



St Aloysius' College SSDA 8669

Traffic and Parking Peer Review

Department of Planning and Environment

21 March 2019

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1. INTRODUCTION

1.1 Project Background and Description

Bitzios Consulting was engaged by the Department of Planning and Environment ("DP&E") to undertake an Independent Peer Review of the Traffic and Parking Impact Assessment of the proposed Staged redevelopment of St Aloysius College. The purpose of this independent review is to determine if the Environmental Impact Statement documents related to traffic and transport adequately assesses the local traffic impacts and to specify any additional information required from the applicant or make recommendations where issues have not been adequately addressed.

The main purpose of this report is to summarise the EIS review of traffic components as it relates to the above development for consideration by DP&E.

The Concept proposal divides the site into the three distinct campuses:

- Junior Campus
- Senior Campus
- Middle Campus

The proposed developments are located at existing St. Aloysius Junior, Middle and Senior Campuses building and scope of works are summarised below:

Senior Campus – 1-5 Jeffreys Street, Kirribilli

- Extension of two (2) existing Level 1 learning rooms
- Internal upgrades of teaching and learning spaces to the Wyalla building.

Middle Campus – 47 Upper Pitt Street, Kirribilli

- Demolition of existing North-East Wing, and construction of new teaching and learning precinct and infilling exiting quadrangle
- Refurbishment of North Wing classrooms, as well as the Great Hall and chapel
- Upgrades to existing courtyard space.

Junior Campus – 29 Burton Street, Kirribilli

- Construction of new semi subterranean sports facility, and associated undercroft area
- Construction of additional storey to the west of the Site.

1.2 Compliance with Applicable Legislation / Environmental Planning Instruments

This assessment has been undertaken in consultation with the following Legislation and Environmental Planning Instruments:

- North Sydney Local Environmental Plan 2013
- North Sydney Development Control Plan 2013
- State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017
- Roads and Maritime Guide to Traffic Generating Developments 2002.

1.3 Department of Planning and Environment Secretary's Environmental Assessment Requirements (SEARs)

A SEARs under Section 78A(8A) of the *Environmental Planning and Assessment Act Schedule 2 of the Environmental Planning and Assessment Regulation 2000* was issued on 22 November 2017. The following items relate to traffic and parking:

- Key Issue 6. Transport and Accessibility
 - Prepare a transport and accessibility impact assessment including but not limited to the conditions as provided in a copy of the SEARs in Appendix A
- Plans and Documents
 - Preliminary Construction Management Plan, inclusive of a Preliminary Construction Traffic and Pedestrian Management Plan detailing vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures
- Consultation in particular with:
 - North Sydney Council
 - Transport for NSW (TfNSW)
 - Roads and Maritime Services (RMS).

A copy of the Secretary's Environmental Assessment Requirements (SEARs) is provided in **Appendix A**.

2. REVIEW OF APPLICATION

2.1 Review of Traffic Report and Addendum Traffic Report against SEARs

Prior to a detailed review of the *Transport and Accessibility Impact Assessment Report of St. Aloysius College, Kirribilli* – Positive Traffic Pty Ltd – (“*Traffic Report*”) dated March 2018, and the Transport related Responses to Submissions – Positive Traffic Pty Ltd – (“*Addendum Traffic Report*”) dated 25 October 2018, a high level review based on the SEARs was undertaken. This assessment is shown in Table 2.1.

Table 2.1: Review of Traffic Report against SEARs

SEARs Requirement	Addressed in Traffic Report or Addendum Traffic Report Section	Any additional information required for Traffic Report
Page 3, Part 6, Bullet Point 1 accurate details of the current daily and peak hour vehicle, public transport, pedestrian and cycle movement and existing traffic and transport facilities provided on the road network located adjacent to the proposed development;	<i>Traffic Report</i> Section 2.5 – Existing site traffic generation by various transport modes is depicted in Table 2; however the report does not include any assessment of existing vehicular movements near the sites and adjacent intersections and pedestrian crossing performance. Descriptions of the existing pedestrian and cycling facilities are included in both the <i>Traffic Report</i> Section 2.7, 2.8 and 2.9, and the <i>Addendum Traffic Report</i> .	Existing and future vehicular movements are not adequately addressed in <i>Traffic Report</i> , specifically relating to traffic volumes at mid-blocks and surrounding intersections. There is no discussion of the existing vehicular traffic on the surrounding roads to provide an understanding of the existing performance of roads and intersections and whether there are any issues with capacity now and looking forward.

