

RESIDENTIAL SUBDIVISION PART LOT 141 DP 1225076 & LOT 8 DP855275 62 MOUNT VINCENT ROAD & 6 WILTON DRIVE EAST MAITLAND

PREPARED FOR: HUNTER LAND PTY LTD

JULY 2024



19/141

TRAFFIC IMPACT ASSESSMENT HUNTER LAND PTY LTD

RESIDENTIAL SUBDIVISION PART LOT141 DP 1225076 & LOT 8 DP855275 62 MOUNT VINCENT ROAD & 6 WILTON DRIVE, EAST MAITLAND

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1.0 INTRODUCTION

Intersect Traffic Pty Ltd (Intersect Traffic) has been engaged by Hunter Land Pty Ltd to prepare a Traffic Impact Assessment for a residential subdivision on part Lot 141 DP 1225076, 62 Mount Vincent Road & Lot 8 DP855275, 6 Wilton Drive, East Maitland which is to provide up to 87 residential lots (88 lots total) including a residual 10 ha lot. The site adjoins the Rathluba Ridge Residential Estate and has direct access to Wilton Drive. The development will be constructed in 5 stages, though Stage 5 (11 lots including residual lot), still needs rezoning approval from Maitland City Council. This assessment therefore covers the proposed development application for Stages 1 to 4 of the residential subdivision as well as an intended resubmission of a scoping proposal to allow the future subdivision shown as Stage 5.

Vehicular access to the development is proposed from Wilton Drive, through 6 Wilton Drive approximately 570 metres west of Mount Vincent Road. A further bushfire emergency only access connection to Wilton Drive, 230 metres west of Mount Vincent Road will also be created as part of the development works for Stage 1. This fire trail will have a locked gate at Wilton Drive to ensure it is only used for bushfire emergency access. An existing 12-unit seniors living development has been approved (DA 2019/128) on part of the development site (6 Wilton Drive, East Maitland) and this will be surrendered should this subdivision receive development consent. The proposed development plan is shown in **Attachment A**. The subject site is currently vacant rural land.

This report is required to support a rezoning application to Maitland City Council for the proposal and allow the Council to assess the proposal in regard to its impact on the local and state road network.

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

- 1. An outline of the existing situation in the vicinity of 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. Determines any triggers for the provision of additional infrastructure.
- 4. Reviews parking, public transport, pedestrian, and cycle way requirements for the proposed development, including assessment against Council's DCP and Australian Standard requirements.
- 5. Presentation of conclusions and recommendations.



2.0 SITE LOCATION

The subject site is located on the western side of Mount Vincent Road to the south of Wilton Drive, East Maitland. The site is 2 km south-west of Greenhills Shopping Centre, 4.1 kms south-east of the Maitland CBD and 2.9 km south-west of Victoria Street Railway Station. The developable portion of the property has road frontage to Wilton Drive. *Figure 1* below shows the site location from a local context.

The site is titled as Part Lot 141 DP 1225076 – 62 Mount Vincent Road, East Maitland and Lot 8 DP 855275. It has a developable area above the 1% AEP flood level of 8.5 ha. The site is currently zoned R1 – General Residential (Stages 1 – 4) and C3 – Environmental Management. *Photograph 1* shows the existing conditions at the site connection to Wilton Drive while *Photograph 2* shows Wilton Drive near the proposed new subdivision access intersection.



Figure 1 – Site Location

In ersect

Traffic Impact Assessment - Residential Subdivision - 62 Mount Vincent Road & 6 Wilton Drive, East Maitland



Photograph 1 – Development site looking south from Wilton Drive



Photograph 2 – Wilton Drive near proposed subdivision access intersection.

3.0 EXISTING ROAD NETWORK

3.1 Mount Vincent Road

Mount Vincent Road is a regional road under the care and control of Maitland City Council. Under a functional road hierarchy, it performs the function of a major collector / distributor road providing connection to the sub-arterial road network at East Maitland (New England Highway) and Buchanan (John Renshaw Drive and Hunter Expressway). Near the site it is a two lane two way sealed rural road with lane widths of 3.5 metres and 2- to 3-metre-wide sealed shoulders. An 80 km/h speed limit applies to this section of road though this reduces to 50 km/h near Wilton Drive and at the time of inspection Mount Vincent Road was observed to be in good condition. *Photograph 3* shows Mount Vincent Road near Wilton Drive.

3.2 Wilton Drive

Wilton Drive in the vicinity of the site is an urban local access road under the care and control of Maitland City Council. Under a functional road hierarchy, it would function as a collector road with its primary function being to collect and distribute traffic to the higher order road (Mount Vincent Road) while also providing vehicular access to adjoining properties. Near the site it is a two-lane two-way sealed road with a carriageway width of 11 metres. A 50 km/h speed limit applies to this section of road and at the time of inspection Wilton Drive was observed to be in good condition. *Photograph 2* above shows Wilton Drive near the proposed subdivision access, 570 metres west of Mount Vincent Road while *Photograph 4* below shows Wilton Drive at its T-intersection connection (give way CHR/AUL) to Mount Vincent Road.



Photograph 3 – Mount Vincent Road near Wilton Drive

In ersect



Photograph 4 – Wilton Drive near Mount Vincent Road.

4.0 ROAD NETWORK IMPROVEMENTS

There are no known major road upgrades in the vicinity of the site that will improve the capacity of the local road network in the near future. With further development in the area a roundabout at the Mount Vincent Road / Wilton Drive intersection has been proposed but would be subject to a nexus being established for its construction. This has been considered in this assessment.

Rehabilitation work on the adjoining local and state road network will be undertaken in the future in accordance with Maitland City Council's and TfNSW annual works programs.

