Town of Gawler

EDITH STREET TRAFFIC STUDY AND RECOMMENDATIONS

March 2022

21-0137

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Rev A	10 Mar 22	Minor changes	JL
Rev B	16 Mar 22	Commentary on road hierarchy and pedestrian refuge added	JL
Rev C	17 Mar 22	Additional data related to shared bicycle infrastructure added	JL

CONTENTS

1.0 BACKGROUND AND STUDY OBJECTIVES

MFY has been engaged to undertake an assessment of the traffic conditions on Edith Street, Blanch Street and Short Street, Gawler. Figure 1 identifies the study area and the adjacent road network.

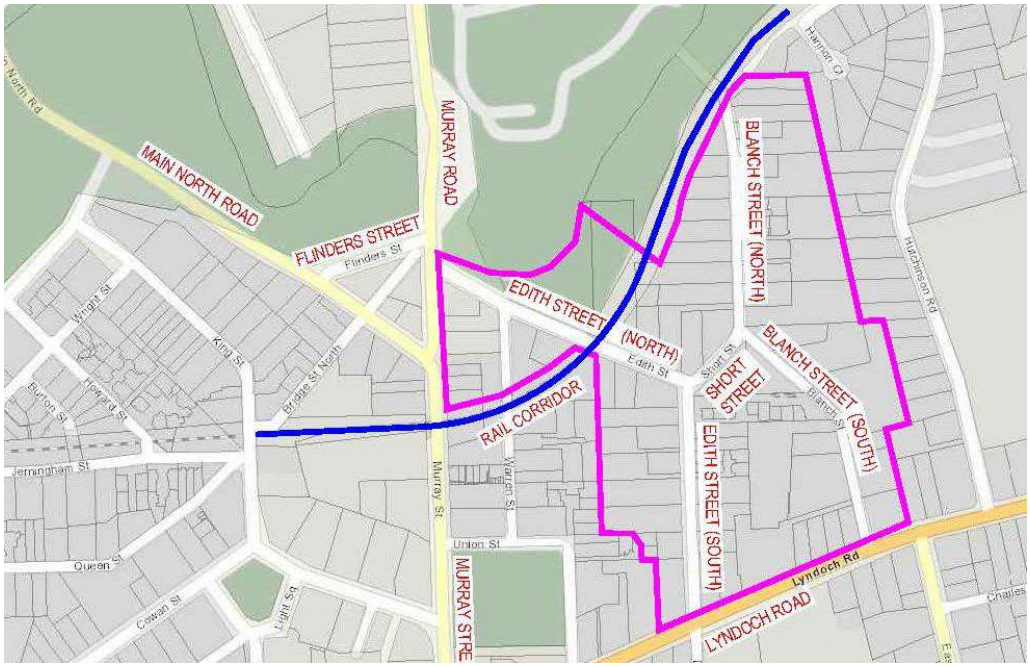


Figure 1: Study area

The local road network provides a connection between Murray Road and Lyndoch Road (Barossa Valley Way), providing an alternative route for drivers to avoid the signalised arterial intersection of Murray Street and Lyndoch Road.

This connectivity is the basis for concerns raised by local residents with respect to the use of the roads for "rat-running", resulting in increased traffic volumes and speeds than typically experienced on local residential streets.

In order to verify these existing operational conditions of the roads, counter and origin-destination data has been collected to assess:

- vehicle volumes;
- vehicle speed (particularly 85th percentile speed);
- proportion of local vs non-local trips, particularly during the peak hour,
- the predominant routes for access to and through the area; and
- vehicle fleet characteristics (i.e. domestic and commercial vehicle numbers).

In addition, a high level safety review of the road infrastructure, with respect to compliance with relevant Codes, Standards and Guidelines for local roads, has been undertaken.

2.0 ROAD NETWORK

Edith Street, Blanch Street and Short Street are local roads under the care and control of the Town of Gawler. They provide access to approximately 70 residential dwellings, primarily to the east of the train line and commercial properties including a medical centre and community facility to the west of the train line.

The roads, with the exception of Edith Street (north) generally provide local road cross section, with two lane kerbed roads and footpaths on one side.

Edith Street (north) is approximately 9 m wide and Edith Street (south) is approximately 8.8 m wide. Short Street and Blanch Street are narrower, being approximately 7.2 m and 6 m wide respectively.

Typically, local roads have a 7.2 m wide pavement which provides opportunities for parking on both sides of the road while maintaining a 3 m lane in accordance with the Australian Road Rules. Collector roads should have clear carriageways of at least 6 m to 6.5 m wide clear of parking bays, in order to maintain simultaneous two-way traffic volumes.

There are limited opportunities for parking, particularly on Edith Street (North) and Short Street, due to an unbroken centreline along the roads and at the approaches to the intersections, which assists in providing capacity of higher volumes along the road.

There are two t-intersections formed by the local roads, which are controlled with stop-signs. The intersections require drivers on Edith Street (North) and Blanch Street (South) to give way to north-south traffic.

Edith Street forms part of Council's cycling network and has been treated with bicycle symbols and sharrows to convey this to road users.

The urban default speed limit of 50 km/h applies to these roads.

Edith Street provides a direct connection between Murray Road (a local collector road with more than 3,000 vehicles per day) and Lyndoch Road (an arterial road with approximately 15,000 vehicles per day) as shown in Figure 2. This connection provides the opportunity for drivers to seek more efficient travel routes by bypassing inefficiencies created by the arterial road intersections (namely the unsignalised intersection of Flinders Street, Murray Street and Main North Road, and the signalised intersection of Murray Street and Lyndoch Road).

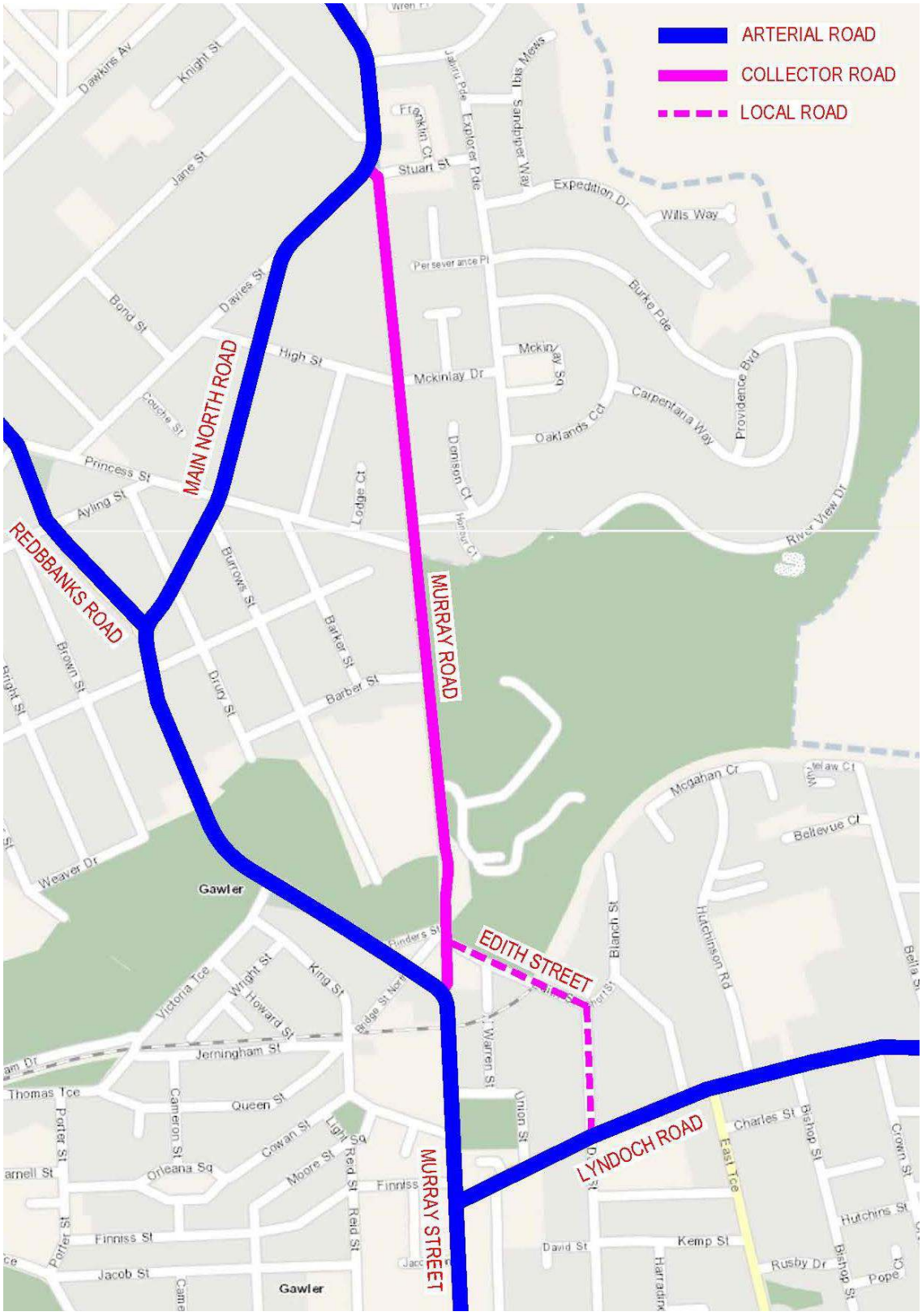


Figure 2: Road Hierarchy

Murray Street (north) and Lyndoch Road are arterial roads under the care and control of the Commissioner of Highways. Data obtained from the Department for Infrastructure and Transport (undertaken in March 2021) identifies:

- Murray Street (north) has Average Annual Daily Traffic (AADT) volumes of approximately 18,800 vehicles per day (vpd) with 5.1% commercial vehicles;
- Lyndoch Road has AADT volumes of approximately 15,000 vehicles per day (vpd) with 4.5% commercial vehicles; and
- Murray Street (south) has AADT volumes of approximately 15,000 vehicles per day (vpd) with 3.8% commercial vehicles

A comparison of data provided by DIT shows that the arterial roads have experienced traffic growth in the order of 1.4% since 2002.

The operation of the signalised intersection is currently close to capacity and as such the increase delays at the signal would likely result in additional drivers perceiving that Edith Street would provide a more efficient route to their destination.

3.0 DATA COLLECTION AND ANALYSIS

3.1 COUNCIL TRAFFIC COUNTER SURVEYS

Traffic volume and speed data was obtained from Council for Edith Street, namely:

- Edith Street (north) between 2 February and 10 February 2017;
- Edith Street (north) between 12 February and 19 February 2019; and
- Edith Street (south) between 23 June and 30 June 2021. These traffic surveys were undertaken during private school holidays.

The traffic data identified the following:

- Edith Street (north) had an average daily traffic volume in the order of 1660 vehicles and an 85th percentile speed of 54.3 km/h in 2017;
- Edith Street (north) had an average daily traffic volume in the order of 1800 vehicles and an 85th percentile speed of 49.3 km/h in 2019; and
- Edith Street (south) had an average daily traffic volume in the order of 1500 vehicles and an 85th percentile speed of 51.6 km/h in 2021.

Council's traffic data identified that on Edith Street (North) the average daily traffic volume has increased approximately 140 vehicles and 85th percentile speed has decreased between 2017 and 2019.

3.2 AUSTRAFFIC TRAFFIC COUNTER SURVEYS

As part of this study, more detailed traffic data were collected by AusTraffic. The surveys recorded:

- the traffic volumes and speeds for Blanch Street, Short Street and Edith Street by counters between 27 November and 3 December 2021; and
- origin destination data by camera on Tuesday 20 November 2021.

The data collection locations are identified in Figure 3.

Figure 3: Data collection locations

Table 1 summarises the average traffic volumes and 85th percentile speed for each section of road surveyed.

Table 1: AusTraffic survey data

Road	Average weekday traffic volume	Average daily traffic volume	Daily 85th percentile speed (km/h)
Blanch Street (north)	130	130	37
Blanch Street (south)	565	470	43
Edith Street (north)	2,300	2,100	50
Edith Street (south)	1,820	1,645	51
Short Street	735	635	35

These data confirm that:

- there have been increases in the order of 5% per year on Edith Street between 2017 and 2021, with the % increasing in latter times; and
- there were increases in traffic in the order of 10% on Edith Street (south) between June and November 2021, albeit this was likely to have been substantially influenced by the earlier study being undertaken during school holidays.