SEARs Requirement	Addressed in Traffic Report or Addendum Traffic Report Section	Any additional information required for Traffic Report
Page 3, Part 6, Bullet Point 2 an assessment of the operation of existing and future transport networks including the bus network and their ability to accommodate the forecast number of trips to and from the development;	<p><i>Traffic Report</i> Section 2.7.1 provides details on existing public transport services to and from the site.</p> <p><i>Traffic Report</i> Section 5.2 states the net increase in traffic would be zero.</p> <p>The <i>Addendum Traffic Report</i> states “bus operators are proactive in increasing services where necessary. In response to the matter presented above, it is proposed that the findings of the Green Travel Plan would be presented to Transport for NSW to consider ongoing public transport services for the school.” As such, we are satisfied that accommodating future public transport demand will be addressed as the need arises.</p>	none
Page 3, Part 6, Bullet Points 3 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 the existing and similar schools within the local area;	<p><i>Traffic Report</i> Section 5.2 states the proposed Concept plan will not include any increase in either staff or student population servicing any of three campuses.</p>	<p>The Addendum EIS Section 2.6 states the school facilities are hired to external users. Sections 5.6 and 6.9 mention extra-curricular activities outside school hours. With the new facilities, there is greater capacity for use by external users and activities outside school hours. What times do these other uses occur and do they coincide with peak traffic times? What is the potential for this to increase vehicular traffic and what is the impact on the surrounding road network?</p>
Page 3, Part 6, Bullet Points 4 the adequacy of public transport, pedestrian and bicycle networks and infrastructure to meet the likely future demand of the proposed development;	<p><i>Traffic Report</i> Sections 2.7, 2.8 and 2.9 show the surrounding public transport network, bicycle network and pedestrian connectivity at a high level.</p> <p>Adequacy of the public transport network and its availability, and pedestrian connectivity has been assessed and confirmed in the traffic report.</p> <p>The <i>Addendum Traffic Report</i> states “the preparation of a Green Travel Plan combined with the proposed increase in end of trip facilities at the school is expected to further promote cycling as a viable mode of transport to / from the school.”</p>	<p>Although pedestrian connectivity is described as “well catered for by all weather paths in all locations and a range of crossing facilities”, observations of the use of the pedestrian facilities and paths would be useful to understand the adequacy of the existing situation.</p>

SEARs Requirement	Addressed in Traffic Report or Addendum Traffic Report Section	Any additional information required for Traffic Report
Page 3, Part 6, Bullet Point 5 the impact of the proposed development on existing and future public transport infrastructure within the vicinity of the site in consultation with Roads and Maritime Services and Transport for NSW and identify measures to integrate the development with the transport network;	The <i>Traffic Report</i> states the proposed development will have no impacts on future public transport infrastructure. This matter has been discussed with Roads and Maritime and TfNSW in the meeting of 18 October 2017 (Appendix C).	There is no evidence that TfNSW and Roads and Maritime have been supportive of the idea of public transport not being influenced by the development at the time of the meeting. However, TfNSW and Roads and Maritime would have raised concerns at the time of meeting if they were concerned about this matter. Therefore, no further action would be required.
Page 3, Part 6, Bullet Point 6 details of any upgrading or road improvement works required to accommodate the proposed development;	No upgrading or road improvements have been proposed in the <i>Traffic Report</i> based on the fact that no growth in traffic would be anticipated due to the proposed redevelopment. The <i>Addendum Traffic Report</i> states "A finer grained CTMP at the time of CC would provide sufficient information / recommendations on the impacts on parking in the area during construction."	As the CTMP would provide the necessary assessment and proposed mitigations prior to CC, no further information is required at this time.
Page 3, Part 6, Bullet Point 7 details of travel demand management measures to minimise the impact on general traffic and bus operations and to encourage sustainable travel choices and details programs for implementation, including the preparation of a Green Travel Plan;	A copy of the Green Travel Plan is included in the <i>Addendum Traffic Report</i> . Public transport access and usage has been adequately described in the <i>Traffic Report</i> .	none
Page 3, Part 6, Bullet Point 8 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 upgrading or road improvement works, if required. Traffic modelling is to be undertaken using, but not limited to, SIDRA network modelling for current and future years;	The impact of the surrounding approved developments and future changes to the road network have not been considered in the <i>Traffic Report</i> . No Traffic modelling has been undertaken in the traffic study.	Existing and future vehicular movements are not adequately addressed in Traffic Report, specifically relating to traffic volumes at mid-blocks and surrounding intersections. There is no discussion of the existing vehicular traffic on the surrounding roads to provide an understanding of the existing performance of roads and intersections and whether there are any issues with capacity now and looking forward, particularly the cumulative impacts from other approved developments in the vicinity.

SEARs Requirement	Addressed in Traffic Report or Addendum Traffic Report Section	Any additional information required for Traffic Report
Page 3, Part 6, Bullet Point 9 the proposed active transport access arrangements and connections to public transport services;	Public Transport and active transport access have been briefly assessed in the <i>Traffic Report</i> Sections 2.7, 2.8 and 2.9. The <i>Addendum Traffic Report</i> Figure 2 shows the routes to public transport. The <i>Addendum Traffic Report</i> Appendix C contains a photographic record of the pedestrian network and crossing facilities.	Although the <i>Addendum Traffic Report</i> states “all existing potential routes of travel by pedestrians to transport nodes are well catered for by all weather paths in all locations and a range of crossing facilities”, observations of the use of the pedestrian facilities and paths would be useful to understand the adequacy of the existing situation.
Page 3, Part 6, Bullet Point 10 the proposed access arrangements, including car and bus pick-up/drop-off facilities, and measures to mitigate any associated traffic impacts and impacts on public transport, pedestrian and bicycle networks, including pedestrian crossings and refuges and speed control devices and zones;	It is stated in the <i>Traffic Report</i> Section 2.1 the College does not rely on large car parks to service drop off / pick up needs. Also, the existing No Parking zones in Burton Street (5 spaces) adjacent to the Junior Campus and in Upper Pitt Street (5 spaces) adjacent to the Main Campus provide for the drop off / pick up requirements of each Campus. Based on the total number of existing drop off depicted in Table 4, the author has concluded that passengers’ drop off by private vehicle would be sufficiently accommodated by the existing zone. The <i>Addendum Traffic Report</i> Appendix C contains a photographic record of the pedestrian network and crossing facilities. The <i>Preliminary CTMP</i> Figure 2 shows the existing crossings speed humps and speed limit zones. The <i>Addendum Traffic Report</i> states “all existing potential routes of travel by pedestrians to transport nodes are well catered for by all weather paths in all locations and a range of crossing facilities.”	Although the <i>Addendum Traffic Report</i> states “all existing potential routes of travel by pedestrians to transport nodes are well catered for by all weather paths in all locations and a range of crossing facilities”, observations of the use of the pedestrian facilities and paths would be useful to understand the adequacy of the existing situation.
Page 3, Part 6, Bullet Point 11 measures to maintain road and personal safety in line with CPTED principles;	A copy of the Crime Risk Assessment Report prepared by PMDL is provided in Appendix D of the <i>Addendum Traffic Report</i> and includes comments on access.	none
Page 3, Part 6, Bullet Point 12 proposed bicycle parking provision, including end of trip facilities, in secure, convenient, accessible areas close to main entries incorporating lighting and passive surveillance;	The revised plans now include additional end of trip and bicycle parking facilities in a convenient location to existing and potential bicycle users.	none

