

3 December 2018

P0925 CMCC Response to Submissions

Catholic Schools Office – Diocese of Maitland Newcastle
C/- Webber Architects Suite 3, L1,
426 Hunter Street
Newcastle NSW 2300

Attn: Tim Hayes

Dear Tim,

Re: Response to Submissions Catherine McAuley Catholic College

This document has been prepared as part of the Response to Submissions for the Catherine McAuley Catholic College development (SSD 8989) for the issues relating to traffic, parking and access. This includes responses to:

- Roads and Maritime Services (RMS)
- Port Stephens Council
- Government Architects Office NSW (GANSW)
- Department of Planning and Environment (DPE)
- Transport for NSW (TfNSW)
- Department of Defence

Response to RMS Comments

Roads and Maritime does not accept the traffic generation rates used within the proponent's Traffic Impact Assessment ('TIA') and associated SIDRA model. The following matters should be addressed and corrected in an amended TIA and associated model:

Comment	Response
<p>1. The light vehicle generation rates are greatly understated due to the rural location of the school and the dispersed school catchment and are not consistent with the rates provided for comparable schools in Appendix C of the TIA (e.g. St Josephs and St Patricks Lochinvar which are on direct opposite sides of the New England Highway and share bus routes). It is recommended the rates recorded for primary (58%) and high school from Lochinvar (25%) be applied to the proposed development. Furthermore, inclusion of light vehicle traffic generated by staff and early learning centre attendees should be included.</p> <p>Following a review of the traffic generation rates, a further analysis of on-site parking provision should be given and addressed in an updated TIA.</p>	<p>In regard to points 1, 2 and 3:</p> <p>The traffic generation rates recommended by the RMS for the development have been adopted, as per the outlined light vehicle and bus usage rates stated, with the remainder to walk/cycle. Parking was provided for staff and students in accordance with the DCP, with these requirements to remain the same.</p> <p>Further parking/vehicle storage has been provided to cater for the additional vehicles on site during the pick-up period as a result of the increased rate applied to the primary school. (See updated TIA)</p>

<p>2. The bus usage within the proponent's assessment is exaggerated. The total bus mode share of 64% of students is greater than the average bus usage for sites referred to in Appendix C (57%). Furthermore, not all sites listed in Appendix C are considered comparable due to the rural nature and low residential density surrounding the subject site and the vast school catchment area. As above, it is recommended the separate primary and high school rates from Lochinvar (being 37% and 70% respectively) be applied to the subject development.</p>	
<p>3. The total walk / cycle mode share of 6% is high considering the school's surrounding residential population comprising very low density housing and absence of existing footpaths (note, no timeframe or certainty for the delivery of Council's shared paths has been provided to support a higher modal uptake).</p>	
<p>4. A total volume of 24 buses generated by the ultimate development is considered low. While Roads and Maritime note that the school is to commission a dedicated bus service, it is considered unlikely that a network can be designed to route 24 buses throughout the vast catchment so that they are at full capacity.</p>	<p>Buses – upon altering the traffic rates in line with the RMS recommendations the number of buses required to service the school is reduced (22 instead of 24), given a higher light vehicle generation was assigned. In order to account for some buses servicing the school to be below their capacity of 50, an average occupancy of 75% was applied which determined 29 buses would be required to service the development.</p>
<p>5. Further information about the collection method of data within Appendix C <i>Student Travel Data</i> should be provided to justify the use of comparable data including the year the data was collected and the method of collection (i.e. student survey or traffic counts).</p>	<p>Further info about collection of data to be provided by Catholic Schools office.</p>
<p>6. The SIDRA model has used the default 30min peak flow with 95% peak flow factor. The model should be adjusted to reflect a typical 20min school peak period and demonstrate a sharp peak drop off at 8:30-9:00am.</p>	<p>Revised SIDRA modelling was completed for the new traffic generation rates applied, which included the 20 minute peak flow requested.</p> <p>The updated Sidra modelling demonstrates that the proposed signal controlled intersection will provide adequate capacity for the development.</p>
<p>7. The internal light vehicle road network is likely to be significantly congested through the PM peak as both buses and light vehicles seek to navigate the exit lanes. This is due to the closely staggered internal intersections and the signalised controlled exit (all within 35m). SIDRA analysis suggests the internal crossovers could be regularly blocked by queued vehicles. It is recommended that alternate intersection arrangements be investigated to simplify the intersection arrangements at this location.</p>	<p>A wide range of alternative options were examined to achieve the most efficient vehicle interactions on site, with the key being to ensure all vehicle queues could be contained within the site and not impact upon the classified road. The final design was determined to achieve this in the best manner possible given the site constraints.</p>
<p>8. Staff exiting the site outside the school PM peak is likely to affect the efficiency of the classified road during the regular PM peak. A SIDRA model of this should be carried out with assumptions of the staff and ELC pickups justified in an addendum to the TIA.</p>	<p>A SIDRA analysis was run for the road network peak during the PM, including all primary school and secondary school staff movements as well as the ELC movements. Modelling was completed for the 2017 and 2027 scenarios, including 2.4%</p>