The speed data on the roads have been further analysed to identify whether there are significant increases in traffic speed during the am and pm (school pick-up) peak hours. Table 2 identifies the speeds during these peak traffic times.

Table 2: peak hour 85th percentile speeds

Road	Daily (km/h)	am peak 8am to 9am (km/h)	pm peak 3pm to 4pm (km/h)
Blanch Street (north)	37	37	37
Blanch Street (south)	43	42	42
Edith Street (north)	50	49	49
Edith Street (south)	51	50	51
Short Street	35	34	34

3.3 AUSTRAFFIC ORIGIN-DESTINATION SURVEYS

The origin-destination surveys were assessed during two three-hour periods in the morning and afternoon. These data were analysed to determine the proportion of traffic that was not local to the subject precinct.

The surveys were conducted on Tuesday 20 November 2021. Cameras were set up at the intersections of:

- Murray Road and Edith Street;
- Edith Street and Lyndoch Road;
- Blanch Street and Lyndoch Road.

An additional camera was also installed at the railway crossing.

The camera footage was analysed to track de-identified vehicles between the location, recording the direction of travel when entering and exiting the study area. In this way, it was possible to identify whether drivers travelled directly through the study area (in which case they were recorded both entering and exiting the study area shortly after), or if they were local to the study area (i.e. they either entered or exited the area but did not do both).

The data identified the following:

- approximately 75% of the traffic on Edith Street during the six-hour survey period is not “local” to the study area;

- the primary route for this traffic was from north to east and vice versa;
- the majority of this bypass traffic is using travelling to/from Edith Street via Murray Road and therefore using Edith Street as a minor collector road providing a link between the arterial road network or the arterial to major collector road network; and
- a similar proportion of drivers used Blanch Street rather than Edith Street but the overall volumes were not high.

Detailed information regarding the use of the roads for bypass traffic are shown in Figures 4 to 9. The graphs show:

- total bypass traffic and a breakdown of volumes in both directions in fifteen minute increments; and
- cumulative traffic over the three hour survey periods in the am and pm; and
- total traffic on the road over the three hour survey period.

Figure 4: AM period, Edith Street North

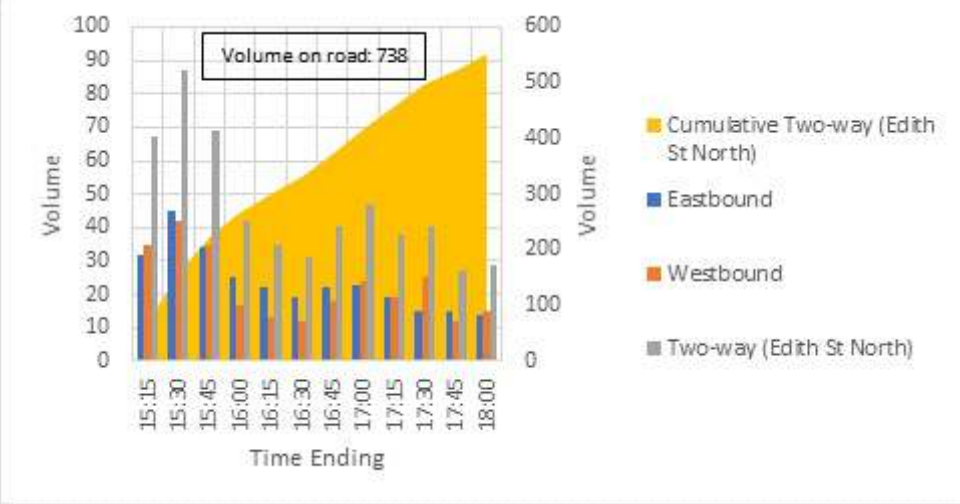


Figure 5: PM period, Edith Street North

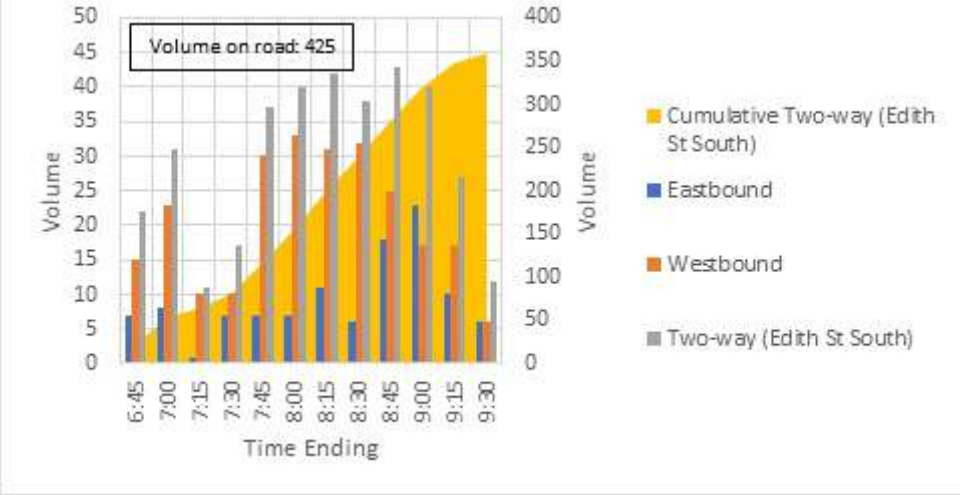


Figure 6: AM period, Edith Street South

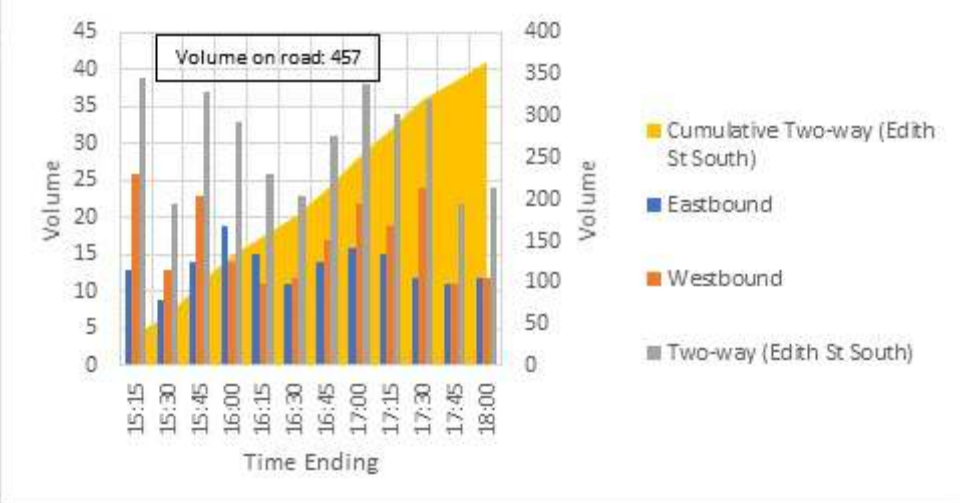


Figure 7: PM period, Edith Street South

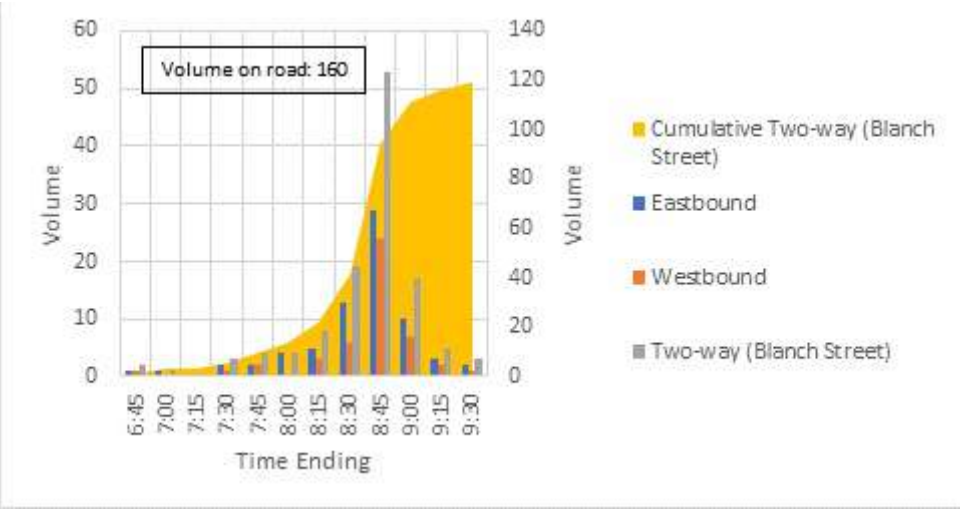


Figure 8: AM period, Blanch Street

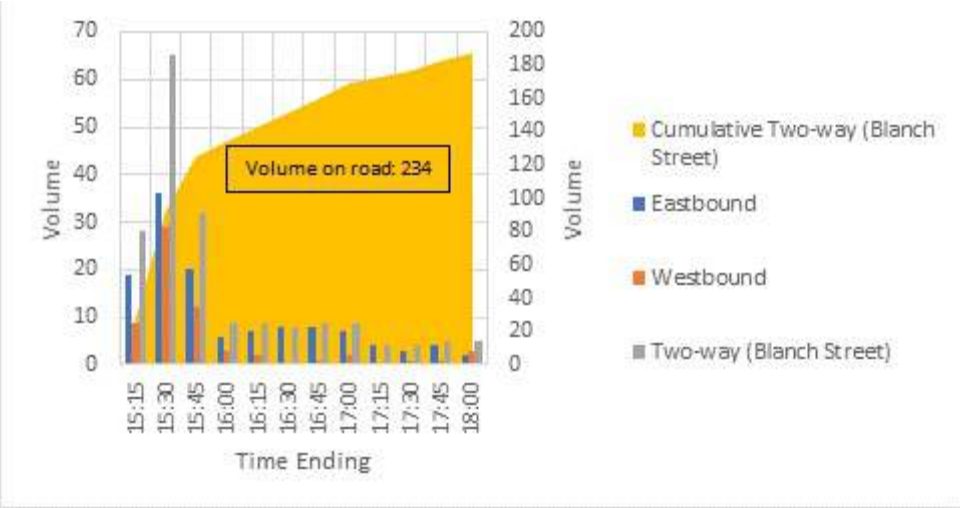


Figure 9: PM period, Blanch Street

Tables 2 and 3 nominate the proportion of traffic on each of the roads which is being generated from outside of the study area.

Table 2: Proportion of traffic on Edith & Blanch Streets generated from outside of study area/total traffic (% traffic) in the morning period

Road	Edith Street (north)	Edith Street (south)	Blanch Street
South-east bound	183/237 (77%)	111/123 (90%)	72/89 (81%)
North-west bound	296/397 (74%)	249/302 (82%)	47/71 (66%)
Total	479/634 (76%)	360/425 (85%)	119/160 (74%)

Table 3: Proportion of traffic on Edith & Blanch Streets generated from outside of study area/total traffic (% traffic) in the afternoon period

Road	Edith Street (north)	Edith Street (south)	Blanch Street
South-east bound	285/380 (75%)	161/199 (81%)	124/150 (83%)
North-west bound	267/358 (75%)	204/258 (79%)	63/84 (75%)
Total	552/738 (75%)	365/457 (80%)	187/234 (80%)

3.4 SPEED

The speed conditions on Edith Street are not outside of typical operational parameters for local roads.

As can be seen in the below Figure 10, the 85th percentile speeds recorded in Edith Street are mid-range when compared to other streets within the suburb of Willaston which were recorded as part of the Willaston Local Area Traffic Management Study (LATM).

The LATM Study provides a comparable basis for assessing the operation of Edith Street with a number of neighbouring roads, as well as allowing a comparison of Council priorities in addressing speed conditions on other roads with the local area.

