

A photograph of a modern, multi-story apartment building with a light-colored facade and large glass windows. The building is situated on a grassy bank overlooking a body of water. In the foreground, there is a wooden pergola structure and some reeds in the water.

TRAFFIC & PARKING ASSESSMENT

PAVILION APARTMENTS – STAGE 2

**LOT 1016 IN DP1298409
114 VINTAGE DRIVE, POKOLBIN**

PREPARED FOR: STEVENS GROUP PTY LTD

MARCH 2024

24/008

**TRAFFIC AND PARKING ASSESSMENT
STEVENS GROUP PTY LTD****PAVILION APARTMENTS STAGE 2
LOT 1016 IN DP 1289409
114 VINTAGE DRIVE, POKOLBIN**

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

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1.0 INTRODUCTION

Intersect Traffic Pty Ltd has been engaged by Stevens Group Pty Ltd to prepare a Traffic and Parking Assessment for Stage 2 of the Pavilion Apartments on part of Lot 1016 in DP 1289409, 114 Vintage Drive, Pokolbin at The Vintage residential estate. The proposal seeks approval for a residential flat development comprising three separate residential flat buildings with twenty-two (22) three storey units that are within the proposed The Vintage Commercial Precinct Stage 2. The plans of the proposed works are shown in **Attachment A**.

The assessment will also consider the traffic impact of two other known developments proposed in The Vintage near the site which are not yet constructed. They are the Precinct G community title subdivision (36 Lots) to the north of the site and the Hawkins Land community title residential subdivision (76 Lots). The assessment will review the adequacy of the Wine Country Drive / McDonalds Road T-intersection and the McDonalds Road / Vintage Drive T-intersection to cater for the three developments and therefore determine whether the construction of the roundabout intersection proposed for the Wine Country Drive / Vintage Drive intersection as part of the masterplan is necessary at this stage.

This report is required to support a planning proposal and a development application to Cessnock City Council for the works and allow the Council to assess the proposal in respect of its impact on the local and state road network. This report presents the findings of the traffic and parking assessment and includes the following:

1. An outline of the existing situation near the site,
2. An assessment of the traffic impacts 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 standards and requirements.
4. Presentation of conclusions and recommendations.

2.0 SITE DESCRIPTION

The subject site is located on the southern side of Vintage Drive, Pokolbin approximately 270 metres west of Wine Country Drive, although there is no public road access from Wine Country Drive at present and approximately 1.3 kilometres east of McDonalds Road. Adjoining the site to the west of the land is the Pavilion Apartments Stage 1 and the first stage of the commercial village (Vintage SG2) including The Vintage Real Estate building. To the north and east of the proposed development site is cleared land earmarked for residential subdivision and the Chateau Elan and the Vintage Golf Club. To the south of the site are residential dwellings part of The Vintage residential estate. The site is vacant and cleared land. **Figure 1** below shows the proposed location of the site among the surrounding developments and open space.

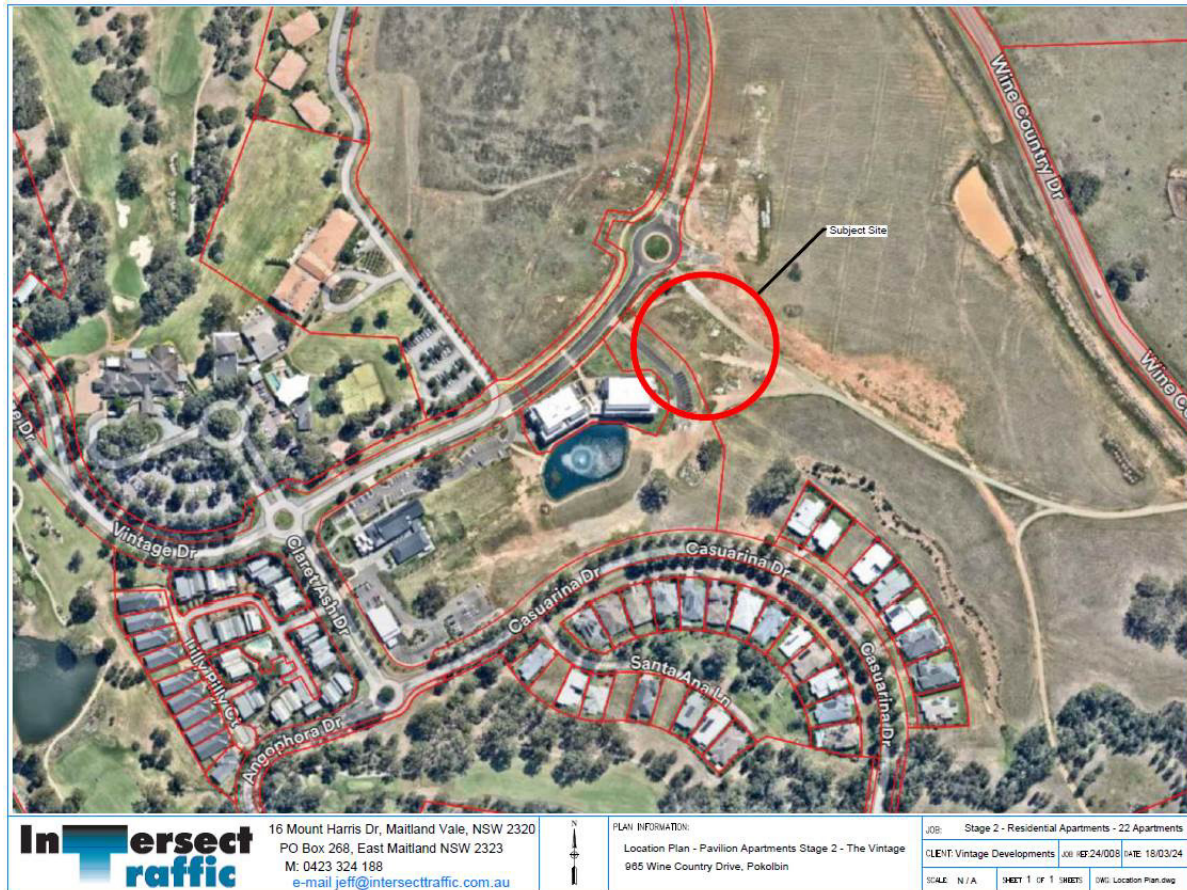


Figure 1 – Site Location

The site has the following property descriptors:

- ◆ Formal land title of Lot 1016 in DP 1289409,
- ◆ Street address of 114 Vintage Drive, Pokolbin,
- ◆ Overall development site area of approximately 6,093 m², and
- ◆ Land zoning of SP3: Tourist – pursuant to the Cessnock LEP (2011).

A combined entry / exit concrete and asphalt vehicular access at Vintage Drive currently exists at the western end of the proposed development. **Photographs 1 & 2** below show the existing cleared site and the existing vehicular access crossing at Vintage Drive approximately 270 metres north-east of Claret Ash Drive.



Photograph 1 – Cleared site adjacent to Pavilion Apartments Stage 1



Photograph 2 – Existing vehicular access off Vintage Drive

3.0 EXISTING ROAD NETWORK

3.1 Wine Country Drive

Wine Country Drive near the site is sealed rural road and a classified main road (MR220) providing a single travel lane in both directions with sealed shoulders and table drains as well as widening at intersections. It links the New England Highway at Branxton to Cessnock. It is under the care and control of the NSW Roads & Maritime Services (RMS). Centreline and edge line markings exist on McDonalds Road north and south of McDonalds Road. Lane widths vary between 3.3 to 3.8 metres wide and shoulders widths generally vary between 1.8 metres and 2.4 metres however the south bound shoulder of Wine Country Drive at the intersection with McDonalds Road is 4 metres wide. At the time of inspection Wine Country Drive was found to be in good condition. A 90 km/h speed zone exists near the site. **Photograph 3** below shows Wine Country Drive at the McDonald's Road intersection.



Photograph 3 – Wine Country Drive near the site

3.2 McDonalds Road

McDonalds Road near the site is a sealed rural collector road providing a single travel lane in each direction with sealed shoulders and longitudinal table drains along both sides of the road. Lane widths are between 3.0 and 3.5 metres with 1-metre-wide sealed shoulders and an 80 km/hr speed zoning applies near the site. The road as a local road is under the care and control of Cessnock City Council and at the time of inspection was found to be in good condition. **Photograph 4** below shows McDonalds Road at its intersection with Vintage Drive.



Photograph 4 – McDonalds Road at its intersection with Vintage Drive

3.3 Vintage Drive

Vintage Drive is a local road under a functional road hierarchy providing vehicular access to properties along its length as well as collecting traffic from The Vintage residential estate and distributing it to McDonald's Road. As a local road it is under the care and control of Cessnock City Council. Near the site Vintage Drive is a two-lane two-way sealed road with kerb & gutter and parking on both sides of the road. It has a carriageway width of 10 metres and a speed limit of 50 km/h. **Photograph 5** below shows that Vintage Drive is in good condition.



Photograph 5 – Vintage Drive fronting the site.

4.0 ROAD NETWORK IMPROVEMENTS

There are no known road upgrades near the site that will increase the capacity of the road network.

5.0 TRAFFIC VOLUMES

Northern Transport Planning and Engineering on behalf of Intersect Traffic carried out manual traffic counts at the McDonalds Road / Wine Country Drive give way-controlled T-intersection on Friday 24th June 2022 and Saturday 25th June 2022 for another project in the area. These counts are still considered relevant for assessment purposes. The peak hours determined from these counts were as follows;

- Friday 24th June 2022 – 8.00 am to 9 am,
- Friday 24th June 2022 – 4.30 pm to 5.30 pm, and
- Saturday 25th June 2022 – 11.30 am to 12.30 pm.

Intersect Traffic also undertook manual traffic counts at the McDonalds Road / Vintage Drive intersection on Thursday 31st August 2023 and Saturday 2nd September 2023 also for another project in The Vintage. The peak hours surveyed for these counts were as follows;

- Thursday 31st August 2023 – 8.00 am to 9 am,
- Thursday 31st August 2023 – 3.00 pm to 4.00 pm, and
- Saturday 2nd September 2023 – 11.45 am to 12.45 pm.

The result sheets for these counts are provided within **Attachment B** and the resultant peak two-way mid-block traffic volumes extrapolated to 2024 and 2034 utilising a 2 % background traffic growth considered suitable for the area are shown in **Table 1** below.

Table 1 – Existing and future two-way mid-block traffic volume data.

Road	Section	2024			2034		
		AM (vtph)	PM (vtph)	Weekend (vtph)	AM (vtph)	PM (vtph)	Weekend (vtph)
Wine Country Drive	North of McDonalds Road	501	574	555	611	700	676
Wine Country Drive	South of McDonalds Road	498	570	487	578	695	594
McDonalds Road	West of Wine Country Drive	205	246	272	250	299	331
McDonalds Road	North of Vintage Drive	160	139	184	195	169	224
McDonalds Road	South of Vintage Drive	154	141	182	188	172	221
Vintage Road	East of McDonalds Road	197	163	196	240	199	239

6.0 ROAD CAPACITY

From Tables 4.3 and 4.5 of the RTA's Guide to Traffic Generating Developments (see below) as urban and rural roads Wine Country Drive, McDonald's Road and Vintage Drive would be expected to have two-way mid-block road capacities in excess of 1,200 vtph and more likely closer to 1,800 vtph. Therefore, it can be seen that as the existing and future traffic volumes on McDonald's Road and Vintage Drive are well below 1,200 vtph it can be concluded there is significant spare capacity within the local road network to cater for new development.

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

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

Table 4.5
peak hour flow on two-lane rural roads (veh/hr)
(Design speed of 100km/hr)

Terrain	Level of Service	Percent of Heavy Vehicles			
		0	5	10	15
Level	B	630	590	560	530
	C	1030	970	920	870
	D	1630	1550	1480	1410
	E	2630	2500	2390	2290
Rolling	B	500	420	360	310
	C	920	760	650	570
	D	1370	1140	970	700
	E	2420	2000	1720	1510
Mountainous	B	340	230	180	150
	C	600	410	320	260
	D	1050	680	500	400
	E	2160	1400	1040	820

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

7.0 ALTERNATE TRANSPORT MODES

7.1 – Public Transport

Rover Coaches provide public bus service routes from the Cessnock area, whilst the nearest service Route 167 (Cessnock – Allandale – Nulkaba – north west Cessnock – Cessnock) ends approximately 10 kilometres south of the site at Nulkaba. It operates 3 daily services Monday to Friday only. The bus service provides a connection at the Cessnock bus interchange for other services 161 – 168, 171 and 172 providing good access for surrounding areas including Kearsley, Millfield, Western, Kurri Kurri, Pelaw Main, Stanford Merthyr, Saddlers Ridge, Maitland, Morisset, University of Newcastle, and Cessnock.

