

Wahroonga Adventist School [SSD 5535]

Environmental Impact Statement

February 2015



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Summary of Content and Documents

Summary of content and documents forming part of this EIS

Requirement	Location in Environmental Assessment	
General Requirements	Title / Page	
The Environmental Impact Statement (EIS) must meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 the <i>Environmental Planning and Assessment Regulation 2000</i>. Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development. Where relevant, the assessment of the key issues below, and any other significant issues identified in the risk assessment, must include: - adequate baseline data; - consideration of potential cumulative impacts due to other development in the vicinity; and - Measures to avoid, minimise and if necessary, offset the predicted impacts, including detailed contingency plans for managing any significant risks to the environment.	Statement of Validity (I) Executive Summary (ii-iii) Statement of Objectives (S.1) Alternatives to development (S.1) Analysis of development (S.1) Compilation of Mitigation Measures (S.5) Justification and Conclusion (S.5)	
Key Issues	Report	Technical Study
1) Statutory and Strategic Context: Address the statutory provisions applying to the development contained in all relevant environmental planning instruments, including: - State Environmental Planning Policy (State & Regional Development) 2011 - State Environmental Planning Policy (Major Development) 2005 - State Environmental Planning Policy (Infrastructure) 2007 - State Environmental Planning Policy (Sydney Harbour Catchment) 2005 - State Environmental Planning Policy No.19 – Bushland in Urban Areas - State Environmental Planning Policy No.55 – Remediation of Land - Ku-ring-gai Planning Scheme Ordinance Address the relevant planning provisions, goals and strategic planning objectives in the following: - NSW 2021 - Metropolitan Plan for Sydney 2036 - North Subregion Draft Subregional Strategy□ - Ku-ring-gai Contributions Plan 2010	Section 3	Various

- Ku-ring-gai Council DCP 43 – Car Parking Code - Ku-ring-gai Council DCP 47 – Water Management - NSW Bike Plan - Planning Guidelines for Walking and Cycling - Integrating Land Use and Transport Policy Package - Healthy Urban Development Checklist, NSW Health.		
2) Wahroonga Estate Concept Plan (MP07_0166) Demonstrate consistency with the terms of approval of the Wahroonga Estate Concept Plan (MP07_0166), including details of school building layouts, student population, proposed recreational space and playing fields, vehicle access and associated facilities. Any areas of inconsistency are to be justified.	All Sections	Various
3) Built Form and Urban Design Address the height, bulk and scale of the proposed development within the context of the locality, including the existing church, Sydney Adventist Hospital and future high density residential development envisaged under the Wahroonga Estate Concept Plan. Address design quality, with specific consideration of the overall site layout, details of and access to recreational space/playing fields, axis, vistas and connectivity, open spaces and edges, primary elements, gateways, façade, rooftop, mechanical plant, massing, setbacks, building articulation, materials, choice of colours, including an assessment against the Crime Prevention Through Environmental Design Principles.	Section 4	Appendix 3 Architectural Drawings and Architectural Design Report
4) Amenity Assess solar access, overshadowing, view loss, visual privacy, servicing requirements (including but not limited to, waste management, loading zones, and mechanical plant), acoustic impacts and wind impacts. A high level of environmental amenity for land uses immediately adjacent and the surrounding residential areas must be demonstrated.	Section 4	Appendix 3 Architectural Drawings and Architectural Design Report
5) 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, construction and ongoing operation phases of the development. Include a description of the measures that would be implemented to minimise consumption of resources, water and energy, including an Integrated Water Management Plan which details any proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design.	Section 4	Various
6) Noise Identify and provide a quantitative assessment of the main noise generating sources and activities at all stages of construction and any noise sources during operation. Outline measures to minimise and mitigate the potential noise	Section 4	Appendix 10 Acoustic Report

impacts on surrounding occupiers of land. <i>Relevant Policies and Guidelines:</i> • <i>NSW Industrial Noise Policy (EPA)</i> • <i>Interim Construction Noise Guideline (DECC)</i>		
7) Transport and Accessibility Construction: • Detail access arrangements at all stages of construction and measures to mitigate any associated pedestrian, cycleway or traffic impacts. • Details regarding car parking arrangements during construction, including the displacement of visitor and staff car parking. Alternative off-site arrangements should be made for staff and construction workers. Operational: • Detail how the development has taken into consideration, and contributes to the achievement of, travel choices and transport objectives contained in NSW 2021, Metropolitan Plan for Sydney 2036 and the North Subregion Draft Subregional Strategy. • Assess the implications of the proposed development for non-car travel modes (including public transport use, walking and cycling), including the potential for implementing a location-specific sustainable travel plan (egg 'Travel smart' or other travel behavioural change initiatives), and the provision of facilities to increase non-car mode share for travel to and from the site. This will entail an assessment of the accessibility of the site by public transport. • Provide details of the daily and peak vehicle movements likely to be generated by the development including the impact on nearby intersections and the need/associated funding for upgrading or road improvement works (if required). Key intersections to be examined/modelled include: ○ Fox Valley Road and proposed future roadway ○ Fox Valley Road and Sydney Adventist Hospital ○ Fox Valley Road and The Comenarra Parkway ○ Fox Valley Road and Pacific Highway • Detail the proposed access and parking provisions associated with the proposed development, including compliance with the requirements of the relevant Australian Standards (i.e.: turn paths, sight distance requirements, aisle widths, etc). • Detail the proposed traffic management measures, including facilities such as stopping bays, bus services and facilities, drop off and pick up areas and vehicular access and circulation arrangements. • Detail compliance with the Deed of Agreement required under Wahroonga Estate Concept Plan (MP07_0166), including details of road upgrade works to Fox Valley Road and associated intersection improvements. • Detail the proposed number of car parking spaces and compliance with appropriate parking codes. • Detail the proposed service vehicle movements (including vehicle type and the likely arrival and departure times).	Section 4	Appendix 6 Transport, Traffic and Parking Report, Workplace Travel Access Plan and Transport Access Guide, and Appendix 20 Outline Construction management Plan

8) Flora and Fauna Address direct and indirect impacts (such as stormwater, nutrients and artificial lighting) on flora and fauna, including threatened species, populations and endangered ecological communities and their habitats and steps taken to mitigate any identified impacts to protect the environment. The location of the proposed recreational areas/oval must avoid direct and indirect impacts on critically/endangered ecological communities. Demonstrate consistency with the endorsed Wahroonga Estate Redevelopment Biodiversity Management Plan, prepared by Cumberland Ecology and dated November 2010.	Section 4	Appendix 9 Tree Report, Appendix 11 Stormwater & Water Quality Report Appendix 14 Flora and Fauna Assessment
9) Riparian Land The EIS shall address the potential impacts of the proposal, including the proposed recreational playing fields, on any watercourse and riparian areas, including areas of disturbance and provide safeguard measures to mitigate impacts, contingency plans for remediation and rehabilitation of riparian areas in the event of potential adverse impacts and long term management of the riparian lands.	Section 4	Appendix 11 Stormwater & Water Quality Report Appendix 14 Flora and Fauna Assessment
10) Heritage A statement of significance and an assessment of the impact on the heritage significance of any heritage items and/or conservation areas should be undertaken in accordance with the guidelines in the NSW Heritage Manual, if relevant.	Section 4	Appendix 16 Heritage Impact Statement
11) Aboriginal Heritage The EIS shall address Aboriginal Heritage in accordance with the Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation 2005 and Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010, if relevant.	Section 4	Appendix 15 Aboriginal Heritage Impact Assessment
12) Bushfire Demonstrate compliance with the relevant provisions of Planning for Bushfire Protection (PBP) 2006 and established Asset Protection Zones.	Section 4	Appendix 17 Bushfire Protection Assessment
13) Sediment, Erosion and Dust controls (Construction and Excavation) Detail measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles. <i>Relevant Policies and Guidelines:</i> - Managing Urban Stormwater – Soils & Construction Volume 1 2004 (Landcom) - Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA)	Section 4	Appendix 11 Stormwater & Water Quality Report and Appendix 20 Outline Construction management Plan
14) Contamination Demonstrate that the site is suitable for the proposed use in accordance with State Environmental Planning Policy No.55 – Remediation of Land, having regard to the Wahroonga Estate Concept Plan Phase 1 Contamination Assessment.	Section 4	Appendix 12 Contamination Assessment
15) Utilities In consultation with relevant agencies, the EIS shall address the existing capacity and any augmentation requirements of	Section 4	Appendix 18 Statements

the development for the provision of utilities including staging of infrastructure through the preparation of an Infrastructure Management Plan.		Correspondence attached
16) Staging Details regarding the staging of the proposed development, including staff and student population growth (if proposed).	Section 2	Appendix 3 Architectural Drawings
17) Contributions Address Council's Section 94 Contribution Plan and/or details of any Voluntary Planning Agreement.	Section 3	-
18) Flooding An assessment of any flood risk on site 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.	Section 4	Appendix 11 Stormwater & Water Quality Report
19) Drainage Details of the drainage associated with the proposal, including stormwater, drainage infrastructure and OSD, which shall be designed in consultation with Ku-ring-gai Council and must avoid any adverse impacts on downstream properties.	Section 4	Appendix 11 Stormwater & Water Quality Report
20) 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.	Section 4	Appendix 13 Waste Management Plan and Appendix 21 Outline Construction management Plan
Plans and Documents		
The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the <i>Environmental Planning and Assessment Regulation 2000</i>. Provide these as part of the EIS rather than as separate documents. In addition, the EIS must include the following: • architectural drawings • site survey plan, showing existing levels, location and height of existing and adjacent structures/buildings and boundaries • site analysis plan • shadow diagrams • view analysis/photomontage • landscape plan • preliminary construction management plan • preliminary construction traffic management plan • geotechnical and structural report • arborist report • sample board and schedule of materials and finishes.	Appendices	Appendix 3 Architectural Drawings, Management Plans Site survey plan, site analysis plan, Appendix 8 Tree Report, Appendix 7 Geotechnical report Appendix 20 Outline Construction management Plan
Consultation		
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.	Section 5	Appendix 17 Bushfire Protection Assessment- RFS

Summary of Content and Documents

In particular you must consult with: • Ku-ring-gai Council • Roads and Maritime Services • Office of Environment and Heritage • NSW Rural Fire Service • Sydney Water • Local Aboriginal Land Council and relevant stakeholders • Local heritage Group/s, if relevant. 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		consultation Appendix 15 Aboriginal Cultural Heritage Impact Assessment- MLALC consultation
Other		
Capital Investment Value- QS Report	Section 1, 2 & 3	Appendix 2
Access Report		Attachment 19
Engineering Response- Supplementary letter	Post Exhibition Submission Queries	Attachment 21

Statement of Validity

Submission of Environmental Impact Statement (EIS) prepared in accordance with Part 4 of the *Environmental Planning and Assessment Act 1979* (The Act) and Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (The Regulation).

Environmental Impact Statement prepared by

Name Patricia Docherty
Qualifications BA Planning (Hons), MSc, MPIA, MRTPI
Address MacroPlan Dimasi, Level 4, 39 Martin Place, Sydney, 2000

Applicant Details

Name Seventh Day Adventist, Greater Sydney Conference
ABN 14 145 463 559
Address 4 Cambridge Street, Epping NSW 2121

Site Details Wahroonga Adventist School
Site Address Fox Valley Road, Wahroonga, 2076
Legal Description: Lot 621, DP 1128314, Lot 1, DP 834960, Lot 2, DP 843960, Lot 1, DP 834961 and Lot 1-4, DP 834967

Certificate

An Environmental Impact Statement (EIS) is attached in response to the Director General's assessment requirements (DGR's) issued on 6 September 2012. The EIS and the accompanying consultant reports and plans contain all available information required to assess the environmental impact of the development.

I certify that I have prepared the contents of the Environmental Impact Statement in accordance with The Act and The Regulation and that, to the best of my knowledge, the information contained in this report is not false or misleading.

Signature



Name Patricia Docherty BA (Hons) Planning, MSc Urban Design, MRTPI MPIA
Date 13.02.2015

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Executive Summary

This Environmental Impact Statement (EIS) supports an application for State Significant Development [SSD 5535] to redevelop Wahroonga Adventist School, pursuant to *Part 4 of the Environmental Planning and Assessment Act 1979* (EP&A Act) and *State Environmental Planning Policy State and Regional Development 2011* (SEPP SRD).

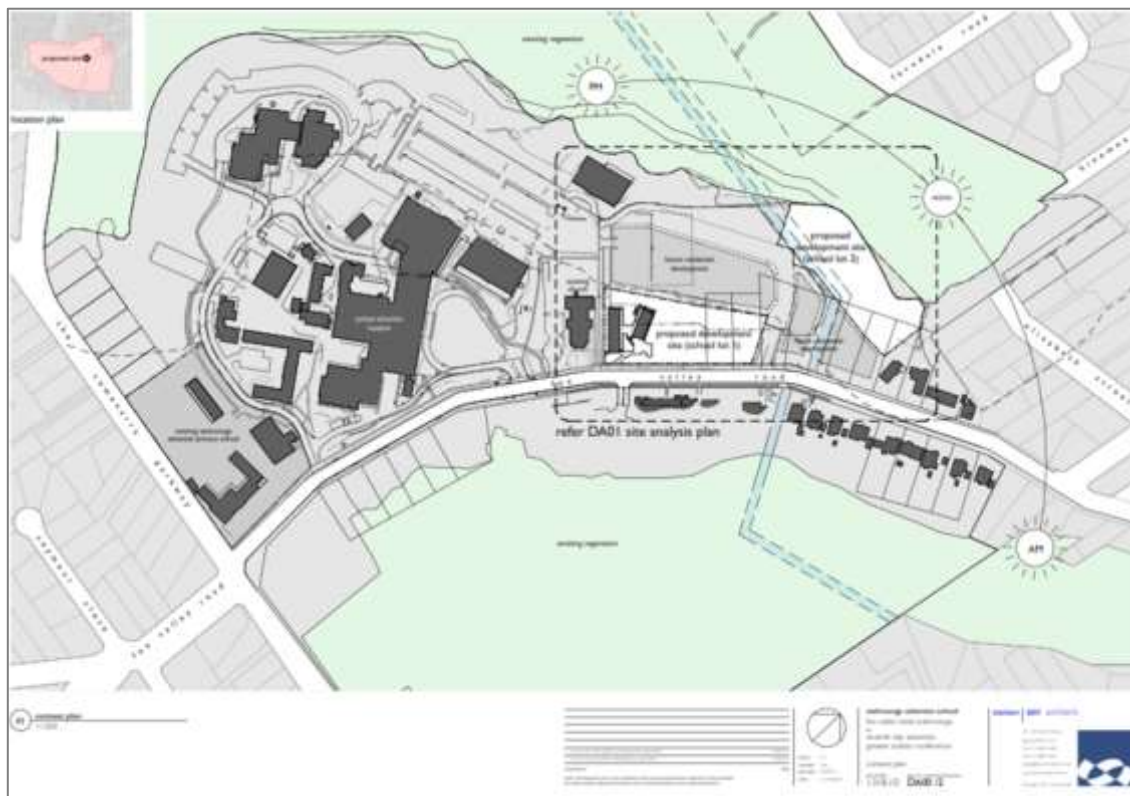
Director General's Requirements (DGR's) for environmental assessment were issued on the 6th of September 2012 to MacroPlan Dimasi on behalf of the proponent Seventh-day Adventist Schools (Greater Sydney) Ltd. The Proponent's ABN is 63 106 908 767. (see **Appendix 1**)

The **Capital Investment Value** (CIV) of the proposed development is \$39,327,000.00 (thirty nine million three hundred and twenty seven thousand dollars) and is classified SSD under the provisions of Schedule 1 of SEPP SRD (see **Appendix 2**).

