0	3	14
08:15	0	0	0	0	0	3	0	1	0	1	0	0	5	15
08:30	0	0	0	0	0	4	0	0	0	0	0	0	4	14
08:45	0	0	0	0	0	4	0	0	0	3	0	0	7	19
09:00	0	0	0	0	0	0	0	0	0	1	1	0	2	18
09:15	0	0	1	0	0	0	0	0	0	2	0	0	3	16
09:30	0	0	2	0	0	3	0	0	1	1	0	0	7	19
09:45	1	0	0	0	0	0	0	0	0	2	0	0	3	15
10:00	0	0	0	0	1	3	0	0	0	2	0	0	6	19

All Vehicles

	1	2	3	4	5	6	7	8	9	10	11	12	Total Vehicles 15 MIN	HOURLY
07:15	17	0	7	2	2	75	7	17	3	82	8	2	222	
07:30	14	0	9	0	7	87	3	11	1	64	12	1	209	
07:45	25	4	15	0	4	88	13	14	2	69	15	0	249	
08:00	25	2	10	0	7	120	10	26	4	63	10	1	278	958
08:15	18	2	20	0	6	104	1	11	4	57	9	0	232	968
08:30	13	2	24	0	5	69	2	4	2	63	14	1	199	958
08:45	24	1	40	0	8	74	2	6	0	59	8	0	222	931
09:00	27	1	39	0	9	56	1	7	1	50	19	0	210	863
09:15	26	0	31	1	8	71	0	10	2	57	14	0	220	851
09:30	13	0	12	0	8	40	3	6	5	54	15	1	157	809
09:45	14	0	8	0	3	48	1	4	2	46	7	1	134	721
10:00	12	0	5	0	4	66	2	1	1	54	13	2	160	671

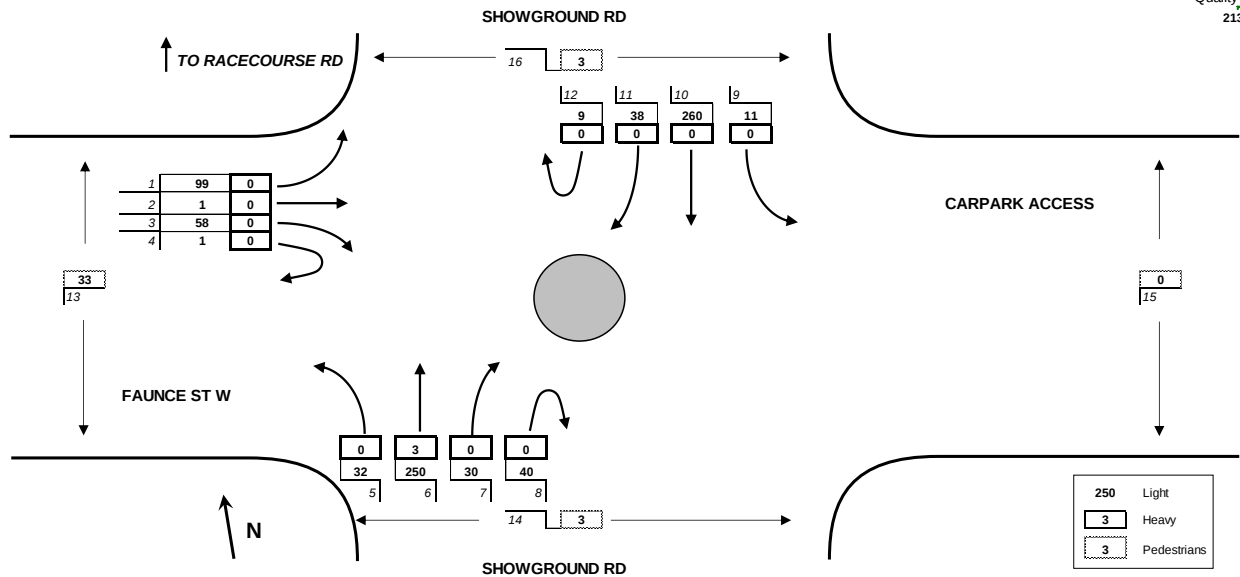
Note: Arrows "<" indicate the end time for the peak hour for each turning movement.

16/6/2021 - SHOWGROUND RD / FAUNCE ST W, GOSFORD

17:30 <<< HOUR ENDING

Wednesday

Summary: SHOWGROUND RD / FAUNCE ST W

829 Total Light Vehicles
3 Total Heavy Vehicles
39 Total Pedestrians


16/6/2021 - SHOWGROUND RD / FAUNCE ST W, GOSFORD

Light Vehicles

	1	2	3	4	5	6	7	8	9	10	11	12	Total Vehicles 15 MIN	Hour	Pedestrians 13	14	15	16
15:15	32	2	31	0	2	51	2	5	1	73	7	1	207		43	0	0	2
15:30	40	3	23	0	8	42	2	7	2	64	7	0	198		206	1	0	0
15:45	35	2	30	1	10	47	3	13	2	65	7	0	215		17	1	0	0
16:00	29	0 <	19 <	0	11	56	1	14	2	70 <	11	0	213	833	11 <	0	0	1
16:15	38 <	0	24	0	4 <	61	2	2	1	65	8	0	205	831	14	0	0	2
16:30	29	0	12	1 <	5	55	1	16	3	61	12	3	198	831	15	0	0	0
16:45	28	1	13	0	4	57	7	10	4	65	7	3	199	815	21	1	0	1 <
17:00	29	0	16	1 <	10	61	10	12	3	69	15	2	228	830	4	0	0	0
17:15	23	0	18	0 <	8	81	8	11 <	2 <	74	9 <	4 <	238	863 <	7	1	0	0
17:30	19	0	11	0	10	51	5 <	7	2	52	7	0	164	829	1	1	0	2
17:45	18	0	11	0	5 <	63	4	14	5 <	63	10	1	194	824	3	1	0	0
18:00	22	1	9	0	6	72 <	7	14	2	48	11	5	197	793	0	1 <	0	0

Heavy Vehicles

	1	2	3	4	5	6	7	8	9	10	11	12	Total Vehicles 15 MIN	Hour
15:15	0	0	1	0	1	6	0	0	0	2	0	0	10	
15:30	0	0	1	0	1	3	0	0	0	3	0	0	8	
15:45	0	0	0	0	1	0	0	0	0	4	0	0	5	
16:00	0	0	0 <	0	0 <	0 <	0	0	0	1 <	1 <	0	2	25 <
16:15	0	0	0	0	1 <	3	0	0	0	0	0 <	0	4	19
16:30	0	0	0	0	0	3	0	1 <	0	1	0 <	0	5	16
16:45	0	0	0	0	0	1	0	0 <	0	0	0 <	0	1	12
17:00	0	0	0	0	0	0	0	0 <	0	0	0	0	0	10
17:15	0	0	0	0	0	0	0	0 <	0	0	0	0	0	6
17:30	0	0	0	0	0	2	0	0	0	0	0	0	2	3
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2

All Vehicles

	1	2	3	4	5	6	7	8	9	10	11	12	Total Vehicles 15 MIN	Hour
15:15	32	2	32	0	3	57	2	5	1	75	7	1	217	
15:30	40	3	24	0	9	45	2	7	2	67	7	0	206	
15:45	35	2	30	1	10	48	3	13	2	69	7	0	220	
16:00	29	0 <	19 <	0	11	56	1	14	2	71 <	12	0	215	858
16:15	38 <	0	24	0	5 <	64	2	2	1	65	8	0	209	850
16:30	29	0	12	1 <	5	58	1	17	3	62	12	3	203	847
16:45	28	1	13	0	4	58	7	10	4	65	7	3	200	827
17:00	29	0	16	1 <	10	61	10	12	3	69	15	2	228	840
17:15	23	0	18	0 <	8	81	8	11 <	2 <	74	9 <	4 <	238	869 <
17:30	19	0	11	0	10	53	5 <	7	2	52	7	0	166	832
17:45	18	0	11	0	5	63	4	14	5 <	63	10	1	194	826
18:00	22	1	9	0	6	72 <	7	14	2	48	11	5	197	795

Note: Arrows "<" indicate the end time for the peak hour for each turning movement.