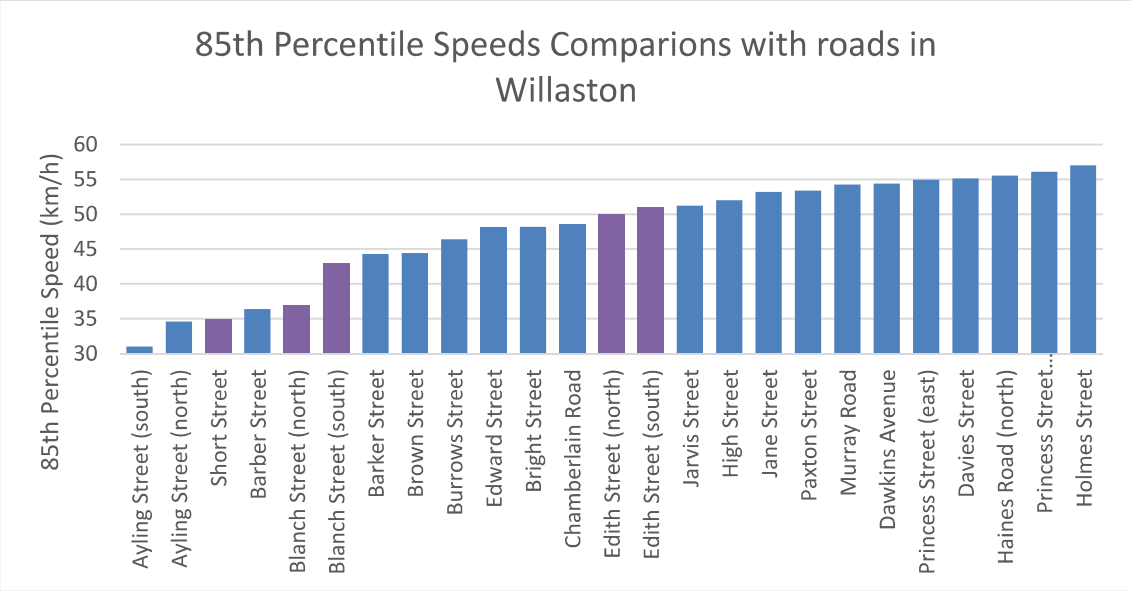


Figure 10: Comparison of Edith Street speeds to other roads in the Town of Gawler

It is relevant to note that the three roads in Willaston with minor collector volumes (Paxton Street, Murray Road and Holmes Street) have higher traffic volumes Edith Street, which is likely a function of the length and straight alignment of these roads.

While the roads in the study area do not exhibit excessive speed characteristics when compared to other similar streets, it would be preferable to lower the operating speed

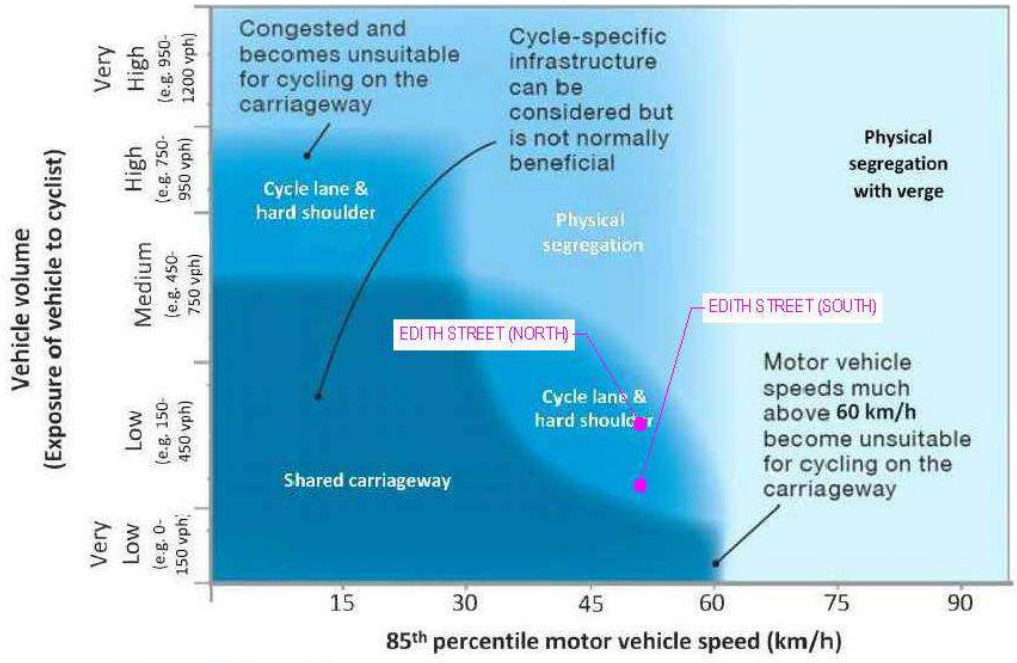
of the road (ideally to 40 km/h or less) given the status of Edith Street as a bicycle route as nominated in Town of Gawler's *Walking and Cycling Plan 2018-2028*.

The management of Council's on-road cycling network requires consideration of both traffic volume and speed to determine appropriate cycling infrastructure.

Austroads' *Guide to Traffic Management Part 8: Local Street Management (AGTM8)* notes that:

> *Most of the concern about risks and impediments to cyclists arises from the excessive speed of motor vehicles when they come in close proximity with bicycles. If motor vehicles are not travelling faster than bicycles then spatial separation is less critical and therefore integration of bicycles within the traffic stream is appropriate.*
>
> *Therefore, the most important contribution to pedestrian and cyclist safety and amenity in local streets comes from effective reduction in vehicle speeds, requiring concerted application of all the relevant advice in this Guide. This means aiming at speeds below 40 km/h rather than above 50 km/h, for all vehicles, if a compatible speed environment is genuinely sought.*

Edith Street has a shared carriageway arrangement and while this treatment is appropriate for low speed and/or low volume roads, Figure 11 identifies that a reduction in speed or volume, or both, would be desirable for the existing shared carriageway arrangement.



Source: Adapted from Sustrans (2014).

Figure 11: Guidance on the separation of cyclists and motor vehicles for the preferred bicycle route (source: Austroads' Guide to Traffic Management Part 5:Link Management)

3.5 VEHICLE FLEET COMPOSITION

The traffic counters identified that the traffic on the residential roads to the east of the railway corridor are approximately 97% domestic vehicles and 3% commercial vehicles, which is typical for residential street operation.

4.0 ANALYSIS

4.1 CUT THROUGH TRAFFIC

The data collection has confirmed there is a significant portion of bypass traffic using Edith Street, which is changing the nature and function of the road from a local residential street to a minor collector road. The volumes have increased over the last year and this has effectively changed the nature and function of the road.

It is not possible within the constraints of this study to determine the extent to which this bypass traffic is local to the area (in that it is accessing Murray Road collector road from adjacent local dwellings) or whether it is using Edith Street (and Murray Road) to bypass the arterial road intersection of Lyndoch Road and Murray Street, but then re-joining the arterial road as part of a wider route through the Gawler township. This is an important consideration, as it is more difficult to alter traffic conditions which provide for locally generated traffic, when compared to drivers who are using local roads to travel between sections of the arterial road network.

Notwithstanding this, the use of Edith Street as a minor collector road is contrary to the road hierarchy of the area, as drivers should travel from arterial to major collector to minor collector/local roads. In other words, drivers should not be using Edith Street to travel between the arterial road (Lyndoch Road) and the major collector (Murray Road).

It is likely that drivers are using Edith Street to avoid existing capacity issues at the signalised intersection of Murray Street/Main North Road/Lyndoch Road. Council staff has previously commissioned a report into the operation of this intersection following upgrades to provide safety improvements at the High Street intersection, which is approximately 70 m east of the signals (Stantec's *Lyndoch Road / High Street Intersection Upgrade – Traffic Review*, dated 2 July 2021).

The Lyndoch Road approach was altered to reduce the length of the right-turn lane, which means that the dual lane operation at the signal has been reduced. This modification would have impacted on the capacity of this approach, requiring either increased green time for Lyndoch Road, or resulting in fewer right-turners being able to turn at the signal and therefore increasing the length of the right-turn queue.

Observations in the Stantec report noted that typically right-turners cleared the signal in one phase, with queues of 10 vehicles or fewer. However, longer queues were observed during the recent OD study, with the queue extent to the Edith Street intersection on numerous occasions (250 m or approximately 35 vehicles long).

This would suggest that the operation of the intersection is highly dependent on fluctuations in the operation of the arterial road network due to the signal being at or

close to capacity, which is having a flow-on effect to driver choice to use Edith Street or Blanch Street as a route.

It is likely that the majority of bypass traffic is local to the Council area. As shown in Figure 12, the road hierarchy of Willaston (east) and Hewett is based on local roads feeding Murray Road as the major collector road accessing Main North Road and the Gawler CBD. Residents of these areas with origins or destinations to the east of Gawler would use Edith Street and/or Blanch Street as a convenient connection to Lyndoch Road, in effect using Edith Street as a collector road to provide access from the local area to the arterial road network.

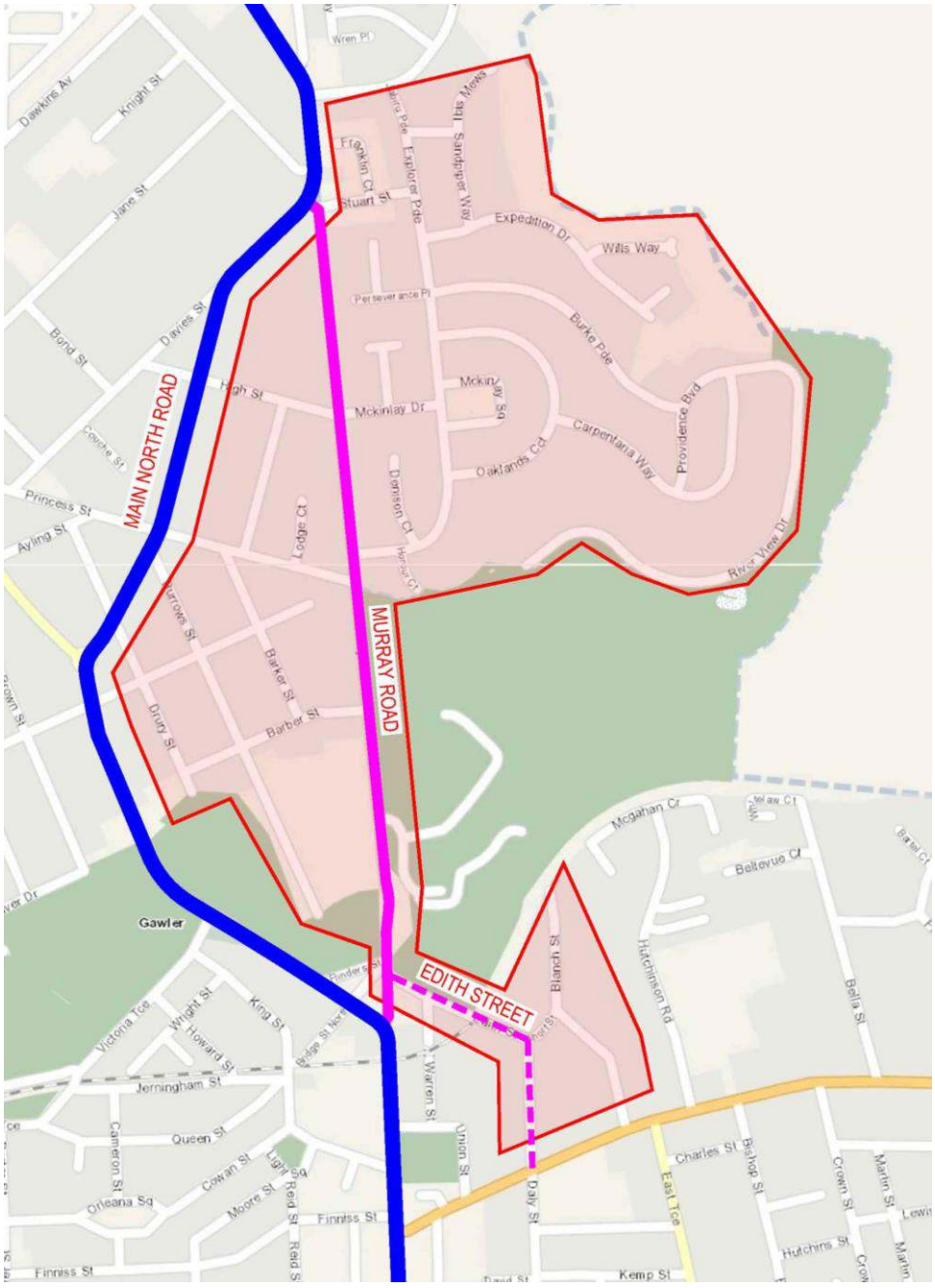


Figure 12: Potential "local" area catchment

Given that Edith Street is providing a more direct route to residents of the Willaston (east) and Hewett area, it is likely that these drivers will continue to use Edith Street or Blanch Street to a large degree, as the roads are providing convenient access, particularly given the inefficiencies and circuitous route offered by the arterial and major collector road network.