The public transport service is generally not suitable for use for the site however it could be expanded as development occurs in the area. At present motorised transport from the site to the nearest bus stop is the best option to connect to the bus route 167 service and for other bus connections to local areas and also to rail services at Maitland, Morisset, and Cessnock. School buses to a myriad of Hunter schools service the nearby residential development and is adequate

for the area. **Figure 2** below shows the existing Rover Coaches local bus routes south of the development site.

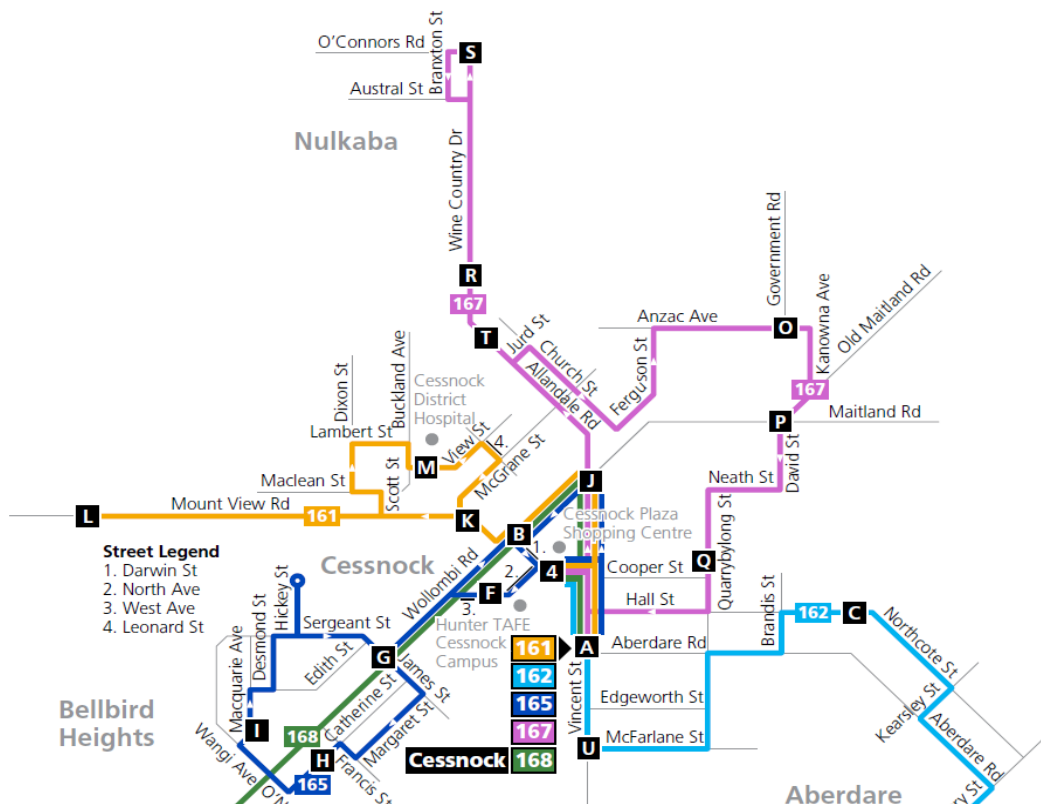


Figure 3 – Bus Routes south of the site

7.2 – Pedestrian and Cycleway Facilities

Currently there are concrete shared pathways and pedestrian road crossings and pedestrian refuges in Vintage Drive and Claret Ash Drive adjacent to the development. The shared pathways are constructed of concrete with exposed aggregate surface approximately 2.5 metres in width and the pedestrian refuges and/or road crossings of concrete pavers vary between 2.5 and 3.0 metres in width. The pathways extend in many directions from the site and form a part of a masterplan network of pedestrian and cycleway facilities throughout 'The Vintage'. This theme will continue in future sections of the development. The existing shared pathway facilities provide excellent walking and cycling areas at the frontage to the development site and the surrounding adjoining streets. Sealed footpath areas do not exist on McDonalds Road or on the main road (Wine Country Drive) near the site as depicted in **Photographs 3 & 4** above, which is typical of the rural style of the area. **Photographs 6 & 7** below show a typical urban shared pathway and shared refuge / crossing near the development site.



Photograph 6 – Shared pathway near the site



Photograph 7 – Shared refuge and road crossing near the site

8.0 DEVELOPMENT PROPOSAL

The proposed development is for three residential flat buildings comprising 22 units. A total of 43 on-site car parking spaces are proposed in basement level car parks for the buildings accessed from the existing access road off Vintage Drive via combined entry / exit driveways. The proposed development specifically involves the following:

- ◆ Consolidation of the development area into 1 lot,
- ◆ Earthworks and services provision on the site,
- ◆ Construction of 2 - two-storey residential flat building (Buildings A and C) and 1 – three-storey residential flat building comprising:
 - 2 – two-bedroom units, and
 - 20 – three-bedroom units.
- ◆ On-site parking for 43 cars with each unit in Buildings A and C providing garages to cater for 2 motor vehicles and a golf cart,
- ◆ Storage for golf carts (within the garages in Buildings A and C and within 8 golf cart garages in Building B),
- ◆ Provision of two entry/exit vehicular accesses to the access road from Vintage Drive, approximately 6-metres-wide, with Buildings B and C sharing an access driveway; and
- ◆ Provision of footpath, landscaping and drainage to Cessnock City Council requirements and The Vintage masterplan.

The development concept plans are shown in **Attachment A**.

9.0 TRAFFIC GENERATION

The *RTA's Guide to Traffic Generating Development's* provides specific advice on the traffic generation potential of various land uses. In respect to medium density residential development the guide provides the following advice.

For smaller 1-bedroom and 2-bedroom units.

Daily vehicle trips = 4 – 5 per dwelling.

Weekday peak hour vehicle trips = 0.4 – 0.5 per dwelling.

For 3-bedroom and more units

Daily vehicle trips = 5 – 6.5 per dwelling.

Weekday peak hour vehicle trips = 0.5 – 0.65 per dwelling.

Therefore, based on the above maximum rates the peak hour traffic generation from the proposed subdivision can be estimated as follows (rounded up):

Daily trips	= 20 x 6.5 + 2 x 5 vtpd = 140 vtpd.
Weekday AM & PM peak hour trips	= 20 x 0.65 vtph + 2 x 0.5 = 14 vtph.

This additional traffic needs to be distributed through the road network and the likely development distribution adopted for this assessment is as follows:

- ◆ In the AM peak 80% of traffic is outbound and 20% of traffic is inbound,
- ◆ In the PM peak 30% of traffic is outbound and 70% of traffic is inbound,
- ◆ In the weekend peak (PM) 50% of traffic is outbound and 50% of traffic is inbound,

- ♦ Traffic at the McDonald's Road / Vintage Drive intersection will have an origin / destination 60 % north and 40 % south.
- ♦ Traffic at Wine Country Drive and McDonalds Road intersection will have an origin / destination 60% to the north and 40% to the south.

Whilst there may be some variations to the proposed traffic distributions than stated above their impact is considered insignificant. The resulting traffic distributions at the Wine Country Drive / McDonalds Road intersection and the McDonalds Road / Vintage Drive intersection are shown below in **Figure 3**.

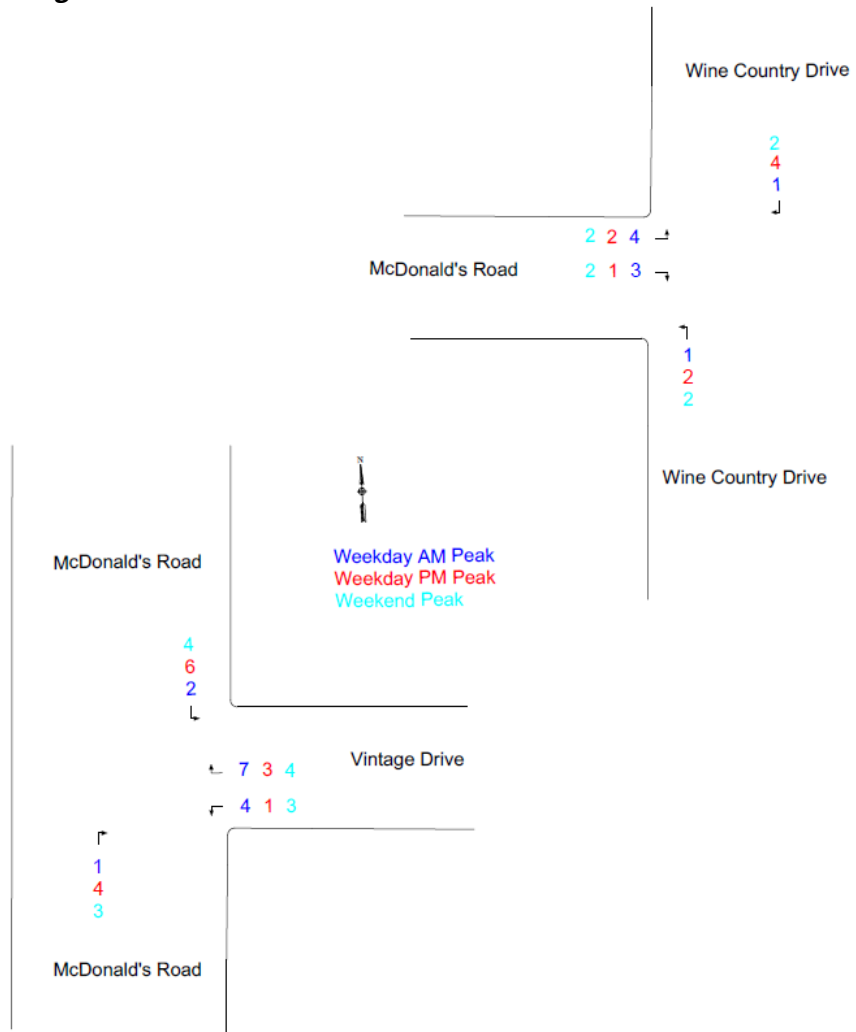


Figure 3 – Pavilion Apartments Stage 2 - Trip Distribution

The **other known proposed development** impacting on the Wine Country Drive / McDonalds Road intersection and the McDonalds Road / Vintage Drive intersection that are not yet constructed is the Precinct G Subdivision north of the site providing 36 new community title lots. The likely traffic generation from this proposal obtained from the Traffic Impact Assessment for the development (Intersect Traffic - is shown below in **Figure 4** and has been included in this assessment.

Whilst subdivision of the Hawkins Land east of the site and further development of the commercial area west of the site is likely to occur in the future these developments are yet to be finalised and will be supported by Traffic Impact Assessments that will again review the access intersection at McDonald's Road and the Wine Country Drive / McDonalds Road intersection.