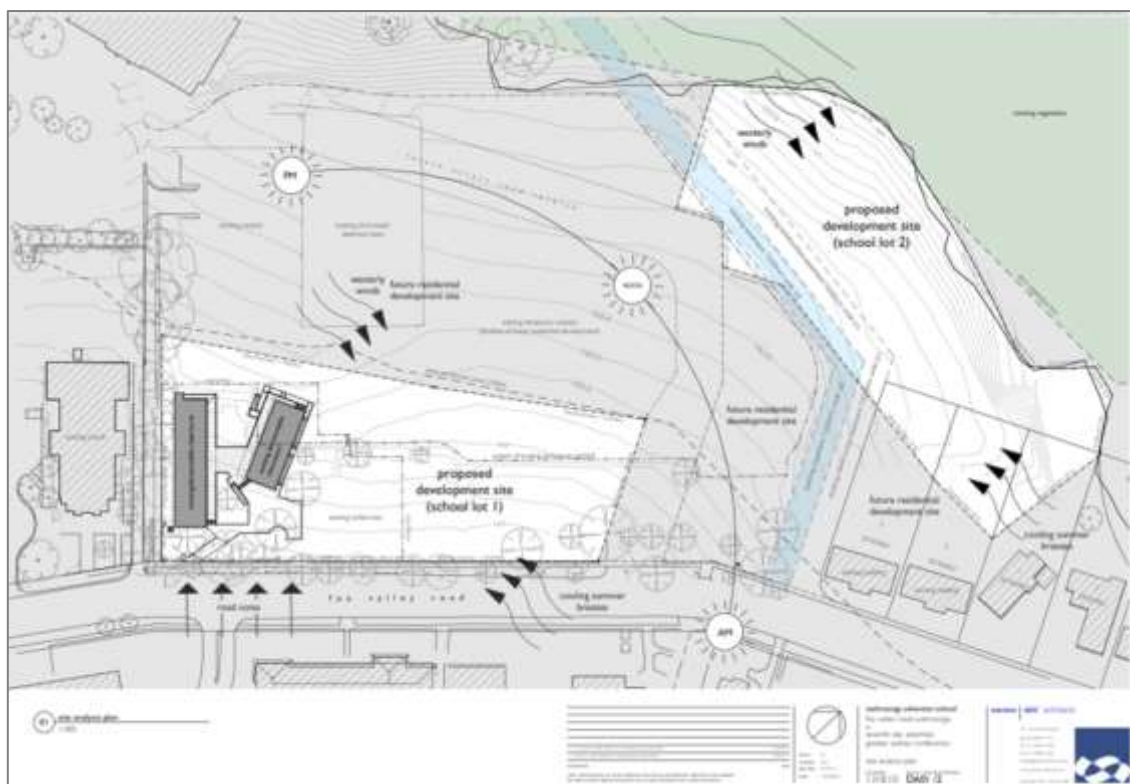
This SSD Application to the Department of Planning and Infrastructure (DP&E) relates to development on land within the Wahroonga Estate site, in Ku-ring-gai Local Government Area. The land is legally described as:

Parts of Lot	Deposited Plan
Lot 621	DP 1128314,
Lot 1,	DP 834960,
Lot 2	DP 843960
Lot 1	DP 834961
Lot 1-4	DP 834967

The attached Context Plan and Site Analysis Plan shows the existing primary school, to be relocated within Wahroonga Estate from a corner site at 189 Fox Valley Road, to a larger site at 167-181 Fox Valley Road, north east of the Wahroonga Seventh Day Adventist Church (see **Appendix 3a- Architectural Drawings** for full size plans prepared by architect Stanton Dahl).



Snapshot of Context. Source: Stanton Dahl Architects



Snapshot of Site Analysis Plan. Source: Stanton Dahl Architects

The relocation is necessary to accommodate the expansion and modernisation of school facilities for students from Kindergarten (prep) to Year 12 consisting of:

- Development of a three to four storey educational establishment, to accommodate a Kindergarten to Year 12 school, and associated basement car parking and kiss-and-drop facilities,
- Development of associated school sporting facilities, including turf playing area and PE courts,
- The removal of existing trees on-site, and
- Subdivision of land comprising the school (7,040m²) and playing/PE areas (7,160m²) to create lot 703 in DP1193247.

Precinct Plan

The site is currently zoned R4 – High Density Residential under the Ku-ring-gai Planning Scheme Ordinance (PSO), Part IIIC Wahroonga Estate Site. Part IIIC was amended in January 2013, to incorporate site specific provisions from State Environmental Planning Policy (Major Projects) 2005 (SEPP MP), which was amended in December 2012.

Educational establishments are permitted with consent in Zone R4- High Density Residential under Regulation 28 of State Environmental Planning Policy (Infrastructure) 2007.

This EIS assesses any potential environmental impacts for the redevelopment of the new school site. Detailed supporting consultants reports have been prepared and are attached in the appendices to this EIS.

The EIS provides necessary information in support of State Significant Development Application [SSD 5536]. This EIS demonstrates the proposed redevelopment of Wahroonga Adventist School in its new location shall address the further assessment requirements identified in the Concept Plan Approval (MP07_0166) for Wahroonga Estate to:

- 1. Ensure the site is appropriately managed for the proposed uses;*
- 2. Adequately mitigate the environmental impacts of the development;*

3. *Reasonably protect the amenity of the local area; and*
4. *Protect the public interest.*

The EIS addresses the DGR's. All potential impacts have been assessed as minor to moderate and can be mitigated or avoided. It is considered that the relocation of the existing school is consistent with the surrounding local area and the development and expansion of school facilities will provide better and more accessible education facilities to the community and wider catchment.

This development proposal presents a high level of merit on planning, environmental, economic and social grounds. Approval of this State Significant Development Application by the Minister of Planning and Environment for New South Wales is in the public interest and is therefore justified.

Introduction

The report is structured as follows:

Section 1 – Background: provides an overview of the role and history of Wahroonga Adventist School; analysis of the subject site and locality; objectives of the development; assessment of alternatives to development and consequences of not proceeding. This section concludes with a general overview of State and Local planning context and the State Significant Development process.

Section 2 – Proposed development: details the proposed State Significant Development of Wahroonga Adventist K-Y12 School; building components; layouts; staging; subdivision; student and staff population; recreational space and playing/PE areas; traffic and parking and associated facilities.

Section 3 – Statutory and Strategic Context: examines relevant provisions to be considered for the proposed development in state and local planning instruments and any other applicable legislation, policies and guidelines. This Section addresses compliance with the Concept Plan (for MP07_0166) and development standards applicable to the site.

Section 4 – Environment assessment requirements: covers all other Director General's Requirements including an assessment built form and urban design, potential environmental, social and economic impacts of the proposed development, including risk assessment and mitigation measures.

Section 5 – Consultation- Response: Details the consultation process undertaken as required by the DGR's and the response to submissions.

Section 6 – Conclusion: summarises the key findings from the assessment, reasons justifying the carrying out of the development and a compilation of all mitigation measures proposed

Section 7 – Summary of all Mitigation Measures

List of all Appendices

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Section 1: Background

1.1 Summary of Wahroonga Adventist School

Wahroonga is located approximately 5 kilometres South of Hornsby and 23 kilometres from Sydney CBD. The areas surrounding Wahroonga Estate predominantly contain low density residential dwellings and bushland. Wahroonga Estate consists of Sydney Adventist Hospital, Wahroonga Seventh-day Adventist Church and Wahroonga Adventist Primary School.

Wahroonga Adventist Primary School has been located on the Wahroonga Estate site for 107 years and is a longstanding feature of the local community, which provides wider social benefits to the locality and region.

At present, Wahroonga Adventist School provides primary education facilities to 235 students from its current location at 189 Fox Valley Road on land next to the Sydney Adventist Hospital (SAN) on the north-west side of the junction with The Comenarra Parkway.

The existing Wahroonga Adventist School is one of 8 Seventh-day Adventist schools covering the Greater Sydney area. The existing independent primary school serves a wider catchment of suburbs including the local community of Wahroonga.

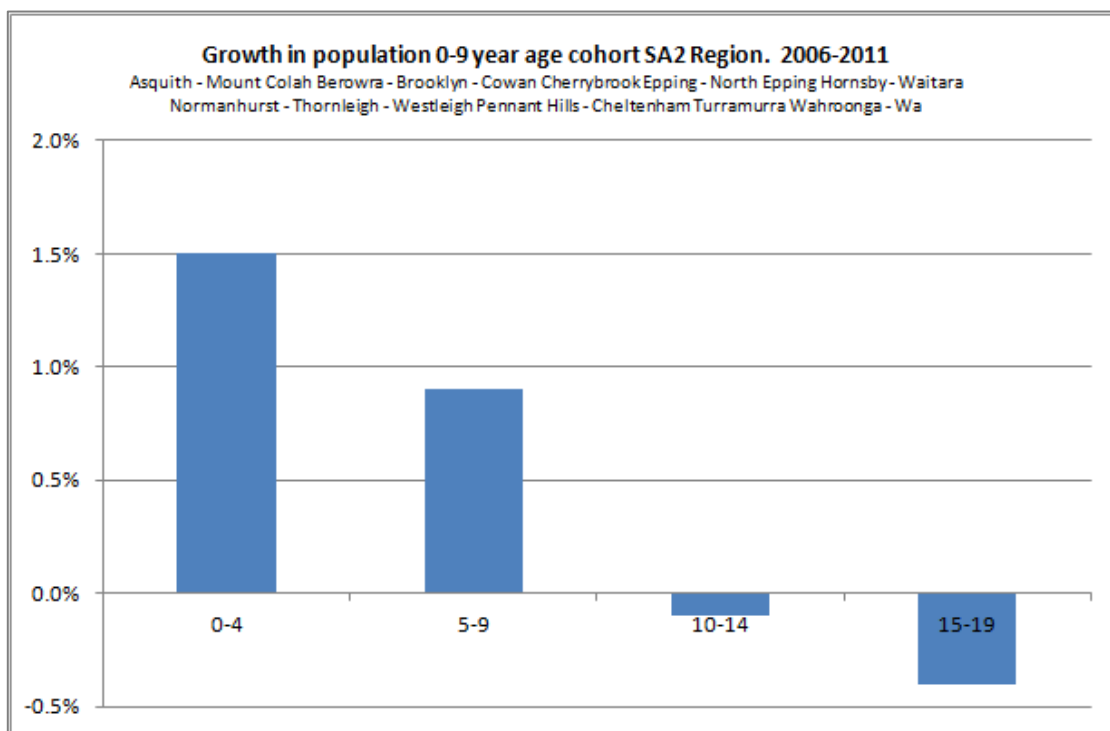
Existing facilities for students include generously sized classrooms; early learning classrooms; specialist learning areas; spacious play areas and secure grounds; a library; computer lab; and canteen. The school provides out of school hours (OOSH) care.

Currently, the existing site of the Wahroonga Adventist Primary School is subject to another development application for student accommodation and key worker housing ancillary to Sydney Adventist Hospital, which (at the time of writing this EIS) is under assessment by Ku-ring-gai Council. The timing of the SSD assessment of the proposed educational establishment will be imperative to the delivery and staging of this ancillary accommodation.

1.2 Consideration of Feasible Alternatives to Development

The existing school site is identified in the Concept Plan Approval as the location for essential hospital accommodation to support Key Workers and Students associated with Sydney Adventist Hospital. Therefore the school will need to relocate.

The school has been operating from Wahroonga Estate since 1905 and serves the local Wahroonga community and a wider catchment extending suburbs from Berowra, Cherry Hills, Epping and Turramurra. The longstanding role of the school cannot be lost. There is current and future demand for school places in the existing catchment. This is demonstrated in the chart below, which shows a growing population for children aged 0-9 years, who will benefit for the expanded school, due for completion over the next 10 years.



Being co-located with Sydney Adventist Hospital and Seventh-day Adventist Church, the school benefits from direct access to services on the Wahroonga Estate site, including a heated swimming pool, tennis courts and chaplaincy support.

The specific location of the school within Wahroonga, maintains accessibility to the site for students and staff, enhances the day to day relationship with the existing church, maintains access to the wider facilities of Sydney Adventist Hospital and ensures the areas of sensitivity adjoining the E2 Environmental Conservation land is not affected by development.

The land is owned by Seventh-day Adventist Schools (Greater Sydney) Ltd. It would not be financially feasible for them to procure an alternative site.

If the school was not permitted to operate on this site, the impact on the current 235 student population, their families and the wider community would be unacceptable. Furthermore, the opportunity to provide additional school places up to Year 12 would be lost.

It is essential that the school is permitted to relocate and operate from its new site within the Wahroonga Estate. This will safeguard the future of this longstanding educational establishment and meet demand for school places within the existing school catchment.

1.3 Objectives of the Proposal

The main purpose of the proposed Wahroonga Adventist School is to develop modern, well-equipped buildings and grounds in a co-educational campus to enable expansion of school enrolment from the current Primary school to student Kindergarten to Year 12 (K-12) campus for up to 800 students.

The school will provide the same level of high quality education at Wahroonga Estate by Seventh-day Adventist (Greater Sydney) to a wider age range of students and meet the demand for school places in its catchment.

The relocation of Wahroonga Adventist School will clear the existing site earmarked for development by Sydney Adventist Hospital for essential key workers and student accommodation.

1.4 Site Location and Planning Context

The proposed SSD Application to the Department of Planning and Environment (DP&E) relates to development located at 167-181 Fox Valley Road, Wahroonga

and forms part of the site known as Wahroonga Estate, in Ku-ring-gai Local Government Area.



Site Image. Aerial looking north west

The current legal description of the land affected is detailed in the table and



accompanying lot boundary plan below.

Lot Plan. Source: NSW Six Maps -Land and Property Information.

In December 2009 Wahroonga Estate was declared a State Significant Site. The Wahroonga Estate site is subject to a Concept Plan, which presents the basis by which further development approvals will be made.

The Concept Approval was issued in March 2010 and outlines land uses and maximum gross floorspace across five precincts within the Estate.

The approved Concept Plan is the principal planning instrument, supplemented by Part IIIC Wahroonga Estate Site under Ku-ring-gai Planning Scheme Ordinance.

The Concept Plan stipulates that it is the prevailing Environmental Planning Instrument should any inconsistencies arise.

The Concept Plan was modified on 28 July 2014 (MP07_0166 MOD5) with direct reference to designs prepared by Stanton Dahl Architects, lodged under this SSD application.



Approved Concept Plan (MP07_0166 MOD5).

The Instrument of Approval issued under Section 75W specifies the following:

A2 Development in Accordance with Plans and Documentation

... 2. In the event of any inconsistencies between the administrative terms of approval and further assessment requirements of this concept approval and the plans and document described in this Schedule, the administrative terms of approval and further assessment requirements of this concept approval prevail.

The modification also incorporated the following revised drawing for Precinct B: central church, prepared by Stanton Dahl Architects:



Precinct B: Detail Plan (MP07_0166 MOD5).

Flexibility in design is also considered as part of the Concept Approval under the following terms of approval:

A8 Building Height

- 1. Buildings shall generally be compliant with the Wahroonga Estate Height of Buildings Map, except as follows:*

...

- g. Precinct B: Central Church education development senior school building shall be restricted to the maximum RL 182.8m;*
 - h. Precinct B: Central Church education development middle school building shall be restricted to the maximum RL 183.3 m;*
 - i. Precinct B: Central Church education development junior school building shall be restricted to the maximum RL 164.0 m.*
2. *Notwithstanding A8 (1) above, development consent may be granted for development that exceeds the maximum building height stipulated in A8 (1) if the consent authority has considered and is satisfied with the written request from the applicant that seeks to justify the contravention of the maximum building height...*

These development standards were drafted by utilising the architectural designs enclosed. The design is therefore consistent with the approved Concept Plan.