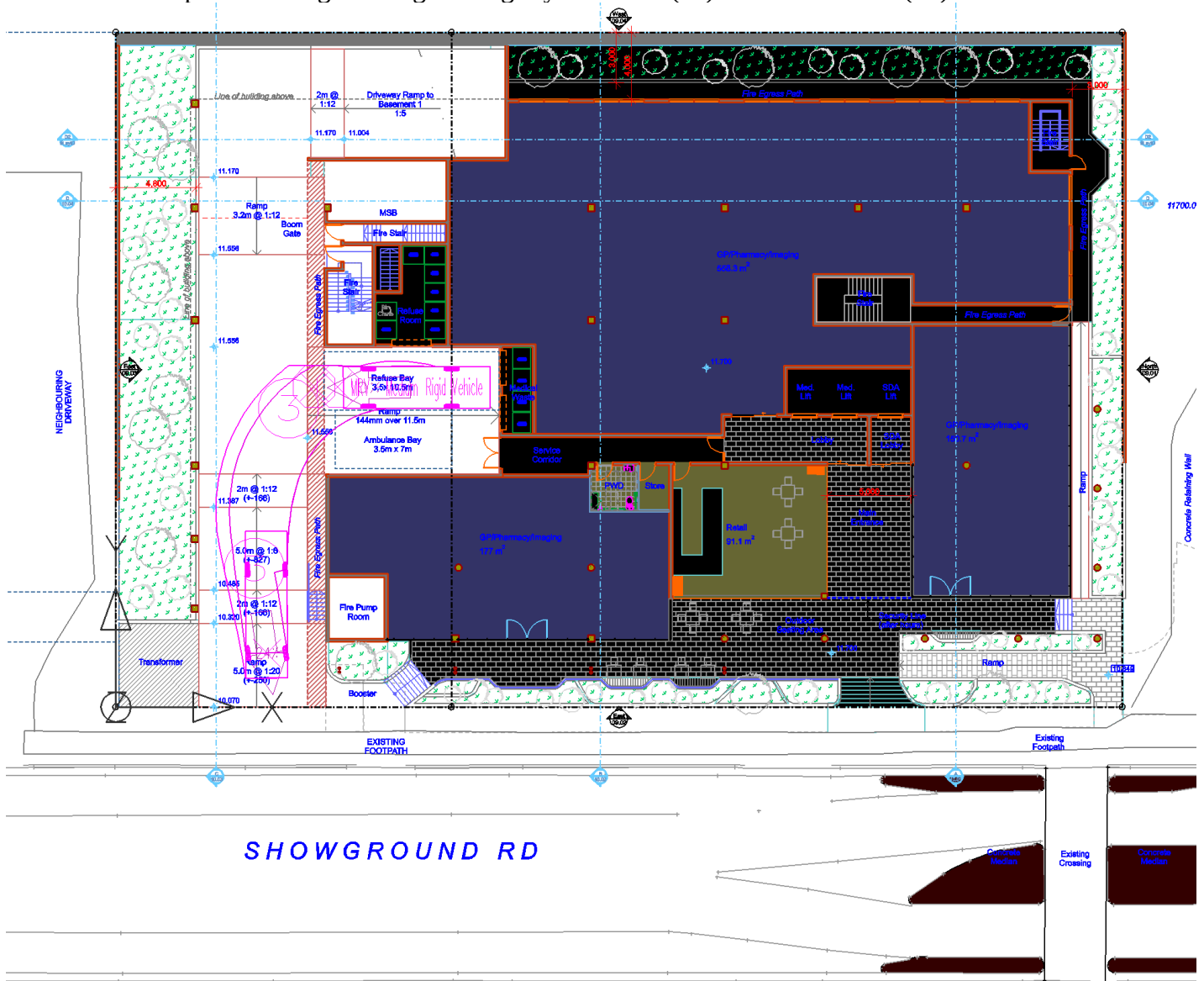
Appendix C

Vehicle Turning Paths

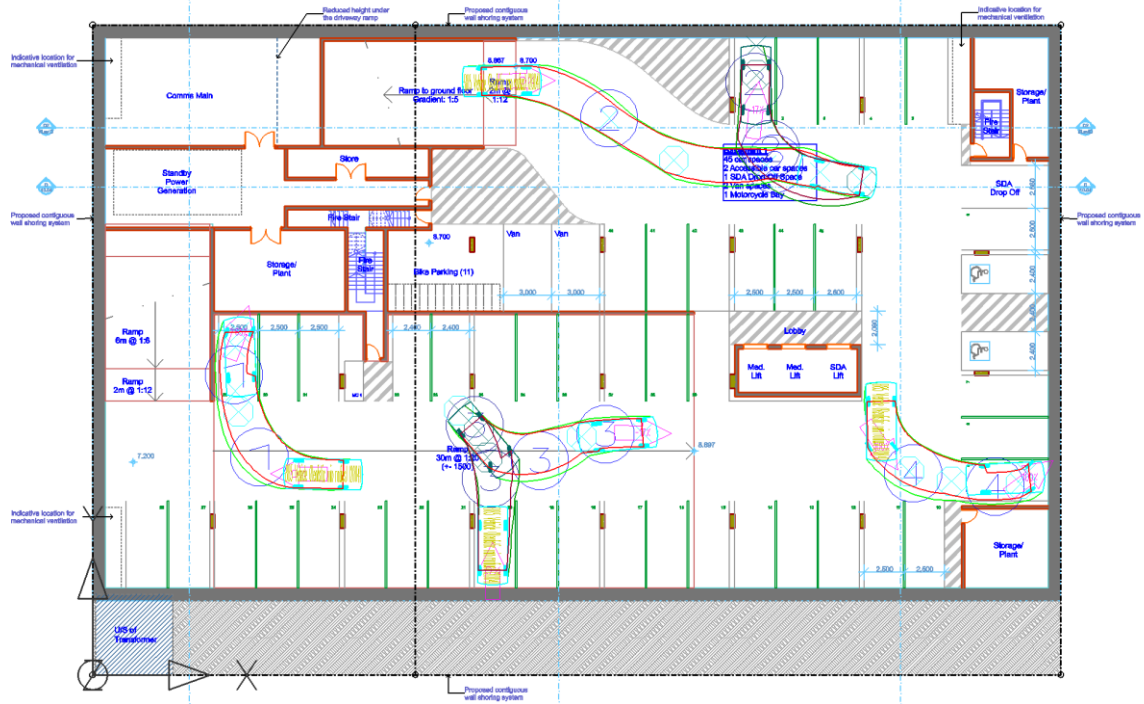
Typical Vehicle Turning Paths to and from Parking Bays.



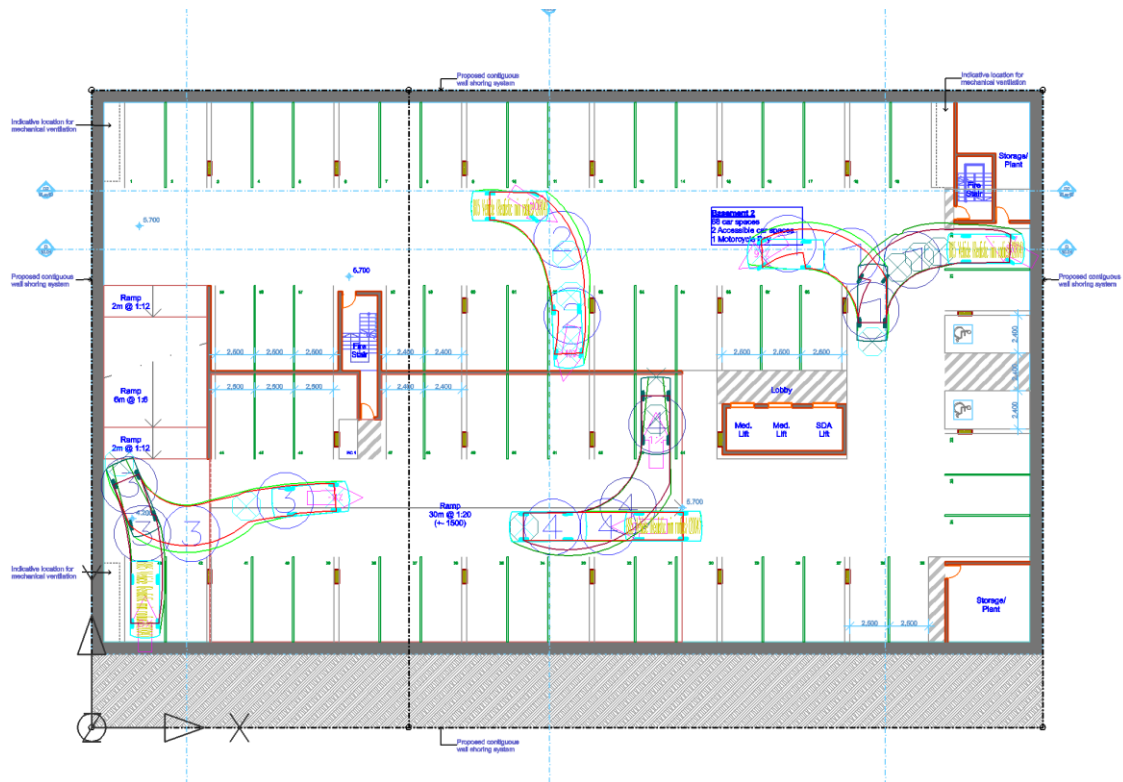
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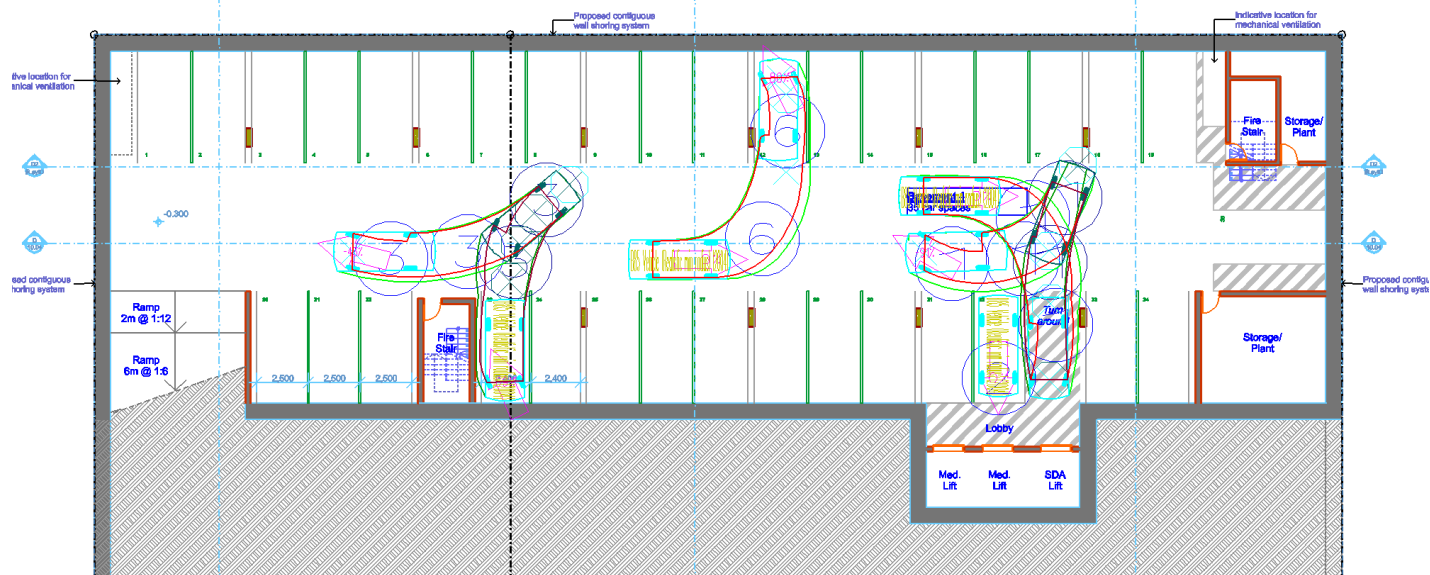
Ground Floor - Waste Removal – Forward Out