	<p>background growth along Medowie Road, with the proposed intersection layouts sufficient to accommodate these flows.</p> <p>During the regular PM peak, the background traffic is around 200 vehicles per hour higher. However the school flows, allowing for ALL staff to exit in the peak hour, are less than 50% of the school peak demand. Therefore the proposed site access will operate adequately during the school and road peak periods.</p>
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Response to Port Stephens Council Comments

Requirement	Response
<p>Item 10</p> <p>The information supplied is not considered to satisfactorily address the requirements of the SEAR's with regards to Transport and Accessibility. In particular:</p> <p>a. Accurate details of the current peak hour traffic have not been provided (only a single count at a peak period specified by the traffic consultant). No consideration of the potential for the actual peak occurring outside the count hours has been provided e.g. It is unclear whether the brief count includes a significant peak that occurs on Medowie Road during the shift change at the nearby RAAF base;</p> <p>b. Accurate details of the current daily traffic have not been provided (only an estimate based on a single peak hour count);</p> <p>c. Accurate details of the current daily and peak hour cycle movements have not been provided;</p> <p>d. Details of estimated total daily and peak hour trips generated by the proposal, including vehicle, public transport, pedestrian and bicycle trips based on surveys of similar schools within the local area have not been provided;</p>	<p>Normal traffic engineering practice is to allow for a single day of counts only, completed on a Tuesday, Wednesday or Thursday. Our understanding of the peaks associated with RAAF base are that they occur outside of the peak periods associated with the school – we do not consider it appropriate to consider the peak associated with the RAAF base as the school at that time will be generating minimal traffic flows. The surveyed peak period in the AM coincides with the school flows, with this period modelled as the worst case. The road network peak in the PM has now been modelled for two scenarios, being the peak school flows generated and for the flows during the recorded road network peak to ensure the intersection operates to a suitable standard at critical times.</p> <p>Daily traffic flows for the school are not critical. The RMS Guide to Traffic Generating Developments indicates that an assessment during the critical peaks is appropriate – it follows that if the road network has adequate capacity during the school peak period then there is capacity outside of the peak and throughout the day. As stated in the TIA, the overall impact upon daily traffic flows in the locality will be relatively low, as outside of the drop off and pick up periods the traffic movements associated with the school are minimal.</p> <p>Though no data was recorded, the design of the signals and site allows for the through cycle movements along Medowie Road as per RMS requirements, with the upgraded intersection providing a high level of safety for cyclists.</p> <p>Travel data for 4 other primary and secondary schools was supplied by the CSO to determine travel mode splits. This provided accurate data for comparable schools, with the updated mode share applied based on the recommended rate identified by RMS for the schools in Lochinvar.</p>

<p>e. Details have not been provided on improvements required to affected intersections including Medowie Road at Richardson Road and Blueberry Road, and Kingfisher Close at Blueberry Road;</p> <p>f. The impact of trips generated by the development on nearby intersections, with consideration of the cumulative impacts from other approved developments in the vicinity, and the need/associated funding for, and details of, upgrades or road improvement works. Traffic modelling is to be undertaken using SIDRA network modelling for current and future years – no consideration of external intersections has been provided; and</p> <p>g. An assessment of the cumulative on-street parking impacts of cars and bus pick-up/drop-off, staff parking and any other parking demands associated with the existing and proposed development – this item has not been addressed. Note it is considered that the above survey of similar schools within the local area will need to be considered when addressing this item.</p>	<p>We do not consider that this project triggers any upgrade at the roundabout controlled intersection of Medowie Road and Richardson Road. As the school will not be adding any traffic on Blueberry Road or Kingfisher Close no road upgrades are required.</p> <p>Sidra modelling allowed for background growth. Discussion with the RMS did not highlight any other intersections requiring any assessment as part of this project.</p> <p>All parking and bus drop off / pick up are located on site and therefore no on-street impact is generated by the project. The mode share of private vehicles and buses has been assigned based on comparable data from other schools, with sufficient parking and queuing on site to cater for this.</p>
<p>Item 11</p> <p>The applicant has not addressed comments provided by Council during the consultation period. Most significantly, all traffic movements both into and out of the site from Medowie Road shall be catered for by the proposed signalised intersection.</p>	<p>Access for all movements in and out of the traffic signals was assessed under the previous designs, with this determined as unsuitable given a range of reasons which are outlined within the options analysis completed for the site (completed by Webber architects).</p>
<p>Item 12</p> <p>Council's Traffic Committee dispute advice tabled by Seca Traffic Consultants that 'the impact of the traffic volumes generated by the School as well as the traffic lights would be limited to the peak AM & PM periods of drop off and pick up, which occurs over a 15-20 minutes period twice a day'. The site caters for Early Learning, Primary and High School students so the spread of arrival and departure times would potentially be experienced over a longer period than stated by SECA.</p>	<p>The major impact of the development will be during the traditional drop off and pick up period. Outside of this period, the traffic flows on Medowie Road are much lower and the traffic flows for the school site are also much lower. It therefore follows that the impact is much lower outside of the peak school demands. Sidra modelling has been completed to confirm this.</p> <p>The traffic modelling assessed all generated development flows over the critical peak hours with 3 key periods modelled as described previously (Item 10a).</p>
<p>Item 14</p> <p>The proposal to have only the exiting traffic from the school utilising the traffic signals is not supported for the following reasons:</p>	

