

ENVIRONMENTAL IMPACT STATEMENT

JORDAN SPRINGS PUBLIC SCHOOL



JANUARY 2019
SA6418
PREPARED FOR NSW DEPARTMENT OF EDUCATION



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Project Code	SA6418_Jordan Springs PS_EIS
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SIGNED DECLARATION


This Environmental Impact Statement (EIS) has been prepared in accordance with Schedule 2 of the *Environmental Planning and Assessment Regulations 2000*.

Environmental Assessment Prepared by:	
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Address:	Urbis Pty Ltd Level 23, Darling Park Tower 2, 201 Sussex Street Sydney NSW, 2000
In respect of:	NSW Department of Education

Applicant and Land Details:	
Applicant:	NSW Department of Education C/- Urbis Pty Ltd
Applicant Address:	Urbis Pty Ltd Level 23, Darling Park Tower 2, 201 Sussex Street Sydney NSW, 2000
Land to be developed:	Lot 22 in DP 1194338
Project:	The development of the new Jordan Springs Public School.

I certify that the contents of the Environmental Impact Statement, to the best of my knowledge, has been prepared as follows:

- In accordance with Schedule 2 of the *Environmental Planning and Assessment Regulations 2000*;
- In accordance with the requirements of the *Environmental Planning and Assessment Regulations 2000*; and *State Environmental Planning Policy (State and Regional Development) 2011*;
- The statement contains all available information that is relevant to the environmental assessment of the proposed development; and
- The information contained in this report is neither false nor misleading.

Name:	Alaine Roff, Associate Director	
Signature / Date:		20/02/2019

EXECUTIVE SUMMARY

PURPOSE OF THIS REPORT

This Environmental Impact Statement (EIS) has been prepared on behalf of the NSW Department of Education (DoE) and Schools Infrastructure NSW (SINSW) in support of State Significant Development Application SSDA_9354. The application is for construction and development of a new school to be known as Jordan Springs Public School at 14-28 Cullen Avenue, Jordan Springs (the 'site'). This EIS should be read in conjunction with the *Secretary's Environmental Assessment Requirements* (SEARs) attached at **Appendix A**, and the supporting technical documents provided at **Appendix B – CC**.

THE PROPOSAL

The new Jordan Springs Public School reflects the significant need for additional public education infrastructure in this precinct. Across New South Wales, the DoE is funding new schools, upgrades to existing schools and improved facilities as public school enrolments are anticipated to be 40,000 students higher in 2019-20 than 2015-16. The Jordan Springs area is a location where significant residential growth will result in a concentration of new student enrolments. To meet the future demand, the DoE is required to provide a school at this location with the modern facilities required for a contemporary teaching and learning environment.

Jordan Springs Public School will be a new school catering for students from Kindergarten to Year 6. The school will accommodate approximately 1,000 students and 70 full-time staff and will assist in alleviating pressure on existing school enrolments in the area and cater for future population growth. To meet this future demand, the proposal seeks consent for:

- Construction of a 2-storey library, administration and staff building (Block A) comprising:
 - School administrative spaces including reception;
 - Library with reading nooks, makers space and research pods;
 - Staff rooms and offices;
 - Special programs rooms;
 - Amenities;
 - Canteen;
 - Interview rooms; and
 - Presentation spaces.
- Construction of three 2-storey learning hubs containing 42 homebases comprising:
 - Collaborative learning spaces;
 - Learning studios;
 - Covered outdoor learning spaces;
 - Practical activity areas; and
 - Amenities.
- Construction of a single storey assembly hall (Block B) with a performance stage and integrated covered outdoor learning area (COLA). The assembly hall will have OOSH facilities and store room areas;
- Associated site landscaping and open space including associated fences throughout and sporting facilities;
- Pick-up and drop-off zone from Cullen Avenue;
- Pedestrian access points along both Cullen Avenue and Lakeside Parade;

- Construction of an at-grade car park containing 62 spaces accessible from Lakeside Parade and 2 spaces accessible from Cullen Avenue;
- School signage to the front entrance; and
- New substation fronting Cullen Avenue.

Early works (including earthworks and inground servicing of the site) will be subject to separate approvals.

All proposed school buildings will be connected by a double storey covered walkway providing integrated covered outdoor learning areas (COLAs). Figure 1 below illustrates the concept master plan for the proposal.

Figure 1 – Concept master plan



Source: Group GSA Architects

THE SITE

Jordan Springs Public School is to be located at 14-28 Cullen Avenue, Jordan Springs (see Figure 2). The site is legally described as Lot 22 in Deposited Plan 1194338 and has an area of approximately 2.84ha. The site contains frontages to Lakeside Parade to the west and Cullen Avenue to the south. The site is currently vacant and has been completely cleared of all vegetation. A dry creek is located to the east and there is an existing substation in the south west corner of the site fronting Lakeside Parade. The new school buildings are proposed to be predominantly concentrated in the eastern portion of the site away from existing residential dwellings to the west.

SITE SUITABILITY

The site is considered highly suitable for the proposal for the following reasons:

- The land is zoned 'Urban' under the *Sydney Regional Environmental Plan (SREP) No. 30 – St Marys*. The proposal is permissible with consent and consistent with the land use objectives of this zoning;
- The proposal is consistent with the objectives of all relevant planning controls and achieves a high level of planning policy compliance;

- There are no significant environmental constraints limiting development on the site;
- The suburb of Jordan Springs is a rapidly developing predominantly residential suburb, focused around a core of mixed use residential, commercial and retail premises. The proposal is considered compatible with this context.
- The surrounding infrastructure and road network is capable of supporting a new school on the site; and
- The proposal will not generate unreasonable impacts on the surrounding locality.

PLANNING FRAMEWORK

The development is for the purpose of a new school. Pursuant to Schedule 1 Clause 15(1) of the *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP), development for the purposes of a new school is state significant development, regardless of cost of works. Accordingly, the proposal will be submitted to the New South Wales *Department of Planning and Environment* (DPE) for assessment and determination.

ASSESSMENT

The proposal has been assessed against all items contained to the *Secretary's Environmental Assessment Requirements* (SEARS) issued for the project on 13 June 2018. In summary:

- **The proposal satisfies the applicable local and state planning policies:** The proposal satisfies the objectives of all relevant planning controls and achieves a high level of planning policy compliance.
- **The design positively responds to the site conditions and future urban morphology:** The design of the School was carefully considered to ensure it has good connections to adjacent external space, is generally located away from residential neighbours and is located on a primary street address with a good street presence.
- **The proposal is highly suitable for the site:** The site is zoned 'Urban' as per the SREP No. 30 - St Marys and the proposal is permissible with consent in this zone. The proposal is also consistent with the objectives of all relevant planning controls and achieves a high level of planning policy compliance. There are no significant environmental constraints limiting development on the site and the proposal will not generate unreasonable impacts on the surrounding locality. Therefore, the site is considered highly suitable.
- **The proposal is in the public's interest:** The proposal will take substantial pressure off existing schools within the surrounding locality and ensure more children have access to high quality school facilities, learning spaces and equipment. The proposal will also create temporary job opportunities in manufacturing, construction and construction management during the project's construction phase of works, and significant job opportunities in teaching and administration at the project's completion.
- **The proposal appropriately satisfies each item within the Secretary's Environmental Assessment Requirements:** The proposal satisfies the SEARs as demonstrated within this EIS.

Considering the above and the content contained to this EIS, it is recommended that the DPE approve this SSDA, subject to appropriate conditions.

SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

A request was made to the Minister for the Secretary's Environmental Assessment Requirements (SEARs), pursuant to Clause 3, Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*. The SEARs issued on 13 June 2018. Following further correspondence with DPE, the SEARs was subsequently amended and reissued by DPE on 30 January 2019. The revised SEARs are addressed within this report and included in full at **Appendix A**.

Table 1 below provides a summary of the SEARs and identifies the section of the report where the relevant requirement is addressed and/or the appendix reference for the specialist consultant's report associated with that requirement.

Table 1 – SEARs

Item/ Description	Document Reference
A. General Requirements	
<p>The Environmental Impact Statement (EIS) must be prepared in accordance with and meet the minimum requirements of clauses 6 and 7 of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i> (the Regulation).</p> <p>Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development.</p> <p>Where relevant, the assessment of the key issues below, and any other significant issues identified in the risk assessment, must include:</p> <ul style="list-style-type: none"> • Adequate baseline data; • Consideration of potential cumulative impacts due to other development in the vicinity (complete, underway or proposed); and • Measures to avoid, minimise and if necessary, offset the predicted impacts, including detailed contingency plans for managing any significant risks to the environment. 	<p>The EIS has been prepared in accordance with the Secretary's Requirements and meets the minimum form and content requirements specified in Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>.</p> <p>The EIS includes a comprehensive assessment of the environmental risks and impacts associated with the development.</p>
<p>The EIS must be accompanied by a report from a qualified quantity surveyor providing:</p> <ul style="list-style-type: none"> • A detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the <i>Environmental Planning and Assessment Regulation 2000</i>) of the proposal, including details of all assumptions and components from which the CIV calculation is derived; • An estimate of the jobs that will be created by the future development during the construction and operational phases of the development; and • Certification that the information provided is accurate at the date of preparation. 	Refer to Appendix D

Item/ Description	Document Reference
B. Key Issues – The EIS must address the following specific matters:	
<p>1. Statutory and Strategic Context</p> <p>Address the statutory provisions contained in all relevant environmental planning instruments, including:</p> <ul style="list-style-type: none"> • <i>Biodiversity Conservation Act 2016;</i> • <i>State Environmental Planning Policy (State & Regional Development) 2011;</i> • <i>State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017;</i> • <i>State Environmental Planning Policy No. 64 – Advertising and Signage;</i> • <i>State Environmental Planning Policy No.55 – Remediation of Land;</i> • <i>Draft State Environmental Planning Policy (Remediation of Land);</i> • <i>Draft State Environmental Planning Policy (Environment);</i> • <i>Sydney Regional Environmental Plan No. 30 – St Marys;</i> • <i>Western Precinct Plan and Development Control Strategy; and</i> • <i>Penrith Local Environmental Plan 2010.</i> <p><i>Permissibility:</i></p> <p>Detail the nature and extent of any prohibitions that apply to the development.</p> <p><i>Development Standards:</i></p> <p>Identify compliance with the development standards applying to the site and provide justification for any contravention of the development standards.</p>	Refer to Section 4 of the EIS
<p>2. Policies</p> <p>Address the relevant planning provisions, goals and strategic planning objectives in the following:</p> <ul style="list-style-type: none"> • <i>NSW State Priorities;</i> • <i>The Greater Sydney Regional Plan, A Metropolis of three cities;</i> • <i>NSW Future Transport Strategy 2056;</i> • <i>State Infrastructure Strategy 2018 – 2038 Building the Momentum;</i> • <i>Sydney's Cycling Future 2013;</i> • <i>Sydney's Walking Future 2013;</i> • <i>Sydney's Bus Future 2013;</i> • <i>Crime Prevention Through Environmental Design (CPTED) Principles;</i> • <i>Healthy Urban Development Checklist, NSW Health;</i> 	Refer to Section 5 of the EIS

Item/ Description	Document Reference
<ul style="list-style-type: none"> • <i>Greater Sydney Commission's Western City District Plan;</i> • <i>Penrith Development Control Plan 2014</i> • <i>Sydney's Walking Future 2013;</i> 	
<p>3. Operation</p> <ul style="list-style-type: none"> • Provide details of the proposed school operations, including staff and student numbers, school hours of operation, and operational details of any proposed before/after school care services and/or community use of school facilities. • Provide a detailed justification of suitability of the site to accommodate the proposal. 	Refer to Section 3.5 of the EIS
<p>4. Built Form and Urban Design</p> <ul style="list-style-type: none"> • Address the height, density, bulk and scale, setbacks of the proposal in relation to the surrounding development, topography, streetscape and any public open spaces. • Address design quality, with specific consideration of the overall site layout, streetscape, open spaces, façade, rooftop, massing, setbacks, building articulation, materials, colours and Crime Prevention Through Environmental Design Principles. • Provide details of any digital signage boards, including size, location and finishes. • Provide a design report that establishes design guidelines and development parameters, and includes diagrams, illustrations and drawings to clarify the design intent of the proposal and which clearly demonstrates how design quality will be achieved in accordance with Schedule 4 Schools – Design Quality Principles of State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017. • Detail how services, including but not limited to waste management, loading zones, and mechanical plant are integrated into the design of the development. • Provide detailed site and context analysis to justify the proposed site planning and design approach. • Provide a detailed site-wide landscape strategy. 	Refer to Appendix E and Section 3.3 of the EIS
<p>5. Environmental Amenity</p> <ul style="list-style-type: none"> • Assess amenity impacts on the surrounding locality, including solar access, visual privacy, overshadowing and acoustic impacts. 	Refer to Section 6.1 of the EIS

Item/ Description	Document Reference
<ul style="list-style-type: none"> Undertake a view analysis to the site from key vantage points and streetscape locations (photomontages or perspectives should be provided showing the building envelope and likely future development). Provide a lighting strategy and detail measures to reduce spill into the surrounding sensitive receivers. Identify any proposed use of the school outside of school hours (including weekends) and assess any resultant amenity impacts on the immediate locality and proposed mitigation measures. Detail the nature and extent of the intensification of use associated with the increased floor space, particularly in relation to the proposed increase in staff and student numbers. Detail amenity impacts including solar access, acoustic impacts, visual privacy, view loss, overshadowing and wind impacts. A high level of environmental amenity for any surrounding residential land uses must be demonstrated. 	
<p>6. Staging</p> <ul style="list-style-type: none"> Provide details regarding the staging of the proposed development (if any). 	<p>The proposal will be developed in one stage.</p>
<p>7. Transport and Accessibility</p> <p>Include a transport and accessibility impact assessment, which details, but is not limited to the following:</p> <ul style="list-style-type: none"> accurate details of the current daily and peak hour vehicle, existing and future public transport networks and pedestrian and cycle movement provided on the road network located adjacent to the proposed development; details of estimated total daily and peak hour trips generated by the proposal, including vehicle, public transport, pedestrian and bicycle trips based on surveys of the existing and similar schools within the local area; the adequacy of existing public transport or any future public transport infrastructure within the vicinity of the site, pedestrian and bicycle networks and associated infrastructure to meet the likely future demand of the proposed development; measures to integrate the development with the existing/future public transport network; the impact of trips generated by the development on nearby intersections, including the intersection of The Northern Road / Greenwood Parkway and The Northern Road / Jordan Springs Boulevard, with consideration of the cumulative impacts from other approved developments in the vicinity, and the need/associated funding for, and details of, upgrades or road 	<p>Refer to Appendix G, Appendix H, Appendix I and Section 6.2 of the EIS</p>

