Transport
Roads & Maritime
Services

4 December 2018

Roads and Maritime Reference: SYD17/01766/02 (A25080397)
Council Ref: 1/2018/PLP

The General Manager
Cumberland Council
PO Box 42
Merrylands NSW 2160

Attention: Monica Cologna

Dear Sir/Madam,

PLANNING PROPOSAL – ADDITIONAL PERMITTED USE TO ALLOW FOR EDUCATIONAL ESTABLISHMENT (SCHOOL) AT 2 PERCY STREET, AUBURN

I refer to correspondence from Council dated 24 September 2018 inviting Roads and Maritime Services (Roads and Maritime) and Transport for NSW (TfNSW) to provide comment on the abovementioned planning proposal currently on exhibition including the draft Site Specific Development Control Plan (DCP) and Voluntary Planning Agreement (VPA) and other relevant documents. Roads and Maritime appreciates the opportunity to provide comment and apologise for the delay in providing a submission.

Roads and Maritime and TfNSW has reviewed the submitted documentation and it is noted that the Planning Proposal seeks to amend Auburn Local Environmental Plan 2010 (PLEP 2010) to allow 'Educational Establishments' as an additional permitted use for the site 2 Percy Street, Auburn (zoned IN2 Light Industrial).

It is understood that the site is located within the Gelibolu Precinct, which is being investigated by Cumberland Council for residential population uplift and the Department of Planning and Environment's Gateway determination requested that the planning proposal to permit a school on the subject site be updated to consider further traffic modelling currently being undertaken by Council for the broader precinct.

It is noted that Council has requested that Roads and Maritime and TfNSW review this Planning Proposal with a particular focus on Councils draft Precinct-wide study undertaken by GHD. It is also understood that the precinct wide traffic and transport study is still in draft format and has not yet been completed.

Roads and Maritime has reviewed the planning proposal and the comments/issues previously raised by Transport for NSW (TfNSW) in their submission of 21 September 2018 (**TAB A**) on the State Significant Development (SSD) for the proposed school are supported and reiterated.

It is noted that the draft transport study undertaken by GHD has considered the cumulative impacts of the proposed school and the development yield proposed within the Gelibolu precinct, which is a requirement of the amended Gateway. Roads and Maritime has reviewed the draft transport study and provides comment in **TAB B** for Council's consideration.

Thank you for the opportunity to provide advice on the subject planning proposal. Should you have any questions or further enquiries in relation to this matter, Laura van Putten would be pleased to take your call on 8849 2480 or e: development.sydney@rms.nsw.gov.au

Yours sincerely,

James Hall
A/Senior Manager Strategic Land Use
Sydney Planning, Sydney Division

TAB A

Transport for NSW

Mr Andrew Beattie
Team Leader
School Infrastructure Assessments
Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Attn: Iona Cameron

Dear Mr Beattie

Staged Development of the International Maarif School Australia Gallipoli Campus 2 Percy Street, Auburn (SSD 8926)

Thank you for your letter dated 20 August 2018 inviting Transport for NSW (TfNSW) to review and provide comment on the subject development application. Due to the proximity of the development near to the Main Western Rail Line, Sydney Trains should be consulted.

The subject site is currently zoned IN2 under the *Auburn Local Environmental Plan* (LEP) *2010* and a planning proposal had been lodged separately that seeks to amend the LEP to increase the maximum height of buildings and to introduce "educational establishments" as an additional permissible use on the site. It is understood that the subject application is being lodged for concurrent assessment with the planning proposal pursuant to *Section 3.39* of the *Environmental Planning & Assessment Act*.

Clarification was provided by Council on 18 September 2018 in regards to the proposed Church Street Link. The information as given by Council indicates that the subject link is currently under consideration as part of the above planning proposal for the subject site. Due to the uncertainty on the provision of the link, it should not be considered under the subject development application.

The exhibited documents have been reviewed and comments are provided with regard to transport issues in the context of the subject development application. The issues are generally outlined as follows:

- Traffic operation and safety of the proposed drop-off/pick-up zones on Percy Street and Gelibolu Parade; and
- Manoeuvring of buses at the proposed drop-off/pick-up zone for school buses on Church Street.

Details of the above comments are contained in **Attachment A**.

It is understood that the planning proposal for the subject site received Gateway

Determination in February 2018 and is currently underway to satisfy the conditions of the Gateway Determination. Notwithstanding the above comments, any outstanding traffic and transport related issues identified in the context of the planning proposal should be resolved as part of the planning proposal.

Our initial suggested Conditions of Consent are provided in **Attachment B**. TfNSW would be pleased to consider any further material forwarded from the applicant.

Thank you again for the opportunity of reviewing the subject application. For further information or clarification regarding this matter, please contact Billy Yung, Senior Transport Planner, at Billy.Yung@transport.nsw.gov.au.

