

06 November 2020

Our ref: 202007_003

Bloompark Consulting

Attn: Peter Brogan

Via email

Dear Peter

RE: SSD-10371 Trinity Grammar School redevelopment – Response to Submissions – Transport and Access comments

1. Background

This letter has been written to address the submissions regarding the Transport and Access report by TTM Consulting raised by the Department of Planning, Industry and Environment (DPIE) and Inner West Council (IWC) following the public exhibition of SSD-10371 for the Trinity Grammar School redevelopment.

We note that on 15 July 2020, TTM Consulting closed its Sydney consulting division, and Street Level Strategies (SLS) was appointed by Trinity Grammar School to develop the Response to Submissions. Street Level Strategies was selected to enable project continuity as the former Director of TTM Consulting Sydney is now the Director of Street Level Strategies.

We also note that for project continuity purposes, SLS engaged TTM Consulting in Queensland to complete all further design work and SIDRA modelling.

2. Response to Submissions – DPIE comments

This section of the letter will respond to requests for clarification, further work or commentary as requested by DPIE.

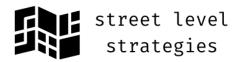
a. Item 1 – Clarification regarding SIDRA analysis

"It is unclear whether the intersection performance results in the SIDRA analysis within the Transport and Accessibility (TA) report are for the year of completion/operation of the development or 10 years following completion. In this regard, the SIDRA analysis must clarify the year for which the 'Future' SIDRA model is predicated."

The SIDRA results for the future year are for the year of completion. They are based on the project being completely constructed and a student population of 2,100 students with 321 staff.

b. Item 2 – Clarification regarding SIDRA Existing and Future scenarios

"The number of students considered in the TA report at the time of the SIDRA analysis is also unclear. Clarification must be provided in this regard and the number of students / timing specified against each analysis or table of results."



We clarify the following for the SIDRA modelling in TTM's TA report:

- All Existing Scenarios 1,655 students and 277 staff
- All Future Scenarios 2,100 students and 321 staff

c. Item 3 – Clarification regarding phasing of student increases

"The TA report must specify whether the increase in student numbers are to be phased during operation. The associated SIDRA modelling for intersection performances, construction and operational traffic impacts on the surrounding road network must be considered for each phase of increase in student numbers or construction of a new building."

The increase in students will be phased and each increase will generally align with the start of the school year in late January/early February.

Construction will also be phased, with Stages 1 and 2 completed before any student increases occur. This is a deliberate strategy to ensure that any additional demand for vehicle travel to/from the school is captured within the new car park on the school grounds to reduce potential for queuing of vehicles on-street.

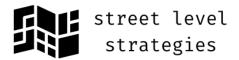
The table below shows the relationship between student number increases and construction phasing.

		2023	2024	2025	2026	2027	2028
	Junior School		+20	+20	+20		
Student increases	Senior School	+40	+40	+40	+40	+40	+40
	TOTAL	+40	+60	+60	+60	+40	+40
	Stage 1 & 2 – completed prior to 2023						
Construction	Stage 3 – General Learning, finish car park						
Staging	Stage 4 – Performing Arts						
	Stage 5 – Junior School, landscaping						
	Stage 6 – Minor works						

Table 1 - Student increases and Construction Staging

The SIDRA Future Scenario modelling in the original TA report by TTM Consulting was carried out using assumptions that the full student and staff increases had been reached. However, to meet the Department's request, additional modelling has been undertaken to demonstrate the effect of the larger student increases between years 2024-2026.

See **Appendix 1** for the SIDRA modelling results. Note, additional modelling was not carried out for the years when smaller student increases occur as the impact would be negligible on the street network. We note the findings of the additional modelling confirm that the impact of the student increases is less than the full development outcome, any impact is incremental, and intersections continue to operate at the same level of service as existing conditions.



d. Item 4 – Clarification regarding phasing of student increases

"The TA report provides comparative analysis of the existing / future traffic volumes in both peak periods (AM and PM) and concludes that the identified intersections would continue to perform at adequate level of service (LoS) post redevelopment of the school. Notwithstanding, the above conclusion regarding the LoS, the SIDRA analysis and associated tables of results should identify additional delays or queue lengths due to the additional design traffic volume (which is anticipated). The TA report should then address the impacts of the additional queue lengths and delays (if any) and propose suitable mitigation and management measures to minimise the impacts on the surrounding traffic network."

After considering the phasing in of students and construction, additional review of the AM and PM peaks for the base and future years has been carried out to present the full spectrum of data including delays per approach, identifying the worst delayed movement, as well as queue analysis.

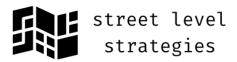
It is important to note that as a base case, the worst-performing movements at the intersections of Prospect Rd/Old Canterbury Road, Hurlstone Ave/Old Canterbury Road and Henson Rd/Old Canterbury Road all currently operate at a Level of Service (LoS) F and above their capacity. The Prospect Road intersection currently operates over two and a half times its capacity in the AM peak for the right turn movement into Old Canterbury Road.

Where delays and/or queues are identified to be significantly impacted by the development, further analysis has been conducted to identify a mitigation solution to alleviate the impact of the development.

Intersections Reviewed

A total of eight intersections have been reviewed in line with those analysed within the Transport and Accessibility Statement for the project. The intersections reviewed are as per the TA are as follows:

- 1. Old Canterbury Road/Prospect Road;
- 2. Old Canterbury Road/Hurlstone Avenue;
- 3. Old Canterbury Road/Henson Street; and
- 4. Old Canterbury Road/James Street.
- 5. Prospect Road/Seaview Street East;
- 6. Prospect Road/Seaview Street West;
- 7. Victoria Street/Seaview Street; and
- 8. Victoria Street/Harland Street.



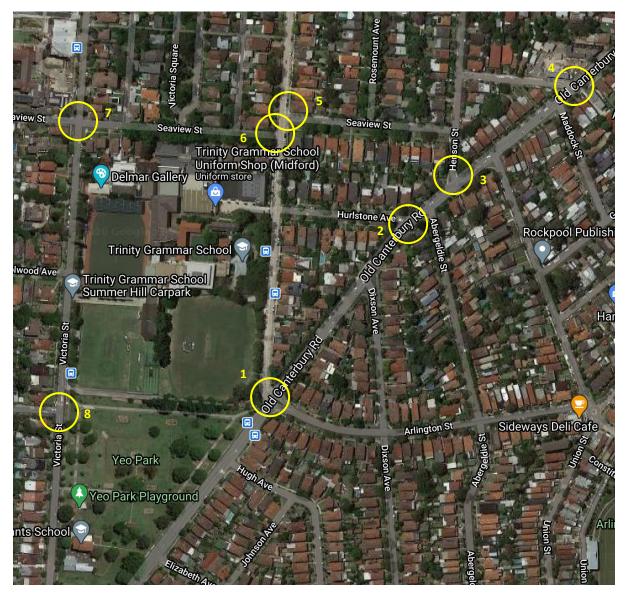


Figure 1 - Intersections reviewed for mitigation purposes

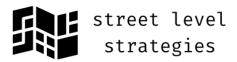
The review was carried out to identify potential mitigations to the traffic impact of the development to maintain the current performance of the street network.

The summaries of each intersection are provided in the spreadsheet at **Appendix 2**.

Intersection 1 - S1. Old Canterbury Rd / Prospect Rd

The intersection of Prospect Road/Old Canterbury Road experiences the most impact due to the development. The most affected movement at this intersection is on Prospect Road and those attempting to turn right onto Old Canterbury Road. This movement's delays are expected to increase by up to 15% in the AM, 30% in the PM, and the queue increases by up to nine (9) vehicles in both peak periods. The impact is significant enough to warrant mitigation.

An iterative mitigation review has been done which has resulted in a proposed two-step mitigation strategy:



- 1. Introduce Clearways on Old Canterbury Road during the peaks; and
- 2. Add a left turn lane on Prospect Road.

The combination of these proposals mitigates the impact of the development, but also improves on existing conditions.

Mitigation 1 – Introduce peak Clearways on Old Canterbury Road

There are currently no restrictions to kerbside allocation along Old Canterbury Road in the vicinity of this intersection, meaning that people can park on Old Canterbury Road even in the peak traffic periods.

In the base traffic model a "short lane with parking" has been included along both kerbside lanes on the Old Canterbury Road approaches, and only increasing to two lanes for a distance of 10m either side of the intersection (due to standard road rules and regulations).

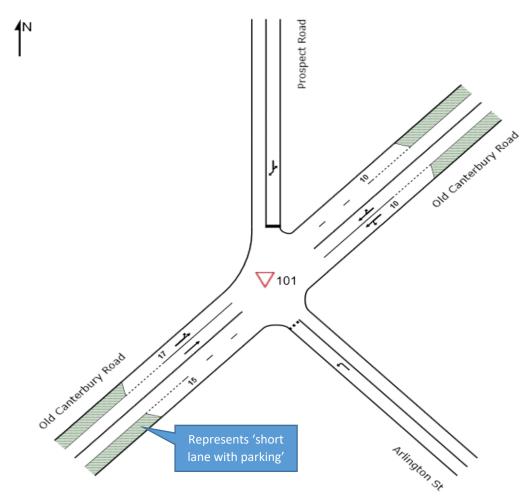
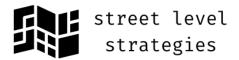


Figure 2 - Base model diagram of Prospect Road/Old Canterbury Road intersection

This subsequently reduces the flow of vehicles through the intersection to a single lane and therefore increases the delay to Prospect Rd further (as gaps in traffic are less frequent and the flow of vehicles is more constant when only a single lane is operational).

It is noted that the intersection is already identified to be at capacity in the peak periods without the development, and therefore the mitigation proposed is identified to mitigate the



new development only and not resolve the base issue that is not directly attributed to the development.

In the Mitigation 1 (step one) model the "short lane with parking" has been removed and Old Canterbury Road is subject to being a clearway in both peak periods (in the vicinity of this intersection).



Figure 3 – Prospect Road proposed mitigation 1

The outputs show that this provides a significant improvement in the AM peak, whereby all movements are improved apart from Arlington Street, which experiences a minor 0.7s increase in delay. In the PM peak, Prospect Road remains an issue and requires an additional mitigation.

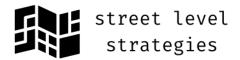
Mitigation 2 – Adding a left turn lane at Prospect Road

The Mitigation 2 (step two) model builds on Mitigation 1 and introduces a short, left turn lane out of Prospect Road and bans the right turn from into Prospect Road in the PM only.

The right turn ban in the PM is acceptable as data shows there are only 12 vehicles making this turn currently. People wanting to make this movement can instead turn through the Old Canterbury Road / Hurlstone Avenue intersection.

This mitigation returns the PM model to a comparable position as the base model in that all movements are improved in regard to delays and queues – the exception being a 0.9s delay increase on Arlington Street and the Degree of Saturation (DoS) increases by 2.4%. The AM peak further improves due to the added left turn lane.

When looking at the intersection as a whole, the minor increases identified due to the mitigation are considered acceptable as the performance of Old Canterbury Road, and in



particular, Prospect Road are markedly improved with delays reducing by 64s in the AM peak and 4s in the PM peak. Additionally, queues on Prospect Road improve by 50% in the AM peak and 25% in the PM peak.

A preliminary design of the Mitigation 2 proposal is presented below.

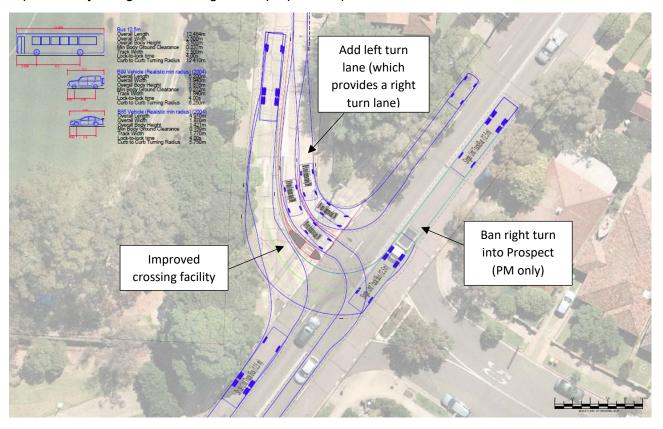


Figure 4 - Proposed mitigation 2 - preliminary design

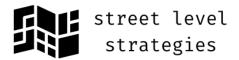
The design retains the inbound (to Prospect Road) movements as per existing but also enables a widening of the median crossing island to 1.2m producing an improved pedestrian outcome from the existing condition.

The design still allows for buses to maintain their existing turning movements (i.e. Route 406 right turn from Prospect Road into Old Canterbury Road, and various bus routes left into Prospect from Old Canterbury Road), so public transport services are not impacted. For the swept paths, the modelled vehicle inbound is a 12.5m rigid bus.

Based on this preliminary drawing, this proposal can be carried out within the existing kerb alignment which reduces the need for and impact of any lengthy civil works.

Intersection 2 - S2. Old Canterbury Rd / Hurlstone Ave

As with intersection 1, this intersection is also identified to be operating at capacity without the development. However, the development does increase delays to Hurlstone Avenue of 34s and a queue increase of six (6) vehicles in the AM peak. Similar to the Prospect Road intersection, this is a result of Old Canterbury Road being restricted to single lane operation resulting in delays to the right turn out of Hurlstone Avenue.



A similar mitigation strategy is proposed in that the 'short lane with parking' is removed, and the section of Old Canterbury Road in the vicinity of the intersection is to be converted to being a clearway.



Figure 5 - Hurlstone Ave proposed mitigation

This mitigation results in a substantial improvement to the intersection performance.

Intersection 3 - S3. Old Canterbury Rd / Henson St

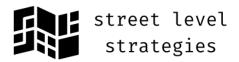
Modelling of this intersection shows that the development does not have impact as development traffic does not distribute through the intersection. Therefore, no mitigation is required at this intersection.

Intersection 4 - S4. Old Canterbury Rd / James St

Modelling of this intersection shows that the development does not have impact as development traffic does not distribute through the intersection. Therefore, no mitigation is required at this intersection.

Intersections 5 to 8

- S5. Prospect Rd / Seaview St (East)
- S6. Prospect Rd / Seaview St (West)
- S7. Victoria St / Seaview St
- S8. Victoria St / Harland St



Modelling shows that there is a minor increase in delay and queuing, however, all are within acceptable thresholds for priority intersections with queues less than two vehicles and delays no more than 13s across all four intersections.

a. Item 5 – Clarification regarding bicycle parking facilities

"It is unclear whether bicycle parking spaces with end of trip facilities are provided on site. Adequate bicycle spaces with end-of-trip facilities should be proposed and identified in the architectural plans."

In the Environmental Impact Statement (EIS), the Bicycle Parking Facility was identified on Drawing No. DA111 in the basement car park. Please see the reference below. Access to showers and lockers for an end of trip facility are in the existing aquatic complex.

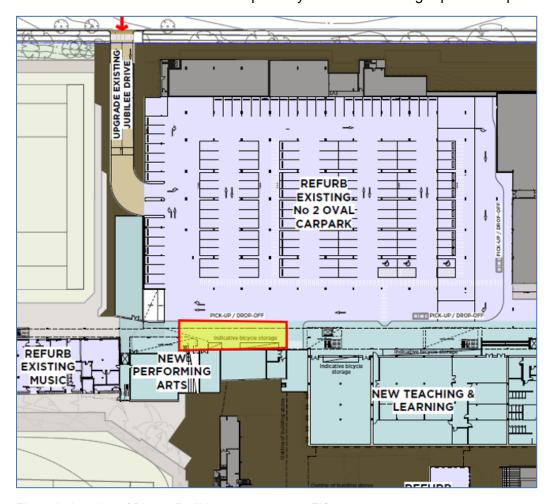
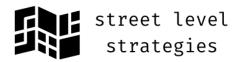


Figure 6 - Location of Bicycle Facilities as shown in the EIS

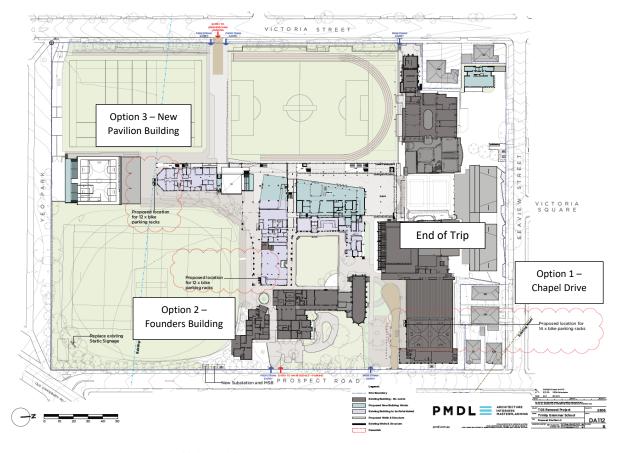
However, on further assessment, this location for the bike parking is not ideal given that bike riders will need to mix with the car park traffic to access the bike parking. The alternate is to enter the school at ground level, dismount, and walk the bike to the bike parking. These actions are likely to be a disincentive to bike riding.

It is proposed to relocate the bike parking so that it is accessible from Prospect Road and closer to the end of trip facilities in the aquatic centre. Three potential locations are proposed, with final placement (or potential to consolidate these options into one or two locations) to be decided during detailed design.



The proposed locations are shown in Figure 7 below:

- Option 1 Chapel Drive;
- Option 2 Founders Building; and/or
- Option 3 New Pavilion Building.



• Figure 7 - Future proposed bike rack locations

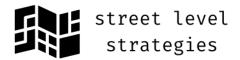
b. Item 6 – Construction vehicle routes

"Details of construction traffic arrival and departure routes should be included in the TA report. The details of truck turning movements (considering the various sizes and the width of the access roads) and any associated issues / pedestrian safety matters in relation to the construction traffic routes must also be identified, noting that the site is located in a residential area."

In the preliminary Construction Management Plan submitted by TBH (Appendix 18 – Preliminary CMP), the following vehicle types are proposed to be used for the project:

- Dump trucks;
- Concrete Mixers; and
- Flatbed trucks.

These truck types are generally Medium Rigid Vehicles and with the generous width of Victoria St, the turning movement for these vehicle types to and from site is comfortable. Swept paths to/from the proposed gates will be carried out as part of the Construction Traffic Management Plan (CTMP) development.



The key risks to be managed with pedestrians is to ensure pedestrian access across the site entry/exit gate is under Traffic Control whenever the site is operational, and that movements in and out of the site are limited during school AM and PM peaks. These factors will be considered in a CTMP.

Regarding truck routes, it is proposed that heavy vehicles enter and exit the site via the preliminary routes outlined below. These routes are intended to reduce the heavy vehicle traffic on the local street network, to reduce the load of heavy vehicles on any particular street, and to give the shortest possible route for heavy vehicles to the state road and motorway network. Vehicles will turn left in and left out at the site gates on Victoria Street.

See below for proposed construction vehicle routes. These routes are to be confirmed or amended as part of the CTMP development once further detail is developed.

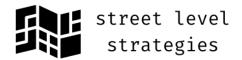


Figure 8 - Proposed construction vehicle routes

c. Item 7 – Student pick up/drop off zones and timing

"Details of the student drop-off / pick-up zones, the average vehicle turnaround time at the zone, expected demand based on the number of anticipated drop-off / pick-up for the students are to be provided. Having regard to that data, the adequacy of the existing / proposed drop-off / pick-zones zones are to be discussed in detail in the TA report."

The intent of the car park design is to contain vehicle queueing within the car park and not on local streets.



This will be achieved primarily by extending the length of pickup/drop off area and secondarily by increasing the overall length of circulation road and aisles within the car park. This will provide significantly more queuing space with the carpark.