Basement 1 – Parking



Basement 2 – Parking



Basement 4 – Parking & Turning Bay

Appendix D

2021 Racecourse Rd / Showground Rd
- with and without Development

2031 Racecourse Rd / Showground Rd
- with and without Development

SIDRA OUTPUTS

MOVEMENT SUMMARY

 Without Dev Racecourse Rd/Showground Rd - AM Peak 2021

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

AM Peak
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Showground Rd (south)															
1	L2	All MCs	74	2.7	74	2.7	0.553	13.3	LOS A	4.8	34.8	0.90	0.87	1.10	46.9
2	T1	All MCs	160	3.8	160	3.8	0.553	13.1	LOS A	4.8	34.8	0.90	0.87	1.10	47.3
3	R2	All MCs	106	1.9	106	1.9	0.553	15.7	LOS B	4.8	34.8	0.90	0.87	1.10	46.8
3u	U	All MCs	7	0.0	7	0.0	0.553	17.1	LOS B	4.8	34.8	0.90	0.87	1.10	46.9
Approach			347	2.9	347	2.9	0.553	14.0	LOS A	4.8	34.8	0.90	0.87	1.10	47.1
East: Racecourse Rd (east)															
4	L2	All MCs	121	1.7	121	1.7	0.720	11.9	LOS A	8.8	64.7	0.89	0.81	1.11	48.0
5	T1	All MCs	374	5.3	374	5.3	0.720	11.8	LOS A	8.8	64.7	0.89	0.81	1.11	48.3
6	R2	All MCs	128	5.5	128	5.5	0.720	14.6	LOS B	8.8	64.7	0.89	0.81	1.11	47.6
6u	U	All MCs	10	70.0	10	70.0	0.720	19.6	LOS B	8.8	64.7	0.89	0.81	1.11	45.3
Approach			633	5.7	633	5.7	0.720	12.5	LOS A	8.8	64.7	0.89	0.81	1.11	48.0
North: Showground Rd (north)															
7	L2	All MCs	186	7.5	186	7.5	0.246	9.3	LOS A	1.5	11.0	0.67	0.71	0.67	49.5
8	T1	All MCs	177	1.7	177	1.7	0.319	7.6	LOS A	2.2	15.5	0.69	0.68	0.69	50.7
9	R2	All MCs	115	5.2	115	5.2	0.319	10.5	LOS A	2.2	15.5	0.69	0.68	0.69	49.9
9u	U	All MCs	12	0.0	12	0.0	0.319	11.8	LOS A	2.2	15.5	0.69	0.68	0.69	50.1
Approach			490	4.7	490	4.7	0.319	9.0	LOS A	2.2	15.5	0.68	0.69	0.68	50.0
West: Racecourse Rd (west)															
10	L2	All MCs	79	6.3	79	6.3	0.536	10.1	LOS A	4.4	32.6	0.78	0.74	0.87	49.3
11	T1	All MCs	299	6.4	299	6.4	0.536	9.7	LOS A	4.4	32.6	0.78	0.74	0.87	49.7
12	R2	All MCs	39	15.4	39	15.4	0.536	13.0	LOS A	4.4	32.6	0.78	0.74	0.87	48.7
12u	U	All MCs	7	0.0	7	0.0	0.536	13.6	LOS A	4.4	32.6	0.78	0.74	0.87	49.3
Approach			424	7.1	424	7.1	0.536	10.2	LOS A	4.4	32.6	0.78	0.74	0.87	49.6
All Vehicles			1894	5.2	1894	5.2	0.720	11.4	LOS A	8.8	64.7	0.81	0.77	0.94	48.7

MOVEMENT SUMMARY

 Without Dev Racecourse Rd/Showground Rd - PM Peak 2021

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

PM Peak
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%				v/c	sec				
South: Showground Rd (south)															
1	L2	All MCs	53	0.0	53	0.0	0.714	17.7	LOS B	8.3	58.2	0.98	0.99	1.43	44.3
2	T1	All MCs	199	1.0	199	1.0	0.714	17.5	LOS B	8.3	58.2	0.98	0.99	1.43	44.7
3	R2	All MCs	201	0.0	201	0.0	0.714	20.2	LOS B	8.3	58.2	0.98	0.99	1.43	44.2
3u	U	All MCs	5	0.0	5	0.0	0.714	21.6	LOS B	8.3	58.2	0.98	0.99	1.43	44.2
Approach			458	0.4	458	0.4	0.714	18.7	LOS B	8.3	58.2	0.98	0.99	1.43	44.4
East: Racecourse Rd (east)															
4	L2	All MCs	105	0.0	105	0.0	0.660	8.4	LOS A	7.0	49.9	0.77	0.66	0.82	50.2
5	T1	All MCs	368	1.1	368	1.1	0.660	8.1	LOS A	7.0	49.9	0.77	0.66	0.82	50.6
6	R2	All MCs	196	2.6	196	2.6	0.660	11.0	LOS A	7.0	49.9	0.77	0.66	0.82	49.9
6u	U	All MCs	7	71.4	7	71.4	0.660	15.3	LOS B	7.0	49.9	0.77	0.66	0.82	47.2
Approach			676	2.1	676	2.1	0.660	9.1	LOS A	7.0	49.9	0.77	0.66	0.82	50.3
North: Showground Rd (north)															
7	L2	All MCs	179	4.5	179	4.5	0.256	10.0	LOS A	1.6	11.9	0.75	0.74	0.75	49.1
8	T1	All MCs	128	0.0	128	0.0	0.263	8.3	LOS A	1.8	12.7	0.75	0.71	0.75	50.4
9	R2	All MCs	93	0.0	93	0.0	0.263	11.1	LOS A	1.8	12.7	0.75	0.71	0.75	49.7
9u	U	All MCs	2	0.0	2	0.0	0.263	12.5	LOS A	1.8	12.7	0.75	0.71	0.75	49.7
Approach			402	2.0	402	2.0	0.263	9.7	LOS A	1.8	12.7	0.75	0.72	0.75	49.6
West: Racecourse Rd (west)															
10	L2	All MCs	105	1.0	105	1.0	0.747	17.8	LOS B	9.3	66.0	0.99	1.00	1.47	44.9
11	T1	All MCs	379	1.3	379	1.3	0.747	17.5	LOS B	9.3	66.0	0.99	1.00	1.47	45.2
12	R2	All MCs	23	0.0	23	0.0	0.747	20.1	LOS B	9.3	66.0	0.99	1.00	1.47	44.8
12u	U	All MCs	2	0.0	2	0.0	0.747	21.6	LOS B	9.3	66.0	0.99	1.00	1.47	44.8
Approach			509	1.2	509	1.2	0.747	17.7	LOS B	9.3	66.0	0.99	1.00	1.47	45.1
All Vehicles			2045	1.5	2045	1.5	0.747	13.5	LOS A	9.3	66.0	0.87	0.83	1.11	47.4