Yours sincerely

21/9/2018

Mark Ozinga
Principal Manager, Land Use Planning and Development
Freight, Strategy and Planning

CD18/07615

Attachment A – Comments on Transport Impact Assessment prepared by GTA Consultants for 2 Percy Street, Auburn

Drop-off/pick-up zone on Percy Street and Gelibolu Parade

Issues:

- Tables 2.4 and 2.5 indicate the current parking demand within the nearby council car park is low during both AM and PM peak hours. There is potential for the car park to be used for picking up/dropping off of students in addition to the proposed drop-off/pick-up zone, if the car park remains for open for general traffic.
- Figure 3.3 indicates that vehicles coming from north of Percy Street would be required to detour through Council's car park to access the drop-off/pick-up zone proposed on the western side of Percy Street. This is an assumption made on the basis of using the council car park as a traffic route.
- Some southbound drivers are likely to make a U-turn at the end of Percy Street where it intersects with Gelibolu Parade in order to access the proposed school drop-off zone on Percy Street. Buses leaving the drop-off/pick-up zone on Gelibolu Parade and traffic exiting from the council car park would also pass through this location.
- Figure 3.5 shows the proposed treatments to improve safety for pedestrians near the subject site, notably a new pedestrian crossing over Percy Street to connect the footpath adjoining the subject site with Council's car park.

Recommendation:

- It is recommended that prior to issue of any construction certificate, an independent Detailed Design Road Safety Audit (RSA, refer to *NSW Centre for Road Safety Guidelines for Road Safety Audit Practices*) shall be undertaken of the proposed modification, notably the proposed pedestrian crossing and extended/new footpaths on Percy Street. The proposed design shall address any deficiencies identified within the RSA.
- Swept path analysis should be undertaken to demonstrate the feasibility of buses leaving the drop-off/pick-up zone on Gelibolu Parade turning to Percy Street under the proposed treatments and not interfering with traffic from the opposite direction.

Drop-off/pick-up zone for school buses on Church Street

Issues:

- Figures 3.4 and 6.4 show that buses leaving the proposed drop-off/pick-up zone on Church Street would be required to use the adjoining land (i.e. PCYC/Lidcombe Oval) as a turn around space. This is an assumption made on the basis of using land that is not within control of the applicant for regular school bus services. The applicant should give consideration of the possibility that land would not be

available, notwithstanding the necessary agreement to be sought with the land owner.

Recommendation:

- Swept path analysis should be carried out to demonstrate the feasibility of buses to turn around within the existing kerbs of Church Street. It is recommended that improvements to the street configuration should be investigated if more turn around space is required.

Feasibility of Church Street Link

The following comment on the proposed Church Street Link is provided for completeness, noting that such proposal does not form any part of the subject development application but rather an option currently under consideration by Council as part of the planning proposal lodged for the subject site.

Issues:

- Figure 5.3 shows a conceptual drawing for the proposed Church Street Link. There are no details of the concept and it is not evident what implications the proposed Link would have on the adjoining lands.
- There is a shared path running along this proposed link. This shared path would be the essential connection between the proposed school bus drop-off/pick-up zone on Church Street. Therefore the proposed vehicular link may create an unsafe situation for pedestrian using this connection. Moreover the proposed vehicular link would add complexity to the intersection where Percy Street and Gelibolu Parade are connected with the existing car park exit and the shared path would bring in additional crossing demand at this location.

Recommendation:

- More information should be provided to demonstrate the resolution of land ownership issues as it is a fundamental consideration for the feasibility of the Link.
- Detailed drawings of the proposed Link should be provided for review under the assessment of the planning proposal.
- The proposal should be reviewed from a road user safety prospective, in particular its relationship to the pedestrian connectivity in the vicinity of the subject development.

Attachment B – Recommended Conditions of Consent

TfNSW recommends that DP&E include the following conditions in any issued consent:

Road Safety Audit

Prior to issue of any construction certificate, an independent Detailed Design Road Safety Audit (RSA, refer to *NSW Centre for Road Safety Guidelines for Road Safety Audit Practices*) shall be undertaken of the proposed modification, notably the proposed pedestrian crossing and extended/new footpaths on Percy Street. The proposed design shall address any deficiencies identified within the RSA.

Green Travel Plan

As part of the ongoing operation of the school, the actions and recommendations identified in the Green Travel Plan at Appendix 19 of the Environmental Impact Statement for International Maarif Schools of Australia – Gallipoli Campus, prepared by DFP Planning Pty Limited (August 2018), must be implemented accordingly and updated on a regular basis.

Detailed Construction Pedestrian and Traffic Management Plan

Prior to the commencement of any construction works, a detailed Construction Pedestrian and Traffic Management Plan (CPTMP) shall be prepared, approved by Council and submitted to the satisfaction of the Certifying Authority. The CPTMP must specify, but not be limited to, the following:

(a) assessment of cumulative impacts associated with other construction activities (if any);

(b) assessment of road safety at key intersections and locations subject to heavy vehicle movements and high pedestrian activity;

(c) details of construction program, the anticipated construction duration and milestones and events during the construction process;

(d) details of anticipated peak hour and daily truck movements to and from the site;

(e) details of access arrangements for workers to/from the site, emergency vehicles and service vehicle movements;

(f) details of temporary cycling and pedestrian access during construction;

(g) details of proposed construction vehicle access arrangements at all stages; and

(h) traffic and transport impacts during construction and how these impacts will be mitigated for any associated traffic, pedestrian, cyclists, parking and public transport, which must include vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures for all demolition/construction activities.