Furthermore, the car parking spaces on the main circulation roads has been reduced. These spaces have been moved to aisles. This reduces the frequency that circulating vehicles are delayed by vehicles completing a parking manoeuvre. Vehicles parking in the path of vehicles circulating was observed on site as being one of the major contributors to delays in the car park.

The table below presents a comparison between the number of spaces in existing and the refurbished car park.

Item	Existing Car Park	Future Car Park
No. spaces on circulation aisle	107	41 (-66)
No. parking spaces next to pick up/drop off	25	0 (-25)
zone		
Total number of spaces	312	324 (+12)
Length of pick up/drop off area (m)	105	170 (+65)
Length of main circulation aisle (m)	290	408 (+118)
Total length of circulation aisle (m)	180	501 (+321)
Driveway length – entry (m)	75	108 (+33)
Driveway length – exit (m)	75	45 (-30)
Total roadway length (m)	620	1,062 (+442)

Table 2 - Comparison of Existing and Future Car Park

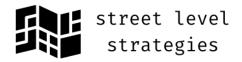
Given the increased capacity of the car park, an analysis of the existing and future demand is below.

The Future Car Park scenario is for the school at full development with a 25% proportional increase of students and staff. For queuing demand, the AM demand has been used to present a worse case scenario.

	Existing Car Park	Future Car Park
Length of Pick-up/Drop-off area (m)	105	170
Number of bays (6m per vehicle)	18	28
Average turnover time (sec)	120	120
Capacity per hour (no. vehicles)	525	850
Demand AM peak (no. vehicles)	327	409
Demand PM peak (no. vehicles)	179	224
Queuing demand (no. vehicles)	11	14
Queue length required (m)	65	82

Table 3 - Analysis of car park demand and queuing (existing and future)

As this analysis shows, there is more than adequate (and spare) capacity within the car park to accommodate the additional demand for pick-up/drop-off and for queuing. The reorientation of the car parking spaces further reduce potential for delay by removing opportunities for drivers to park where other drivers are circulating.



d. Item 8 – Trinity School bus service frequency and bus stop locations "Details on bus drop-off areas / coach parking as well as number of buses and frequency are to be provided in the TA report."

A mix of Government, Government School Special and school-provided services (operated by Telfords) operate at the school and are detailed below. Services arrive and depart from both Prospect Road and Victoria Street.

Route	Туре	Bus Stop location	AM	PM
TGS01 Strathfield			8.05am	3.45pm
		-	8.10am	4pm
		-	8.15am	
TGS03 Concord		-	8.05am	3.50pm
TGS04 Putney			8am	3.55pm
TGS05 Balmain		-	8.10am	4pm
TGS07 Eastern Suburbs	Tripity/Tolfordo	Droop of Dd	8.10am	4pm
TGS08 Cronulla	Trinity/Telfords	Prospect Rd	8am	3.45pm
TGS08 Miranda		-	8am	3.55pm
TGS10 Allawah		-		3.45pm
TGS12 Peakhurst		-	8.10am	3.55pm
		-		5.20pm (Wed)
TGS14 Sutherland			8am	3.55pm
				5.20pm (Wed)
563 Summer Hill Station	Govt - School	Droop oot Dd	7.53am	
	Special	Prospect Rd	8.05am	
406 Ashfield Station/ Five			6.25am	4.08pm
Dock	Govt	Prospect Rd (eastern	7.32am	4.38pm
	Govi	side)	8.02am	5.08pm
		5.0.5)		5.38pm
TGS Ashfield Station	Trinity/Telfords	Victoria St	8.10am	
562 Ashfield Station				3.42pm
	Govt - School Special	Victoria St		3.45pm
	<u> </u>			3.50pm
565 Kingsgrove Station	Govt - School	Victoria St -	7.50am	
566 Kingsgrove Station	Special	viololia Gt		3.45pm

Table 4 - Bus services at Trinity Grammar

The existing bus stops around the school and their approximate length are shown below.

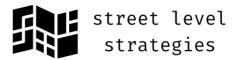




Figure 9 - Bus stops surrounding Trinity Grammar

The Trinity school buses predominantly drop-off and pick-up from the western kerb of Prospect Road at the bus stop near the main gates and Chapel Drive. In the morning, Trinity buses enter from Old Canterbury Road and turn left into Prospect Road and do not contribute to the queuing at Prospect Road.

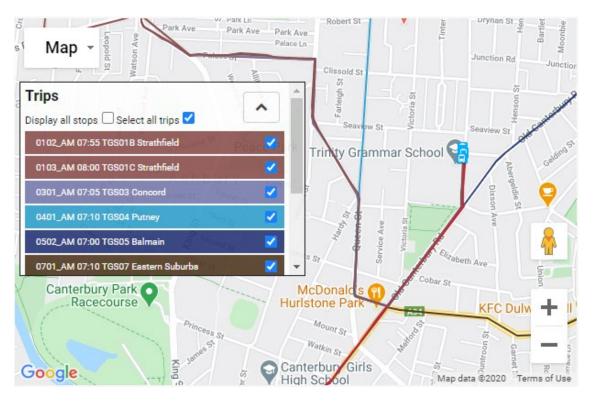


Figure 10 - Trinity school bus service routes (AM services)

In the afternoon students are marshalled within the school grounds and escorted to the bus once it arrives at Prospect Road. These services exit by turning right onto Hurlstone Avenue from Prospect Road and then make a right turn onto Old Canterbury Road.

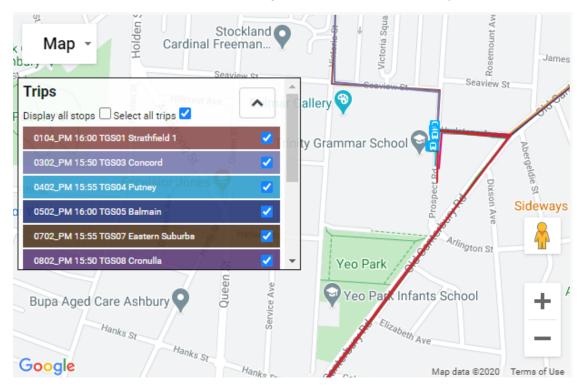
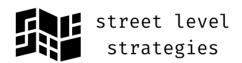


Figure 11 - Trinity school bus service routes (PM services)



The table below shows the maximum number of buses that are picking up or dropping off at either Prospect Road or Victoria Street at any one time. This table represents all bus types, including Government, School Specials and those as part of the Trinity bus network.

Location		Time of day/ Number of Services										
		<8am	8am	8.02am	8.05am	8.10am	8.15am					
Prospect Road	AM	3	4	1	3	4	1					
Victoria Street	-	1				1						
		<3.45pm	3.45pm	3.50pm	3.55pm	4pn4pm	>4pr à 4pm					
Prospect Road	PM		3	1	4	3	6					
Victoria Street	_	1	2	1								

Table 5 - Cumulative buses at Prospect Rd and Victoria St bus stops

With a total length at Prospect Road of 65 metres on the western side, this is ample capacity to capture the maximum buses (at 12.5m each) that arrive or depart to service the school. We note that the six buses that depart after 4pm are spread across a 1.5-hour timeframe which can be serviced by the bus stops.

Victoria Street's 35 metre bus zone also has capacity for the maximum two buses.

The need for additional school-provided bus routes will be determined following the enrolment of new students and their travel needs. The school currently provides a comprehensive school bus service program and is committed to expanding services or adding new routes as demand requires.

9. Response to Submissions - Inner West Council comments

The following items respond to the transport and traffic matters raised by Inner West Council in their submission on the Environmental Impact Statement.

a. Item 1 – Upgrade of Prospect Street pedestrian crossing

"Consider the upgrading of the existing pedestrian crossing in Prospect Road to a raised pedestrian crossing."

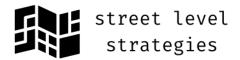
Trinity Grammar School has been an advocate for a raised pedestrian crossing on Prospect Road for some time and supports a proposal for an upgrade to a Raised Crossing/ Continuous Footpath Treatment.

The school has indicated that it would be willing to contribute to the cost of a pedestrian crossing upgrade at this location.

b. Item 2 – Consider pedestrian refuge at Prospect Rd/Old Canterbury Rd "Consider widening of the island at the intersection of Old Canterbury Road and Prospect Road to provide a refuge island to improve safety of pedestrians at the intersection."

As per our response regarding the proposed traffic mitigation measures (Item 4 for DPIE), there is an opportunity to realign and widen the existing median on Prospect Road at the intersection of Old Canterbury Road.

The preliminary design demonstrates that widening the median to 1.2 metres is feasible, and final dimensions would be subject to further design development.



c. Item 3 – Consider relocating the Electrical Kiosk on Victoria St

"Consider the relocation of the existing electrical kiosk at the main vehicular access location in Victoria Street as the current location severely impacts sight distance."

The electrical kiosk has been *in situ* for many years, including prior to the design and installation of the pedestrian refuge by Inner West Council in March 2018. In the design for this pedestrian refuge, to accommodate the bus turning movement from Victoria Street to Harland Street, the traffic linemarking at the service driveway exit was shifted to the west on Victoria Street and a kerb blister installed to the north of the driveway.



Figure 12 - Victoria St service exit

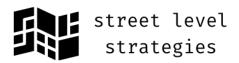
The linemarking and kerb blister provide an opportunity for vehicles exiting the driveway to view pedestrians crossing and traffic in both directions to be able to make an exit.

The car park driveway has been operational both before and after the installation of this pedestrian refuge with traffic turning Left Only. There have been no incidents of crashes at this location in the past five years of crash data.

The introduction of service functions to and from this driveway will mean that larger vehicles will be accessing the driveway. To achieve the required turning movements MRVs and HRVs will need to turn RIGHT ONLY out of the driveway to Victoria St (northbound) when exiting to avoid any impact on the pedestrian refuge.

d. Item 4 – Consider upgrading footpaths

"Consider improvement of the poor sections of asphalt footpaths in Prospect Road, Seaview and Victoria Streets to improve pedestrian and cyclist safety."



There has not been a history of safety concerns raised during the project consultation and the increase in school students and staff as part of this project is unlikely to add significant wear and tear to warrant upgrades as part of the project.

e. Item 5 – Pedestrian Refuge on Victoria St concerns

"The other measure proposed at the southern driveway is to remove the adjacent traffic island to allow delivery vehicles to turn left out of Harland Street into Victoria Street and then a quick right into the southern driveway. The traffic island proposed to be removed is in fact a pedestrian refuge and its removal is not supported. The removal of this refuge will severely impact pedestrian safety as it is adjacent to the main southern driveway whose use is being intensified and which has poor sight lines for and of pedestrians and vehicles due to the existence of an electrical substation adjacent to the driveway. Delivery vehicles should only access the driveway by turning left in."

The movements to and from the driveway for service vehicles were reviewed to determine the potential for access without any impact on the pedestrian refuge. While the original intent for access to/from this driveway was to limit heavy vehicle movements along Victoria Street, it was not possible to achieve turning movements for Medium Rigid Vehicles (MRV) or Heavy Rigid Vehicles (HRV) to/from Harland St without adjusting or relocating the pedestrian refuge.

To resolve this concern, we have tested vehicle movements in and out via Victoria St (north) and all movements can be achieved. Therefore, the proposed entry and exit from this driveway for heavy vehicles is to be left in and right out at Victoria Street only.

See **Appendix 3** for the swept path drawings.

5. Conclusion

These responses have been developed to respond to the requests from the Department of Planning, Industry and Environment, Inner West Council and in consideration of the assessment already undertaken by TTM Consulting for the Environmental Impact Statement.

In preparing these responses, we have considered the options or questions put forward and either resolved concerns raised by finding an alternative solution or found there to be no compelling nexus to the proposed school redevelopment to proceed with a suggestion.

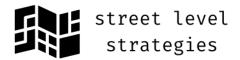
In consideration of the facts, we are satisfied that there is no reason that the proposed development should not proceed.

Best regards

Mel Fyfe

Managing Director

street level strategies



Appendix 1 – Additional SIDRA modelling for years 2024-2026



24 August 2020

Our Ref: 20GCT0204_LT01

Your Ref:

Attention: Mel Fyfe

Street Level Strategies

by email

Dear Mel,

RE: Trinity Grammar School - Sidra Analysis

1. Introduction

This report has been prepared in response to the Dept of Planning request - "The TA report must specify whether the increase in student numbers are to be phased during operation. The associated SIDRA modelling for intersection performances, construction and operational traffic impacts on the surrounding road network must be considered for each phase of increase in student numbers or construction of a new building."

After considering the phasing in of students and construction, additional modelling for the AM and PM peaks for the three additional years has been carried out.

2. Assessment Scenarios

The TA report presented the ultimate assessment scenario of 2,100 students, which is planned to be realised by 2028. The school proposes to phase in students, rather than introducing the ultimate 2,100 in a single phase.

The additional phasing in of students therefore has been assessed to address Dept of Planning request. The additional scenarios modelled and presented within this report are:

- 2024 1,825 students
- 2025 1,885 students
- 2026 1,945 students

Regarding student trips the mode split assumptions set out in Table 6-1 of the TA are adopted for each assessment year.

The summary of new trips is summarised below (based on 1,655 existing students):



- 2024 170 new students = 75 new trips
- 2025 230 new students = 102 new trips
- 2026 290 new students = 128 new trips

For staff it is assumed that the total 321 staff (required for the full 2,100 students) are already in attendance at the commencement of the 2024 assessment year. Therefore the 36 new trips generated by staff (identified within TA section 6.3.1) at full occupation is assumed to be constant through each assessment scenario 2024, 2025 and 2026.

In regard to construction traffic management, it is understood that deliveries will be restricted to occur outside of peak school periods and therefore are not subject to the AM and PM peak assessment contained herein.

3. Intersections Analysed

A total of eight intersections have been analysed in line with those analysed within the Transport and Accessibility Statement for the project. The intersections analysed are as per the TA as follows:

- 1. Old Canterbury Road/Prospect Road;
- 2. Old Canterbury Road/Hurlstone Avenue;
- 3. Old Canterbury Road/Henson Street; and
- 4. Old Canterbury Road/James Street.
- 5. Prospect Road/Seaview Street East;
- 6. Prospect Road/Seaview Street West;
- 7. Victoria Street/Seaview Street; and
- 8. Victoria Street/Harland Street.

The summaries of each intersection for each year are presented in turn in the following sections. Movement summary reports are provided in Attachment 1.



4. Old Canterbury Road/Prospect Road

Table 4-1 Summary of SIDRA Outputs for Old Canterbury Road/Prospect Road Intersection – AM Peak

			Current			2024			2025		2026		
Approach	Movement	DOS	Avg Delay (s)	LOS									
Arlington St	Left	0.03	6.2	А									
	Left	0.10	5.5	А	0.11	5.5	А	0.11	5.5	А	0.11	5.5	А
Old Canterbury Rd (NE)	Through	0.52	2.9	А	0.53	3.1	А	0.53	3.1	А	0.53	3.1	А
ita (ive)	Right	0.52	21.1	С	0.53	21.3	С	0.53	21.4	С	0.53	21.4	С
Dunnan ant Dal	Left	2.55	>50.0	F	2.67	>50.0	F	2.71	>50.0	F	2.74	>50.0	F
Prospect Rd	Right	2.55	>50.0	F	2.67	>50.0	F	2.71	>50.0	F	2.74	>50.0	F
Old Canterbury	Left	0.91	5.5	А	0.09	5.5	А	0.09	5.5	А	0.09	5.5	А
Rd (SW)	Through	0.46	0.1	А									

Table 4-2 Summary of SIDRA Outputs for Old Canterbury Road/Prospect Road Intersection – PM Peak

			Current	Current		2024			2025			2026		
Approach	Movement	DOS	Avg Delay (s)	LOS	DOS	Avg Delay (s)	LOS	DOS	Avg Delay (s)	LOS	DOS	Avg Delay (s)	LOS	
Arlington St	Left	0.03	6.6	А	0.03	6.7	А	0.03	6.7	А	0.03	6.7	А	
	Left	0.14	5.5	А	0.14	5.5	А	0.14	5.5	А	0.14	5.5	А	
Old Canterbury Rd (NE)	Through	0.67	0.4	А	0.68	0.4	А	0.68	0.4	А	0.68	0.4	А	
113 (112)	Right	0.67	12.9	В	0.68	13.0	В	0.68	13.0	В	0.68	13.0	В	
Draspast Dd	Left	1.07	>50.0	F	1.16	>50.0	F	1.18	>50.0	F	1.21	>50.0	F	
Prospect Rd	Right	1.07	>50.0	F	1.16	>50.0	F	1.18	>50.0	F	1.21	>50.0	F	
Old Canterbury	Left	0.05	5.5	А	0.05	5.4	А	0.05	5.4	А	0.05	5.4	А	
Rd (SW)	Through	0.25	0.0	А	0.25	0.0	А	0.26	0.0	А	0.26	0.0	А	



5. Old Canterbury Road/Hurlstone Avenue

Table 5-1 Summary of SIDRA Outputs for Old Canterbury Road/Hurlstone Avenue Intersection – AM Peak

			Current		2024				2025		2026		
Approach	Movement	DOS	Avg Delay (s)	LOS									
Old Canterbury	Through	1.12	13.3	В	1.14	11.8	В	1.14	11.4	В	1.14	11.1	В
Rd (NE)	Right	1.12	>50.0	F	1.14	>50.0	F	1.14	>50.0	F	1.14	>50.0	F
Hurlstone	Left	1.10	>50.0	F	1.12	>50.0	F	1.13	>50.0	F	1.14	>50.0	F
Avenue	Right	1.10	>50.0	F	1.12	>50.0	F	1.13	>50.0	F	1.14	>50.0	F
Old Canterbury	Left	0.09	6.5	А									
Rd (SW)	Through	0.44	0.0	А									

Table 5-2 Summary of SIDRA Outputs for Old Canterbury Road/Hurlstone Avenue Intersection – PM Peak

			Current			2024			2025		2026		
Approach	Movement	DOS	Avg Delay (s)	LOS									
Old Canterbury	Through	0.86	3.5	А	0.87	3.8	Α	0.87	3.9	А	0.87	4.0	А
Rd (NE)	Right	0.86	14.1	В	0.87	14.6	В	0.87	14.7	В	0.87	14.9	В
Hurlstone	Left	0.25	8.4	А	0.26	8.5	А	0.26	8.6	А	0.26	8.6	А
Avenue	Right	0.25	41.2	E	0.26	41.5	E	0.26	41.5	E	0.26	41.6	Е
Old Canterbury	Left	0.04	6.5	А									
Rd (SW)	Through	0.22	0.0	А									



6. Old Canterbury Road/Henson Street

Table 6-1 Summary of SIDRA Outputs for Old Canterbury Road/Henson Street Intersection – AM Peak

			Current		2024				2025		2026		
Approach	Movement	DOS	Avg Delay (s)	LOS									
Old Canterbury	Through	1.21	39.8	Е	1.21	39.8	E	1.21	39.8	E	1.21	39.8	E
Rd (NE)	Right	1.21	>50.0	F									
Hamasu Ct	Left	0.68	28.0	D									
Henson St	Right	0.68	>50.0	F									
Old Canterbury	Left	0.14	4.7	А									
Rd (SW)	Through	0.48	0.0	А	0.47	0.0	А	0.47	0.0	А	0.47	0.0	А

Table 6-2 Summary of SIDRA Outputs for Old Canterbury Road/Henson Street Intersection – PM Peak