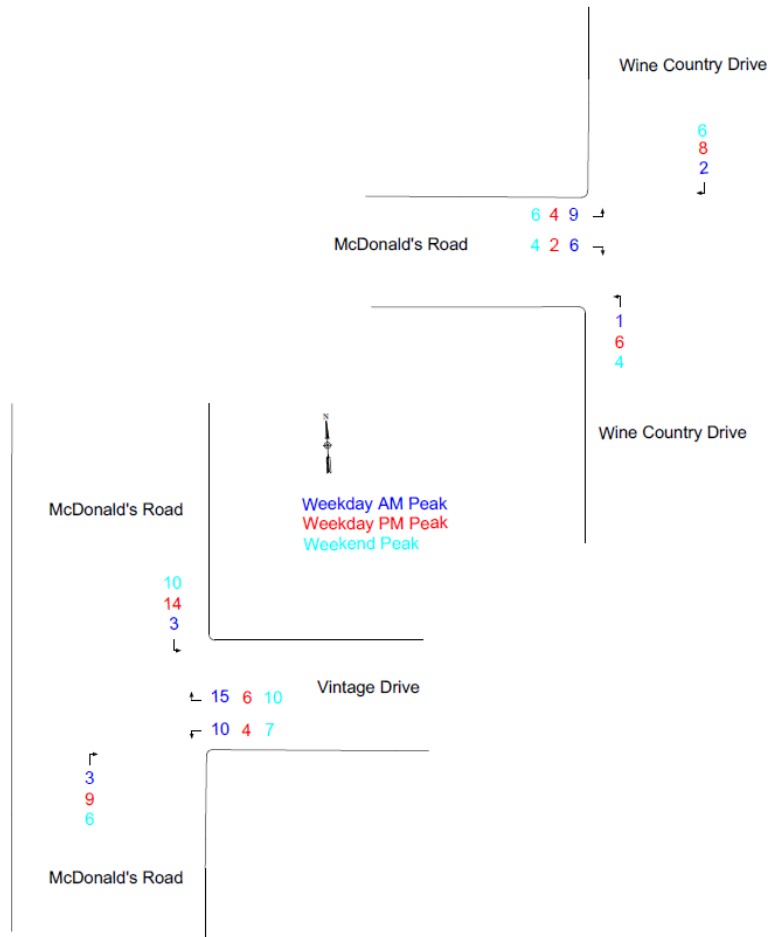


Figure 4 – Development Traffic Trip Distribution – Precinct G subdivision

10.0 TRAFFIC IMPACTS

10.1 Road Network Capacity

This assessment (**Sections 5 and 6**) has determined that the local road network is operating within its two-way mid-block technical capacity as relevant. **Section 9** above has determined that the additional traffic generated by this development and the other known development in The Vintage yet to be constructed (precinct G subdivision) will increase the two-way mid-block peak hour traffic volumes as follows:

- ◆ Wine Country Drive north of McDonalds Road – 16 vtph in the AM peak, 18 vtph in the PM peak and 16 vtph in the weekend peak,
- ◆ Wine Country Drive south of McDonalds Road – 11 vtph in the AM peak, 11 vtph in the PM peak and 12 vtph in the weekend peak,
- ◆ McDonalds Drive north of Vintage Drive – 29 vtph in the AM peak, 29 vtph in the PM peak and 28 vtph in the weekend peak,
- ◆ McDonalds Drive south of Vintage Drive – 18 vtph in the AM peak, 18 vtph in the PM peak and 19 vtph in the weekend peak, and
- ◆ Vintage Drive east of McDonalds Road – 45 vtph in the AM peak and 47 vtph in the PM peak 47 vtph in the weekend peak.

The addition of this traffic onto the 2024 traffic volumes determined in **Section 5** will not result in the two-way mid-block capacity thresholds for all roads to be reached (see **Section 6**). Further,

consideration of likely 2034 traffic volumes indicate the two-way mid-block traffic capacity thresholds will also not be reached for all roads with the addition of the development traffic, as demonstrated in **Table 2**.

Table 2 - Road Capacity Assessment – post development

Road	Section	2024 + development			2034 + development			Development Traffic			Capacity
		AM (vtph)	PM (vtph)	Weekend (vtph)	AM (vtph)	PM (vtph)	Weekend (vtph)	AM (vtph)	PM (vtph)	Weekend (vtph)	
Wine Country Drive	North of McDonalds Road	517	592	571	627	718	692	16	18	16	1200
Wine Country Drive	South of McDonalds Road	509	581	499	589	706	606	11	11	12	1200
McDonalds Road	West of Wine Country Drive	234	275	300	279	328	359	29	29	28	1200
McDonalds Road	North of Vintage Drive	189	168	212	224	198	252	29	29	28	1200
McDonalds Road	South of Vintage Drive	172	159	201	206	190	240	18	18	19	1200
Vintage Road	East of McDonalds Road	242	208	243	285	244	286	45	45	47	1200

Therefore, the proposal will not adversely impact on the two-way mid-block traffic flows on the local and state road network post development and through to at least 2034.

10.2 Intersection Capacity

The main intersections directly impacted upon by the development are the Wine Country Drive / McDonalds Road priority-controlled stop sign T-intersection and the McDonalds Road / Vintage Drive priority-controlled give-way T-intersection. To demonstrate these intersections have been modelled using the SIDRA INTERSECTION 9 intersection analysis program. This software package predicts likely delays, queue lengths and thus levels of service that will occur at intersections. Assessment is then based on the level of service requirements of TfNSW shown below. It is noted that the counts undertaken at the Wine Country Drive / McDonalds Road intersection in late March 2020 were lower than usual due to the impacts of the self-isolation strategies adopted to combat the coronavirus pandemic. Comparison with the counts at McDonalds Road / Vintage Drive intersection undertaken in late January early February 2023 indicated a drop of 20 % in the AM and PM peak flows and 50% in the weekend counts. These drops have been corrected in the mid-block counts by increasing the counts by 20 % and 50 % respectively and in the intersection modelling by undertaking a 20 % sensitivity analysis on the AM and PM counts and a 50 % sensitivity on the weekend counts.

Table 4.2
Level of service criteria for intersections

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

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

Assumptions made in the modelling for both intersections were:

- ◆ The existing intersection layout will remain as per current conditions.
- ◆ Traffic volumes used in the modelling were as collected by Intersect Traffic in August / September 2023 at the McDonalds Road / Vintage Drive intersection and by NTPE in June 2022 at the Wine Country Drive / McDonalds Road.
- ◆ Traffic generated by the developments is distributed as per **Figures 3 & 4**.
- ◆ Future traffic growth predicted using a 2.0% per annum background traffic growth rate as presented above.

The results of the modelling for the 'all vehicles' case with worst average delay and LoS is shown in **Table 3 & 4** below while the Sidra summary tables are provided in **Attachment C**.

Table 3 – Wine Country Drive / McDonalds Rd – Sidra Modelling – Results Summary

Modelled Peak	Degree of Saturation (v/c)	Worst Delay (s)	Worst Level of Service	95% back of queue length (cars)
2024AM	0.193	7.3	A	0.6
2024 PM	0.172	7.6	A	0.5
2024 Weekend	0.187	7.6	A	0.8
2024 AM with development	0.202	7.5	A	0.7
2024 PM with development	0.180	7.8	A	0.6
2024 Weekend with development	0.202	7.8	A	0.9
2034 AM with development	0.251	8.3	A	0.9
2034 PM with development	0.220	8.7	A	0.8
2034 Weekend with development	0.253	8.7	A	1.2

Table 4 – McDonalds Rd/ Vintage Dr – Sidra Modelling – Results Summary

Modelled Peak	Degree of Saturation (v/c)	Worst Delay (s)	Worst Level of Service	95% back of queue length (cars)
2024AM	0.049	6.1	A	0.2
2024 PM	0.037	6.1	A	0.2
2024 Weekend	0.062	6.3	A	0.2
2024 AM with development	0.086	6.3	A	0.4
2024 PM with development	0.060	6.4	A	0.3
2024 Weekend with development	0.079	6.6	A	0.3
2034 AM with development	0.109	6.5	A	0.5
2034 PM with development	0.075	6.6	A	0.3
2034 Weekend with development	0.096	6.9	A	0.3

The modelling results show that both intersections currently operate satisfactorily and will continue to do so post development (all currently known developments) and with 10 years background traffic growth. All critical performance indicators are less than the recommended NSW RMS criteria for good operation. The degree of saturation data indicates the intersections are operating at less than or slightly greater than 10% to 20 % capacity and will continue to do so through to 2030 with and without development. Therefore, post development there is still significant spare capacity for the intersections to cater for a large amount of additional traffic.

Therefore, it is concluded that post development through to 2030 the Wine Country Drive / McDonalds Road priority-controlled T-intersection and the McDonalds Road / Vintage Drive priority-controlled intersection will continue to operate satisfactorily with little or no delay for motorists. As such the current proposed developments will not adversely impact on the operation of these intersections if McDonald's Road access remains the only access to The Vintage residential estate.

10.3 Access

From observation on site, it has been determined that suitable safe sight distance at the proposed vehicular access to the site off the existing private access road to the north-east of the Stage 1 apartments in accordance with Australian Standard requirements (*AS2890.1 – 2004 Parking facilities – Part 1 Off street car parking*) Figure 3.2 Access Sight Distance which is 45 metres minimum for a 50 km/h speed environment is available.

Further as the site provides resident parking (Class 1A) for 25 to 100 vehicles fronting a local road a category 1 access facility only is required. *AS2890.1 – 2004 Parking facilities – Part 1 Off street car parking* denotes a category 1 access as a combined entry / exit 3 metres to 5.5 metres wide.

As the development proposes to provide combined entry / exit accesses each 6.0 metres wide to each building basement car parking areas as well as to Vintage Drive via the existing access road, it is concluded that the proposed access crossings are compliant with *AS2890.1 – 2004 Parking facilities – Part 1 Off-street car parking*.

Overall, it is concluded that the proposed vehicular accesses to the site are suitable and comply with *AS2890.1 – 2004 Parking facilities – Part 1 Off street car parking* and Cessnock City Council requirements.

10.4 On-site car parking

With regard to on-site parking the proposal is generally required to comply with *Chapter 1 - Parking and Access - Part C General Guidelines* of Cessnock City Council's DCP (2010).

As there was not a medium density residential rate provided in the DCP it is considered the car parking rate for medium density residential provided in the *RTA's Guide to Traffic Generating Developments* is appropriate to apply to the development. These rates are as follows.

The recommended minimum number of off-street, resident parking spaces is 1 space per unit plus 1 additional space per each 5 x 2-bedroom unit or part thereof. Also, an additional 1 space per each 2 x 3-bedroom unit or part thereof is recommended. An additional 1 space per 5 units or part thereof for visitor parking is also recommended.

The parking requirement (rounded up) for the proposed development can be calculated as follows:

$$\begin{aligned}\text{Car parking} &= 22 \text{ units} \times 1 + 1 \text{ (2 bedrooms)} + 10 \text{ (3 bedrooms)} + 5 \text{ (visitor)} \\ &= \mathbf{38 \text{ car spaces}}\end{aligned}$$

A review of the development plans has also determined that 43 car parking spaces, with an equivalent number of storage spaces and 14 golf cart or buggy parking spaces are also provided. There is an excess of 5 parking spaces on the RTA Guide's requirements therefore it is reasonable to conclude that sufficient on-site car parking is provided within the development.

On-site parking layout and manoeuvrability should comply with Australian Standard *AS2890.1-2004 Parking facilities – Part 1 - Off-street car parking*. Parking area and parking layout shall comply with *Figure 2.2* of the *Australian Standard 2890.1-2004*. For a User Class 1A this is:

- ◆ *Car parking spaces 2.4 metres wide and 5.4 metres long with 0.3m extra width where adjacent to a wall, and*
- ◆ *A minimum aisle width of 5.8 metres and 1.0-metre-long extension of blind aisles.*

In regard to compliance with *AS2890.1-2004* the following is noted from dimensions provided on the development plans.

- ◆ All car parking spaces are a minimum of 5.4 metres long by 2.4 metres wide,
- ◆ A minimum of 0.3m extra width has been provided where adjacent to a wall,
- ◆ The aisle width is a minimum of 5.8 metres wide, and
- ◆ A minimum of 1.0 metre is available at the end of the blind aisle.

Therefore, the dimensions of car spaces and aisle widths comply with or exceed the minimum requirements.

Overall, it is concluded that the proposed on-site car parking for the Pavilion Apartments would comply with Cessnock City Council's DCP (2010) and Australian Standard *AS2890.1-2004 Parking facilities – Part 1 - Off-street car parking*.

10.5 Servicing

The development has been designed for collection of waste by private contractor using the private access road between the Stage 1 and Stage 2 apartments. Residents will be required to ensure their bins are presented to the access road for collection and returned to their garage (Buildings A and C) or the waste bin area (Building B) after collection. Forward entry and exit to and from the site by the waste service vehicle will occur using the turning area at the end of the access road ensuring safety for vehicles entering and exiting the site during the collection. Waste collection will be programmed to ensure it is carried out during non-peak traffic generating periods for the development.

Overall, it is concluded that the proposed internal road layout and dimensions are suitable for a MRV waste collection vehicle.

10.5 Alternate Transport Modes

The site is currently not serviced by public transport (bus) services however as development increases the nearby Rover Bus service may expand as demand requires. The roads within the Vintage have been built to cater for bus access to facilitate a suitable service to all necessary facilities and locations near the site in the future. The proposed development will not generate a significant increase in patronage of a public transport system, therefore, changes to the existing public transport system or additional infrastructure is not required.

It is not considered that the external pedestrian and bicycle traffic generated by the development would be significant enough as to provide a nexus for the provision of additional external pedestrian and bicycle paths (on or off road) to the site as the existing infrastructure in the vicinity of the site is considered satisfactory for the scale of proposed development.

