



3 October 2018

Department of Planning and Environment  
School Infrastructure Assessments  
GPO Box 39  
SYDNEY NSW 2001

Attention: Andrew Beattie / Scott Hay,

**MEDOWIE ROAD (MR518): SSD 8989, NEW CATHOLIC COLLEGE – ‘CATHERINE MCAULEY CATHOLIC COLLEGE, LOT: 413 DP: 1063902, 507 MEDOWIE ROAD, MEDOWIE**

Reference is made to Department of Planning and Environment's ('DPE') letter dated 2 July 2018, regarding the abovementioned application which was referred to Roads and Maritime Services (Roads and Maritime) for comment in accordance with Clause 57 of the *State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017*.

Roads and Maritime understands the development involves construction of a new Catholic school in Medowie over seven stages and consists of:

- A high school for up to 1,190 students, a primary school for up to 630 students and an early learning centre for up to 124 children;
- A library, multipurpose hall, canteen, café, chapel and administration and support facilities;
- Environmental works including tree removal, earthworks and drainage;
- Carparking for 272 vehicles, access roads and fire trails; and,
- Associated landscaping works and signage.

The proposal also involves the provision of a new entry point for light vehicles to the south of the site from Medowie Road, a separate dedicated bus entry from Medowie Road and an upgrade of the intersection of Medowie Road / South Street to a traffic control signals ('TCS') to facilitate traffic controlled egress for all vehicles leaving the proposed school site.

Transport for NSW and Roads and Maritime's primary interests are in the road network, traffic and broader transport issues. In particular, the efficiency and safety of the classified road network, the security of property assets and the integration of land use and transport. Medowie Road is a classified (Regional) road. Accordingly, Port Stephens Council is the roads authority for Medowie Road and all other roads in the surrounding network.

## Roads and Maritime response

Roads and Maritime has reviewed the information provided and raises the following concerns about the proposed traffic generating development and proposed road upgrades for DPE's consideration:

- 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:
  - 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.

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.
  - 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.
  - 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 shard paths has been provided to support a higher modal uptake).
  - 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.
  - Further information about the collection method of data within Appendix C *Student Travel Data* 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).
  - 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.
  - 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.
  - 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.

- The concept TCS design does not meet the standards of *Austrroads Guide to Road Design 2010* and associated supplements as the concept intersection has not been designed to the prevailing speed limit. The intersection has been designed for a 40kph school zone however the proponent has advised that the site will be used outside school peak periods.

Please see *Attachment A – Roads and Maritime Design Review (Revision 2)* to be addressed by the proponent. Following a review of the design comments by the proponent, Roads and Maritime recommends the concept intersection design be revised to comply with Austrroads and relevant supplements and Australian Standards.

- Landscaping on the school site at the southwest corner of the TCS should incorporate plants that encourage redirection of pedestrians to cross to the northwest corner for entry to the school grounds. This removes the potential for pedestrians to attempt to cross the bus lane and exit to the carpark for access to the school grounds. It is unclear on the Landscaping Plans what measures have been taken to address this requirement.
- For road safety reasons Roads and Maritime does not generally support advertising signage with an LED component capable of supporting digital image and digital video display in areas where drivers are required to make critical decisions. In most circumstances, LED signage has the ability to display animation, scrolling text, flashing and use multiple colours all of which have the potential to distract drivers.

Although Roads and Maritime concurrence is not required for this sign in accordance with *SEPP No. 64 - Advertising and Signage*, Roads and Maritime has reviewed the information provided and does not support an LED sign in the proposed location. The proposed location of the LED sign is in the vicinity of a school crossing and as such is considered likely to cause distraction to drivers and create a safety hazard for pedestrians, particularly school children.

Further to the above matters, Roads and Maritime highlights that in determining the application under Part 4 of the *Environmental Planning & Assessment Act, 1979* it is the consent authority's responsibility to consider the environmental impacts of any road works which are ancillary to the development, such as (inter alia) removal of trees, relocation of utilities, stormwater management, etc. This includes any works which form part of the proposal and/or any works which are deemed necessary to include as requirements in the conditions of development consent (i.e. the proposed TCS). Depending on the level of environmental assessment undertaken to date and the nature of the works, the DPE may require the developer to undertake further environmental assessment for the ancillary road works.

Following receipt of another referral addressing the concerns raised above, Roads and Maritime will provide further advice.


Should you require further information please contact Hunter Land Use on 4908 7688 or by email at [development.hunter@rms.nsw.gov.au](mailto:development.hunter@rms.nsw.gov.au).