			Current		2024				2025		2026		
Approach	Movement	DOS	Avg Delay (s)	LOS									
Old Canterbury	Through	0.90	4.4	А									
Rd (NE)	Right	0.90	17.1	С									
Hamann Ch	Left	0.52	16.6	С									
Henson St	Right	0.52	>50	F	0.52	>50.0	F	0.52	>50.0	F	0.52	>50.0	F
Old Canterbury	Left	0.07	4.7	А	0.07	4.7	Α	0.07	4.7	А	0.07	4.8	А
Rd (SW)	Through	0.23	0.0	А	0.24	0.0	Α	0.24	0.0	А	0.24	0.0	А



7. Old Canterbury Road/James Street

Table 7-1 Summary of SIDRA Outputs for Old Canterbury Road/James Street Intersection – AM Peak

			Current		2024				2025		2026		
Approach	Movement	DOS	Avg Delay (s)	LOS									
Old Canterbury	Through	0.42	1.6	А									
Rd (NE)	Right	0.42	11.5	В									
James Str	Right	0.05	44.9	E									
Old Canterbury	Left	0.11	6.9	А									
Rd (SW)	Through	0.36	0.0	А	0.37	0.0	А	0.37	0.0	А	0.37	0.0	А

Table 7-2 Summary of SIDRA Outputs for Old Canterbury Road/James Street Intersection – PM Peak

			Current			2024			2025			2026	
Approach	Movement	DOS	Avg Delay (s)	LOS									
Old Canterbury	Through	0.66	0.2	А									
B.L.(N.E.)	Right	0.66	6.9	А									
James Str	Right	0.01	41.2	E									
Old Canterbury	Left	0.07	6.5	А									
Rd (SW)	Through	0.23	0.0	А									



8. Prospect Road/Seaview Street (West)

Table 8-1 Summary of SIDRA Outputs for Prospect Road/Seaview Street – West Intersection – AM Peak

			Current			2024			2025			2026	
Approach	Movement	DOS	Avg Delay (s)	LOS									
Duncan set Del (C)	Left	0.12	5.6	А	0.13	5.6	А	0.14	5.6	А	0.13	5.6	А
Prospect Rd (S)	Through	0.12	0.0	А	0.13	0.0	А	0.14	0.0	А	0.13	0.0	А
Dragnost Dd (N)	Through	0.19	0.3	А	0.20	0.3	А	0.20	0.4	А	0.20	0.4	А
Prospect Rd (N)	Right	0.19	6.3	А	0.20	6.4	А	0.20	6.5	А	0.20	6.4	А
Carrier Ct	Left	0.16	6.0	А	0.17	6.0	А	0.18	6.0	А	0.19	6.0	А
Seaview St	Right	0.16	8.2	А	0.17	8.3	А	0.18	8.5	А	0.19	8.4	А

Table 8-2 Summary of SIDRA Outputs for Prospect Road/Seaview Street – West Intersection – PM Peak

			Current			2024			2025			2026	
Approach	Movement	DOS	Avg Delay (s)	LOS									
Dunana at Dal (C)	Left	0.08	5.7	А	0.09	5.6	А	0.09	5.6	А	0.09	5.6	А
Prospect Rd (S)	Through	0.08	0.0	А	0.09	0.0	А	0.09	0.0	А	0.09	0.0	А
Dunnan ant Del (NI)	Through	0.11	0.2	А	0.12	0.3	А	0.12	0.3	А	0.12	0.3	А
Prospect Rd (N)	Right	0.11	5.9	А	0.12	6.0	А	0.12	6.0	А	0.12	6.0	А
Consideration Ch	Left	0.08	5.8	А	0.10	5.8	А	0.10	5.8	А	0.11	5.8	А
Seaview St	Right	0.08	6.9	А	0.10	6.9	А	0.10	6.9	А	0.11	7.0	А



9. Prospect Road/Seaview Street (East)

Table 9-1 Summary of SIDRA Outputs for Prospect Road/Seaview Street – East Intersection – AM Peak

			Current			2024			2025			2026	
Approach	Movement	DOS	Avg Delay (s)	LOS									
Dragnagt Dd (C)	Through	0.11	0.5	А	0.12	0.5	А	0.12	0.5	А	0.12	0.5	А
Prospect Rd (S)	Right	0.11	6.8	А	0.12	6.8	А	0.12	6.8	А	0.12	6.8	А
Candiau Ch	Left	0.07	6.5	А	0.07	6.6	А	0.07	6.6	А	0.07	6.6	А
Seaview St	Right	0.07	7.8	А	0.07	7.8	А	0.07	7.9	А	0.07	7.9	А
Dragnagt Dd (NI)	Left	0.18	5.6	А	0.18	5.6	Α	0.18	5.6	А	0.18	5.6	А
Prospect Rd (N)	Through	0.18	0.0	А									

Table 9-2 Summary of SIDRA Outputs for Prospect Road/Seaview Street – East Intersection – PM Peak

			Current			2024			2025			2026	
Approach	Movement	DOS	Avg Delay (s)	LOS									
Draspact Dd (C)	Through	0.07	0.2	А	0.08	0.2	Α	0.08	0.2	А	0.08	0.2	А
Prospect Rd (S)	Right	0.07	6.0	А	0.08	6.0	А	0.08	6.0	А	0.08	6.0	А
Seaview St	Left	0.04	6.0	А									
Seaview St	Right	0.04	6.6	А	0.04	6.6	А	0.04	6.6	А	0.04	6.7	А
-	Left	0.09	5.5	А	0.10	5.5	А	0.10	5.5	А	0.10	5.5	А
Prospect Rd (N)	Through	0.09	0.0	А	0.10	0.0	А	0.10	0.0	А	0.10	0.0	А



10. Victoria Street/Seaview Street

Table 10-1 Summary of SIDRA Outputs for Victoria Street/Seaview Street Intersection – AM Peak

			Current			2024			2025			2026	
Approach	Movement	DOS	Avg Delay (s)	LOS									
	Left	0.12	6.9	А	0.15	6.6	А	0.16	6.7	А	0.17	6.7	А
Victoria St (S)	Through	0.12	0.6	А	0.15	0.4	А	0.16	0.5	А	0.17	0.5	А
	Right	0.12	7.0	А	0.15	6.6	А	0.16	6.7	А	0.17	6.8	А
	Left	0.16	9.8	А	0.19	9.4	А	0.21	9.5	А	0.22	9.6	А
Seaview St	Through	0.16	13.3	А	0.19	11.8	А	0.21	12.1	А	0.22	125	А
	Right	0.16	16.9	А	0.19	14.5	А	0.21	15.0	В	0.22	15.6	В
	Left	0.15	6.1	А	0.17	6.0	А	0.18	6.0	А	0.18	6.0	А
Victoria St (N)	Through	0.15	0.1	А	0.17	0.1	А	0.18	0.1	А	0.18	0.1	А
	Right	0.15	7.4	А	0.17	7.0	А	0.18	7.1	А	0.18	7.2	А
	Left	0.20	10.0	А	0.25	9.2	А	0.26	9.3	А	0.27	9.5	А
West: Seaview Street	Through	0.20	14.2	А	0.25	12.1	А	0.26	12.6	А	0.27	13.0	А
3	Right	0.20	17.0	А	0.25	13.9	А	0.26	14.6	В	0.27	15.3	В



Table 10-2 Summary of SIDRA Outputs for Victoria Street/Seaview Street Intersection – PM Peak

			Current			2024			2025			2026	
Approach	Movement	DOS	Avg Delay (s)	LOS									
	Left	0.09	6.1	А	0.13	6.3	А	0.15	6.3	А	0.16	6.4	А
Victoria St (S)	Through	0.09	0.2	А	0.13	0.3	А	0.15	0.4	А	0.16	0.4	А
	Right	0.09	6.2	А	0.13	6.3	А	0.15	6.4	А	0.16	6.4	А
	Left	0.13	8.8	А	0.15	9.0	А	0.16	9.0	А	0.17	9.	А
Seaview St	Through	0.13	9.8	А	0.15	10.74	А	0.16	11.0	А	0.17	11.4	А
	Right	0.13	13.3	А	0.15	15.2	В	0.16	15.8	В	0.17	16.4	В
	Left	0.12	5.8	А	0.13	5.9	А	0.14	5.9	А	0.14	5.9	А
Victoria St (N)	Through	0.12	0.1	А	0.13	0.1	А	0.14	0.1	А	0.14	0.1	А
	Right	0.12	5.9	А	0.13	3.1	А	0.14	6.1	А	0.14	6.2	А
	Left	0.09	8.5	А	0.11	8.7	А	0.12	8.7	А	0.12	8.8	А
West: Seaview Street	Through	0.09	9.8	А	0.11	10.6	А	0.12	10.9	А	0.12	11.1	А
3331	Right	0.09	10.7	А	0.11	12.0	А	0.12	12.4	А	0.12	12.9	А



11. Victoria Street/Harland Street

Table 11-1 Summary of SIDRA Outputs for Victoria Street/Harland Street Intersection – AM Peak

			Current			2024			2025			2026	
Approach	Movement	DOS	Avg Delay (s)	LOS									
\/: -t = vi= Ct /C\	Left	0.03	5.5	А									
Victoria St (S)	Through	0.03	0.0	А									
Viotorio Ct (NI)	Through	0.17	0.2	А	0.19	0.2	Α	0.19	0.2	А	0.20	0.2	А
Victoria St (N)	Right	0.17	5.7	А	0.19	5.7	Α	0.19	5.7	А	0.20	5.7	А
Hanland Ch	Left	0.15	5.7	А	0.18	5.7	Α	0.18	5.7	А	0.19	5.7	А
Harland St	Right	0.15	7.1	А	0.18	7.3	А	0.18	7.4	А	0.19	7.4	А

Table 11-2 Summary of SIDRA Outputs for Victoria Street/Harland Street Intersection – PM Peak

			Current			2024			2025			2026	
Approach	Movement	DOS	Avg Delay (s)	LOS									
Vieterie Ct (C)	Left	0.04	5.5	А									
Victoria St (S)	Through	0.04	0.0	А									
Vistoria Ct (NI)	Through	0.16	0.2	А	0.18	0.2	А	0.19	0.2	А	0.19	0.2	А
Victoria St (N)	Right	0.16	5.7	А	0.18	5.7	А	0.19	5.7	А	0.19	5.7	А
Hardan d Ch	Left	0.07	5.7	А	0.09	5.7	А	0.10	5.7	А	0.10	5.7	А
Harland St	Right	0.07	6.8	А	0.09	7.0	А	0.10	7.1	А	0.10	7.2	А



The analysis of all three future year volumes at all intersections indicates that the current level of service is maintained in all movements – with very limited increases to delay and DOS.

12. Conclusion

The additional phasing in of students has been assessed to address Dept of Planning request. Eight intersections as identified within the TA have been assessed for the following future school enrolment scenarios.

- 2024 1,825 students
- 2025 1,885 students
- 2026 1,945 students

The analysis of the current volumes in both peaks at all current configuration intersections was previously identified in the TA to provide adequate level of service. The additional modelling subject to this report has identified that all intersections under current configurations will continue to provide adequate or comparable level of service as the school develops.

I trust the information contained herein is sufficient for your purposes. If you require any further information or clarification of any issues, please contact me by email at iblackburn@ttmgroup.com.au or by phone on (07) 5514 8000.

Yours sincerely,

Ilona Blackburn

Associate Director

TTM Consulting Pty Ltd



Attachment 1: SIDRA Movement Summary Reports

V Site: 101 [Scenario 1: Old Canterbury Rd-Prospect Rd - AM peak]

Scenario 1: Old Canterbury Rd-Prospect Rd - AM peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment F	erforman	ce - Vel	nicles								
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	East: Ar	lington St										
21	L2	32	3.3	0.028	6.2	LOSA	0.1	0.7	0.26	0.56	0.26	51.7
Appro	ach	32	3.3	0.028	6.2	LOS A	0.1	0.7	0.26	0.56	0.26	51.7
North	East: Old	d Canterbur	y Road									
24	L2	1	0.0	0.105	5.5	LOS A	0.0	0.0	0.00	0.00	0.00	57.3
25	T1	453	5.1	0.525	3.1	LOS A	1.5	11.3	0.19	0.04	0.28	55.3
26b	R3	24	8.9	0.525	21.3	LOS C	1.5	11.3	0.33	0.07	0.50	49.7
Appro	ach	477	5.3	0.525	4.0	NA	1.5	11.3	0.19	0.04	0.30	55.0
North:	Prospe	ct Road										
7b	L3	51	2.1	2.671	1591.5	LOS F	54.4	405.5	1.00	2.43	6.19	1.6
9a	R1	59	12.4	2.671	1677.1	LOS F	54.4	405.5	1.00	2.43	6.19	2.1
Appro	ach	110	7.6	2.671	1637.5	LOS F	54.4	405.5	1.00	2.43	6.19	1.8
South	West: O	ld Canterbu	ıry Road									
30a	L1	118	14.3	0.092	5.5	LOSA	0.0	0.0	0.00	0.43	0.00	53.9
31	T1	925	3.2	0.460	0.1	LOSA	0.0	0.0	0.00	0.02	0.00	59.6
Appro	ach	1043	4.4	0.460	0.7	NA	0.0	0.0	0.00	0.07	0.00	58.7
All Ve	hicles	1662	4.9	2.671	110.3	NA	54.4	405.5	0.13	0.23	0.50	17.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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Organisation: TTM CONSULTING PTY LTD | Processed: Friday, 21 August 2020 11:27:30 AM
Project: \\TTMFPS01\Synergy\GC\Synergy\Projects\20GCT\20GCT\20GCT0204 Trinity Grammar School - Sidra Analysis\6 - Analysis\2024 - Old

Cantebury Rd\19SYT0056sid01 rev03 - Old Canterbury Rd [2024].sip8

V Site: 101 [Scenario 1: Old Canterbury Rd-Prospect Rd - PM peak]

Scenario 1: Old Canterbury Rd-Prospect Rd - PM peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ement P	erforman	ce - Vel	nicles								
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued		Aver. No. Cycles	Average Speed km/h
South	East: Arl	ington St										
21	L2	26	4.0	0.026	6.7	LOSA	0.1	0.7	0.33	0.58	0.33	51.4
Appro	ach	26	4.0	0.026	6.7	LOS A	0.1	0.7	0.33	0.58	0.33	51.4
North	East: Old	d Canterbur	y Road									
24	L2	4	0.0	0.135	5.5	LOS A	0.0	0.0	0.00	0.01	0.00	57.2
25	T1	798	3.6	0.677	0.4	LOS A	0.6	4.0	0.04	0.01	0.08	59.2
26b	R3	13	25.0	0.677	13.0	LOS B	0.6	4.0	0.06	0.02	0.11	54.6
Appro	ach	815	3.9	0.677	0.7	NA	0.6	4.0	0.04	0.01	0.08	59.1
North	: Prospe	ct Road										
7b	L3	30	0.0	1.157	257.4	LOS F	17.0	122.3	1.00	1.45	3.20	7.0
9a	R1	58	5.4	1.157	377.4	LOS F	17.0	122.3	1.00	1.45	3.20	8.9
Appro	ach	89	3.6	1.157	336.4	LOS F	17.0	122.3	1.00	1.45	3.20	8.3
South	West: O	ld Canterbu	ıry Road									
30a	L1	63	10.0	0.051	5.4	LOS A	0.0	0.0	0.00	0.40	0.00	54.2
31	T1	519	2.0	0.254	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	59.7
Appro	ach	582	2.9	0.254	0.6	NA	0.0	0.0	0.00	0.06	0.00	58.9
All Ve	hicles	1512	3.5	1.157	20.5	NA	17.0	122.3	0.09	0.13	0.24	41.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 101 [Scenario 1: Old Canterbury Rd-Hurlstone Ave - AM peak]

Scenario 1: Old Canterbury Rd-Hurlstone Ave - AM peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erforman	ce - Vel	nicles								
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
North	East: Old	d Canterbur	y Road									
25	T1	458	5.7	1.136	11.8	LOS B	16.7	119.0	0.07	0.15	0.51	37.2
26a	R1	128	8.0	1.136	179.6	LOS F	16.7	119.0	1.00	2.18	7.67	4.3
Appro	ach	586	4.7	1.136	48.4	NA	16.7	119.0	0.27	0.59	2.07	16.4
West:	Hurlston	ne Avenue										
10a	L1	226	1.9	1.123	162.9	LOS F	25.2	181.6	1.00	2.79	7.90	4.5
12b	R3	20	21.3	1.123	211.2	LOS F	25.2	181.6	1.00	2.79	7.90	7.3
Appro	ach	246	3.4	1.123	166.8	NA	25.2	181.6	1.00	2.79	7.90	4.7
South	West: O	d Canterbu	ry Road									
30b	L3	12	0.0	0.087	6.5	LOSA	0.0	0.0	0.00	0.05	0.00	56.0
31	T1	985	3.1	0.435	0.0	LOSA	0.0	0.0	0.00	0.01	0.00	59.7
Appro	ach	997	3.1	0.435	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.6
All Ve	hicles	1829	3.6	1.136	38.0	NA	25.2	181.6	0.22	0.57	1.73	19.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 101 [Scenario 1: Old Canterbury Rd-Hurlstone Ave - PM peak]

Scenario 1: Old Canterbury Rd-Hurlstone Ave - PM peak Site Category: (None) Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
NorthEast: Old Canterbury Road												
25	T1	826	1.9	0.866	3.8	LOS A	4.5	31.9	0.16	0.06	0.53	49.1
26a	R1	70	0.0	0.866	14.6	LOS B	4.5	31.9	0.27	0.11	0.90	36.9
Appro	ach	897	1.8	0.866	4.6	NA	4.5	31.9	0.17	0.07	0.56	48.2
West: Hurlstone Avenue												
10a	L1	113	2.8	0.258	8.5	LOS A	1.0	7.0	0.60	0.84	0.65	30.3
12b	R3	9	22.2	0.258	41.5	LOS E	1.0	7.0	0.60	0.84	0.65	35.5
Appro	ach	122	4.3	0.258	11.1	NA	1.0	7.0	0.60	0.84	0.65	30.9
SouthWest: Old Canterbury Road												
30b	L3	6	0.0	0.043	6.5	LOS A	0.0	0.0	0.00	0.05	0.00	56.0
31	T1	495	1.9	0.217	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	59.7
Appro	ach	501	1.9	0.217	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.7
All Vehicles		1520	2.0	0.866	3.6	NA	4.5	31.9	0.15	0.11	0.38	49.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 101 [Scenario 1: Old Canterbury Rd-Henson St - AM peak]

Scenario 1: Old Canterbury Rd-Henson St - AM peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformanc	e - Vel	nicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
North	East: Old	d Canterbury	Road									
25	T1	555	4.7	1.212	39.8	LOS E	26.4	188.9	0.17	0.33	1.94	16.0
26b	R3	104	1.0	1.212	236.8	LOS F	26.4	188.9	1.00	1.92	11.20	7.2
Appro	ach	659	4.2	1.212	70.9	NA	26.4	188.9	0.30	0.58	3.40	11.8
North:	Henson	Street										
7b	L3	205	2.6	0.681	28.0	LOS D	6.8	48.9	0.64	1.12	1.63	27.5
9a	R1	16	0.0	0.681	160.5	LOS F	6.8	48.9	0.64	1.12	1.63	23.6
Appro	ach	221	2.4	0.681	37.5	LOS E	6.8	48.9	0.64	1.12	1.63	27.3
South	West: O	d Canterbur	y Road									
30a	L1	54	3.9	0.142	4.7	LOSA	0.0	0.0	0.00	0.12	0.00	53.1
31	T1	1121	3.1	0.473	0.0	LOSA	0.0	0.0	0.00	0.02	0.00	59.1
Appro	ach	1175	3.1	0.473	0.2	NA	0.0	0.0	0.00	0.03	0.00	58.6
All Ve	hicles	2055	3.4	1.212	26.9	NA	26.4	188.9	0.17	0.32	1.27	23.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 101 [Scenario 1: Old Canterbury Rd-Henson St - PM peak]