In addition, terms extracted from a previous Instrument of Approval (MP07_0166 MOD 4) dated 8 April, 2014; provide further clarity as to the scope of flexibility enabled by the instrument to allow for alternative designs.

This enables variations which provide a superior built form and/or urban design outcome, that are consistent with the intent of the indicative design elements, as follows:

B1 Urban Design

1. *Future development applications are to be generally consistent with the following elements of the approved Concept Plan, unless it can be satisfactorily demonstrated to the consent authority that a superior built form and/or urban design outcome can be achieved with an alternative layout, while remaining consistent with the terms of approval and intent of the approved Concept Plan:*
 - (a) Building footprints*
 - (b) Asset Protection Zones widths*
 - (c) Internal road location*

(d) Detention basin location

2. *Buildings are to be sited to avoid critically/endangered ecological communities, achieve balance between cut and fill, minimise earthworks, provide adequate solar access and minimise impacts on privacy and overshadowing of residential uses ...*

...4. *Buildings with frontage to Fox Valley Road must have an active street frontage and provide a setback of at least 10 metres from the street front boundary.*

The subject site sits outside the scope of a Project Approval (MP10_0070) issued in March 2011- for the staged alterations and additions to the Sydney Adventist Hospital; permitting the following works:

- Staged expansion and refurbishment of the Clinical Services Building;
- Construction of a 3-4 storey Education Centre (nursing faculty);
- Demolition and construction of a new Shannon Wing;
- Multi-level car park for 922 spaces;
- Expanded at-grade staff car parks for an additional 86 spaces;
- Temporary car park for 258 cars during construction; and
- New perimeter road around multi-level car park, to connect to existing access road.

Notwithstanding, elements of the Project Approval, including the use of the temporary car park, has been considered in the design and staging of the school to ensure construction is not impeded by external projects.

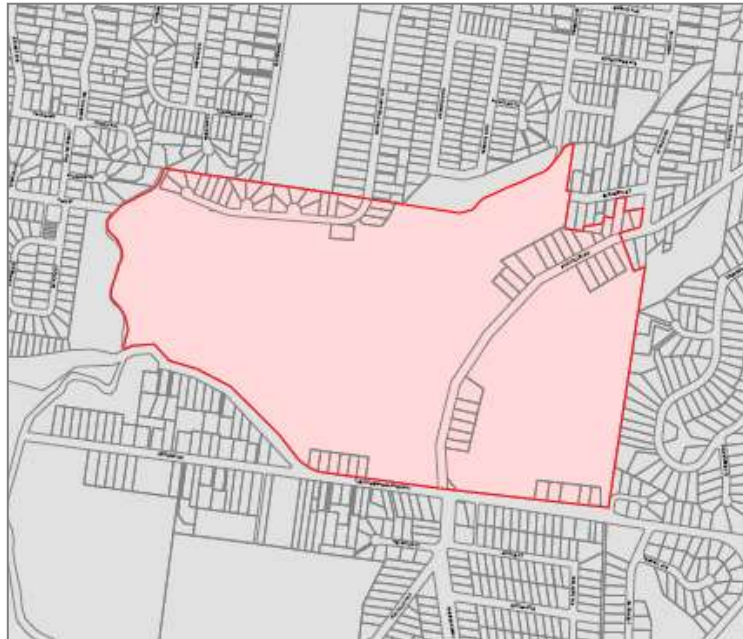
The site of the proposed school is currently occupied by temporary demountable buildings used for educational purposes. Demolition of residential dwellings and removal of trees, which previously occupied the site, was as approved by Ku-ring-gai Council in 2012.

Ku-ring-gai PSO, Part IIIC applies to the land; this governs land use zoning, height of buildings and gross floorspace in Wahroonga Estate. No other Part of the Ku-ring-gai Planning Scheme Ordinance (PSO) applies to land on the Wahroonga Estate site, shown on the Land Application Map.

**Ku-ring-gai Planning Scheme
Ordinance—
Wahroonga Estate
Land Application Map**

sheet LAP 001

 Subject Land
Cadastra
 Cadastra 15/09/2012 © NSW LPI



The site is zoned R4 – High Density Residential. *Educational establishments* are permitted with consent in Zone R4- High Density Residential under Regulation 28 of State Environmental Planning Policy (Infrastructure) 2007.

The definitions of the proposed use on the site, as outlined in the Standard Instrument (LEP) Order 2006 is:

Activity	Definition
Educational establishment	<i>A building or place used for education (including teaching), being:</i> <i>(a) school, or</i> <i>(b) a tertiary institution, including a university or a TAFE establishment, that provides formal education and is constituted by or under an Act.</i>

The SEPP (State and Regional Development) 2011 (SEPP SRD) identifies development for the purposes of an Educational establishment as State Significant development (SSD) if it is categorised as such under Schedule 1 of the SEPP SRD:

Development for the purpose of educational establishments (including associated research facilities) that has a capital investment value of more than \$30 million.

The **Capital Investment Value** (CIV) of the Wahroonga Adventist K-12 School is \$39,327,000 and therefore is SSD.

The consent authority for all State Significant Development Applications in New South Wales is the State Planning Minister and delegates including the NSW Planning Assessment Commission or a senior officer of the Planning Board of NSW Planning and Environment.

The EIS and the accompanying consultant reports and plans contain all available information required to assess the environmental impact of the development.

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Section 2: Proposed Development

2.1 Overview of the proposed development

The redevelopment and expansion of the existing Wahroonga Adventist School necessitates a relocation of the school campus to accommodate an increase in student numbers and provide specific teaching facilities suited to Year 7-12 education.

The attached Site Plan shows the existing primary school, to be relocated within Wahroonga Estate from a corner site at 189 Fox Valley Road, to a larger site at 167-181 Fox Valley Road, north east of the Wahroonga Seventh Day Adventist Church (see **Appendix 3** for full size plan). The relocation is necessary to accommodate the expansion and modernisation of school facilities for students from Kindergarten (prep) to Year 12 consisting of:

- Development of a three to four storey educational establishment, to accommodate a Kindergarten to Year 12 school, and associated basement car parking and kiss-and-drop facilities,
- Development of associated school sporting facilities, including turf playing area and PE courts,
- The removal of existing trees on-site, and
- Subdivision of land comprising the school (7,040m²) and play/PE area (7,160m²) to create lot 703 in DP1193247.

Wahroonga Adventist School will be in keeping with existing and future residential character of the surrounding area. The proposal seeks to develop an educational establishment, a Kindergarten to Year 12 school, in accordance with the Concept Plan and Concept Approval.

A complete list of all appendices is available at the end of the EIS. Please refer to all attached drawings, documents and plans as required by the DGR's:

- **Architectural drawings** include shadow diagrams, view analysis/photomontage, landscape plan, schedule of materials and finishes, site analysis plan. **Appendix 3**

- Draft plan of subdivision to create lot 703 in DP1193247 - **Appendix 4**
- Site survey plan, showing existing levels, location and height of existing and adjacent structures/buildings and boundaries - **Appendix 5**
- Traffic management plan - **Appendix 6**
- Geotechnical report - **Appendix 7**
- Structural report - **Appendix 8**
- Tree Report - **Appendix 9**

2.2 Staging and Construction Management

The redevelopment will be constructed over six stages:

- Stage 1 – Middle School;
- Stage 2 – Turf Playing Area
- Stage 3 – Junior School East;
- Stage 4 – Stores, Amenities and PE Courts;
- Stage 5 – Junior School West; and
- Stage 6 – Senior School.

Details of each stage are as follows:

STAGE 1 (Middle School):

Construction of a Middle School facility for the accommodation of Prep to Year 8 students, including:

- New Middle School building;
- Associated outdoor play space;
- Basement car parking and 'kiss & drop' facilities;
- Landscaping works.

STAGE 2 (Playing Area):

Construction of a new playing area (west portion of School Lot 2) including:

- Open turfed playing area (unmarked);
- Associated retaining wall works;
- Landscaping works.

STAGE 3 (Junior School - East):

Construction of a Junior School facility for the accommodation of Prep to Year 12 students, including:

- New Junior School building;
- Associated outdoor play space;
- Basement car parking and 'Kiss & Drop' facilities;
- New access road adjoining Fox Valley Road;
- Landscaping works.

STAGE 4 (Stores, Amenities & PE Courts):

Construction of a new pavilion and playing courts area (east portion of School Lot 2) including:

- PE courts;
- Stores and amenities building;
- Associated retaining wall works;
- Landscaping works.

STAGE 5 (Junior School - West):

Construction of a Junior School wing to the Stage 3 facility for the accommodation of Prep to Year 1 students, including:

- New Junior School building wing;
- Associated outdoor play space;
- Landscaping works.

STAGE 6 (Senior School):

Construction of a School facility for the accommodation of Prep to Year 12 students, including:

- Removal of existing demountable classroom buildings;
- Construction of new Senior School building;
- Associated outdoor space;
- Basement car parking and 'Kiss & Drop' facilities;
- Landscaping works.

Upon completion of Stage 6 the school is projected to accommodate 800 students and employ 57 full time equivalent teachers and associated staff.

Stage	Current	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Years	Prep [K] to Year 6	Prep [K] to Year 7	Turf Playing Area	Prep [K] to Year 12	Prep [K] to Year 12	Prep [K] to Year 12	Prep [K] to Year 12
Total No. students	235	456	No change	679	No change	No change	800
Total Y12 Students	0	0	No change	60 (included in above total)	No change	No change	90 (included in above total)
Total Staff	20	30	No change	48	No change	No change	57

The staging and provision of gross floor space and parking in relation to student and staff numbers is illustrated in the table below and attached architectural drawing in Appendix 3 - development statistics- Sheets 1, 2 and 3 and Staging Plans 1-6.

Stage	Stage 1-	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Total
Basement GFA	-	-	-	-	-	-	-
Ground Floor GFA	689 sqm	-	403 sqm	76 sqm	265 sqm	977 sqm	2,410 sqm
First Floor	692 sqm	-	411 sqm	-	307 sqm	970 sqm	2,380 sqm
Second Floor	682 sqm	-	476 sqm	-	-	1210 sqm	2,368 sqm
Third Floor	675 sqm	-	-	-	-	325 sqm	1,000 sqm
Total GFA	2,738 sqm	-	1,290 sqm	76	572	3,482 sqm	8,158 sqm
Parking Spaces	39	-	38	-	-	47	124
Kiss & Drop spaces	4	-	-	-	-	3	7
Bicycle spaces	5	-	10	-	-	-	15
Motorcycle	2	-	-	-	-	-	2
Total No. students	456	No change	456+223= 679	No change	No change	679+121= 800	800
Total Y12 Students	0	No change	60	No change	No change	60+30= 90	90
Total Staff	30	No change	30+18=48	No change	No change	48+9= 57	57

Construction Management

The following preliminary construction/staging management plan outlines matters to be managed throughout the construction process; addressing measures indicated in the relevant supporting study recommendations. A preliminary construction management plan, including vehicle access and parking arrangements is attached at Appendix 20. The specific risk and mitigation measures are detailed further in Section 4.

Construction Management Issue	Study	Location
Site Management	Outline construction Management Plan	Appendix 20
Traffic	Transport, Traffic and Parking Report	Appendix 6 & 20
Amenity/Acoustic/Vibration	Acoustic Report	Appendix 10 & 20
Sediment and Erosion	Stormwater & Water Quality Engineering Report	Appendix 11 & 20
Waste	Contamination Reports	Appendix 12 & 20
	Waste Management Plan	Appendix 13 & 20

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Section 3: Statutory and Strategic Context

3.1 Strategic Planning Policies

NSW 2021: A Plan to Make NSW Number One

NSW 2021 is the government's ten year plan to strengthen the local economy, provide and maintain services and infrastructure and restore government accountability. NSW 2021 replaces the NSW State Plan as the strategic framework of business planning in the State. The five key strategies in NSW 2021 are:

- **Rebuild the Economy** – *restore economic growth and establish NSW as the 'first place in Australia to do business'.*
- **Return Quality Services** – *provide the best transport, health, education, policing, justice and family services, with a focus on the customer.*
- **Renovate Infrastructure** – *build the infrastructure that makes a difference to both our economy and people's lives.*
- **Strengthen our Local Environment and Communities** – *improve people's lives by protecting natural environments and building a strong sense of community.*
- **Restore Accountability to Government** – *talk honestly with the community, return planning powers to the community and give people a say on decisions that affect them.*

Metropolitan Plan for Sydney 2036

The Metropolitan Plan for Sydney 2036 provides the planning framework to manage housing, population and employment growth and development over the next 25 years.

It is envisaged the key measures to Sydney's long-term growth will be the emergence of Parramatta as the city's second CBD, the growth of Liverpool and Penrith as Regional Cities and the development of Major Centres. This growth will be driven by appropriate land use planning, the location of housing and employment lands in key areas, and supported by efficient transport infrastructure and corridors.

The key strategic directions and key policy settings which affect the Wahroonga Adventist School are:

- Strengthening a city of cities.
 - Support key economic gateways with integrated land use, infrastructure and transport planning.
- Growing and renewing centres.
 - Focus activity in accessible centres.
- Growing Sydney's economy.
 - Support high growth and high value industries through clustering.
- Transport for a connected city.
 - Target development around existing and planned transport capacity.
 - Improve local opportunities for walking, cycling and using public transport.

The school meets the above directions by being centrally located and upgrading the existing offer of educational facilities on the Wahroonga Estate site. The proposed expansion of the school will allow for local employment opportunities and greater integration with hospital amenities.

Draft Metropolitan Strategy for Sydney 2031

New draft sub regions are indicated in the Draft Metropolitan Strategy for Sydney 2031. North sub-region represents a population of 529,000 and covers an area of 802 km², across the Local Government Areas of Hornsby, Ku-ring-gai, Manly, Pittwater and Warringah. The population target for the sub-region indicates an increase in 81,000 residents by the year 2031.

Some relevant priorities for North Sub-region include:

- *promote as a highly accessible and liveable area with outstanding amenity, a growing network of employment areas and a prized natural environment*
- *improve connections linking the Orbital Motorway Network to the F3*
- *provide for increased housing choice through redevelopment for a variety of new housing types and densities around identified centres along major*

transport corridors including strategic bus corridors and the North Shore Line and Northern Line

- *protect the health and resilience of the environmental assets of the subregion, including the Hawkesbury River valley and estuary, the Northern Beaches, Pittwater, Broken Bay and Middle Harbour and the National Parks such as Ku-ring-gai Chase.*

Draft North Subregional Strategy

The Draft North Subregional Strategy was prepared by the Department of Planning in November 2007 and incorporates the LGAs of Ku-ring-gai and Hornsby. The Subregional Strategy sets out a dwelling target of an additional 21,000 houses and employment target of an additional 13,500 jobs in the subregion to 2031.

The key directions of the North subregional strategy include:

- Better access to a variety of housing choice,
- Strengthen the Major Centre,
- Enhance the Local Centres,
- Better public transport access to, from and within the North subregion, and
- Manage rural and resource lands.

The proposed development is an important component of the overall Wahroonga Estate redevelopment. Consideration has been given to the key directions outlined in the draft North Subregional Strategy and the proposed development will provide community benefit to the Wahroonga area.

NSW Bike Plan

The NSW Bike Plan was prepared in May 2010 and details the NSW cycle program, responding to the Metropolitan Transport Plan's \$158 million commitment to improve the cycle network. The NSW State Government will work with local councils, communities and businesses to promote cycling over the next ten years. The infrastructure plan includes:

- \$80 million over ten years to connect district centres by building missing links in Metro Sydney Bike Network,

- \$78 million over ten years to fast-track subregional bike networks for Parramatta, Liverpool and Penrith, and
- At least \$5 million every year to regional cities and local council across NSW to complete neighbourhood cycleway networks.