The only effective way to create a wholesale redirection of traffic onto higher order roads would be to prevent access to Edith Street and Blanch Street.

There are two options which could be pursued – part closure (e.g. out only from Edith Street to Murray Road) or full closure (e.g. blocking at the train line). The resulting change to access for all drivers currently using Edith and Blanch Streets, including local drivers, are demonstrated in Figures 13 and 14.

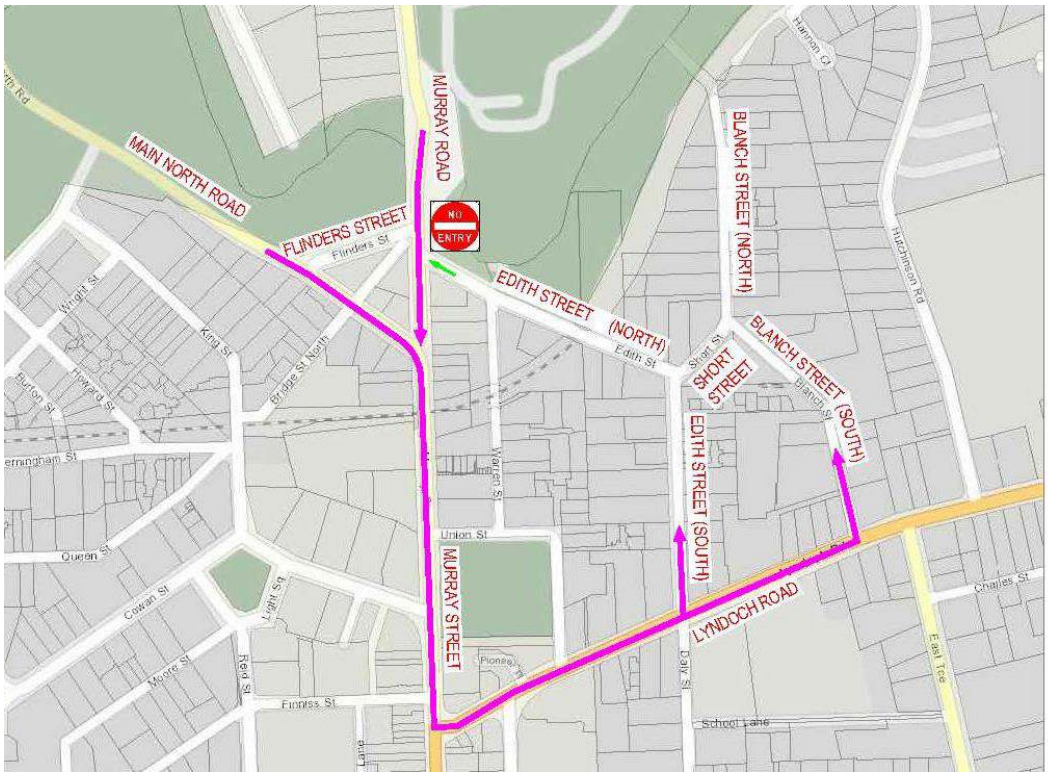


Figure 13: Route change resulting from part closure of Edith Street / Murray Street (out only)

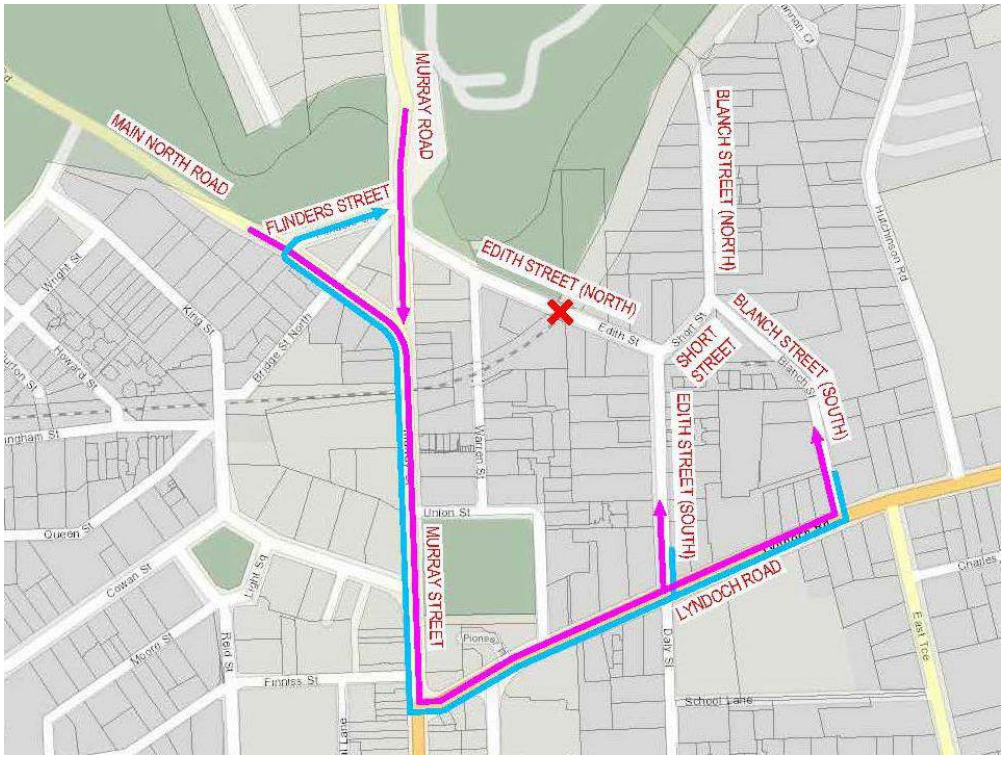


Figure 14: Route change resulting from full closure of Edith Street at the rail corridor

The anticipated reduction in traffic volumes on Edith Street (north) would be in the order of:

- 500-600 per day under the part closure; and
- 1,100 to 1,300 per day under the full closure.

The traffic would be rediverted to turn at the signal, resulting in the following additional volumes:

- part closure – 145 extra left turns in the am (currently 266 so extra 55%), 120 extra left turns in the pm (currently 333 so extra 35%)
- full closure – as per part closure, plus 190 extra right turns in the am (currently 380 so extra 50%), 110 extra right turns in the pm (currently 361 so extra 30%)

As such, adopting road closures at Edith Street will have significant traffic impacts on the operation of the adjacent road network for the broader community, as well as impacts on access and route choices available to drivers within the study area.

Given the current capacity constraints at the signal, this extra traffic would result in additional queues and delays for all road users (including the residents who would now also have to travel through the signals depending on their origin/destination).

Drivers from the study area would have increased travel times, both through longer travel routes and the increased congestion at the traffic signals. The queues from the signals would extend back along Lyndoch Road more frequently, which would restrict access from the local road network onto the arterial road when it occurs.

These impacts would be realised at all times that the restrictions are in place (i.e. during peak hours when the road network is currently heavily utilised).

If Council wishes to pursue an option of reducing the bypass volumes in the roads completely, this would need to be undertaken in accordance with the *Road Traffic Act 1961*.

5.0 RECOMMENDATIONS

5.1 POTENTIAL IMPROVEMENTS TO THE SIGNAL OPERATION

A proportion of the drivers that use Edith and Blanch Streets would do so to avoid the signalised intersection. This number would reduce if the operation of the intersection was improved, thereby reducing queues and delays.

The Stantec report identified that there could be improvements to the queues at the signal if the cycle time was reduced and DIT has also reviewed this at a high level and indicated that this may assist in reducing the Lyndoch Road queues.

Double cycling of traffic can improve the efficiency of traffic signal approaches where the geometric layout includes short turn lanes which block or reduce traffic flow in adjacent lanes, as is the case on Lyndoch Road and Murray Street (south). DIT has offered to implement a trial operational review of the signals to ascertain what benefits, if any, may be realised through reducing the cycle length, noting that while it is possible that reductions in queue lengths on Lyndoch Road may be realised, the proximity to the Cowan Street intersection may result in increased queues and delays for Murray Street traffic.

It is also noted that any improvements will potentially attract latent demand (i.e. drivers that are changing their time of travel and route choices) and will diminish over time, due to daily traffic fluctuation and general growth of traffic.

Notwithstanding this, any capacity improvements will have benefits for the operation of the local and adjacent street network and it is recommended that this be further explored with DIT to determine the potential impacts of this operational change.

Recommendation: Liaise with DIT to determine the impacts of reducing the cycle time on the operation of the arterial road signal.

5.2 TRAFFIC MANAGEMENT

The attractiveness of Edith and Blanch Streets for bypass traffic would also be reduced through the implementation of traffic management. The speed of traffic on Edith Street also warrants review, given its function as part of the on-road bicycle network, albeit the speeds do not exceed those typically experienced on residential roads.

There are a number of physical traffic control devices that can provide speed reduction on local roads and the most effective measure provide an element of vertical deflection. Typically in recent times, road cushions have been installed for this purpose rather than traditional road humps. Photo 1 shows an example of the installation of road cushions in the City of Marion.

Photo 1: Road cushions (source: AGTM8)

Austroads' GTM8 notes the following advantages and disadvantages of road cushions:

The advantages of road cushions include:

- *a reported 27% reduction in 85th percentile vehicle speeds in the vicinity of the device*
- *when used in a series they regulate speeds over the entire length of the street*
- *they are relatively low cost to install and maintain*
- *they discourage through traffic*
- *they do not restrict or discomfort cyclists*
- *they can be designed so that they do not inconvenience buses, commercial vehicles, etc.*

Some disadvantages of road cushions include:

- *the traffic noise level may increase just before and after the device due to braking, acceleration and the vertical displacement of vehicles and their goods*
- *they are less effective in slowing vehicles with a wide track*
- *they are less effective in slowing motorcyclists*
- *they can prevent cyclists using kerbside gaps on on-street parking*
- *drivers can reduce their effect by traversing the cushions with only two wheels.*

Importantly for the subject study area, road cushions have two main benefits when compared to traditional road humps:

- there is reduced noise impacts on residents (albeit there are still noise impacts associated with their installation and use); and
- they are easier to negotiate for cyclists.

If adopted, the humps should be installed within 50 m of the start of the road and then at intervals of no greater than 100 m to ensure smoother acceleration and deceleration of vehicles between the devices. An example of placement of the cushions is shown in Figure 15 below. The cushions could be installed more frequently to align with existing street lights if that were to prove a more cost effective solution.

The treatment could be expanded to Blanch Street if desired, to ensure that bypass traffic does not transfer to that road in preference to Edith Street.

Figure 15: Potential location of road cushions

The cost of road cushions was typically in the order of $1,200 to $12,000, depending on the need to upgrade road lighting to comply with relevant Australian Standards for lighting levels at traffic control devices (source: AGTM8, 2015 figures).

Flat top road humps could also be considered, but these are considerably more expensive to install and will not achieve substantive additional operational benefit when compared to road cushions.

Recommendation: Install road cushions in Edith Street and Blanch Street to reduce the operation speeds in Edith Street and discourage cut through movements on both roads.

5.3 INTERSECTION ALIGNMENT

The existing alignment of the internal road intersections do not meet minimum sight distance requirements as recommended by Austroads' Guide to Road Design Part 4A: Unsignalised and Signalised Intersections *("Austroads' GRD4A").* This was previously identified in a study undertaken for Council by WGA, which resulted in recommendations to install traffic control to improve delineation through the intersections within the area, as shown in Figure 16.