11.0 CONCLUSIONS

This traffic and parking assessment for Stage 2 of the Pavilion Apartments on part of Lot 1016 in DP 1289409, 114 Vintage Drive, Pokolbin at The Vintage residential estate has determined the following:

- ◆ The proposed development is only likely to generate 140 vtpd, 14 vtpm during the weekday AM and PM peak periods as well as the weekend lunchtime peak traffic period.
- ◆ The local road network around the site has sufficient spare capacity to cater for the development without the need to upgrade the road network.
- ◆ Sidra Intersection modelling of the Wine Country Drive / McDonalds Road priority-controlled T-intersection and the McDonalds Road / Vintage Drive priority-controlled T-intersection will continue to operate satisfactorily with the additional development traffic through to at least 2034. Therefore, there is no warrant or need to construct a roundabout access to The Vintage off Wine Country Drive at this stage. This will need to be further reviewed with future development applications within The Vintage.
- ◆ The proposed development therefore does not adversely impact on the local and state road network with the current access arrangements off McDonald's Road only remaining in place.
- ◆ The proposed vehicular accesses to the site and buildings are suitable and comply with *AS2890.1 – 2004 Parking facilities – Part 1 Off street car parking* requirements.
- ◆ Sufficient on-site car parking is provided to meet the requirements of *the RTA's Guide to Traffic Generating Developments (2002)* in the absence of a relevant car parking rate within the Cessnock DCP.
- ◆ The proposed on-site car parking layout is suitable and complies with *AS2890.1 – 2004 Parking facilities – Part 1 Off street car parking*.

- ◆ The proposed development will not generate a significant increase in patronage of a public transport system, therefore, changes to the existing public transport system or additional infrastructure is not required.
- ◆ The external pedestrian and bicycle traffic generated by the development would not be significant enough as to provide a nexus for the provision of additional external pedestrian and bicycle paths (on or off road) to the site as the existing infrastructure in the vicinity of the site is considered satisfactory for the scale of proposed development.

12.0 RECOMMENDATION

Having carried out this traffic and parking assessment for Stage 2 of the Pavilion Apartments on part of Lot 1016 in DP 1289409, 114 Vintage Drive, Pokolbin at The Vintage residential estate it is recommended that the proposal can be supported from a traffic and parking perspective as the proposal does not adversely impact on the local and state road network and complies with the requirements of Cessnock City Council, Australian Standards and TfNSW.

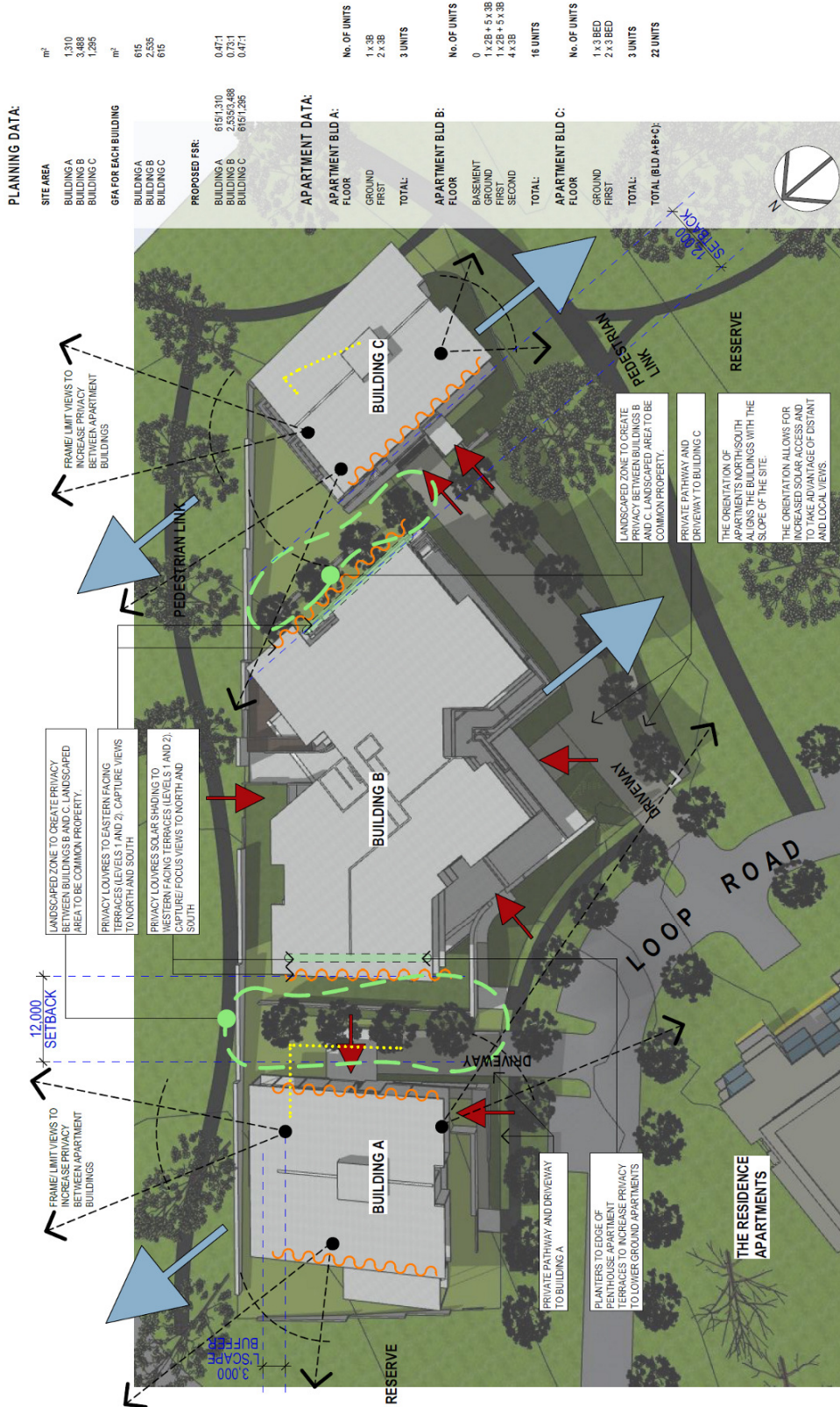


JR Garry BE (Civil), Masters of Traffic
Director
Intersect Traffic Pty Ltd



ATTACHMENT A

DEVELOPMENT PLANS





VINTAGE STAGE 02 : BLD B - BASEMENT FLOOR PLAN

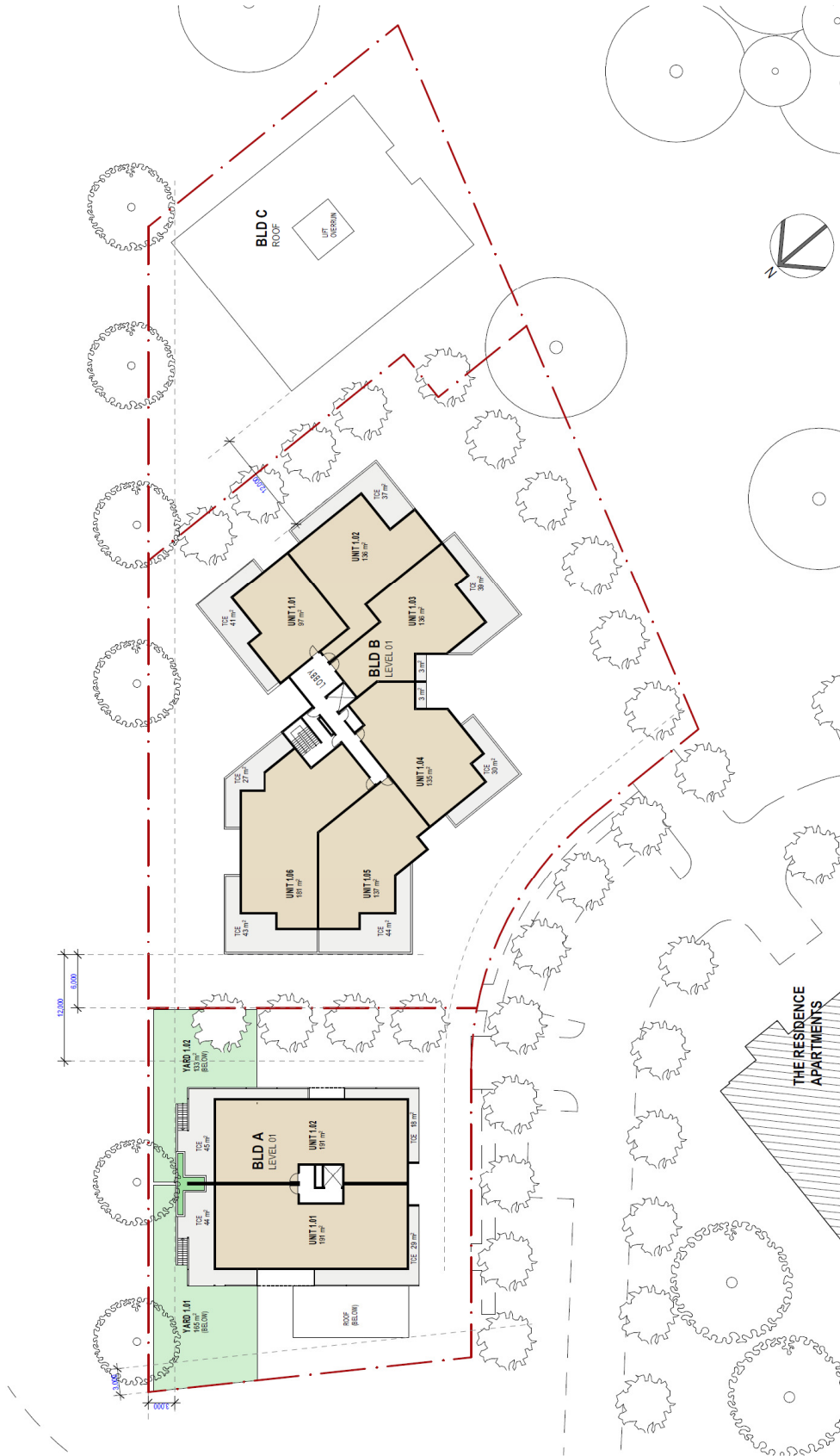
14236 - A102 - Rev. C - 01 December 2023
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1:400 @ A3



VINTAGE STAGE 02 : BLD B - GROUND FLOOR PLAN

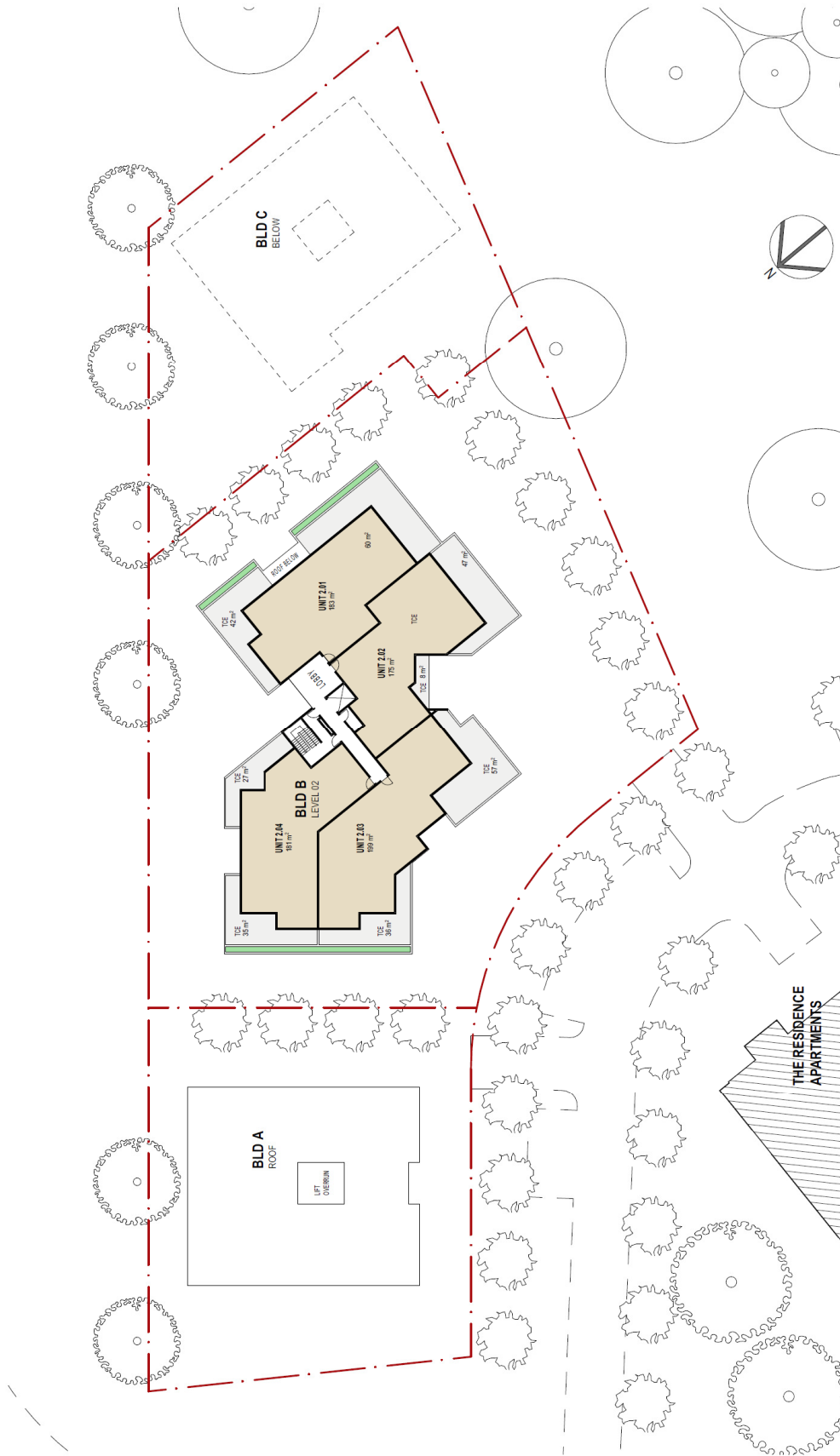
14326 - A103 - Rev C - 01 December 2023
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VINTAGE STAGE 02 : BLD B - LEVEL 01 FLOOR PLAN