Aims of the cycle plan:

- *The NSW Bike plan will encourage more bike-riding by: Creating connecting cycling networks, Making bike-riding safe for all, Planning cycling-friendly neighbourhoods, Growing jobs in cycling, Getting organisations working together to support bike-riding.*

At present there are no marked cycling routes/bike paths which service the school site at Wahroonga.



Source: NSW Bike Plan 2010. P.3.

Planning Guidelines for Walking and Cycling

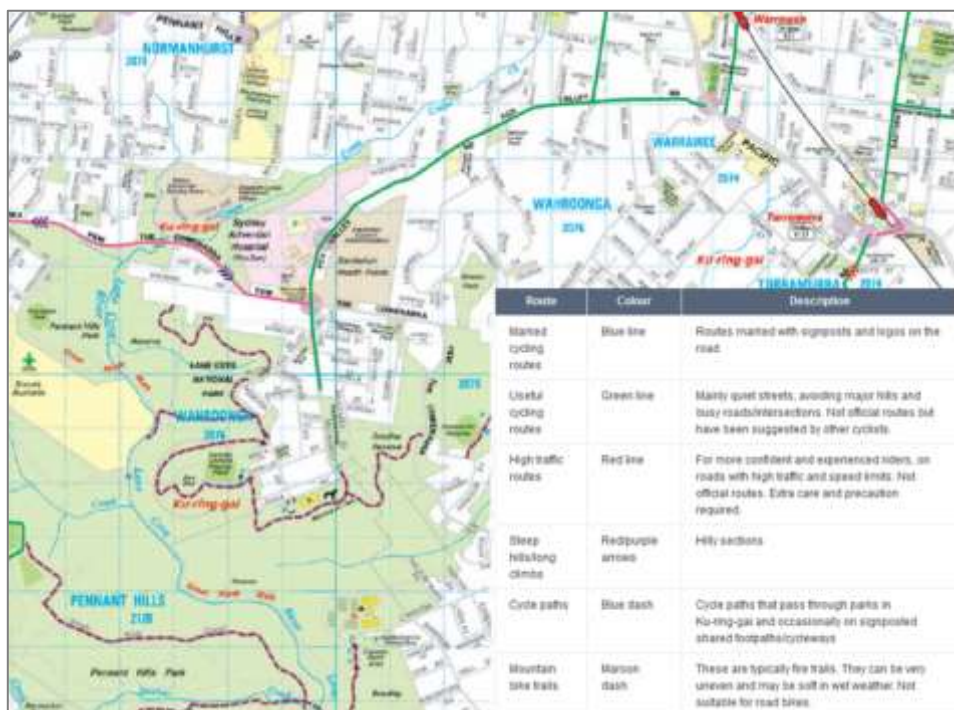
Planning Guidelines for Walking and Cycling were introduced to give greater consideration for walkability and 'cycleability' and the role it plays in shaping

urban form. The guidelines were prepared in line with the Integrating Land Use and Transport Planning Policy Package.

Planning provides the opportunity to further promote walking and cycling through the use of urban densities and forms, the link between land use and transport integration and the improvement and maintenance of services and facilities and any applicable contributions.

Potential walkability is defined by a circle of radius 400m or 5 minutes walk around a centre, and 800m or 10 minutes walk around a centre that includes a public transport stop. As bicycles travel three to four times faster than a person on foot, the bicycle catchment for a five minute ride is around 1.5 km.

Ku-ring-gai Council 'Cycleways map' classifies the surrounding bike routes which serve the site as follows: Comenarra Parkway- as steep hill/long climb; and Fox Valley Road as a 'useful cycling route'. Useful routes are described as "mainly quiet streets avoiding major hills and busy intersections . Not official routes but have been suggested by other cyclists."



Source: Ku-ring-gai Council Cycleway Map

Fox Valley Road connects to Warrawee Rail Station via Ada Avenue or Haydon Avenue approximately 2.8 km east of the School, as indicated on the plan above. This represents around a ten minute cycle from the school to the nearest rail station.

The enclosed traffic assessment identifies a range of 'other travel modes', which includes walking, cycling, motor cycles and public transport, as follows:

The school will also foster and encourage car sharing/pool for staff and parents/carers. All of these elements are addressed in the Sustainable Transport Initiative Report by GTA Consultants (July 2010) for the Wahroonga Estate development.

Access and circulation for pedestrians and cyclists will be provided for with pedestrian and cycle route provisions as identified in the Final Preferred Project Report and Concept Plan. This is particularly relevant to the school with routes along Fox Valley Road and the proposed new road running to the east and north of the site. Provisions is made for 15 bicycle spaces (5 for Stage 1) while staff will have locker and shower access.

Pedestrians will have convenient connection to the footways along Fox Valley Road and the proposed new road while there will be some parking provision for motor cycles in the basement level.

A bus stop with shelter will be located on the Fox Valley Road frontage for normal route and school special services and the proposed traffic signal controlled intersection will facilitate the crossing movements of pedestrian and cyclists to/from the school.

Integrating Land Use and Transport Policy Package

Integrating Land Use and Transport (ILUT) package outlines board sustainability objectives that help to plan for transport choice.

Management of the integration of land use and transport development will lead to a reduction in the number and length of private car journeys and make other modes of transport (walking, cycling and public transport) more attractive.

The ten principles of accessible development are:

- *Principle 1 – Concentrate in Centres*
- *Principle 2 – Mix uses in centres*
- *Principle 3 – Align centres within corridors*
- *Principle 4 – Link public transport with land use strategies*
- *Principle 5 – Connect streets*
- *Principle 6 – Improve pedestrian access*
- *Principle 7 – Improve cycle access*
- *Principle 8 – Manage parking supply*
- *Principle 9 – Improve road management*
- *Principle 10 – Implement good urban design*

The proposed development has given consideration to all of these principles throughout its design stage.

Please refer to the attached Access Report for further details on the site's function and accessibility.

Healthy Urban Development Checklist, NSW Health

The Health Urban Development Checklist was prepared by NSW Health in response to the role that both urban planning and the health profession play in ensuring healthy, sustainable communities.

The relationship between health and urban development is linked to urban growth, social needs and the provision of appropriate infrastructure. The key points outlined in the Checklist include:

- Physical activity
- Housing
- Transport and physical connectivity
- Quality employment
- Public open space
- Social infrastructure
- Social cohesion and social connectivity

The proposed development provides a high quality built environment and opportunities for all students and staff to adopt healthy and sociable learning and teaching practices. The school is an integral part of the community and the new development provides an opportunity to expand these benefits to a wider age

group. The campus is well connected to the local community infrastructure. The design and layout considers the relationship with surrounding residential areas, health and religious buildings and protects and enhances public open space.

The school will employ a total 57 staff and accommodate 800 students.

3.2 State Planning Policies

SEPP (State and Regional Development) 2011

Under Part 15 of the SEPP (State and Regional Development) 2011 the proposed development is considered to be State Significant as it has a CIV value greater than \$30 million.

This EIS responds to the DGRs issued in September 2012 for this State Significant Development.

SEPP (Infrastructure) 2007

Division 3 of the SEPP (Infrastructure) 2007 refers to specific provisions for *educational establishments*. The Infrastructure SEPP outlines that educational establishments are permitted with consent on land zoned R4 – High Density Residential.

The following clause applies to the Wahroonga Adventist School.

Regulation 28 – Development Permitted with Consent

(2) Development for any of the following purposes may be carried out by any person with consent on any of the following land:

(a) development for the purpose of educational establishments – on land on which there is an existing educational establishment,

(b) development for the purpose of the expansion of existing educational establishments – on land adjacent to the existing educational establishment.

Regulation 104- Traffic Generating Development and Schedule 3

Regulation 104 - Traffic-generating development is triggered where development of an Educational Establishment will accommodate fifty or more students with

access to any road. The proposed school will have vehicular access to and from a basement car park onto a new access road, which will connect to Fox Valley Road.

Pedestrian access is off Fox Valley Road.

To assist the Department of Planning and Environment in preparing a written notice of the application to Roads and Maritime Services, under Reg. 104, consideration has been given to the accessibility of the site concerned, including:

- *the efficiency of movement of people and freight to and from the site and the extent of multi-purpose trips, and*
- *the potential to minimise the need for travel by car and to maximise movement of freight.*

Potential traffic safety, road congestion or parking implications of the development are also considered in the attached traffic study in **Appendix 6** along with a Work Place Travel Plan and Transport Access Guide.

SEPP No. 19 – Bushland in Urban Areas

The SEPP states proposed development should give consideration to protect and preserve existing bushland in urban areas. The proposal has given consideration on the impact of the development on urban bushland through a detailed tree report and flora and fauna assessment and ecological reports. These reports are included at **Appendix 9** and **Appendix 14** discussed in more detail in Section 4.

These reports determine the impact is low given the main campus is located outside of the APZ setbacks and have no direct or indirect impact on biodiversity. Implementation of the Wahroonga Estate Biodiversity Management Plan will mitigate risks of run-off, pollutants and light spill arising from the PE Courts.

SEPP No. 55 – Remediation of Land

SEPP 55 provides the framework to remediate contaminated land to reduce the risk to human health or the environment. A previous Phase 1 Contamination Assessment has been undertaken for the site. It demonstrates the site has a low risk of contamination and associated impact of developing.

A further Phase 1 and Phase 2 Contamination Assessment (**Appendix 12**) have been undertaken as part of this SSD application and are discussed in more detail in Section 4.

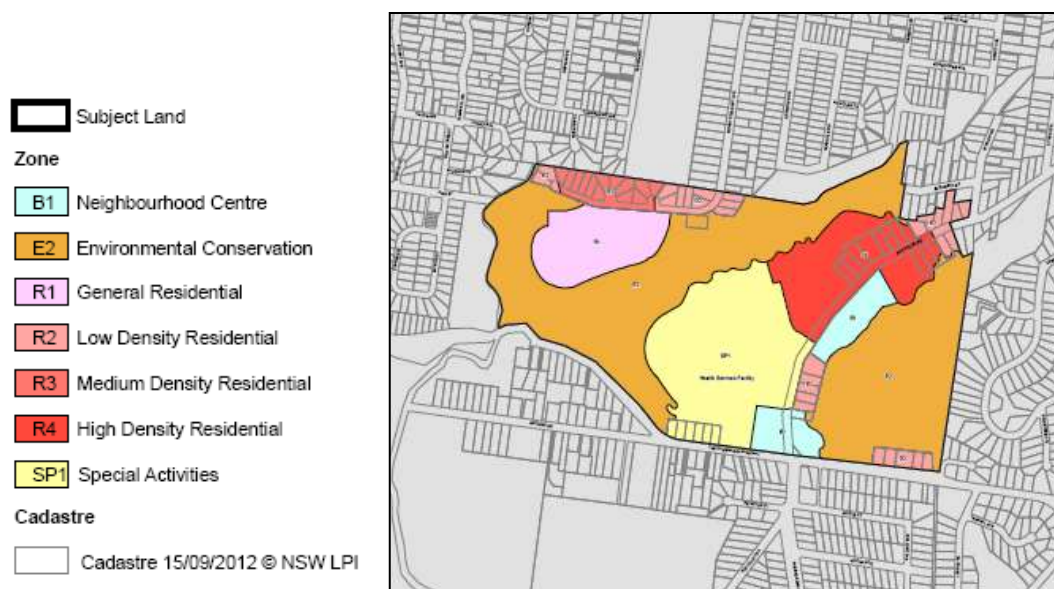
3.3 Site Specific Planning Policies

Ku-ring-gai Planning Scheme Ordinance

Part IIIC Wahroonga Estate

An amendment to the Ku-ring-gai Planning Scheme Ordinance (PSO) was gazetted on 21 December 2012. This amendment transferred planning provisions from the SEPP (Major Development) 2005 into the Ku-ring-gai PSO.

The land is zoned R4 High Density Residential. Educational Establishments are permitted with consent on this land.



26G Zone R4 High Density Residential

(1) *The objectives of Zone R4 High Density Residential are as follows:*

- (a) *to provide for the housing needs of the community within a high density residential environment,*
- (b) *to provide a variety of housing types within a high density residential environment,*

(c) to enable other land uses that provide facilities or services to meet the day today needs of residents.

For the purposes of interpreting the provisions in the PSO, any word or expression used has the same meaning as it has in the standard instrument prescribed by the *Standard Instrument (Local Environmental Plans) Order 2006* unless it is otherwise defined in Part IIIC.

Note. Relevant Standard Instrument Local Environmental Plan Definitions

"gross floor area" means the sum of the floor area of each floor of a building measured from the internal face of external walls, or from the internal face of walls separating the building from any other building, measured at a height of 1.4 metres above the floor, and includes:

- (a) the area of a mezzanine, and*
- (b) habitable rooms in a basement or an attic, and*
- (c) any shop, auditorium, cinema, and the like, in a basement or attic,*

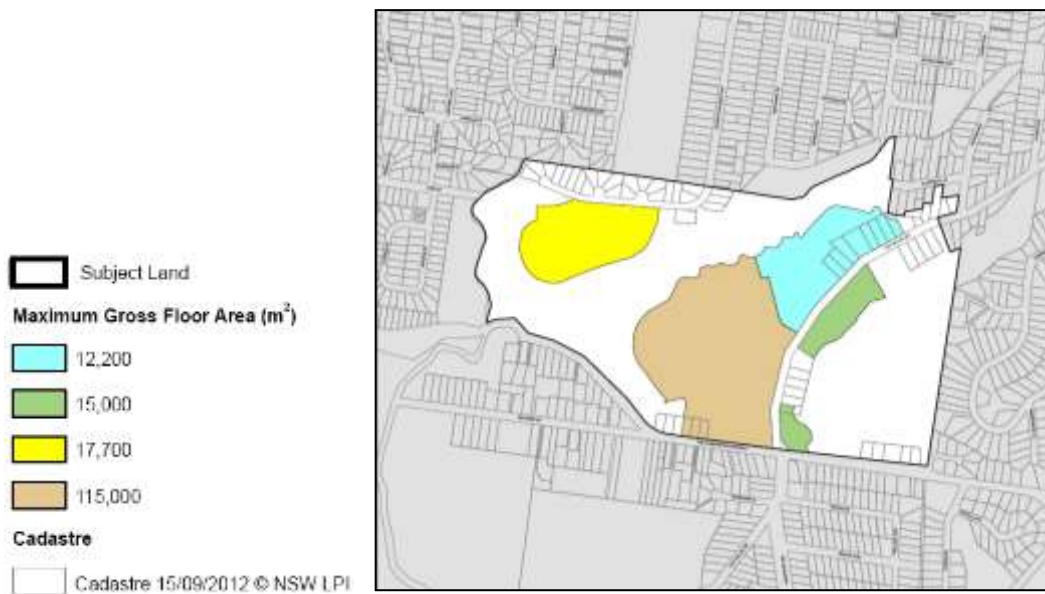
but excludes:

- (d) any area for common vertical circulation, such as lifts and stairs, and*
- (e) any basement:*
 - (i) storage, and*
 - (ii) vehicular access, loading areas, garbage and services, and*
- (f) plant rooms, lift towers and other areas used exclusively for mechanical services or ducting, and*
- (g) car parking to meet any requirements of the consent authority (including access to that car parking), and*
- (h) any space used for the loading or unloading of goods (including access to it), and*
- (i) terraces and balconies with outer walls less than 1.4 metres high, and*
- (j) voids above a floor at the level of a storey or storey above.*

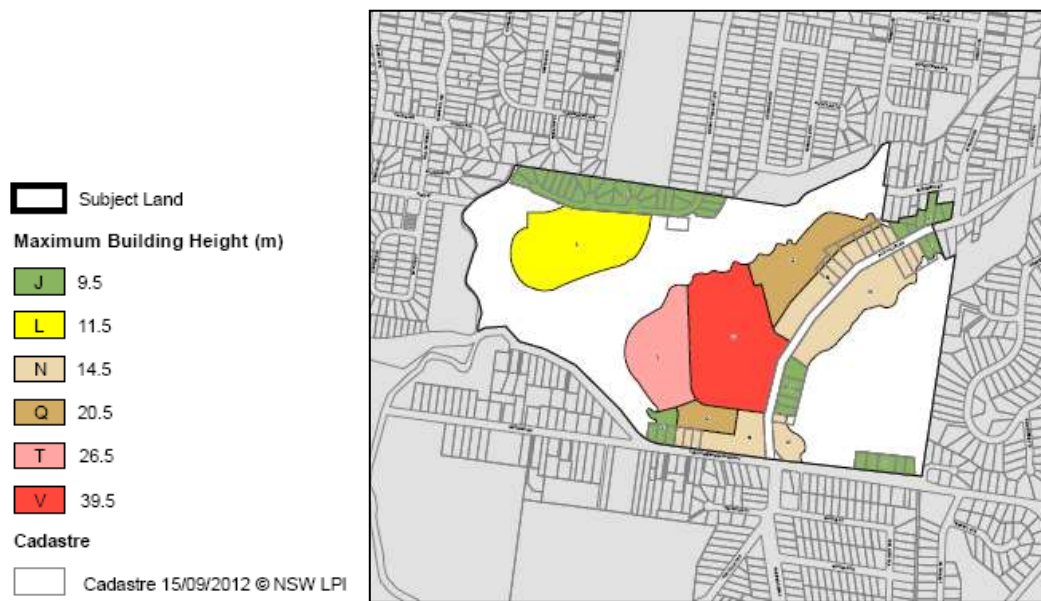
"building height" (or **"height of building"**) means the vertical distance between ground level (existing) and the highest point of the building, including plant and lift overruns, but excluding communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like.