Yours sincerely



**Peter Marler**  
Manager Land Use Assessment  
Hunter Region

## Attachment A - Roads and Maritime Design Review (Revision 2)

 <b>Transport Roads &amp; Maritime Services</b> Engineering Services Road Design	Project Title	Proposed Signalised intersection- Catherine McAuley Catholic College – 507 Medowie Rd and South St – Medowie		DESIGN REVIEW		
	Road No.	Design Organisation	Drawing No.	ROAD ENGINEERING		
	MR518	MPC	17-828	This design review by the Roads & Maritime Services (hereafter referred to as "RMS") covers an examination of the provided drawings and report to determine if they conform to RMS policy and practice. The review is not a proof check or a dimensional check and may not be complete.		
Review requested by:		Review performed by:		Project Status	Issue No	Review Issue Date
01 – Kylie-Anne Pont, Development Assessment Officer, RMS Hunter 02 – Kylie-Anne Pont, Development Assessment Officer, RMS Hunter		01 – Greg Pollard (GP), Designer, Design Newcastle, Engineering Services, RMS 02 – Greg Pollard (GP), Designer, Design Newcastle, Engineering Services, RMS		01 – Strategic 02 - Strategic	01 – 02-	01 – 11/4/18 02 – 16/08/18
Statement by reviewer:	01 –Review of 8 Plans dated 23.03.18 rev 1 – Proposed Signalised intersection- Catherine McAuley Catholic College – 507 Medowie Rd and South St – Medowie 02 –Review of 8 Plans dated 16.05.18 rev 2 – Proposed Signalised intersection- Catherine McAuley Catholic College – 507 Medowie Rd and South St – Medowie					

Item	Date (DD/MM/YY)	Reviewer(s) (Initials)	Aspect (D – Design, C – CAD/Drafting)	Design Component / Discipline	Sheet / Section	Review Comment	To be completed by Designers prior to any further assessments being carried out by RMS			Status (I-N-O-P-)	Closeout (Initial & DD/MM/YY)
							Response & Action	Response By (Disciple & Initials)	Response Date (DD/MM/YY)		
Issue 01 – Strategic											
1.	11/4/18	GP	D	Design references	all	Also refer to comments on markup. Refer RMS Cadd Manual for all drawings for detail design. Refer to RMS signal design and RMS standard drawings and Specifications including Austroads guides and RMS supplements to Austroads and Australian standards. It is RMS policy to design at posted speed + 10km/hr. Therefore Design speed is 90km/hr	<i>Agreed or otherwise with comment. Note what has been done to address the review comment if applicable.</i>	Position – AA	(DD/MM/YY)	P	
2.	11/4/18	GP	D	Right turn Deceleration lane into Road 1	R02, R03	The Right Deceleration Lane should be marked to allow for comfortable deceleration to stop. Refer Austroads Part 4a table 5.2. The internal road network should be based on 10km/hr shared zone. <b>GP 16/08/18 Right turn lane shown is substandard for design speed and posted speed.</b>	<i>Agreed or otherwise with comment. Note what has been done to address the review comment if applicable.</i>	Position – AA	(DD/MM/YY)	O	
3.	11/4/18	GP	D	Left turn Deceleration lanes	R02, R03, R04	The Left Deceleration Lanes should be marked to allow for comfortable deceleration to 20km/hr. Refer Austroads Part 4a table 5.2. The internal road network should be based on 10km/hr shared zone. <b>GP 16/08/18 left turn lane shown is substandard for design speed and posted speed</b>	<i>Agreed or otherwise with comment. Note what has been done to address the review comment if applicable.</i>	Position – AA	(DD/MM/YY)	O	
4.	11/4/18	GP	D	Intersection opposing right turns	R02, R04	Please show turn paths on design set .Need to provide back to back right turns for Single unit trucks at intersection with 1m path offsets refer Austroads part 4 A.16.2 <b>GP 16/08/18 vehicle turn paths not shown.</b>	<i>Agreed or otherwise with comment. Note what has been done to address the review comment if applicable.</i>	Position – AA	(DD/MM/YY)	O	
5.	11/4/18	GP	D	On road Cyclists location	R02, R03,R04, R05	On road cyclist location should be marked out at back of shoulder on left deceleration lanes at Posted speed of 80km/hr <b>GP 16/08/18 onroad cyclist shown in incorrect location for design speed</b>	<i>Agreed or otherwise with comment. Note what has been done to address the review comment if applicable.</i>	Position – AA	(DD/MM/YY)	O	
6.	11/4/18	GP	D	Acceleration to Merge lanes	R02	Merge length for Acceleration lanes are short they should be 90m for 90km/hr Refer Austroads 4a Table 5.5. Minimum desirable length 190m. <b>GP 16/08/18 Southbound and Northbound acceleration lanes are substandard for design and posted speed.</b>	<i>Agreed or otherwise with comment. Note what has been done to address the review comment if applicable.</i>	Position – AA	(DD/MM/YY)	O	
7.	11/4/18	GP	D	Left turn Deceleration lane to South St	R02, R05	Deceleration Lanes should be marked to allow for comfortable deceleration to stop. Refer Austroads Part 4a table 5.2 and adjusted for the down grade <b>GP 16/08/18 left turn lane shown is substandard for design speed and posted speed</b>	<i>Agreed or otherwise with comment. Note what has been done to address the review comment if applicable.</i>	Position – AA	(DD/MM/YY)	O	
8.	11/4/18	GP	D	Pedestrian crossing	R02, R04	Pedestrian crossing lines may be required on all legs of the TCS. Standard RMS Policy.	<i>Agreed or otherwise with comment. Note what has been done to address the review comment if applicable.</i>	Position – AA	(DD/MM/YY)	I	GP 16/08/18
9.	11/4/18	GP	D	Shared path on South Street	R02, R04	Shared path on South Street should be considered for Children riding to school.	<i>Agreed or otherwise with comment. Note what has been done to address the review comment if applicable.</i>	Position – AA	(DD/MM/YY)	O	