SEARs Requirement	Addressed in Traffic Report or Addendum Traffic Report Section	Any additional information required for Traffic Report
Page 3, Part 6, Bullet Point 13 proposed number of on-site car parking spaces and corresponding compliance with existing parking codes and justification for the level of car parking provided on-site;	The <i>Addendum Traffic Report</i> page 3 lists the existing on-site parking provision of each campus and page 4 includes calculation of the required parking using North Sydney Council DCP rate of 1 parking space per 6 staff.	none
Page 3, Part 6, Bullet Point 14 details of emergency vehicle access arrangements;	The Main Campus includes a loading dock accessed from Jefferies Street which also provides emergency vehicle access. These arrangements will not change as part of this proposal. The Senior Campus (Wylla) also includes service and emergency vehicle access from Robertson Lane, which also will not change under the current proposal.	none
Page 3, Part 6, Bullet Point 15 an assessment of road and pedestrian safety adjacent to the proposed development and the details of required road safety measures;	Whilst pedestrian network has been briefly assessed in section 2.9, a holistic pedestrian safety assessment and associated mitigation measures has not been undertaken adjacent to the development. The <i>Addendum Traffic Report</i> suggests that a “pedestrian safety [audit] report could form a condition of consent” at the time of the Construction Certificate application.	None. We agree a pedestrian safety audit report could be a condition of consent.
Page 3, Part 6, Bullet Point 16 service vehicle access, delivery and loading arrangements and estimated service vehicle movements (including vehicle type and the likely arrival and departure times);	No service vehicle, refuse truck and delivery or loading arrangements in terms of access/egress have been assessed in the report. The <i>Traffic Report</i> briefly mentions an existing loading dock in Upper Pitt Street, but no access arrangement has been discussed in the report. The <i>Addendum Traffic Report</i> shows the existing service vehicle areas on page 15 and no changes are proposed to existing servicing arrangements and access points as part of the Master Plan.	none

SEARs Requirement	Addressed in Traffic Report or Addendum Traffic Report Section	Any additional information required for Traffic Report
<p>Page 3, Part 6, Bullet Point 17 in relation to construction traffic:</p> <ul style="list-style-type: none"> assessment of cumulative impacts associated with other construction activities (if any); an assessment of road safety at key intersection and locations subject to heavy vehicle construction traffic movements and high pedestrian activity; details of construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process; details of anticipated peak hour and daily construction vehicle movements to and from the site; details of access arrangements of construction vehicles, construction workers to and from the site, emergency vehicles and service vehicle; details of temporary cycling and pedestrian access during construction; details of proposed construction vehicle access arrangements at all stages of construction; and traffic and transport impacts during construction, including cumulative impacts associated with other construction activities, and how these impacts will be mitigated for any associated traffic, pedestrian, cyclists, parking and public transport, including the preparation of a draft Construction Traffic Management Plan to demonstrate the proposed management of the impact. 	<ul style="list-style-type: none"> No other parallel construction activities have been considered in the preliminary CTMP. CTMP states it is expected that all external footpaths surrounding the three campuses will remain open to pedestrians at all times. If a footpath is required to be closed at any stage, a Pedestrian Management Plan may be required, which will be submitted to Council for approval prior to the closure. A preliminary construction schedule has been provided in the CTMP with significant milestones highlighted. CTMP stipulates that light traffic roads and those subject to load or height limits will be avoided as well as minimising heavy vehicle movements during school peak periods. Whilst working on site can occur during the abovementioned construction hours, the site manager will endeavour to restrict truck loading/unloading outside peak school drop-off/pick-up periods. Daily truck movements per day have also been mentioned in the CTMP. No details for temporary cycling facilities have been provided in the CTMP. It is anticipated that all pedestrian footpaths will remain open during construction. Otherwise a Pedestrian control plan will be provided and approved by the Council. Heavy vehicle route map during the construction stages has been provided in the CTMP. No traffic impact assessment due to construction works has been undertaken in the <i>Traffic Report</i>. The <i>Addendum Traffic Report</i> suggests that further CTMP reports (expected to form a condition of consent as with all developments of this scale) would cover the relevant SEARs including an assessment of existing / future traffic conditions. 	<p>We agree that further CTMP reports should form a condition of consent and cover the relevant SEARs, including the following:</p> <ul style="list-style-type: none"> Consider other ongoing construction works in the vicinity of the site in liaison with Council and reflect the impacts in the CTMP A pedestrian safety/risk assessment considering the construction vehicles sightlines to the pedestrian activity desire lines Assess the cumulative impacts of construction works on the surrounding road network traffic circulation and associated delays during the peak hours of network operation Provide a traffic impact assessment due to construction works for the proposed development.