A school is a sub term of the definition 'Educational establishment' in the Standard Instrument dictionary. Although Part IIIC of the local PSO applies to this site, the consent authority of an educational establishment with a CIV over \$30 million is the Department of Planning and Environment (DP&E) under the provisions of SEPP (State and Regional Development) 2011.

The following development standards apply:



Maximum Gross Floor Area for the whole precinct is 12,200 sqm, comprising 3,200sqm for Place of Public Worship (Seventh-day Adventist Church) and 9,000 sqm for Education.

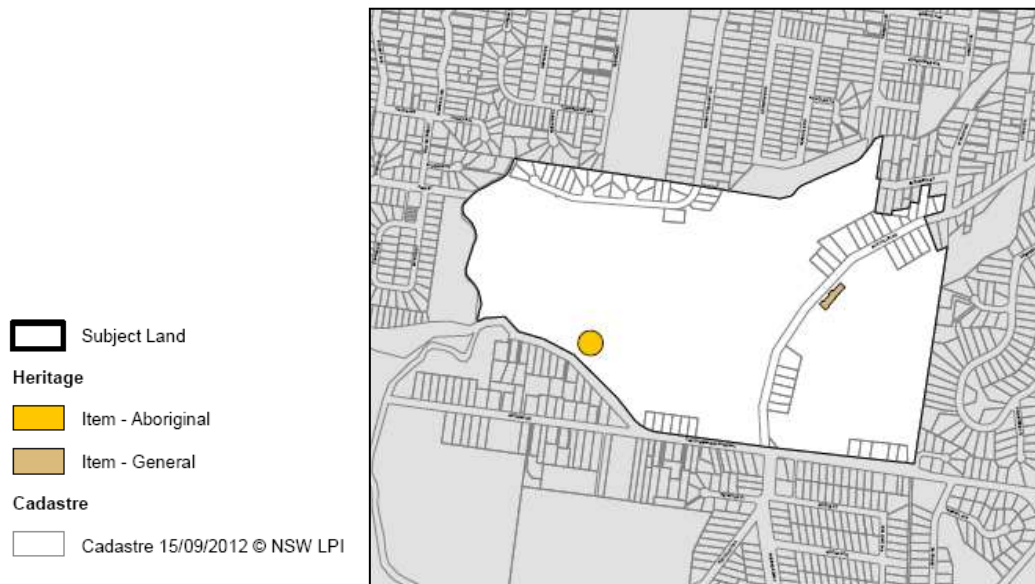


The maximum height of buildings detailed on the height of building map is 14.5 metres on the school site and 20.5 metres on the proposed playing/PE site.

Flexibility in design is also considered as part of the Concept Approval under the following terms of approval

Parts of the building rely on approved Concept Plan (MP07_0166 MOD5) to accommodate the ridge line of the school hall, an exhaust vent from the basement car park, a lift over-run and awnings over the covered walkway within the internal circulation areas of the school. This is detailed in full in the attached Architectural Design Report at **Appendix 3b**.

The development shall have no direct impacts on heritage items.



Wahroonga Estate Concept Plan

The Final Preferred Project Report and Concept Plan was completed in January 2010 and presented a concept plan as the basis upon which further development approvals would be issued. The Concept Plan identifies that the school location was moved to along Fox Valley Road to avoid bushfire constraints and the oval (sporting fields) location was shifted due to the Conservation Boundary.

The Concept Plan also outlines the existing and proposed school development.

Type of Use	Existing Development	Proposed Development
Education	Primary school of approximately 1,200m ² and catering for approx. 200 students.	Allowance for a K- 12 school of 9,000m ² relocated to Central Church Precinct and catering for approx. 800 students.

The Concept Approval for the Wahroonga Estate was issued in March 2010. The Concept Approval allows for the expansion of the hospital by 28,000m². It also permits for the provision of 500 private residential dwellings, student accommodation, senior housing, retail and commercial uses, a new Kindergarten to Year 12 school and nursing faculty.

The area identified in the Concept Approval as Precinct B: Central Church precinct, was allocated following land uses and maximum gross floorspace for uses as a school building.

Precinct	Maximum Gross Floor Area (m²) (excluding dwellings)	Maximum
<i>Precinct B: Central Church</i>	<i>12,200m²</i>	<i>9,000m² education 3,200m² place of public worship</i>

The proposed development is consistent with the various relevant terms of the Concept Approval (MP07_0166) including MP 07_0166 Mod 5, which allows flexibility in design under the following terms of approval:

A3 Gross Floor Area - The gross floor area of the K-12 school building is 8158 sqm and will be less than 9000 sqm allocated to a school building located within the area identified in the Concept Plan Approval as Precinct B: Central Church.

A8 Building Height - Buildings shall generally be compliant with the Wahroonga Estate Height of Buildings Map, except as follows:

...

- j. Precinct B: Central Church education development senior school building shall be restricted to the maximum RL 182.8m;
- k. Precinct B: Central Church education development middle school building shall be restricted to the maximum RL 183.3 m;
- l. Precinct B: Central Church education development junior school building shall be restricted to the maximum RL 164.0 m.

3. Notwithstanding A8 (1) above, development consent may be granted for development that exceeds the maximum building height stipulated in A8 (1) if the consent authority has considered and is satisfied with the written request from the applicant that seeks to justify the contravention of the maximum building height...

B1 Urban Design- Buildings with frontage to Fox Valley Road are to be set back 10 metres and provide an active street frontage.

B3 Proposed School Facilities – The drawings show the layout of school buildings and associated facilities including the proposed oval [playing/PE areas]; Design of buildings and relationship with surrounding development and traffic management measures (including facilities such as stopping bays, bus facilities, drop off and pick up areas, car parking and vehicular access arrangements). The location and proposed management of the playing/PE areas avoids impacts on critically/endangered ecological communities.

B4 Biodiversity – A Biodiversity Management Plan prepared for the whole site guides the necessary management procedures to maintain and regenerate bushland. This will ensure the quality of the bushland is safeguarded to maintain its ecological value under current and future ownership of all land zoned E2 Environmental Conservation.

B5 Bushfire Protection –stipulates measures which are to be undertaken for bushfire protection.

(1) All Asset Protection Zones are to be located outside of the conservation land as shown in the approved Concept Plan unless required for development constructed prior to the date of this instrument.

(2) Uses constituting 'Special Fire Protection Purposes' as defined in Planning for Bushfire Protection 2006 are to be undertaken in consultation with the NSW Rural Fire Service.

(3) All Asset Protection Zones and other bushfire protection measures are to comply with Planning for Bushfire Protection 2006.

The educational establishment is located outside the bushfire Asset Protection Zone (APZ) setbacks identified in the approved Concept Plan. See **Appendix 17**.

B6-B9 – Road Design, Agency Road Requirements, Transport and Car Parking have all been addressed in the attached Traffic Report and Work Place Travel Plan and Transport Access Guide. See **Appendix 6**.

Assessment of the proposed development scheme has concluded that:

- *the proposal is consistent with Concept Plan*
- *there will not be any adverse traffic implications*
- *the proposed parking provision will be suitable and appropriate*
- *the proposed vehicle access, internal circulation and servicing arrangements will be satisfactory*

The Concept Approval stipulates that:

B9 Car Parking

(3) The consent authority is to have regard to the provisions of the relevant Council Development Control Plan regulating car parking at the time of the application, the final Preferred Project Report and any other relevant traffic, transport and car parking reports when determining car parking requirements for employment generating land uses.

(4) Applications for non-residential land uses must be accompanied by a traffic and car parking assessment prepared by a suitably qualified traffic planner, demonstrating that sufficient car parking has been provided having regard to the RTA's Guide to Traffic Generating Developments and Council's DCP requirements.

B10 – Aboriginal Heritage. There will be no impacts on Aboriginal Heritage. The attached Aboriginal Heritage Impact Assessment addresses consultation with the Metropolitan Local Aboriginal Land Council. See **Appendix 15**

B11 – Stormwater Management measures are indicated in the Stormwater Management and Water Quality Engineering Report at **Appendix 11**. This is submitted for approval with this development application. This demonstrates that water sensitive urban design measures

have been integrated into the development and considers *Council's DCP 47 Water Management*.

B12 – Geotechnical Issues outlined in the Concept approval are addressed in the attached Geotechnical Report at **Appendix 7**

B13 – Contamination management and best practice techniques are prescribed in **Appendix 12**

B14 – Construction Management is addressed in all relevant studies including traffic, noise, vibration, sediment and erosion controls. The staging information in Section 2 provides details of the delivery of the project.

3.4 Other Local Planning Policies

Ku-ring-gai Contributions Plan 2010

Contributions

The Ku-ring-gai contributions plan 2010 applies to development on land in the Ku-ring-gai local governmental area that will result in a net demand for local infrastructure, specifically arising from residential, commercial and retail uses.

The development of Wahroonga Adventist School shall result in a net community benefit. Development contributions will not be required for the provision of community infrastructure, which supports the school population without additional cost to the local community. No contributions are required and a voluntary planning agreement is not proposed as part of this application.

Development Control Plans

Development Control Plans (DCP's) do not ordinarily apply to State Significant Development on the presumption that they "*are generally concerned with local or specific issues and do not provide appropriate planning controls for large, complex development of importance to the State*" (DP&E Fact Sheet February 2012). The DGR's for Wahroonga Adventist School specify consideration of two local DCP's as a guide to addressing matters in relation to car parking ratios and Water Management.

Ku-ring-gai DCP 43 – Car Parking Code

Ku-ring-gai Council DCP 43 – Car Parking Code outlines the guidelines for parking within the LGA. It aims to ensure that:

- There is adequate parking provided in developments,
- The design of parking and service areas is consistent with the characteristics and environmental standards of the LGA,
- Provide ecologically sustainable car parking facilities, and
- Provide standards with regard to protecting the environmental quality of the LGA and consider major transport corridor that service the area.

Car Parking Code DCP 43 is stipulated in the DGR's. This applies the following car parking requirements.

Primary and Secondary Schools

1 space per equivalent full-time employee plus 1 space per 8 Year 12 students. Where an auditorium or similar rooms are proposed, additional parking might be required. Provision for set down / pick up of students and a set down / pick up management plan is required.

The number of equivalent full time employees should be the maximum number at the school at any one time. A parking impact assessment should be undertaken to quantify the total parking required. Provision is also to be made for bus services in all applications made by schools.

All of these considerations have been taken into account when accommodating adequate car parking spaces for the development.

Ku-ring-gai DCP 47 – Water Management

Ku-ring-gai DCP 47 – Water Management demonstrates Council's requirements relating to water management during development. The objectives of the DCP include:

- *Water management that is appropriate to the site and its surroundings and that is integrated into the overall design of the development.*

- *Sustainable management and use of water in Ku-ring-gai.*
- *Management and conservation of natural and built waterways and natural assets in the catchments.*
- *Maintenance or enhancement of the predominant landscape quality of Ku-ring-gai.*
- *An urban environment with a high standard of residential amenity and safety.*
- *Development application plans and documentation that are of a high standard.*
- *Development that meets all environmental, planning and Council requirements*

All of these objectives have been given consideration in the Stormwater and Water Quality Engineering Report. Please refer to **Appendix 11**.

Section 4: Environmental Assessment

4.1 Built Form and Urban Design Compliance

DGRs require the proposed development to carefully consider the full range of qualitative built form and urban design principles.

The proposed works comprise a total of 8,158 sqm, which is within the maximum allowable 9,000 sqm of education floor area permitted in Precinct B: Central Church in the approved concept plan.

The new school is proposed on two separate parcels of land. The K-12 school campus has a frontage of 125.8 metre to Fox Valley Road. Playing/PE area is situated to the north, located on a separate nearby lot adjoining bushland. These are set back 3 metres from the E2 land. Measures are proposed to protect and manage conservation areas.

The layout of the school teaching buildings is primarily influenced by legislative requirements for a 100m Asset Protection Zone; set-back controls from Fox Valley Road (10m) and the church (16.1m); and various BCA regulations.

Clearly defined and separated pedestrian and vehicular gateways are provided to the site and activate the street frontage for pedestrians to and from Fox Valley Road, as required.

A concept plan requirement for below ground parking determines the lower floor level for all buildings across this sloping site. The underground basement is designed to be concealed from view along the streetscape on the south-eastern edge of the site then rises partly above natural ground level on the north western side of the site (due to the required levels to achieve vehicular access from the new internal road and movement within the basement).

The three buildings provide a variation of mass and scale and all sit above the common basement parking area. Overall buildings comprise between two to four levels.

The layout and number of floors responds to functional and capacity requirements within the campus and with wider Wahroonga Estate facilities, particularly the Church. The accommodation requirements on the school campus incorporate four levels above ground for the Senior and Middle Schools, and three levels above ground for the Junior School. This maximises site efficiency.

All building heights are consistent with the approved concept plan. The design responds as close as possible to the 14.5 height plane and site specific RL limitations nominated in the approved concept plan allow for protrusions including awnings, lift overruns, mechanical services plant and equipment, fully integrated within the building form. The Middle and Senior School building forms are close in height to the general 14.5m control envelope on the site, which has influenced the design of the building roofscape to be low in profile and scale. The Junior School building is completely below the general 14.5m height plane above natural ground level, with the majority of the footprint being equivalent to one storey below the permissible height.

When viewed from Fox Valley Road, the front edge of the Junior School roof on the south-east elevation is significantly below the 14.5m height line. It is therefore considered to be consistent with the objectives of the Concept Plan. The south east elevation of all buildings on Fox Valley Road is below the 14.5m height plane and consistent with streetscape objectives of the Concept Plan.

The footprints and layout of the site are consistent with the approved concept plan. Building footprints and building depths are minimised for greater efficiency and provide good connectivity on the campus, solar access, daylight and natural ventilation.