Item/ Description	Document Reference
<p>improvement works, if required (Traffic modelling is to be undertaken using SIDRA network modelling for current and future years);</p> <ul style="list-style-type: none"> the identification of infrastructure required to ameliorate any impacts on traffic efficiency and road safety impacts associated with the proposed development, including details on improvements required to affected intersections, additional school bus routes along bus capable roads (i.e. minimum 3.5 m wide travel lanes), additional bus stops or bus bays; details of travel demand management measures to minimise the impact on general traffic and bus operations, including details of a location-specific sustainable travel plan (Green Travel Plan and specific Workplace travel plan) and the provision of facilities to increase the non-car mode share for travel to and from the site; the proposed walking and cycling access arrangements and connections to public transport services; the proposed access arrangements, including car and bus pick-up/drop-off facilities, and measures to mitigate any associated traffic impacts and impacts on public transport, pedestrian and bicycle networks, including pedestrian crossings and refuges and speed control devices and zones; proposed bicycle parking provision, including end of trip facilities, in secure, convenient, accessible areas close to main entries incorporating lighting and passive surveillance; proposed number of on-site car parking spaces for teaching staff and visitors and corresponding compliance with existing parking codes and justification for the level of car parking provided on-site; an assessment of the cumulative on-street parking impacts of cars and bus pick-up/drop-off, staff parking and any other parking demands associated with the development; an assessment of road and pedestrian safety adjacent to the proposed development and the details of required road safety measures and personal safety in line with CPTED; emergency vehicle access, service vehicle access, delivery and loading arrangements and estimated service vehicle movements (including vehicle type and the likely arrival and departure times); the preparation of a preliminary Construction Traffic and Pedestrian Management Plan to demonstrate the proposed management of the impact in relation to construction traffic addressing the following: <ul style="list-style-type: none"> assessment of cumulative impacts associated with other construction activities (if any); 	

Item/ Description	Document Reference
<ul style="list-style-type: none"> ○ an assessment of road safety at key intersection and locations subject to heavy vehicle construction traffic movements and high pedestrian activity; ○ details of construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process; ○ details of anticipated peak hour and daily construction vehicle movements to and from the site; ○ details of on-site car parking and access arrangements of construction vehicles, construction workers to and from the site, emergency vehicles and service vehicle; and ○ details of temporary cycling and pedestrian access during construction. <p>→ <u>Relevant Policies and Guidelines:</u></p> <ul style="list-style-type: none"> • <i>Guide to Traffic Generating Developments (Roads and Maritime Services)</i> • <i>EIS Guidelines – Road and Related Facilities (DoPI)</i> • <i>Cycling Aspects of Austroads Guides</i> • <i>NSW Planning Guidelines for Walking and Cycling</i> • <i>Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development</i> • <i>Standards Australia AS2890.3 (Bicycle Parking Facilities)</i> • <i>Healthy Urban Development Checklist, NSW Health</i> • <i>Development Near Rail Corridors and Busy Roads – Interim Guideline (Department of Planning 2008)</i> 	
<p>8. Ecologically Sustainable Development (ESD)</p> <ul style="list-style-type: none"> • Detail how ESD principles (as defined in clause 7(4) of Schedule 2 of the Regulation) will be incorporated in the design and ongoing operation phases of the development. • Include preliminary consideration of building performance and mitigation of climate change, including consideration of Green Star Performance. • Include a description of the measures that would be implemented to minimise consumption of resources, water (including water sensitive urban design) and energy. • Provide a statement regarding how the design of the future development is responsive to the CSIRO projected impacts of climate change. Specifically: <ul style="list-style-type: none"> ○ hotter days and more frequent heatwave events; 	<p>Refer to Appendix J and Section 6.3 of the EIS</p>

Item/ Description	Document Reference
<ul style="list-style-type: none"> ○ extended drought periods; ○ more extreme rainfall events; ○ gustier wind conditions; and ○ how these will inform material selection and social equity aspects (respite/shelter areas). 	
<p>9. Social Impacts</p> <ul style="list-style-type: none"> • Include an assessment of the social consequences which considers the proposed development's location, surrounding context and strategic planning for the area and how the school would serve the existing and future community. 	Refer to Section 6.11 of the EIS
<p>10. Aboriginal Heritage</p> <ul style="list-style-type: none"> • Identify and describe the Aboriginal cultural heritage values that exist across the whole area that would be affected by the development and document these in an Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation. The identification of cultural heritage values must be conducted in accordance with the Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (OEH 2010), and guided by the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (DECCW, 2011); • Consultation with Aboriginal people must be undertaken and documented in accordance with the Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR; • Impacts on Aboriginal cultural heritage values are to be assessed and documented in the ACHAR. The ACHAR must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH. 	Refer to Appendix K, Appendix CC and Section 2.7.2 of the EIS
<p>11. Noise and Vibration</p> <ul style="list-style-type: none"> • Identify and provide a quantitative assessment of the main noise and vibration generating sources during demolition, site preparation, bulk excavation, construction. Outline measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land. • Identify and assess operational noise, including consideration of any public-address system, school bell, mechanical services (e.g. air conditioning plant), use of any school hall for concerts etc. (both during and outside school hours) and any out of hours community use of school 	Refer to Appendix L and Section 6.6 of the EIS

Item/ Description	Document Reference
<p>facilities, and outline measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land.</p> <p>→ <u>Relevant Policies and Guidelines:</u></p> <ul style="list-style-type: none"> • <i>NSW Noise Policy for Industry 2017 (EPA)</i> • <i>Interim Construction Noise Guideline (DECC)</i> • <i>Assessing Vibration: A Technical Guideline 2006</i> • <i>Development Near Rail Corridors and Busy Roads – Interim Guideline (Department of Planning 2008)</i> 	
<p>12. Contamination</p> <ul style="list-style-type: none"> • Assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable for the proposed use in accordance with SEPP 55. • Undertake a hazardous materials survey of all existing structures and infrastructure prior to any demolition or site preparation works. <p>→ <u>Relevant Policies and Guidelines:</u></p> <ul style="list-style-type: none"> • <i>Managing Land Contamination: Planning Guidelines - SEPP 55 Remediation of Land (DUAP)</i> 	<p>Refer to Appendix M, Appendix N and Section 4.4 of the EIS</p>
<p>13. Utilities</p> <ul style="list-style-type: none"> • Prepare an Infrastructure Management Plan in consultation with relevant agencies, detailing information on the existing capacity and any augmentation and easement requirements of the development for the provision of utilities including staging of infrastructure. • Prepare an Integrated Water Management Plan detailing any proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design. 	<p>Refer to Appendix P and Section 3.9 of the EIS</p>
<p>14. Contributions</p> <ul style="list-style-type: none"> • Address Council's "Section 94/94A Contribution Plan" and/or details of any Voluntary Planning Agreement, which may be required to be amended because of the proposed development. 	<p>Refer to Section 0 of the EIS</p>
<p>15. Drainage</p> <ul style="list-style-type: none"> • Detail measures to minimise operational water quality impacts on surface waters and groundwater. • Provide stormwater plans detailing the proposed methods of drainage without impacting on the downstream properties. <p>→ <u>Relevant Policies and Guidelines:</u></p>	<p>Refer to Appendix Q, Appendix R and Section 3.10 of the EIS</p>