2.2 General Assessment of Reports

2.2.1 Introduction

In addition to the above assessment against the SEARs, a detailed review was undertaken of the *Transport and Accessibility Impact Assessment Report of St. Aloysius College, Kirribilli* – Positive Traffic Pty Ltd – (“*Traffic Report*”) dated March 2018, and the Transport related Responses to Submissions – Positive Traffic Pty Ltd – (“*Addendum Traffic Report*”) dated 25 October 2018. The following are the findings of the detailed review.

2.2.2 Traffic Survey Data and Traffic Impacts

No traffic survey data or observations of existing traffic or pedestrian movements has been provided. Ideally, traffic volumes at mid-blocks and surrounding intersections would be provided to quantify the existing traffic situation.

The report should at least include discussion of the existing vehicular traffic on the surrounding roads to provide an understanding of the existing performance of roads and intersections and whether there are any issues with capacity now and looking forward.

The Addendum EIS Section 2.6 states the school facilities are hired to external users. Sections 5.6 and 6.9 mention extra-curricular activities outside school hours. With the new facilities, there is greater capacity for use by external users and activities outside school hours. No information is provided about the times these other uses occur and whether they coincide with peak traffic times. No assessment has been made of the potential for these other uses to increase vehicular traffic and what is the likely impact to the surrounding road network.

2.2.3 Car Parking, Including Persons with a Disability Parking

The *Traffic Report* does not assess whether the existing car parks meet AS2890.1. Notwithstanding that the on-site car parks are not being modified, they should be assessed as a Development Application is proposed to change the site.

The *Traffic Report* does not include any information on the compliance and provision of a Persons with a Disability parking space as per *North Sydney Council DCP* and AS2890.6-2009 - Off-street parking for people with disabilities.

2.2.4 Existing Pedestrian Crossing Assessment

No information is provided about the use of existing pedestrian crossings and any existing shortcomings to be addressed. The type of information that would be useful to understand the existing situation includes:

- How crowded the crossings and footpaths are
- Whether crossings cause delays to traffic
- Whether existing pedestrian numbers warrant additional crossing facilities
- Crash history involving pedestrians

2.2.5 Road Safety

A road safety assessment has not been undertaken on the basis that no changes are proposed to the road and pedestrian facilities adjacent to the development. However, changes that affect safety may have been made since the school was built or will be made by others before construction of the

development. Therefore, a holistic pedestrian and road safety assessment should be undertaken adjacent to the development and associated mitigation measures be considered.

The *Addendum Traffic Report* suggests that a “pedestrian safety [audit] report could form a condition of consent” at the time of the Construction Certificate application. We agree with this suggestion to review and address road safety issues prior to construction of the development.

2.3 Issues Raised in Submissions Relating to Traffic and Parking

2.3.1 Introduction

The *Addendum Traffic Report* provides responses to submissions from NSW Department of Planning & Environment, Transport for NSW, and North Sydney Council. The following is our review of the responses to the issues raised.

2.3.2 NSW Planning & Environment

Submission Comment: Traffic and Transport

- The Transport and Accessibility Impact Assessment (TAIA) must be updated to:
 - consider the anticipated growth in student and staff numbers as a result of the proposal

The *Addendum Traffic Report* states there will be no material change to student population within each campus at the completion of the works in full.

To avoid potential impacts due to increases in staff and student numbers, we recommend capping student and staff numbers at a level similar to the existing numbers as a condition of consent unless an assessment of the impacts of increases is undertaken and suitable mitigation measures implemented for any impacts.

- include a detailed assessment of the proposal against the relevant parking requirements of the North Sydney Development Control Plan 2013 (NSDCP), including any floorspace-based requirement; and

The *Addendum Traffic Report* includes an assessment of the proposal against the relevant parking requirements of the North Sydney Development Control Plan 2013, based on the number of staff. This shows that the parking provision exceeds the DCP requirement.

- include a draft Green Travel Plan (GTP) as specified in the Secretary's Environmental Assessment Requirements (SEARs).

The *Addendum Traffic Report* includes a Green Travel Plan report prepared by High Range Analytics. It contains actions to monitor and update public transport usage and capacity, and could therefore be used when considering future public transport demands for the college.

2.3.3 Transport for NSW – Recommended Conditions of Approval

Recommended Condition: Road Safety Evaluation

The *Addendum Traffic Report* states the condition of consent is considered appropriate for submission at the time of Construction Certificate application for each future proposal. We agree with this statement.

Recommended Condition: Green Travel Plan

A Green Travel Plan report prepared by High Range Analytics has been provided.

Recommended Condition: Traffic and Parking Management Plan

The *Addendum Traffic Report* recommends the condition of consent be omitted from any approval as it “is seeking a retrospective review of existing transport operations for the college” and “would be more appropriate for a new school facility or one which involves significant changes to existing travel arrangements which is not the case for this proposal.” However, we believe the Traffic and Parking Management Plan should be prepared to reflect the existing arrangements for transport to and from the school. This information can be used to

- Minimise risks
- Inform new enrolments about desirable travel behaviour
- Provide clear guidance to personnel for executing the plan.

Recommended Condition: Construction Pedestrian and Traffic Management Plan (CPTMP)

The *Addendum Traffic Report* states the requirements for the CPTMP can form a condition of consent. We agree with this statement.