Scenario 1: Old Canterbury Rd-Henson St - PM peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformanc	e - Ver	icles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
North	East: Old	d Canterbury	/ Road									
25	T1	851	3.7	0.901	4.4	LOS A	5.5	39.2	0.17	0.10	0.74	44.3
26b	R3	87	0.0	0.901	17.1	LOS C	5.5	39.2	0.29	0.17	1.24	44.8
Appro	ach	938	3.4	0.901	5.6	NA	5.5	39.2	0.18	0.11	0.79	44.4
North	North: Henson St											
7b	L3	112	0.0	0.520	16.6	LOS C	3.1	21.7	0.38	0.72	0.67	31.8
9a	R1	39	0.0	0.520	60.5	LOS F	3.1	21.7	0.38	0.72	0.67	27.2
Appro	ach	151	0.0	0.520	28.0	LOS D	3.1	21.7	0.38	0.72	0.67	30.6
South	West: O	ld Canterbur	y Road									
30a	L1	51	0.0	0.071	4.7	LOSA	0.0	0.0	0.00	0.22	0.00	52.0
31	T1	541	2.5	0.237	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	58.8
Appro	ach	592	2.3	0.237	0.4	NA	0.0	0.0	0.00	0.05	0.00	57.7
All Ve	hicles	1680	2.7	0.901	5.8	NA	5.5	39.2	0.14	0.14	0.50	44.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 101 [Scenario 1: Old Canterbury Rd-James St - AM peak]

Scenario 1: Old Canterbury Rd-James St - AM peak Site Category: (None)

Giveway / Yield (Two-Way)

Move	ment F	Performan	ce - Vel	nicles								
Mov	Turn	Demand		Deg.	Average	Level of		of Queue	Prop.	Effective		
ID		Total	HV	Satn	Delay	Service	Vehicles	Distance	Queued	Stop Rate	Cycles	Speed
		veh/h	%	v/c	sec		veh	m				km/h
North	±ast: Ol	d Canterbur	y Road									
25	T1	519	4.5	0.424	1.6	LOS A	1.2	8.5	0.16	0.03	0.23	51.1
26a	R1	29	0.0	0.424	11.5	LOS B	1.2	8.5	0.23	0.05	0.33	41.0
Appro	ach	548	4.2	0.424	2.1	NA	1.2	8.5	0.17	0.03	0.23	50.6
West:	James	Street										
12b	R3	4	0.0	0.048	44.9	LOS E	0.1	1.0	0.92	0.97	0.92	16.5
Appro	ach	4	0.0	0.048	44.9	LOS E	0.1	1.0	0.92	0.97	0.92	16.5
South	West: O	ld Canterbu	ry Road									
30b	L3	5	40.0	0.110	6.9	LOS A	0.0	0.0	0.00	0.02	0.00	49.6
31	T1	905	3.5	0.368	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Appro	ach	911	3.7	0.368	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.7
All Ve	hicles	1463	3.9	0.424	1.0	NA	1.2	8.5	0.06	0.02	0.09	55.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 101 [Scenario 1: Old Canterbury Rd-James St - PM peak]

Scenario 1: Old Canterbury Rd-James St - PM peak Site Category: (None)

Giveway / Yield (Two-Way)

Move	ment F	Performano	e - Vel	nicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
Northl	East: Ol	d Canterbury	Road									
25	T1	880	2.0	0.659	0.2	LOS A	0.3	2.2	0.02	0.01	0.04	58.7
26a	R1	9	0.0	0.659	6.9	LOS A	0.3	2.2	0.03	0.01	0.06	50.8
Appro	ach	889	2.0	0.659	0.3	NA	0.3	2.2	0.02	0.01	0.04	58.6
West:	James	Street										
12b	R3	1	0.0	0.011	41.2	LOS E	0.0	0.2	0.91	0.97	0.91	17.5
Appro	ach	1	0.0	0.011	41.2	LOS E	0.0	0.2	0.91	0.97	0.91	17.5
South	West: O	ld Canterbur	y Road									
30b	L3	2	0.0	0.069	6.5	LOS A	0.0	0.0	0.00	0.01	0.00	55.8
31	T1	575	1.5	0.230	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Appro	ach	577	1.5	0.230	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.8
All Ve	hicles	1467	1.8	0.659	0.2	NA	0.3	2.2	0.01	0.00	0.03	58.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 1 [Scenario1: Prospect - Seaview West AM Peak]

2019 AM Peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformanc	e - Vel	nicles								
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate		Average Speed km/h
South	: Prospe	ct Road										
1	L2	100	5.3	0.126	5.6	LOS A	0.0	0.0	0.00	0.26	0.00	56.1
2	T1	131	7.3	0.126	0.0	LOSA	0.0	0.0	0.00	0.26	0.00	57.7
Appro	ach	231	6.4	0.126	2.4	NA	0.0	0.0	0.00	0.26	0.00	57.0
North:	Prospe	ct Road										
8	T1	275	3.1	0.199	0.3	LOS A	0.6	4.4	0.19	0.14	0.19	58.1
9	R2	78	1.4	0.199	6.4	LOS A	0.6	4.4	0.19	0.14	0.19	55.9
Appro	ach	353	2.7	0.199	1.7	NA	0.6	4.4	0.19	0.14	0.19	57.6
West:	Seaviev	v Street										
10	L2	69	0.0	0.174	6.0	LOS A	0.6	4.5	0.31	0.64	0.31	52.2
12	R2	94	3.4	0.174	8.3	LOSA	0.6	4.5	0.31	0.64	0.31	51.7
Appro	ach	163	1.9	0.174	7.3	LOS A	0.6	4.5	0.31	0.64	0.31	51.9
All Ve	hicles	746	3.7	0.199	3.1	NA	0.6	4.5	0.16	0.28	0.16	56.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 1 [Scenario1: Prospect - Seaview West PM Peak]

2019 PM Peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Prospe	ct Road										
1	L2	71	9.0	0.085	5.6	LOS A	0.0	0.0	0.00	0.26	0.00	56.1
2	T1	86	2.4	0.085	0.0	LOS A	0.0	0.0	0.00	0.26	0.00	57.7
Appro	ach	157	5.4	0.085	2.5	NA	0.0	0.0	0.00	0.26	0.00	57.0
North:	Prospe	ct Road										
8	T1	134	3.1	0.115	0.3	LOSA	0.4	3.0	0.19	0.20	0.19	57.4
9	R2	69	0.0	0.115	6.0	LOSA	0.4	3.0	0.19	0.20	0.19	55.4
Appro	ach	203	2.1	0.115	2.2	NA	0.4	3.0	0.19	0.20	0.19	56.7
West:	Seaviev	v Street										
10	L2	53	0.0	0.098	5.8	LOSA	0.4	2.6	0.21	0.59	0.21	53.0
12	R2	59	5.4	0.098	6.9	LOSA	0.4	2.6	0.21	0.59	0.21	52.4
Appro	ach	112	2.8	0.098	6.4	LOS A	0.4	2.6	0.21	0.59	0.21	52.6
All Ve	hicles	472	3.3	0.115	3.3	NA	0.4	3.0	0.13	0.31	0.13	55.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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∇ Site: 2 [Scenario1: Prospect - Seaview East AM Peak]

2019 AM Peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment F	erformanc	e - Ve	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Prospe	ct Road										
2	T1	154	5.5	0.119	0.5	LOS A	0.4	2.7	0.23	0.15	0.23	57.8
3	R2	46	2.3	0.119	6.8	LOS A	0.4	2.7	0.23	0.15	0.23	55.7
Appro	ach	200	4.7	0.119	2.0	NA	0.4	2.7	0.23	0.15	0.23	57.3
East:	Seaview	Street										
4	L2	53	0.0	0.070	6.6	LOS A	0.3	1.8	0.38	0.63	0.38	52.5
6	R2	21	0.0	0.070	7.8	LOS A	0.3	1.8	0.38	0.63	0.38	52.0
Appro	ach	74	0.0	0.070	6.9	LOS A	0.3	1.8	0.38	0.63	0.38	52.3
North:	Prospe	ct Road										
7	L2	43	0.0	0.180	5.6	LOS A	0.0	0.0	0.00	0.08	0.00	57.7
8	T1	300	3.2	0.180	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	59.3
Appro	ach	343	2.8	0.180	0.7	NA	0.0	0.0	0.00	0.08	0.00	59.1
All Ve	hicles	617	3.1	0.180	1.9	NA	0.4	2.7	0.12	0.17	0.12	57.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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∇ Site: 2 [Scenario1: Prospect - Seaview East PM Peak]

2019 PM Peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment F	erformanc	e - Vel	nicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Prospe	ct Road										
2	T1	107	2.0	0.077	0.2	LOS A	0.2	1.5	0.15	0.14	0.15	58.2
3	R2	32	0.0	0.077	6.0	LOS A	0.2	1.5	0.15	0.14	0.15	56.1
Appro	ach	139	1.5	0.077	1.5	NA	0.2	1.5	0.15	0.14	0.15	57.7
East:	Seaview	Street										
4	L2	37	0.0	0.039	6.0	LOS A	0.1	1.0	0.26	0.57	0.26	52.8
6	R2	13	0.0	0.039	6.6	LOS A	0.1	1.0	0.26	0.57	0.26	52.3
Appro	ach	49	0.0	0.039	6.2	LOS A	0.1	1.0	0.26	0.57	0.26	52.7
North:	Prospe	ct Road										
7	L2	15	0.0	0.095	5.5	LOS A	0.0	0.0	0.00	0.05	0.00	57.9
8	T1	166	2.5	0.095	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	59.5
Appro	ach	181	2.3	0.095	0.5	NA	0.0	0.0	0.00	0.05	0.00	59.4
All Ve	hicles	369	1.7	0.095	1.6	NA	0.2	1.5	0.09	0.15	0.09	57.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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🥯 Site: 3 [Scenario1: Victoria - Seaview AM Peak]

2019 AM Peak Site Category: (None) Stop (Two-Way)

Mov	Turn	Demand	Flows	Deg.	Average	Level of	95% Back	of Queue	Prop.	Effective	Aver. No.	Average
ID		Total	HV	Satn	Delay	Service	Vehicles	Distance	Queued	Stop Rate		Speed
0 "		veh/h	%	v/c	sec		veh	m				km/r
	: Victoria											
1	L2	23	4.5	0.148	6.6	LOS A	0.5	3.4	0.22	0.17	0.22	55.9
2	T1	183	0.6	0.148	0.4	LOSA	0.5	3.4	0.22	0.17	0.22	57.6
3	R2	54	0.0	0.148	6.6	LOSA	0.5	3.4	0.22	0.17	0.22	55.5
Appro	ach	260	8.0	0.148	2.3	NA	0.5	3.4	0.22	0.17	0.22	57.0
East:	Seaview	Street										
4	L2	87	2.4	0.193	9.4	LOSA	0.7	5.3	0.46	0.94	0.46	50.5
5	T1	37	0.0	0.193	11.8	LOS A	0.7	5.3	0.46	0.94	0.46	50.3
6	R2	22	9.5	0.193	14.5	LOS A	0.7	5.3	0.46	0.94	0.46	50.0
Appro	ach	146	2.9	0.193	10.8	LOS A	0.7	5.3	0.46	0.94	0.46	50.4
North	: Victoria	Street										
7	L2	27	11.5	0.170	6.0	LOS A	0.1	0.9	0.04	0.07	0.04	57.4
8	T1	280	1.9	0.170	0.1	LOSA	0.1	0.9	0.04	0.07	0.04	59.3
9	R2	8	37.5	0.170	7.0	LOS A	0.1	0.9	0.04	0.07	0.04	56.0
Appro	ach	316	3.7	0.170	0.7	NA	0.1	0.9	0.04	0.07	0.04	59.
West:	Seaviev	v Street										
10	L2	24	4.3	0.247	9.2	LOSA	1.0	6.8	0.52	1.00	0.54	49.
11	T1	78	1.4	0.247	12.1	LOS A	1.0	6.8	0.52	1.00	0.54	49.
12	R2	45	0.0	0.247	13.9	LOS A	1.0	6.8	0.52	1.00	0.54	49.2
Appro	ach	147	1.4	0.247	12.2	LOS A	1.0	6.8	0.52	1.00	0.54	49.
All Ve	hicles	869	2.3	0.247	4.8	NA	1.0	6.8	0.25	0.40	0.25	55.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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🚥 Site: 3 [Scenario1: Victoria - Seaview PM Peak]

2019 PM Peak Site Category: (None) Stop (Two-Way)

Mov	Turn	Demand	Flows	Deg.	Average	Level of	95% Back	of Queue	Prop.	Effective	Aver. No.	Average
ID		Total	HV	Satn	Delay	Service	Vehicles	Distance	Queued	Stop Rate	Cycles	Speed
0 "	\ r	veh/h	%	v/c	sec		veh	m				km/r
	: Victoria											
1	L2	18	0.0	0.134	6.3	LOS A	0.4	3.2	0.20	0.18	0.20	56.1
2	T1	163	0.6	0.134	0.3	LOSA	0.4	3.2	0.20	0.18	0.20	57.6
3	R2	56	1.9	0.134	6.3	LOSA	0.4	3.2	0.20	0.18	0.20	55.4
Appro	ach	237	0.9	0.134	2.2	NA	0.4	3.2	0.20	0.18	0.20	56.9
East:	Seaview	Street										
4	L2	75	1.4	0.154	9.0	LOS A	0.6	4.3	0.39	0.92	0.39	50.9
5	T1	43	0.0	0.154	10.7	LOS A	0.6	4.3	0.39	0.92	0.39	50.7
6	R2	12	45.5	0.154	15.2	LOS B	0.6	4.3	0.39	0.92	0.39	50.1
Appro	ach	129	4.9	0.154	10.1	LOS A	0.6	4.3	0.39	0.92	0.39	50.8
North	: Victoria	Street										
7	L2	27	7.7	0.133	5.9	LOSA	0.2	1.2	0.07	0.11	0.07	57.1
8	T1	202	2.6	0.133	0.1	LOSA	0.2	1.2	0.07	0.11	0.07	58.8
9	R2	18	0.0	0.133	6.1	LOS A	0.2	1.2	0.07	0.11	0.07	56.6
Appro	ach	247	3.0	0.133	1.1	NA	0.2	1.2	0.07	0.11	0.07	58.4
West:	Seaviev	v Street										
10	L2	6	0.0	0.110	8.7	LOSA	0.4	2.7	0.47	0.97	0.47	50.3
11	T1	34	0.0	0.110	10.6	LOS A	0.4	2.7	0.47	0.97	0.47	50.0
12	R2	29	0.0	0.110	12.0	LOS A	0.4	2.7	0.47	0.97	0.47	49.8
Appro	ach	69	0.0	0.110	11.0	LOS A	0.4	2.7	0.47	0.97	0.47	50.0
All Ve	hicles	683	2.3	0.154	4.2	NA	0.6	4.3	0.22	0.37	0.22	55.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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∇ Site: 4 [Scenario1: Victoria - Harland AM Peak]

2019 AM Peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Victoria	a Street										
1	L2	19	0.0	0.034	5.5	LOS A	0.0	0.0	0.00	0.17	0.00	56.9
2	T1	46	2.3	0.034	0.0	LOS A	0.0	0.0	0.00	0.17	0.00	58.4
Appro	ach	65	1.6	0.034	1.6	NA	0.0	0.0	0.00	0.17	0.00	58.0
North:	Victoria	Street										
8	T1	51	2.1	0.187	0.2	LOS A	1.0	7.1	0.18	0.47	0.18	55.2
9	R2	267	2.8	0.187	5.7	LOSA	1.0	7.1	0.18	0.47	0.18	53.3
Appro	ach	318	2.6	0.187	4.8	NA	1.0	7.1	0.18	0.47	0.18	53.6
West:	Harland	Street										
10	L2	247	0.0	0.176	5.7	LOS A	8.0	5.5	0.12	0.55	0.12	53.2
12	R2	17	0.0	0.176	7.3	LOS A	0.8	5.5	0.12	0.55	0.12	52.7
Appro	ach	264	0.0	0.176	5.8	LOS A	0.8	5.5	0.12	0.55	0.12	53.2
All Vel	hicles	647	1.5	0.187	4.9	NA	1.0	7.1	0.14	0.48	0.14	53.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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∇ Site: 4 [Scenario1: Victoria - Harland PM Peak]

2019 PM Peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate		Average Speed km/h
South	: Victoria	a Street										
1	L2	29	0.0	0.036	5.5	LOS A	0.0	0.0	0.00	0.25	0.00	56.2
2	T1	40	0.0	0.036	0.0	LOSA	0.0	0.0	0.00	0.25	0.00	57.8
Appro	ach	69	0.0	0.036	2.4	NA	0.0	0.0	0.00	0.25	0.00	57.1
North:	Victoria	Street										
8	T1	39	0.0	0.183	0.2	LOS A	1.0	6.8	0.19	0.49	0.19	55.1
9	R2	272	1.9	0.183	5.7	LOSA	1.0	6.8	0.19	0.49	0.19	53.1
Appro	ach	311	1.7	0.183	5.0	NA	1.0	6.8	0.19	0.49	0.19	53.4
West:	Harland	Street										
10	L2	113	0.0	0.088	5.7	LOS A	0.4	2.5	0.10	0.56	0.10	53.3
12	R2	16	0.0	0.088	7.0	LOSA	0.4	2.5	0.10	0.56	0.10	52.8
Appro	ach	128	0.0	0.088	5.8	LOS A	0.4	2.5	0.10	0.56	0.10	53.3
All Ve	hicles	508	1.0	0.183	4.9	NA	1.0	6.8	0.14	0.48	0.14	53.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 101 [Scenario 1: Old Canterbury Rd-Prospect Rd - AM peak]

Scenario 1: Old Canterbury Rd-Prospect Rd - AM peak

Site Category: (None) Giveway / Yield (Two-Way)

Move	ement P	erformanc	e - Veh	icles								
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	East: Arli	ngton St										
21	L2	32	3.3	0.028	6.2	LOS A	0.1	0.7	0.26	0.56	0.26	51.7
Appro	ach	32	3.3	0.028	6.2	LOSA	0.1	0.7	0.26	0.56	0.26	51.7
North	East: Old	Canterbury	Road									
24	L2	1	0.0	0.105	5.5	LOSA	0.0	0.0	0.00	0.00	0.00	57.3
25	T1	453	5.1	0.525	3.1	LOS A	1.6	11.4	0.19	0.04	0.29	55.3
26b	R3	24	8.9	0.525	21.4	LOS C	1.6	11.4	0.33	0.07	0.51	49.7
Appro	ach	477	5.3	0.525	4.0	NA	1.6	11.4	0.19	0.04	0.30	55.0
North:	Prospec	t Road										
7b	L3	52	2.0	2.705	1621.2	LOS F	55.4	413.2	1.00	2.43	6.19	1.5
9a	R1	60	12.3	2.705	1706.0	LOS F	55.4	413.2	1.00	2.43	6.19	2.0
Appro	ach	112	7.5	2.705	1666.8	LOS F	55.4	413.2	1.00	2.43	6.19	1.8
South	West: Ol	d Canterbur	y Road									
30a	L1	119	14.2	0.092	5.5	LOS A	0.0	0.0	0.00	0.43	0.00	53.9
31	T1	925	3.2	0.461	0.1	LOSA	0.0	0.0	0.00	0.02	0.00	59.6
Appro	ach	1044	4.4	0.461	0.7	NA	0.0	0.0	0.00	0.07	0.00	58.7
All Ve	hicles	1665	4.9	2.705	113.5	NA	55.4	413.2	0.13	0.23	0.51	17.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 101 [Scenario 1: Old Canterbury Rd-Prospect Rd - PM peak]