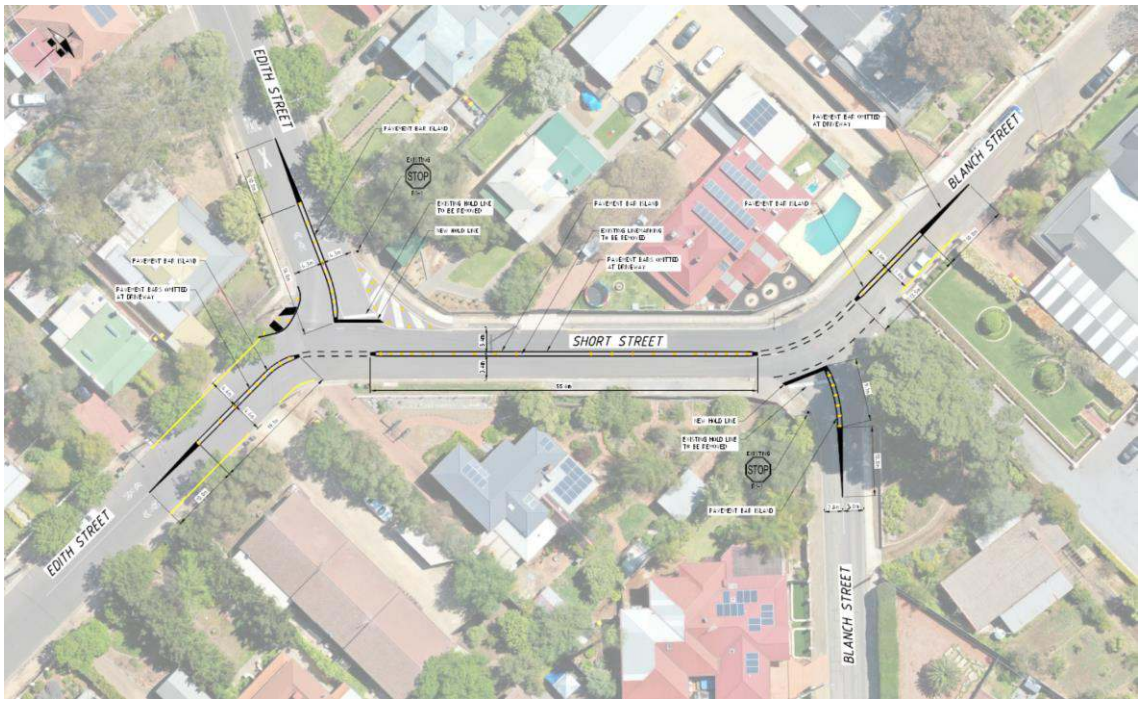


Figure 16: WGA traffic control recommendation

While the recommended treatment would assist with improving delineation of the intersections and separation of traffic flow, it would not address the existing safety issues associated with sightline restrictions. The sightlines could, however, be improved, through realigning the interactions to suit the primary traffic flow.

Adopting alignments shown in Figures 17 and 18 would:

- provide safer intersections with respect to priority of movement being for the major traffic flow;

- address the existing sight line constraints; and
- provide more opportunities for parking along the road, which would also assist in speed reduction by requiring on-coming drivers to share the pavement with other road users.

While the centreline treatments could be delineated with pavement bars to improve separation as per the WGA recommendation, these treatments are typically discouraged on roads which form part of the bicycle network as they can be a hazard for cyclists.

Figure 17: Recommended realignment of Edith Street/Short Street intersection

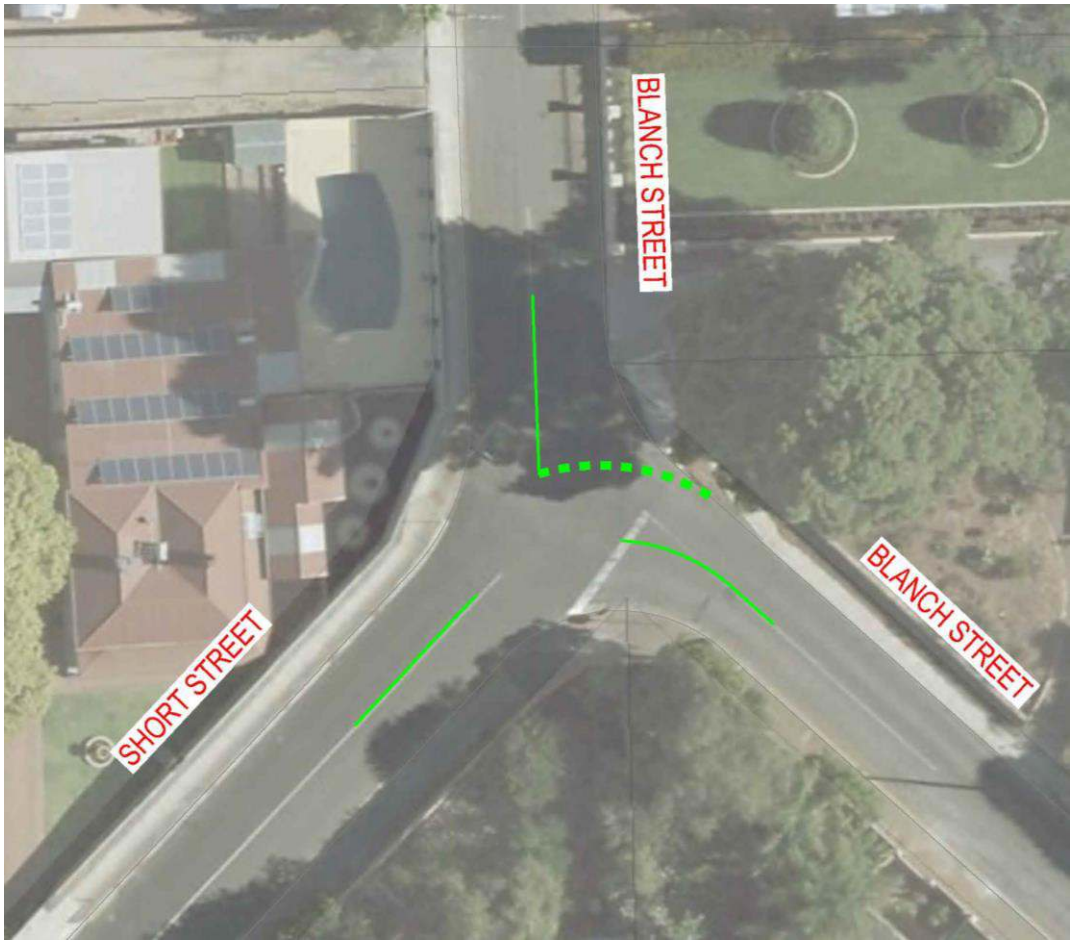


Figure 18: Recommended realignment of Blanch Street/Short Street intersection

Recommendation: Upgrade the intersections within the study area to match traffic flows and provide compliant sightlines

5.4 PEDESTRIAN FACILITIES

Collector roads are typically provided with footpaths on both sides of the road. The footpaths on Edith Street could be improved to provide this functionality. The location and alignment of pedestrian ramps should also be improved as part of any footpath upgrades or intersection realignment works.

A resident within the study area suggested that pedestrian crossing opportunities would benefit from the installation of a pedestrian refuge at the Edith Street/Short Street intersection. Pedestrian refuges can assist pedestrians in crossing high volume roads, as they only require a gap in one direction of traffic and provide a shorter crossing distance to the centre of the road. However, the road widths at the intersection would be insufficient to provide such a facility. Figure 19 demonstrates that it would not be possible for a Medium Rigid Vehicle to turn if a refuge was installed (noting the Council's refuse collection vehicles are likely to be larger than this design vehicle).

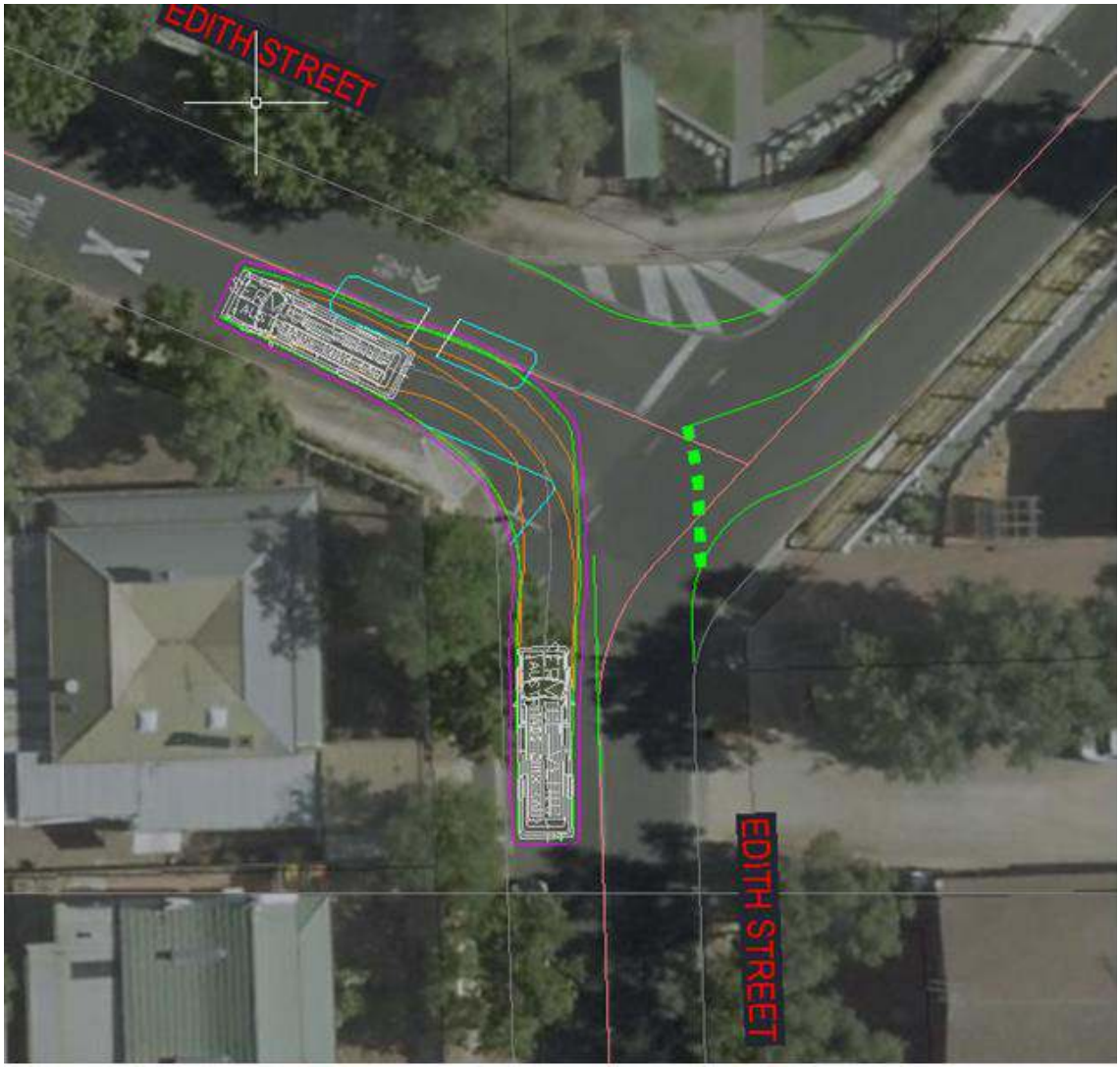


Figure 19: Swept path demonstrating conflict with a potential pedestrian facility

If the recommended road cushions were installed, this would provide a reduced speed environment on the road which would facilitate safe crossing opportunities for pedestrians on the road in lieu of a formalised facility.

5.5 PART OR FULLTIME ROAD CLOSURE

As identified in Section 4 above, more substantive interventions to prevent access to the roads (such as restricting turns or closure of the roads) would significantly impact on the access for residents. This would also create capacity issues on the adjacent local road network and the broader road network (including emergency access, potential impacts on queues and delays at the arterial intersection and potential impacts for residents and businesses in the local area associated with restricted access). As such, substantive modelling and assessment of these impacts would need to be developed in order to progress the consultation of any further interventions as they would likely require substantive upgrades to the arterial road intersections.

Both the community and Council, as stakeholders in the broader operation of traffic within the area, will need to determine the extent to which it wishes to enforce the road hierarchy, noting that the traffic conditions on Edith and Blanch Streets are not dissimilar to those experienced by other residents. Edith Street is in effect assisting to mitigate existing capacity constraints on the broader road network. The consequence of removing this function of the road would result in delays and safety impacts that arise when road congestion increases.

6.0 SUMMARY

In summary, the traffic data identified that Edith Street is being used as a minor collector road by drivers from outside the subject study area. Most of the drivers would be local to the Hewett and Willaston (east) suburbs and so are local to the area. However, they are originating in a neighbouring catchment which should be following the established road hierarchy of Murray Road to/from arterial roads. There would be a smaller proportion of drivers avoiding the Lyndoch Road/Murray Street intersection to travel between arterial roads.

While the road cross section can accommodate this volume of traffic from a capacity perspective, the following safety and traffic calming interventions that have been recommended to address existing non-compliance and to reduce the attractiveness of the roads for cut-through traffic:

- install traffic calming measures such as road cushions to manage vehicle speed to an appropriate level given the function of Edith Street as part of the on-road bicycle network and to discourage cut-through movements on both Edith Street and Blanch Street;
- realign the existing intersections within the study area to ensure priority is given to the primary traffic flow and to address existing non-compliant sightlines; and
- improve pedestrian facilities by incorporating Edith Street into Council's footpath upgrade program.