2.3.4 North Sydney Council

Submission Comment: General Comments

The *Addendum Traffic Report* contests the statement that this development cannot be supported through detailed analysis of existing and future traffic / parking conditions based on evidence. The traffic reports provide details of the existing parking, but no information on existing traffic conditions as evidence of acceptable existing and ongoing traffic performance around the development, including conditions for active transport.

Submission Comment: Traffic and Transport Operation's Manager Review

Council's position is “The proposed development will not have unacceptable traffic implications in terms of road network capacity provided that there is no increase of school population and a Green Travel Plan be submitted as part of this application or a condition of consent prior to the issue of Construction Certificate/Occupation Certificate.

The *Addendum Traffic Report* states Council's position is in friction with our statement seeking intersection modelling of existing / future traffic conditions. Council may have the above position, but no evidence has been provided in the traffic reports on acceptable existing traffic conditions and ongoing traffic performance around the development, including conditions for active transport.

Submission Comment: Car Parking Supply

The *Addendum Traffic Report* provides clarification of the capacity of the pick-up and drop-off zones based on the assumption of a maximum 2-minute stay for each of the 5 parking spaces located adjacent to each campus. This length of stay is in accordance with the Australian Road Rules 2009 which states a maximum 2-minute length of stay where the time limit with a No Parking zone is not specified.

The above justification is reasonable. However, during pick-up times, cars waiting to pick-up may overstay the 2-minute limit if they arrive before the student is ready to be picked up and the length of stay is not enforced. This would have a knock-on effect to other cars arriving to pick-up students, causing queuing on the road or adding to traffic circulating looking for an alternative parking space. The Traffic and Parking Management Plan recommended as a condition of approval by TfNSW would address this if it includes a process for the college to monitor the length of stay and require cars to comply with the maximum 2-minute stay.

Submission Comment: Conclusion – Objection until workable traffic solutions are provided to Council which can provide relief to the traffic circumstances around the Kirribilli suburb

The *Addendum Traffic Report* contests that traffic conditions within the Kirribilli suburb are heavily influenced by traffic generated by St Aloysius College given the high mode share to non-private vehicle modes recorded through the surveys of all students and staff of all campuses.

The *Addendum Traffic Report* states the application should be considered on merit and for approval based on the following:

- The development does not propose any increase in student / staff population
- The college as a whole is a very low traffic generator with high usage of public transport
- The street network around all campuses is highly restrictive of all day parking by school traffic and is well protected
- The college is well served by a range of public transport modes

We agree with the last four bullet points. However, no evidence has been provided in the traffic reports on acceptable existing traffic conditions and ongoing traffic performance around the development, including conditions for active transport.

3. CONCLUSIONS

3.1 Capping Staff and Student Numbers

To avoid potential impacts due to increases in staff and student numbers, we recommend capping student and staff numbers at a level similar to the existing numbers as a condition of consent unless an assessment of the impacts of increases is undertaken and suitable mitigation measures implemented for any impacts.

As this development application does not propose an increase in student and staff numbers, capping it does not affect the outcome of this development application. Any future development application to increase student and staff numbers would need to include an assessment of the impacts of increases and implementation of suitable mitigation measures for any impacts.

3.2 Road Safety Evaluation

As noted in Transport for NSW's Recommended Conditions of Approval, "A Road Safety Evaluation (RSE, refer to NSW Centre for Road Safety Guidelines for Road Safety Audit Practices and Austroads Guide to Road Safety Part 6: Road Safety Audit) shall be conducted on all relevant sections of road utilised for bus and private vehicle pick-up and drop-off." and

"Appropriate road safety measures and/or traffic management measures shall be implemented based on the outcomes of the RSE."

It is recommended that a Pedestrian and Road Safety Audit is conducted including areas adjacent to the development prior to the issue of the Construction Certificate for Stage 1 of the development and prior to the issue of a Construction Certificate for the subsequent stages.

3.3 Green Travel Plan

As specified in the Secretary's Environmental Assessment Requirements (SEARs), a Green Travel Plan report prepared by High Range Analytics has been provided.

3.4 Traffic and Parking Management Plan

A Traffic and Parking Management Plan should be prepared to reflect the existing arrangements for transport to and from the school, which can be used to minimise risks, inform new enrolments at the college what is expected or required of them, and guide the personnel executing the plan.

3.5 Construction Pedestrian and Traffic Management Plan (CPTMP)

A CPTMP should be provided as a condition of consent and cover the relevant SEARs for a CTMP.

3.6 Traffic Survey Data and Traffic Impacts

Traffic volumes at mid-blocks and surrounding intersections should be provided to quantify the existing traffic situation. The report should at least include discussion of the existing vehicular traffic on the surrounding roads to provide an understanding of the existing performance of roads and intersections and whether there are any issues with capacity now and looking forward, including the impact of use by external users and activities outside school hours.

3.7 Car Parking, Including Persons with a Disability Parking

The general on-site car parking supply of 43 spaces exceeds the 30 spaces required by the DCP for the college as a whole.

Notwithstanding that the on-site car parks are not being modified, they should be assessed against AS2890.1 as a Development Application is proposed to change the site. Furthermore, compliance and provision of a Persons with a Disability parking space should be assessed as per *North Sydney Council DCP* and AS2890.6-2009 - Off-street parking for people with disabilities.