MOVEMENT SUMMARY

 With Dev Racecourse Rd/Showground Rd - AM Peak 2021

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

AM Peak
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Stop Rate	Eff. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%				v/c	sec				
South: Showground Rd (south)															
1	L2	All MCs	128	1.6	128	1.6	0.760	18.1	LOS B	9.9	70.6	1.00	1.05	1.53	44.3
2	T1	All MCs	214	2.8	214	2.8	0.760	18.5	LOS B	9.9	70.6	1.00	1.05	1.53	44.5
3	R2	All MCs	153	1.3	153	1.3	0.760	21.8	LOS B	9.9	70.6	1.00	1.05	1.53	44.0
3u	U	All MCs	7	0.0	7	0.0	0.760	23.4	LOS B	9.9	70.6	1.00	1.05	1.53	44.0
Approach			502	2.0	502	2.0	0.760	19.5	LOS B	9.9	70.6	1.00	1.05	1.53	44.3
East: Racecourse Rd (east)															
4	L2	All MCs	162	1.2	162	1.2	0.806	15.5	LOS B	12.3	90.2	1.00	0.98	1.46	45.9
5	T1	All MCs	374	5.3	374	5.3	0.806	15.8	LOS B	12.3	90.2	1.00	0.98	1.46	46.1
6	R2	All MCs	128	5.5	128	5.5	0.806	19.3	LOS B	12.3	90.2	1.00	0.98	1.46	45.5
6u	U	All MCs	10	70.0	10	70.0	0.806	25.0	LOS B	12.3	90.2	1.00	0.98	1.46	43.5
Approach			674	5.3	674	5.3	0.806	16.5	LOS B	12.3	90.2	1.00	0.98	1.46	45.9
North: Showground Rd (north)															
7	L2	All MCs	186	7.5	186	7.5	0.263	9.6	LOS A	1.6	12.1	0.72	0.72	0.72	49.5
8	T1	All MCs	218	1.4	218	1.4	0.365	7.9	LOS A	2.7	19.1	0.76	0.69	0.76	50.5
9	R2	All MCs	115	5.2	115	5.2	0.365	11.4	LOS A	2.7	19.1	0.76	0.69	0.76	49.7
9u	U	All MCs	12	0.0	12	0.0	0.365	12.9	LOS A	2.7	19.1	0.76	0.69	0.76	49.9
Approach			531	4.3	531	4.3	0.365	9.4	LOS A	2.7	19.1	0.75	0.70	0.75	50.0
West: Racecourse Rd (west)															
10	L2	All MCs	79	6.3	79	6.3	0.629	12.2	LOS A	6.3	46.3	0.90	0.85	1.12	47.8
11	T1	All MCs	299	6.4	299	6.4	0.629	12.4	LOS A	6.3	46.3	0.90	0.85	1.12	48.1
12	R2	All MCs	74	8.1	74	8.1	0.629	15.8	LOS B	6.3	46.3	0.90	0.85	1.12	47.4
12u	U	All MCs	7	0.0	7	0.0	0.629	17.1	LOS B	6.3	46.3	0.90	0.85	1.12	47.7
Approach			459	6.5	459	6.5	0.629	13.0	LOS A	6.3	46.3	0.90	0.85	1.12	47.9
All Vehicles			2166	4.6	2166	4.6	0.806	14.7	LOS B	12.3	90.2	0.91	0.90	1.23	46.9

MOVEMENT SUMMARY

With Dev Racecourse Rd/Showground Rd - PM Peak 2021

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

PM Peak
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Showground Rd (south)															
1	L2	All MCs	120	0.0	120	0.0	1.029	76.6	LOS F	39.5	277.1	1.00	2.28	4.27	25.9
2	T1	All MCs	266	0.8	266	0.8	1.029	76.4	LOS F	39.5	277.1	1.00	2.28	4.27	26.0
3	R2	All MCs	258	0.0	258	0.0	1.029	79.1	LOS F	39.5	277.1	1.00	2.28	4.27	25.9
3u	U	All MCs	5	0.0	5	0.0	1.029	80.5	LOS F	39.5	277.1	1.00	2.28	4.27	25.9
Approach			649	0.3	649	0.3	1.029	77.5	LOS F	39.5	277.1	1.00	2.28	4.27	25.9
East: Racecourse Rd (east)															
4	L2	All MCs	127	0.0	127	0.0	0.714	10.1	LOS A	8.8	62.6	0.85	0.73	0.99	49.1
5	T1	All MCs	368	1.1	368	1.1	0.714	9.9	LOS A	8.8	62.6	0.85	0.73	0.99	49.5
6	R2	All MCs	196	2.6	196	2.6	0.714	12.7	LOS A	8.8	62.6	0.85	0.73	0.99	48.8
6u	U	All MCs	7	71.4	7	71.4	0.714	17.5	LOS B	8.8	62.6	0.85	0.73	0.99	46.2
Approach			698	2.0	698	2.0	0.714	10.8	LOS A	8.8	62.6	0.85	0.73	0.99	49.2
North: Showground Rd (north)															
7	L2	All MCs	179	4.5	179	4.5	0.282	10.9	LOS A	1.8	13.2	0.79	0.76	0.79	48.5
8	T1	All MCs	150	0.0	150	0.0	0.310	9.0	LOS A	2.2	15.4	0.81	0.73	0.81	50.0
9	R2	All MCs	93	0.0	93	0.0	0.310	11.8	LOS A	2.2	15.4	0.81	0.73	0.81	49.4
9u	U	All MCs	2	0.0	2	0.0	0.310	13.2	LOS A	2.2	15.4	0.81	0.73	0.81	49.4
Approach			424	1.9	424	1.9	0.310	10.4	LOS A	2.2	15.4	0.80	0.74	0.80	49.2
West: Racecourse Rd (west)															
10	L2	All MCs	105	1.0	105	1.0	0.904	35.8	LOS C	17.4	122.7	1.00	1.45	2.32	36.7
11	T1	All MCs	379	1.3	379	1.3	0.904	35.5	LOS C	17.4	122.7	1.00	1.45	2.32	36.9
12	R2	All MCs	42	0.0	42	0.0	0.904	38.1	LOS C	17.4	122.7	1.00	1.45	2.32	36.6
12u	U	All MCs	2	0.0	2	0.0	0.904	39.6	LOS C	17.4	122.7	1.00	1.45	2.32	36.6
Approach			528	1.1	528	1.1	0.904	35.8	LOS C	17.4	122.7	1.00	1.45	2.32	36.9
All Vehicles			2299	1.3	2299	1.3	1.029	35.3	LOS C	39.5	277.1	0.92	1.34	2.19	37.0

MOVEMENT SUMMARY

 Without Dev Racecourse Rd/Showground Rd - AM Peak - 2031

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

AM Peak
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Showground Rd (south)															
1	L2	All MCs	97	3.1	97	3.1	0.887	37.9	LOS C	15.5	111.2	1.00	1.43	2.26	35.8
2	T1	All MCs	208	3.8	208	3.8	0.887	38.3	LOS C	15.5	111.2	1.00	1.43	2.26	35.9
3	R2	All MCs	138	2.2	138	2.2	0.887	41.6	LOS C	15.5	111.2	1.00	1.43	2.26	35.6
3u	U	All MCs	9	0.0	9	0.0	0.887	43.1	LOS D	15.5	111.2	1.00	1.43	2.26	35.6
Approach			452	3.1	452	3.1	0.887	39.3	LOS C	15.5	111.2	1.00	1.43	2.26	35.8
East: Racecourse Rd (east)															
4	L2	All MCs	158	1.9	158	1.9	1.028	64.9	LOS E	46.2	339.2	1.00	2.29	3.94	28.4
5	T1	All MCs	486	5.3	486	5.3	1.028	65.2	LOS E	46.2	339.2	1.00	2.29	3.94	28.5
6	R2	All MCs	166	5.4	166	5.4	1.028	68.7	LOS E	46.2	339.2	1.00	2.29	3.94	28.2
6u	U	All MCs	13	69.2	13	69.2	1.028	75.3	LOS F	46.2	339.2	1.00	2.29	3.94	27.5
Approach			823	5.7	823	5.7	1.028	66.0	LOS E	46.2	339.2	1.00	2.29	3.94	28.4
North: Showground Rd (north)															
7	L2	All MCs	242	7.4	242	7.4	0.366	10.4	LOS A	2.5	18.5	0.81	0.75	0.81	49.0
8	T1	All MCs	230	1.7	230	1.7	0.458	8.9	LOS A	3.8	26.9	0.85	0.74	0.88	49.9
9	R2	All MCs	150	5.3	150	5.3	0.458	12.4	LOS A	3.8	26.9	0.85	0.74	0.88	49.2
9u	U	All MCs	16	0.0	16	0.0	0.458	13.8	LOS A	3.8	26.9	0.85	0.74	0.88	49.4
Approach			638	4.7	638	4.7	0.458	10.4	LOS A	3.8	26.9	0.84	0.74	0.86	49.4
West: Racecourse Rd (west)															
10	L2	All MCs	103	6.8	103	6.8	0.774	17.3	LOS B	10.4	77.1	1.00	1.02	1.51	44.9
11	T1	All MCs	389	6.4	389	6.4	0.774	17.5	LOS B	10.4	77.1	1.00	1.02	1.51	45.2
12	R2	All MCs	51	15.7	51	15.7	0.774	21.4	LOS B	10.4	77.1	1.00	1.02	1.51	44.4
12u	U	All MCs	9	0.0	9	0.0	0.774	22.1	LOS B	10.4	77.1	1.00	1.02	1.51	44.9
Approach			552	7.2	552	7.2	0.774	17.9	LOS B	10.4	77.1	1.00	1.02	1.51	45.1
All Vehicles			2465	5.3	2465	5.3	1.028	35.9	LOS C	46.2	339.2	0.96	1.45	2.29	36.9