5.0 TRAFFIC VOLUMES

Intersect Traffic carried out manual traffic counts at the Mount Vincent Road / Wilton Drive intersection on Thursday 27th June 2024 (PM) and Friday 28th June 2024 (AM). The counts were obtained between 8.00 am and 9.00 am and 3:00 pm to 4:00 pm, which in more recent counts near this site have been determined as the peak traffic periods on this part of the local road network. The counts were undertaken to allow SIDRA modelling of this intersection but also provides current peak two-way midblock traffic volumes on Mount Vincent Road and Wilton Drive. The results of these counts are shown below in *Table 1* as well as the predicted 2034 peak two-way mid-block traffic volumes based on a compound background traffic growth of 1.5% per annum as recommended by TfNSW for use in the lower Hunter area. These volumes have been used as baseline figures for this assessment.

The results of the manual traffic counts carried out by Intersect Traffic are provided graphically within *Attachment B*.



		20	24	2034 @1.5% p.a.	
Road	Section	AM (vtph)	PM (vtph)	AM (vtph)	PM (vtph)
Mount Vincent Road	north of Wilton Drive	1079	1180	1252	1369
Mount Vincent Road	south of Wilton Drive	1012	1134	1174	1316
Wilton Drive	north of Mount Vincent Road	109	100	126	116

Table 1 – Current and future peak two-way mid-block traffic volumes.

6.0 ROAD CAPACITY

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

Type of Road	One-Way Mid-block Lane Capacity (pcu/hr)			
Median or inner lane:	Divided Road	1,000		
Median or inner lane.	-	900		
	With Adjacent Parking Lane	900		
Outer or kerb lane:	Clearway Conditions	900		
	ivided Road Individed Road Vith Adjacent Parking Lane learway Conditions Iccasional Parked Cars Iccasional Parked Cars Iccasional Parked Cars	600		
4 lane undivided:	Occasional Parked Cars	1,500		
4 lane undivided.	ndivided Road ith Adjacent Parking Lane earway Conditions ccasional Parked Cars ccasional Parked Cars earway Conditions	1,800		
4 lane divided:	Clearway Conditions	1 ,900		

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

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

Noting that the local road network is generally a two-way undivided road, the two-way mid-block capacity of the network is at least 1,800 vtph (2 lanes x 900 vtph per lane) based on the above table. With traffic volumes on Mount Vincent Road only expected to reach 1369 vtph by 2034 there is spare capacity within Mount Vincent Road to cater for new development.

As Wilton Drive is an urban collector road containing residential dwellings the environmental road capacity thresholds provided within Table 4.6 of the RTA's *Guide to Traffic Generating Developments* (reproduced below) are of more relevance when considering the local road network's capacity to cater for additional traffic.

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

 Table 4.6

 Environmental capacity performance standards on residential streets

Note: Maximum speed relates to the appropriate design maximum speeds

in new residential developments. In existing areas maximum speed relates

to 85th percentile speed.

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



As Wilton Drive performs the function of a collector road within the Rathluba Ridge Estate its environmental capacity is considered to be 500 vtph maximum.

Current and future predicted traffic volumes on Wilton Drive (up to 126 vtph in 2034) are well below 500 vtph indicating there is significant spare capacity within Wilton Drive to cater for additional development.

7.0 ALTERNATE TRANSPORT MODES

Currently Hunter Valley Buses operates the public transport services (bus) in the East Maitland area. The nearest service route to the site is Route 187 Greenhills Shopping Centre to Wilton Drive (loop service) which operates Monday to Saturday (see *Figure 2*). This service runs past the site along Wilton Drive to Woodrow Way with the nearest bus stop located at the Woodrow Way intersection 140 metres east of the site. This service could be used by future residents of the residential development with additional bus stops provided in consultation with the bus company and the Department of Transport once a demand for changes to the service is established.

This service connects to major retail facilities at Greenhills where a transport interchange allows connection to other bus services to Maitland, Cessnock, Rutherford, and Singleton including connection to local railway stations on the Hunter line.

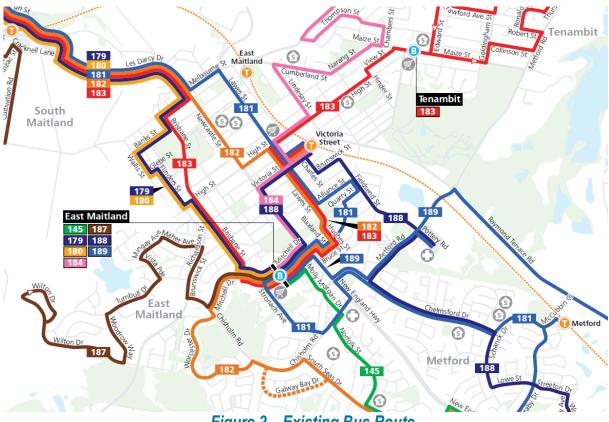


Figure 2 – Existing Bus Route.

Currently there is nothing in the way of formalised cycle or pedestrian pathways in the vicinity of the site on Wilton Drive through to Mount Vincent Road. A shared pedestrian cycle path exists on the eastern side of Mount Vincent Road which runs north connecting to Worcester Drive near the Chisholm Road roundabout (see **Photograph 5**). This provides some benefit to pedestrians and cyclists heading to the local areas of Greenhills and Ashtonfield. In the vicinity of the site and south



along Mount Vincent Road cyclists and pedestrians would either have to use the existing grassed verges or share the travel lanes / sealed shoulders on the local road network.



Photograph 5 – Pedestrian / cycle path Mount Vincent Road north of Wilton Drive.

8.0 DEVELOPMENT PROPOSAL

The development involves the subdivision of Part Lot 141 DP 1225076 62 Mount Vincent Road, East Maitland and Lot 8 DP855275 6 Wilton Drive, East Maitland into 87 residential lots and a residual lot (10 ha). The proposal is to construct the subdivision in 5 stages; however, Stage 5 (10 lots including a residual lot) is subject to part of th C3 Environmental Management zoning being rezoned to R1 - General Residential. This assessment however is based on all 5 stages being approved and completed therefore will support both the Development Application for Stages 1 to 4 and the resubmitted Scoping Proposal for Stage 5 of the development. The current development plans are provided within *Attachment A*.