3.8 Existing Pedestrian Crossing Assessment

An assessment of existing pedestrian crossings should be undertaken to understand the existing situation and any existing shortcomings to be addressed including:

- How crowded the crossings and footpaths are
- Whether crossings cause delays to traffic
- Whether existing pedestrian numbers warrant additional crossing facilities
- Crash history involving pedestrians

Appendix A: Secretary's Environmental Assessment Requirements (SEARs) dated 22 November 2017

Secretary's Environmental Assessment Requirements

Section 78A(8A) of the *Environmental Planning and Assessment Act* Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*

Application Number	SSD 8669
Proposal Name	St Aloysius' College Redevelopment
Development Description	<p>Staged development application for the redevelopment of St Aloysius' College, including:</p> <ul style="list-style-type: none"> • concept proposal for the staged redevelopment of the school's Junior, Middle and Senior Campuses, including building envelopes for alterations and additions and new infill development; • concurrent first stage of the development comprising internal refurbishment and extension works to the Senior School Campus and refurbishment and expansion works and new infill development on the Middle School Campus; and • second stage of the development comprising the construction of a new sports court facility and associated undercroft area and extension of the main building including the construction an additional storey on the Junior School Campus.
Location	St Aloysius' College – St Aloysius' Junior School (29 Burton Street, Kirribilli), St Aloysius' Senior School (1-5 Jeffreys Street, Kirribilli) and St Aloysius' Middle School (47 Upper Pitt Street, Kirribilli).
Applicant	St Aloysius College
Date of Issue	Reissued 22 November 2017
General Requirements	<p>The Environmental Impact Statement (EIS) must be prepared in accordance with, and meet the minimum requirements of clauses 6 and 7 of Schedule 2 the <i>Environmental Planning and Assessment Regulation 2000</i> (the Regulation).</p> <p>Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development.</p> <p>Where relevant, the assessment of the key issues below, and any other significant issues identified in the risk assessment, must include:</p> <ul style="list-style-type: none"> • adequate baseline data; • consideration of potential cumulative impacts due to other development in the vicinity (completed, underway or proposed); and • measures to avoid, minimise and if necessary, offset the predicted impacts, including detailed contingency plans for managing any significant risks to the environment. <p>The EIS must be accompanied by a report from a qualified quantity surveyor providing:</p> <ul style="list-style-type: none"> • a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the <i>Environmental Planning and Assessment Regulation 2000</i>) of the proposal, including details of all assumptions and components from which the CIV calculation is derived; • an estimate of the jobs that will be created by the future development during the construction and operational phases of the development; and

	<ul style="list-style-type: none"> certification that the information provided is accurate at the date of preparation.
Key Issues	<p><u>Concept Proposal</u></p> <p>The EIS must address the following specific matters:</p> <p>1. Statutory and Strategic Context – including: Address the statutory provisions contained in all relevant environmental planning instruments, including:</p> <ul style="list-style-type: none"> State Environmental Planning Policy (State & Regional Development) 2011; <i>State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017</i>; State Environmental Planning Policy (Infrastructure) 2007; State Environmental Planning Policy No.55 – Remediation of Land; and North Sydney Local Environmental Plan 2013. <p><i>Permissibility</i> Detail the nature and extent of any prohibitions that apply to the development.</p> <p><i>Development Standards</i> Identify compliance with the development standards applying to the site and provide justification for any contravention of the development standards.</p> <p>2. Policies Address the relevant planning provisions, goals and strategic planning objectives in the following:</p> <ul style="list-style-type: none"> NSW State Priorities; A Plan for Growing Sydney; NSW Long Term Transport Master Plan 2012; Sydney's Cycling Future 2013; Sydney's Walking Future 2013; Sydney's Bus Future 2013; Crime Prevention Through Environmental Design (CPTED) Principles; Healthy Urban Development Checklist, NSW Health; Greater Sydney Commission's Draft North District Plan; and North Sydney Development Control Plan 2013. <p>3. Built Form and Urban Design</p> <ul style="list-style-type: none"> Provide a building envelop study to justify the proposed built form. Establish appropriate design guidelines and development parameters within the context of the locality, including but not limited to: <ul style="list-style-type: none"> site layout; gross floor area; building footprints; height and massing of the building envelopes; and open spaces, landscaping and tree planting. Provide a visual impact assessment that identifies any potential impacts on the surrounding built environment, adjoining heritage items and Sydney Harbour and its foreshore, including the provision of photomontages of the development from a range locations, including the Harbour foreshore. <p>4. Environmental Amenity</p> <ul style="list-style-type: none"> Assess amenity impacts on the surrounding locality, including solar access, acoustic impacts, visual privacy, view loss, overshadowing and wind impacts.

- Identify any proposed use of the school outside of school hours (including weekends) and assess any resultant amenity impacts on the immediate locality and proposed mitigation measures.
- Detailed outline of the nature and extent of the intensification of use associated with the increased floor space, particularly in relation to any proposed increase in staff and student numbers.

5. Staging

Provide details regarding the staging of the proposed development.