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1:400 @ A3



Integrity
Innovation
Inspiration

EJE

VINTAGE STAGE 02 : BLD B - PENTHOUSE FLOOR PLAN

1:400 @ A3 - 10/05/2021 - 10/05/2021 - 10/05/2021
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ATTACHMENT B

TRAFFIC COUNT DATA

24/6/2022 - WINE COUNTRY DVE / McDONALDS RD, POKOLBIN

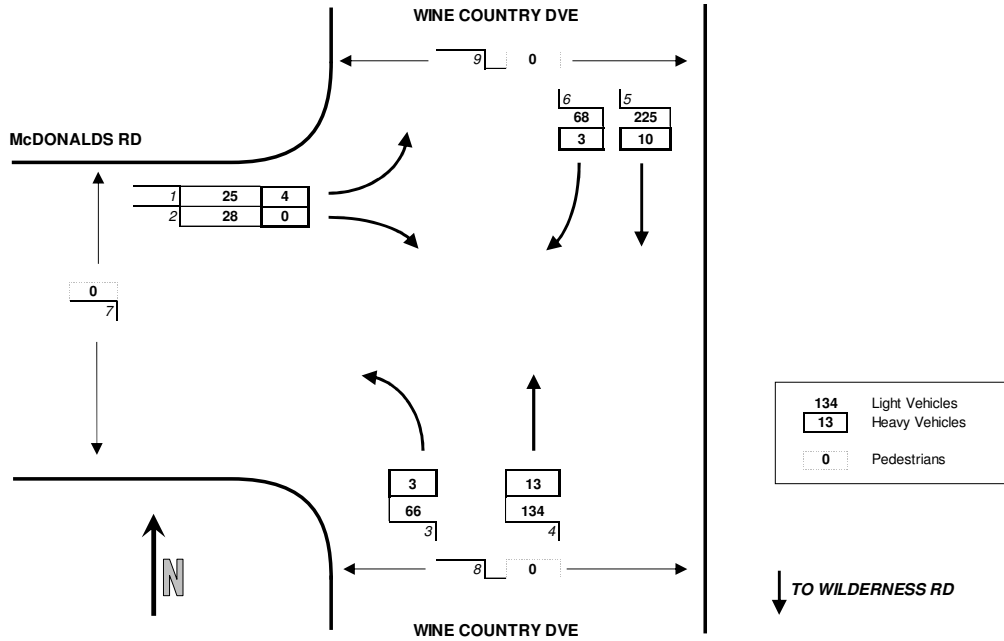
9:00 <<< HOUR ENDING

Friday

Summary:

WINE COUNTRY DVE / McDONALDS RD

546	Total Light Vehicles
33	Total Heavy Vehicles
0	Total Pedestrians



24/6/2022 - WINE COUNTRY DVE / McDONALDS RD, POKOLBIN

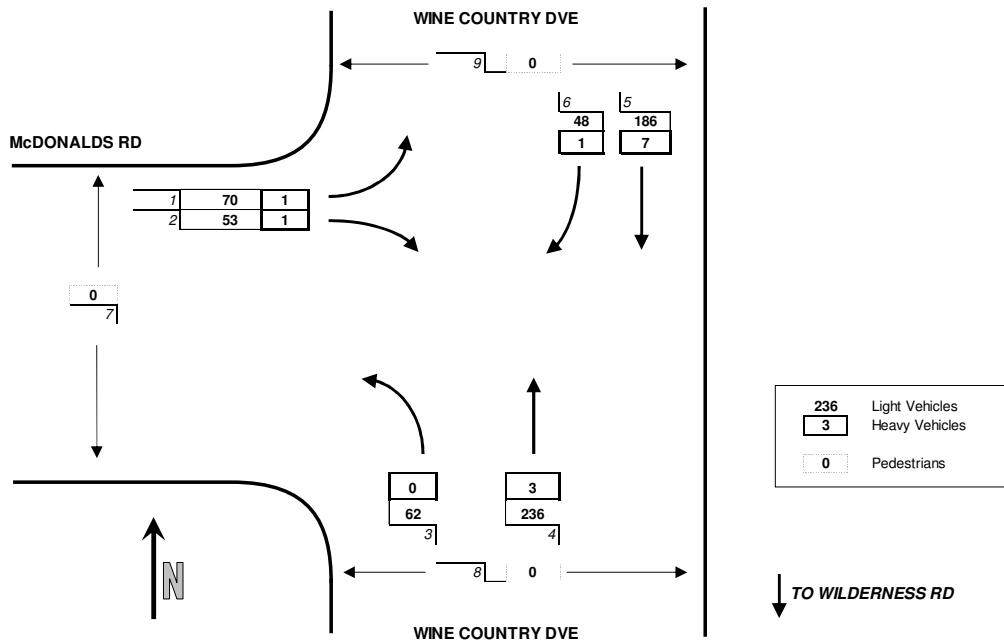
17:30 <<< HOUR ENDING

Friday

Summary:

WINE COUNTRY DVE / McDONALDS RD

655	Total Light Vehicles
13	Total Heavy Vehicles
0	Total Pedestrians



25/6/2022 - WINE COUNTRY DVE / McDONALDS RD, POKOLBIN

12:30 <<< HOUR ENDING

Saturday

Summary:

WINE COUNTRY DVE / McDONALDS RD

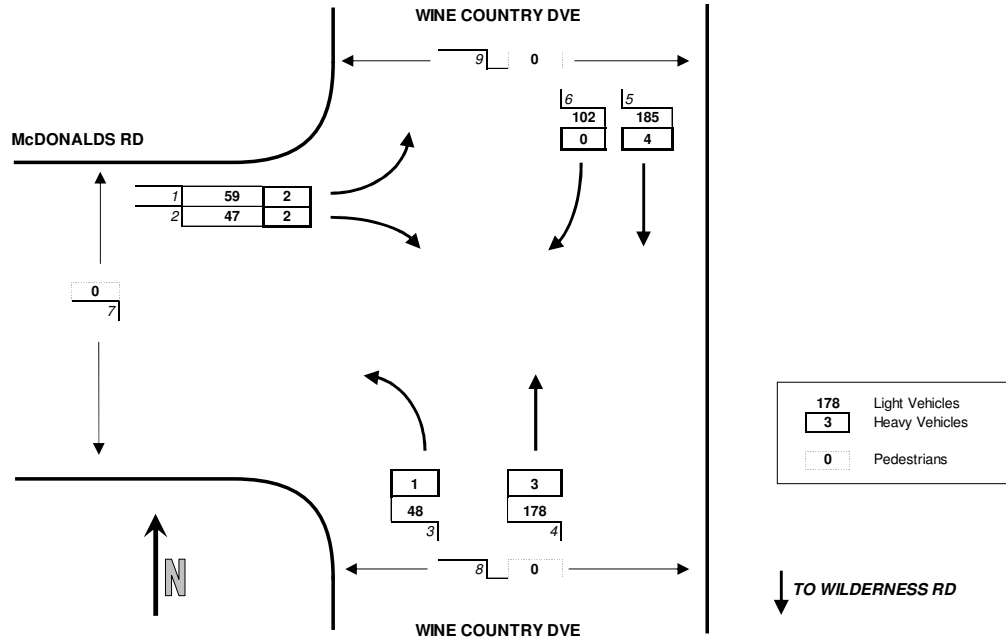
619 Total Light Vehicles

12 Total Heavy Vehicles

0 Total Pedestrians

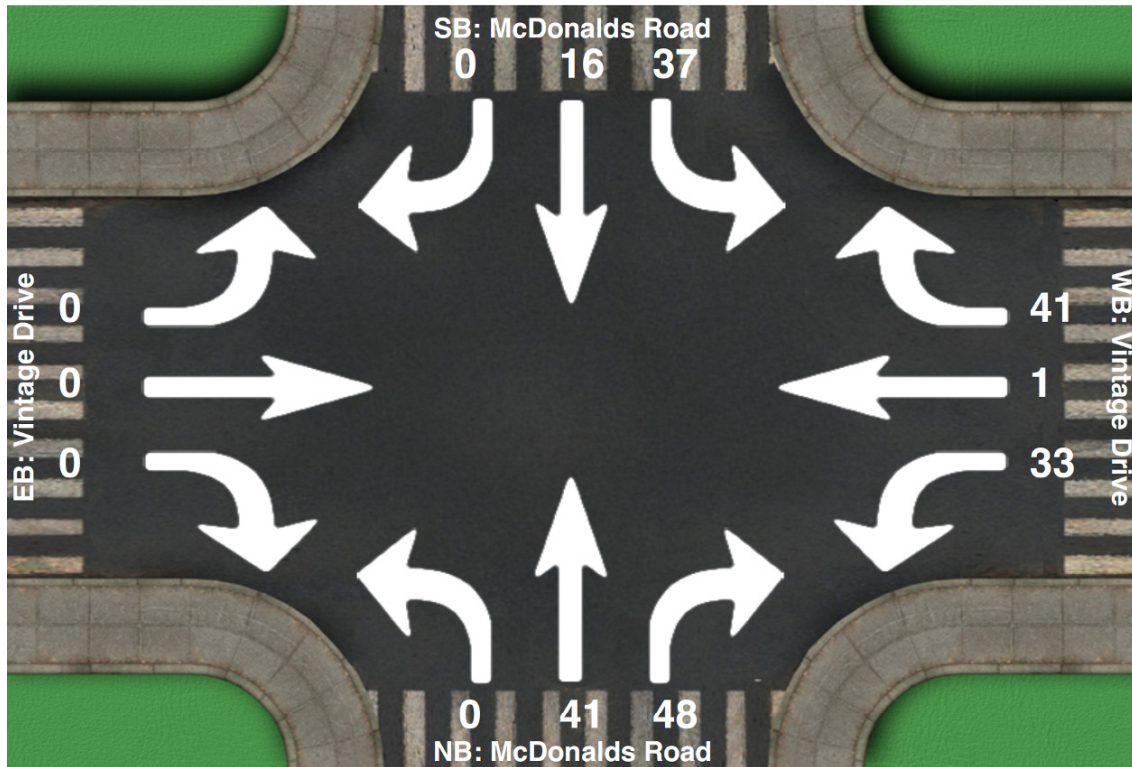


Quality Surveys
223532



Intersection Peak Hour

Location: McDonalds Road at Vintage Drive, Pokolbin
GPS Coordinates: Lat=-32.737334, Lon=151.316532
Date: 2023-08-31
Day of week: Thursday
Weather:
Analyst: Jeff