TAB B:

Roads and Maritime has reviewed GHD's draft transport study for the Gelibolu precinct and provides the following comments:

- The traffic counts undertaken in the TIS for the precinct-wide study were undertaken in close proximity to the school holidays/long weekend and may not indicate normal traffic conditions. Ideally vehicle counts should be undertaken during a typical day, to include Thursday (or Wednesday), Friday and Saturday for the study (not near school/public holidays). This will provide the departments with an accurate understanding of the existing traffic conditions and the actual impact of this planning proposal to the surrounding network. The data should be checked and compared with SCATs data and altered accordingly to ensure that the information provided is rational. Alternatively new counts should be undertaken at more appropriate dates.

- Roads and Maritime has reviewed the AIMSUN models and provides detail comments in **TAB C**. The SIDRA models were also reviewed and comment is provided in **TAB D**. If required, Roads and Maritime can facilitate a meeting with Council and GHD to clarify the comments in further detail.

- Subject to the AIMSUN and SIDRA models being updated to Roads and Maritime satisfaction, Council should identify the feasibility of the identified road upgrades to accommodate the traffic generated by the proposed development within the broader precinct. This should include preparation of geometric road design (i.e. lane, median, footway widths and swept path of design vehicle) of the proposed intersection upgrades overlayed on an aerial to scale to identify any necessary land components and strategic costings inclusive of land components utilising the NSW standard global rates.

- Identification of funding mechanism to deliver the identified road infrastructure to accommodate the proposed development uplift within the precinct.

- The feasibility of the proposed road between Church and Percy Street relies on obtaining consent and approval from adjoining land owners, in this instance, RailCorp's land and easements are affected. TfNSW requests that the proponent should confirm if the proposed road encroaches onto RailCorp owned land and/or easements and to note that any works or development proposed within the RailCorp owned land would not be supported.

- Subject to clarification of land issues raised above, further assessment should include but not be limited to, potential rat running, times/days used and ongoing maintenance of boom gate or similar device etc.

TAB C

Traffic Model:

Gelibolu_Precinct_Model_base

Gelibolu_Precinct_2021 Do Nothing

Gelibolu_Precinct_2021 Final

Gelibolu_Precinct_2026 Final

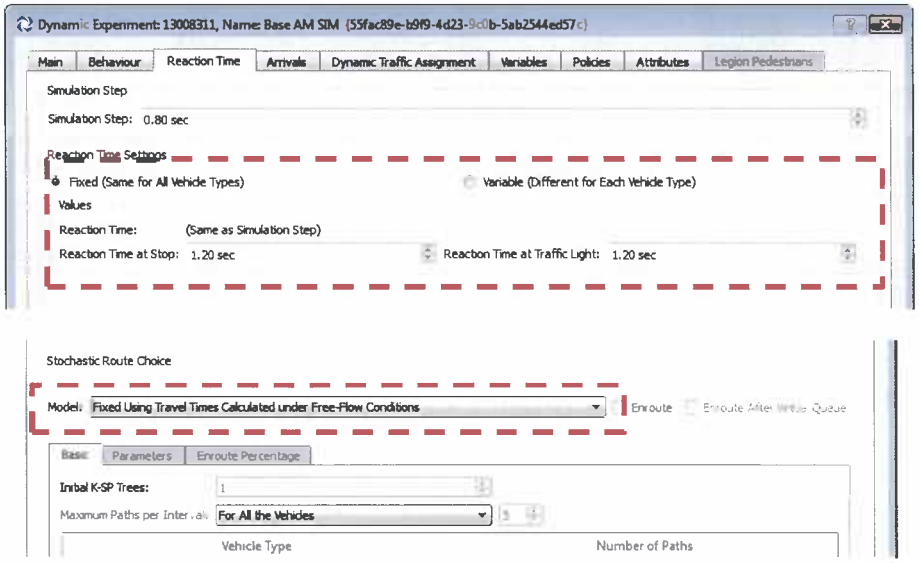
Aimsun version 8.1.5 and Gelibolu Precinct Traffic and Access Study Draft Reoprt (File: 2126926_REP-Traffic Assessment Rev A) were used for this review.

Three options were tested in the traffic modelling in the 2021 and 2026 horizon year which are

Options	Background Growth and Aged Care	Residential, and Commercial	School
Option 1	✓	-	-
Option 2	✓	✓	-
Option 3	✓	✓	✓

Base model and Calibration and validation report should be provided to RMS and reviewed before future scenarios testing.

It is noticed that fixed reaction time for all vehicle types were used in all models which may underestimated the delay of heavy vehicle. It is recommended to be review and separated into different values for each vehicle type.



"Fixed using Travel Time under Free Flow Conditions" Model was used in Route Choice for all models, it does not take into account network congestion, only the length of the paths and the allowed speed. It is recommended to be reviewed especially future model and other variable route choice model to be used.