6. Transport and Accessibility

Prepare a transport and accessibility impact assessment, which details, but not limited to the following:

- accurate details of the current daily and peak hour vehicle, public transport, pedestrian and cycle movement and existing traffic and transport facilities provided on the road network located adjacent to the proposed development;
- an assessment of the operation of existing and future transport networks including the bus network and their ability to accommodate the forecast number of trips to and from the development;
- 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 the existing and similar schools within the local area;
- the adequacy of public transport, pedestrian and bicycle networks and infrastructure to meet the likely future demand of the proposed development;
- the impact of the proposed development on existing and future public transport infrastructure within the vicinity of the site in consultation with Roads and Maritime Services and Transport for NSW and identify measures to integrate the development with the transport network;
- details of any upgrading or road improvement works required to accommodate the proposed development;
- details of travel demand management measures to minimise the impact on general traffic and bus operations and to encourage sustainable travel choices and details programs for implementation, including the preparation of a Green Travel Plan;
- 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 upgrading or road improvement works, if required. Traffic modelling is to be undertaken using, but not limited to, SIDRA network modelling for current and future years;
- the proposed active transport access arrangements and connections to public transport services;
- the proposed access arrangements, including car and bus pick-up/drop-off facilities, and measures to mitigate any associated traffic impacts and impacts on public transport, pedestrian and bicycle networks, including pedestrian crossings and refuges and speed control devices and zones;
- measures to maintain road and personal safety in line with CPTED principles;
- proposed bicycle parking provision, including end of trip facilities, in secure, convenient, accessible areas close to main entries incorporating lighting and passive surveillance;
- proposed number of on-site car parking spaces and corresponding compliance with existing parking codes and justification for the level of car parking provided on-site;
- details of emergency vehicle access arrangements;

- an assessment of road and pedestrian safety adjacent to the proposed development and the details of required road safety measures;
- service vehicle access, delivery and loading arrangements and estimated service vehicle movements (including vehicle type and the likely arrival and departure times);
- in relation to construction traffic:
 - assessment of cumulative impacts associated with other construction activities (if any);
 - an assessment of road safety at key intersection and locations subject to heavy vehicle construction traffic movements and high pedestrian activity;
 - details of construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process;
 - details of anticipated peak hour and daily construction vehicle movements to and from the site;
 - details of access arrangements of construction vehicles, construction workers to and from the site, emergency vehicles and service vehicle;
 - details of temporary cycling and pedestrian access during construction;
 - details of proposed construction vehicle access arrangements at all stages of construction; and
 - traffic and transport impacts during construction, including cumulative impacts associated with other construction activities, and how these impacts will be mitigated for any associated traffic, pedestrian, cyclists, parking and public transport, including the preparation of a draft Construction Traffic Management Plan to demonstrate the proposed management of the impact.

→ Relevant Policies and Guidelines:

- *Guide to Traffic Generating Developments (Roads and Maritime Services)*
- *EIS Guidelines – Road and Related Facilities (DoPI)*
- *Cycling Aspects of Austroads Guides*
- *NSW Planning Guidelines for Walking and Cycling*
- *Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development*
- *Standards Australia AS2890.3 (Bicycle Parking Facilities)*
- *North Sydney Integrated Traffic and Parking Strategy*

7. Noise and Vibration

Identify and provide a quantitative assessment of the main noise and vibration generating sources during construction and operation, including consideration of any public address system, school bell and use of any school hall for concerts etc. (both during and outside school hours). Outline measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land.

→ Relevant Policies and Guidelines:

- *NSW Industrial Noise Policy (EPA)*
- *Interim Construction Noise Guideline (DECC)*
- *Assessing Vibration: A Technical Guideline 2006*
- *Development Near Rail Corridors and Busy Roads – Interim Guideline (Department of Planning 2008)*

8. Ecologically Sustainable Development (ESD)

- Detail how ESD principles (as defined in clause 7(4) of Schedule 2 of the Environmental Planning and Assessment Regulation 2000) will be incorporated in the design and ongoing operation phases of the development.

- Include a description of the measures that would be implemented to minimise consumption of resources, water (including water sensitive urban design) and energy.

9. Social Impacts

Include an assessment of the social consequences of the schools' relative location.

10. Heritage

- The EIS should identify any listed or potential heritage items within the redevelopment area. If any listed or potential heritage items, including archaeological resources, are likely to be affected, a Heritage Impact Statement (HIS) must be prepared in accordance with the guidelines in the NSW Heritage Manual.
- The EIS should include an historical archaeological assessment prepared by a suitably qualified historical archaeologist in accordance with the Heritage Division, Office of Environment and Heritage *Guidelines Assessing Significance for Historical Archaeological Sites and 'Relics' 2009*. This assessment should identify what relics, if any, are likely to be present, assess their significance and consider the impacts from the proposal on this potential resource. Where harm is likely to occur, it is recommended that the significance of the relics be considered in determining an appropriate mitigation strategy. In the event that harm cannot be avoided in whole or Part, an appropriate Research Design and Excavation Methodology should also be prepared to guide any proposed excavations.

11. Utilities

- Prepare an Infrastructure Management Plan in consultation with relevant agencies, detailing information on the existing capacity and any augmentation requirements of the development for the provision of utilities including staging of infrastructure.
- Prepare an Integrated Water Management Plan detailing any proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design.

12. Contributions

Address Council's Section 94 Contribution Plan and/or details of any Voluntary Planning Agreement, which may be required to be amended because of the proposed development.

13. Contamination

Assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable for the proposed use in accordance with SEPP 55.

→ Relevant Policies and Guidelines:

- *Managing Land Contamination: Planning Guidelines - SEPP 55 Remediation of Land (DUAP)*

14. Drainage

Detail drainage associated with the proposal, including stormwater and drainage infrastructure.

→ Relevant Policies and Guidelines:

- *Guidelines for development adjoining land and water managed by DECCW (OEH, 2013)*

15. Flooding

Assess any flood risk on site (detailing the most recent flood studies for the project area) and consideration of any relevant provisions of the NSW

Floodplain Development Manual (2005), including the potential effects of climate change, sea level rise and an increase in rainfall intensity.

