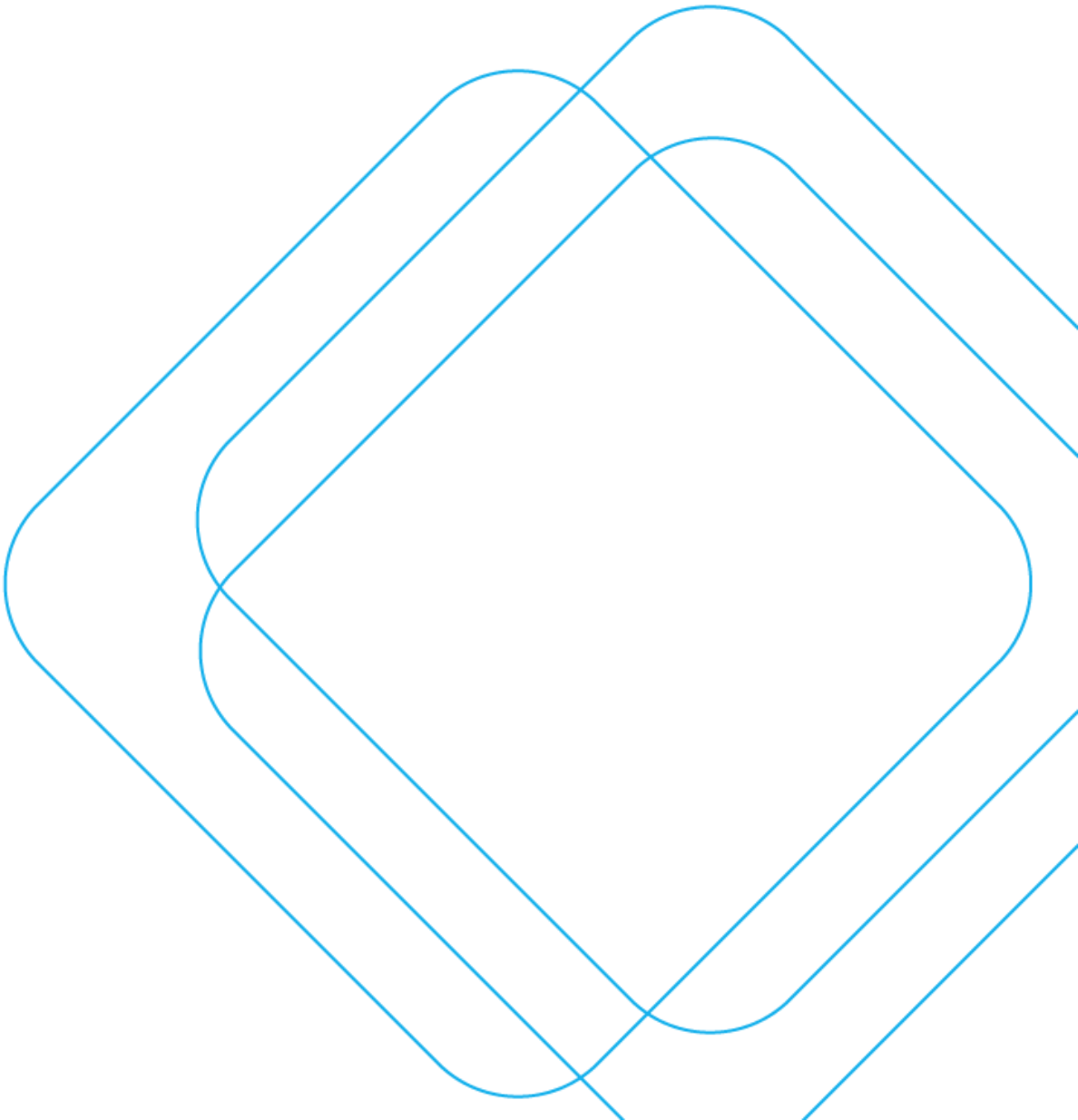
SCT Consulting

AUSTRALIAN CHRISTIAN COLLEGE SINGLETON MASTERPLAN

School Transport Plan

4 APRIL 2024

SCT Consulting acknowledges the traditional owners of the lands on which we work.
We pay our respects to Elders past, present and emerging.