The design considers the interface between future residential developments including orientation, planting, visual amenity, privacy and acoustics.

Outdoor play spaces and landscaped open space comprises four key elements: *Main pedestrian entry to the School at the southern end of the site; Central outdoor play space (the 'heart'); Junior School outdoor play space at the northern end of the site; 'Internal street' link across all three 'schools' on the campus.* The design ensures that desired built form character of Precinct B Central Church is achieved and will not impact on public domain or amenity of adjoining uses. The proposal is compliant with the approved Concept Plan.

Each building design is a direct result of functional amenity requirements to provide necessary facilities for the varying needs of teaching a range of Kindergarten to Year 12 students. The quality of the design is specified in the following tables and associated drawings and architectural design report contained within **Appendix 3** to the EIS.

Design Quality	Architectural Design Report - Contents Reference
Site Layout	2.4, 3.1, 4.1, 4.4
Recreational Space	4.1, 4.3
Axis	3.7
Vistas and Connectivity	4.11
Open Spaces and Edges	4.17, 4.18
Primary Elements	4.1, 4.3
Gateways	3.1, 3.6
Façade	4.9
Roofscape	4.7, 4.8
Mechanical Plant	4.7, 4.9
Height, bulk and scale	3.8, 3.9, 4.5, 4.6, 4.7
Setbacks	3.9, 4.4
Building Articulation	4.9
Materials and Colours	4.15
CPTED Principles to Minimise the Opportunity for Crime	
Surveillance	4.23
Access Control	

Territorial Reinforcement	
Space Management	

4.2 Access, Traffic and Parking

Previous Environmental Assessment

Under the Final Preferred Project Report and Concept Plan, provision was made for a total of 1,671 car spaces (including 250 on-street parking spaces) to service the non-hospital uses across the Wahroonga Estate.

Under the Director-General's Environmental Assessment Report (March 2010) car parking, drop off and pick arrangements for the school are to be supplied at the project application stage. The Environmental Assessment Report also outlines the car parking rate proposed for the school (in line with the Final Preferred Project Report and Concept Plan).

Landuse	DCP Requirement	Proposed Provision in Final PPR
Primary and Secondary School	1 space per equivalent full-time employee 1 space per 8 Year 12 students	1 space per equivalent full-time employee 1 space per 8 Year 12 students

Future applications for employment generating uses will require detailed assessment of the number and location of parking spaces, loading and unloading facilities and traffic management arrangements.

Based on the total staff and projected Year 12 student numbers, the DCP would require 69 spaces:

Total Projected no. Year 12 students = 90

Projected no. staff = 57

$[57 (\text{staff}) + 11.25 (90/8 \text{ y}12)] = [68.25]$ **69 spaces.**

A total of 124 parking spaces are provided within the basement of the proposed development. The total number of spaces provided is in excess of Council DCP standards and is consistent with the 123 car-parking spaces indicated for the

school in Section 8.9.2 of the *Wahroonga Estate - Final preferred Project Report and Concept Plan (Urbis, 2010)*.

A Traffic Report and Work Place Travel Plan and Transport Access Guide outline a range of alternative modes of travel within **Appendix 6**.

4.3 Noise

A number of considerations have been made in relation construction and operational noise in relation to Wahroonga Adventist School. (See **Appendix 10**)

The Primary noise generators that will be mitigated are the PE courts, vehicle noise and general school activity, which may take place out of hours.

- Fields area will be used for supervised play for students during morning tea and lunch times.
- Afternoon use would be for training purposes only with no spectator crowds anticipated.
- As the adjacent existing vegetation community to the north of the fields cannot be disturbed, there are restrictions on the proximity of the new retaining walls in relation to root protection zones etc. As a result, this area is too small to accommodate a standard hockey or soccer field for example - i.e. there will be no spectator crowds for games etc.
- The courts will be netball/basketball courts and be protected by sunshade structures ranging from 4m to 7m above the ground.

Noise management measures recommended include on the Acoustic Report in **Appendix 10** are:

- Encouragement orderly planning of the venue/site by regulating the frequency of noisy events;
- Minimise or limit the use of referee's whistles, use of public address systems;
- Encourage supervision of sporting by teachers/staff during the use of the playing area;
- Encourage patrons to leave the sporting fields in a quick and quiet manner to reduce the likelihood of neighbourhood complaints;

- Limit the use of the fields during the evening period to one court/field as opposed to all 3 courts/fields will result noise emission reductions of approximately 5dB(A).

The construction management plan attached outlines considerations associated with noise and vibration

4.4 Contamination

A Phase 1 Contamination Assessment was prepared by Douglas Partners for the Wahroonga Estate in November 2008. The scope of works included a site walkover, identification of properties, a review of historical aerial photographs, and a search of relevant registers and databases.

Overall, it was considered the site had a low potential for contamination of soil and groundwater.

A Desktop Contamination Assessment Review was undertaken by Douglas Partners in January 2013. Douglas Partners undertook a previous Contamination Assessment of the Wahroonga Estate site in November 2008 (*Report on Phase 1 Contamination Assessment, Proposed Development, Wahroonga Estate*).

The Review found that the potential for soil and groundwater contamination on the site is low. This is based on investigation of past and current land uses and a site inspection. The Review examined both the lots and found differing results for each part of the site. The school site shows signs which indicate past cut and fill activities and potential effects from the demolition of houses on this part of the site. The playing/PE site has generally remained as a vacant grassed area, with limited potential contaminating activities occurring on the site.

A Phase 2 Contamination Assessment was undertaken "to establish the suitability of the site" to contain an educational establishment. Potential groundwater contamination was also considered.

This detailed site investigation for the proposed development did not uncover evidence of widespread or substantial soil contamination. It is considered that,

based on the results of the investigation, the site is compatible with the proposed development subject to the following:

- *Implementation of asbestos remediation within the footprints of the former dwellings and school buildings. This is likely to involve a process of tilling and "emu-picking" and subsequent disposal of ACM fragments followed by an inspection and sign-off by an occupational hygienist. The remediation process should be set out in an appropriate remediation action plan (RAP);*
- *Re-assessment of the ecological risks at and in the vicinity of the reported EIL and ESL exceedances, once the final development layout is confirmed, [if this changes]. This is likely to involve additional soil sampling and testing in target areas; and*
- *Preparation of a Construction Environmental Management Plan (CEMP) incorporating an 'Unexpected Asbestos Finds Protocol', to ensure that any unsuspected finds of contamination, particularly asbestos, are dealt with appropriately.*

Further soil sampling and testing was undertaken in January 2015 to report on additional investigation of ecological screening levels to satisfy that the land is suitable for the proposed use. See **Appendix 12**.

4.5 Landscaping

Under the Final Preferred Project Report and Concept Plan the landscaping treatment for the proposed school site is:

Landscape Type	Description
Fox Valley Road	The existing leafy character of Fox Valley Road is to be maintained with much of the existing trees retained. Where appropriate additional street tree planting will add to this. Proposed buildings will be set back from the existing road and build on the existing trend of formally landscaped frontages including hedgerow and specimen tree planting.
Campus	The landscape treatment across these areas will help to create a 'campus' feel with high levels of pedestrian accessibility. Retention of existing vegetation together with avenue tree planting and larger areas of open lawn will provide a strong green structure within the wider forest setting. A number of key focal spaces related to the hospital, church and residential communities will be interlinked by a strong network of paths and cycleways placing an emphasis on pedestrian movement.

This treatment has been maintained in the proposed landscape plan for Wahroonga Adventist School. (see **Appendix 3**)

4.6 Bushfire

Previous Environmental Assessment

The Bushfire Protection Assessment for the Wahroonga Estate Redevelopment defines that the vegetation on the site varies from managed landscaped gardens/open mown lawns which adjoin the existing facilities, to open forest in the Coups Creek precinct and the undeveloped south eastern corner of the Estate.

DGRs issued as part of the environmental assessment of the Estate an appropriate and justified level of consultation was undertaken with NSW Rural Fire Service. Bushfire safety addressed issues relating to access/egress, fire-fighting access and water supplies, construction standards for buildings, management of APZ vegetation and evacuation protocols.

According to the Bushfire Protection Assessment the location of the new Kindergarten to 12 school is in the "Central [Church] Precinct". The school is located adjacent to the eastern boundary, with this location being chosen as it is separated from the Lane Cove National Park and set away from the bushland near Coups Creek.

Specific Bushfire Protection Assessment Report – Wahroonga Adventist School

DGR's for the preparation of the EIS requires that the application demonstrate compliance with the relevant provisions of *Planning for Bushfire Protection 2006* and established Asset Protection Zones.

Consultation has also occurred, as required by the DGRs, with NSW Rural Fire Service to obtain advice on the adequacy of the bushfire protection measures applied to the proposed development.

The Bushfire Protection Assessment at **Appendix 17** has reviewed the proposed Wahroonga Adventist School development against the deemed-to-satisfy provisions of *Planning for Bushfire Protection 2006* and has found that the School precinct is located beyond the established Asset Protection Zone widths for a 'Special Fire Protection Purpose Development' as defined by the Wahroonga Estate Concept Master Plan.

The report also examines the requirements for the provision of access and water supplies for fire-fighting operations and construction standards to the School buildings which may be impacted by radiant heat and burning embers.

Emergency management has also been examined and concludes that the fire safety measures incorporated into the proposed development provides a safe location from which it will not be necessary to relocate students, staff and visitors, during a bushfire event in the bushland vegetation which will be retained within the Estate

Table 3 in the attached Bushfire Protection Assessment (Appendix 17), summarises the extent to which the proposed development conforms to the deemed-to-satisfy specifications of *Planning for Bushfire Protection 2006*.

4.7 Flora and Fauna

A site specific Flora and Fauna Assessment was completed in May 2013 by Cumberland Ecology (see **Appendix 14**). The following extract provides a summary of findings, which considers the potential impacts of the school and the recreational areas on the adjoining vegetation and riparian land to the north of the development.

The proposed redevelopment of the subject site allows for the construction of a new campus of the Wahroonga Adventist School, adjacent to the currently operating hospital. The subject site is not considered to contain any EECs and limited vegetation considered to constitute suitable fauna habitat. The subject lands downslope of the proposed development contain a number of complex ecological issues including; Sydney Turpentine-Ironbark Forest, an EEC listed under the TSC Act and a CEEC listed under the EPBC Act and known foraging habitat for the Eastern False Pipistrelle and the Grey-headed Flying-fox. The site also provides suitable foraging habitat for a number of threatened species not recorded on the subject site such as microchiropteran bats and other birds. No threatened flora species have been detected on the subject site.

The proposed development will not result in the removal or impacts to any trees diagnostic of STIF. It will, however, remove a small area of planted exotic

vegetation which potentially provides foraging habitat for nectivorous bird and insectivorous bat species. The proposal will not involve the clearing of feed tree species of the Glossy Black-cockatoo.

The proposed development will not impact on the downslope riparian vegetation within the Coups Creek corridor. Stormwater flows from the school area are and will continue to be diverted to a large on site detention basin. Additionally, the concept stormwater plan (Cardno, 2013) includes the implementation of drainage measures and rainwater storage devices for the hardstand areas within the western portion of the subject site. Discharges of water draining from this portion of the site will be via a rock headwall with a dispersion trench.

These measures are consistent with the Water Sensitive Urban Design guidelines, and are predicted to effectively slow water movement, thus minimising soil erosion downslope, thus maintaining water quality levels within Coups Creek.

A range of mitigation measures are proposed to avoid both on and off-site impacts. These include erosion and sediment control to avoid stormwater and sediment runoff, the implementation of on-site water detention measures to minimise long term impacts downslope of the site, pre-clearance surveys to relocate any fauna present, signage to ensure that no unnecessary clearing occurs, and protection of trees to be retained through fencing. The vegetation adjacent to the site will be managed in perpetuity through the BMP.

No significant impact is predicted to occur to threatened species or C/EECs as a result of the development, and the preparation of a Species Impact Statement (SIS) is not warranted.

The development is broadly consistent with the approved BMP. Actions detailed within the plan such as weed management are already being undertaken and will continue to be undertaken in the vegetation adjacent to the subject site. Additional recommendations within the BMP such as the use of onsite water detention basins, gross pollutant traps, water dispersion trenches and garbage bins will be implemented.

Cumberland Ecology prepared the Flora and Fauna Assessment for the broader Wahroonga Estate in March 2009. The purpose of the assessment was to examine

the ecological values and predict the potential impacts of the redevelopment on flora and fauna.

The site is described as containing largely disturbed areas of grassland with scattered trees, as well as considerable areas of native vegetation. The high proportion of exotic weeds indicates the impact of edge effect on the bushland. The site also contains several streams that flow through largely urbanised catchments.

Methods used during the assessment included a flora quadrant survey and fauna surveys. Literature and database records were also examined.

On the site approximately 5.771 hectares of the 37.077 hectares of native vegetation is proposed to be cleared for development, with a further 16.356 hectares to be managed for asset protection zones (APZ) and 1.36 hectares to be managed for bushfire fuel reduction zones.

The Blue Gum High Forest and Sydney Turpentine-Ironbark Forest are to be managed by a site specific Biodiversity Management Plan. Sections of forest habitat have also been retained along the Coups Creek and east of Fox Valley Road, which has retained a wildlife corridor function.

In the Final Preferred Project Report and Concept Plan Figure 101 depicts the APZ landuses on the Wahroonga Estate. The map also indicates the undisturbed vegetation boundary, and riparian and vegetation corridors.

Under the Concept Approval, condition B4 states:

(1) A Biodiversity Management Plan is to be prepared by the Proponent prior to any further application and approved by DEWHA. The plan is to include:

- a) Vegetation Management Plan*
- b) Pest and Weed Plan*
- c) Hydrology and Nutrient Management Plan*
- d) Habitat Corridor and Linkages Management Plan*
- e) Fire Management Plan*
- f) Management Plan outlining public access and impacts on the conservation land (E2 Environmental Conservation zone)*

- g) Ownership. Management, maintenance and monitoring responsibilities for conservation land (E2 Environmental Conservation zone) and funding arrangements.*

Measures have been undertaken in conjunction with this development application to be compliant with the Concept Approval.

The site specific Flora and Fauna Assessment demonstrates that this development is broadly consistent with the approved BMP. Actions detailed within the plan such as weed management are already being undertaken and will continue to be undertaken in the vegetation adjacent to the subject site. Additional recommendations within the BMP such as the use of onsite water detention basins, gross pollutant traps, water dispersion trenches and garbage bins will be implemented.

Tree Report

A Tree Report has been prepared by TreeScan – Urban Forest Management in January 2013. The Tree Report has been prepared to address the proposed removal of all trees on the site with the exception of Trees 17, 18 and 19.

The Tree Report states that the landscape plan will provide replacement plantings on the site. This will address any issues regarding tree amenity which may occur with the removal of existing larger trees on the site.

Trees along the street frontage are to be retained, with the exception of one tree proposed for removal to accommodate the accessway to the site. Notification has been given to Ku-ring-gai Council and the Roads and Maritime Services (RMS) requesting verification of no adverse impacts occurring due to the removal of this tree and that no further action is required from either of these parties.

Please refer to the Tree Report at **Appendix 9** for the relevant tree location plan.

4.8 Ecologically Sustainable Development

This section of the report specifically addresses the following relevant matters associated with the Director General's Environmental Assessment Requirements issued under Section 78A (8A) of the Environmental Planning and Assessment Act 1979.

The Director General's requirements include, at 7 (5) Ecologically Sustainable Development, the requirement to 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, construction and ongoing operation phases of the development.