Resolved by: (to be completed by reviewer)	ACTION "I" = Incorporated into design or documentation (item can be closed-out) ACTION "O" = Issue/Comment remains outstanding ACTION "P" = Pending ACTION "N" – No action required (item can be closed-out)	Response & Action	To be completed by design team	Closeout:	Record date of closeout by Reviewer/Approver. Responsible designer to seek closeout of all comments prior to submission of revised design.
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							Response & Action	Response By (Disciple & Initials)	Response Date (DD/MM/YY)		
10.	11/4/18	GP	D	40 School zone	R02, R03,R04, R05	flashing 40 School zone may be required on Medowie Rd	<i>Agreed or otherwise with comment. Note what has been done to address the review comment if applicable.</i>	Position – AA	(DD/MM/YY)	P	
11.	11/4/18	GP	D	Bus stop location	R02, R04	Bus stop needs to be located outside the road reserve GP 16/08/18 deceleration lane to bus zone only adequate for posted 40k zone	<i>Agreed or otherwise with comment. Note what has been done to address the review comment if applicable.</i>	Position – AA	(DD/MM/YY)	O	
12.	11/4/18	GP	D	Hazards	R02, R03,R04, R05	Hazards need to be assessed for design speed of 90km/hr. Lighting may be required and Absorbing poles would be preferred.	<i>Agreed or otherwise with comment. Note what has been done to address the review comment if applicable.</i>	Position – AA	(DD/MM/YY)	O	
13.	11/4/18	GP	D	Pedestrian Fence	R02, R04,R05	Pedestrian fence may be required on Medowie Road to make students cross at the Signals and deter parent from dropping children off on Medowie Rd.	<i>Agreed or otherwise with comment. Note what has been done to address the review comment if applicable.</i>	Position – AA	(DD/MM/YY)	O	
14.	11/4/18	GP	D	Road 2 exit lanes	R02, R05	Due to unexpected delays on internal network please consider extra lanes on the exit for Road 2. As we don't want parents to park on Medowie Rd to pick up their children to save time.	<i>Agreed or otherwise with comment. Note what has been done to address the review comment if applicable.</i>	Position – AA	(DD/MM/YY)	O	
15.	11/4/18	GP	D	Off-road Cycleway	R02, R05	School students riding on road to school on Medowie Rd would be undesirable as a RMS perspective. Does council propose a off-road facility	<i>Agreed or otherwise with comment. Note what has been done to address the review comment if applicable.</i>	Position – AA	(DD/MM/YY)	O	Council closeout
16.	11/4/18	GP	D	Southbound approach to Signals	R02, R05	The linemarking needs to be seen from north side of the crest at the design speed to indicate the presence of the intersection and possible long queues	<i>Agreed or otherwise with comment. Note what has been done to address the review comment if applicable.</i>	Position – AA	(DD/MM/YY)	O	
17.	11/4/18	GP	D	Internal road network	R02	Internal road network should encourage slow driver speed of 10km/hr for shared zone.	<i>Agreed or otherwise with comment. Note what has been done to address the review comment if applicable.</i>	Position – AA	(DD/MM/YY)	O	
18.	11/4/18	GP	D	South St Deceleration lane	R02, R04, R05	South St is posted as 60km/hr Therefore deceleration lane length should be 75m. Austroads 4a Table 5.2	<i>Agreed or otherwise with comment. Note what has been done to address the review comment if applicable.</i>	Position – AA	(DD/MM/YY)	O	Council closeout

Resolved by: (to be completed by reviewer)	ACTION "I" = Incorporated into design or documentation (item can be closed-out) ACTION "O" = Issue/Comment remains outstanding ACTION "P" = Pending ACTION "N" – No action required (item can be closed-out)	Response & Action	To be completed by design team	Closeout:	Record date of closeout by Reviewer/Approver. Responsible designer to seek closeout of all comments prior to submission of revised design.
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