MOVEMENT SUMMARY

Without Dev Racecourse Rd/Showground Rd - PM Peak 2031

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

PM Peak
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Showground Rd (south)															
1	L2	All MCs	69	0.0	69	0.0	1.314	309.7	LOS F	101.5	713.6	1.00	4.40	10.14	9.8
2	T1	All MCs	259	1.2	259	1.2	1.314	309.5	LOS F	101.5	713.6	1.00	4.40	10.14	9.8
3	R2	All MCs	261	0.0	261	0.0	1.314	312.2	LOS F	101.5	713.6	1.00	4.40	10.14	9.8
3u	U	All MCs	7	0.0	7	0.0	1.314	313.6	LOS F	101.5	713.6	1.00	4.40	10.14	9.8
Approach			596	0.5	596	0.5	1.314	310.7	LOS F	101.5	713.6	1.00	4.40	10.14	9.8
East: Racecourse Rd (east)															
4	L2	All MCs	137	0.0	137	0.0	0.931	23.0	LOS B	25.0	178.5	1.00	1.21	1.81	41.8
5	T1	All MCs	478	1.0	478	1.0	0.931	22.7	LOS B	25.0	178.5	1.00	1.21	1.81	42.1
6	R2	All MCs	255	2.7	255	2.7	0.931	25.6	LOS B	25.0	178.5	1.00	1.21	1.81	41.6
6u	U	All MCs	10	70.0	10	70.0	0.931	31.5	LOS C	25.0	178.5	1.00	1.21	1.81	39.8
Approach			880	2.2	880	2.2	0.931	23.7	LOS B	25.0	178.5	1.00	1.21	1.81	41.9
North: Showground Rd (north)															
7	L2	All MCs	232	4.3	232	4.3	0.381	11.4	LOS A	2.6	19.1	0.86	0.78	0.86	48.2
8	T1	All MCs	166	0.0	166	0.0	0.387	9.5	LOS A	2.9	20.5	0.87	0.75	0.87	49.6
9	R2	All MCs	121	0.0	121	0.0	0.387	12.2	LOS A	2.9	20.5	0.87	0.75	0.87	49.0
9u	U	All MCs	3	0.0	3	0.0	0.387	13.7	LOS A	2.9	20.5	0.87	0.75	0.87	49.0
Approach			522	1.9	522	1.9	0.387	11.0	LOS A	2.9	20.5	0.86	0.76	0.86	48.8
West: Racecourse Rd (west)															
10	L2	All MCs	136	0.7	136	0.7	1.042	84.7	LOS F	43.1	304.7	1.00	2.46	4.71	24.6
11	T1	All MCs	493	1.4	493	1.4	1.042	84.4	LOS F	43.1	304.7	1.00	2.46	4.71	24.7
12	R2	All MCs	30	0.0	30	0.0	1.042	87.1	LOS F	43.1	304.7	1.00	2.46	4.71	24.6
12u	U	All MCs	3	0.0	3	0.0	1.042	88.5	LOS F	43.1	304.7	1.00	2.46	4.71	24.6
Approach			662	1.2	662	1.2	1.042	84.6	LOS F	43.1	304.7	1.00	2.46	4.71	24.7
All Vehicles			2660	1.5	2660	1.5	1.314	100.7	LOS F	101.5	713.6	0.97	2.15	4.21	22.3

MOVEMENT SUMMARY

 With Dev Racecourse Rd/Showground Rd - AM Peak - 2031

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

AM Peak
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Showground Rd (south)															
1	L2	All MCs	151	2.0	151	2.0	1.055	95.6	LOS F	43.5	310.5	1.00	2.52	4.90	22.9
2	T1	All MCs	263	3.0	263	3.0	1.055	96.1	LOS F	43.5	310.5	1.00	2.52	4.90	23.0
3	R2	All MCs	185	1.6	185	1.6	1.055	99.4	LOS F	43.5	310.5	1.00	2.52	4.90	22.8
3u	U	All MCs	9	0.0	9	0.0	1.055	100.9	LOS F	43.5	310.5	1.00	2.52	4.90	22.8
Approach			608	2.3	608	2.3	1.055	97.0	LOS F	43.5	310.5	1.00	2.52	4.90	22.9
East: Racecourse Rd (east)															
4	L2	All MCs	198	1.5	198	1.5	1.180	183.8	LOS F	100.4	735.7	1.00	4.22	8.64	14.8
5	T1	All MCs	486	5.3	486	5.3	1.180	184.2	LOS F	100.4	735.7	1.00	4.22	8.64	14.8
6	R2	All MCs	166	5.4	166	5.4	1.180	187.6	LOS F	100.4	735.7	1.00	4.22	8.64	14.8
6u	U	All MCs	13	69.2	13	69.2	1.180	194.4	LOS F	100.4	735.7	1.00	4.22	8.64	14.6
Approach			863	5.4	863	5.4	1.180	184.9	LOS F	100.4	735.7	1.00	4.22	8.64	14.8
North: Showground Rd (north)															
7	L2	All MCs	242	7.4	242	7.4	0.405	11.6	LOS A	2.9	21.3	0.86	0.79	0.89	48.2
8	T1	All MCs	271	1.5	271	1.5	0.542	11.0	LOS A	5.2	37.1	0.92	0.82	1.07	48.7
9	R2	All MCs	150	5.3	150	5.3	0.542	14.5	LOS A	5.2	37.1	0.92	0.82	1.07	48.0
9u	U	All MCs	16	0.0	16	0.0	0.542	15.9	LOS B	5.2	37.1	0.92	0.82	1.07	48.2
Approach			679	4.4	679	4.4	0.542	12.1	LOS A	5.2	37.1	0.90	0.81	1.01	48.4
West: Racecourse Rd (west)															
10	L2	All MCs	103	6.8	103	6.8	0.874	26.1	LOS B	15.7	116.2	1.00	1.29	1.97	40.5
11	T1	All MCs	389	6.4	389	6.4	0.874	26.3	LOS B	15.7	116.2	1.00	1.29	1.97	40.7
12	R2	All MCs	86	9.3	86	9.3	0.874	29.8	LOS C	15.7	116.2	1.00	1.29	1.97	40.2
12u	U	All MCs	9	0.0	9	0.0	0.874	30.8	LOS C	15.7	116.2	1.00	1.29	1.97	40.5
Approach			587	6.8	587	6.8	0.874	26.8	LOS B	15.7	116.2	1.00	1.29	1.97	40.6
All Vehicles			2737	4.8	2737	4.8	1.180	88.6	LOS F	100.4	735.7	0.98	2.37	4.48	24.2

MOVEMENT SUMMARY

 With Dev Racecourse Rd/Showground Rd - PM Peak 2031

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

PM Peak
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Showground Rd (south)															
1	L2	All MCs	135	0.0	135	0.0	1.733	679.6	LOS F	217.5	1527.3	1.00	6.79	16.56	4.9
2	T1	All MCs	326	0.9	326	0.9	1.733	679.4	LOS F	217.5	1527.3	1.00	6.79	16.56	4.9
3	R2	All MCs	318	0.0	318	0.0	1.733	682.1	LOS F	217.5	1527.3	1.00	6.79	16.56	4.9
3u	U	All MCs	7	0.0	7	0.0	1.733	683.5	LOS F	217.5	1527.3	1.00	6.79	16.56	4.9
Approach			786	0.4	786	0.4	1.733	680.6	LOS F	217.5	1527.3	1.00	6.79	16.56	4.9
East: Racecourse Rd (east)															
4	L2	All MCs	159	0.0	159	0.0	0.997	43.9	LOS D	40.3	286.9	1.00	1.77	2.84	33.8
5	T1	All MCs	478	1.0	478	1.0	0.997	43.6	LOS D	40.3	286.9	1.00	1.77	2.84	34.0
6	R2	All MCs	255	2.7	255	2.7	0.997	46.5	LOS D	40.3	286.9	1.00	1.77	2.84	33.6
6u	U	All MCs	10	70.0	10	70.0	0.997	53.1	LOS D	40.3	286.9	1.00	1.77	2.84	32.4
Approach			902	2.1	902	2.1	0.997	44.6	LOS D	40.3	286.9	1.00	1.77	2.84	33.8
North: Showground Rd (north)															
7	L2	All MCs	232	4.3	232	4.3	0.391	11.7	LOS A	2.8	20.0	0.87	0.79	0.88	48.0
8	T1	All MCs	189	0.0	189	0.0	0.423	9.8	LOS A	3.3	23.3	0.89	0.76	0.90	49.4
9	R2	All MCs	121	0.0	121	0.0	0.423	12.6	LOS A	3.3	23.3	0.89	0.76	0.90	48.8
9u	U	All MCs	3	0.0	3	0.0	0.423	14.0	LOS A	3.3	23.3	0.89	0.76	0.90	48.8
Approach			545	1.8	545	1.8	0.423	11.3	LOS A	3.3	23.3	0.88	0.77	0.90	48.7
West: Racecourse Rd (west)															
10	L2	All MCs	136	0.7	136	0.7	1.035	78.6	LOS F	42.1	297.5	1.00	2.39	4.51	25.7
11	T1	All MCs	493	1.4	493	1.4	1.035	78.3	LOS F	42.1	297.5	1.00	2.39	4.51	25.8
12	R2	All MCs	49	0.0	49	0.0	1.035	81.0	LOS F	42.1	297.5	1.00	2.39	4.51	25.6
12u	U	All MCs	3	0.0	3	0.0	1.035	82.5	LOS F	42.1	297.5	1.00	2.39	4.51	25.6
Approach			681	1.2	681	1.2	1.035	78.6	LOS F	42.1	297.5	1.00	2.39	4.51	25.8
All Vehicles			2914	1.4	2914	1.4	1.733	217.9	LOS F	217.5	1527.3	0.98	3.08	6.57	13.0