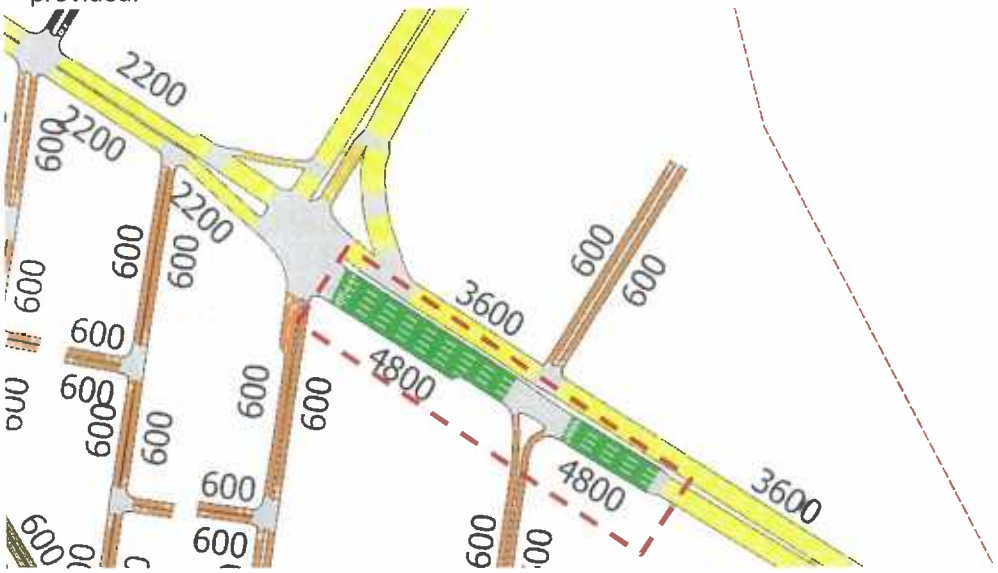
Base and 2021 Do Nothing models Review:

- From Gelibolu Precinct Microsimulation Modelling Calibration Technical Note (in appendix of study report), the travel time in AM base model were above 15% criteria in both directions. Travel times on each route should be cumulatively graphed by sector which is required in the modelling guideline. Queue length could also be used to validate the base model.

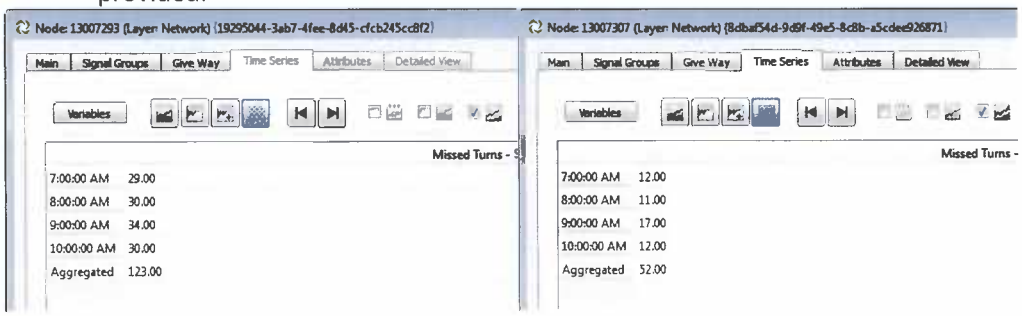
Table 2-Travel Time Validation - AM Peak

Route	Surveyed Average Travel Time (min)	Modelled Average Travel Time(min)	Difference (min)	Validation
Eastbound	1.11	1.42	0:31	✓
Westbound	1.14	0:58	0:16	✓

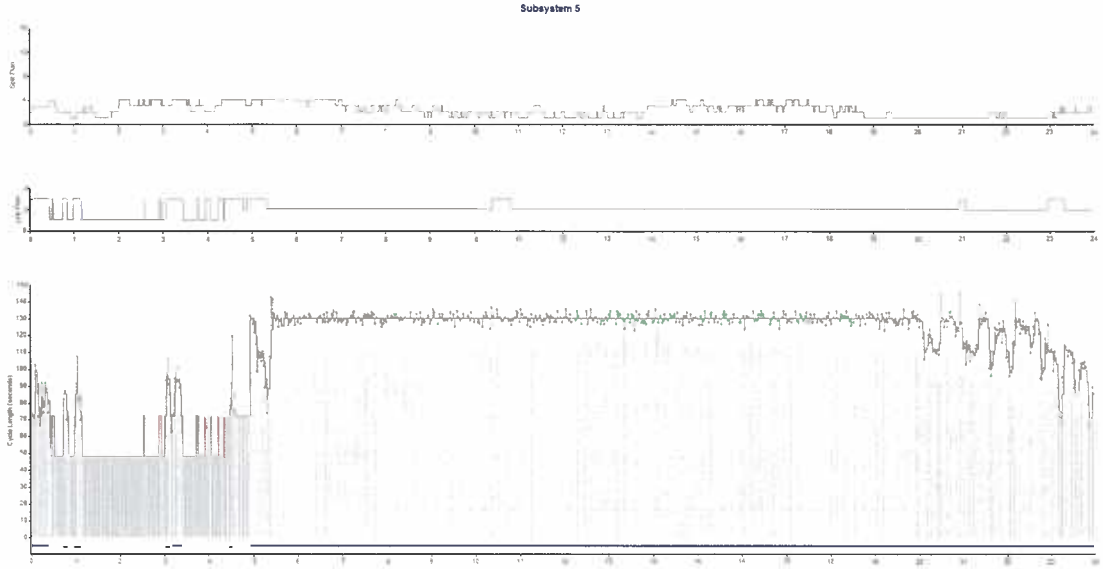
- Same capacity was used although there is different number of lane in the section near St Hilliers Rd / Rawson St intersection. It is recommended to review or justification should be provided.