Item/ Description	Document Reference
<ul style="list-style-type: none"> <i>Guidelines for development adjoining land and water managed by DECCW (OEH, 2013)</i> 	
<p>16. Flooding</p> <ul style="list-style-type: none"> Identify flood risk on-site (detailing the most recent flood studies for the project area) and consideration of any relevant provisions of the NSW Floodplain Development Manual (2005), including the potential effects of climate change, sea level rise and an increase in rainfall intensity. If there is a material flood risk, include design solutions for mitigation. Consider applicable regional and local flood emergency evacuation plans in consultation with the NSW State Emergency Service and Penrith City Council. 	<p>Refer to Appendix S and Section 6.7 of the EIS</p>
<p>17. Bushfire</p> <ul style="list-style-type: none"> Address bushfire hazard and, if relevant, prepare a report that addresses the requirements for Special Fire Protection Purpose Development as detailed in Planning for <i>Bush Fire Protection 2006 (RFS, 2006)</i> guidelines. 	<p>Refer to Appendix T and Section 6.8 of the EIS</p>
<p>18. Biodiversity</p> <ul style="list-style-type: none"> Identify and address the requirements of the Biodiversity Conservation Act 2016 relevant to the State significant development application. Where a Biodiversity Development Assessment Report is not required, engage a suitably qualified person to assess and document the flora and fauna impacts related to the proposal. Where the land is subject to a Biodiversity Certification Order, evidence of this Order and the terms is to be provided. Note: Notwithstanding these requirements, the <i>Biodiversity Conservation Act 2016</i> requires that State Significant Development Applications be accompanied by a Biodiversity Development Assessment Report. 	<p>Refer to Appendix U, Section 2.5 and Section 4.1 of the EIS</p>
<p>19. Sediment, Erosion and Dust Controls</p> <ul style="list-style-type: none"> Detail measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles. <p>→ <u>Relevant Policies and Guidelines:</u></p> <ul style="list-style-type: none"> <i>Managing Urban Stormwater – Soils & Construction Volume 1 2004 (Landcom)</i> <i>Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA)</i> <i>Guidelines for development adjoining land and water managed by DECCW (OEH, 2013)</i> 	<p>Refer to Appendix R and Section 6.9 of the EIS</p>

Item/ Description	Document Reference
<p>20. Waste</p> <ul style="list-style-type: none"> 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. 	<p>Refer to Appendix V, Appendix W and Section 3.8 of the EIS</p>
<p>21. Construction Hours</p> <p>Identify proposed construction hours and provide details of the instances where it is expected that works will be required to be carried out outside the standard construction hours.</p>	<p>Refer to Section 3.11 of the EIS</p>
<p>C. Plans and Documents – The EIS must include the following:</p>	
<p>The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Environmental Planning and Assessment Regulation 2000. Provide these as part of the EIS rather than as separate documents. In addition, the EIS must include the following:</p> <ul style="list-style-type: none"> Architectural drawings including but not limited to the following requirements: <ul style="list-style-type: none"> dimensioned including RLs; plans, sections and elevation of the proposal at no less than 1:200 showing furniture layouts and program; site and context plans that demonstrate active transport linkages with existing, proposed and potential footpaths and bicycle paths and public transport links; and detailed annotated wall sections at 1:20 scale that demonstrate typical cladding, window and floor details, including materials and general construction quality. Artist impressions/architectural renders of the proposal; Site Survey Plan, showing existing levels, location and height of existing and adjacent structures / buildings and boundaries; Site Plans and operations statement demonstrating the afterhours and community use strategy; Site Analysis Plan; Stormwater Concept Plan and Stormwater Management Plan; Sediment and Erosion Control Plan; Shadow Diagrams; View Analysis / Photomontages, including those from public vantage points; 	<p>Refer to Appendix A - Appendix CC</p>

Item/ Description	Document Reference
<ul style="list-style-type: none"> • An integrated Landscape Plan/Strategy (including identification of any trees to be removed and trees to be retained or transplanted); • Preliminary Construction Management Plan, inclusive of a Preliminary Construction Traffic Management Plan detailing vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures; • Geotechnical and Structural Report; • Accessibility Report; • Arborist Report; • Schedule of materials and finishes including a physical material sample board (no larger than A3) with correct proportional representation of materials; • Acoustic Report; • Waste Management Plan; • Fire Safety Measures Schedule; • Green Travel Plan; • Draft Construction Environmental Management Plans and relevant sub plans. 	
D. Consultation	
<p>During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups, special interest groups including local Aboriginal land councils and registered Aboriginal stakeholders, and affected landowners. In particular, you must consult with:</p> <ul style="list-style-type: none"> • Penrith City Council; • Government Architect NSW (through the NSW State Design Review Panel process); • Transport for NSW; and • Roads and Maritime Services. <p>Consultation with Council, GANSW, RMS, and TfNSW should commence as soon as practicable to agree the scope of investigation.</p> <p>The EIS must describe the consultation process and the issues raised and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.</p>	<p>Refer to Appendix Z and Section 7 of the EIS</p>

1. INTRODUCTION

1.1. OVERVIEW

This EIS has been prepared on behalf of the DoE and SINSW in support of State Significant Development Application SSD_9354 for a new school to be known as Jordan Springs Public School. Specifically, this EIS seeks development consent for the following works at the site:

- Construction of a 2-storey library, administration and staff building (Block A) comprising:
 - School administrative spaces including reception;
 - Library with reading nooks, makers space and research pods;
 - Staff rooms and offices;
 - Special programs rooms;
 - Amenities;
 - Canteen;
 - Interview rooms; and
 - Presentation spaces.
- Construction of three 2-storey learning hubs containing 42 homebases comprising:
 - Collaborative learning spaces;
 - Learning studios;
 - Covered outdoor learning spaces;
 - Practical activity areas; and
 - Amenities.
- Construction of a single storey assembly hall (Block B) with a performance stage and integrated covered outdoor learning area (COLA). The assembly hall will have OOSH facilities and store room areas;
- Associated site landscaping and open space including associated fences throughout and sporting facilities;
- Pick-up and drop-off zone from Cullen Avenue;
- Pedestrian access points along both Cullen Avenue and Lakeside Parade;
- Construction of an at-grade carpark containing 62 spaces accessible from Lakeside Parade and 2 spaces accessible from Cullen Avenue;
- School signage to the front entrance; and
- New substation fronting Cullen Avenue.

All proposed school buildings will be connected by a double storey covered walkway providing integrated covered outdoor learning areas (COLAs).

Early works (including earthworks and services) will be subject to a separate approval.

1.2. REPORT STRUCTURE

This EIS provides the following:

- **Section 1:** Executive summary, background information and introduction of the proposal.
- **Section 2:** A description of the site and surrounding context; including identification of the site, existing development on the site, and surrounding development.
- **Section 3:** A detailed description of the proposal.
- **Section 4:** An assessment of the proposal against the relevant statutory planning controls.
- **Section 5:** An assessment of the proposal against the relevant strategic planning policies.
- **Section 6:** An assessment of the key issues and impacts generated by the proposal.
- **Section 7:** A detailed description of the consultation undertaken with respect to the proposal.
- **Section 8:** Recommendations and mitigations and measures.
- **Section 9:** Summary and conclusions.

This EIS should be read in conjunction with the *Secretary's Environmental Assessment Requirements* attached at **Appendix A**, and the supporting technical documents provided at **Appendix B – CC**.