Scenario 1: Old Canterbury Rd-Prospect Rd - PM peak

Site Category: (None) Giveway / Yield (Two-Way)

Move	ement P	erformanc	e - Veh	icles								
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	East: Arli	ngton St										
21	L2	26	4.0	0.026	6.7	LOS A	0.1	0.7	0.33	0.58	0.33	51.4
Appro	ach	26	4.0	0.026	6.7	LOSA	0.1	0.7	0.33	0.58	0.33	51.4
North	East: Old	Canterbury	Road									
24	L2	4	0.0	0.136	5.5	LOS A	0.0	0.0	0.00	0.01	0.00	57.2
25	T1	798	3.6	0.679	0.4	LOS A	0.6	4.0	0.04	0.01	0.08	59.2
26b	R3	13	25.0	0.679	13.0	LOS B	0.6	4.0	0.06	0.02	0.11	54.6
Appro	ach	815	3.9	0.679	0.7	NA	0.6	4.0	0.04	0.01	0.08	59.1
North:	Prospec	t Road										
7b	L3	30	0.0	1.183	275.1	LOS F	18.1	130.6	1.00	1.48	3.31	6.6
9a	R1	60	5.3	1.183	393.3	LOS F	18.1	130.6	1.00	1.48	3.31	8.5
Appro	ach	90	3.5	1.183	353.6	LOS F	18.1	130.6	1.00	1.48	3.31	7.9
South	West: Ol	d Canterbur	y Road									
30a	L1	64	9.8	0.051	5.4	LOS A	0.0	0.0	0.00	0.41	0.00	54.2
31	T1	519	2.0	0.255	0.0	LOSA	0.0	0.0	0.00	0.02	0.00	59.7
Appro	ach	583	2.9	0.255	0.6	NA	0.0	0.0	0.00	0.07	0.00	58.8
All Ve	hicles	1515	3.5	1.183	21.8	NA	18.1	130.6	0.09	0.13	0.24	40.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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Project: \\TTMFPS01\Synergy\GC\Synergy\Projects\20GCT\20GCT\20GCT0204 Trinity Grammar School - Sidra Analysis\6 - Analysis\2024 - Old Cantebury Rd\19SYT0056sid01 rev03 - Old Canterbury Rd [2025].sip8

V Site: 101 [Scenario 1: Old Canterbury Rd-Hurlstone Ave - AM peak]

Scenario 1: Old Canterbury Rd-Hurlstone Ave - AM peak

Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformanc	e - Veh	icles								
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
North	East: Old	l Canterbury	Road									
25	T1	458	5.7	1.140	11.4	LOS B	17.0	120.6	0.06	0.14	0.50	37.6
26a	R1	129	0.8	1.140	182.2	LOS F	17.0	120.6	1.00	2.22	7.76	4.2
Appro	ach	587	4.7	1.140	49.0	NA	17.0	120.6	0.27	0.60	2.10	16.2
West:	Hurlston	e Avenue										
10a	L1	227	1.9	1.130	167.8	LOS F	26.0	187.3	1.00	2.83	8.08	4.4
12b	R3	20	21.0	1.130	215.4	LOS F	26.0	187.3	1.00	2.83	8.08	7.1
Appro	ach	247	3.4	1.130	171.6	NA	26.0	187.3	1.00	2.83	8.08	4.6
South'	West: Ol	d Canterbur	y Road									
30b	L3	12	0.0	0.087	6.5	LOS A	0.0	0.0	0.00	0.05	0.00	56.0
31	T1	985	3.1	0.435	0.0	LOSA	0.0	0.0	0.00	0.01	0.00	59.7
Appro	ach	997	3.1	0.435	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.6
All Vel	hicles	1831	3.6	1.140	39.0	NA	26.0	187.3	0.22	0.58	1.76	19.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 101 [Scenario 1: Old Canterbury Rd-Hurlstone Ave - PM peak]

Scenario 1: Old Canterbury Rd-Hurlstone Ave - PM peak

Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformanc	e - Veh	icles								
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
North	East: Old	d Canterbury	Road									
25	T1	826	1.9	0.868	3.9	LOS A	4.6	32.8	0.16	0.07	0.55	48.8
26a	R1	72	0.0	0.868	14.7	LOS B	4.6	32.8	0.27	0.11	0.92	36.5
Appro	ach	898	1.8	0.868	4.8	NA	4.6	32.8	0.17	0.07	0.58	47.9
West:	Hurlston	ne Avenue										
10a	L1	114	2.8	0.260	8.6	LOSA	1.0	7.0	0.60	0.84	0.65	30.3
12b	R3	9	22.2	0.260	41.5	LOS E	1.0	7.0	0.60	0.84	0.65	35.5
Appro	ach	124	4.2	0.260	11.1	NA	1.0	7.0	0.60	0.84	0.65	30.9
South	West: O	ld Canterbur	y Road									
30b	L3	6	0.0	0.043	6.5	LOSA	0.0	0.0	0.00	0.05	0.00	56.0
31	T1	495	1.9	0.217	0.0	LOSA	0.0	0.0	0.00	0.01	0.00	59.7
Appro	ach	501	1.9	0.217	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.7
All Vel	nicles	1523	2.0	0.868	3.7	NA	4.6	32.8	0.15	0.11	0.39	49.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 101 [Scenario 1: Old Canterbury Rd-Henson St - AM peak]

Scenario 1: Old Canterbury Rd-Henson St - AM peak

Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformance	e - Veh	icles								
Mov ID	Turn	Demand l Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
North	East: Old	Canterbury	Road									
25	T1	555	4.7	1.212	39.8	LOS E	26.4	188.9	0.17	0.33	1.94	16.0
26b	R3	104	1.0	1.212	236.8	LOS F	26.4	188.9	1.00	1.92	11.20	7.2
Appro	ach	659	4.2	1.212	70.9	NA	26.4	188.9	0.30	0.58	3.40	11.8
North:	: Henson	Street										
7b	L3	205	2.6	0.681	28.0	LOS D	6.8	48.9	0.64	1.12	1.63	27.5
9a	R1	16	0.0	0.681	160.5	LOS F	6.8	48.9	0.64	1.12	1.63	23.6
Appro	ach	221	2.4	0.681	37.5	LOS E	6.8	48.9	0.64	1.12	1.63	27.3
South	West: Ol	d Canterbury	/ Road									
30a	L1	54	3.9	0.142	4.7	LOS A	0.0	0.0	0.00	0.12	0.00	53.1
31	T1	1121	3.1	0.473	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	59.1
Appro	ach	1175	3.1	0.473	0.2	NA	0.0	0.0	0.00	0.03	0.00	58.6
All Ve	hicles	2055	3.4	1.212	26.9	NA	26.4	188.9	0.17	0.32	1.27	23.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 101 [Scenario 1: Old Canterbury Rd-Henson St - PM peak]

Scenario 1: Old Canterbury Rd-Henson St - PM peak

Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformance	e - Veh	icles								
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
North	East: Old	Canterbury	Road									
25	T1	851	3.7	0.901	4.4	LOS A	5.5	39.2	0.17	0.10	0.74	44.3
26b	R3	87	0.0	0.901	17.1	LOS C	5.5	39.2	0.29	0.17	1.24	44.8
Appro	ach	938	3.4	0.901	5.6	NA	5.5	39.2	0.18	0.11	0.79	44.4
North:	Henson	Street										
7b	L3	112	0.0	0.520	16.6	LOS C	3.1	21.7	0.38	0.72	0.67	31.8
9a	R1	39	0.0	0.520	60.5	LOS F	3.1	21.7	0.38	0.72	0.67	27.2
Appro	ach	151	0.0	0.520	28.0	LOS D	3.1	21.7	0.38	0.72	0.67	30.6
South	West: Ol	d Canterbury	/ Road									
30a	L1	51	0.0	0.071	4.7	LOS A	0.0	0.0	0.00	0.22	0.00	52.0
31	T1	541	2.5	0.237	0.0	LOSA	0.0	0.0	0.00	0.03	0.00	58.8
Appro	ach	592	2.3	0.237	0.4	NA	0.0	0.0	0.00	0.05	0.00	57.7
All Ve	hicles	1680	2.7	0.901	5.8	NA	5.5	39.2	0.14	0.14	0.50	44.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 101 [Scenario 1: Old Canterbury Rd-James St - AM peak]

Scenario 1: Old Canterbury Rd-James St - AM peak

Site Category: (None) Giveway / Yield (Two-Way)

Move	ment F	Performanc	e - Veh	icles								
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay	Level of Service	95% Back Vehicles veh	Distance	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Speed
North	East: Ol	d Canterbury		V/C	sec	_	ven	m_	_	_	_	km/h
25	T1	519	4.5	0.424	1.6	LOS A	1.2	8.5	0.16	0.03	0.23	51.1
26a	R1	29	0.0	0.424	11.5	LOS B	1.2	8.5	0.23	0.05	0.33	41.0
Appro	ach	548	4.2	0.424	2.1	NA	1.2	8.5	0.17	0.03	0.23	50.6
West:	James :	Street										
12b	R3	4	0.0	0.048	44.9	LOS E	0.1	1.0	0.92	0.97	0.92	16.5
Appro	ach	4	0.0	0.048	44.9	LOS E	0.1	1.0	0.92	0.97	0.92	16.5
South	West: O	ld Canterbur	y Road									
30b	L3	5	40.0	0.110	6.9	LOS A	0.0	0.0	0.00	0.02	0.00	49.6
31	T1	905	3.5	0.368	0.0	LOSA	0.0	0.0	0.00	0.00	0.00	59.8
Appro	ach	911	3.7	0.368	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.7
All Vel	nicles	1463	3.9	0.424	1.0	NA	1.2	8.5	0.06	0.02	0.09	55.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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Project: \\TTMFPS01\Synergy\GC\Synergy\Projects\20GCT\20GCT\20GCT0204 Trinity Grammar School - Sidra Analysis\6 - Analysis\2024 - Old Cantebury Rd\19SYT0056sid01 rev03 - Old Canterbury Rd [2025].sip8

V Site: 101 [Scenario 1: Old Canterbury Rd-James St - PM peak]

Scenario 1: Old Canterbury Rd-James St - PM peak

Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformance	e - Veh	icles								
Mov	Turn	Demand I		Deg.	Average	Level of	95% Back	of Queue	Prop.	Effective	Aver. No.	
ID		Total	HV	Satn	Delay	Service	Vehicles	Distance	Queued	Stop Rate	Cycles	
N. (1.5		veh/h	%	v/c	sec		veh	m				km/h
North	=ast: Old	d Canterbury	Road									
25	T1	880	2.0	0.659	0.2	LOS A	0.3	2.2	0.02	0.01	0.04	58.7
26a	R1	9	0.0	0.659	6.9	LOSA	0.3	2.2	0.03	0.01	0.06	50.8
Appro	ach	889	2.0	0.659	0.3	NA	0.3	2.2	0.02	0.01	0.04	58.6
West:	James S	Street										
12b	R3	1	0.0	0.011	41.2	LOS E	0.0	0.2	0.91	0.97	0.91	17.5
Appro	ach	1	0.0	0.011	41.2	LOS E	0.0	0.2	0.91	0.97	0.91	17.5
South	West: O	ld Canterbury	/ Road									
30b	L3	2	0.0	0.069	6.5	LOS A	0.0	0.0	0.00	0.01	0.00	55.8
31	T1	575	1.5	0.230	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Appro	ach	577	1.5	0.230	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.8
All Vel	nicles	1467	1.8	0.659	0.2	NA	0.3	2.2	0.01	0.00	0.03	58.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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∇ Site: 1 [Scenario1: Prospect - Seaview West AM Peak]

2019 AM Peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformance	e - Veh	icles								
Mov ID	Turn	Demand l Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Prospe	ct Road										
1	L2	107	4.9	0.135	5.6	LOS A	0.0	0.0	0.00	0.26	0.00	56.1
2	T1	140	6.8	0.135	0.0	LOS A	0.0	0.0	0.00	0.26	0.00	57.7
Appro	ach	247	6.0	0.135	2.4	NA	0.0	0.0	0.00	0.26	0.00	57.0
North:	Prospec	ct Road										
8	T1	275	3.1	0.202	0.4	LOS A	0.6	4.5	0.20	0.14	0.20	58.0
9	R2	80	1.3	0.202	6.5	LOSA	0.6	4.5	0.20	0.14	0.20	55.8
Appro	ach	355	2.7	0.202	1.7	NA	0.6	4.5	0.20	0.14	0.20	57.5
West:	Seaview	/ Street										
10	L2	72	0.0	0.180	6.0	LOS A	0.7	4.7	0.32	0.65	0.32	52.2
12	R2	96	3.3	0.180	8.5	LOS A	0.7	4.7	0.32	0.65	0.32	51.6
Appro	ach	167	1.9	0.180	7.4	LOSA	0.7	4.7	0.32	0.65	0.32	51.9
All Vel	hicles	769	3.6	0.202	3.2	NA	0.7	4.7	0.16	0.29	0.16	56.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 1 [Scenario1: Prospect - Seaview West PM Peak]

2019 PM Peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformance	e - Veh	icles								
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Prospe	ct Road										
1	L2	73	8.7	0.086	5.6	LOS A	0.0	0.0	0.00	0.27	0.00	56.1
2	T1	86	2.4	0.086	0.0	LOSA	0.0	0.0	0.00	0.27	0.00	57.7
Appro	ach	159	5.3	0.086	2.6	NA	0.0	0.0	0.00	0.27	0.00	56.9
North:	Prospec	ct Road										
8	T1	134	3.1	0.117	0.3	LOS A	0.4	3.1	0.20	0.21	0.20	57.4
9	R2	72	0.0	0.117	6.0	LOSA	0.4	3.1	0.20	0.21	0.20	55.3
Appro	ach	205	2.1	0.117	2.3	NA	0.4	3.1	0.20	0.21	0.20	56.6
West:	Seaview	/ Street										
10	L2	55	0.0	0.102	5.8	LOS A	0.4	2.7	0.21	0.59	0.21	53.0
12	R2	61	5.2	0.102	6.9	LOS A	0.4	2.7	0.21	0.59	0.21	52.4
Appro	ach	116	2.7	0.102	6.4	LOSA	0.4	2.7	0.21	0.59	0.21	52.6
All Vel	hicles	480	3.3	0.117	3.4	NA	0.4	3.1	0.14	0.32	0.14	55.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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∇ Site: 2 [Scenario1: Prospect - Seaview East AM Peak]

2019 AM Peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformance	- Veh	icles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Prospe	ct Road										
2	T1	155	5.4	0.120	0.5	LOS A	0.4	2.8	0.23	0.15	0.23	57.8
3	R2	47	2.2	0.120	6.8	LOS A	0.4	2.8	0.23	0.15	0.23	55.7
Appro	ach	202	4.7	0.120	2.0	NA	0.4	2.8	0.23	0.15	0.23	57.3
East:	Seaview	Street										
4	L2	54	0.0	0.071	6.6	LOS A	0.3	1.8	0.38	0.63	0.38	52.5
6	R2	21	0.0	0.071	7.9	LOS A	0.3	1.8	0.38	0.63	0.38	52.0
Appro	ach	75	0.0	0.071	6.9	LOSA	0.3	1.8	0.38	0.63	0.38	52.3
North:	Prospec	t Road										
7	L2	43	0.0	0.181	5.6	LOS A	0.0	0.0	0.00	0.07	0.00	57.7
8	T1	301	3.1	0.181	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	59.3
Appro	ach	344	2.8	0.181	0.7	NA	0.0	0.0	0.00	0.07	0.00	59.1
All Vel	hicles	621	3.1	0.181	1.9	NA	0.4	2.8	0.12	0.17	0.12	57.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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∇ Site: 2 [Scenario1: Prospect - Seaview East PM Peak]

2019 PM Peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformance	e - Vehi	icles								
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South:	: Prospec	ct Road										
2	T1	108	1.9	0.078	0.2	LOS A	0.2	1.5	0.15	0.14	0.15	58.2
3	R2	33	0.0	0.078	6.0	LOSA	0.2	1.5	0.15	0.14	0.15	56.0
Appro	ach	141	1.5	0.078	1.6	NA	0.2	1.5	0.15	0.14	0.15	57.7
East: \$	Seaview	Street										
4	L2	38	0.0	0.040	6.0	LOS A	0.1	1.0	0.26	0.57	0.26	52.8
6	R2	13	0.0	0.040	6.6	LOS A	0.1	1.0	0.26	0.57	0.26	52.3
Appro	ach	51	0.0	0.040	6.2	LOSA	0.1	1.0	0.26	0.57	0.26	52.7
North:	Prospec	t Road										
7	L2	15	0.0	0.095	5.5	LOS A	0.0	0.0	0.00	0.05	0.00	57.9
8	T1	167	2.5	0.095	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	59.5
Appro	ach	182	2.3	0.095	0.5	NA	0.0	0.0	0.00	0.05	0.00	59.4
All Vel	hicles	374	1.7	0.095	1.6	NA	0.2	1.5	0.09	0.15	0.09	57.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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🥶 Site: 3 [Scenario1: Victoria - Seaview AM Peak]

2019 AM Peak Site Category: (None) Stop (Two-Way)

Move	ement P	erformanc	e - Veh	icles								
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Victoria	Street										
1	L2	24	4.3	0.159	6.7	LOS A	0.5	3.8	0.24	0.17	0.24	55.8
2	T1	195	0.5	0.159	0.5	LOS A	0.5	3.8	0.24	0.17	0.24	57.5
3	R2	59	0.0	0.159	6.7	LOSA	0.5	3.8	0.24	0.17	0.24	55.4
Appro	ach	278	8.0	0.159	2.3	NA	0.5	3.8	0.24	0.17	0.24	56.9
East:	Seaview	Street										
4	L2	94	2.2	0.205	9.5	LOS A	8.0	5.7	0.48	0.94	0.48	50.4
5	T1	37	0.0	0.205	12.1	LOS A	0.8	5.7	0.48	0.94	0.48	50.2
6	R2	22	9.5	0.205	15.0	LOS B	0.8	5.7	0.48	0.94	0.48	49.9
Appro	ach	153	2.8	0.205	10.9	LOS A	8.0	5.7	0.48	0.94	0.48	50.3
North	: Victoria	Street										
7	L2	27	11.5	0.176	6.0	LOS A	0.1	0.9	0.04	0.06	0.04	57.4
8	T1	292	1.8	0.176	0.1	LOS A	0.1	0.9	0.04	0.06	0.04	59.3
9	R2	8	37.5	0.176	7.1	LOSA	0.1	0.9	0.04	0.06	0.04	56.1
Appro	ach	327	3.5	0.176	0.7	NA	0.1	0.9	0.04	0.06	0.04	59.1
West:	Seaview	Street										
10	L2	24	4.3	0.260	9.3	LOS A	1.0	7.3	0.53	1.01	0.58	49.2
11	T1	78	1.4	0.260	12.6	LOSA	1.0	7.3	0.53	1.01	0.58	49.0
12	R2	46	0.0	0.260	14.6	LOS B	1.0	7.3	0.53	1.01	0.58	48.9
Appro	ach	148	1.4	0.260	12.7	LOSA	1.0	7.3	0.53	1.01	0.58	49.0
All Ve	hicles	906	2.2	0.260	4.9	NA	1.0	7.3	0.25	0.40	0.26	55.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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🥶 Site: 3 [Scenario1: Victoria - Seaview PM Peak]