Quality Assurance

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Prepared by:	SCT Consulting PTY. LTD. (SCT Consulting)	**ABN:**	53 612 624 058

Information	Name	Position	Signature
Author:	Shawn Cen	Principal Consultant	
Reviewer:	Jonathan Busch	Associate Director	
Authoriser:	Jonathan Busch	Associate Director	

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1.0	8 March 2024	Draft report
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Contents

1.0 Introduction

SCT Consulting has been engaged by Christian Education Ministries to develop a School Transport Plan (STP) for the upgrade of Australian Christian College Singleton (ACCS). ACCS is located within the Singleton Shire Local Government Area, adjacent to the New England Highway (Maitland Street) as seen in **Figure 1-1**.

Figure 1-1 Location of the school

Source: Nearmap, 2022

A Transport and Traffic Impact Assessment (TIA) is simultaneously being undertaken to support the development application for this upgrade. The STP should be read in conjunction with the TIA for further understanding of traffic and transport impacts across all modes of transport.

The purpose of the STP is to introduce initiatives to be implemented by ACCS which will help to alleviate external impacts of the future expansion of the school.

1.1 Mode share for students

A travel survey was conducted by the school, which was completed by existing school students. 84 per cent of students completed the survey (318 of 378 students) on 17 Feb 2024. The results of the mode share survey are below in **Table 1-1**.

Table 1-1 Existing mode share

Mode	Student mode share
Walking	1%
Cycle / Scoot	2%
Bus	29%
Car	68%
Total	**100%**

1.2 Student growth

At the time of writing, the school has 378 enrolled students.

The existing buildings could accept some additional student demand – indicatively a population of 400 could be accommodated without any new facilities.

2.0 Adopted policies and procedures

The policies and procedures will be adopted by the school to lessen the external traffic and parking impacts of the school. The effects of these will be discussed in **Table 2-1**.

Table 2-1 Adopted policies and procedures

Stagger bell times by 20 minutes
Bell times will be staggered by 20 minutes, resulting in high school students starting 20 minutes later, and ending 20 minutes later than primary school students. The new bell times will be: – 8:50am – Primary students start. – 9:10am – High school students start. – 3:00pm – Primary students finish. – 3:20pm – High school students finish.
Out of school hours care (OOSH)
The school will implement an OOSH for 45 students, with a maximum of three staff members, this will run from 7:00 to 8:30 (TBC) and 3pm till 6.30pm. OOSH can be operated in existing classrooms, allowing students to be dropped off and picked up by parents at times more suitable to them, rather than at school bell times, reducing vehicle trips. Staff could include teachers, or specific OOSH staff members and students charged an additional fee if they choose to take advantage of this service.

These initiatives will be in place prior to the occupancy of the new facilities and until the opening of Singleton Bypass to general traffic. If Singleton Bypass opens prior to occupancy of the new facilities, these initiatives do not need to be implemented.

3.0 Expected impact of transport initiatives

3.1 Staggered bell times

Staggered bell times result in a lengthened peak period of vehicle arrivals and departures, leading to a reduced traffic impact. Turning count data was extracted to understand the demand for the school within each 15 minutes during peak periods. This was then used to forecast the impacts of peak spreading.

The estimated impact of the staggered bell times can be seen in **Figure 3-1** and **Figure 3-2**, with percentage of arrivals and departures being spread more evenly over the time period.

Figure 3-1 AM vehicle arrivals (staggered vs current)