The main access to the subdivision will be from a new public road connection to Wilton Drive through Lot 8 DP855275 - 6 Wilton Drive, 570 metres west of Mount Vincent Road though a second access to Wilton Drive approximately 230 metres west of Mount Vincent Road is to be provided as a bushfire emergency access (locked gate) for the development. The staging details for the subdivision are as follows;

- Stage 1 28 lots;
- ♦ Stage 2 25 lots;
- Stage 3 24 lots;
- ♦ Stage 4 1 lot; and
- Stage 5 11 lots including a residual 10 ha lot.

All new internal roads (5 off), connections and other roadside infrastructure are to be constructed to the requirements of Maitland City Council as per their Manual of Engineering Standards (2014).



9.0 TRAFFIC GENERATION

The TfNSW Technical Direction (TDT 2013/4) provides the most recent reference for the traffic generation likely from low density residential development. The rates contained in the TDT for regional areas are as below.

- Weekday daily vehicle trips = 7.4 per dwelling
- Weekday AM peak hour vehicle trips = 0.71 per dwelling average and 0.85 per dwelling maximum
- Weekday PM peak hour vehicle trips = 0.78 per dwelling average and 0.9 per dwelling maximum.

Adopting the maximum rates as a worst-case scenario analysis the additional traffic generated by the proposed development during the weekday peak periods can be calculated as follows (rounded up).

Daily vehicle trips	= 87 dwellings x 7.4 trips per dwelling = 644 vtpd.
Weekday AM peak hour	= 87 dwellings x 0.85 trips per dwelling = 74 vtph.
Weekday PM peak hour	= 87 dwellings x 0.9 trips per dwelling = 79 vtph.

These additional traffic volumes have been adopted as the additional development traffic in this assessment.

10.0 TRIP DISTRIBUTION

Before carrying out any traffic assessment the additional peak hour traffic generated by the development needs to be distributed through the adjoining road network. This involves making a number of assumptions as to distribution patterns to and from the development. In distributing the peak hour traffic through the adjacent road network, the following assumptions have been made for this site.

- 10 % of trips will head west at Wilton Drive towards Turnbull Drive and 90 % of trips will head east to Mount Vincent Road
- In the PM peak traffic will be distributed as 30 % outbound and 70 % inbound while in the AM peak traffic will be distributed as 80 % outbound and 20 % inbound.
- In both the AM and PM peak period 75 % of traffic at the Wilton Drive / Mount Vincent Road intersection will have an origin / destination to the north towards East Maitland while 25 % of traffic will have an origin / destination to the south towards Buchanan.
- These assumptions will result in the trip distributions shown in *Figure 3* for the relevant traffic movements.



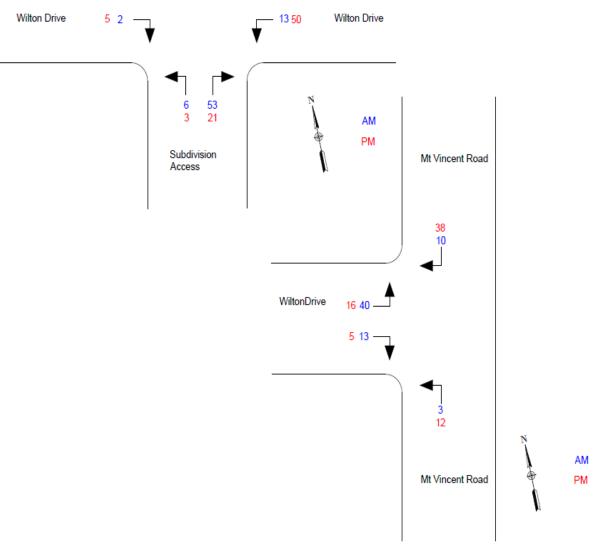


Figure 3 – Development Traffic Trip Distribution



11.0 TRAFFIC IMPACTS OF DEVELOPMENT

11.1 Road Network Capacity

It has previously been shown in *Section 6* of this report that the local road network is currently operating well within its technical mid-block capacity. The proposed development of the site is likely to generate the following additional traffic on the local road network based on the trip distributions shown in *Figure 3*.

- Mount Vincent Road north of Wilton Drive 50 vtph (AM peak) and 54 vtph (PM peak).
- Mount Vincent Road south of Wilton Drive 16 vtph (AM peak) and 17 vtph (PM peak).
- Wilton Drive west of Mount Vincent Road 66 vtph (AM peak) and 71 vtph (PM peak); and
- Wilton Drive west of subdivision access 8 vtph (AM and PM peak).

The addition of this traffic onto the existing and future traffic volumes determined in *Section 5* will not result in the capacity thresholds for Mount Vincent Road and Wilton Drive determined in *Section 6* to be reached. Even with 2 % per annum compound traffic growth over a ten-year period these road capacity thresholds are not reached. This is demonstrated in *Table 2* below.

Table 2 - Road Capacity Assessment

		Capacity	2024		2034 @ 1.5% p.a.		Development traffic	
Road	Section	vtph	AM (vtph)	PM (vtph)	AM (vtph)	PM (vtph)	AM	PM
Mount Vincent Road	north of Wilton Drive	1800	1129	1234	1302	1423	50	54
Mount Vincent Road	south of Wilton Drive	1800	1028	1151	1190	1333	16	17
Wilton Drive	north of Mount Vincent Road	500	175	171	192	187	66	71

Therefore, it can be concluded that the local and road network subject to suitable intersection controls being in place has sufficient spare capacity to cater for the proposed development.

11.2 Intersection Capacity

In assessing intersection performance, the main intersection of concern will be the Mount Vincent Road / Wilton Drive intersection. This intersection has to cater for the additional traffic from the development. For this assessment it needs to be determined whether the intersection as currently constructed, can cater for the additional traffic generated by this development or whether any upgrading works are necessary.

