SECAsolution
ACN: 164611652
ABN: 14164611652
Ground Floor, 161 Scott St
Newcastle NSW 2300
Ph: (02) 4032 7979
admin@secasolution.com.au

26 August 2022

P1410 St James RFI Traffic and Parking

Sparke Helmore Lawyers
Level 7, 28 Honeysuckle Drive
Newcastle NSW 2300

Attn: David Gunter

Dear David,

Review of traffic and parking for St James school, Kotara

Further to your recent email, we have reviewed the comments provided from Council (email dated 23rd August 2022) with regards to traffic and parking matter for the proposed expansion of St james school, Vista Parade, Kotara. The comments relating to traffic have been addressed below.

- *Applicant to supply amended estimates of the likely number of drops offs (AM) and picks up (PM).*

Existing and future traffic demands have been prepared by Sean Morgan and Ken Hollyoak for the project with the summary of the flows prepare by Ken Hollyoak summarised below.

EXISTING SITUATION

EXISTING SCHOOL PEAK HOUR MOVEMENTS BY SECA					EXISTING SCHOOL MOVEMENTS BY KJH					PROPOSED SCHOOL					PROPOSED SCHOOL + CHILDCARE				
	Existing Traffic Moevments (Two Way includes in & out)					Existing Traffic Moevments (Two Way includes in & out)					Existing Traffic Moevments (Two Way includes in & out)					Existing Traffic Moevments (Two Way includes in & out)			
	AM		PM			AM		PM			AM		PM			AM		PM	
	IN	OUT	IN	OUT		IN	OUT	IN	OUT		IN	OUT	IN	OUT		IN	OUT	IN	OUT
Existing School Driveway	141	120	32	31	Existing School Driveway	141	120	32	31	Existing School Driveway	295	257	256	266	Existing School Driveway	296	258	257	267
YMCA OOSH					YMCA OOSH	1	1	1	1	YMCA OOSH	1	1	1	1	YMCA OOSH	1	1	1	1
Church	26	22	31	39	Church	26	22	31	39	Church					Church				
On street Vista Parade	15	15	9	9	On street Vista Parade	15	15	9	9	On street Vista Parade					On street Vista Parade				
On Street Casey St					On Street Casey St	0	0	27	27	On Street Casey St					On Street Casey St				
On Street Priceton Ave					On Street Priceton Ave	5	5	28	28	On Street Priceton Ave					On Street Priceton Ave				
On Street Grayson Avenue					On Street Grayson Avenue	5	5	39	39	On Street Grayson Avenue					On Street Grayson Avenue				
															CHILDCARE	32	31	27	28
	182	157	72	79		193	168	167	174		296	258	257	267		329	290	285	296
TOTAL 2 way flow	339		151		TOTAL 2 way flow	361		341		TOTAL 2 way flow	554		524		TOTAL 2 way flow	619		581	
															FOR QUEUEING ANALYSIS USE ONLY OUT FIGURES	258		267	

This shows that the future traffic demands could be 258 in the AM drop off period and 267 in the PM pick up period.

These values for the proposed school expansion has however assumed NO parking allowed in the church car park. This car park has a capacity for 35 cars and is available for parents for the majority of school days for the drop off and pick up activities. Allowing for the church car park use, the AM outbound movement could be 223 232 in the PM outbound movement. This is for the total expansion of the school to 630 students, inclusive of years 5 and 6.

- *Queueing analysis calculations being undertaken for both AM /PM periods to establish whether vehicle queuing associated with the operation of the tear drop kiss and ride facility will be contained on-site. School Years 5 & 6 should also utilise the tear drop kiss and ride facility for afternoon pick-up unless the analysis demonstrates that queuing is extensive therefore necessitating the use of Princeton Avenue. In the event that school years 5 & 6 are required to utilise Princeton Avenue an estimate of the extent of parking is required to establish length of concrete pedestrian pathway*

The critical PM pick up operates in 2 shifts, 15 minutes apart that could be a demand of 125 vehicles in the two separate shifts.

If the 14 spaces turn over in 80 seconds for first shift of 15 minutes, this gives 11 turn overs in 15 minutes so 154 cars. Allowing for the two shifts then the capacity of the pick-up zone is 300 cars. This provides a comfortable margin as this exceeds the demand by 50 vehicles.

IF the years 5 / 6 cannot be accommodated in the pick-up zone, then the pick-up for years 5 / 6 will need to be on Princeton Avenue and are assumed to be around 60-70 cars (being 1/3 of the total demand of 250 cars less allowance for church car park). Allowing 6 metres per car, this would require the footpath along Princeton Avenue to the south of Vista Parade to be 420 metres.

This footpath would also serve as the area for events at the school where there are visitors in the middle of the day e.g. Grand Parents day. The Traffic Management Plan for the school would include directions for these special events for parents / carers to park on Princeton Avenue and a map should be provided to advise this. Parents / carers can also park as per the existing situation within the church car park, but noting that if there is an event there then the parking is not available. The school shall check if there is an event in the church in the middle of the day when they are expecting visitors for an event and advise people if they cannot park in the church for those days.

- *Similarly an assessment of the adequacy of storage length in the Vista Parade right turn lane based on 2 pick-up time periods*

A Sidra model has been completed allowing for 200 cars to enter the school, with 100 turning in right off Vista Parade and 100 turning in left. The model allowed for these to occur over a 15 minute timeframe, with base traffic volumes based on the surveys completed previously by Seca Solution. The results show that the critical right turn queue into the school would be 17.1 metres. NOTE that this assessment assumes no delays within the school, as the Sidra model cannot allow for the pick- up operation discussed above.

The Sidra results for the afternoon pick up period are provided in the table below.

Approach	Degree of saturation	Average delay	Level of service	Queue (metres)
Vista Parade right turn into school	0.400	9.1	A	17.1
Left turn from school	0.561	6.0	A	32.5
Vista Parade left turn into school	0.297	5.1	A	0.0

Yours sincerely,

Sean Morgan
Director