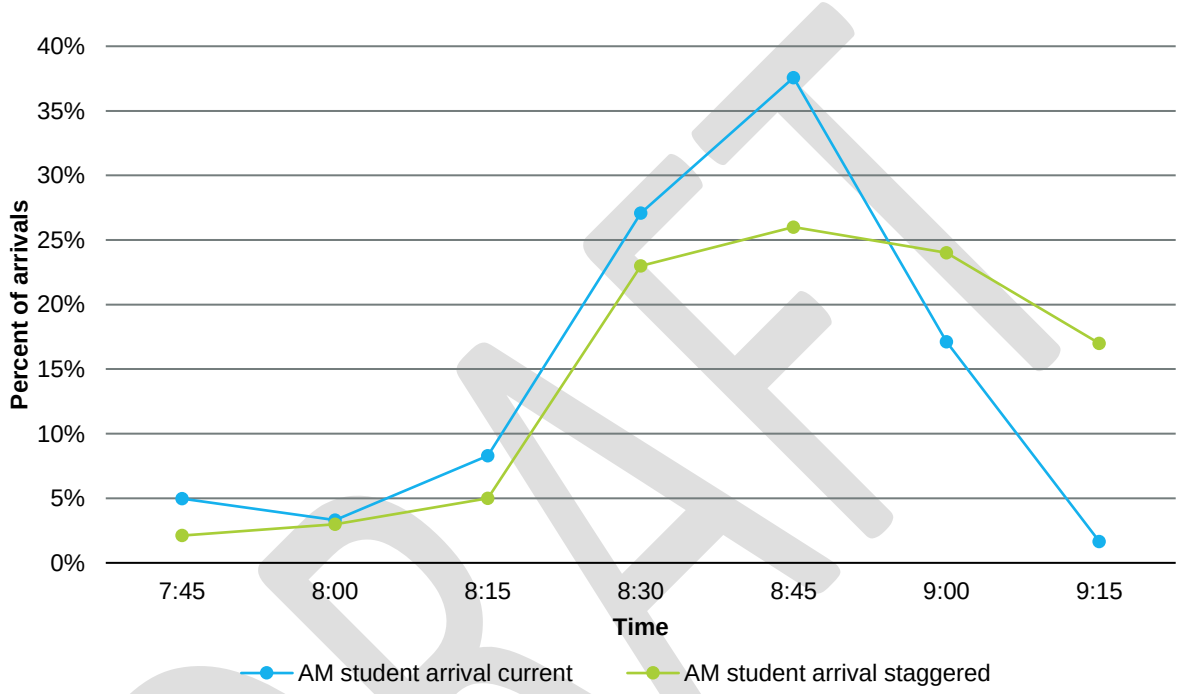
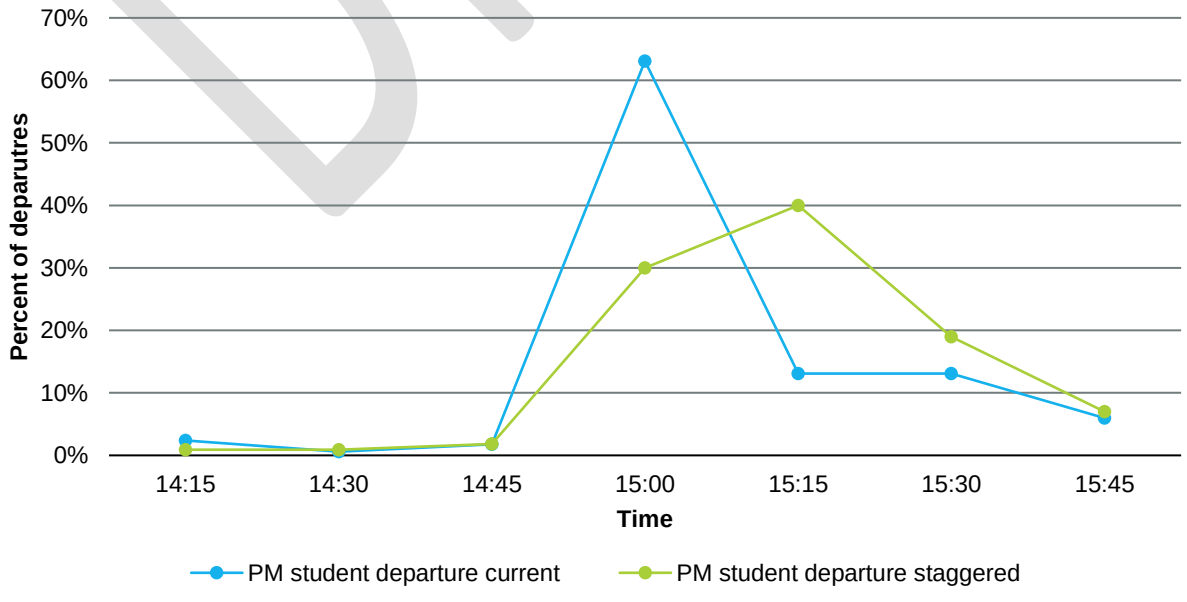