The impacts of the development are best assessed using the SIDRA INTERSECTION 9 software. 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.

Assumptions made in this modelling were.

- The intersection layout will remain as per current conditions i.e. an CHR/AUL type intersection under nomenclature adopted by Austroads.
- Traffic volumes used in the modelling was as collected by Intersect Traffic in June 2024.
- Traffic generated by the development is distributed as per Figure 3.
- Future traffic growth predicted using a 1.5 % per annum compound background traffic growth rate with the intersection modelled through to 2034.
- The model was calibrated based on the average delay for vehicles turning right out of Wilton Drive recorded to be around an average 20 seconds with a maximum of delay of 30 seconds. Best calibration was achieved by reducing the acceptable gap acceptance from 7 seconds to 5.5 seconds and reducing the follow up headway from 4 seconds to 3 seconds.



These values are still greater than the minimum critical gap acceptance values set by Austroads within *Table 3.5 of Austroads Guide to Road Design – Part 4A Unsignalised and signalised intersections (2017)*.

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

Table 4.2
Level of service criteria for intersections

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

С

0.7

The results of the modelling are summarised in *Table 3* below for the worst movement based on LoS (i.e. average delay). The Sidra Movement Summary Tables are provided in *Attachment C*.

Modelled Peak	Degree of Saturation (v/c)	Worst Average Delay (s)	Worst Level of Service	95% back of queue length (cars)
2024 AM	0.345	19.0	В	0.4
2024 PM	0.343	22.6	В	0.3
2024 AM plus development	0.345	19.6	В	0.8
2024 PM plus development	0.343	24.1	В	0.5
2034 AM plus development	0.400	25.9	В	1.2

 Table 3 – Mount Vincent Road / Wilton Drive intersection – Sidra Modelling – Results Summary

0.419

2034 PM plus development

This modelling shows that the Mount Vincent Road / Wilton Drive intersection currently operates satisfactorily during both the AM and PM peak periods and would continue to do so post development and with 10 years traffic growth to 2034. Average delays, LoS and 95 % back of queue lengths all remain at acceptable levels based on the TfNSW assessment criteria listed above and the degree of saturation of the intersection remains well below 0.9. Therefore, no upgrading of the intersection is required.

39.6

In assessing performance of the new development access with Wilton Drive it is noted that traffic on Wilton Drive is unlikely to exceed 200 vtph within a 10-year horizon. Therefore, volumes at the access are well below the thresholds contained in the following table taken from Austroads *Guide to Traffic Management – Part 6 – Intersections, Interchanges & Crossings (2009)* for which the *Guide* states a detailed analysis to demonstrate adequate capacity is available is unlikely to be necessary as uninterrupted flow conditions would prevail.

It can be concluded therefore that the proposed new development vehicular access to Wilton Drive will operate with uninterrupted flow conditions and as such can be constructed as a normal BAR / BAL urban access. With only minor right turn volumes and low through volumes no warrant would exist for protected turning lanes at this intersection.

Major road type ¹	Major road flow (vph)²	Minor road flow (vph) ³
	400	250
Two-lane	500	200
	650	100
	1000	100
Four-lane	1500	50
	2000	25

Notes:

1. Major road is through road (i.e. has priority).

2. Major road flow includes all major road traffic with priority over minor road traffic.

3. Minor road design volumes include through and turning volumes.

Source: - Austroads Guide to Traffic Management – Part 6 – Intersections, Interchanges & Crossings (2009)

11.3 Access

In assessing the subdivision access connection to Wilton Drive in respect of Austroads requirements the following is noted:

- Safe intersection sight distance from the access has been observed to be suitable to meet the Austroads requirements of a desirable 100 metres for a 50 km/h speed zone: and
- Approach sight distance will be required to be 55 metres which can be achieved with suitable road design but will need to be checked at Construction Certificate stage.

The proposed internal roads are to be designed in accordance with Maitland City Council's Manual of Engineering Standards (MoES) and again will need to be checked at Construction Certificate stage when full design details are available. This can be suitably conditioned on a subdivision consent.

Lots within the subdivision comply with the minimum lot requirements within the Maitland DCP therefore it is reasonable to assume that sufficient frontage can be provided to construct a suitable vehicular access to each lot in accordance with Maitland City Council's and Australian Standard *AS2890.1-2004 Parking facilities – Part 1 - Off-street car parking* requirements.

It is therefore concluded the proposed development access is safe and suitable as it would comply with Austroads, Maitland City Council and Australian Standard *AS2890.1-2004 Parking facilities – Part 1 - Off-street car parking* requirements.

11.4 Off-Street Parking

The development as a residential subdivision itself does not generate an on-site car parking demand with future development of the individual allotments generating the on-site parking demand within the residential area. Therefore, assessment of on-site car parking demand will need to occur at the development application stage for the individual allotments created. However, it is reasonable to conclude that as the lots will be compliant with Maitland City Council requirements they will be large enough to accommodate on-site car parking as required for dwellings within the Maitland DCP i.e. a minimum of 1 space per dwelling.

11.5 Servicing

The internal roads will need to be designed to accommodate waste service collections and compliance with Maitland City Council's requirements for subdivision road design will ensure the internal road system will be suitable to carry a normal MRV waste collection vehicle and allow it to easily manoeuvre through and out of the site in a forward direction. No other major servicing of the site would be required.



12.0 PEDESTRIAN & CYCLE FACILITIES

The proposed development may generate pedestrian and cycle traffic therefore a nexus would exist to provide additional facilities. The provision of such facilities would however be up to the future asset owner i.e. Maitland City Council to determine as future maintenance responsibility would lie with the Council. Provision of such facilities should also consider the fairness and reasonableness of such cost burdens on the developer given the lack of existing facilities in the area and thus it would be fairer to include these within a developer contributions plan or Voluntary Planning Agreement whereby the developer only pays their fair share of the costs.

Internal pedestrian pathways to Maitland City Council requirements will be provided within the development.