2019 PM Peak Site Category: (None) Stop (Two-Way)

Move	ement P	erformanc	e - Veh	icles								
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	ı: Victoria	Street										
1	L2	19	0.0	0.145	6.3	LOSA	0.5	3.6	0.22	0.18	0.22	56.0
2	T1	175	0.6	0.145	0.4	LOS A	0.5	3.6	0.22	0.18	0.22	57.5
3	R2	62	1.7	0.145	6.4	LOSA	0.5	3.6	0.22	0.18	0.22	55.3
Appro	oach	256	0.8	0.145	2.3	NA	0.5	3.6	0.22	0.18	0.22	56.8
East:	Seaview	Street										
4	L2	80	1.3	0.163	9.0	LOSA	0.6	4.6	0.40	0.92	0.40	50.8
5	T1	43	0.0	0.163	11.0	LOS A	0.6	4.6	0.40	0.92	0.40	50.6
6	R2	12	45.5	0.163	15.8	LOS B	0.6	4.6	0.40	0.92	0.40	50.0
Appro	oach	135	4.7	0.163	10.2	LOSA	0.6	4.6	0.40	0.92	0.40	50.7
North	: Victoria	Street										
7	L2	27	7.7	0.139	5.9	LOSA	0.2	1.2	0.07	0.10	0.07	57.1
8	T1	214	2.5	0.139	0.1	LOS A	0.2	1.2	0.07	0.10	0.07	58.8
9	R2	18	0.0	0.139	6.1	LOSA	0.2	1.2	0.07	0.10	0.07	56.6
Appro	oach	259	2.8	0.139	1.1	NA	0.2	1.2	0.07	0.10	0.07	58.5
West	: Seaview	Street										
10	L2	6	0.0	0.116	8.7	LOSA	0.4	2.8	0.49	0.98	0.49	50.1
11	T1	34	0.0	0.116	10.9	LOSA	0.4	2.8	0.49	0.98	0.49	49.8
12	R2	31	0.0	0.116	12.4	LOSA	0.4	2.8	0.49	0.98	0.49	49.6
Appro	oach	71	0.0	0.116	11.4	LOSA	0.4	2.8	0.49	0.98	0.49	49.8
All Ve	hicles	720	2.2	0.163	4.2	NA	0.6	4.6	0.22	0.37	0.22	55.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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∇ Site: 4 [Scenario1: Victoria - Harland AM Peak]

2019 AM Peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformance	e - Veh	icles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Victoria	Street										
1	L2	19	0.0	0.034	5.5	LOS A	0.0	0.0	0.00	0.17	0.00	56.9
2	T1	46	2.3	0.034	0.0	LOS A	0.0	0.0	0.00	0.17	0.00	58.4
Appro	ach	65	1.6	0.034	1.6	NA	0.0	0.0	0.00	0.17	0.00	58.0
North:	Victoria	Street										
8	T1	51	2.1	0.193	0.2	LOS A	1.0	7.3	0.18	0.48	0.18	55.2
9	R2	278	2.7	0.193	5.7	LOS A	1.0	7.3	0.18	0.48	0.18	53.2
Appro	ach	328	2.6	0.193	4.9	NA	1.0	7.3	0.18	0.48	0.18	53.5
West:	Harland	Street										
10	L2	257	0.0	0.182	5.7	LOSA	0.8	5.7	0.12	0.55	0.12	53.2
12	R2	17	0.0	0.182	7.4	LOS A	0.8	5.7	0.12	0.55	0.12	52.7
Appro	ach	274	0.0	0.182	5.8	LOSA	8.0	5.7	0.12	0.55	0.12	53.2
All Vel	hicles	667	1.4	0.193	4.9	NA	1.0	7.3	0.14	0.48	0.14	53.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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∇ Site: 4 [Scenario1: Victoria - Harland PM Peak]

2019 PM Peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformance	e - Veh	icles								
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South:	: Victoria	Street										
1	L2	29	0.0	0.036	5.5	LOSA	0.0	0.0	0.00	0.25	0.00	56.2
2	T1	40	0.0	0.036	0.0	LOSA	0.0	0.0	0.00	0.25	0.00	57.8
Appro	ach	69	0.0	0.036	2.4	NA	0.0	0.0	0.00	0.25	0.00	57.1
North:	Victoria	Street										
8	T1	39	0.0	0.188	0.2	LOSA	1.0	7.0	0.19	0.50	0.19	55.0
9	R2	281	1.9	0.188	5.7	LOS A	1.0	7.0	0.19	0.50	0.19	53.1
Appro	ach	320	1.6	0.188	5.0	NA	1.0	7.0	0.19	0.50	0.19	53.3
West:	Harland	Street										
10	L2	123	0.0	0.095	5.7	LOSA	0.4	2.7	0.10	0.56	0.10	53.3
12	R2	16	0.0	0.095	7.1	LOS A	0.4	2.7	0.10	0.56	0.10	52.8
Appro	ach	139	0.0	0.095	5.8	LOSA	0.4	2.7	0.10	0.56	0.10	53.3
All Vel	nicles	528	1.0	0.188	4.9	NA	1.0	7.0	0.14	0.48	0.14	53.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 101 [Scenario 1: Old Canterbury Rd-Prospect Rd - AM peak]

Scenario 1: Old Canterbury Rd-Prospect Rd - AM peak

Site Category: (None) Giveway / Yield (Two-Way)

Move	ement P	erformanc	e - Veh	icles								
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	East: Arli	ngton St										
21	L2	32	3.3	0.028	6.2	LOS A	0.1	0.7	0.26	0.56	0.26	51.7
Appro	ach	32	3.3	0.028	6.2	LOSA	0.1	0.7	0.26	0.56	0.26	51.7
North	East: Old	Canterbury	Road									
24	L2	1	0.0	0.105	5.5	LOS A	0.0	0.0	0.00	0.00	0.00	57.3
25	T1	453	5.1	0.527	3.1	LOS A	1.6	11.6	0.19	0.04	0.29	55.2
26b	R3	24	8.7	0.527	21.4	LOS C	1.6	11.6	0.34	0.07	0.52	49.5
Appro	ach	478	5.3	0.527	4.1	NA	1.6	11.6	0.20	0.04	0.30	54.9
North:	: Prospec	t Road										
7b	L3	52	2.0	2.741	1653.2	LOS F	56.5	420.9	1.00	2.43	6.19	1.5
9a	R1	61	12.1	2.741	1737.3	LOS F	56.5	420.9	1.00	2.43	6.19	2.0
Appro	ach	113	7.4	2.741	1698.5	LOS F	56.5	420.9	1.00	2.43	6.19	1.8
South	West: Ol	d Canterbur	y Road									
30a	L1	120	14.0	0.092	5.5	LOS A	0.0	0.0	0.00	0.44	0.00	53.8
31	T1	925	3.2	0.461	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.6
Appro	ach	1045	4.4	0.461	0.7	NA	0.0	0.0	0.00	0.07	0.00	58.7
All Ve	hicles	1668	4.9	2.741	116.9	NA	56.5	420.9	0.13	0.23	0.51	16.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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Organisation: TTM CONSULTING PTY LTD | Processed: Friday, 21 August 2020 3:37:18 PM
Project: \\TTMFPS01\Synergy\GC\Synergy\Projects\20GCT\20GCT\20GCT0204 Trinity Grammar School - Sidra Analysis\6 - Analysis\2024 - Old Cantebury Rd\19SYT0056sid01 rev03 - Old Canterbury Rd [2026].sip8

V Site: 101 [Scenario 1: Old Canterbury Rd-Prospect Rd - PM peak]

Scenario 1: Old Canterbury Rd-Prospect Rd - PM peak

Site Category: (None) Giveway / Yield (Two-Way)

Move	ement P	erformanc	e - Veh	icles								
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	East: Arli	ngton St										
21	L2	26	4.0	0.026	6.7	LOS A	0.1	0.7	0.33	0.58	0.33	51.4
Appro	ach	26	4.0	0.026	6.7	LOSA	0.1	0.7	0.33	0.58	0.33	51.4
North	East: Old	Canterbury	Road									
24	L2	4	0.0	0.136	5.5	LOS A	0.0	0.0	0.00	0.01	0.00	57.2
25	T1	798	3.6	0.680	0.4	LOS A	0.6	4.0	0.04	0.01	0.08	59.2
26b	R3	13	25.0	0.680	13.0	LOS B	0.6	4.0	0.06	0.02	0.11	54.6
Appro	ach	815	3.9	0.680	0.7	NA	0.6	4.0	0.04	0.01	0.08	59.1
North:	: Prospec	t Road										
7b	L3	30	0.0	1.208	292.7	LOS F	19.3	138.8	1.00	1.50	3.40	6.3
9a	R1	61	5.2	1.208	409.4	LOS F	19.3	138.8	1.00	1.50	3.40	8.2
Appro	ach	92	3.4	1.208	370.7	LOS F	19.3	138.8	1.00	1.50	3.40	7.6
South	West: Ol	d Canterbur	y Road									
30a	L1	66	9.6	0.051	5.4	LOS A	0.0	0.0	0.00	0.42	0.00	54.1
31	T1	519	2.0	0.255	0.0	LOSA	0.0	0.0	0.00	0.02	0.00	59.7
Appro	ach	585	2.9	0.255	0.6	NA	0.0	0.0	0.00	0.07	0.00	58.8
All Ve	hicles	1517	3.5	1.208	23.1	NA	19.3	138.8	0.09	0.13	0.25	39.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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Organisation: TTM CONSULTING PTY LTD | Processed: Friday, 21 August 2020 3:37:18 PM
Project: \\TTMFPS01\Synergy\GC\Synergy\Projects\20GCT\20GCT\20GCT0204 Trinity Grammar School - Sidra Analysis\6 - Analysis\2024 - Old Cantebury Rd\19SYT0056sid01 rev03 - Old Canterbury Rd [2026].sip8

V Site: 101 [Scenario 1: Old Canterbury Rd-Hurlstone Ave - AM peak]

Scenario 1: Old Canterbury Rd-Hurlstone Ave - AM peak

Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformanc	e - Veh	icles								
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
North	East: Old	l Canterbury	Road									
25	T1	458	5.7	1.143	11.1	LOS B	17.2	122.3	0.06	0.14	0.48	38.0
26a	R1	131	0.8	1.143	184.7	LOS F	17.2	122.3	1.00	2.26	7.85	4.2
Appro	ach	588	4.7	1.143	49.6	NA	17.2	122.3	0.27	0.61	2.12	16.0
West:	Hurlston	ne Avenue										
10a	L1	229	1.8	1.136	172.5	LOS F	26.8	192.8	1.00	2.87	8.25	4.3
12b	R3	20	20.7	1.136	219.5	LOS F	26.8	192.8	1.00	2.87	8.25	6.9
Appro	ach	249	3.4	1.136	176.3	NA	26.8	192.8	1.00	2.87	8.25	4.5
South	West: Ol	d Canterbur	y Road									
30b	L3	12	0.0	0.087	6.5	LOS A	0.0	0.0	0.00	0.05	0.00	56.0
31	T1	985	3.1	0.435	0.0	LOSA	0.0	0.0	0.00	0.01	0.00	59.7
Appro	ach	997	3.1	0.435	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.6
All Ve	hicles	1834	3.6	1.143	39.9	NA	26.8	192.8	0.22	0.59	1.80	18.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 101 [Scenario 1: Old Canterbury Rd-Hurlstone Ave - PM peak]

Scenario 1: Old Canterbury Rd-Hurlstone Ave - PM peak

Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformanc	e - Veh	icles								
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
North	East: Old	d Canterbury	Road									
25	T1	826	1.9	0.871	4.0	LOS A	4.8	33.7	0.16	0.07	0.56	48.6
26a	R1	73	0.0	0.871	14.9	LOS B	4.8	33.7	0.28	0.11	0.95	36.2
Appro	ach	899	1.8	0.871	4.9	NA	4.8	33.7	0.17	0.07	0.59	47.7
West:	Hurlston	ne Avenue										
10a	L1	116	2.7	0.262	8.6	LOSA	1.0	7.1	0.60	0.84	0.66	30.4
12b	R3	9	22.2	0.262	41.6	LOS E	1.0	7.1	0.60	0.84	0.66	35.5
Appro	ach	125	4.2	0.262	11.1	NA	1.0	7.1	0.60	0.84	0.66	30.9
South	West: O	ld Canterbur	y Road									
30b	L3	6	0.0	0.043	6.5	LOSA	0.0	0.0	0.00	0.05	0.00	56.0
31	T1	495	1.9	0.217	0.0	LOSA	0.0	0.0	0.00	0.01	0.00	59.7
Appro	ach	501	1.9	0.217	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.7
All Ve	hicles	1526	2.0	0.871	3.8	NA	4.8	33.7	0.15	0.11	0.40	49.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 101 [Scenario 1: Old Canterbury Rd-Henson St - AM peak]

Scenario 1: Old Canterbury Rd-Henson St - AM peak

Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformance	- Vehi	icles								
Mov ID	Turn	Demand l Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	9 1
North	East: Old	Canterbury	Road									
25	T1	555	4.7	1.212	39.8	LOS E	26.4	188.9	0.17	0.33	1.94	16.0
26b	R3	104	1.0	1.212	236.8	LOS F	26.4	188.9	1.00	1.92	11.20	7.2
Appro	ach	659	4.2	1.212	70.9	NA	26.4	188.9	0.30	0.58	3.40	11.8
North:	Henson	Street										
7b	L3	205	2.6	0.681	28.0	LOS D	6.8	48.9	0.64	1.12	1.63	27.5
9a	R1	16	0.0	0.681	160.5	LOS F	6.8	48.9	0.64	1.12	1.63	23.6
Appro	ach	221	2.4	0.681	37.5	LOS E	6.8	48.9	0.64	1.12	1.63	27.3
South	West: Ol	d Canterbury	/ Road									
30a	L1	54	3.9	0.142	4.7	LOS A	0.0	0.0	0.00	0.12	0.00	53.1
31	T1	1121	3.1	0.473	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	59.1
Appro	ach	1175	3.1	0.473	0.2	NA	0.0	0.0	0.00	0.03	0.00	58.6
All Ve	hicles	2055	3.4	1.212	26.9	NA	26.4	188.9	0.17	0.32	1.27	23.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 101 [Scenario 1: Old Canterbury Rd-Henson St - PM peak]

Scenario 1: Old Canterbury Rd-Henson St - PM peak

Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformance	e - Veh	icles								
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	9
North	East: Old	I Canterbury	Road									
25	T1	851	3.7	0.901	4.4	LOS A	5.5	39.2	0.17	0.10	0.74	44.3
26b	R3	87	0.0	0.901	17.1	LOS C	5.5	39.2	0.29	0.17	1.24	44.8
Appro	ach	938	3.4	0.901	5.6	NA	5.5	39.2	0.18	0.11	0.79	44.4
North:	Henson	Street										
7b	L3	112	0.0	0.520	16.6	LOS C	3.1	21.7	0.38	0.72	0.67	31.8
9a	R1	39	0.0	0.520	60.5	LOS F	3.1	21.7	0.38	0.72	0.67	27.2
Appro	ach	151	0.0	0.520	28.0	LOS D	3.1	21.7	0.38	0.72	0.67	30.6
South	Nest: Ol	d Canterbury	/ Road									
30a	L1	51	0.0	0.071	4.7	LOS A	0.0	0.0	0.00	0.22	0.00	52.0
31	T1	541	2.5	0.237	0.0	LOSA	0.0	0.0	0.00	0.03	0.00	58.8
Appro	ach	592	2.3	0.237	0.4	NA	0.0	0.0	0.00	0.05	0.00	57.7
All Vel	nicles	1680	2.7	0.901	5.8	NA	5.5	39.2	0.14	0.14	0.50	44.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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∇ Site: 101 [Scenario 1: Old Canterbury Rd-James St - AM peak]

Scenario 1: Old Canterbury Rd-James St - AM peak

Site Category: (None) Giveway / Yield (Two-Way)

Move	ment F	Performanc	e - Veh	icles								
Mov	Turn	Demand		Deg.	Average	Level of	95% Back		Prop.	Effective	Aver. No.	
ID		Total veh/h	HV %	Satn v/c	Delay sec	Service	Vehicles veh	Distance	Queued	Stop Rate	Cycles	Speed km/h
North	East: Ol	d Canterbury		V/C	SEC	_	ven	m m	_		_	KIII/II
25	T1	519	4.5	0.424	1.6	LOSA	1.2	8.5	0.16	0.03	0.23	51.1
26a	R1	29	0.0	0.424	11.5	LOS B	1.2	8.5	0.23	0.05	0.33	41.0
Appro	ach	548	4.2	0.424	2.1	NA	1.2	8.5	0.17	0.03	0.23	50.6
West:	James	Street										
12b	R3	4	0.0	0.048	44.9	LOS E	0.1	1.0	0.92	0.97	0.92	16.5
Appro	ach	4	0.0	0.048	44.9	LOS E	0.1	1.0	0.92	0.97	0.92	16.5
South	West: O	ld Canterbur	y Road									
30b	L3	5	40.0	0.110	6.9	LOS A	0.0	0.0	0.00	0.02	0.00	49.6
31	T1	905	3.5	0.368	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Appro	ach	911	3.7	0.368	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.7
All Vel	hicles	1463	3.9	0.424	1.0	NA	1.2	8.5	0.06	0.02	0.09	55.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 101 [Scenario 1: Old Canterbury Rd-James St - PM peak]

Scenario 1: Old Canterbury Rd-James St - PM peak

Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformance	e - Veh	icles								
Mov	Turn	Demand I		Deg.	Average	Level of	95% Back	of Queue	Prop.	Effective	Aver. No.	
ID		Total	HV	Satn	Delay	Service	Vehicles	Distance	Queued	Stop Rate	Cycles	
N. (1.5		veh/h	%	v/c	sec		veh	m				km/h
North	=ast: Old	d Canterbury	Road									
25	T1	880	2.0	0.659	0.2	LOS A	0.3	2.2	0.02	0.01	0.04	58.7
26a	R1	9	0.0	0.659	6.9	LOSA	0.3	2.2	0.03	0.01	0.06	50.8
Appro	ach	889	2.0	0.659	0.3	NA	0.3	2.2	0.02	0.01	0.04	58.6
West:	James S	Street										
12b	R3	1	0.0	0.011	41.2	LOS E	0.0	0.2	0.91	0.97	0.91	17.5
Appro	ach	1	0.0	0.011	41.2	LOS E	0.0	0.2	0.91	0.97	0.91	17.5
South	West: O	ld Canterbury	/ Road									
30b	L3	2	0.0	0.069	6.5	LOS A	0.0	0.0	0.00	0.01	0.00	55.8
31	T1	575	1.5	0.230	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Appro	ach	577	1.5	0.230	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.8
All Vel	nicles	1467	1.8	0.659	0.2	NA	0.3	2.2	0.01	0.00	0.03	58.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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∇ Site: 1 [Scenario1: Prospect - Seaview West AM Peak]

2019 AM Peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformance	e - Vehi	icles								
Mov ID	Turn	Demand l Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Prospe	ct Road										
1	L2	105	5.0	0.129	5.6	LOS A	0.0	0.0	0.00	0.26	0.00	56.0
2	T1	131	7.3	0.129	0.0	LOS A	0.0	0.0	0.00	0.26	0.00	57.6
Appro	ach	236	6.3	0.129	2.5	NA	0.0	0.0	0.00	0.26	0.00	56.9
North:	Prospec	t Road										
8	T1	275	3.1	0.203	0.4	LOS A	0.6	4.6	0.20	0.14	0.20	58.0
9	R2	83	1.3	0.203	6.4	LOS A	0.6	4.6	0.20	0.14	0.20	55.8
Appro	ach	358	2.6	0.203	1.8	NA	0.6	4.6	0.20	0.14	0.20	57.5
West:	Seaview	Street										
10	L2	75	0.0	0.189	6.0	LOS A	0.7	5.0	0.31	0.65	0.31	52.2
12	R2	102	3.1	0.189	8.4	LOSA	0.7	5.0	0.31	0.65	0.31	51.6
Appro	ach	177	1.8	0.189	7.4	LOSA	0.7	5.0	0.31	0.65	0.31	51.9
All Vel	hicles	771	3.6	0.203	3.3	NA	0.7	5.0	0.16	0.30	0.16	55.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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V Site: 1 [Scenario1: Prospect - Seaview West PM Peak]