<p>a. The proposed right-turn into the school, across the northbound travel lane, will pose increased safety risk for potentially inexperienced drivers (school students). The proposed location is on a high volume and high speed section of road. This turn would be much better accommodated within the proposed traffic signals, especially as a high proportion of trips will originate from the Medowie direction;</p>	<p>The right turn into the site to the south of the new signals has been discussed and supported in principle by the RMS. During the critical high traffic demand periods i.e. drop off and pick up there will be a 40 km/h speed zone in operation, with much lower demands outside of this period. Visibility at this location is good and there are no specific safety concerns raised for this movement. This right turn has been designed in accordance with Austroads Guidelines.</p>
<p>b. The additional travel distance required for buses (from the Medowie direction) to enter the school and the increased safety risk of u-turning at the Richardson Road roundabout is not supported. The length of road between South Street and including the roundabout has a significant crash history. Council has received written and verbal advice from bus operators voicing concerns regarding the proposed bus access arrangements;</p>	<p>The U turn for buses at the roundabout is not considered a safety risk, as accident rates for buses are typically much lower than light vehicles due to their high visibility and lower vehicle speed.</p> <p>During discussion with the bus company it was noted that in the PM it was likely the vast majority of buses would approach from the south, thereby not requiring the U-turn. In the AM it is anticipated approximately 12 of the total 29 buses would approach from the north, with no specific safety concern regarding these buses completing a U-turn manoeuvre.</p>
<p>c. The internal layout and car park access appears convoluted which may encourage drop-off and pick-up activities to be undertaken on Medowie Road;</p>	<p>Parent drop off and pick up arrangements will be documented for all parents and a protocol will be prepared to manage the on-site operations as per normal school requirements. NO Stopping zones will be provided on Medowie Road as per the RMS requirements.</p>
<p>d. RMS input into the design and operation of the traffic signals will be required; and</p>	<p>Yes, RMS approval is required.</p>
<p>e. Adequate footpath connection to the traffic signals will also be required.</p>	<p>Footpath connections have been provided from the subject site to the traffic signals, as well as pedestrian crossings on all 4 approaches to the traffic signals as per RMS requirements.</p>

Response to GANSW Comments

Requirement	Response
<p>There appears to be little provision for pedestrian access to the campus, with no footpaths shown on the proposed Medowie Rd / South St intersection upgrade.</p>	<p>Pedestrian access provides connection to the traffic signals which incorporate pedestrian phasing.</p>
<p>The extent and configuration of car parking has a significant impact on the proposal, particularly in terms of pedestrian amenity / safety and campus identity / presentation. This has been a key issue since the preliminary review sessions with GANSW. While some improvements were made during the review period – between meetings one and two, this issue has not yet been adequately addressed.</p>	<p>Parking provision exceeds the DCP but has been determined based on other schools and ensures that all parking can be accommodated on site. RMS indicated that no parking will be permitted on Medowie Road and development must ensure adequate off-street parking.</p>
<p>Provisions for car parking seem excessive. There are 272 formal spaces (44 more than required by the Port Stephens DCP) with an additional 50 informal spaces as well as 12 on site bus bays which will be used for car parking outside key bus drop off/ pick up times. The combined impact of these, together with a complex internal road system, creates an extensive asphalt terrain that dominates the campus frontage.</p>	<p>Parking to cater for school visitors and mid-week demands for the chapel was provided, which is not incorporated under the DCP rates.</p>
<p>Bicycle parking has been provided but it is located at the far end of the secondary campus. While this is practical in terms of proximity to change rooms (which can double as end of trip facilities) it should be more centrally located to promote bicycle use by staff and primary students.</p>	<p>Bicycle use is considered to be required for the senior school primarily with minimal use by the junior school.</p>