13.0 PUBLIC TRANSPORT FACILITIES

The proposed development may generate additional public transport usage and all lots within the site will be within 400 metres of the existing service. The local bus service does run past the site therefore no additional service is required however there may be opportunity to provide a bus stop nearer to the site, in front of the existing 6 Wilton Drive property. This would require some liaison with Maitland City Council, Department of Transport, and the bus company at Construction Certificate stage however preliminary discussions with Hunter Valley Buses (see **Attachment D**) indicates in principle support to the relocation of the bus stop in front of No. 2 Wilton Drive to the proposed position in front of No. 6 Wilton Drive.

14.0 CONCLUSIONS

This traffic impact assessment for a proposed residential subdivision of Part Lot 141 DP1225076, 62 Mount Vincent Road & Lot 8 DP855275, 6 Wilton Drive, East Maitland resulting in 87 residential allotments and a residual lot has concluded.

- Existing traffic volumes on the local road network are within the technical and environmental capacity standards determined by Austroads and TfNSW.
- The local road network is currently operating satisfactorily with good levels of service and little if any delay for motorists and has capacity to cater for additional traffic associated with new development in the area.
- The proposed development is likely to generate an additional 74 vehicle trips per hour during the AM peak and 79 vehicle trips per hour during the PM peak traffic periods.
- The local road network currently has sufficient spare capacity to cater for the development traffic generated by this development without adversely impacting on either current level of service experienced by motorists on the road or the residential amenity of existing residents.
- Sidra modelling of the Mount Vincent Road / Wilton Drive intersection has shown that it currently operates satisfactorily during both the AM and PM peak periods and would continue to do so post development and with 10 years traffic growth to 2034. Average delays, LoS and 95 % back of queue lengths all remain at acceptable levels based on the TfNSW assessment criteria.
- The subdivision access at Wilton Drive will operate with uninterrupted flow conditions and as such can be constructed as a normal BAR / BAL urban intersection. The proposed site access is safe and suitable as it would comply with Austroads, Maitland City Council and Australian Standard AS2890.1-2004 Parking facilities – Part 1 - Off-street car parking.





- As the lots within the development are compliant with Maitland City Council requirements, they will be large enough to accommodate on-site car parking as required for dwellings within the Maitland DCP i.e. a minimum of 1 space per dwelling.
- With the internal roads being constructed to Maitland City Council requirements a waste collection vehicle will be able to manoeuvre through the site conveniently in a forward direction.
- The proposed development will generate pedestrian and cycle traffic therefore a nexus would exist to provide additional facilities. The applicant could be required to pay a fair and reasonable contribution to these works via a developer contributions plan or voluntary planning agreement.
- The proposed development may generate additional public transport usage and all lots within the site will be within 400 metres of the existing service. Whilst the local bus service does run past the site therefore no additional service is required. To provide a satisfactory public transport service to the development would only require the provision of a bus stop (with shelter and seating) on Wilton Drive near the subdivision access road. This would require some liaison with Maitland City Council, Department of Transport, and the bus company at Construction Certificate stage however as evidenced in *Attachment D* Hunter Valley Buses have given in principle support to relocation of an existing bus stop to this location.

15.0 **RECOMMENDATION**

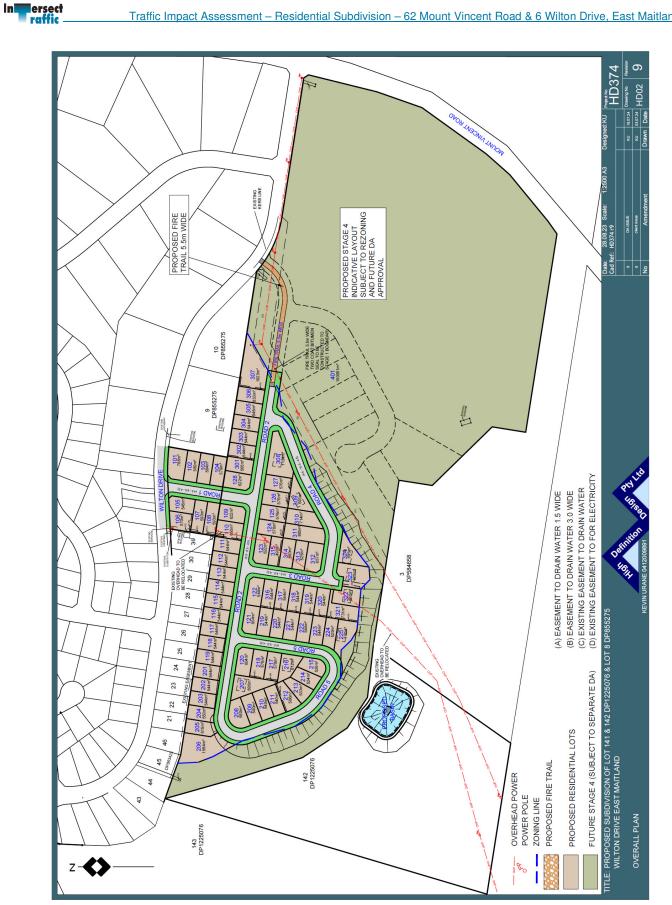
Having carried out this traffic impact assessment for a residential subdivision of Part Lot 141 DP1225076, 62 Mount Vincent Road & Lot 8 DP855275, 6 Wilton Drive, East Maitland it is recommended that the proposal can be supported from a traffic impact perspective as it will not adversely impact on the local road network and complies with all relevant Maitland City Council, Austroads, Australian Standards and TfNSW traffic and parking related requirements.