16. Waste

- Identify, quantify and classify the likely waste streams to be generated during construction and operation and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.
- Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site.

17. Biodiversity

Biodiversity impacts related to the proposal and the preparation of a Biodiversity Assessment are to be addressed in accordance with the requirements of the Biodiversity Conservation Act 2016.

First and Second Stages

The EIS/s for the construction of buildings works must address the following specific matters:

1. Built Form and Urban Design

- Address the height, density, bulk and scale, setbacks of the proposal in relation to the surrounding development, topography, streetscape and any public open spaces.
- Demonstrate design quality of the proposed development, with specific consideration of the overall site layout, streetscape, open spaces, façade, rooftop, massing, setbacks, building articulation, materials, colours and Crime Prevention Through Environmental Design Principles.
- Provide a visual impact assessment that identifies any potential impacts on the surrounding built environment, adjoining heritage items and Sydney Harbour and its foreshore, including the provision of photomontages of the development from a range of locations, including the Harbour foreshore.
- Detail how services, including but not limited to waste management, loading zones, and mechanical plant are integrated into the design of the development.

2. Environmental Amenity

- Detail amenity impacts including solar access, acoustic impacts, visual privacy, view loss, overshadowing and wind impacts. A high level of environmental amenity for any surrounding residential land uses must be demonstrated.
- Detail any proposed use of the school grounds out of school hours (including weekends) and any resultant amenity impacts on the immediate locality and proposed mitigation measures.

3. Transport and Accessibility

- A Transport Impact Assessment must be prepared that reassesses the transport impacts of the relevant stages within the context of the assessment undertaken for the Concept Proposal.
- Detail access arrangements for construction and measures to mitigate any associated pedestrian, cyclist or traffic impacts, including the preparation of a preliminary Construction Traffic and Pedestrian Management Plan (CTPMP) to demonstrate the proposed management of impact. The CTPMP should also consider cumulative impacts associated with other construction activities and assess road safety at any key intersections subject to heavy vehicle movements and high pedestrian activity.

→ Relevant Policies and Guidelines:

- *Guide to Traffic Generating Developments (Roads and Maritime Services)*

4. Noise and Vibration

Identify and provide a quantitative assessment of the main noise and vibration generating noise sources and activities during construction. Outline measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land.

→ Relevant Policies and Guidelines:

- *Interim Construction Noise Guideline (DECC)*
- *Assessing Vibration: A Technical Guideline 2006*

5. Ecological Sustainable Development

- Detail how ESD principles (as defined in clause 7(4) of Schedule 2 of the Environmental Planning and Assessment Regulation 2000) will be incorporated in the design and ongoing operation phases of the development.
- Include a description of the measures that would be implemented to minimise consumption of resources, water (including water sensitive urban design) and energy.
- Demonstrate that the development has been assessed against a suitably accredited rating scheme to meet industry best practice.

6. Sediment, Erosion and Dust Controls

Detail measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles.

→ Relevant Policies and Guidelines:

- *Managing Urban Stormwater – Soils & Construction Volume 1 2004 (Landcom)*
- *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA)*
- *Guidelines for development adjoining land and water managed by DECCW (OEHL, 2013)*

7. Contamination

Assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable for the proposed use in accordance with SEPP 55.

→ Relevant Policies and Guidelines:

- *Managing Land Contamination: Planning Guidelines - SEPP 55 Remediation of Land (DUAP)*

8. Drainage

Provide a stormwater concept plan detailing how water quality and quantity impacts on drainage systems would be managed.

9. Waste

- Identify, quantify and classify the likely waste streams to be generated during construction and operation and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.
- Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site.

10. Construction Hours

	Identify proposed construction hours and provide details of the instances where it is expected that works will be required to be carried out outside the standard construction hours.
Plans and Documents	<p>The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Environmental Planning and Assessment Regulation 2000. Provide these as part of the EIS rather than as separate documents.</p> <p>In addition, the EIS must include the following:</p> <ul style="list-style-type: none"> • Architectural drawings (dimensioned and including RLs); • Site Survey Plan, showing existing levels, location and height of existing and adjacent structures / buildings and boundaries; • Site Analysis Plan; • Stormwater Concept Plan; • Sediment and Erosion Control Plan; • Shadow Diagrams; • View Analysis / Photomontages; • Landscape Plan (identifying any trees to be removed and trees to be retained or transplanted); • Preliminary Construction Management Plan, inclusive of a Preliminary Construction Traffic and Pedestrian Management Plan detailing vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures; • Acoustic Report; • Geotechnical and Structural Report; • Accessibility Report; • Arborist Report; • Salinity Investigation Report (if required); • Acid Sulphate Soils Management Plan (if required); • Waste Management Plan; • Fire Safety Measures Schedule; and • Schedule of materials and finishes.
Consultation	<p>During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular, you must consult with:</p> <ul style="list-style-type: none"> • North Sydney Council; • Transport for NSW (TNSW); and • Roads and Maritime Services (RMS). <p>Consultation with TNSW and RMS should commence as soon as practicable to agree the scope of investigation.</p> <p>The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.</p>
Further consultation after 2 years	If you do not lodge a development application and EIS for the development within two years of the issue date of these SEARs, you must consult further with the Secretary in relation to the preparation of the EIS.
References	The assessment of the key issues listed above must consider relevant guidelines, policies, and plans as identified.