Appendix E

2021 Faunce St / Showground Rd
- with and without Development

2031 Faunce St / Showground Rd
- with and without Development

SIDRA OUTPUTS

MOVEMENT SUMMARY

Without Dev Faunce St/Showground Rd - AM Peak - 2021

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

AM Peak
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%				v/c	sec				
South: Showground Rd (south)															
1	L2	All MCs	29	0.0	29	0.0	0.288	5.5	LOS A	1.9	13.5	0.23	0.50	0.23	52.3
2	T1	All MCs	319	3.6	319	3.6	0.288	5.2	LOS A	1.9	13.5	0.23	0.50	0.23	52.6
3	R2	All MCs	6	0.0	6	0.0	0.288	7.9	LOS A	1.9	13.5	0.23	0.50	0.23	52.1
3u	U	All MCs	29	3.6	29	3.6	0.288	9.4	LOS A	1.9	13.5	0.23	0.50	0.23	51.9
Approach			384	3.3	384	3.3	0.288	5.6	LOS A	1.9	13.5	0.23	0.50	0.23	52.5
North: Showground Rd (north)															
7	L2	All MCs	7	0.0	7	0.0	0.275	6.3	LOS A	1.7	12.1	0.42	0.55	0.42	51.6
8	T1	All MCs	241	2.2	241	2.2	0.275	6.0	LOS A	1.7	12.1	0.42	0.55	0.42	52.0
9	R2	All MCs	53	2.0	53	2.0	0.275	8.8	LOS A	1.7	12.1	0.42	0.55	0.42	51.3
9u	U	All MCs	1	0.0	1	0.0	0.275	10.2	LOS A	1.7	12.1	0.42	0.55	0.42	51.4
Approach			302	2.1	302	2.1	0.275	6.5	LOS A	1.7	12.1	0.42	0.55	0.42	51.9
West: Faunce St (west)															
10	L2	All MCs	86	0.0	86	0.0	0.240	7.5	LOS A	1.4	9.5	0.55	0.67	0.55	50.3
11	T1	All MCs	6	0.0	6	0.0	0.240	7.2	LOS A	1.4	9.5	0.55	0.67	0.55	50.8
12	R2	All MCs	129	0.0	129	0.0	0.240	9.9	LOS A	1.4	9.5	0.55	0.67	0.55	50.1
12u	U	All MCs	1	0.0	1	0.0	0.240	11.4	LOS A	1.4	9.5	0.55	0.67	0.55	50.1
Approach			223	0.0	223	0.0	0.240	8.9	LOS A	1.4	9.5	0.55	0.67	0.55	50.2
All Vehicles			909	2.1	909	2.1	0.288	6.7	LOS A	1.9	13.5	0.37	0.56	0.37	51.7

MOVEMENT SUMMARY

Without Dev Faunce St/Showground Rd - PM Peak - 2021

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

PM Peak
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%				v/c	sec				
South: Showground Rd (south)															
1	L2	All MCs	34	0.0	34	0.0	0.274	5.4	LOS A	1.7	12.3	0.21	0.52	0.21	52.1
2	T1	All MCs	266	1.2	266	1.2	0.274	5.1	LOS A	1.7	12.3	0.21	0.52	0.21	52.5
3	R2	All MCs	32	0.0	32	0.0	0.274	7.9	LOS A	1.7	12.3	0.21	0.52	0.21	51.9
3u	U	All MCs	42	0.0	42	0.0	0.274	9.3	LOS A	1.7	12.3	0.21	0.52	0.21	51.9
Approach			374	0.8	374	0.8	0.274	5.9	LOS A	1.7	12.3	0.21	0.52	0.21	52.4
North: Showground Rd (north)															
7	L2	All MCs	12	0.0	12	0.0	0.284	6.0	LOS A	1.7	12.0	0.36	0.54	0.36	51.8
8	T1	All MCs	274	0.0	274	0.0	0.284	5.7	LOS A	1.7	12.0	0.36	0.54	0.36	52.3
9	R2	All MCs	40	0.0	40	0.0	0.284	8.5	LOS A	1.7	12.0	0.36	0.54	0.36	51.6
9u	U	All MCs	9	0.0	9	0.0	0.284	9.9	LOS A	1.7	12.0	0.36	0.54	0.36	51.6
Approach			335	0.0	335	0.0	0.284	6.1	LOS A	1.7	12.0	0.36	0.54	0.36	52.2
West: Faunce St (west)															
10	L2	All MCs	104	0.0	104	0.0	0.178	7.3	LOS A	1.0	6.7	0.52	0.65	0.52	50.8
11	T1	All MCs	1	0.0	1	0.0	0.178	7.0	LOS A	1.0	6.7	0.52	0.65	0.52	51.2
12	R2	All MCs	61	0.0	61	0.0	0.178	9.7	LOS A	1.0	6.7	0.52	0.65	0.52	50.6
12u	U	All MCs	1	0.0	1	0.0	0.178	11.2	LOS A	1.0	6.7	0.52	0.65	0.52	50.6
Approach			167	0.0	167	0.0	0.178	8.2	LOS A	1.0	6.7	0.52	0.65	0.52	50.7
All Vehicles			876	0.4	876	0.4	0.284	6.4	LOS A	1.7	12.3	0.33	0.55	0.33	52.0

MOVEMENT SUMMARY

 With Dev Faunce St/Showground Rd - AM Peak- 2021

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

AM Peak
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Stop Rate	Eff. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%				v/c	sec				
South: Showground Rd (south)															
1	L2	All MCs	29	0.0	29	0.0	0.330	5.5	LOS A	2.3	16.4	0.25	0.50	0.25	52.3
2	T1	All MCs	380	3.0	380	3.0	0.330	5.2	LOS A	2.3	16.4	0.25	0.50	0.25	52.6
3	R2	All MCs	6	0.0	6	0.0	0.330	7.9	LOS A	2.3	16.4	0.25	0.50	0.25	52.1
3u	U	All MCs	29	3.6	29	3.6	0.330	9.4	LOS A	2.3	16.4	0.25	0.50	0.25	51.9
Approach			445	2.8	445	2.8	0.330	5.5	LOS A	2.3	16.4	0.25	0.50	0.25	52.5
North: Showground Rd (north)															
7	L2	All MCs	7	0.0	7	0.0	0.277	6.3	LOS A	1.7	12.4	0.43	0.55	0.43	51.6
8	T1	All MCs	241	2.2	241	2.2	0.277	6.0	LOS A	1.7	12.4	0.43	0.55	0.43	52.0
9	R2	All MCs	53	2.0	53	2.0	0.277	8.8	LOS A	1.7	12.4	0.43	0.55	0.43	51.3
9u	U	All MCs	1	0.0	1	0.0	0.277	10.2	LOS A	1.7	12.4	0.43	0.55	0.43	51.4
Approach			302	2.1	302	2.1	0.277	6.5	LOS A	1.7	12.4	0.43	0.55	0.43	51.8
West: Faunce St (west)															
10	L2	All MCs	147	0.0	147	0.0	0.323	8.1	LOS A	2.0	13.7	0.62	0.69	0.62	50.1
11	T1	All MCs	6	0.0	6	0.0	0.323	7.8	LOS A	2.0	13.7	0.62	0.69	0.62	50.5
12	R2	All MCs	129	0.0	129	0.0	0.323	10.6	LOS A	2.0	13.7	0.62	0.69	0.62	49.9
12u	U	All MCs	1	0.0	1	0.0	0.323	12.0	LOS A	2.0	13.7	0.62	0.69	0.62	49.9
Approach			284	0.0	284	0.0	0.323	9.3	LOS A	2.0	13.7	0.62	0.69	0.62	50.0
All Vehicles			1032	1.8	1032	1.8	0.330	6.8	LOS A	2.3	16.4	0.40	0.57	0.40	51.6