0. barry

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



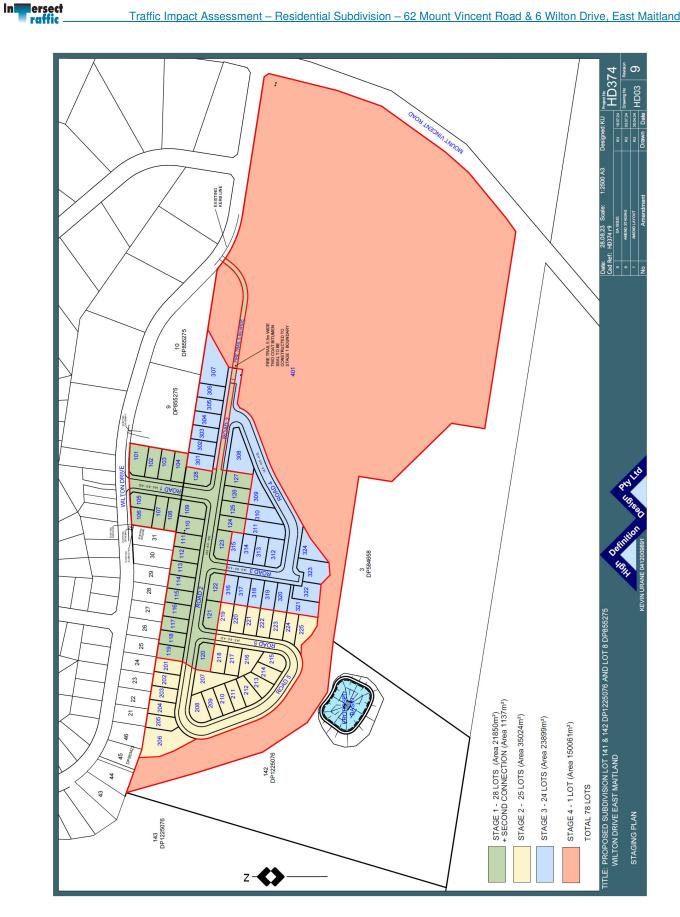












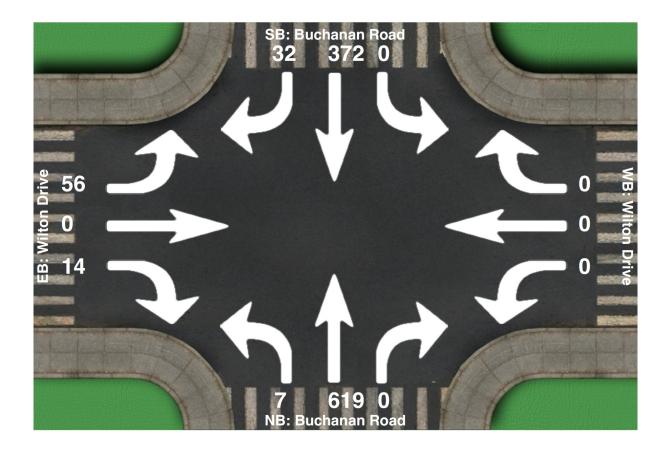


ATTACHMENT B Traffic Count Data



Intersection Peak Hour

Location:Buchanan Road at Wilton Drive, East MaitlandGPS Coordinates:Lat=-32.769035, Lon=151.576969Date:2024-06-28Day of week:FridayWeather:Jeff



Intersection Peak Hour

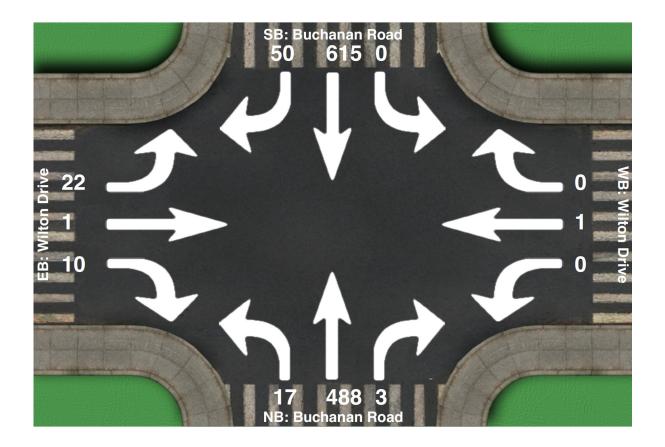
08:00 - 09:00

	Sc	outhBou	Ind	We	estboun	d	No	orthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
Vehicle Total	0	372	32	0	0	0	7	619	0	56	0	14	1100
Factor	0.00	0.84	0.57	0.00	0.00	0.00	0.44	0.86	0.00	0.82	0.00	0.44	0.93
Approach Factor		0.86			0.00			0.87			0.80		



Intersection Peak Hour

Location:Buchanan Road at Wilton Drive, East MaitlandGPS Coordinates:Lat=-32.769035, Lon=151.576969Date:2024-06-27Day of week:ThursdayWeather:Jeff



Intersection Peak Hour

15:00 - 16:00

	Sc	outhBou	Ind	We	estboun	d	No	orthbour	nd	Ea	astboun	d	Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
Vehicle Total	0	615	50	0	1	0	17	488	3	22	1	10	1207
Factor	0.00	0.91	0.78	0.00	0.25	0.00	0.71	0.69	0.25	0.55	0.25	0.62	0.82
Approach Factor		0.93			0.25			0.70			0.63		





ATTACHMENT C SIDRA Movement Summary Tables



🚳 Site: 1 [2024AM Peak (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Mount Vincent Road and Wilton Drive Intersection CHR / AUL June 2024 counts Site Category: (None) Stop (Two-Way)