2019 PM Peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformance	e - Veh	icles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Prospe	ct Road										
1	L2	76	8.3	0.088	5.6	LOS A	0.0	0.0	0.00	0.28	0.00	56.0
2	T1	86	2.4	0.088	0.0	LOSA	0.0	0.0	0.00	0.28	0.00	57.6
Appro	ach	162	5.2	0.088	2.6	NA	0.0	0.0	0.00	0.28	0.00	56.9
North:	Prospec	ct Road										
8	T1	134	3.1	0.119	0.3	LOS A	0.5	3.2	0.21	0.21	0.21	57.3
9	R2	75	0.0	0.119	6.0	LOS A	0.5	3.2	0.21	0.21	0.21	55.2
Appro	ach	208	2.0	0.119	2.3	NA	0.5	3.2	0.21	0.21	0.21	56.6
West:	Seaview	/ Street										
10	L2	58	0.0	0.108	5.8	LOS A	0.4	2.8	0.21	0.59	0.21	52.9
12	R2	64	4.9	0.108	7.0	LOS A	0.4	2.8	0.21	0.59	0.21	52.4
Appro	ach	122	2.6	0.108	6.4	LOSA	0.4	2.8	0.21	0.59	0.21	52.6
All Vel	hicles	493	3.2	0.119	3.5	NA	0.5	3.2	0.14	0.33	0.14	55.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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∇ Site: 2 [Scenario1: Prospect - Seaview East AM Peak]

2019 AM Peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformance	e - Veh	icles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Prospe	ct Road										
2	T1	156	5.4	0.121	0.5	LOS A	0.4	2.9	0.24	0.15	0.24	57.8
3	R2	48	2.2	0.121	6.8	LOSA	0.4	2.9	0.24	0.15	0.24	55.6
Appro	ach	204	4.6	0.121	2.0	NA	0.4	2.9	0.24	0.15	0.24	57.3
East:	Seaview	Street										
4	L2	55	0.0	0.071	6.6	LOSA	0.3	1.8	0.38	0.63	0.38	52.5
6	R2	21	0.0	0.071	7.9	LOSA	0.3	1.8	0.38	0.63	0.38	51.9
Appro	ach	76	0.0	0.071	6.9	LOSA	0.3	1.8	0.38	0.63	0.38	52.3
North:	Prospec	ct Road										
7	L2	43	0.0	0.181	5.6	LOSA	0.0	0.0	0.00	0.07	0.00	57.7
8	T1	302	3.1	0.181	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	59.3
Appro	ach	345	2.7	0.181	0.7	NA	0.0	0.0	0.00	0.07	0.00	59.1
All Ve	hicles	625	3.0	0.181	1.9	NA	0.4	2.9	0.12	0.17	0.12	57.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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∇ Site: 2 [Scenario1: Prospect - Seaview East PM Peak]

2019 PM Peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformance	e - Veh	icles								
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South:	: Prospec	ct Road										
2	T1	109	1.9	0.079	0.2	LOS A	0.2	1.6	0.15	0.14	0.15	58.1
3	R2	34	0.0	0.079	6.0	LOS A	0.2	1.6	0.15	0.14	0.15	56.0
Appro	ach	143	1.5	0.079	1.6	NA	0.2	1.6	0.15	0.14	0.15	57.6
East: \$	Seaview	Street										
4	L2	39	0.0	0.041	6.0	LOS A	0.2	1.1	0.27	0.57	0.27	52.8
6	R2	13	0.0	0.041	6.7	LOS A	0.2	1.1	0.27	0.57	0.27	52.3
Appro	ach	52	0.0	0.041	6.2	LOSA	0.2	1.1	0.27	0.57	0.27	52.7
North:	Prospec	t Road										
7	L2	15	0.0	0.096	5.5	LOS A	0.0	0.0	0.00	0.05	0.00	57.9
8	T1	168	2.5	0.096	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	59.5
Appro	ach	183	2.3	0.096	0.5	NA	0.0	0.0	0.00	0.05	0.00	59.4
All Vel	hicles	378	1.7	0.096	1.7	NA	0.2	1.6	0.09	0.15	0.09	57.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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🥶 Site: 3 [Scenario1: Victoria - Seaview AM Peak]

2019 AM Peak Site Category: (None) Stop (Two-Way)

Move	ement P	erformanc	e - Veh	icles								
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	n: Victoria		70	7,0	550		7011					1311/11
1	L2	25	4.2	0.170	6.7	LOS A	0.6	4.3	0.25	0.18	0.25	55.7
2	T1	205	0.5	0.170	0.5	LOS A	0.6	4.3	0.25	0.18	0.25	57.4
3	R2	65	0.0	0.170	6.8	LOS A	0.6	4.3	0.25	0.18	0.25	55.3
Appro	oach	296	0.7	0.170	2.4	NA	0.6	4.3	0.25	0.18	0.25	56.8
East:	Seaview	Street										
4	L2	99	2.1	0.216	9.6	LOS A	8.0	6.0	0.49	0.94	0.49	50.3
5	T1	37	0.0	0.216	12.5	LOS A	0.8	6.0	0.49	0.94	0.49	50.1
6	R2	22	9.5	0.216	15.6	LOS B	0.8	6.0	0.49	0.94	0.49	49.8
Appro	oach	158	2.7	0.216	11.1	LOSA	0.8	6.0	0.49	0.94	0.49	50.2
North	: Victoria	Street										
7	L2	27	11.5	0.182	6.0	LOS A	0.1	0.9	0.04	0.06	0.04	57.4
8	T1	303	1.7	0.182	0.1	LOS A	0.1	0.9	0.04	0.06	0.04	59.4
9	R2	8	37.5	0.182	7.2	LOSA	0.1	0.9	0.04	0.06	0.04	56.1
Appro	oach	339	3.4	0.182	0.7	NA	0.1	0.9	0.04	0.06	0.04	59.1
West	: Seaview	/ Street										
10	L2	24	4.3	0.273	9.5	LOS A	1.1	7.8	0.55	1.02	0.61	48.8
11	T1	78	1.4	0.273	13.0	LOSA	1.1	7.8	0.55	1.02	0.61	48.7
12	R2	47	0.0	0.273	15.3	LOS B	1.1	7.8	0.55	1.02	0.61	48.6
Appro	oach	149	1.4	0.273	13.2	LOSA	1.1	7.8	0.55	1.02	0.61	48.7
All Ve	hicles	942	2.1	0.273	5.0	NA	1.1	7.8	0.26	0.40	0.27	54.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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🥶 Site: 3 [Scenario1: Victoria - Seaview PM Peak]

2019 PM Peak Site Category: (None) Stop (Two-Way)

Move	ement P	erformanc	e - Vehi	icles								
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Victoria											
1	L2	20	0.0	0.156	6.4	LOSA	0.6	3.9	0.23	0.19	0.23	56.0
2	T1	186	0.6	0.156	0.4	LOS A	0.6	3.9	0.23	0.19	0.23	57.5
3	R2	67	1.6	0.156	6.4	LOSA	0.6	3.9	0.23	0.19	0.23	55.3
Appro	ach	274	8.0	0.156	2.3	NA	0.6	3.9	0.23	0.19	0.23	56.8
East:	Seaview	Street										
4	L2	86	1.2	0.173	9.1	LOSA	0.7	4.9	0.41	0.92	0.41	50.7
5	T1	43	0.0	0.173	11.4	LOS A	0.7	4.9	0.41	0.92	0.41	50.5
6	R2	12	45.5	0.173	16.4	LOS B	0.7	4.9	0.41	0.92	0.41	49.9
Appro	ach	141	4.5	0.173	10.4	LOSA	0.7	4.9	0.41	0.92	0.41	50.6
North	: Victoria	Street										
7	L2	27	7.7	0.144	5.9	LOSA	0.2	1.2	0.07	0.10	0.07	57.2
8	T1	224	2.3	0.144	0.1	LOS A	0.2	1.2	0.07	0.10	0.07	58.8
9	R2	18	0.0	0.144	6.2	LOSA	0.2	1.2	0.07	0.10	0.07	56.7
Appro	ach	269	2.7	0.144	1.1	NA	0.2	1.2	0.07	0.10	0.07	58.5
West:	Seaview	Street										
10	L2	6	0.0	0.124	8.8	LOSA	0.4	3.0	0.51	0.99	0.51	49.9
11	T1	34	0.0	0.124	11.1	LOSA	0.4	3.0	0.51	0.99	0.51	49.6
12	R2	32	0.0	0.124	12.9	LOSA	0.4	3.0	0.51	0.99	0.51	49.4
Appro	ach	72	0.0	0.124	11.7	LOSA	0.4	3.0	0.51	0.99	0.51	49.5
All Ve	hicles	756	2.1	0.173	4.3	NA	0.7	4.9	0.23	0.37	0.23	55.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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∇ Site: 4 [Scenario1: Victoria - Harland AM Peak]

2019 AM Peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ement P	erformance	e - Veh	icles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Victoria	Street										
1	L2	19	0.0	0.034	5.5	LOS A	0.0	0.0	0.00	0.17	0.00	56.9
2	T1	46	2.3	0.034	0.0	LOSA	0.0	0.0	0.00	0.17	0.00	58.4
Appro	ach	65	1.6	0.034	1.6	NA	0.0	0.0	0.00	0.17	0.00	58.0
North:	: Victoria	Street										
8	T1	51	2.1	0.199	0.2	LOSA	1.1	7.6	0.18	0.48	0.18	55.2
9	R2	287	2.6	0.199	5.7	LOS A	1.1	7.6	0.18	0.48	0.18	53.2
Appro	ach	338	2.5	0.199	4.9	NA	1.1	7.6	0.18	0.48	0.18	53.5
West:	Harland	Street										
10	L2	266	0.0	0.188	5.7	LOSA	0.9	6.0	0.12	0.55	0.12	53.2
12	R2	17	0.0	0.188	7.4	LOS A	0.9	6.0	0.12	0.55	0.12	52.7
Appro	ach	283	0.0	0.188	5.8	LOSA	0.9	6.0	0.12	0.55	0.12	53.2
All Ve	hicles	686	1.4	0.199	5.0	NA	1.1	7.6	0.14	0.48	0.14	53.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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∇ Site: 4 [Scenario1: Victoria - Harland PM Peak]

2019 PM Peak Site Category: (None) Giveway / Yield (Two-Way)

Move	ment P	erformance	e - Veh	icles								
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South:	: Victoria	Street										
1	L2	29	0.0	0.036	5.5	LOS A	0.0	0.0	0.00	0.25	0.00	56.2
2	T1	40	0.0	0.036	0.0	LOS A	0.0	0.0	0.00	0.25	0.00	57.8
Appro	ach	69	0.0	0.036	2.4	NA	0.0	0.0	0.00	0.25	0.00	57.1
North:	Victoria	Street										
8	T1	39	0.0	0.194	0.2	LOS A	1.0	7.3	0.19	0.50	0.19	55.0
9	R2	291	1.8	0.194	5.7	LOS A	1.0	7.3	0.19	0.50	0.19	53.1
Appro	ach	329	1.6	0.194	5.1	NA	1.0	7.3	0.19	0.50	0.19	53.3
West:	Harland	Street										
10	L2	133	0.0	0.101	5.7	LOSA	0.4	2.9	0.10	0.56	0.10	53.3
12	R2	16	0.0	0.101	7.2	LOS A	0.4	2.9	0.10	0.56	0.10	52.8
Appro	ach	148	0.0	0.101	5.8	LOSA	0.4	2.9	0.10	0.56	0.10	53.3
All Vel	nicles	547	1.0	0.194	4.9	NA	1.0	7.3	0.14	0.48	0.14	53.8

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

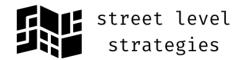
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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Appendix 2 – Mitigation proposal – SIDRA results

Degree of Saturation (DoS)

NO CHANGE IMPROVED INCREASE < 5% (0.05) INCREASE > 5% (0.05) DELAY

NO CHANGE IMPROVED INCREASE < 5s INCREASE > 5s QUEUE

NO CHANGE
IMPROVED
INCREASE < 1 VEH
INCREASE > 1 VEH

S1 Old Contorbury Dd / December Dd	Degree of				Average Delay	(s)			Level of Service		95th Percentile C	ritical Queue (veh)	
S1. Old Canterbury Rd / Prospect Rd	Saturation	All vehicles	Arlington St	OCR (NE)	Prospect Rd	OCR (SW)	We	orst Movement	Worst Approach	Arlington St	OCR (NE)	Prospect Rd	OCR (SW)
AM base - surveyed (existing layout)	2.552	100.3	6.2	3.7	1532.9	0.7	1573.2	Prospect Rd (N) - R	F	0.1	1.4	51.0	0.0
AM future (existing layout)	2.832	125.5	6.3	4.2	1777.6	0.7	1815.6	Prospect Rd (N) - R	F	0.1	1.6	59.3	0.0
Development Impact	0.280	25.2	0.1	0.5	244.7	0.0	242.4			0.0	0.2	8.3	0.0
AM future (mitigation layout 1)	1.923	65.8	6.9	2.3	927.1	0.7	954.4	Prospect Rd (N) - R	F	0.1	0.9	41.8	0.0
Development Impact (mitigation 1)	-0.629	-34.5	0.7	-1.4	-605.8	0.0	-618.8			0.0	-0.5	-9.2	0.0
AM future (mitigation layout 1+2)	1.851	35.6	6.9	2.3	494.3	0.6	904.9	Prospect Rd (N) - R	F	0.1	0.9	23.7	0.0
Development Impact (mitigation 1+2)	-0.701	-64.7	0.7	-1.4	-1038.6	-0.1	-668.3	-		0.0	-0.5	-27.3	0.0
PM base - surveyed (existing layout)	1.075	16.3	6.6	0.6	290.3	0.6	335.0	Prospect Rd (N) - R	F	0.1	0.5	13.1	0.0
PM future (existing layout)	1.270	26.7	6.7	0.6	415.8	0.7	452.0	Prospect Rd (N) - R	F	0.1	0.6	22.3	0.0
Development Impact	0.195	10.4	0.1	0.0	125.5	0.1	117.0			0.0	0.1	9.2	0.0
PM future (mitigation layout 1)	1.179	19.7	7.6	0.4	305.0	0.7	325.4	Prospect Rd (N) - R	F	0.1	0.3	15.7	0.0
Development Impact (mitigation 1)	0.104	3.4	1.0	-0.2	14.7	0.1	-9.6			0.0	-0.2	2.6	0.0
PM future (mitigation layout 1+2)	1.099	12.1	7.5	0.0	186.3	0.6	268.7	Prospect Rd (N) - R	F	0.1	0.0	9.0	0.0
Development Impact (mitigation 1+2)	0.024	-4.2	0.9	-0.6	-104.0	0.0	-66.3			0.0	-0.5	-4.1	0.0

53 Old Controllers Dd / Hawletons Ave	Degree of				Average Delay	(s)			Level of Service		95th Percentile C	ritical Queue (veh)	
S2. Old Canterbury Rd / Hurlstone Ave	Saturation	All vehicles	-	OCR (NE)	Hurlstone Av	OCR (SW)	Wo	orst Movement	Worst Approach	=	OCR (NE)	Hurlstone Av	OCR (SW)
AM base - surveyed (existing layout)	1.118	34.9	-	45.1	154.1	0.1	200.3	Hurlstone Ave (W) - R	F	-	15.4	23.1	0.0
AM future (existing layout)	1.153	42.4	-	51.2	188.8	0.1	230.6	Hurlstone Ave (W) - R	F	-	17.8	28.8	0.0
Development Impact	0.035	7.5		6.1	34.7	0.0	30.3				2.4	5.7	0.0
AM future (mitigation layout)	0.948	10.2	-	5.5	61.5	0.1	96.8	Hurlstone Ave (W) - R	F	-	2.3	10.4	0.0
Development Impact (mitigation)	-0.170	-24.7		-39.6	-92.6	0.0	-103.5				-13.1	-12.7	0.0
PM base - surveyed (existing layout)	0.859	3.4	-	4.3	11.1	0.1	41.2	Hurlstone Ave (W) - R	E	-	4.1	0.9	0.0
PM future (existing layout)	0.877	4	-	5.2	11.1	0.1	41.7	Hurlstone Ave (W) - R	E	-	5.1	1.0	0.0
Development Impact	0.018	0.6		0.9	0.0	0.0	0.5				1.0	0.1	0.0
PM future (mitigation layout 1)	0.281	1.9	-	1.6	11.1	0.1	44.8	Hurlstone Ave (W) - R	E	-	1.6	1.0	0.0
Development Impact (mitigation 1)	-0.578	-1.5		-2.7	0.0	0.0	3.6				-2.5	0.1	0.0
PM future (mitigation layout 1+2)	0.290	2.0	-	1.7	11.2	0.1	45.3	Hurlstone Ave (W) - R	E	-	1.8	1.0	0.0
Development Impact (mitigation 1+2)	-0.569	-1.4		-2.6	0.1	0.0	4.1				-2.3	0.1	0.0

S3. Old Cantebury Rd / Henson St	Degree of				Average Delay	(s)			Level of Service		95th Percentile C	ritical Queue (veh)	
33. Old Califebury Rd / Helisoli St	Saturation	All vehicles	-	OCR (NE)	Henson St	OCR (SE)	W	orst Movement	Worst Approach	-	OCR (NE)	Hurlstone Av	OCR (SW)
AM base - surveyed (existing layout)	1.212	26.9	-	70.9	37.5	0.2	236.8	OCR (NE) - R	E	-	26.4	6.8	0.0
AM future (existing layout)	1.212	26.9	-	70.9	37.5	0.2	236.8	OCR (NE) - R	E	-	26.4	6.8	0.0
Development Impact	0.000	0		0.0	0.0	0.0	0.00				0.0	0.0	0.0
PM base - surveyed (existing layout)	0.901	5.8	-	5.6	28.0	0.4	60.5	Henson St (N) - R	D	-	5.5	3.1	0.0
PM future (existing layout)	0.901	5.8	-	5.6	28.0	0.4	60.5	Henson St (N) - R	D	-	5.5	3.1	0.0
Development Impact	0.000	0		0.0	0.0	0.0	0				0.0	0.0	0.0

S4. Old Cantebury Rd / James St	Degree of				Average Delay	(s)			Level of Service		95th Percentile Co	ritical Queue (veh)	
54. Old Califebuly Rd / James 5t	Saturation	All vehicles	-	OCR (NE)	James St	OCR (SE)	Wo	rst Movement	Worst Approach	-	OCR (NE)	Hurlstone Av	OCR (SW)
AM base - surveyed (existing layout)	0.424	1	-	2.1	44.9	0.1	44.9	James St (W) - R	E	-	1.2	0.1	0.0
AM future (existing layout)	0.424	1	-	2.1	44.9	0.1	44.9	James St (W) - R	E	-	1.2	0.1	0.0
Development Impact	0.000	0		0.0	0.0	0.0	0.00				0.0	0.0	0.0
PM base - surveyed (existing layout)	0.659	0.2	-	0.3	41.2	0.0	41.2	James St (W) - R	E	-	0.3	0.0	0.0
PM future (existing layout)	0.659	0.2	-	0.3	41.2	0.0	41.2	James St (W) - R	E	-	0.3	0.0	0.0
Development Impact	0.000	0		0.0	0.0	0.0	0				0.0	0.0	0.0