MOVEMENT SUMMARY

 With Dev Faunce St/Showground Rd - PM Peak 2021

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

PM Peak
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%				v/c	sec				
South: Showground Rd (south)															
1	L2	All MCs	34	0.0	34	0.0	0.297	5.4	LOS A	1.9	13.7	0.22	0.52	0.22	52.1
2	T1	All MCs	300	1.1	300	1.1	0.297	5.1	LOS A	1.9	13.7	0.22	0.52	0.22	52.6
3	R2	All MCs	32	0.0	32	0.0	0.297	7.9	LOS A	1.9	13.7	0.22	0.52	0.22	51.9
3u	U	All MCs	42	0.0	42	0.0	0.297	9.3	LOS A	1.9	13.7	0.22	0.52	0.22	51.9
Approach			407	0.8	407	0.8	0.297	5.8	LOS A	1.9	13.7	0.22	0.52	0.22	52.4
North: Showground Rd (north)															
7	L2	All MCs	12	0.0	12	0.0	0.284	6.0	LOS A	1.7	12.1	0.37	0.54	0.37	51.8
8	T1	All MCs	274	0.0	274	0.0	0.284	5.7	LOS A	1.7	12.1	0.37	0.54	0.37	52.3
9	R2	All MCs	40	0.0	40	0.0	0.284	8.5	LOS A	1.7	12.1	0.37	0.54	0.37	51.6
9u	U	All MCs	9	0.0	9	0.0	0.284	9.9	LOS A	1.7	12.1	0.37	0.54	0.37	51.6
Approach			335	0.0	335	0.0	0.284	6.1	LOS A	1.7	12.1	0.37	0.54	0.37	52.2
West: Faunce St (west)															
10	L2	All MCs	138	0.0	138	0.0	0.220	7.6	LOS A	1.2	8.6	0.55	0.66	0.55	50.7
11	T1	All MCs	1	0.0	1	0.0	0.220	7.3	LOS A	1.2	8.6	0.55	0.66	0.55	51.1
12	R2	All MCs	61	0.0	61	0.0	0.220	10.1	LOS A	1.2	8.6	0.55	0.66	0.55	50.5
12u	U	All MCs	1	0.0	1	0.0	0.220	11.5	LOS A	1.2	8.6	0.55	0.66	0.55	50.5
Approach			201	0.0	201	0.0	0.220	8.4	LOS A	1.2	8.6	0.55	0.66	0.55	50.6
All Vehicles			943	0.3	943	0.3	0.297	6.5	LOS A	1.9	13.7	0.34	0.55	0.34	51.9

MOVEMENT SUMMARY

Without Dev Faunce St/Showground Rd - AM Peak - 2031

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

AM Peak
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%				v/c	sec				
South: Showground Rd (south)															
1	L2	All MCs	38	0.0	38	0.0	0.381	5.6	LOS A	2.9	20.5	0.31	0.50	0.31	52.0
2	T1	All MCs	415	3.6	415	3.6	0.381	5.3	LOS A	2.9	20.5	0.31	0.50	0.31	52.4
3	R2	All MCs	8	0.0	8	0.0	0.381	8.1	LOS A	2.9	20.5	0.31	0.50	0.31	51.8
3u	U	All MCs	38	2.8	38	2.8	0.381	9.6	LOS A	2.9	20.5	0.31	0.50	0.31	51.7
Approach			499	3.2	499	3.2	0.381	5.7	LOS A	2.9	20.5	0.31	0.50	0.31	52.3
North: Showground Rd (north)															
7	L2	All MCs	9	0.0	9	0.0	0.380	6.8	LOS A	2.6	18.5	0.53	0.58	0.53	51.2
8	T1	All MCs	314	2.3	314	2.3	0.380	6.5	LOS A	2.6	18.5	0.53	0.58	0.53	51.6
9	R2	All MCs	68	1.5	68	1.5	0.380	9.3	LOS A	2.6	18.5	0.53	0.58	0.53	51.0
9u	U	All MCs	1	0.0	1	0.0	0.380	10.7	LOS A	2.6	18.5	0.53	0.58	0.53	51.0
Approach			393	2.1	393	2.1	0.380	7.0	LOS A	2.6	18.5	0.53	0.58	0.53	51.5
West: Faunce St (west)															
10	L2	All MCs	113	0.0	113	0.0	0.346	8.6	LOS A	2.2	15.1	0.67	0.71	0.67	49.6
11	T1	All MCs	8	0.0	8	0.0	0.346	8.2	LOS A	2.2	15.1	0.67	0.71	0.67	50.0
12	R2	All MCs	168	0.0	168	0.0	0.346	11.0	LOS A	2.2	15.1	0.67	0.71	0.67	49.4
12u	U	All MCs	1	0.0	1	0.0	0.346	12.5	LOS A	2.2	15.1	0.67	0.71	0.67	49.4
Approach			291	0.0	291	0.0	0.346	10.0	LOS A	2.2	15.1	0.67	0.71	0.67	49.5
All Vehicles			1182	2.0	1182	2.0	0.381	7.2	LOS A	2.9	20.5	0.47	0.58	0.47	51.3

MOVEMENT SUMMARY

 Without Dev Faunce St/Showground Rd - PM Peak - 2031

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

PM Peak
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%				v/c	sec				
South: Showground Rd (south)															
1	L2	All MCs	44	0.0	44	0.0	0.363	5.6	LOS A	2.6	18.5	0.28	0.52	0.28	51.9
2	T1	All MCs	346	1.2	346	1.2	0.363	5.2	LOS A	2.6	18.5	0.28	0.52	0.28	52.3
3	R2	All MCs	41	0.0	41	0.0	0.363	8.0	LOS A	2.6	18.5	0.28	0.52	0.28	51.7
3u	U	All MCs	55	0.0	55	0.0	0.363	9.5	LOS A	2.6	18.5	0.28	0.52	0.28	51.7
Approach			486	0.9	486	0.9	0.363	6.0	LOS A	2.6	18.5	0.28	0.52	0.28	52.2
North: Showground Rd (north)															
7	L2	All MCs	15	0.0	15	0.0	0.384	6.4	LOS A	2.6	18.0	0.46	0.56	0.46	51.5
8	T1	All MCs	356	0.0	356	0.0	0.384	6.1	LOS A	2.6	18.0	0.46	0.56	0.46	52.0
9	R2	All MCs	52	0.0	52	0.0	0.384	8.9	LOS A	2.6	18.0	0.46	0.56	0.46	51.3
9u	U	All MCs	13	0.0	13	0.0	0.384	10.3	LOS A	2.6	18.0	0.46	0.56	0.46	51.3
Approach			435	0.0	435	0.0	0.384	6.5	LOS A	2.6	18.0	0.46	0.56	0.46	51.9
West: Faunce St (west)															
10	L2	All MCs	136	0.0	136	0.0	0.254	8.2	LOS A	1.5	10.3	0.62	0.69	0.62	50.2
11	T1	All MCs	1	0.0	1	0.0	0.254	7.9	LOS A	1.5	10.3	0.62	0.69	0.62	50.6
12	R2	All MCs	79	0.0	79	0.0	0.254	10.6	LOS A	1.5	10.3	0.62	0.69	0.62	50.0
12u	U	All MCs	1	0.0	1	0.0	0.254	12.1	LOS A	1.5	10.3	0.62	0.69	0.62	50.0
Approach			217	0.0	217	0.0	0.254	9.1	LOS A	1.5	10.3	0.62	0.69	0.62	50.1
All Vehicles			1138	0.4	1138	0.4	0.384	6.8	LOS A	2.6	18.5	0.41	0.57	0.41	51.6

MOVEMENT SUMMARY

 With Dev Faunce St/Showground Rd - AM Peak - 2031

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

AM Peak
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%				v/c	sec				
South: Showground Rd (south)															
1	L2	All MCs	38	0.0	38	0.0	0.424	5.6	LOS A	3.4	24.1	0.32	0.50	0.32	52.0
2	T1	All MCs	476	3.1	476	3.1	0.424	5.4	LOS A	3.4	24.1	0.32	0.50	0.32	52.4
3	R2	All MCs	8	0.0	8	0.0	0.424	8.1	LOS A	3.4	24.1	0.32	0.50	0.32	51.8
3u	U	All MCs	38	2.8	38	2.8	0.424	9.6	LOS A	3.4	24.1	0.32	0.50	0.32	51.7
Approach			560	2.8	560	2.8	0.424	5.7	LOS A	3.4	24.1	0.32	0.50	0.32	52.3
North: Showground Rd (north)															
7	L2	All MCs	9	0.0	9	0.0	0.381	6.8	LOS A	2.6	18.8	0.54	0.58	0.54	51.2
8	T1	All MCs	314	2.3	314	2.3	0.381	6.5	LOS A	2.6	18.8	0.54	0.58	0.54	51.6
9	R2	All MCs	68	1.5	68	1.5	0.381	9.3	LOS A	2.6	18.8	0.54	0.58	0.54	51.0
9u	U	All MCs	1	0.0	1	0.0	0.381	10.7	LOS A	2.6	18.8	0.54	0.58	0.54	51.0
Approach			393	2.1	393	2.1	0.381	7.0	LOS A	2.6	18.8	0.54	0.58	0.54	51.5
West: Faunce St (west)															
10	L2	All MCs	174	0.0	174	0.0	0.442	9.6	LOS A	3.0	21.3	0.75	0.74	0.77	49.0
11	T1	All MCs	8	0.0	8	0.0	0.442	9.3	LOS A	3.0	21.3	0.75	0.74	0.77	49.5
12	R2	All MCs	168	0.0	168	0.0	0.442	12.1	LOS A	3.0	21.3	0.75	0.74	0.77	48.9
12u	U	All MCs	1	0.0	1	0.0	0.442	13.5	LOS A	3.0	21.3	0.75	0.74	0.77	48.9
Approach			352	0.0	352	0.0	0.442	10.8	LOS A	3.0	21.3	0.75	0.74	0.77	49.0
All Vehicles			1304	1.9	1304	1.9	0.442	7.5	LOS A	3.4	24.1	0.50	0.59	0.51	51.1