Vehi	cle Mo	ovemen	t Perfo	rma	nce										
Mov ID	Tum	Mov Class		ows HV]		rival lows HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service		lack Of eue Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver Speed km/h
South	n: Mou	nt Vincen	t Road												
1	L2	All MCs	7	5.0	7	5.0	0.004	6.4	LOS A	0.0	0.0	0.00	0.61	0.00	57.5
2	T1	All MCs	652	5.0	652	5.0	0.345	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
Appro	bach		659	5.0	659	5.0	0.345	0.2	NA	0.0	0.0	0.00	0.01	0.00	69.6
North	: Mour	nt Vincen	t Road												
8	T1	All MCs	392	5.0	392	5.0	0.207	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.9
9	R2	All MCs	34	5.0	34	5.0	0.056	10.9	LOS A	0.2	1.4	0.58	0.79	0.58	48.6
Appro	bach		425	5.0	425	5.0	0.207	0.9	NA	0.2	1.4	0.05	0.06	0.05	67.5
West	: Wiltor	n Drive													
10	L2	All MCs	59	5.0	59	5.0	0.129	13.8	LOS A	0.4	3.1	0.63	1.00	0.63	45.6
12	R2	All MCs	15	5.0	15	5.0	0.050	19.0	LOS B	0.2	1.2	0.78	1.00	0.78	42.9
Appro	bach		74	5.0	74	5.0	0.129	14.8	LOS B	0.4	3.1	0.66	1.00	0.66	45.1
All Ve	hicles		1158	5.0	1158	5.0	0.345	1.4	NA	0.4	3.1	0.06	0.09	0.06	66.5

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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Site: 1 [2024 PM Peak (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Mount Vincent Road and Wilton Drive Intersection CHR / AUL June 2024 count Site Category: (None) Stop (Two-Way)

Vehic	cle Mo	ovement	t Perfo	rmai	nce										
Mov ID	Tum	Mov Class		lows HV]		rival lows HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service		Back Of Ieue Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South	: Mou	nt Vincen	t Road												
1	L2	All MCs	18	5.0	18	5.0	0.010	6.4	LOS A	0.0	0.0	0.00	0.61	0.00	57.5
2	T1	All MCs	517	5.0	517	5.0	0.274	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
Appro	ach		535	5.0	535	5.0	0.274	0.3	NA	0.0	0.0	0.00	0.02	0.00	69.3
North	: Mour	nt Vincent	t Road												
8	T1	All MCs	648	5.0	648	5.0	0.343	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
9	R2	All MCs	53	5.0	53	5.0	0.071	9.6	LOS A	0.3	1.9	0.53	0.75	0.53	49.4
Appro	ach		701	5.0	701	5.0	0.343	0.8	NA	0.3	1.9	0.04	0.06	0.04	67.7
West:	Wilton	n Drive													
10	L2	All MCs	24	5.0	24	5.0	0.041	11.5	LOS A	0.1	1.0	0.52	0.94	0.52	46.9
12	R2	All MCs	11	5.0	11	5.0	0.046	22.6	LOS B	0.1	1.0	0.83	1.00	0.83	41.2
Appro	ach		35	5.0	35	5.0	0.046	14.8	LOS B	0.1	1.0	0.61	0.96	0.61	45.0
All Ve	hicles		1271	5.0	1271	5.0	0.343	1.0	NA	0.3	1.9	0.04	0.07	0.04	67.4

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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Dite: 1 [2024AM Peak + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Mount Vincent Road and Wilton Drive Intersection CHR / AUL June 2024 counts Site Category: (None) Stop (Two-Way)

Vehio	cle Mo	ovement	t Perfo	rmai	nce										
Mov ID	Tum	Mov Class		lows HV]		rival ows HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service		Back Of Ieue Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South	: Mou	nt Vincen	t Road												
1	L2	All MCs	11	5.0	11	5.0	0.006	6.4	LOS A	0.0	0.0	0.00	0.61	0.00	57.5
2	T1	All MCs	652	5.0	652	5.0	0.345	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
Appro	ach		662	5.0	662	5.0	0.345	0.2	NA	0.0	0.0	0.00	0.01	0.00	69.5
North	Mour	nt Vincent	t Road												
8	T1	All MCs	392	5.0	392	5.0	0.207	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.9
9	R2	All MCs	44	5.0	44	5.0	0.074	11.0	LOS A	0.3	1.9	0.58	0.81	0.58	48.5
Appro	ach		436	5.0	436	5.0	0.207	1.2	NA	0.3	1.9	0.06	0.08	0.06	66.9
West:	Wilton	n Drive													
10	L2	All MCs	101	5.0	101	5.0	0.221	14.3	LOS A	0.8	5.7	0.66	1.02	0.70	45.4
12	R2	All MCs	28	5.0	28	5.0	0.099	19.6	LOS B	0.3	2.4	0.80	1.00	0.80	42.6
Appro	ach		129	5.0	129	5.0	0.221	15.5	LOS B	0.8	5.7	0.69	1.01	0.72	44.7
All Ve	hicles		1227	5.0	1227	5.0	0.345	2.1	NA	0.8	5.7	0.09	0.14	0.10	64.8

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 (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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Site: 1 [2024 PM Peak + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Mount Vincent Road and Wilton Drive Intersection CHR / AUL June 2024 count Site Category: (None) Stop (Two-Way)

Vehic	cle M	ovemen	t Perfo	rma	nce										
Mov ID	Tum	Mov Class		lows HV]		tival lows HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service		Back Of ieue Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South	: Mou	nt Vincen	t Road												
1	L2	All MCs	31	5.0	31	5.0	0.017	6.4	LOS A	0.0	0.0	0.00	0.61	0.00	57.5
2	T1	All MCs	517	5.0	517	5.0	0.274	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
Appro	ach		547	5.0	547	5.0	0.274	0.4	NA	0.0	0.0	0.00	0.03	0.00	69.0
North	Mou	nt Vincent	t Road												
8	T1	All MCs	648	5.0	648	5.0	0.343	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
9	R2	All MCs	93	5.0	93	5.0	0.127	9.8	LOS A	0.5	3.5	0.55	0.78	0.55	49.2
Appro	ach		741	5.0	741	5.0	0.343	1.3	NA	0.5	3.5	0.07	0.10	0.07	66.3
West:	Wilto	n Drive													
10	L2	All MCs	41	5.0	41	5.0	0.070	11.6	LOS A	0.2	1.7	0.53	0.96	0.53	46.8
12	R2	All MCs	16	5.0	16	5.0	0.074	24.1	LOS B	0.2	1.7	0.84	1.00	0.84	40.5
Appro	ach		57	5.0	57	5.0	0.074	15.0	LOS B	0.2	1.7	0.61	0.97	0.61	44.9
All Ve	hicles		1345	5.0	1345	5.0	0.343	1.5	NA	0.5	3.5	0.06	0.11	0.06	66.0