1.3. PROJECT TEAM

Specialist consultants were engaged to assist in the preparation of this SSDA, including:

Table 2 – Project Team

Deliverable	Consultant	Appendix
Architectural Plans	Group GSA	Appendix B
Site Survey Plan	Lockley Registered Surveyors	Appendix C
Quantity Surveyor's Report	MBM	Appendix D
Urban Design Report	Group GSA	Appendix E
Landscape Plans	Group GSA	Appendix F
Traffic Impact Assessment	Bitzios Consulting	Appendix G
Green Travel Plan	Bitzios Consulting	Appendix H
Construction Traffic Management Plan	Bitzios Consulting	Appendix I
Ecologically Sustainable Design (ESD) Report	WSP	Appendix J
Aboriginal Cultural Heritage Assessment Report	Biosis	Appendix K
Environmental Noise and Vibration Assessment	Acoustic Logic	Appendix L
Preliminary Environmental Site Assessment	Environmental Investigation Services	Appendix M
Detailed Environmental Site Investigation	WSP	Appendix N
Geotechnical Investigation	JK Geotechnics	Appendix O

Deliverable	Consultant	Appendix
Site Infrastructure Overview Report	WSP	Appendix P
Civil Design Report	Northrop	Appendix Q
Civil Plans	Northrop	Appendix R
Flood Risk Assessment	WSP	Appendix S
Bushfire Impact Assessment	Peterson Bushfire	Appendix T
Biodiversity Development Assessment Report	Alphitonia	Appendix U
Construction Waste Management Plan	EcCell	Appendix V
Operational Waste Management Plan	The MACK Group	Appendix W
Access Report	Certis Access Consultancy	Appendix X
BCA Assessment Report	Modern Building Certifiers	Appendix Y
Consultation Outcomes Report	TSA Management	Appendix Z
Environmental Management Plan	Richard Crookes	Appendix AA
Historical Archaeological Impact Assessment	Biosis	Appendix BB
Archaeological Report	Biosis	Appendix CC

2. THE SITE AND SURROUNDING CONTEXT

2.1. SUBJECT SITE

Jordan Springs Public School is to be located at 14-28 Cullen Avenue, Jordan Springs (outlined in red in Figure 1). The site is irregular in shape with a total area of approximately 2.84ha and is legally described as Lot 22 in DP 1194338. The site has frontages to Lakeside Parade to west and Cullen Avenue to the south.

Figure 2 – Aerial image of proposed site



Source: Urbis/ Near Map

2.2. EXISTING DEVELOPMENT

The subject site is currently vacant land except for an existing substation located in the south west corner of the site fronting Lakeside Parade. It has been completely cleared of all vegetation.

2.3. CONTEXT AND SURROUNDING DEVELOPMENT

The site is in the Penrith Local Government Area (LGA) in the suburb of Jordan Springs. Jordan Springs is 60km north-west of Sydney Central Business District and the area is accessible via major arterial roads, including Northern Road, and is also serviced by public transport in the form of buses. Penrith Train Station is located approximately 6km south of the site. The site is in the Western Precinct of the St Mary's Urban Release Area and the surrounding area is in transition, reflecting a shift from rural landscape to low density residential. The surrounding development includes:

- The site is bordered to the north by newly constructed low-density residential dwellings fronting Barrow Circuit;
- A recreational precinct is to the east of the site including a children's cycling path, multipurpose oval, netball courts and Jordan Spring dog park. Separating the site and the precinct is a dry creek bed which

functions as a riparian corridor and drains to a large manmade lake to the south of the site on the other side of Cullen Avenue;

- To the south of the site is Cullen Avenue. Across Cullen Avenue is undeveloped land earmarked for construction of three (3) to five (5) storey residential townhouse and flat building developments. Further to the southwest of the site along Lakeside Parade is the Jordan Springs Town Centre which includes a Woolworths, Plus Fitness, Subway, Anytime Fitness and a Terry White Chemist;
- Within the same block of the site is a childcare centre “Little Zak’s Academy” and a community hub both of which front Cullen Avenue; and
- To the west of the site is Lakeside Parade. Across Lakeside Parade are newly constructed two-storey detached residential dwellings.

Images of the site and surrounding development are provided in Figure 3 – Pictures 1 to 6.

2.4. TRANSPORT CONTEXT

The proposed school catchment area is anticipated to be the adjacent residential area, which is located within a short walking distance from the development.

The site is well connected to public transport links and is easily accessible via Northern Road, the main arterial road in the area. A summary of public transport links is provided below.

Bus:

The school is located close to multiple bus stops operating State Transit bus services:

- Route 673: Penrith to Windsor via Cranebrook
- Route 783: Jordan Springs to Penrith
- Route 786: Penrith to Cranebrook via North Penrith (Loop Service)

Cycleways:

The site benefits from proximity to dedicated cycleways on Lakeside Parade, Cullen Avenue and more broadly through the newly built residential suburb of Jordan Springs.

Train:

The site is located approximatively 5km north of Kingswood Train Station and 6km north west of Penrith Train Station.

Figure 3 – Proposed site for new Jordan Springs Public School and surrounding development



Picture 1 – Looking west across the site from Lakeside Parade.

Source: Google Earth



Picture 2 – Looking north west towards the site from Lakeside Parade.

Source: Google Earth



Picture 3 – Recently constructed residential development located opposite the new school site along Lakeside Avenue.

Source: Google Earth



Picture 4 – The new community hub located on the corner of Lakeside Parade and Cullen Avenue, adjacent to the new school site.

Source: Google Earth



Picture 5 – Five-storey mixed use development located opposite the new community hub on the corner of Lakeside Parade and Cullen Avenue.

Source: Google Earth



Picture 6 – Looking towards 'Little Zac's Academy' whilst under construction.