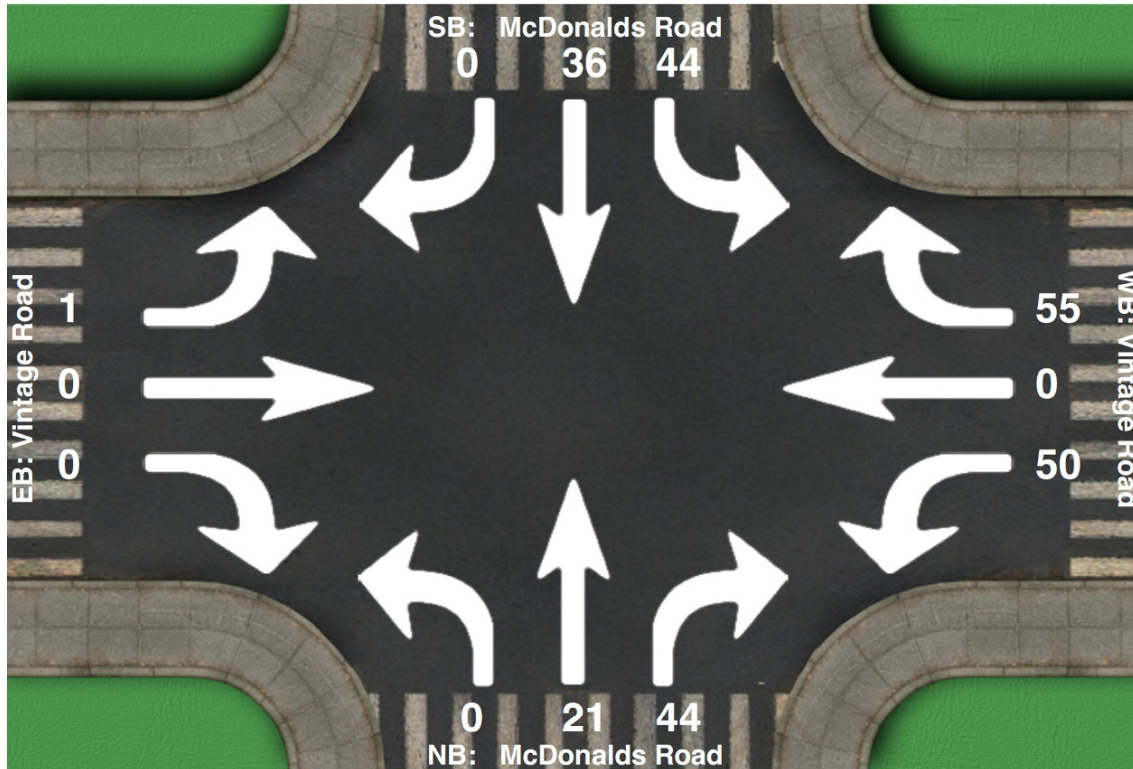
Intersection Peak Hour

15:00 - 16:00

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	37	16	0	33	1	41	0	41	48	0	0	0	217
Factor	0.66	0.67	0.00	0.75	0.25	0.60	0.00	0.85	0.75	0.00	0.00	0.00	0.74
Approach Factor	0.66			0.75			0.79			0.00			

Intersection Peak Hour

Location: McDonalds Road at Vintage Road, Pokolbin
GPS Coordinates: Lat=-32.737252, Lon=151.316569
Date: 2023-09-01
Day of week: Friday
Weather:
Analyst: Jeff



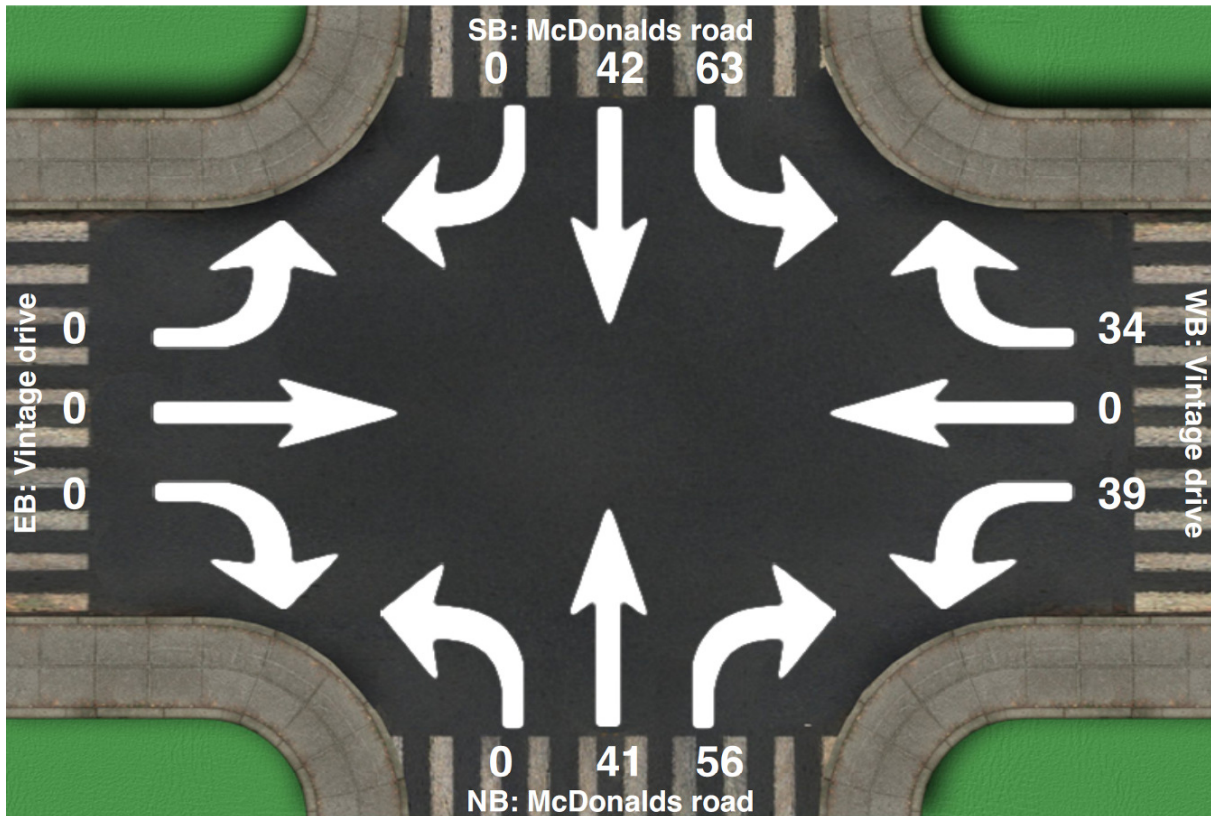
Intersection Peak Hour

08:00 - 09:00

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	44	36	0	50	0	55	0	21	44	1	0	0	251
Factor	0.58	0.69	0.00	0.83	0.00	0.81	0.00	0.88	0.85	0.25	0.00	0.00	0.76
Approach Factor	0.62			0.82			0.90			0.25			

Intersection Peak Hour

Location: McDonalds road at Vintage drive, Pokolbin
 GPS Coordinates: Lat=-32.738575, Lon=151.316179
 Date: 2023-09-02
 Day of week: Saturday
 Weather:
 Analyst: Jeff



Intersection Peak Hour

11:45 - 12:45

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	63	42	0	39	0	34	0	41	56	0	0	0	275
Factor	0.79	0.88	0.00	0.70	0.00	0.71	0.00	0.93	0.88	0.00	0.00	0.00	0.84
Approach Factor	0.82			0.76			0.93			0.00			

ATTACHMENT C

SIDRA SUMMARY TABLES

MOVEMENT SUMMARY

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

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Wine Country Drive / McDonalds Road give way T

June 2022 counts

Site Category: (None)

Give-Way (Two-Way)

Design Life Analysis (Final Year): Results for 2 years

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]	%	v/c	sec		[Veh. veh]	[Dist m]				km/h
South: Wine Country Drive															
1	L2	All MCs	76	4.3	76	4.3	0.129	5.6	LOS A	0.0	0.0	0.00	0.19	0.00	55.6
2	T1	All MCs	161	8.8	161	8.8	0.129	0.0	LOS A	0.0	0.0	0.00	0.19	0.00	58.2
Approach			237	7.4	237	7.4	0.129	1.8	NA	0.0	0.0	0.00	0.19	0.00	57.3
North: Wine Country Drive															
8	T1	All MCs	257	4.3	257	4.3	0.193	0.4	LOS A	0.6	4.3	0.20	0.23	0.20	58.0
9	R2	All MCs	78	4.2	78	4.2	0.193	6.5	LOS A	0.6	4.3	0.20	0.23	0.20	55.1
Approach			335	4.2	335	4.2	0.193	1.8	NA	0.6	4.3	0.20	0.23	0.20	57.3
West: McDonalds Road															
10	L2	All MCs	32	13.8	32	13.8	0.056	6.3	LOS A	0.2	1.5	0.34	0.59	0.34	51.4
12	R2	All MCs	31	0.0	31	0.0	0.056	7.3	LOS A	0.2	1.5	0.34	0.59	0.34	51.7
Approach			62	7.0	62	7.0	0.056	6.8	LOS A	0.2	1.5	0.34	0.59	0.34	51.5
All Vehicles			634	5.7	634	5.7	0.193	2.3	NA	0.6	4.3	0.14	0.25	0.14	56.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

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MOVEMENT SUMMARY

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

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Wine Country Drive / McDonalds Road give way T

June 2022 counts

Site Category: (None)

Give-Way (Two-Way)

Design Life Analysis (Final Year): Results for 2 years

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]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Wine Country Drive															
1	L2	All MCs	68	0.0	68	0.0	0.172	5.6	LOS A	0.0	0.0	0.00	0.12	0.00	56.4
2	T1	All MCs	262	1.3	262	1.3	0.172	0.0	LOS A	0.0	0.0	0.00	0.12	0.00	58.8
Approach			330	1.0	330	1.0	0.172	1.2	NA	0.0	0.0	0.00	0.12	0.00	58.3
North: Wine Country Drive															
8	T1	All MCs	211	3.6	211	3.6	0.153	0.4	LOS A	0.4	3.1	0.20	0.23	0.20	58.1
9	R2	All MCs	54	2.0	54	2.0	0.153	6.8	LOS A	0.4	3.1	0.20	0.23	0.20	55.3
Approach			265	3.3	265	3.3	0.153	1.7	NA	0.4	3.1	0.20	0.23	0.20	57.5
West: McDonalds Road															
10	L2	All MCs	78	1.4	78	1.4	0.123	6.5	LOS A	0.5	3.4	0.40	0.64	0.40	51.7
12	R2	All MCs	59	1.9	59	1.9	0.123	7.6	LOS A	0.5	3.4	0.40	0.64	0.40	51.4
Approach			137	1.6	137	1.6	0.123	7.0	LOS A	0.5	3.4	0.40	0.64	0.40	51.6
All Vehicles			732	1.9	732	1.9	0.172	2.5	NA	0.5	3.4	0.15	0.26	0.15	56.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

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.

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MOVEMENT SUMMARY

▽ Site: 101 [2024Weekend (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Wine Country Drive / McDonalds Road give way T
June 2022 counts
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 2 years

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]	%	v/c	sec		[Veh. veh]	[Dist]				km/h
South: Wine Country Drive															
1	L2	All MCs	54	2.0	54	2.0	0.132	5.6	LOS A	0.0	0.0	0.00	0.13	0.00	56.3
2	T1	All MCs	198	1.7	198	1.7	0.132	0.0	LOS A	0.0	0.0	0.00	0.13	0.00	58.8
Approach			252	1.7	252	1.7	0.132	1.2	NA	0.0	0.0	0.00	0.13	0.00	58.2
North: Wine Country Drive															
8	T1	All MCs	207	2.1	207	2.1	0.187	0.5	LOS A	0.8	5.4	0.27	0.31	0.27	57.1
9	R2	All MCs	112	0.0	112	0.0	0.187	6.4	LOS A	0.8	5.4	0.27	0.31	0.27	54.5
Approach			319	1.4	319	1.4	0.187	2.6	NA	0.8	5.4	0.27	0.31	0.27	56.2
West: McDonalds Road															
10	L2	All MCs	67	3.3	67	3.3	0.106	6.3	LOS A	0.4	2.9	0.37	0.61	0.37	51.7
12	R2	All MCs	54	4.1	54	4.1	0.106	7.6	LOS A	0.4	2.9	0.37	0.61	0.37	51.4
Approach			120	3.6	120	3.6	0.106	6.9	LOS A	0.4	2.9	0.37	0.61	0.37	51.6
All Vehicles			691	1.9	691	1.9	0.187	2.8	NA	0.8	5.4	0.19	0.30	0.19	56.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

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.