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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Project: D:\Work\2024\24.059 Wilton Drive DA\Sidra\Intersection MtVincentRdWiltonDr.sip9



Site: 1 [2034AM Peak + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Mount Vincent Road and Wilton Drive Intersection CHR / AUL June 2024 counts Site Category: (None) Stop (Two-Way) Design Life Analysis (Final Year): Results for 10 years

Vehic	cle Mo	ovemen	t Perfo	rmai	nce										
Mov ID	Tum	Mov Class		lows HV]		rival lows HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service		Back Of leue Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South	: Mou	nt Vincen	t Road												
1	L2	All MCs	12	5.0	12	5.0	0.007	6.4	LOS A	0.0	0.0	0.00	0.61	0.00	57.5
2	T1	All MCs	756	5.0	756	5.0	0.400	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.7
Appro	ach		768	5.0	768	5.0	0.400	0.2	NA	0.0	0.0	0.00	0.01	0.00	69.5
North	Mour	nt Vincen	t Road												
8	T1	All MCs	454	5.0	454	5.0	0.241	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
9	R2	All MCs	51	5.0	51	5.0	0.104	12.6	LOS A	0.4	2.6	0.67	0.87	0.67	47.5
Appro	ach		506	5.0	506	5.0	0.241	1.3	NA	0.4	2.6	0.07	0.09	0.07	66.7
West:	Wilton	n Drive													
10	L2	All MCs	117	5.0	117	5.0	0.322	17.9	LOS B	1.2	8.8	0.76	1.06	0.93	43.6
12	R2	All MCs	33	5.0	33	5.0	0.165	25.9	LOS B	0.5	3.7	0.86	1.00	0.88	39.8
Appro	ach		150	5.0	150	5.0	0.322	19.6	LOS B	1.2	8.8	0.78	1.05	0.92	42.7
All Ve	hicles		1424	5.0	1424	5.0	0.400	2.7	NA	1.2	8.8	0.11	0.15	0.12	64.2

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 (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\24.059 Wilton Drive DA\Sidra\Intersection MtVincentRdWiltonDr.sip9



🚳 Site: 1 [2034 PM Peak + development (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Mount Vincent Road and Wilton Drive Intersection CHR / AUL June 2024 count Site Category: (None) Stop (Two-Way) Design Life Analysis (Final Year): Results for 10 years

Vehi	cle Mo	ovemen	t Perfo	rma	nce										
Mov ID	Tum	Mov Class		lows HV]		rival ows HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service		Back Of Ieue Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South	: Mou	nt Vincen	t Road												
1	L2	All MCs	37	5.0	37	5.0	0.021	6.4	LOS A	0.0	0.0	0.00	0.61	0.00	57.5
2	T1	All MCs	630	5.0	630	5.0	0.334	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
Appro	ach		667	5.0	667	5.0	0.334	0.4	NA	0.0	0.0	0.00	0.03	0.00	68.9
North	: Mour	nt Vincen	t Road												
8	T1	All MCs	790	5.0	790	5.0	0.419	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.7
9	R2	All MCs	113	5.0	113	5.0	0.187	11.3	LOSA	0.7	5.1	0.61	0.85	0.61	48.3
Appro	bach		903	5.0	903	5.0	0.419	1.5	NA	0.7	5.1	0.08	0.11	0.08	66.0
West	Wilto	n Drive													
10	L2	All MCs	50	5.0	50	5.0	0.105	13.3	LOS A	0.3	2.5	0.61	1.00	0.61	45.9
12	R2	All MCs	19	5.0	19	5.0	0.167	39.6	LOS C	0.5	3.4	0.92	1.01	0.94	34.6
Appro	ach		69	5.0	69	5. 0	0.167	20.6	LOS B	0.5	3.4	0.70	1.00	0.70	42.1
All Ve	hicles		1640	5.0	1640	5. 0	0.419	1.9	NA	0.7	5.1	0.07	0.11	0.07	65.6

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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ATTACHMENT D Hunter Valley Buses Advice



Jerr

From:		
Sent:		
To:		
Subject:		

John Meldrum <john.meldrum@cdcbus.com.au> Tuesday, 21 April 2020 10:39 AM Jeff Re: New Bus Stop

Hi Jeff,

This one looks fairly straight forward. Currently a stop exists in the system fronting property number 2. This could be moved closer to number 8 to support the development your client is proposing here.

I would have no issue with moving the stop closer to the development entrance of number 8. The stop as usual would need to meet DSAPT design.

Thanks Jeff.



From: Jeff <jeff@intersecttraffic.com.au> Sent: Tuesday, 21 April 2020 9:58 AM To: John Meldrum <john.meldrum@cdcbus.com.au> Subject: New Bus Stop

John,

I am working on a new subdivision proposal for land off Wilton Drive, East Maitland. The attached subdivision plan is the current plan. In reality however once the applicant has approval for rezoning the land to General Residential it is the intention to develop the land as a seniors living complex as an extension to a seniors living complex approved on the lot numbered 8 Wilton Drive in the above plan. The dead end road at the southern boundary of No. 8 Wilton Drive will extend through to Wilton Drive as part of the already approved SL development on 8 Wilton Drive. The developer wants to provide a bus shelter and seat and accessible bus stop on Wilton Drive adjacent to the seniors living access at 8 Wilton Drive i.e. along the frontage of 8 Wilton Drive to connect to your service route No.187.

Would this receive the support of Hunter Valley Buses and Transport NSW?

Jeff Garry Director



PO Box 268, East Maitland NSW 2323 **16 Mount Harris Drive** Maitland Vale NSW 2320