Response to DPE Comments

Requirement	Response
<p>The proposed car parking, vehicle queuing and access arrangements occupy a large proportion of the frontage to Medowie Road. The Department raises concern with the provision of car parking which exceeds the Council's DCP requirements, safety as a result of vehicle/bus/pedestrian conflicts, multiple access points to the site and the amount of impervious surfaces. The Department therefore requests an options analysis be prepared for car parking, queuing and access arrangements for the site including consideration of:</p> <ul style="list-style-type: none"> • Combining access points to the site • Better utilisation of the existing intersection between Medowie Road and South Street • Vehicle and bus queue lengths • Reducing car parking spaces • Increasing the amount of soft landscaping treatments • Minimising vehicle/bus/pedestrian conflict points • Pedestrian and cyclist access 	<p>Parking provision exceeds the DCP but has been determined based on other schools and ensures that all parking can be accommodated on site. RMS indicated that no parking will be permitted on Medowie Road and development must ensure adequate off-street parking.</p> <p>Parking to cater for school visitors and mid-week demands for the chapel was provided, which is not incorporated under the DCP rates.</p> <p>Options analysis completed by Webber Architects.</p>

Response to TfNSW Comments

Requirement	Response
<p>Clarification of bus entry arrangements</p> <p>Comment:</p> <p>It is unclear from the road design plans whether buses heading south along Medowie Road would be able to utilise the bus entry access via a right-in movement.</p> <p>It is preferred that a right-in movement is made available as an alternate route. Using a left-in only access would increase the time and cost to operate bus services to the school.</p> <p>Recommendation:</p> <p>The Applicant should confirm whether buses heading south along Medowie Road would be able to utilise the bus entry access via a right-in movement.</p>	<p>The right-in bus movement at the traffic signals was not included due to the high number of bus movements anticipated for the development, with requirement for buses to queue on site.</p> <p>The options analysis (completed by Webber Architects) identifies the constraints for the internal road network in this regard, with the final layout of the internal road network not having sufficient area for buses turning right into the site to queue, with the potential risk of queuing back onto Medowie Road unacceptable.</p>
<p>Bicycle parking and end-of-trip facilities</p> <p>Comment:</p> <p>The Traffic Impact Assessment states that “bicycle storage facilities will be provided within the school grounds to cater for both staff and student cycling demands”. However, no indication has been provided as to the quantity of storage spaces that would be provided as part of the proposal. The report identifies that the DCP requires that the proposal should provide a total of 198 spaces, however, recommends a provision of 148 spaces would be appropriate.</p> <p>Recommendation:</p> <ol style="list-style-type: none"> 1) The Applicant should state the quantity of bicycle parking spaces proposed to be included as part of the application. Any bicycle parking should be supported with end-of-trip facilities that are located in secure, convenient and accessible areas in accordance with relevant development control plans and guidelines. 2) DP&E should include a condition of consent requiring a provision of 148 bicycle storage spaces, which would be located and designed in accordance with AS2890.3, and supporting end-of-trip facilities. 	<p>The recommended rate in the Council DCP (198 spaces) is not appropriate for this site, given only 5% of each schools population are anticipated to walk/cycle (being less than 100 students in total).</p> <p>The TIA states “A reduction to 50 bike spaces is therefore proposed for the site”.</p> <p>This refers to a total of 50 bike spaces being appropriate, not a reduction of 50 off the 198 to give 148 as stated in the TfNSW commentary which would equate to more bike parking than the total students within a reasonable walking/cycling distance.</p>

Department of Defence

Requirement	Response
<p>Defence is concerned that existing road capacity and condition will not be sufficient to cater for the increase in traffic. Medowie Road is important to defence as it provides access to RAAF Base Williamtown and is a key route to work for Defence staff. Any development will need to consider the nature of Defence Traffic, including potential use by heavy vehicles. The consent authority needs to be satisfied that traffic can be appropriately managed.</p>	<p>The development includes a significant upgrade to the intersection of Medowie Road and South Street, including the duplication of Medowie Road in the vicinity to ensure that through movements for commuters along this road are not overtly impacted upon.</p> <p>Traffic modelling has been completed during the existing road network peak periods along this road, as well as during the school periods incorporating the traffic generate by the development. This modelling determined that during the critical periods the proposed intersection upgrades are suitable to ensure the efficient operation of this intersection. Given the road network operates to a satisfactory level during the peak periods, outside of these periods it shall operate at a more efficient level.</p>