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MOVEMENT SUMMARY

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

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Wine Country Drive / McDonalds Road give way T
June 2022 counts
Includes Precinct G traffic
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 2 years

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]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Wine Country Drive															
1	L2	All MCs	83	3.9	83	3.9	0.133	5.6	LOS A	0.0	0.0	0.00	0.20	0.00	55.5
2	T1	All MCs	161	8.8	161	8.8	0.133	0.0	LOS A	0.0	0.0	0.00	0.20	0.00	58.1
Approach			244	7.2	244	7.2	0.133	1.9	NA	0.0	0.0	0.00	0.20	0.00	57.2
North: Wine Country Drive															
8	T1	All MCs	257	4.3	257	4.3	0.202	0.4	LOS A	0.7	4.9	0.22	0.25	0.22	57.8
9	R2	All MCs	90	3.7	90	3.7	0.202	6.5	LOS A	0.7	4.9	0.22	0.25	0.22	55.0
Approach			347	4.1	347	4.1	0.202	2.0	NA	0.7	4.9	0.22	0.25	0.22	57.0
West: McDonalds Road															
10	L2	All MCs	58	7.5	58	7.5	0.093	6.2	LOS A	0.4	2.6	0.35	0.60	0.35	51.6
12	R2	All MCs	48	0.0	48	0.0	0.093	7.5	LOS A	0.4	2.6	0.35	0.60	0.35	51.6
Approach			106	4.1	106	4.1	0.093	6.8	LOS A	0.4	2.6	0.35	0.60	0.35	51.6
All Vehicles			698	5.2	698	5.2	0.202	2.7	NA	0.7	4.9	0.16	0.29	0.16	56.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

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 (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.

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MOVEMENT SUMMARY

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

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Wine Country Drive / McDonalds Road give way T
 June 2022 counts
 Includes Precinct G traffic
 Site Category: (None)
 Give-Way (Two-Way)
 Design Life Analysis (Final Year): Results for 2 years

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]	%	v/c	sec		[Veh. veh]	[Dist] m				km/h
South: Wine Country Drive															
1	L2	All MCs	83	0.0	83	0.0	0.180	5.6	LOS A	0.0	0.0	0.00	0.14	0.00	56.2
2	T1	All MCs	262	1.3	262	1.3	0.180	0.0	LOS A	0.0	0.0	0.00	0.14	0.00	58.6
Approach			345	1.0	345	1.0	0.180	1.4	NA	0.0	0.0	0.00	0.14	0.00	58.0
North: Wine Country Drive															
8	T1	All MCs	211	3.6	211	3.6	0.174	0.6	LOS A	0.6	4.5	0.27	0.31	0.27	57.5
9	R2	All MCs	79	1.4	79	1.4	0.174	6.9	LOS A	0.6	4.5	0.27	0.31	0.27	54.8
Approach			290	3.0	290	3.0	0.174	2.3	NA	0.6	4.5	0.27	0.31	0.27	56.8
West: McDonalds Road															
10	L2	All MCs	94	1.2	94	1.2	0.147	6.5	LOS A	0.6	4.1	0.41	0.65	0.41	51.6
12	R2	All MCs	68	1.6	68	1.6	0.147	7.8	LOS A	0.6	4.1	0.41	0.65	0.41	51.4
Approach			162	1.4	162	1.4	0.147	7.1	LOS A	0.6	4.1	0.41	0.65	0.41	51.5
All Vehicles			797	1.8	797	1.8	0.180	2.9	NA	0.6	4.5	0.18	0.31	0.18	56.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

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Project: D:\Work\2024\24.008 - The Vintage Apartments Stage 2\Sidra\WCD_McDonalds\WCD_McDonalds.sip9

MOVEMENT SUMMARY

▼ Site: 101 [2024Weekend + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Wine Country Drive / McDonalds Road give way T
June 2022 counts
Includes Precinct G traffic
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 2 years

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]	%	v/c	sec		[Veh. veh	Dist]				km/h
South: Wine Country Drive															
1	L2	All MCs	67	1.6	67	1.6	0.139	5.6	LOS A	0.0	0.0	0.00	0.15	0.00	56.1
2	T1	All MCs	198	1.7	198	1.7	0.139	0.0	LOS A	0.0	0.0	0.00	0.15	0.00	58.6
Approach			265	1.7	265	1.7	0.139	1.4	NA	0.0	0.0	0.00	0.15	0.00	57.9
North: Wine Country Drive															
8	T1	All MCs	207	2.1	207	2.1	0.202	0.6	LOS A	0.9	6.3	0.30	0.35	0.30	56.8
9	R2	All MCs	130	0.0	130	0.0	0.202	6.5	LOS A	0.9	6.3	0.30	0.35	0.30	54.3
Approach			337	1.3	337	1.3	0.202	2.9	NA	0.9	6.3	0.30	0.35	0.30	55.8
West: McDonalds Road															
10	L2	All MCs	85	2.6	85	2.6	0.135	6.3	LOS A	0.5	3.8	0.38	0.62	0.38	51.7
12	R2	All MCs	67	3.3	67	3.3	0.135	7.8	LOS A	0.5	3.8	0.38	0.62	0.38	51.4
Approach			152	2.9	152	2.9	0.135	6.9	LOS A	0.5	3.8	0.38	0.62	0.38	51.6
All Vehicles			755	1.7	755	1.7	0.202	3.2	NA	0.9	6.3	0.21	0.33	0.21	55.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

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.

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MOVEMENT SUMMARY

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

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Wine Country Drive / McDonalds Road give way T
 June 2022 counts
 Includes Precinct G traffic
 Site Category: (None)
 Give-Way (Two-Way)
 Design Life Analysis (Final Year): Results for 12 years

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. veh	Dist] m				
South: Wine Country Drive															
1	L2	All MCs	101	3.9	101	3.9	0.163	5.6	LOS A	0.0	0.0	0.00	0.20	0.00	55.5
2	T1	All MCs	196	8.8	196	8.8	0.163	0.0	LOS A	0.0	0.0	0.00	0.20	0.00	58.1
Approach			298	7.2	298	7.2	0.163	1.9	NA	0.0	0.0	0.00	0.20	0.00	57.2
North: Wine Country Drive															
8	T1	All MCs	314	4.3	314	4.3	0.251	0.6	LOS A	0.9	6.5	0.25	0.29	0.25	57.6
9	R2	All MCs	109	3.7	109	3.7	0.251	6.8	LOS A	0.9	6.5	0.25	0.29	0.25	54.8
Approach			423	4.1	423	4.1	0.251	2.2	NA	0.9	6.5	0.25	0.29	0.25	56.9
West: McDonalds Road															
10	L2	All MCs	71	7.5	71	7.5	0.124	6.4	LOS A	0.5	3.5	0.40	0.63	0.40	51.4
12	R2	All MCs	59	0.0	59	0.0	0.124	8.3	LOS A	0.5	3.5	0.40	0.63	0.40	51.4
Approach			129	4.1	129	4.1	0.124	7.2	LOS A	0.5	3.5	0.40	0.63	0.40	51.4
All Vehicles			850	5.2	850	5.2	0.251	2.9	NA	0.9	6.5	0.19	0.31	0.19	56.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

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MOVEMENT SUMMARY

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

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Wine Country Drive / McDonalds Road give way T
 June 2022 counts
 Precinct G traffic included
 Site Category: (None)
 Give-Way (Two-Way)
 Design Life Analysis (Final Year): Results for 12 years

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]	[Total HV]	[Total HV]	v/c	sec		[Veh. veh	Dist]				km/h
South: Wine Country Drive															
1	L2	All MCs	101	0.0	101	0.0	0.220	5.6	LOS A	0.0	0.0	0.00	0.14	0.00	56.2
2	T1	All MCs	319	1.3	319	1.3	0.220	0.1	LOS A	0.0	0.0	0.00	0.14	0.00	58.6
Approach			421	1.0	421	1.0	0.220	1.4	NA	0.0	0.0	0.00	0.14	0.00	58.0
North: Wine Country Drive															
8	T1	All MCs	258	3.6	258	3.6	0.218	0.8	LOS A	0.8	6.0	0.31	0.36	0.31	57.3
9	R2	All MCs	96	1.4	96	1.4	0.218	7.3	LOS A	0.8	6.0	0.31	0.36	0.31	54.7
Approach			354	3.0	354	3.0	0.218	2.6	NA	0.8	6.0	0.31	0.36	0.31	56.6
West: McDonalds Road															
10	L2	All MCs	115	1.2	115	1.2	0.198	6.8	LOS A	0.8	5.6	0.48	0.69	0.48	51.3
12	R2	All MCs	83	1.6	83	1.6	0.198	8.7	LOS A	0.8	5.6	0.48	0.69	0.48	51.0
Approach			198	1.4	198	1.4	0.198	7.6	LOS A	0.8	5.6	0.48	0.69	0.48	51.2
All Vehicles			972	1.8	972	1.8	0.220	3.1	NA	0.8	6.0	0.21	0.33	0.21	56.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

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.

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MOVEMENT SUMMARY

▼ Site: 101 [2034Weekend + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Wine Country Drive / McDonalds Road give way T

June 2022 counts

Includes Precinct G traffic

Site Category: (None)

Give-Way (Two-Way)

Design Life Analysis (Final Year): Results for 12 years

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]	%	v/c	sec		[Veh. veh]	[Dist m]				km/h
South: Wine Country Drive															
1	L2	All MCs	81	1.6	81	1.6	0.170	5.6	LOS A	0.0	0.0	0.00	0.15	0.00	56.1
2	T1	All MCs	242	1.7	242	1.7	0.170	0.0	LOS A	0.0	0.0	0.00	0.15	0.00	58.6
Approach			323	1.7	323	1.7	0.170	1.4	NA	0.0	0.0	0.00	0.15	0.00	57.9
North: Wine Country Drive															
8	T1	All MCs	252	2.1	252	2.1	0.253	0.8	LOS A	1.2	8.3	0.35	0.39	0.35	56.7
9	R2	All MCs	159	0.0	159	0.0	0.253	6.8	LOS A	1.2	8.3	0.35	0.39	0.35	54.1
Approach			411	1.3	411	1.3	0.253	3.2	NA	1.2	8.3	0.35	0.39	0.35	55.7
West: McDonalds Road															
10	L2	All MCs	104	2.6	104	2.6	0.181	6.5	LOS A	0.7	5.2	0.44	0.65	0.44	51.4
12	R2	All MCs	81	3.3	81	3.3	0.181	8.7	LOS A	0.7	5.2	0.44	0.65	0.44	51.1
Approach			186	2.9	186	2.9	0.181	7.4	LOS A	0.7	5.2	0.44	0.65	0.44	51.3
All Vehicles			920	1.7	920	1.7	0.253	3.4	NA	1.2	8.3	0.25	0.36	0.25	55.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

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MOVEMENT SUMMARY

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

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

McDonalds Road / Vintage Drive give way T

August / September 2023 counts

Site Category: (None)

Give-Way (Two-Way)

Design Life Analysis (Final Year): Results for 1 years

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]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: McDonalds Road															
2	T1	All MCs	24	5.0	24	5.0	0.013	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	47	5.0	47	5.0	0.029	5.8	LOS A	0.1	1.0	0.19	0.54	0.19	52.0
Approach			71	5.0	71	5.0	0.029	3.9	NA	0.1	1.0	0.13	0.36	0.13	54.4
East: Vintage Drive															
4	L2	All MCs	54	5.0	54	5.0	0.035	5.7	LOS A	0.1	1.0	0.11	0.54	0.11	52.3
6	R2	All MCs	59	5.0	59	5.0	0.049	6.1	LOS A	0.2	1.5	0.26	0.57	0.26	51.7
Approach			113	5.0	113	5.0	0.049	5.9	LOS A	0.2	1.5	0.19	0.56	0.19	52.0
North: McDonalds Road															
7	L2	All MCs	47	5.0	47	5.0	0.047	5.6	LOS A	0.0	0.0	0.00	0.32	0.00	54.6
8	T1	All MCs	39	5.0	39	5.0	0.047	0.0	LOS A	0.0	0.0	0.00	0.32	0.00	57.1
Approach			86	5.0	86	5.0	0.047	3.1	NA	0.0	0.0	0.00	0.32	0.00	55.7
All Vehicles			269	5.0	269	5.0	0.049	4.5	NA	0.2	1.5	0.11	0.43	0.11	53.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

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.