Figure 3-2 PM vehicle departures (staggered vs current)



In the AM, the maximum arrival percentage has fallen from 38 per cent to 26 per cent, additionally, the peak vehicle volume in the network was observed to be between 8.30am and 8.45am, staggered bell times will result in less school traffic during this time period. Overall, this will improve traffic impact of the school for the AM peak period.

The PM peak period has a much more concentrated peak currently with 63 per cent of vehicles departing at 3.00pm to 3.15pm. The impact of the staggered bell times reduces the maximum percent of departures to around 40 per cent, which could significantly reduce the traffic impact of the school, helping to mitigate the effects of any increases in student capacity.

Table 3-1 summarises the effect of the staggered bell time in relation to the reduced number of students. This indicates that up to 46 students can be added onto the current road network without any additional impact, which is equivalent to about 30 cars (based on occupancy of 1.5 people per car).

Table 3-1 Effect of bell times on vehicle volumes

Scenario	AM peak arrival volumes		PM Peak departure volumes	
	8.30am-8.45am	8.45am-9.00am	3.00pm-3.15pm	3.15pm-3.30pm
Current bell times, 400 students	108 students	150 students	252 students	52 students
Staggered bell times, 400 students	92 students	104 students	120 students	160 students
Reduction of the students*	**150-104=46 students**		**252-160=92 students**	

*The reduction is calculated based on the difference of either of the peak 15 minutes. The smaller number between AM and PM peak prevails given the less impact at the other peak hour.

3.2 OOSH

Usually, OOSH students are unlikely to use bus or other modes but is expected to be car dominant. It is assumed that the provision of OOSH will take away 100 per cent car mode share students. Hence, an OOSH with the capacity of 45 students running at 100 per cent capacity, could reduce the vehicle trips by 29 cars (based on occupancy of 1.5 people per car), during both the AM and PM peak periods, helping to reduce the impact of any increased student capacity, this represents a 22 per cent reduction of trips in the AM and a 25 per cent reduction of trips in the PM.

Table 3-2 Effect of OOSH

Scenario	AM peak arrival volumes (veh)	PM Peak departure volumes (veh)
Reduction of the cars with OOSH	**29 cars**	**29 cars**

4.0 Conclusion

The combined impact of the above initiatives is expected to help mitigate the external impacts of future expansion of school. The staggered bell times will spread out the pickup and drop off of students combined with the reduction in vehicle trips produced by an OOSH. Therefore, based on 400 students (without the need for any new facilities):

– By staggered bell time, an addition of 46 students could be accommodated which would not cause any upgrade of the transport network.

– By operation of OOSH, an addition of 45 students could be accommodated which would not cause any upgrade of the transport network.

A total of 91 students could be accommodated with the combined impact of the above initiatives.

Compared with the current 378 enrolled students (2024), there would be a potential allowance of up to **113 additional students** for the school expansion before any additional car trips would be generated in the network. This is based on 22 students from the remaining capacity of the existing facility and 91 students as a result of School Transport Plan initiatives (**Table 4-1**).

Table 4-1 School enrolment summary

Scenarios	Existing 2024	Remaining capacity of the facilities	With initiatives
Student number	378 students	+22 students	+46 students by staggered bell time
			+45 students by OOSH
Total enrolment forecast	**-**	**400 students**	**491 students**

In summary, the school could expand to 491 students subject to the initiatives identified in this school transport plan. With a growth of up to 491 students, the impact on the transport network would be no more than the school accommodates under the existing facility (400 students).

Thoughtful Transport Solutions

Suite 4.03, Level 4, 157 Walker Street, North Sydney NSW 2060
sctconsulting.com.au