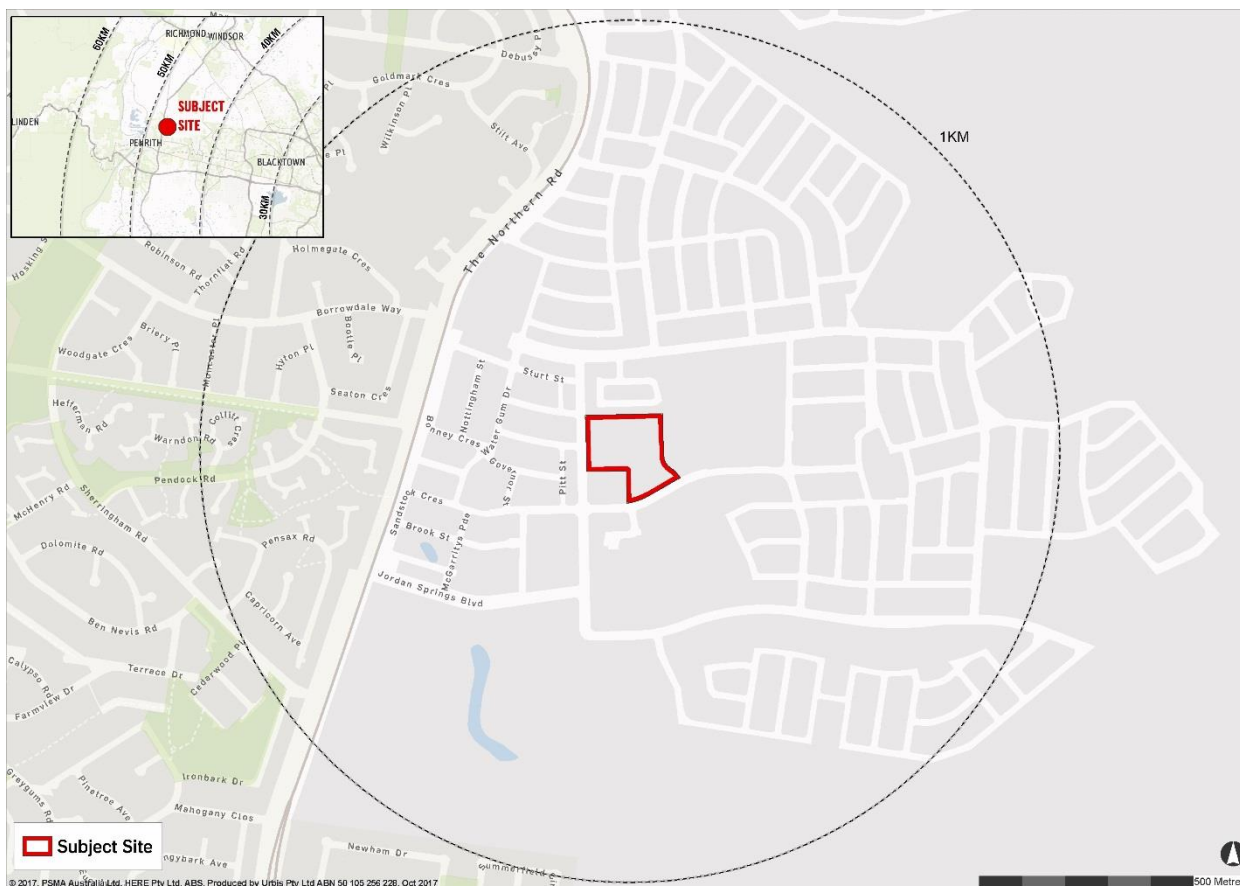
Source: Google Earth

Figure 4 – Site context map



Source: Group GSA Architects

Figure 5 – Site location map



Source: Urbis / Near Map

2.5. TOPOGRAPHY

The site is generally flat with a gentle raise in height towards the north-west boundary. A dry creek bed runs approximately 8 metres to the east of the site. The site is situated at approximately 40 metres Australian Height Datum (AHD) and slopes towards the south. This is generally consistent with the level of the surrounding properties. The site appears to have a low potential for flooding, based on the Flood Risk Assessment contained at **Appendix S** as well as the fact that there is a lack of significantly sized water bodies surrounding the site. The nearest surface water body is a small unnamed creek adjacent to the eastern boundary which terminates in an unnamed manmade lake approximately 150 metres to the south of the site.

2.6. FLORA AND FAUNA

A Biodiversity Development Assessment Report (BDAR) has been prepared by Alphitonia and is contained at **Appendix V**. The BDAR confirms the site has been cleared of most vegetation and that there are no significant vegetation communities or habitat features present within the subject land.

The site is located entirely within the Cumberland Plain subregion and whilst remnant vegetation has been cleared from the subject land, some native vegetation is present within the grassland dominated by exotic species.

The BDAR confirms that the site does not contain any areas of outstanding biodiversity value as defined under the *Biodiversity Conservation Act 2016*. The report also confirms that the site does not contain any areas of geological significance, no important wetlands or soil hazard features. A riparian buffer located to the east of the site forms part of Council's drainage network and this drains to a constructed wetland located further south of the subject land and Cullen Avenue. It is not connected to a natural watercourse.

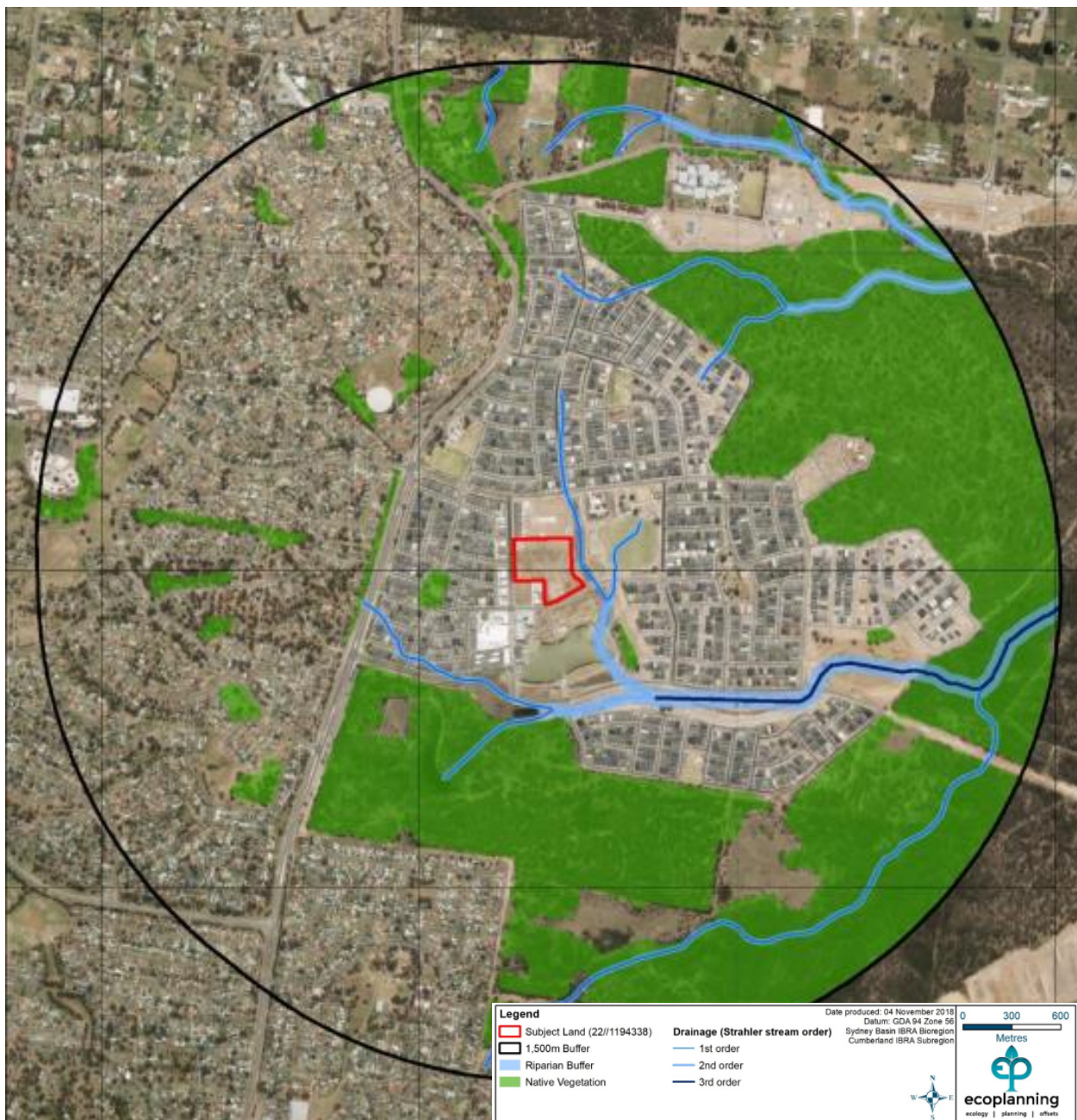
2.6.1. Flora

The BDAR confirms the site originally contained Shale Plains Woodland prior to the land being cleared of all trees during the construction of Jordan Springs estate. Existing vegetation on the site is mainly exotic grasslands and herbaceous weeds with no native vegetation communities present. A total of 36 flora species were identified in the subject land during the field survey, of which ten were native and 26 were exotic. No threatened flora species were identified in the subject land.

2.6.2. Fauna

The site contains minimal fauna habitat having been subject to considerable disturbance and clearance of remnant vegetation. Exotic grasses and forbs are dominate the subject land. The subject land provides habitat for species common to urban environments, however no hollow bearing trees, or substantial fauna habitat in the form of coarse woody debris were identified in the subject land. The field survey undertaken in the BDAR recorded a total of three fauna species, all of which were birds. No threatened fauna species were identified in the subject land.

Figure 6 – Biodiversity map



Source: Eco Planning

2.7. HERITAGE AND ARCHAEOLOGY

2.7.1. European Heritage and Historical Archaeology

The site does not contain any items of heritage significance, is not located near surrounding heritage items and is not located within a heritage conservation area. Notwithstanding, a Historical Archaeological Impact Assessment (HAIA) has been prepared by Biosis and is contained at **Appendix BB**. Refer to **Section 6.5** of this EIS for further discussion.