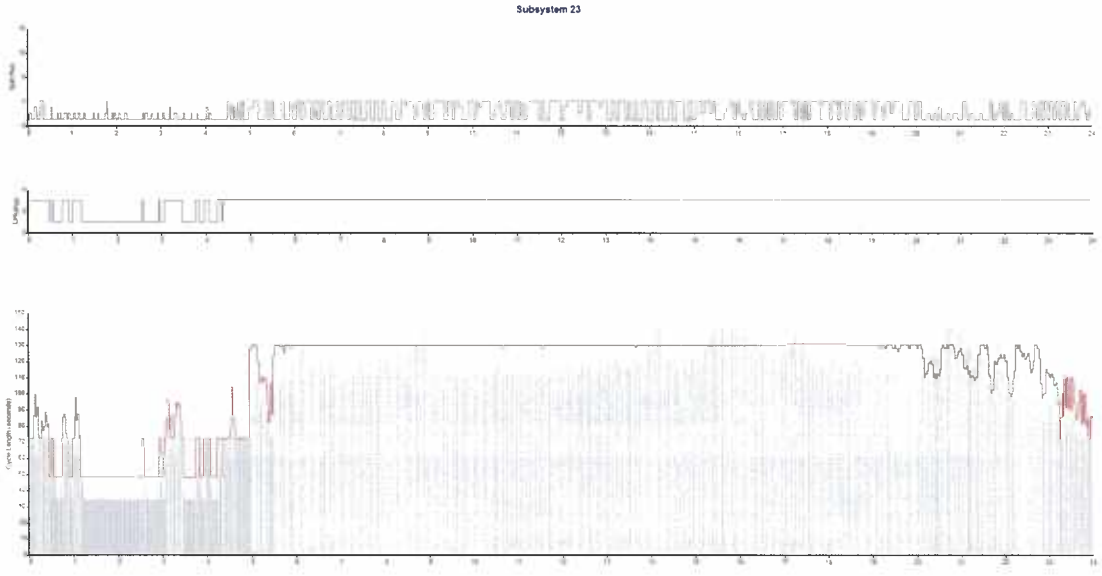
- Relatively high number of missed turn at St Hilliers Rd / Rawson St and Station Rd / Rawson St intersections in both AM and PM models. Parameters such as look ahead distance should be reviewed to reduce the number of missed turn vehicles or justification should be provided.



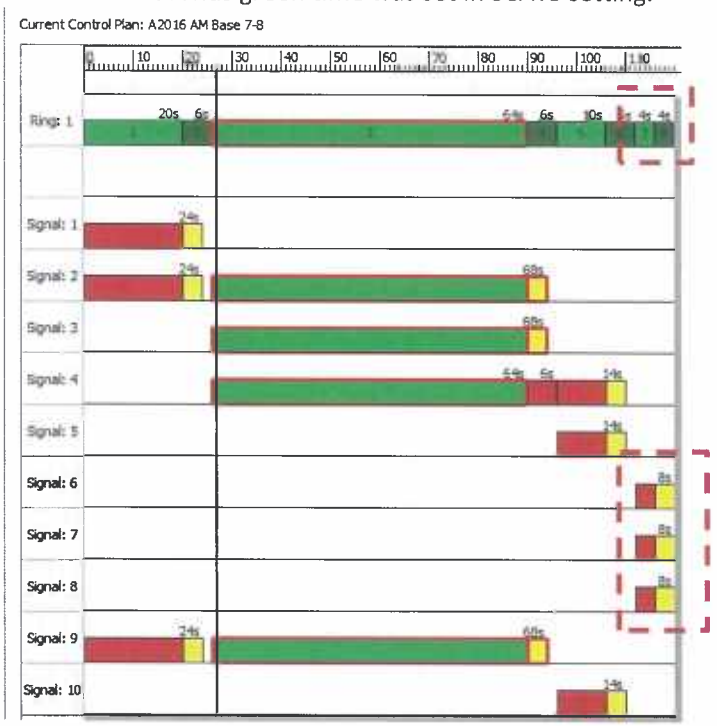
- According to SCATS, St Hilliers intersection was running 130 seconds cycle time in both AM and PM peaks. However it were modelled as 115 secs and 120 seconds in AM and PM respectively. It is recommended to review the cycle time and reflect the existing traffic condition at site.