Of importance to manage the use of the roads by bypass traffic is to ensure that the capacity of the arterial road is maximised to reduce the likelihood of drivers avoiding the existing signals. Council should progress discussions with DIT, particularly with respect to reducing the cycle times at the intersection to ascertain the extent to which this would assist the operation of the signals.

More restrictive interventions (such as part or full road closures) could be further considered once the above changes have been implemented in the event that substantive capacity increases are realised. However, given that these would substantially impact on residents' access to the study area as well as impact access to the broader community, these would need to be carefully reviewed and discussed so that the impacts are acceptable to affected stakeholders.

It is considered on balance that improvements to the operation of the signalised intersection and measures to address the speed of traffic and intersection priority as per the above recommendations will assist in reducing the volumes on Edith and Blanch Streets. This, combined with the recommended changes to intersection priorities, will improve safety on the roads particularly for vulnerable road uses.

APPENDIX A

DATA SUMMARIES

Automatic Traffic Count Site Summary

STREET NAME :	Blanch Street	**LOCATION:**	south end midblock
SUBURB:	Gawler	**START DATE :**	Saturday 27 Nov 2021
FILE NAME :	Individual-2269.txt	**FINISH DATE :**	Friday 03 Dec 2021
SITE ID NUMBER :	49E	**SPEED ZONE :**	50
PREPARED BY :	Austraffic	**ROAD CLASSIFICATION:**	
DATE:	21/01/2022		
SIGNATURE:			

		DIRECTION OF TRAVEL		
		TWO-WAY	**Northbound**	**Southbound**
TRAFFIC VOLUME:	Week Days Only Average	565	224	341
[VEH/DAY]	Total Survey Average	472	186	287
WEEK DAY PEAK AM	8:00	118	57	62
HOUR VOLUME: PM	15:00	137	59	77
PEAK DAY		Fri 03 Dec 2021	Mon 29 Nov 2021	Tue 30 Nov 2021
PEAK DAY VOLUME		578	230	360
WEEKDAY PACE	15Kph Pace Start	30	30	29
	% Pace Volume	81%	76%	84%
TOTAL SPEEDS:	85th Percentile	43	44	43
Km/Hr	Average	37.1	36.6	37.4
95th Percentile	Saturday 27/11/21	47.3	47.5	47.4
	Sunday 28/11/21	46.3	46.5	45.6
	Monday 29/11/21	49.6	51.7	48.3
	Tuesday 30/11/21	47.2	47.3	47.0
	Wednesday 01/12/21	46.4	46.5	46.3
	Thursday 02/12/21	47.8	48.5	47.5
	Friday 03/12/21	47.1	48.9	47.5
99th Percentile	Saturday 27/11/21	56.3	51.9	56.5
	Sunday 28/11/21	53.3	49.3	53.8
	Monday 29/11/21	56.5	57.4	52.7
	Tuesday 30/11/21	57.3	57.3	52.8
	Wednesday 01/12/21	51.6	50.4	51.9
	Thursday 02/12/21	53.3	53.8	52.5
	Friday 03/12/21	54.5	52.8	54.5
CLASSIFICATION % *:	Week Days CLASS 1 %	95.9%	95.5%	96.1%
	Week Days Commercial	3.2%	3.6%	3.0%

NOTES : (OBSERVATIONS)

* CLASS 1 - Short Vehicles up to 5.5m
Commercial - Classes 3 to 12 inclusive

Automatic Traffic Counts - Site Data

Site No:	49E
Date:	Saturday 27 Nov 2021
Start Time:	0:00
Officer:	ATS
Road:	Blanch Street
Suburb:	Gawler
LOCATION: south end midblock	
Map/GPS Ref:	
Comments:	

North Point

Sketch

Automatic Traffic Count Site Summary

STREET NAME :	Blanch Street	**LOCATION:**	north end midblock
SUBURB:	Gawler	**START DATE :**	Saturday 27 Nov 2021
FILE NAME :	Individual-2272.txt	**FINISH DATE :**	Friday 03 Dec 2021
SITE ID NUMBER :	W56	**SPEED ZONE :**	50
PREPARED BY :	Austraffic	**ROAD CLASSIFICATION:**	
DATE:	21/01/2022		
SIGNATURE:			

		DIRECTION OF TRAVEL		
		TWO-WAY	**Northbound**	**Southbound**
TRAFFIC VOLUME:	Week Days Only Average	131	66	65
[VEH/DAY]	Total Survey Average	130	65	64
WEEK DAY PEAK AM	11:00	12	5	7
HOUR VOLUME: PM	17:00	11	7	4
PEAK DAY		Fri 03 Dec 2021	Fri 03 Dec 2021	Fri 03 Dec 2021
PEAK DAY VOLUME		147	71	76
WEEKDAY PACE	15Kph Pace Start	23	23	19
	% Pace Volume	70%	71%	72%
TOTAL SPEEDS:	85th Percentile	37	37	37
Km/Hr	Average	28.6	28.6	28.6
95th Percentile	Saturday 27/11/21	42.7	41.6	42.5
	Sunday 28/11/21	36.5	34.5	36.2
	Monday 29/11/21	40.9	38.9	42.0
	Tuesday 30/11/21	41.5	38.8	42.5
	Wednesday 01/12/21	40.5	41.6	38.7
	Thursday 02/12/21	42.2	40.5	42.7
	Friday 03/12/21	40.9	40.5	40.7
99th Percentile	Saturday 27/11/21	46.5	46.5	44.4
	Sunday 28/11/21	44.5	40.9	46.9
	Monday 29/11/21	44.8	41.9	45.2
	Tuesday 30/11/21	44.8	43.2	44.4
	Wednesday 01/12/21	44.5	43.7	42.5
	Thursday 02/12/21	47.3	45.7	46.7
	Friday 03/12/21	44.5	43.6	44.5
CLASSIFICATION % *:	Week Days CLASS 1 %	95.4%	95.4%	95.4%
	Week Days Commercial	3.5%	3.6%	3.4%

NOTES : (OBSERVATIONS)

* CLASS 1 - Short Vehicles up to 5.5m
Commercial - Classes 3 to 12 inclusive

Automatic Traffic Counts - Site Data

Site No:	W56
Date:	Saturday 27 Nov 2021
Start Time:	0:00
Officer:	ATS
Road:	Blanch Street
Suburb:	Gawler
LOCATION: north end midblock	
Map/GPS Ref:	
Comments:	

North Point

Sketch

Automatic Traffic Count Site Summary

STREET NAME :	Short Street	**LOCATION:**	midblock
SUBURB:	Gawler	**START DATE :**	Saturday 27 Nov 2021
FILE NAME :	Individual-2268.txt	**FINISH DATE :**	Friday 03 Dec 2021
SITE ID NUMBER :	6QM	**SPEED ZONE :**	50
PREPARED BY :	Austraffic	**ROAD CLASSIFICATION:**	
DATE:	21/01/2022		
SIGNATURE:			

		DIRECTION OF TRAVEL		
		TWO-WAY	**Eastbound**	**Westbound**
TRAFFIC VOLUME:	Week Days Only Average	735	425	311
[VEH/DAY]	Total Survey Average	634	366	268
WEEK DAY PEAK AM	8:00	135	67	68
HOUR VOLUME: PM	15:00	148	85	63
PEAK DAY		Fri 03 Dec 2021	Fri 03 Dec 2021	Fri 03 Dec 2021
PEAK DAY VOLUME		790	454	336
WEEKDAY PACE	15Kph Pace Start	22	21	23
	% Pace Volume	89%	89%	89%
TOTAL SPEEDS:	85th Percentile	35	34	35
Km/Hr	Average	29.8	29.2	30.5
95th Percentile	Saturday 27/11/21	38.2	38.6	37.5
	Sunday 28/11/21	38.2	38.1	38.3
	Monday 29/11/21	39.4	38.8	40.5
	Tuesday 30/11/21	38.7	37.9	39.3
	Wednesday 01/12/21	37.9	38.5	36.9
	Thursday 02/12/21	38.2	37.4	39.2
	Friday 03/12/21	36.3	35.8	36.8
99th Percentile	Saturday 27/11/21	42.8	45.5	40.7
	Sunday 28/11/21	40.5	41.5	40.8
	Monday 29/11/21	43.4	42.5	43.6
	Tuesday 30/11/21	41.7	40.9	42.5
	Wednesday 01/12/21	41.8	41.2	42.8
	Thursday 02/12/21	42.3	40.8	42.8
	Friday 03/12/21	40.5	39.9	39.6
CLASSIFICATION % *:	Week Days CLASS 1 %	96.2%	96.7%	95.4%
	Week Days Commercial	2.6%	2.2%	3.2%

NOTES : (OBSERVATIONS)

* CLASS 1 - Short Vehicles up to 5.5m
Commercial - Classes 3 to 12 inclusive

Automatic Traffic Counts - Site Data

Site No:	6QM
Date:	Saturday 27 Nov 2021
Start Time:	0:00
Officer:	ATS
Road:	Short Street
Suburb:	Gawler
LOCATION: midblock	
Map/GPS Ref:	
Comments:	

North Point

Sketch

Automatic Traffic Count Site Summary

STREET NAME :	Edith Street	**LOCATION:**	south end outside 6
SUBURB:	Gawler	**START DATE :**	Saturday 27 Nov 2021
FILE NAME :	Individual-2270.txt	**FINISH DATE :**	Friday 03 Dec 2021
SITE ID NUMBER :	GAQ	**SPEED ZONE :**	50
PREPARED BY :	Austraffic	**ROAD CLASSIFICATION:**	
DATE:	21/01/2022		
SIGNATURE:			

		DIRECTION OF TRAVEL		
		TWO-WAY	**Northbound**	**Southbound**
TRAFFIC VOLUME:	Week Days Only Average	1,821	1,155	666
[VEH/DAY]	Total Survey Average	1,644	1,039	605
WEEK DAY PEAK AM	8:00	189	132	57
HOUR VOLUME: PM	15:00	175	103	76
PEAK DAY		Fri 03 Dec 2021	Fri 03 Dec 2021	Thu 02 Dec 2021
PEAK DAY VOLUME		1925	1240	689
WEEKDAY PACE	15Kph Pace Start	37	38	37
	% Pace Volume	79%	79%	80%
TOTAL SPEEDS:	85th Percentile	51	52	51
Km/Hr	Average	44.9	45.2	44.4
95th Percentile	Saturday 27/11/21	56.8	57.4	55.8
	Sunday 28/11/21	54.4	53.9	55.3
	Monday 29/11/21	55.5	55.2	54.8
	Tuesday 30/11/21	56.0	56.1	55.6
	Wednesday 01/12/21	55.3	55.9	53.9
	Thursday 02/12/21	55.1	55.5	54.4
	Friday 03/12/21	55.8	56.1	55.2
99th Percentile	Saturday 27/11/21	65.5	67.9	61.3
	Sunday 28/11/21	59.7	59.1	60.4
	Monday 29/11/21	60.3	60.3	58.5
	Tuesday 30/11/21	61.5	61.8	60.8
	Wednesday 01/12/21	60.8	60.9	59.5
	Thursday 02/12/21	61.7	63.3	59.5
	Friday 03/12/21	62.8	63.6	62.3
CLASSIFICATION % *:	Week Days CLASS 1 %	94.5%	94.5%	94.4%
	Week Days Commercial	3.6%	3.7%	3.4%

NOTES : (OBSERVATIONS)

* CLASS 1 - Short Vehicles up to 5.5m
Commercial - Classes 3 to 12 inclusive

Automatic Traffic Counts - Site Data

Site No:	GAQ
Date:	Saturday 27 Nov 2021
Start Time:	0:00
Officer:	ATS
Road:	Edith Street
Suburb:	Gawler