MOVEMENT SUMMARY

 With Dev Faunce St/Showground Rd - PM Peak - 2031

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

PM Peak
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%				v/c	sec				
South: Showground Rd (south)															
1	L2	All MCs	44	0.0	44	0.0	0.387	5.6	LOS A	2.9	20.3	0.29	0.52	0.29	51.9
2	T1	All MCs	380	1.1	380	1.1	0.387	5.3	LOS A	2.9	20.3	0.29	0.52	0.29	52.3
3	R2	All MCs	41	0.0	41	0.0	0.387	8.0	LOS A	2.9	20.3	0.29	0.52	0.29	51.7
3u	U	All MCs	55	0.0	55	0.0	0.387	9.5	LOS A	2.9	20.3	0.29	0.52	0.29	51.7
Approach			520	0.8	520	0.8	0.387	5.9	LOS A	2.9	20.3	0.29	0.52	0.29	52.2
North: Showground Rd (north)															
7	L2	All MCs	15	0.0	15	0.0	0.384	6.4	LOS A	2.6	18.1	0.46	0.56	0.46	51.5
8	T1	All MCs	356	0.0	356	0.0	0.384	6.1	LOS A	2.6	18.1	0.46	0.56	0.46	52.0
9	R2	All MCs	52	0.0	52	0.0	0.384	8.9	LOS A	2.6	18.1	0.46	0.56	0.46	51.3
9u	U	All MCs	13	0.0	13	0.0	0.384	10.3	LOS A	2.6	18.1	0.46	0.56	0.46	51.3
Approach			435	0.0	435	0.0	0.384	6.5	LOS A	2.6	18.1	0.46	0.56	0.46	51.9
West: Faunce St (west)															
10	L2	All MCs	168	0.0	168	0.0	0.302	8.6	LOS A	1.8	12.7	0.66	0.70	0.66	50.0
11	T1	All MCs	1	0.0	1	0.0	0.302	8.3	LOS A	1.8	12.7	0.66	0.70	0.66	50.4
12	R2	All MCs	79	0.0	79	0.0	0.302	11.0	LOS A	1.8	12.7	0.66	0.70	0.66	49.8
12u	U	All MCs	1	0.0	1	0.0	0.302	12.5	LOS A	1.8	12.7	0.66	0.70	0.66	49.8
Approach			249	0.0	249	0.0	0.302	9.4	LOS A	1.8	12.7	0.66	0.70	0.66	49.9
All Vehicles			1204	0.3	1204	0.3	0.387	6.9	LOS A	2.9	20.3	0.43	0.57	0.43	51.6

Appendix F

2021 Access/ Showground Road

2031 Access/ Showground Road

SIDRA OUTPUTS

MOVEMENT SUMMARY

Gosford Health Hub - Showground Rd AM Peak 2021

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

AM Peak with Development

Site Category: (None)

Stop (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Government Road (south)															
4	L2	All MCs	122	0.0	122	0.0	0.303	5.6	LOS A	0.0	0.0	0.00	0.13	0.00	56.3
5	T1	All MCs	457	2.0	457	2.0	0.303	0.1	LOS A	0.0	0.0	0.00	0.13	0.00	58.7
Approach			579	1.6	579	1.6	0.303	1.3	NA	0.0	0.0	0.00	0.13	0.00	58.2
North: Government Rd (north)															
11	T1	All MCs	313	2.0	313	2.0	0.162	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
12	R2	All MCs	122	0.0	122	0.0	0.126	8.0	LOS A	0.5	3.7	0.56	0.76	0.56	50.8
Approach			435	1.4	435	1.4	0.162	2.3	NA	0.5	3.7	0.16	0.21	0.16	57.0
West: Access to Health Hub															
1	L2	All MCs	163	0.0	163	0.0	0.188	10.6	LOS A	0.8	5.3	0.52	0.93	0.52	50.0
Approach			163	0.0	163	0.0	0.188	10.6	LOS A	0.8	5.3	0.52	0.93	0.52	50.0
All Vehicles			1177	1.3	1177	1.3	0.303	2.9	NA	0.8	5.3	0.13	0.27	0.13	56.5

MOVEMENT SUMMARY

Gosford Health Hub - Showground Rd PM Peak 2021

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

PM Peak with Development

Site Category: (None)

Stop (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Government Road (south)															
4	L2	All MCs	66	0.0	66	0.0	0.225	5.6	LOS A	0.0	0.0	0.00	0.09	0.00	56.6
5	T1	All MCs	365	2.0	365	2.0	0.225	0.1	LOS A	0.0	0.0	0.00	0.09	0.00	59.0
Approach			432	1.7	432	1.7	0.225	0.9	NA	0.0	0.0	0.00	0.09	0.00	58.7
North: Government Rd (north)															
11	T1	All MCs	349	2.0	349	2.0	0.182	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
12	R2	All MCs	66	0.0	66	0.0	0.057	7.0	LOS A	0.2	1.7	0.47	0.66	0.47	51.4
Approach			416	1.7	416	1.7	0.182	1.2	NA	0.2	1.7	0.07	0.10	0.07	58.4
West: Access to Health Hub															
1	L2	All MCs	200	0.0	200	0.0	0.205	10.0	LOS A	0.9	6.0	0.47	0.90	0.47	50.4
Approach			200	0.0	200	0.0	0.205	10.0	LOS A	0.9	6.0	0.47	0.90	0.47	50.4
All Vehicles			1047	1.4	1047	1.4	0.225	2.7	NA	0.9	6.0	0.12	0.25	0.12	56.8

MOVEMENT SUMMARY

Gosford Health Hub - Showground Rd AM Peak - 2031

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

AM Peak with Development

Site Category: (None)

Stop (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Government Road (south)															
4	L2	All MCs	122	0.0	122	0.0	0.374	5.6	LOS A	0.0	0.0	0.00	0.10	0.00	56.4
5	T1	All MCs	594	2.0	594	2.0	0.374	0.1	LOS A	0.0	0.0	0.00	0.10	0.00	58.8
Approach			716	1.7	716	1.7	0.374	1.1	NA	0.0	0.0	0.00	0.10	0.00	58.4
North: Government Rd (north)															
11	T1	All MCs	406	2.0	406	2.0	0.211	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
12	R2	All MCs	122	0.0	122	0.0	0.154	9.2	LOS A	0.6	4.3	0.62	0.83	0.62	50.0
Approach			528	1.5	528	1.5	0.211	2.2	NA	0.6	4.3	0.14	0.19	0.14	57.3
West: Access to Health Hub															
1	L2	All MCs	163	0.0	163	0.0	0.230	11.9	LOS A	0.9	6.3	0.59	0.98	0.60	49.2
Approach			163	0.0	163	0.0	0.230	11.9	LOS A	0.9	6.3	0.59	0.98	0.60	49.2
All Vehicles			1407	1.4	1407	1.4	0.374	2.7	NA	0.9	6.3	0.12	0.24	0.12	56.7

MOVEMENT SUMMARY

Gosford Health Hub - Showground Rd PM Peak - 2031

Output produced by SIDRA INTERSECTION Version: 9.1.2.202

PM Peak with Development

Site Category: (None)

Stop (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total	HV]	[Total	HV]				[Veh.	Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Government Road (south)															
4	L2	All MCs	66	0.0	66	0.0	0.282	5.6	LOS A	0.0	0.0	0.00	0.07	0.00	56.7
5	T1	All MCs	475	2.0	475	2.0	0.282	0.1	LOS A	0.0	0.0	0.00	0.07	0.00	59.2
Approach			541	1.8	541	1.8	0.282	0.8	NA	0.0	0.0	0.00	0.07	0.00	58.9
North: Government Rd (north)															
11	T1	All MCs	455	2.0	455	2.0	0.236	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
12	R2	All MCs	66	0.0	66	0.0	0.065	7.7	LOS A	0.3	1.9	0.53	0.71	0.53	51.0
Approach			521	1.7	521	1.7	0.236	1.0	NA	0.3	1.9	0.07	0.09	0.07	58.6
West: Access to Health Hub															
1	L2	All MCs	200	0.0	200	0.0	0.236	10.8	LOS A	1.0	6.8	0.54	0.94	0.54	49.9
Approach			200	0.0	200	0.0	0.236	10.8	LOS A	1.0	6.8	0.54	0.94	0.54	49.9
All Vehicles			1262	1.5	1262	1.5	0.282	2.5	NA	1.0	6.8	0.11	0.22	0.11	57.1