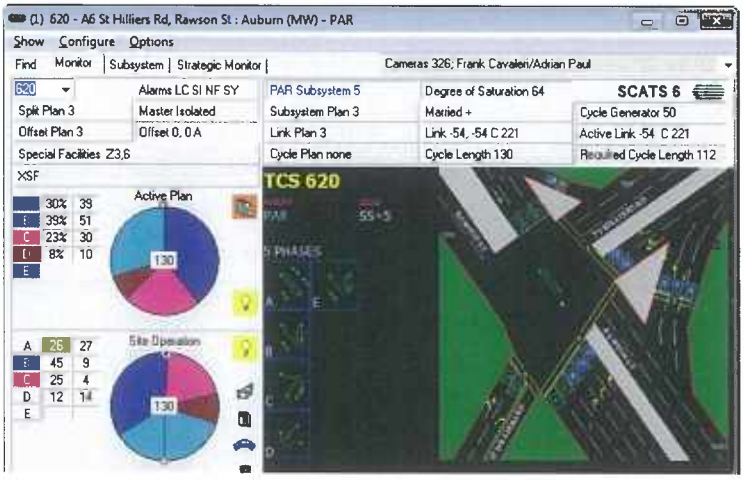


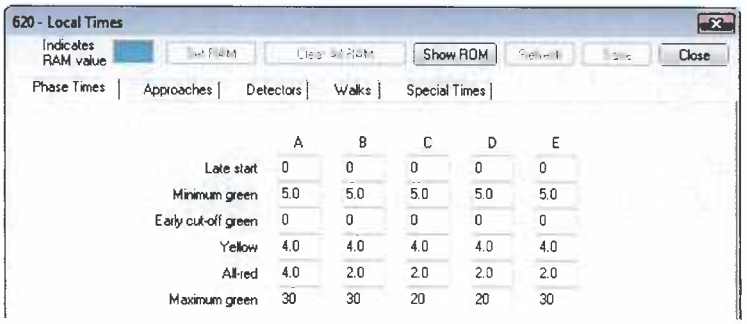
- According to SCATS, Station Road intersection was running 130 seconds cycle time in both AM and PM peaks. However it were modelled as 113 secs and 123 seconds in AM and PM respectively. It is recommended to review the cycle time and reflect the existing traffic condition at site.



- In AM model, Red time missed and there is only 4 seconds green time for traffic from St Hilliers Road (South) at St Hilliers Rd / Rawson St intersection. It may be too short where minimum 5 seconds green time was set in SCATS setting.







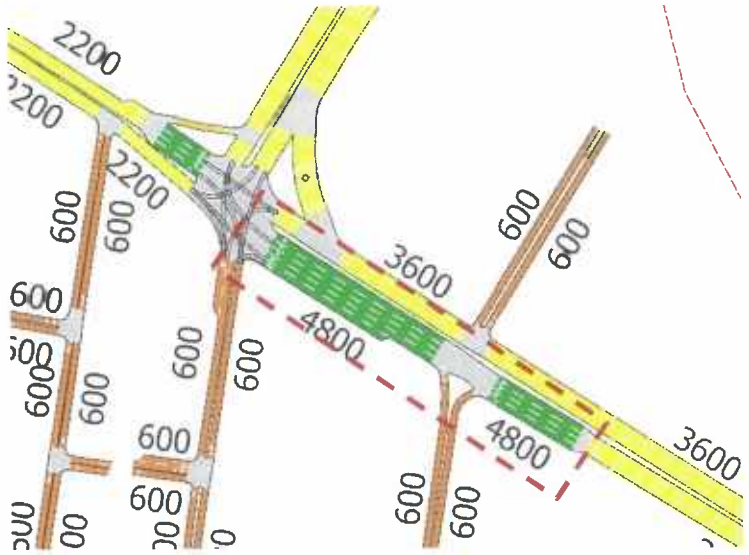
2021 and 2026 Final models Review:

- The linear traffic growth rate for AIMSUN zones (Zone 6-10) that are not included in STFM is assumed to be 1 percent per annum which is relative low compare to Zone 1 – 5. More details should be given in report about flat 1% growth assumption.
-

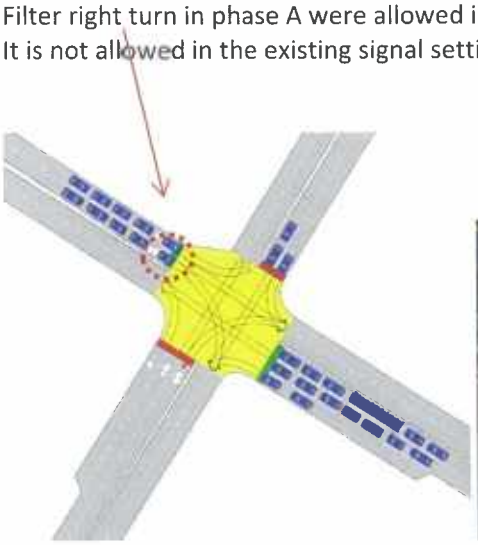
Table 5-4 Background Growth Rates for 2021 and 2026