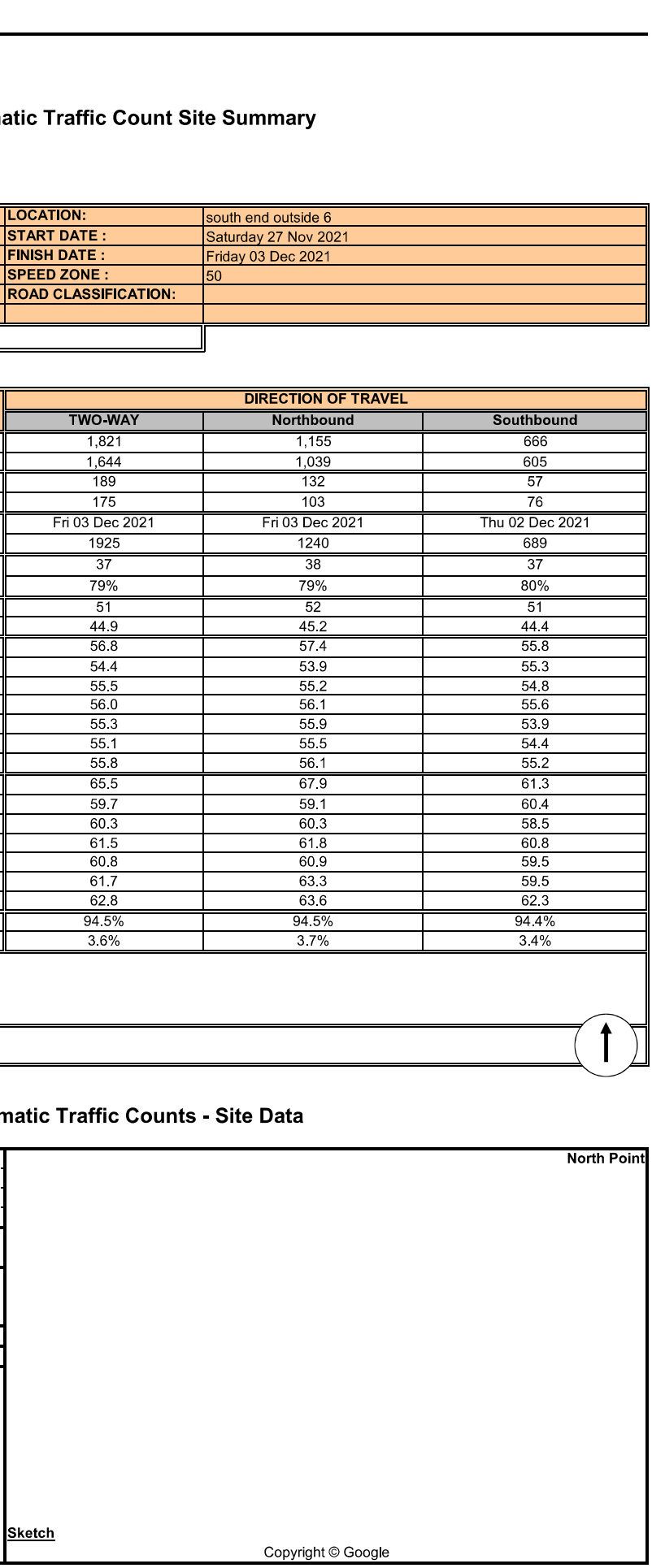
LOCATION:
south end outside 6

Map/GPS Ref:	

Comments:

North Point

Sketch



Automatic Traffic Count Site Summary

STREET NAME :	Edith Street	**LOCATION:**	north end outside 20
SUBURB:	Gawler	**START DATE :**	Saturday 27 Nov 2021
FILE NAME :	Individual-2271.txt	**FINISH DATE :**	Friday 03 Dec 2021
SITE ID NUMBER :	K44	**SPEED ZONE :**	50
PREPARED BY :	Austraffic	**ROAD CLASSIFICATION:**	
DATE:	03/03/2022		
SIGNATURE:			

		DIRECTION OF TRAVEL		
		TWO-WAY	**Eastbound**	**Westbound**
TRAFFIC VOLUME:	Week Days Only Average	2,373	1,005	1,368
[VEH/DAY]	Total Survey Average	2,106	890	1,217
WEEK DAY PEAK AM	8:00	310	117	194
HOUR VOLUME: PM	15:00	305	150	155
PEAK DAY		Fri 03 Dec 2021	Fri 03 Dec 2021	Fri 03 Dec 2021
PEAK DAY VOLUME		2474	1031	1443
WEEKDAY PACE	15Kph Pace Start	36	36	37
	% Pace Volume	77%	75%	79%
TOTAL SPEEDS:	85th Percentile	50	49	51
Km/Hr	Average	43.1	42.1	43.9
95th Percentile	Saturday 27/11/21	55.1	54.6	55.3
	Sunday 28/11/21	54.2	54.3	53.9
	Monday 29/11/21	54.4	54.6	54.3
	Tuesday 30/11/21	54.4	53.3	54.7
	Wednesday 01/12/21	54.3	53.3	54.9
	Thursday 02/12/21	54.0	53.6	54.2
	Friday 03/12/21	54.2	53.1	54.7
99th Percentile	Saturday 27/11/21	62.7	61.6	62.0
	Sunday 28/11/21	61.3	60.4	61.5
	Monday 29/11/21	59.7	59.1	58.6
	Tuesday 30/11/21	59.7	59.2	59.5
	Wednesday 01/12/21	60.5	61.5	59.5
	Thursday 02/12/21	59.9	59.4	60.2
	Friday 03/12/21	60.3	59.8	61.6
CLASSIFICATION % *:	Week Days CLASS 1 %	92.8%	92.9%	92.8%
	Week Days Commercial	5.7%	5.5%	5.8%

NOTES : (OBSERVATIONS)

* CLASS 1 - Short Vehicles up to 5.5m
Commercial - Classes 3 to 12 inclusive

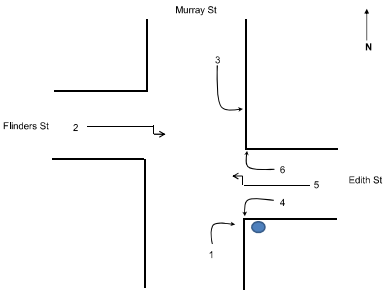
Automatic Traffic Counts - Site Data

Site No:	K44
Date:	Saturday 27 Nov 2021
Start Time:	0:00
Officer:	ATS
Road:	Edith Street
Suburb:	Gawler
LOCATION: north end outside 20	
Map/GPS Ref:	
Comments:	

North Point

Sketch

Client	: MFY
Job	: Gawler OD
Day/Date	: Tuesday, 30 November 2021
Survey Location	: Edith Street at Murray Street
Weather	: Fine



AM

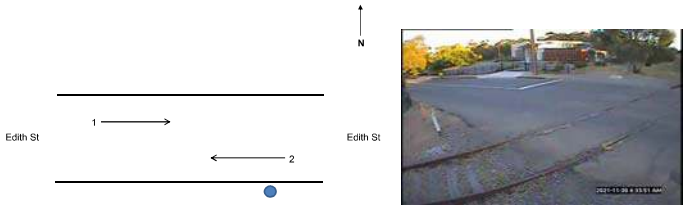
Murray St

Time	Movement 1			Movement 2			Movement 3			Movement 4			Movement 5			Movement 6			Total of all Movements	Peak Hour Volume Determination	
Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			
6:30 - 6:45	0	0	0	0	0	0	8	0	8	0	0	0	1	0	1	17	0	17	26	6:30 - 7:30	114
6:45 - 7:00	0	0	0	0	0	0	9	1	10	1	0	1	6	0	6	21	0	21	38	6:45 - 7:45	138
7:00 - 7:15	0	0	0	0	0	0	3	0	3	4	0	4	1	0	1	10	0	10	18	7:00 - 8:00	151
7:15 - 7:30	0	0	0	2	0	2	10	0	10	4	0	4	5	0	5	10	1	11	32	7:15 - 8:15	191
7:30 - 7:45	0	0	0	2	0	2	10	0	10	1	0	1	8	0	8	29	0	29	50	7:30 - 8:30	236
7:45 - 8:00	0	0	0	3	0	3	11	0	11	3	0	3	0	0	0	34	0	34	51	7:45 - 8:45	301
8:00 - 8:15	0	0	0	2	0	2	17	0	17	1	0	1	3	0	3	35	0	35	58	8:00 - 9:00	341
8:15 - 8:30	0	0	0	3	0	3	21	0	21	6	0	6	1	0	1	45	1	46	77	8:15 - 9:15	330
8:30 - 8:45	1	0	1	11	0	11	40	0	40	1	0	1	6	0	6	55	1	56	115	8:30 - 9:30	284
8:45 - 9:00	1	0	1	10	0	10	37	0	37	1	0	1	7	0	7	35	0	35	91	AM Peak	341
9:00 - 9:15	1	0	1	3	0	3	16	0	16	5	0	5	4	0	4	18	0	18	47		
9:15 - 9:30	2	0	2	6	0	6	7	0	7	1	0	1	1	0	1	14	0	14	31		
Total	5	0	5	42	0	42	189	1	190	28	0	28	43	0	43	323	3	326	634		
AM Peak	2	0	2	26	0	26	115	0	115	9	0	9	17	0	17	170	2	172	341		

PM

Time	Movement 1			Movement 2			Movement 3			Movement 4			Movement 5			Movement 6			Total of all Movements	Peak Hour Volume Determination	
Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			
15:00 - 15:15	0	0	0	7	0	7	30	0	30	7	0	7	2	0	2	36	0	36	82	15:00 - 16:00	347
15:15 - 15:30	2	0	2	3	0	3	50	0	50	6	0	6	1	0	1	45	0	45	107	15:15 - 16:15	310
15:30 - 15:45	1	0	1	9	0	9	37	0	37	7	0	7	4	0	4	45	0	45	103	15:30 - 16:30	242
15:45 - 16:00	1	0	1	10	0	10	20	0	20	4	0	4	0	0	0	20	0	20	55	15:45 - 16:45	192
16:00 - 16:15	0	0	0	4	0	4	20	1	21	7	0	7	1	0	1	12	0	12	45	16:00 - 17:00	205
16:15 - 16:30	0	0	0	6	0	6	18	0	18	2	0	2	1	0	1	12	0	12	39	16:15 - 17:15	217
16:30 - 16:45	1	0	1	4	0	4	24	0	24	1	0	1	1	0	1	22	0	22	53	16:30 - 17:30	228
16:45 - 17:00	2	0	2	6	0	6	26	0	26	3	0	3	2	0	2	28	1	29	68	16:45 - 17:45	212
17:00 - 17:15	0	0	0	10	0	10	23	0	23	2	0	2	4	0	4	18	0	18	57	17:00 - 18:00	186
17:15 - 17:30	1	0	1	4	0	4	19	0	19	1	0	1	0	0	0	25	0	25	50	PM Peak	347
17:30 - 17:45	0	0	0	4	0	4	15	0	15	2	0	2	0	0	0	16	0	16	37		
17:45 - 18:00	0	0	0	3	0	3	19	0	19	1	0	1	1	0	1	18	0	18	42		
Total	8	0	8	70	0	70	301	1	302	43	0	43	17	0	17	297	1	298	738		
PM Peak	4	0	4	29	0	29	137	0	137	24	0	24	7	0	7	146	0	146	347		

Client	: MFY
Job	: Gawler OD
Day/Date	: Tuesday, 30 November 2021
Survey Location	: Edith Street at rail crossing
Weather	: Fine



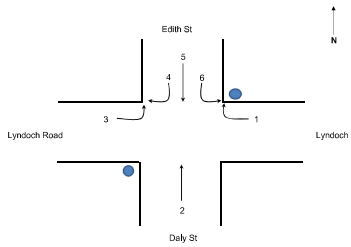
AM

Time Period	Movement 1			Movement 2			Total of all Movements	Peak Hour Volume Determination	
	Light	Heavy	Total	Light	Heavy	Total			
6:30 - 6:45	8	0	8	18	0	18	26	6:30 - 7:30	108
6:45 - 7:00	9	1	10	28	0	28	38	6:45 - 7:45	132
7:00 - 7:15	1	0	1	15	0	15	16	7:00 - 8:00	142
7:15 - 7:30	9	0	9	18	1	19	28	7:15 - 8:15	186
7:30 - 7:45	10	0	10	40	0	40	50	7:30 - 8:30	231
7:45 - 8:00	11	0	11	37	0	37	48	7:45 - 8:45	292
8:00 - 8:15	19	0	19	41	0	41	60	8:00 - 9:00	323
8:15 - 8:30	21	0	21	51	1	52	73	8:15 - 9:15	308
8:30 - 8:45	48	0	48	62	1	63	111	8:30 - 9:30	266
8:45 - 9:00	36	0	36	43	0	43	79	AM Peak	323
9:00 - 9:15	18	0	18	27	0	27	45		
9:15 - 9:30	13	0	13	18	0	18	31		
Total	203	1	204	398	3	401	605		
AM Peak	124	0	124	197	2	199	323		