S5. Prospect Rd / Seaview St (East)	Degree of	egree of Average Delay (s) Level						Level of Service	itical Queue (veh	(veh)			
33. Prospect Ru / Seaview St (East)	Saturation	All vehicles	-	Prospect Rd (S)	Seaview St	Prospect Ra	Wo	rst Movement	Worst Approach	-	Prospect Rd (S)	Seaview St	Prospect Rd (N)
AM base - surveyed (existing layout)	0.178	1.8	-	1.9	6.9	0.7	7.8	7.8 Seaview St (E) - R		-	0.3	0.2	0.0
AM future (existing layout)	0.183	2.00	-	2.1	7.0	0.7	8	Seaview St (E) - R	Α	-	0.4	0.3	0.0
Development Impact	0.005	0.2		0.2	0.1	0.0	0.20				0.1	0.1	0.0
PM base - surveyed (existing layout)	0.092	1.5	-	1.4	6.2	0.5	6.6	Seaview St (E) - R	A	-	0.2	0.1	0.0
PM future (existing layout)	0.098	1.7	-	1.7	6.2	0.4	6.7	Seaview St (E) - R	Α	-	0.2	0.2	0.0
Development Impact	0.006	0.2		0.3	0.0	-0.1	0.10				0.0	0.1	0.0

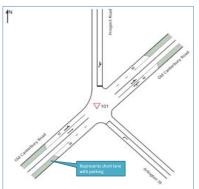
S6. Prospect Rd / Seaview St (West)	Degree of	egree of Average Delay (s) Level						Level of Service 95th Percentile Critical Queue (veh)					
36. Frospect Ru / Seaview 31 (West)	Saturation	All vehicles	-	Prospect Rd (S)	Seaview St	Prospect Ru	Wo	orst Movement	Worst Approach	-	Prospect Rd (S)	Seaview St	Prospect Rd (N)
AM base - surveyed (existing layout)	0.193	2.9	-	2.2	1.5	7.3	8.2	Seaview St (W) - R	Α	-	0.0	0.5	0.6
AM future (existing layout)	0.209	3.40	-	2.6	1.9	7.4	8.6	Seaview St (W) - R	Α	-	0.0	0.7	0.8
Development Impact	0.016	0.5		0.4	0.4	0.1	0.4				0.0	0.2	0.2
PM base - surveyed (existing layout)	0.109	3	-	2.4	2.0	6.3	6.9	Seaview St (W) - R	Α	-	0.0	0.4	0.3
PM future (existing layout)	0.124	3.6	-	2.8	2.5	6.5	7	Seaview St (W) - R	A	-	0.0	0.5	0.4
Development Impact	0.015	0.6		0.4	0.5	0.2	0.1	0.1			0.0	0.1	0.1

S7. Victoria St / Seaview St	Degree of	Average Delay (s)							Level of Service	itical Queue (veh)	ue (veh)		
57. Victoria St / Seaview St	Saturation	All vehicles	Victoria St (S)	Seaview St (E)	Victoria St (N)	Seaview St (W)	Wo	rst Movement	Worst Approach	Victoria St (S)	Seaview St (E)	Victoria St (N)	Seaview St (W)
AM base - surveyed (existing layout)	0.204	4.6	1.9	10.3	0.8	10.9	12.1	12.1 Seaview St (W) - R		0.3	0.6	0.1	0.8
AM future (existing layout)	0.316	5.20	2.6	11.5	0.7	14.7	17.3	Seaview St (W) - R	Α	0.8	1.0	0.1	1.3
Development Impact	0.112	0.6	0.7	1.2	-0.1	3.8	5.2			0.5	0.4	0.0	0.5
PM base - surveyed (existing layout)	0.127	4.2	1.9	9.6	1.3	10.0	13.3	Seaview St (E) - R	Α	0.3	0.5	0.2	0.3
PM future (existing layout)	0.199	4.4	2.5	10.7	1.0	12.7	18.3	Seaview St (E) - R	Α	0.7	0.8	0.2	0.5
Development Impact	0.072	0.2	0.6	1.1	-0.3	2.7	5.0			0.4	0.3	0.0	0.2

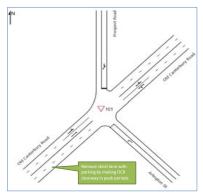
S8. Victoria St / Harland St	Degree of			(s)	Level of Service	95th Percentile Critical Queue (veh)							
36. Victoria 3t / Harianu 3t	Saturation	All vehicles	Victoria St (S)	-	Victoria St (N)	Harland St (W)	nd St (W) Worst Movement Wo			Victoria St (S)	-	Victoria St (N)	Harland St (W)
AM base - surveyed (existing layout)	0.171	4.8	1.6	-	4.8	5.8	7.1	Harland St (W) - R	Α	0.0	-	0.9	0.6
AM future (existing layout)	0.213	5.00	1.6	-	4.9	5.8	7.7	Harland St (W) - R	Α	0.0	-	1.2	0.9
Development Impact	0.042	0.2	0.0		0.1	0.0	0.6			0.0		0.3	0.3
PM base - surveyed (existing layout)	0.159	4.7	2.4	-	4.9	5.8	6.8	Harland St (W) - R	Α	0.0	-	0.8	0.3
PM future (existing layout)	0.209	5	2.4	-	5.1	5.8	7.3	Harland St (W) - R	Α	0.0	-	1.1	0.5
Development Impact	0.050	0.3	0.0		0.2	0.0	0.5	0.5		0.0		0.3	0.2

S1. Old Cantebury Rd / Prospect Rd





MITIGATION 1

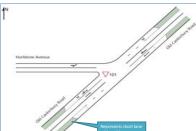


short left turn lane on Prospect Rd
Only 12 vehicles turn right from OCR to Prospect Rd in PM - ban moveme



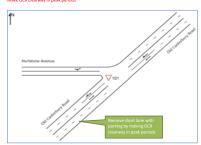
S2. Old Cantebury Rd / Huristone Ave



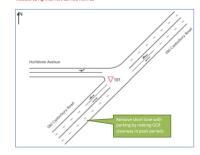


MITIGATION 1

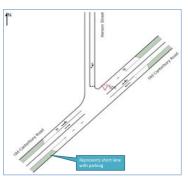
Make OCR clearway in peak periods



MITIGATION 2 Includes 12 right turners banned from S1







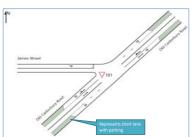
MITIGATION

No mitigation required

Development traffic not identified to turn through this intersection

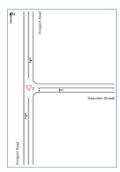




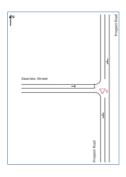


SS. Prospect Rd / Seaview East









MITIGATION
No mitigation required
Whilst development has some impact it is minor and all queues
and delays remain within acceptable limits

MITIGATION

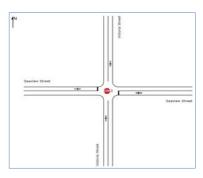
No mitigation required

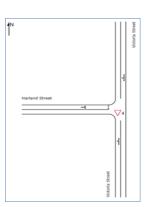
Whilst development has some impact it is minor and all queues and delays remain within acceptable limits

S7. Victoria St / Seaview St







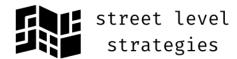


MITIGATION
No mitigation required
Whilst development has some impact it is minor and all queues
and delays remain within acceptable limits

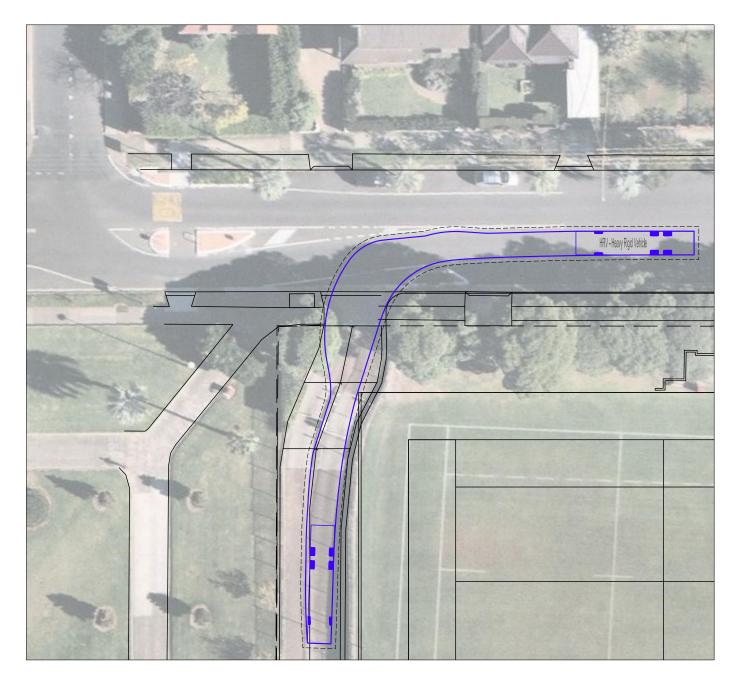
MITIGATION

No mitigation required

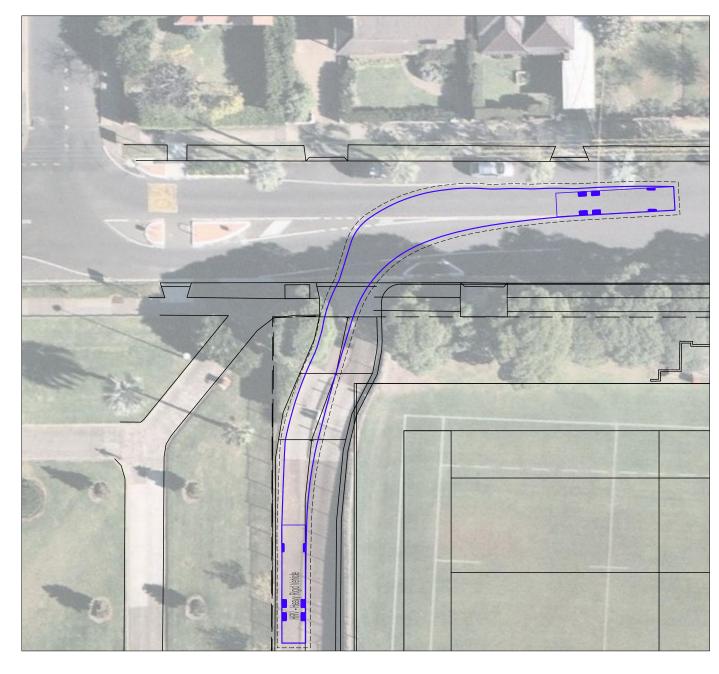
Whilst development has some impact it is minor and all queues and delays remain within acceptable limits



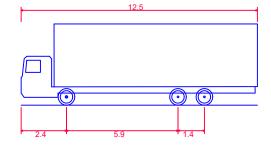
Appendix 3 – Victoria Street service driveway swept paths



DRIVEWAY - LEFT TURN ACCESS - HRV SCALE 1:400



DRIVEWAY - RIGHT TURN EGRESS - HRV SCALE 1:400



HRV - Heavy Rigid Vehicle Overall Length Overall Width Overall Body Height Min Body Ground Clearance Track Width Lock-to-lock time Curb to Curb Turning Radius Design Speed Forward Clearance Envelope

12.500m 2.500m 4.300m 0.417m 2.500m 6.00s 12.500m 5.0km/h 0.500m

SITE FRONTAGE BASED OFF NEARMAP IMAGERY. SUBJECT TO DETAILED DESIGN & SITE SURVEY

PRELIMINARY ADVICE ONLY 7 August 2020

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RFV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED	$\overline{\psi}$					Ĺ



TTM CONSULTING PTY LTD

ABN 65 010 868 621 LEVEL 8, 369 Ann Street, BRISBANE, QLD, 4000 P.O. BOX 12015, BRISBANE, QLD, 4003

T: (07) 3327 9500 F: (07) 3327 9501 E: ttmbris@ttmgroup.com.au W: www.ttmgroup.com.au

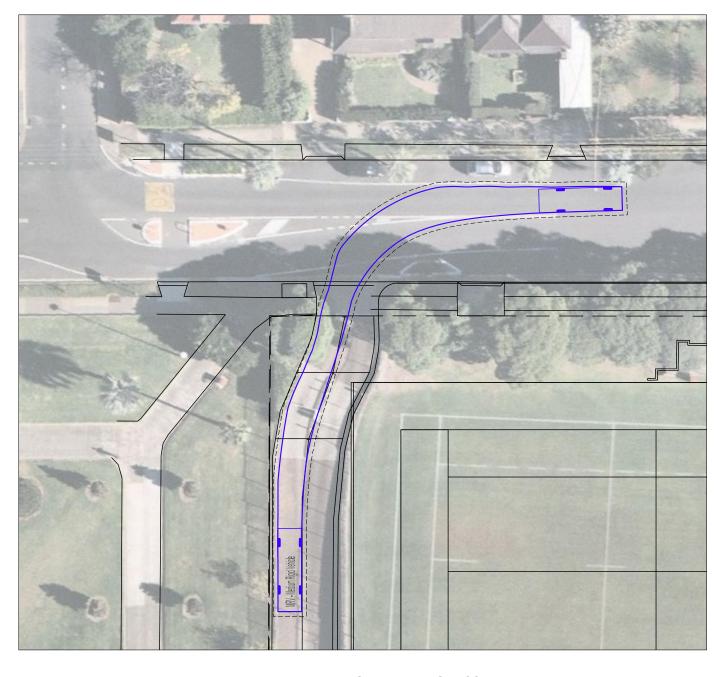
TRINITY GRAMMAR SCHOOL

DRIVEWAY ANALYSIS - LEFT ACCESS & RIGHT EGRESS HRV (12.5m) DESIGN VEHICLE

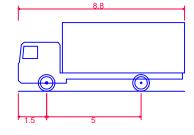
19SYT0056	А3
DRAWING NUMBER 19SYT0056-27	REVISION
195110050-27	A
^{DATE} 7 Aug 2020	1 OF 1
, nag 2020	1011



DRIVEWAY - LEFT TURN ACCESS - MRV SCALE 1:400



DRIVEWAY - RIGHT TURN EGRESS - MRV SCALE 1:400



MRV - Medium Rigid Vehicle Overall Length Overall Width Overall Body Height Min Body Ground Clearance Track Width Lock-to-lock time Curb to Curb Turning Radius Design Speed Forward Clearance Envelope

8.800m 2.500m 3.633m 0.428m 2.500m 4.00s 10.000m 5.0km/h 0.500m

NOTE: SITE FRONTAGE BASED OFF NEARMAP IMAGERY. SUBJECT TO DETAILED DESIGN & SITE SURVEY PRELIMINARY
ADVICE ONLY
7 August 2020

						SCALE		12	16	20m
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Α	07-08-20	ORIGINAL ISSUE	SD	BC	BC		BLOOM	PAKK C	JUSUL	TING
REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED					



TTM CONSULTING PTY LTD

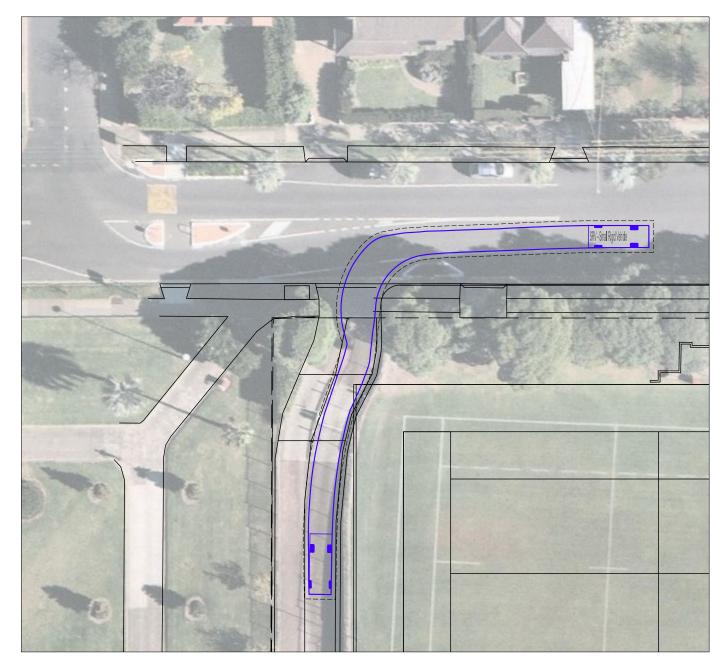
ABN 65 010 868 621 LEVEL 8, 369 Ann Street, BRISBANE, QLD, 4000 P.O. BOX 12015, BRISBANE, QLD, 4003

T: (07) 3327 9500 F: (07) 3327 9501 E: ttmbris@ttmgroup.com.au W: www.ttmgroup.com.au

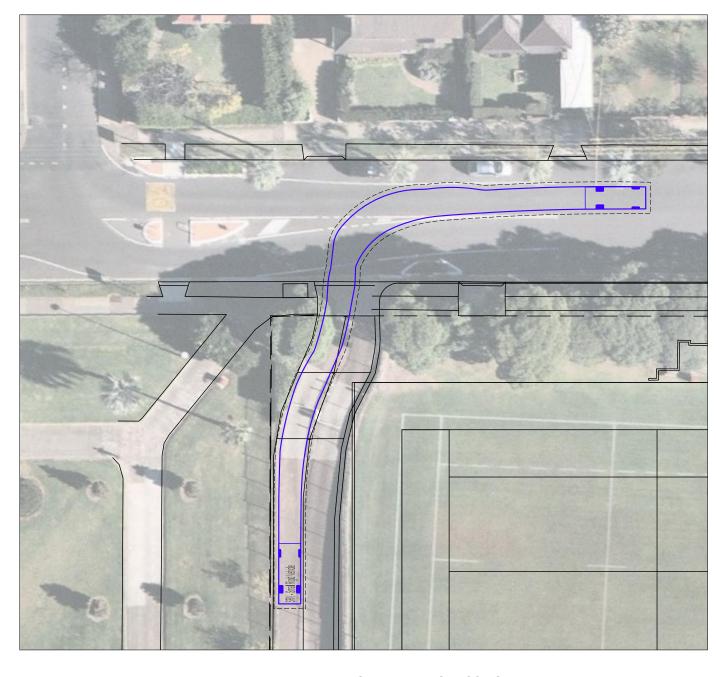
DAWING TITLE

DRIVEWAY ANALYSIS - LEFT ACCESS & RIGHT EGRESS MRV (8.8m) DESIGN VEHICLE

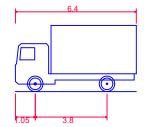
19SYT0056	А3
DRAWING NUMBER	REVISION
19SYT0056-28	Α
DATE	SHEET
7 Aug 2020	1 OF 1



DRIVEWAY - LEFT TURN ACCESS - SRV SCALE 1:400



DRIVEWAY - RIGHT TURN EGRESS - SRV SCALE 1:400



SRV - Small Rigid Vehicle
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock-to-lock time
Curb to Curb Turning Radius
Design Speed Forward
Clearance Envelope 6.400m 2.330m 3.500m 0.398m 2.330m 4.00s 7.100m 5.0km/h 0.500m

SITE FRONTAGE BASED OFF NEARMAP IMAGERY. SUBJECT TO DETAILED DESIGN & SITE SURVEY

PRELIMINARY ADVICE ONLY 7 August 2020

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DRIVEWAY ANALYSIS - LEFT ACCESS & RIGHT EGRESS SRV (6.4m) DESIGN VEHICLE

19SYT0056	A3
DRAWING NUMBER	REVISION
19SYT0056-29	Α
DATE	SHEET
7 Aug 2020	1 OF 1