Zone Number	Growth Rate 2017 to 2021 AM	Growth Rate 2017 to 2021 PM	Growth Rate 2017 to 2026 AM	Growth Rate 2017 to 2026 PM
1	0.52%	0.36%	0.65%	1.24%
2	2.02%	4.90%	1.49%	3.73%
3	2.08%	2.00%	1.78%	2.41%
4	9.28%	7.26%	4.56%	5.10%
5	4.98%	2.87%	3.26%	3.33%
Zone Number	Growth Rate 2017 to 2021 AM	Growth Rate 2017 to 2021 PM	Growth Rate 2017 to 2026 AM	Growth Rate 2017 to 2026 PM
6	1.00%	1.00%	1.00%	1.00%
7	1.00%	1.00%	1.00%	1.00%
8	1.00%	1.00%	1.00%	1.00%
9	1.00%	1.00%	1.00%	1.00%
10	1.00%	1.00%	1.00%	1.00%
11	1.00%	1.00%	1.00%	1.00%

- Same as base model, same capacity was used although there is different number of lane in the section near St Hilliers Rd / Rawson St intersection.



- Filter right turn in phase A were allowed into future models which could be a safety concern. It is not allowed in the existing signal setting. It should be reviewed.



Recommendation:

- The intersection with the Northumberland Road should be included in the model which is about 120m away from Station Road intersection. The lane reduction at western side of Northumberland Road intersection will affect the movement of vehicles out of Rawson Street and also the arrival pattern/rate. Queue may spill back to upstream intersections starting from this.

Lane Reduction

- It would be good if queue length validation could also be provided which reflect the accuracy of the base model.

- Fixed time signal were used in base models which could be sufficient however it would be good if variable signal could be used in future model as traffic pattern may change.

TAB D

Intersection Layout and Geometry:

Most of the intersection layout and geometry such as lane length, speed etc are correctly coded into the models.

Only 2026 base network model (existing network layout) provided. There is no proposed intersection upgrades were tested in 2026 and not provided in SIDRA network models.

Peak flow factor:

60mins peak flow period were used for all models (both traffic and pedestrian) where the 30 minutes default values should be used, otherwise, intersection performance could be underestimated because of possible oversaturation during the peak period which will not be accounted for when flows are averaged over a long period.

Volume Data Settings for Site

Unit Time for Volumes	60 minutes
Peak Flow Period	60 minutes
Volume Data Method	Separate

Movement Volumes for Selected Approach (Per 60 Minutes)

From SouthEast to Exit	SW	NW	NE
	L2	T1	R2
Total (veh) *	10	581	1192
Light Vehicles (veh)	10	562	1121
Heavy Vehicles (veh)	0	19	71
Input Check	OK	OK	OK

Volume Data Settings for Site

Unit Time for Volumes	60 minutes
Peak Flow Period	60 minutes

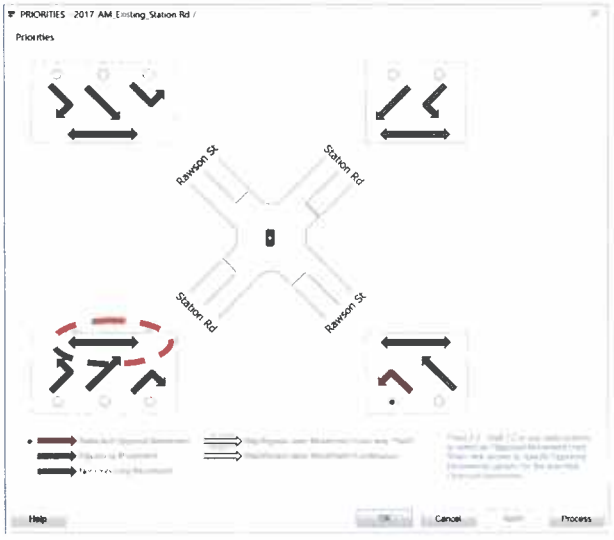
Volume Data

	Full Crossing
Volume (Per 60 Minutes)	50 ped
Peak Flow Factor	
Flow Scale (Constant)	100.0 %
Growth Rate (per year)	2.0 %

Pedestrian setting:

Default pedestrian demands (50peds) were used all movement and scenarios for AM and PM peaks which may sufficient if the area only have low number of pedestrian.