2.7.2. Aboriginal Heritage and Archaeology

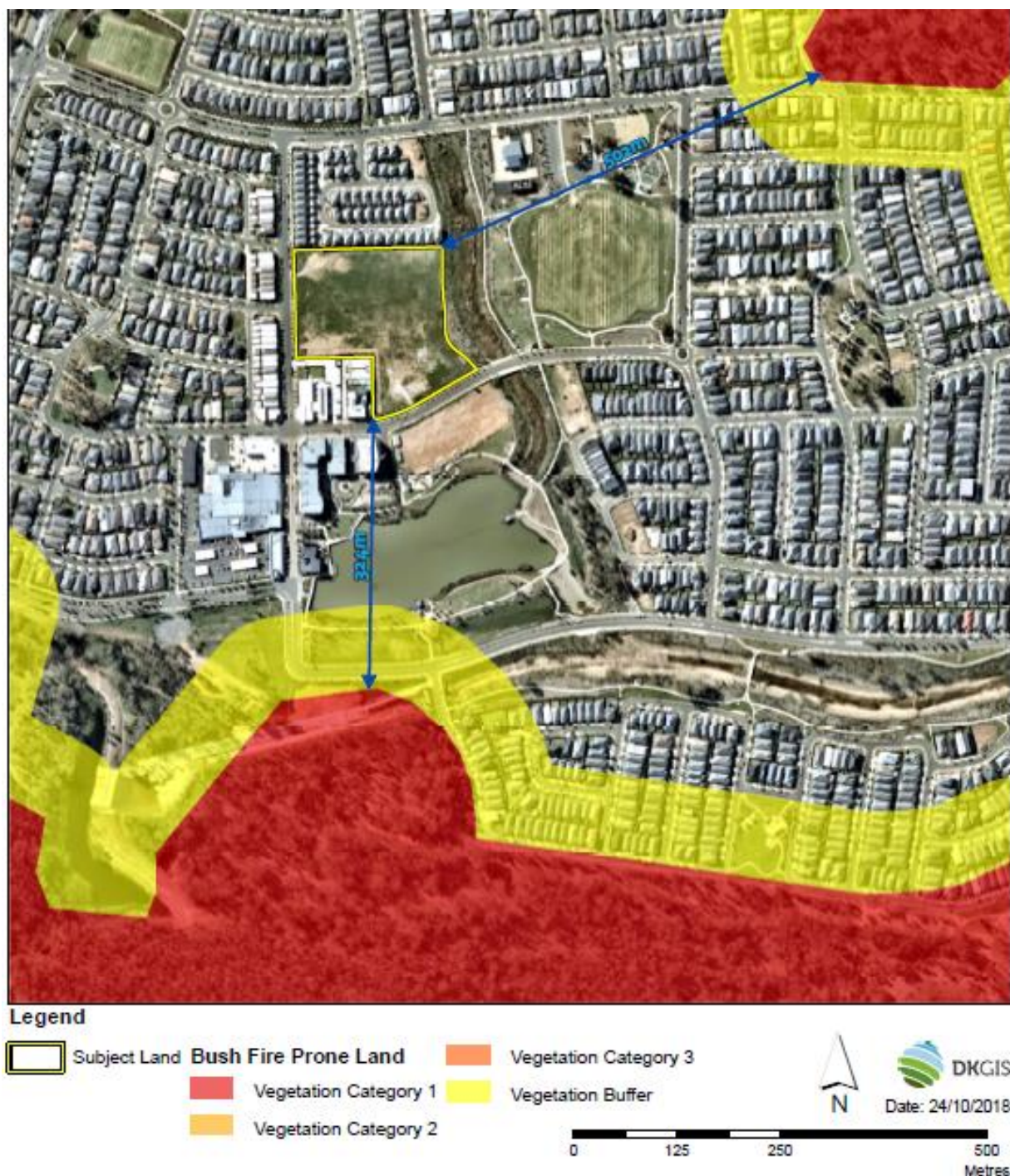
An Aboriginal Cultural Heritage Assessment Report (ACHAR) and accompanying Archaeological Report have been prepared by Biosis and are contained at **Appendix K** and **Appendix CC** respectively.

Biosis confirmed that there are 103 Aboriginal cultural heritage sites registered with the Aboriginal Heritage Information Management System (AHIMS) located in the vicinity of the study area, with no sites located within the study area. Most of the registered AHIMS sites are either isolated artefacts or artefact scatters with sites primarily focused adjacent to higher order creeks and lower slopes with sporadic sites occurring on elevated areas. Refer to **Section 6.4** of this EIS for further discussion.

2.8. BUSHFIRE

A Bushfire Impact Assessment has been prepared by Peterson Bushfire and is contained at **Appendix T**. The site does not contain 'bushfire prone land' as shown in Figure 7, and the nearest bushfire hazard is located more than 500 metres to the north-east and 320 metres to the south of the site. Recently developed lands, residential streets and parklands provide a large buffer between the subject land and these bushfire hazards. As such, bushfire protection measures such as Asset Protection Zones (APZ) and Bushfire Attack Levels (BAL) do not apply to the proposal.