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MOVEMENT SUMMARY

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

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

McDonalds Road / Vintage Drive give way T

August / September 2023 counts

Site Category: (None)

Give-Way (Two-Way)

Design Life Analysis (Final Year): Results for 1 years

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]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: McDonalds Road															
2	T1	All MCs	44	5.0	44	5.0	0.023	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	52	5.0	52	5.0	0.031	5.7	LOS A	0.1	1.0	0.15	0.54	0.15	52.1
Approach			96	5.0	96	5.0	0.031	3.1	NA	0.1	1.0	0.08	0.29	0.08	55.5
East: Vintage Drive															
4	L2	All MCs	35	5.0	35	5.0	0.023	5.6	LOS A	0.1	0.7	0.07	0.55	0.07	52.5
6	R2	All MCs	45	5.0	45	5.0	0.037	6.1	LOS A	0.2	1.2	0.26	0.57	0.26	51.7
Approach			81	5.0	81	5.0	0.037	5.9	LOS A	0.2	1.2	0.18	0.56	0.18	52.1
North: McDonalds Road															
7	L2	All MCs	40	5.0	40	5.0	0.031	5.6	LOS A	0.0	0.0	0.00	0.41	0.00	54.0
8	T1	All MCs	17	5.0	17	5.0	0.031	0.0	LOS A	0.0	0.0	0.00	0.41	0.00	56.4
Approach			57	5.0	57	5.0	0.031	3.9	NA	0.0	0.0	0.00	0.41	0.00	54.7
All Vehicles			233	5.0	233	5.0	0.037	4.3	NA	0.2	1.2	0.09	0.41	0.09	54.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

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MOVEMENT SUMMARY

▽ Site: 101 [2024Weekend (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

McDonalds Road / Vintage Drive give way T
August / September 2023 counts
Includes Precinct G traffic
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 1 years

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]	%	v/c	sec		[Veh. veh	Dist]				km/h
South: McDonalds Road															
2	T1	All MCs	44	5.0	44	5.0	0.023	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	60	5.0	60	5.0	0.038	5.9	LOS A	0.2	1.2	0.22	0.55	0.22	51.9
Approach			104	5.0	104	5.0	0.038	3.4	NA	0.2	1.2	0.13	0.31	0.13	55.1
East: Vintage Drive															
4	L2	All MCs	42	5.0	42	5.0	0.027	5.7	LOS A	0.1	0.8	0.12	0.54	0.12	52.3
6	R2	All MCs	37	5.0	37	5.0	0.032	6.3	LOS A	0.1	1.0	0.31	0.57	0.31	51.6
Approach			78	5.0	78	5.0	0.032	6.0	LOS A	0.1	1.0	0.21	0.56	0.21	52.0
North: McDonalds Road															
7	L2	All MCs	68	5.0	68	5.0	0.062	5.6	LOS A	0.0	0.0	0.00	0.35	0.00	54.4
8	T1	All MCs	45	5.0	45	5.0	0.062	0.0	LOS A	0.0	0.0	0.00	0.35	0.00	56.9
Approach			113	5.0	113	5.0	0.062	3.4	NA	0.0	0.0	0.00	0.35	0.00	55.4
All Vehicles			295	5.0	295	5.0	0.062	4.1	NA	0.2	1.2	0.10	0.39	0.10	54.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

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Project: D:\Work\2024\24.008 - The Vintage Apartments Stage 2\Sidra\McDonalds Vintage\McDonalds Vintage.sip9

MOVEMENT SUMMARY

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

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

McDonalds Road / Vintage Drive give way T

August / September 2023 counts

Includes Precinct G subdivision

Site Category: (None)

Give-Way (Two-Way)

Design Life Analysis (Final Year): Results for 1 years

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]	%	v/c	sec		[Veh. veh]	[Dist] m				km/h
South: McDonalds Road															
2	T1	All MCs	24	5.0	24	5.0	0.013	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	60	5.0	60	5.0	0.038	5.9	LOS A	0.2	1.2	0.21	0.54	0.21	52.0
Approach			84	5.0	84	5.0	0.038	4.2	NA	0.2	1.2	0.15	0.39	0.15	54.0
East: Vintage Drive															
4	L2	All MCs	81	5.0	81	5.0	0.052	5.7	LOS A	0.2	1.6	0.11	0.54	0.11	52.3
6	R2	All MCs	102	5.0	102	5.0	0.086	6.3	LOS A	0.4	2.8	0.30	0.58	0.30	51.6
Approach			183	5.0	183	5.0	0.086	6.0	LOS A	0.4	2.8	0.22	0.56	0.22	51.9
North: McDonalds Road															
7	L2	All MCs	67	5.0	67	5.0	0.058	5.6	LOS A	0.0	0.0	0.00	0.37	0.00	54.3
8	T1	All MCs	39	5.0	39	5.0	0.058	0.0	LOS A	0.0	0.0	0.00	0.37	0.00	56.7
Approach			105	5.0	105	5.0	0.058	3.6	NA	0.0	0.0	0.00	0.37	0.00	55.1
All Vehicles			371	5.0	371	5.0	0.086	4.9	NA	0.4	2.8	0.14	0.47	0.14	53.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

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MOVEMENT SUMMARY

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

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

McDonalds Road / Vintage Drive give way T
August / September 2023 counts
Includes Precinct G traffic
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 1 years

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]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: McDonalds Road															
2	T1	All MCs	44	5.0	44	5.0	0.023	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	77	5.0	77	5.0	0.048	5.9	LOS A	0.2	1.6	0.21	0.55	0.21	52.0
Approach			121	5.0	121	5.0	0.048	3.7	NA	0.2	1.6	0.13	0.35	0.13	54.6
East: Vintage Drive															
4	L2	All MCs	50	5.0	50	5.0	0.032	5.6	LOS A	0.1	0.9	0.07	0.55	0.07	52.5
6	R2	All MCs	70	5.0	70	5.0	0.060	6.4	LOS A	0.3	1.9	0.31	0.58	0.31	51.6
Approach			120	5.0	120	5.0	0.060	6.1	LOS A	0.3	1.9	0.21	0.57	0.21	52.0
North: McDonalds Road															
7	L2	All MCs	79	5.0	79	5.0	0.053	5.6	LOS A	0.0	0.0	0.00	0.48	0.00	53.4
8	T1	All MCs	17	5.0	17	5.0	0.053	0.0	LOS A	0.0	0.0	0.00	0.48	0.00	55.8
Approach			97	5.0	97	5.0	0.053	4.6	NA	0.0	0.0	0.00	0.48	0.00	53.8
All Vehicles			338	5.0	338	5.0	0.060	4.8	NA	0.3	1.9	0.12	0.46	0.12	53.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

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.

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MOVEMENT SUMMARY

▽ Site: 101 [2024Weekend + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

McDonalds Road / Vintage Drive give way T

August / September 2023 counts

Includes Precinct G traffic

Site Category: (None)

Give-Way (Two-Way)

Design Life Analysis (Final Year): Results for 1 years

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]	%	v/c	sec		[Veh. veh]	[Dist m]				km/h
South: McDonalds Road															
2	T1	All MCs	44	5.0	44	5.0	0.023	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	81	5.0	81	5.0	0.052	6.0	LOS A	0.2	1.7	0.26	0.55	0.26	51.8
Approach			125	5.0	125	5.0	0.052	3.9	NA	0.2	1.7	0.17	0.36	0.17	54.4
East: Vintage Drive															
4	L2	All MCs	63	5.0	63	5.0	0.041	5.7	LOS A	0.2	1.2	0.12	0.54	0.12	52.3
6	R2	All MCs	68	5.0	68	5.0	0.061	6.6	LOS A	0.3	1.9	0.35	0.60	0.35	51.5
Approach			131	5.0	131	5.0	0.061	6.2	LOS A	0.3	1.9	0.24	0.57	0.24	51.9
North: McDonalds Road															
7	L2	All MCs	99	5.0	99	5.0	0.079	5.6	LOS A	0.0	0.0	0.00	0.40	0.00	54.0
8	T1	All MCs	45	5.0	45	5.0	0.079	0.0	LOS A	0.0	0.0	0.00	0.40	0.00	56.4
Approach			144	5.0	144	5.0	0.079	3.9	NA	0.0	0.0	0.00	0.40	0.00	54.7
All Vehicles			399	5.0	399	5.0	0.079	4.6	NA	0.3	1.9	0.13	0.44	0.13	53.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

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

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

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

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

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

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MOVEMENT SUMMARY

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

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

McDonalds Road / Vintage Drive give way T
August / September 2023 counts
Includes Precinct G traffic
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 11 years

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]	%	v/c	sec		[Veh. veh]	[Dist m]				km/h
South: McDonalds Road															
2	T1	All MCs	29	5.0	29	5.0	0.015	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	73	5.0	73	5.0	0.047	6.0	LOS A	0.2	1.6	0.24	0.55	0.24	51.9
Approach			102	5.0	102	5.0	0.047	4.3	NA	0.2	1.6	0.17	0.39	0.17	53.9
East: Vintage Drive															
4	L2	All MCs	98	5.0	98	5.0	0.064	5.7	LOS A	0.3	1.9	0.13	0.54	0.13	52.3
6	R2	All MCs	124	5.0	124	5.0	0.109	6.5	LOS A	0.5	3.6	0.34	0.60	0.34	51.5
Approach			222	5.0	222	5.0	0.109	6.2	LOS A	0.5	3.6	0.24	0.57	0.24	51.9
North: McDonalds Road															
7	L2	All MCs	81	5.0	81	5.0	0.070	5.6	LOS A	0.0	0.0	0.00	0.37	0.00	54.3
8	T1	All MCs	47	5.0	47	5.0	0.070	0.0	LOS A	0.0	0.0	0.00	0.37	0.00	56.7
Approach			128	5.0	128	5.0	0.070	3.6	NA	0.0	0.0	0.00	0.37	0.00	55.1
All Vehicles			453	5.0	453	5.0	0.109	5.0	NA	0.5	3.6	0.16	0.48	0.16	53.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

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 (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.

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MOVEMENT SUMMARY

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

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

McDonalds Road / Vintage Drive give way T

August / September 2023 counts

Includes Precinct G traffic

Site Category: (None)

Give-Way (Two-Way)

Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		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]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: McDonalds Road															
2	T1	All MCs	53	5.0	53	5.0	0.028	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	92	5.0	92	5.0	0.059	5.9	LOS A	0.3	2.0	0.23	0.55	0.23	51.9
Approach			145	5.0	145	5.0	0.059	3.8	NA	0.3	2.0	0.15	0.35	0.15	54.6
East: Vintage Drive															
4	L2	All MCs	60	5.0	60	5.0	0.038	5.7	LOS A	0.2	1.1	0.08	0.55	0.08	52.5
6	R2	All MCs	83	5.0	83	5.0	0.075	6.6	LOS A	0.3	2.4	0.35	0.60	0.35	51.5
Approach			144	5.0	144	5.0	0.075	6.2	LOS A	0.3	2.4	0.23	0.58	0.23	51.9
North: McDonalds Road															
7	L2	All MCs	95	5.0	95	5.0	0.064	5.6	LOS A	0.0	0.0	0.00	0.48	0.00	53.4
8	T1	All MCs	21	5.0	21	5.0	0.064	0.0	LOS A	0.0	0.0	0.00	0.48	0.00	55.8
Approach			115	5.0	115	5.0	0.064	4.6	NA	0.0	0.0	0.00	0.48	0.00	53.8
All Vehicles			404	5.0	404	5.0	0.075	4.9	NA	0.3	2.4	0.14	0.47	0.14	53.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

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.

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Project: D:\Work\2024\24.008 - The Vintage Apartments Stage 2\Sidra\McDonalds_Vintage\McDonalds_Vintage.sip9

MOVEMENT SUMMARY

▽ Site: 101 [2034Weekend + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

McDonalds Road / Vintage Drive give way T
August / September 2023 counts
Includes Precinct G traffic
Site Category: (None)
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 11 years

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]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: McDonalds Road															
2	T1	All MCs	54	5.0	54	5.0	0.028	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	98	5.0	98	5.0	0.066	6.2	LOS A	0.3	2.2	0.29	0.56	0.29	51.7
Approach			152	5.0	152	5.0	0.066	4.0	NA	0.3	2.2	0.19	0.36	0.19	54.4
East: Vintage Drive															
4	L2	All MCs	77	5.0	77	5.0	0.051	5.8	LOS A	0.2	1.5	0.14	0.54	0.14	52.3
6	R2	All MCs	82	5.0	82	5.0	0.079	6.9	LOS A	0.3	2.5	0.39	0.62	0.39	51.4
Approach			160	5.0	160	5.0	0.079	6.3	LOS A	0.3	2.5	0.27	0.58	0.27	51.8
North: McDonalds Road															
7	L2	All MCs	120	5.0	120	5.0	0.096	5.6	LOS A	0.0	0.0	0.00	0.40	0.00	54.0
8	T1	All MCs	55	5.0	55	5.0	0.096	0.0	LOS A	0.0	0.0	0.00	0.40	0.00	56.4
Approach			175	5.0	175	5.0	0.096	3.9	NA	0.0	0.0	0.00	0.40	0.00	54.7
All Vehicles			487	5.0	487	5.0	0.096	4.7	NA	0.3	2.5	0.15	0.45	0.15	53.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

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

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.

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