Clause 7(4) of schedule 2 of the Environmental Planning and Assessment Regulation 2000 states:

7 Content of environmental impact statement

(4) The principles of ecologically sustainable development are as follows:

(a) the "precautionary principle" , namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:

(i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and

(ii) an assessment of the risk-weighted consequences of various options,

(b) "inter-generational equity" , namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,

(c) "conservation of biological diversity and ecological integrity" , namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,

(d) "improved valuation, pricing and incentive mechanisms" , namely, that environmental factors should be included in the valuation of assets and services, such as:

(i) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,

(ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,

(iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

The principles of Ecologically Sustainable Development (ESD) will be addressed as follows:

A number of studies have been undertaken to provide a level of scientific certainty to ensure the development of Wahroonga Seventh Day Adventist School presents no adverse impacts on the environment. This includes a flora and fauna assessment that evaluates all potential impacts including the recreational areas on the surrounding bushland and riparian land. This demonstrates that there are no impacts predicted to occur to threatened species or Critical or Endangered Ecological Communities and that all other potential impacts such as storm water run -off, protection of trees during site clearance etc. have been assessed and will be mitigated.

The long term protection of all vegetation adjoining the site will be managed through the ongoing implementation of the current approved Biodiversity Management Plan (2010). This comprehensive approach ensures that the current ecological values of flora and fauna are maintained for the benefit of future

generations; fundamentally safeguarding biological diversity and ecological integrity.

In the new buildings and recreational facilities on the campus, a wide range of sustainable design measures have been considered and integrated into the built form and layout of the School. This addresses environmental factors to avoid pollution and considers the full life cycle of materials and construction methods; including the use of natural resources and recycling.

The entire proposed development outcome is a result of the design process weighing up the costs and benefits of solutions and responses to environmental problems, whilst ensuring it is practical for the purposes of the effective operation of the school:

- The buildings are designed to maximise the provision of natural ventilation and controlled solar ingress to the teaching and staff spaces throughout the campus.
- Good cross ventilation opportunities are particularly available in the Middle and Junior School building footprints through multi-use/flexi spaces, due to their narrower depth.
- The design provides for generous daylight access into the buildings to reduce reliance on artificial lighting during the day.
- The new school campus facilities have been designed to comply with the sustainability requirements of Section J of the Building Code of Australia.
- Consideration has been made in the design process for energy requirements which include;
 - building fabric;
 - glazing;
 - building sealing;
 - air-conditioning and ventilation systems;
 - lighting and power;

- hot water supply;
 - access for maintenance; and
 - facilities for monitoring energy usage.
- Measures to be integrated from conforming with the above energy requirements include:
 - appropriate thermal insulation incorporated into the external building envelope;
 - utilising VRV mechanical air-conditioning systems for energy efficiency;
 - maximised use of energy efficient light fittings; and
 - maximised used of water efficient fixtures.
- A large rainwater collection tank has been designed in to the basement level for water re-use, including the flushing of toilets and irrigation to landscaped areas.
- Water Sensitive Urban Design (WSUD) considerations have also been made to achieve reductions in gross pollutants/suspended solids etc, prior to entering the stormwater system.
- Rainwater run-off on the northern edge of the Playing /PE area has been located to ensure minimal impact on the adjoining natural vegetation and habitat, further detailed design will be undertaken in consultation with the environmental consultant (*refer to the Stormwater and Water Quality Report*).
- Finishes and materials in the building are proposed to incorporate low VOC paint products, and low environmental impact products suitable for educational environments, as far as possible.

Refer also to the Architectural Design Report (**Appendix 3b**).

Previous Environmental Assessment regarding ESD

The Wahroonga Estate Redevelopment Ecologically Sustainable Development Review addresses the principles of ecologically sustainable development (ESD) in

response to the Director-General Requirements (DGRs) issued during the Part 3A environmental assessment process. The DGR stated:

Demonstrated how the development will satisfy ESD principles, including BASIX, water sensitive urban design measures, energy efficiency and recycling and waste management.

In the Final Preferred Project Report and Concept Plan four key points have been followed being:

- The precautionary principle,
- Intergenerational equity,
- Conservation of biological diversity and ecological integrity, and
- Improved valuation, pricing and incentive mechanisms.

ESD principles which are incorporation into the wider Wahroonga Estate, relevant to this SSD are discussed below. These allow flexibility in site configuration and development controls.

- Water sensitive urban design (WSUD) – have been considered in the 'Wahroonga Estate Flooding and Stormwater Master Plan'. Site stormwater and water cycle management infrastructure control flooding, improve water quality and conserve and reuse water on-site. WSUD recommendations include rainwater tanks, detention basins, wetlands and ponds.
- Energy efficiency – best practice ESD principles have also been incorporated into the design of non-residential development. Efficient components and development systems will help to reduce operating costs and minimise the environmental footprint of future buildings.
- Recycling and waste management – adaptive reuse has been utilised where viable. Future developments will prepare and implement Waste Management Plans for demolition, excavation and construction works. measures which will be undertaken to achieve effective recycling and waste management processes include:
 - Reuse of concrete aggregate and reuse of existing structures,
 - The use of recycled or environmentally certified construction materials, and

- Utilise appropriate recycling firms for the disposal of recyclable products.

Some other ESD measures, not necessarily specific to this development that will be implemented on the Wahroonga Estate are:

- BASIX for residential developments.
- Improved access and mobility on-site to reduce demand for private vehicles,
- Provide user pay car parking facilities to encourage higher patronage of public transport, and
- The introduction of a carpooling scheme.

The Principles of ESD are incorporated in the design and proposed construction methods, choice of material and ongoing management processes for Wahroonga Adventist School. Specific measures are indicated throughout the various sections of this EIS, including:

- Biodiversity Management Planning,
- Water Sensitive Urban Design,
- Energy Efficiency,
- Waste Management Plan- construction and operational.

The Environmental Risk Assessment at the end of this Section summarises all measure taken, where practical to avoid damage to the environment and to maintain environmental quality and conservation of biological diversity and ecological integrity for current and future generations.

This EIS therefore addresses the principles of ESD as specified in Schedule 2, Part3, Clause 4 of the Environmental Planning and Assessment Regulation 2000.

4.9 Heritage

Australian Museum Business Services prepared the Heritage Impact Assessment for the wider Wahroonga Estate site. Recommendations were made to ensure heritage values on the site are protected. These are listed below.

Recommendation 1 – Registered Site 45-6-2040 and the undisturbed areas adjacent to Coups Creek should remain undeveloped. If future development is proposed an Aboriginal Heritage Impact Assessment, along with consultation and an archaeological survey should be prepared.

Recommendation 2 – impacts of proposed development will be individually assessed in Statements of Heritage Impact for the Adventist Administration Building, the Mahratta Urban Conservation Area and views from distant ridge tops on the Lane Cove River. A Statement of Heritage should also be prepared for the relocation of any timber framed cottages on Fox Valley Road.

Recommendation 3 – process of removal and possible relocation, of timber framed cottages should be guided by a Statement of Heritage Impact to determine appropriate elements for re-use.

Recommendation 4 – archival recording should be prepared to ensure the different phases of historical development of the Sydney Adventist in Wahroonga is not lost.

Recommendation 5 – clearance works associated with the proposed development will be supervised and recorded in detail by the nominated excavation director in accordance with Heritage Branch requirements.

Recommendation 6 – the Sydney Adventist Hospital, and associated buildings, is a Wahroonga landmark, which should be the subject of an Interpretation Strategy.

Originally, the Wahroonga Adventist School was established to accommodate the educational needs of staff member's children. Increasing pupil numbers allowed the school to expand in 1922. In 1941, the school was built on the west side of Fox Valley Road, which was subsequently expanded in the 160s and 1970s. Demountables were added to the primary school between 2000 to 2002.

In the Final Preferred Project Report and Concept Plan it states that a number of building which have been identified as having potential heritage significant are to be removed or relocated. Archival photographic recording is being undertaken to ensure the historical contribution of these buildings is not lost.

Statement of Heritage Impact

A Statement of Heritage Impact was prepared by Graham Brooks and Associates in January 2013 (See **Appendix 16**). The Statement has been prepared in response to the Director-General Environmental Assessment Requirements:

"10. Heritage

A statement of significance and an assessment of the impact of the heritage significance of any heritage items and/or conservation areas should be undertaken in accordance with the guidelines in the NSW Heritage Manual if relevant".

The Statement determines the impact of the proposed development on heritage items in the vicinity of the subject site. The Statement also provides a historical account of the development of the Wahroonga Estate.

The Statement makes the following recommendations:

- No part of the site contains a listed item of heritage significant from any statutory instrument.
- The proposed development is located in the vicinity of the Administrative Headquarters of the Seventh Day Adventist at 148 Fox Valley Road which is a listed heritage item under the K-ring-gai Planning Scheme Ordinance (PSO). As the heritage item is located on the opposite side of Fox Valley Road, there will be no adverse impact from the proposed development.

Aboriginal Cultural Heritage Impact Assessment

An Aboriginal Cultural Heritage Impact Assessment was prepared by Australian Museum Business Services (AMBS) in January 2013 (see **Appendix 15**). The Assessment was prepared in response to the Director-General Environmental Assessment Requirements:

"11. Aboriginal Heritage

The EIS shall address Aboriginal Heritage in accordance with the Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation 2005 and Aboriginal Cultural Heritage Consultation Requirements for Proponents, if relevant”.

The Assessment was prepared to determine the identification of any Aboriginal heritage sites, assessment of their heritage values and provide recommendations for management. As part of the Director-General Requirements, consultation with the Local Aboriginal Land Council was required. The Metropolitan Local Aboriginal Land Council (MLALC) was notified on the 30 November 2012.

The Assessment noted there were no registered Aboriginal heritage items within the study area. A review was undertaken of a previously prepared survey by AMBS (June 2008) and stated the site “*did not identify any Aboriginal sites or areas of archaeological sensitivity*”. The Assessment concluded that there were no Aboriginal heritage constraints impacting the proposed development.

4.10 Utilities

Consultation and correspondence has been undertaken to ensure adequate supply and capacity to service for Wahroonga Adventist school with all necessary utility infrastructure. See **Appendix 18A and 18B** attached.

4.11 Construction Management

An Outline Construction Management Plan describes the overall process to be implemented by a main contractor for the construction of the new school campus and covers the following principles of management. This is enclosed at **Appendix 20** and is supplemented by the waste management plan:

- The operations of site management when undertaking the works;
- Mitigation to minimise amenity and environmental impacts;
- Traffic/pedestrian management throughout duration of the works;
- Waste management and recycling principles.

4.12 Environmental Risk Assessment

An environmental risk assessment is required to understand the potential environmental impacts associated with the development of Wahroonga Adventist School.

This assessment considers both construction and operational risks and identifies the 'residual' risk of the development once avoidance, mitigation or management of risks will be implemented. This assessment meets the criteria in the DGR's to address the following specific direct and indirect issues:

Issue	Response
Adequacy of the baseline data	The findings outlined in the sections above, demonstrates that independent professional studies have been undertaken, based on robust scientific and technical research methods.
Potential of Cumulative Impacts due to other development in the vicinity.	The relevant studies undertaken for all potential risks were completed at concept plan stage and again in preparation of this SSD application. These consider direct and indirect impacts of the development in the context of the wider Wahroonga Estate site and surrounds now and in the future.
Measures to avoid, minimise and if necessary, offset impacts including detailed contingency plans for managing significant risks to the environment	Studies which identified direct or indirect environmental impacts include recommendations to avoid such impacts as a first measure, mitigate impacts which are unavoidable and manage potential ongoing risks to the local environment as required (e.g. through the Wahroonga Biodiversity Management Plan)

This Environmental Risk Assessment is based on Australian Standards for Risk Assessment AS 4369:1999 Risk Management. This is a qualitative assessment which indicates the significance of potential environmental impacts on a scale of 1 to 5 (5 being more significant) based on the receiving environment, the level of

understanding of the type and extent of impacts, and response to the environmental consequences. The assessment then considers how manageable these impacts are on a scale of 1 to 5 (5 being complex) based on the complexity of mitigation measures, the known level of performance of the safeguards proposed, and the opportunity for adaptive management.

This provides a basis of the significance of environmental effects of the development and the ability to confidently manage those effects to minimise harm of actual and perceived impacts.

The numerical value allocated for each issue is based upon the following considerations:

Significance of Effects

5. Extreme - Undisturbed receiving environment; type or extent of impacts unknown; substantial community concern.
4. High - Sensitive receiving environment; type or extent of impacts not well understood; high level of community concern.
3. Moderate - Resilient receiving environment; type and extent of impacts understood; community interest.
2. Minor - Disturbed receiving environment; type and extent of impacts well understood; some local community interest.
1. Low - Degraded receiving environment; type and extent of impacts fully understood; uncontroversial project.

Manageability of Effects

5. Complex - Complicated array of mitigation measures required; safeguards or technology are unproven; adaptive management inappropriate.
4. Substantial - Significant mix of mitigation measures required; limited evidence of effectiveness of safeguards; adaptive management feasible.

3. Straightforward - Straightforward range of mitigation measures required; past performance of safeguards is understood; adaptive management easily applied.

2. Standard - Simple suite of mitigation measures required; substantial track record of effectiveness of safeguards; adaptive management unlikely to be required.

1. Minimal - Little or no mitigation measures required; safeguards are standard practice; adaptive management not required.

The numbers are added together to provide a result which provides a ranking from 1 to 10 of potential residual effects of the proposed development. This is illustrated in the following Risk Assessment Matrix.