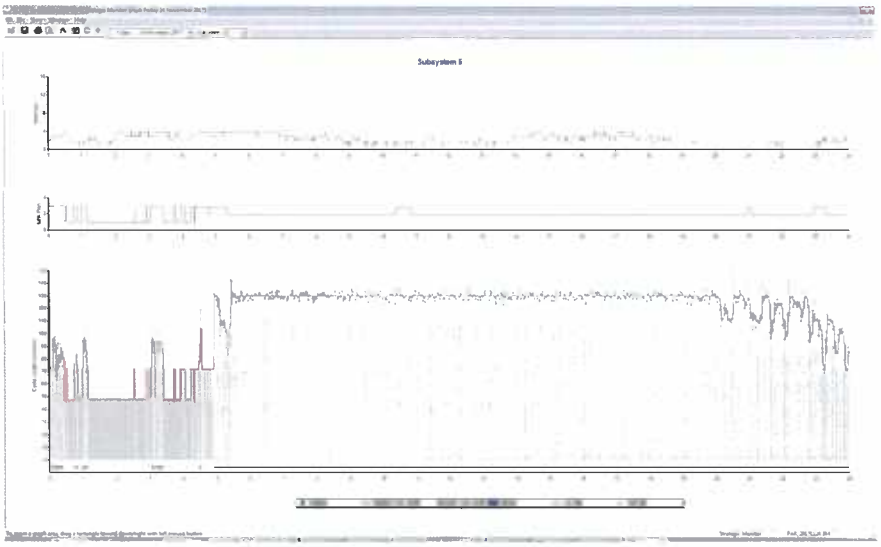
Turning movement should give priority to all pedestrian crossing which extend the delay and intersection performance.



Signal Phasing and Timing:

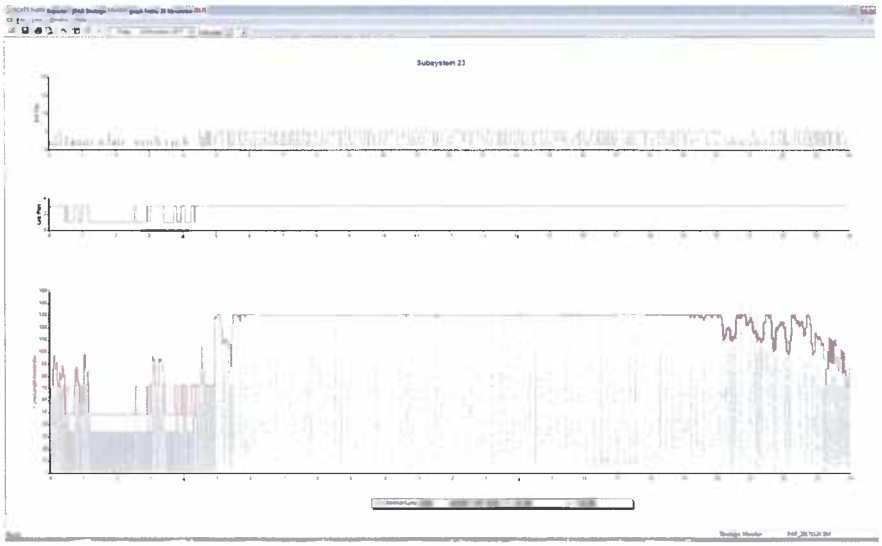
Rawson Street / St Hilliers Road Intersection -

Cycle time for existing AM and PM peaks are different to SCATS setting which running at 130secs. Different cycle time may be used in future scenarios according to different traffic pattern. Justification should be provided to how the proposed setting to work with other intersection in the corridor for future scenarios.



Rawson Street / Station Road Road Intersection -

Cycle time for existing AM and PM peaks are different to SCATS setting which running at 130secs. Different cycle time may be used in future scenarios according to different traffic pattern. Justification should be provided to how the proposed setting to work with other intersection in the corridor for future scenarios.



Performance Results

Gelibolu Pde / St Hilliers Rd intersection-

All movements were predicted to have minimal delays (LOS A) at both AM and PM peak. This intersection is assessed to operate in good condition in both existing and 2026 base models.

Rawson St / Boorea St / Percy St intersection-

All movements were predicted to have minimal delays (LOS A) at both AM and PM peak. This intersection is assessed to operate in good condition in both existing and 2026 base models.

Rawson St / Dartbrook Rd intersection-

All movements were predicted to have minimal delays (LOS A) at both AM and PM peak. This intersection is assessed to operate in good condition in both existing and 2026 base models.

Station Rd / Geibolu Pde intersection-

All movements were predicted to have minimal delays (LOS A) at both AM and PM peak. This intersection is assessed to operate in good condition in both existing and 2026 base models.

Station Rd / Rawson St intersection-

The intersection was operating satisfactory (LoS C) in existing at both AM and PM peaks. However, it is requested that the cycle time (modelled at 123secs which SCATS is 130secs) to be reviewed to see whether this is correlated with the actual traffic operation.

In 2026 base model, it was at capacity (LoS E) at both AM and PM peaks. Right turn from Station Rd (South) onto Rawson Street (East) was predicted to have delays approximately 300 seconds (LOS F).

Station Rd / St Hilliers Rd intersection-

The intersection was operating satisfactory (LoS C) in existing at both AM and PM peaks. However, it is requested that the cycle time (modelled at 114secs which SCATS is 130secs) to be reviewed to see whether this is correlated with the actual traffic operation.

In 2026 base model, it was unsatisfactory (LoS F) at PM peaks. All movement from Rawson Street (West) was predicted to have delays approximately 75 seconds (LOS F).