PM

Time Period	Movement 1			Movement 2			Total of all Movements	Peak Hour Volume Determination	
	Light	Heavy	Total	Light	Heavy	Total			
15:00 - 15:15	39	0	39	38	0	38	77	15:00 - 16:00	331
15:15 - 15:30	53	0	53	53	0	53	106	15:15 - 16:15	298
15:30 - 15:45	45	0	45	46	0	46	91	15:30 - 16:30	224
15:45 - 16:00	31	0	31	26	0	26	57	15:45 - 16:45	187
16:00 - 16:15	23	1	24	20	0	20	44	16:00 - 17:00	191
16:15 - 16:30	19	0	19	13	0	13	32	16:15 - 17:15	202
16:30 - 16:45	33	0	33	21	0	21	54	16:30 - 17:30	219
16:45 - 17:00	33	0	33	27	1	28	61	16:45 - 17:45	202
17:00 - 17:15	32	0	32	23	0	23	55	17:00 - 18:00	178
17:15 - 17:30	22	0	22	27	0	27	49	PM Peak	331
17:30 - 17:45	21	0	21	16	0	16	37		
17:45 - 18:00	17	0	17	20	0	20	37		
Total	368	1	369	330	1	331	700		
PM Peak	168	0	168	163	0	163	331		

Client	: MFY
Job	: Gawler OD
Day/Date	: Tuesday, 30 November 2021
Survey Location	: Edith Street at Lyndoch Road
Weather	: Fine



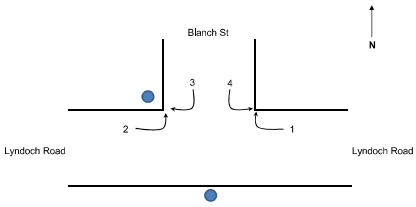
AM

Time	Movement 1			Movement 2			Movement 3			Movement 4			Movement 5			Movement 6			Total of all Movements	Peak Hour Volume Determination	
Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			
6:30 - 6:45	14	0	14	2	0	2	1	0	1	1	0	1	0	0	0	7	0	7	25	6:30 - 7:30	91
6:45 - 7:00	22	0	22	2	0	2	1	0	1	1	0	1	0	0	0	8	0	8	34	6:45 - 7:45	108
7:00 - 7:15	10	0	10	2	0	2	2	0	2	1	0	1	0	0	0	1	0	1	16	7:00 - 8:00	119
7:15 - 7:30	11	0	11	0	0	0	1	0	1	0	0	0	0	0	0	4	0	4	16	7:15 - 8:15	150
7:30 - 7:45	32	0	32	1	0	1	0	0	0	1	0	1	0	0	0	8	0	8	42	7:30 - 8:30	179
7:45 - 8:00	30	0	30	2	0	2	4	0	4	1	0	1	0	0	0	8	0	8	45	7:45 - 8:45	187
8:00 - 8:15	32	0	32	1	0	1	3	0	3	0	0	0	0	0	0	11	0	11	47	8:00 - 9:00	185
8:15 - 8:30	30	1	31	2	0	2	5	0	5	0	0	0	3	0	3	4	0	4	45	8:15 - 9:15	174
8:30 - 8:45	26	1	27	2	0	2	3	0	3	3	0	3	3	0	3	12	0	12	50	8:30 - 9:30	155
8:45 - 9:00	11	0	11	3	0	3	6	0	6	5	0	5	3	0	3	15	0	15	43	AM Peak	187
9:00 - 9:15	19	0	19	1	0	1	3	0	3	4	0	4	2	0	2	7	0	7	36		
9:15 - 9:30	8	0	8	4	0	4	4	0	4	0	0	0	1	0	1	9	0	9	26		
Total	245	2	247	22	0	22	33	0	33	17	0	17	12	0	12	94	0	94	425		
AM Peak	118	2	120	7	0	7	15	0	15	4	0	4	6	0	6	35	0	35	187		

PM

Time	Movement 1			Movement 2			Movement 3			Movement 4			Movement 5			Movement 6			Total of all Movements	Peak Hour Volume Determination	
Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			
15:00 - 15:15	19	0	19	3	0	3	7	0	7	0	0	0	2	0	2	15	0	15	46	15:00 - 16:00	167
15:15 - 15:30	16	0	16	0	0	0	7	0	7	0	0	0	0	0	0	10	0	10	33	15:15 - 16:15	149
15:30 - 15:45	22	0	22	0	0	0	6	0	6	1	0	1	2	0	2	16	0	16	47	15:30 - 16:30	140
15:45 - 16:00	15	0	15	3	0	3	4	0	4	0	0	0	0	0	0	19	0	19	41	15:45 - 16:45	131
16:00 - 16:15	9	0	9	0	0	0	5	0	5	0	0	0	0	0	0	13	1	14	28	16:00 - 17:00	140
16:15 - 16:30	10	0	10	0	0	0	2	0	2	0	0	0	1	0	1	11	0	11	24	16:15 - 17:15	157
16:30 - 16:45	16	0	16	2	0	2	3	0	3	1	0	1	3	0	3	13	0	13	38	16:30 - 17:30	176
16:45 - 17:00	16	1	17	3	0	3	8	0	8	1	0	1	1	0	1	20	0	20	50	16:45 - 17:45	171
17:00 - 17:15	14	0	14	3	0	3	4	0	4	2	0	2	2	0	2	20	0	20	45	17:00 - 18:00	150
17:15 - 17:30	16	0	16	3	0	3	8	0	8	1	0	1	2	0	2	13	0	13	43	PM Peak	176
17:30 - 17:45	15	0	15	0	0	0	3	0	3	2	0	2	0	0	0	13	0	13	33		
17:45 - 18:00	10	0	10	1	0	1	4	0	4	2	0	2	2	0	2	10	0	10	29		
Total	178	1	179	18	0	18	61	0	61	10	0	10	15	0	15	173	1	174	457		
PM Peak	62	1	63	11	0	11	23	0	23	5	0	5	8	0	8	66	0	66	176		

Client	: MFY
Job	: Gawler OD
Day/Date	: Tuesday, 30 November 2021
Survey Location	: Blanch Street at Lyndoch Road
Weather	: Fine



AM

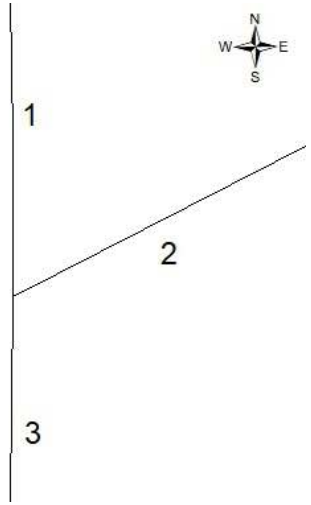
Time	Movement 1			Movement 2			Movement 3			Movement 4			Total of all Movements	Peak Hour Volume Determination	
Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			
6:30 - 6:45	1	0	1	1	0	1	0	0	0	1	0	1	3	6:30 - 7:30	13
6:45 - 7:00	0	0	0	1	0	1	1	0	1	2	0	2	4	6:45 - 7:45	14
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	7:00 - 8:00	17
7:15 - 7:30	2	0	2	0	0	0	1	0	1	3	0	3	6	7:15 - 8:15	27
7:30 - 7:45	2	0	2	0	0	0	1	0	1	1	0	1	4	7:30 - 8:30	49
7:45 - 8:00	2	0	2	0	0	0	0	0	0	5	0	5	7	7:45 - 8:45	105
8:00 - 8:15	2	0	2	1	0	1	2	0	2	5	0	5	10	8:00 - 9:00	120
8:15 - 8:30	10	0	10	2	0	2	0	0	0	16	0	16	28	8:15 - 9:15	119
8:30 - 8:45	27	0	27	2	0	2	0	0	0	31	0	31	60	8:30 - 9:30	98
8:45 - 9:00	10	0	10	1	0	1	0	0	0	11	0	11	22	AM Peak	120
9:00 - 9:15	2	0	2	2	0	2	1	0	1	4	0	4	9		
9:15 - 9:30	3	0	3	0	0	0	0	0	0	4	0	4	7		
Total	61	0	61	10	0	10	6	0	6	83	0	83	160		
AM Peak	49	0	49	6	0	6	2	0	2	63	0	63	120		

PM

Time	Movement 1			Movement 2			Movement 3			Movement 4			Total of all Movements	Peak Hour Volume Determination	
Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			
15:00 - 15:15	13	0	13	0	0	0	1	0	1	19	0	19	33	15:00 - 16:00	160
15:15 - 15:30	27	0	27	3	0	3	1	0	1	37	0	37	68	15:15 - 16:15	137
15:30 - 15:45	10	0	10	6	0	6	1	0	1	24	0	24	41	15:30 - 16:30	77
15:45 - 16:00	4	0	4	5	0	5	0	0	0	9	0	9	18	15:45 - 16:45	48
16:00 - 16:15	2	0	2	0	0	0	0	0	0	8	0	8	10	16:00 - 17:00	41
16:15 - 16:30	1	0	1	0	0	0	0	0	0	7	0	7	8	16:15 - 17:15	37
16:30 - 16:45	0	0	0	1	0	1	0	0	0	11	0	11	12	16:30 - 17:30	42
16:45 - 17:00	2	0	2	1	0	1	0	0	0	8	0	8	11	16:45 - 17:45	36
17:00 - 17:15	0	0	0	0	0	0	0	0	0	6	0	6	6	17:00 - 18:00	33
17:15 - 17:30	5	0	5	0	0	0	1	0	1	7	0	7	13	PM Peak	160
17:30 - 17:45	1	0	1	0	0	0	1	0	1	4	0	4	6		
17:45 - 18:00	3	0	3	0	0	0	1	0	1	4	0	4	8		
Total	68	0	68	16	0	16	6	0	6	144	0	144	234		
PM Peak	54	0	54	14	0	14	3	0	3	89	0	89	160		

Intersection of: MURRAY STREET / LYNDOCH ROAD
Locality: GAWLER
AMG Reference: TG935691
Date of Count: 04/03/2021 Day: Thursday
Weather: Dry Control: SIGNALS
Survey Status:

Arm	Road Number - Name
1	4399 - MURRAY STREET
2	4384 - LYNDOCH ROAD
3	4399 - MURRAY STREET



	Arm	1		2		3	
	Exit Arm	2 (L)	3	3 (L)	1 (R)	1	2 (R)
11 hour totals	Cars	**2691**	**4057**	**2828**	**3137**	**3589**	**2176**
	CV	**164**	**195**	**64**	**205**	**167**	**79**
	Total	**2855**	**4252**	**2892**	**3342**	**3756**	**2255**
AM Peak hour (08:15)	Cars	**248**	**404**	**327**	**359**	**283**	**185**
	CV	**18**	**21**	**5**	**21**	**24**	**6**
	Total	**266**	**425**	**332**	**380**	**307**	**191**
PM Peak hour (16:15)	Cars	**330**	**415**	**307**	**345**	**406**	**278**
	CV	**3**	**14**	**6**	**16**	**11**	**6**
	Total	**333**	**429**	**313**	**361**	**417**	**284**

		1	2	3
One-way Flows	11 Hour Totals	**(IN) 7107 (OUT) 7098**	**(IN) 6234 (OUT) 5110**	**(IN) 6011 (OUT) 7144**
	AM Peak Hour	**08:15 691 08:00 707**	**08:00 719 10:15 471**	**10:30 556 08:15 757**
	PM Peak Hour	**16:30 765 16:15 778**	**16:15 674 16:45 641**	**16:30 702 15:15 775**
Two-way Flows	AM Peak Hour	**08:00 1379**	**08:15 1169**	**08:15 1255**
	PM Peak Hour	**16:15 1540**	**16:15 1291**	**16:30 1458**
All Vehicles	11 Hour Totals	**14205 5.1% CV**	**11344 4.5% CV**	**13155 3.8% CV**
	Estimated AADT	**18800 SF(1.00) ZF(1.32)**	**15000 SF(1.00) ZF(1.32)**	**17400 SF(1.00) ZF(1.32)**

AADT - Annual Average Daily Traffic SF - Seasonal Factor ZF - Zone Factor CV - Commercial Vehicles