Significance of Effects	Manageability of Effects				
	5 Complex	4 Substantial	3 Straightforward	2 Standard	1 Minimal
1 Low	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)	2 (Low)
2 Minor	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)
3 Moderate	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)
4 High	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)
5 Extreme	10 (High)	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)

Section 4: Environmental Assessment

Item	DGR Key Issue	Phase C or O	Potential Environmental Impact	Proposed Mitigation Measures and/or Comment	Risk Assessment- Impact			Evidence-Supporting Study
					Significance	Manageability	Residual	
Amenity	4.	O	- Over shadowing, privacy impact on surrounding residential area. - Visual impact from local residences, public areas.	Building Setbacks, landscape and trees, streetscape heights maintained	1	2	3 (low)	Architectural Drawings and Architectural Design Report
Resources Water and Energy	5. 20.	C+O	Waste of water, energy, and other resources	- Detention tanks, a rainwater tank, proprietary stormwater treatment devices. - Waste management plan to be implemented to reduce waste, recycle materials - Choice of materials and energy saving devices	2	2	4 (low/medium)	Stormwater & Water Quality Engineering Report
Noise	6.	C+O	- Noise during construction plant, machinery - Noise - increase in student and teacher numbers will generate more noise through traffic, playing field activities- plant and machinery.	Range of noise management measures to reduce noise including sporting fields, pick up and drop off (internal car park and out of hours activities).	3	2	5 (low/medium)	Acoustic Report
Transport and Parking	7.	C+O	Increased traffic and parking on local roads	- Ample car parking provided in basement will internalise kiss and drop, pickups- containing noise and keeping cars off the street. - AS2890.1 compliant driveways and new traffic signal controlled intersection to/from school via Fox Valley Road.	3	1	4 (low/medium)	Transport, Traffic and Parking Report
Flora and Fauna Riparian	8. 9.	C+O	- Direct and Indirect impacts on flora and fauna habitats - Indirect Impact on Riparian areas and Coups Creek catchment	- Location of playing /PE area and associated structures is set back 3 metres and avoids indigenous flora and fauna habitats' - Mitigation measure will reduce stormwater run-off, pollutants, nutrients and light spill. - Implementation of Biodiversity Management Plan.	2	1	3 (low)	Flora and Fauna Assessment & Tree Report & Stormwater Water Quality Report
Heritage/	10.	C+O	Indirect impact on heritage located elsewhere on Estate	- Aboriginal Cultural Heritage Impact Assessment found no constraints - Heritage Impact Statement	1	1	2 (low)	Aboriginal Cultural Heritage Impact Assessment, &

Aboriginal Heritage	11.			concludes proposed development will have no adverse impact on established heritage significance.				Heritage Impact Statement
Bushfire	12.	C+O	- Potential threat to assets and human life from bushfire event - Adequacy of access, water supply and construction.	- Compliance with the relevant provisions of <i>Planning for Bushfire Protection 2006</i> and established Asset Protection Zones. - Consultation with NSW Rural Fire Service undertaken to ensure bushfire protection measures applied - Bushfire Assessment found that the School precinct is located beyond the established Asset Protection Zone widths for a '<i>Special Fire Protection Purpose Development</i>'. - Emergency management - fire safety measures provides a safe location from which it will not be necessary to relocate students, staff and visitors, during a bushfire event. Current bushfire evacuation procedures will be maintained and updated.	1	1	2 (low)	Bushfire Protection Assessment
Sediment, Erosion, Dust Drainage	13. 19.	C+O	Potential generation of off-site transmission of sediment, dust and fine particles affecting water quality.	- Operational- On site detention and Water Sensitive Urban Design Measures. Detention tanks, rainwater tanks, - Construction-proprietary stormwater treatment devices: shake-down/cattle grid for the removal of soil materials from vehicles; stabilisation and catch drains to divert uncontaminated runoff from outside the site; sediment traps, rock check dams to trap sediment from outlet pipes, silt/sediment fences; temporary stockpile sites.	2	1	3 (low)	Stormwater & Water Quality Engineering Report
Contamination	17.	C	- Exposure of hazardous material during excavation and construction. - Generally a low risk of soil or groundwater contamination within the site.	- Further site specific investigation has been carried out; - All measures will be taken during construction and excavation to ensure potential waste materials are managed to enable appropriate	2	1	3 (low)	Contamination Assessment & Waste Management Plan

Section 4: Environmental Assessment

			However, the potential for contamination cannot be ruled out.	management of waste soils.				
Flooding	18.	C+O	- Site is not on flood plain nor is it at risk from coastal flooding - Potential of overland flow in extreme wet weather event.	Mitigated through on site detention and Water Sensitive Urban Design Measures. Detention tanks & rainwater tanks- overland flow paths on roads and swales to avoid damage to property. Detailed design specifications will be prepared prior to construction.	1	1	2(low)	Stormwater & Water Quality Engineering Report
Crime	3.	O	Risk of criminal activity affecting staff, students or property	Crime Prevention Through Environmental Design principles have been applied to ensure access control, surveillance and territorial reinforcement	2	1	3 (low)	Section 4 of EIS and Architectural Design Report
C = Construction. O = Operational. O+P = Both.								

Section 5: Consultation - Response to Submissions

The Director-General's Environmental Assessment Requirements outline the following:

Consultation	<i>During the preparation of the EIS, you must consult with the relevant local, State and Commonwealth Government authorities, service providers, community groups and affected landowners.</i> <i>In particular you must consult with:</i> • <i>Ku-ring-gai Council</i> • <i>Roads and Maritime Services</i> • <i>Office of Environment and Heritage</i> • <i>NSW Rural Fire Service</i> • <i>Sydney Water</i> • <i>Local Aboriginal Land Council and relevant stakeholders</i> • <i>Local heritage group/s, if relevant.</i> <i>The EIS must describe the consultation process and the issues raised and identify where the design of the development has been amended to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.</i>
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Previous Consultation Assessment

The Wahroonga Estate has undergone an extensive consultation process with Ku-ring-gai and Hornsby Councils, government agencies, the local community and key stakeholders. The consultation process was undertaken during the environment assessment stage and feedback received was reviewed and incorporated into the design of the Wahroonga Estate. This included measuring site capabilities, operational requirements and the impact on the community.

Procedures for disseminating consultation included:

- Online information – information was made publically available through the Department of Planning's website (www.planning.nsw.gov.au) during the

exhibition of the redevelopment proposal. JPG (Johnson Property Group) and the Sydney Adventist Hospital also updated their websites to provide advice and information relating to the proposed redevelopment.

- Neighbourhood letterbox drop and/or door-knocking – this was undertaken during the early stage of exhibition. It allowed the opportunity to engage directly with local residents.
- Information sessions (staff and general public) – the sessions provided an overview of the proposal and helped to identify opportunities for interested parties to further participate in the exhibition process.
- Public information day – was held on-site on the Wahroonga Estate and provided the opportunity for the public to view redevelopment documentation. Key project consultants were in attendance on the day to provide advice on the environment assessment process and to field questions.
- ACA internal workshops and committees – project workshops and committees occurred throughout the exhibition process, in line with ACA procedures. The workshops/committees provided direct feedback from Estate users.
- Media coverage – this involved local and regional media to advise of the public exhibition, provide notification of consultation sessions and promote information relating to the redevelopment proposal.

Consultation for SSD 5535

A number of letters were issued to various state agencies by the Department on the 16 August 2012 including the Environmental Protection Authority, Sydney Water, NSW Office of Environment and Heritage.

Initial correspondence was issued to consultees via a letter and attached plan with details of the proposed development, dated 18 December 2012, to relevant government authorities, service providers and affected landowners. The letter outlined that our client had been issued with Director-General Environmental Assessment Requirements in preparation of the lodgement of a State Significant Development (SSD) application for an educational establishment (SSD 5535).

The residential properties identified to partake in the consultation process are outlined in the table below:

Street Number	Address
145,147,149,151,153,155,157,159,161,163, 142,138,136,134,132,130,128,126,126B,126 A,124,122	Fox Valley Road Wahroonga 2076
2,4,6A,6B,8,10,12	Elizabeth Street Wahroonga 2076

A second consultation letter, dated 22 January 2013, was issued to the abovementioned addresses. This outlined a formal notification of the close of submissions ending on the 31 January 2013. No Submissions were received.

A second letter was issued on 14 February 2013, to the government authorities and services providers outlined in DGR's, stating the end of the consultation period was nearing and making a call of submission for any late responses.

Further, a letter was received from Ku-ring-gai Council on 15 February 2013, requesting more detailed information. A third letter was issued to Ku-ring-gai Council on 20 February 2013, and hand delivered along with conceptual architectural drawings.

A summary of the responses received from local council, government authorities and service providers is provided below.

Ku-ring-gai Council

Council's primary concerns in the submission were in relation to Concept Plan further assessment requirements. The submission particularly emphasised the concept plan requirement for the proposed school facilities: to address the layout of buildings and school facilities, the design in relation to surrounding buildings, traffic management and avoidance of any impacts on critically/endangered ecological communities.

The EIS addresses all of these matters in Sections 2, 3 and 4.

Roads and Maritime Services

The issues raised by the RMS have been addressed below:

1. A review of the Metropolitan Strategy, NSW State Plan and draft North Subregional Strategy has been included in the EIS. The review has taken into consideration the transport objectives and further details are outlined in an accompanying Traffic Report.

A major objective of the Wahroonga Estate, as outlined in the Concept Plan, is to the site as a 'living-working community'. A key element of this objective is that it will reduce the dependency of vehicles and allow people to live and work in close proximity to one another.

2. Details of the proposed accesses and the parking provisions associated with the development are outlined on the architectural drawings and Traffic Report

3. The proposed development is compliant with the parking provisions required for the educational establishment.

4. As the proposed development is for an educational establishment, it is expected the development will not generate a significant amount of service vehicle movements. Further details of service vehicle movements are outlined in the Traffic Report.

5. Details of the implications of the proposed development for non-car travel modes and the provision of facilities to increase the non-car mode share of travel is outlined in the Traffic Report. The educational establishment provides allocation for a kiss-and-drop area.

Office of Environment and Heritage

The Office of Environment and Heritage provided a response on the 4 September 2012. They asked for the following additions to be made to the Director-General Requirements:

7. Flora and Fauna

Address direct and indirect impacts (such as stormwater, nutrients and artificial lighting) on flora and fauna, including threatened species, populations and endangered ecological communities and their habitats and steps taken to mitigate any identified impacts to protect the environment”.

A second letter, dated 4 March 2013 from the Office of Environment and Heritage was received on 6 March 2013. This letter stated that the OEHL wish to ensure that the provisions of the Biodiversity Management Plan for Wahroonga Estate are met to ensure the quality of the bushland is maintained and regenerated. The primary concern of OEHL is maintenance of the environmental value of the bushland to safeguard the potential for it to be transferred to E1 National Parks and Nature Reserves and become part of Lane Cove National Park in future.

These matters have been addressed in the attached Flora and Fauna Assessment Tree Report and Stormwater, Water Quality Assessment.

NSW Rural Fire Service

The NSW Rural Fire Service (RFS) provided a response on 10 September 2012 and sought a number of bushfire protection matters be addressed. Further consultation with Mr. Wayne Sketchley, Development Control Officer of the NSW Rural Fire Service was carried out in relation to the specific bushfire protection measures required for the school to obtain advice on the adequacy of the bushfire protection measures applied to the proposed development. This is outlined in detail in the attached Bushfire Protection Assessment (**Appendix 17**).

Sydney Water

Through consultation with Sydney water, a response has indicated the following minimal requirements:

1. Integrated Water Management
2. Infrastructure Management

These matters are addressed in the attached Stormwater, Water Quality Engineering Report at **Appendix 11** and Hydraulic Statement in **Appendix 18B**.

Local Aboriginal Land Council

The Metropolitan Local Aboriginal Land Council was consulted during the preparation of the attached Aboriginal Heritage Impact Assessment (**Appendix 16**). No submissions were received.

Environmental Planning Agency

The Environment Protection Agency (EPA) provided a response regarding the State Significant Development application and stated that it *“does not have any regulatory responsibilities in relation to this matter and has no comment to provide on this proposal”*.

Section 6: Conclusion

This Environmental Impact Statement (EIS) supports an application for State Significant Development [SSD 5535] to redevelop Wahroonga Adventist School, pursuant to *Part 4 of the Environmental Planning and Assessment Act 1979* (EP&A Act) and *State Environmental Planning Policy State and Regional Development 2011* (SEPP SRD).

The relocation is necessary to accommodate the expansion and modernisation of school facilities for students from Kindergarten (prep) to Year 12 consisting of:

- Development of a three to four storey educational establishment, to accommodate a Kindergarten to Year 12 school, and associated basement car parking and kiss-and-drop facilities,
- Development of associated school sporting facilities, including turf playing area and PE courts,
- The removal of existing trees on-site, and
- Subdivision of land comprising the school (7,040m²) and playing/PE area (7,160m²) to create lot 703 in DP1193247.

This EIS assesses any potential environmental impacts for the redevelopment of the new school site. Detailed supporting consultants reports have been prepared and are attached in the appendices to this EIS.

The EIS provides necessary information in support of State Significant Development Application [SSD 5536]. This EIS demonstrates the proposed redevelopment of Wahroonga Adventist School in its new location shall address the further assessment requirements identified in the Concept Plan Approval (MP07_0166) for Wahroonga Estate to:

5. *Ensure the site is appropriately managed for the proposed uses;*
6. *Adequately mitigate the environmental impacts of the development;*
7. *Reasonably protect the amenity of the local area; and*
8. *Protect the public interest.*

The built form is subservient to the adjoining Church and the proposed high density residential area on adjoining land to the north west of the school.

The EIS addresses the DGR's. All potential impacts have been assessed as minor to moderate and can be mitigated or avoided. Mitigation measures are summarised in Section 7.

It is considered that the relocation of the existing school is consistent with the surrounding local area and the development and expansion of school facilities will provide better and more accessible education facilities to the community and wider catchment.

This development proposal presents a high level of merit on planning, environmental, economic and social grounds.

Approval of this State Significant Development Application by the Minister of Planning and Environment for New South Wales is in the public interest and is therefore justified.

Section 7: Summary of all Mitigation Measures

Item	Proposed Mitigation Measures and/or Comment
Amenity	Building Setbacks, landscape and trees, streetscape heights maintained
Resources Water and Energy	- Detention tanks, a rainwater tank, proprietary stormwater treatment devices. - Waste management plan to be implemented to reduce waste, recycle materials - Choice of materials and energy saving devices
Noise	Range of noise management measures during construction and operation to reduce noise including sporting fields, pick up and drop off (internal car park and out of hours activities).
Transport and Parking	- Ample car parking provided in basement will internalise kiss and drop, pickups-containing noise and keeping cars off the street. - AS2890.1 compliant driveways and new traffic signal controlled intersection to/from school via Fox Valley Road.
Flora and Fauna Riparian	- Location of playing/PE area and associated structures avoids indigenous flora and fauna habitats' - Mitigation measure will reduce stormwater run-off, pollutants, nutrients and light spill. - Implementation of Biodiversity Management Plan.
Heritage/ Aboriginal Heritage	- Aboriginal Cultural Heritage Impact Assessment found no constraints - Heritage Impact Statement concludes proposed development will have no adverse impact on established heritage significance.
Bushfire	- Compliance with the relevant provisions of <i>Planning for Bushfire Protection 2006</i> and established Asset Protection Zones. - Consultation with NSW Rural Fire Service has been undertaken to ensure bushfire protection measures applied - Bushfire Assessment found that the School precinct is located beyond the established Asset Protection Zone widths for a '<i>Special Fire Protection Purpose Development</i>'. - Emergency management - fire safety measures provides a safe location from which it will not be necessary to relocate students, staff and visitors, during a bushfire event.
Sediment, Erosion, Dust Drainage	- Operational- On site detention and Water Sensitive Urban Design Measures. Detention tanks, rainwater tanks, - Construction-proprietary stormwater treatment devices: shake-down/cattle grid for the removal of soil materials from vehicles; stabilisation and catch drains to divert uncontaminated runoff from outside the site; sediment traps, rock check dams to trap sediment from outlet pipes, silt/sediment fences; temporary stockpile sites.
Contamination	All measures will be taken during construction and excavation to ensure potential waste materials are managed to enable appropriate management of waste soils.
Flooding	Mitigated through on site detention and Water Sensitive Urban Design Measures. Detention tanks & rainwater tanks- overland flow paths on roads and swales to avoid damage to property.
Crime	Crime Prevention Through Environmental Design principles have been applied to ensure access control, surveillance and territorial reinforcement

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List of Appendices

Appendix 1	Director General Requirements, 6 September 2012
Appendix 2	Quantity Surveyor Report - Capital Investment Value (CIV)
Appendix 3a*	Architectural Drawings, Plans, Site Survey, Photomontage, Materials etc
Appendix 3b*	Architectural Design Report
Appendix 4	Draft Plan of Subdivision to create Lot 703 in DP1193247
Appendix 5	Site Survey Plan- Existing
Appendix 6*	Transport, Traffic and Parking Report, Work Place Travel Plan and Transport Access Guide
Appendix 7	Geotechnical Study
Appendix 8	Structural Report
Appendix 9	Tree Report
Appendix 10	Acoustic Report
Appendix 11*	Stormwater Water Quality Report and Civil Drawings
Appendix 12*	Contamination Assessment- Phase 1 and Phase 2/ Additional Site Investigation
Appendix 13*	Waste Management Plan
Appendix 14	Flora and Fauna Assessment
Appendix 15	Aboriginal Cultural Heritage Impact Assessment
Appendix 16	Heritage Impact Statement
Appendix 17	Bushfire Protection Assessment
Appendix 18a	Electricity Statement
Appendix 18b	Hydraulic Statement
Appendix 19	Access Report
Appendix 20*	Outline Construction Management Plan
Appendix 21*	Engineering Response- Supplementary letter from Cardno following submissions

*Additional information added after review of submissions in February 2015