Figure 7 – Bushfire prone land map

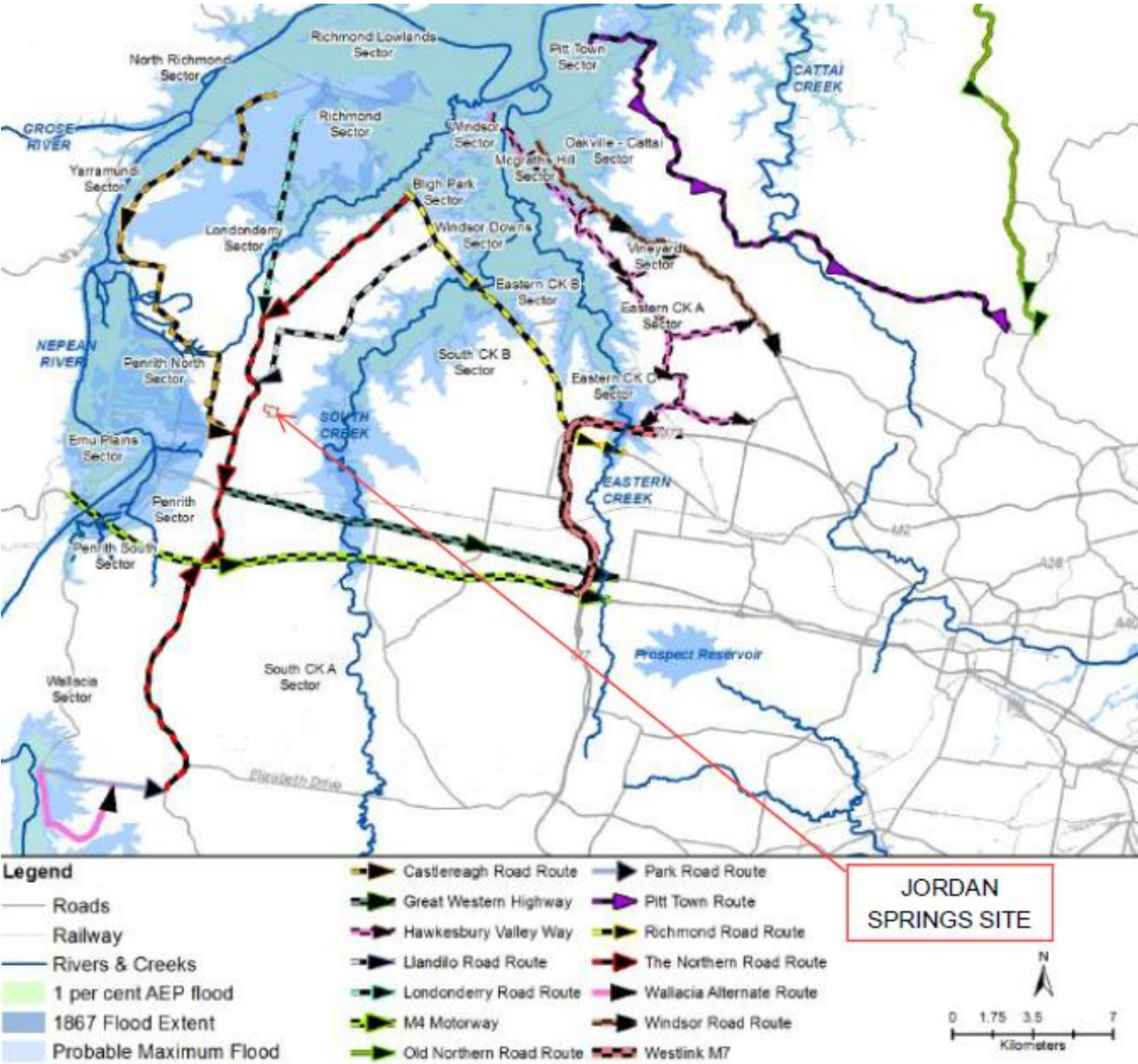


Source: Paterson Bushfire

2.9. FLOODING

The site slopes generally to the south and east and drains into Werrington Creek and then into South Creek, which forms part of the Hawkesbury-Nepean catchment. A Flood Risk Assessment has been prepared by WSP and is contained at **Appendix S**. The report confirms that the site is not located within 'flood prone land' as identified by the *Sydney Regional Environmental Plan No 30 – St Marys* or any other local and regional flood studies. The site is also located outside the Probable Maximum Flood (PMF) extent however in the event of a flooding event, required evacuation would utilise the Northern Road Route as shown in Figure 8.

Figure 8 – Evacuation routes within Hawkesbury-Nepean Valley



Source: WSP

3. THE PROPOSAL

3.1. DEVELOPMENT OVERVIEW

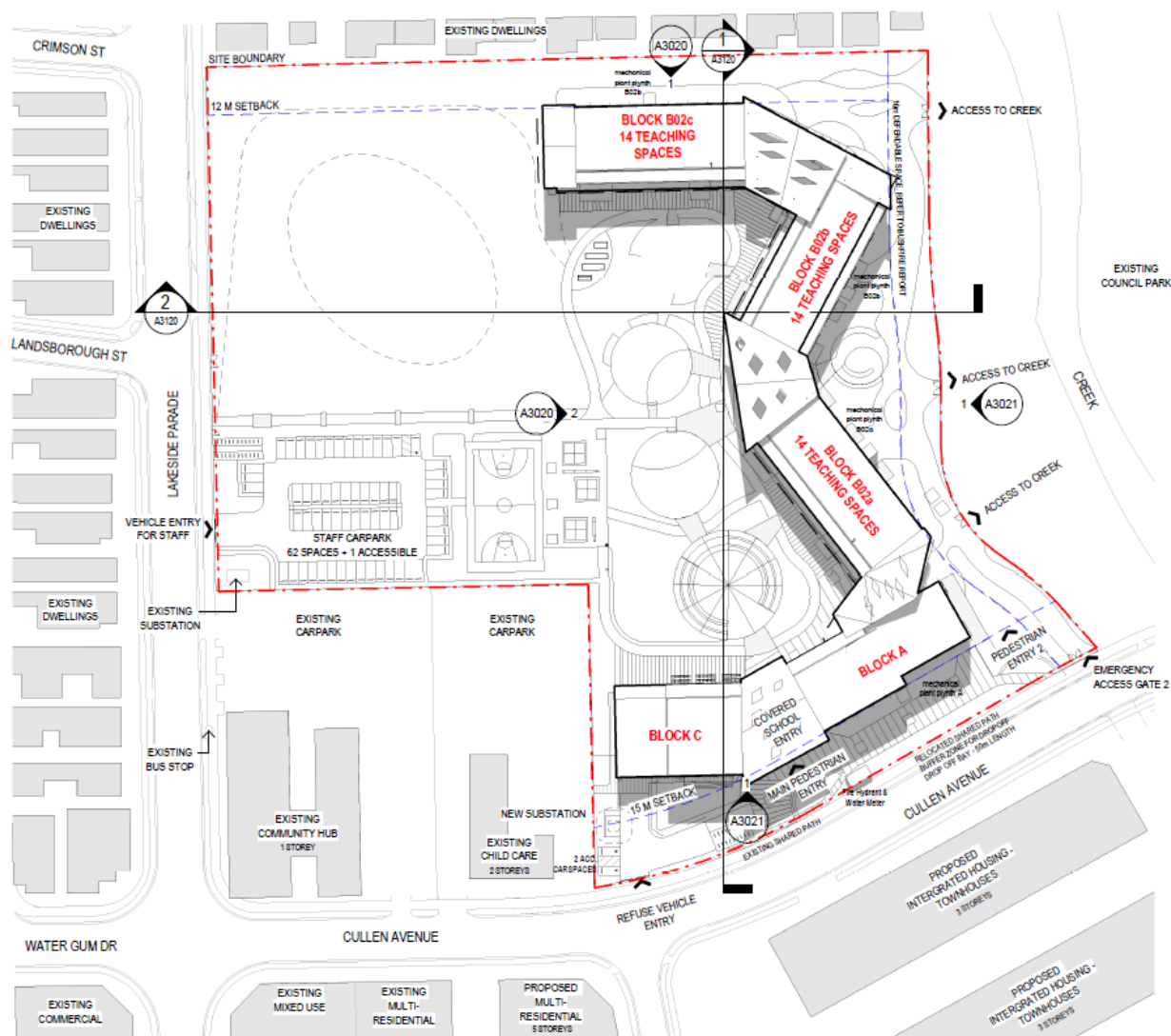
Jordan Springs Public School will cater for approximately 1,000 primary school students and 70 full-time staff upon completion. The proposal seeks consent for:

- Construction of a 2-storey library, administration and staff building (Block A) comprising:
 - School administrative spaces including reception;
 - Library with reading nooks, makers space and research pods;
 - Staff rooms and offices;
 - Special programs rooms;
 - Amenities;
 - Canteen;
 - Interview rooms; and
 - Presentation spaces.
- Construction of three 2-storey learning hubs containing 42 homebases comprising:
 - Collaborative learning spaces;
 - Learning studios;
 - Covered outdoor learning spaces;
 - Practical activity areas; and
 - Amenities.
- Construction of a single storey assembly hall (Block B) with a performance stage and integrated covered outdoor learning area (COLA). The assembly hall will have OOSH facilities and store room areas;
- Associated site landscaping and open space including associated fences throughout and sporting facilities;
- Pick-up and drop-off zone from Cullen Avenue;
- Pedestrian access points along both Cullen Avenue and Lakeside Parade;
- Construction of an at-grade car park containing 62 spaces accessible from Lakeside Parade and 2 spaces accessible from Cullen Avenue;
- School signage to the front entrance; and
- New substation fronting Cullen Avenue.

All proposed school buildings will be connected by a double storey covered walkway providing integrated covered outdoor learning areas (COLAs). Further details of the proposal are provided in the subsections below and within **Appendix A - CC**. A site plan of the proposal can be seen in Figure 9.

Early works (including earthworks and services) will be subject to a separate approval.

Figure 9 – Proposed site plan



Source: Group GSA Architects

3.2. DESIGN PHILOSOPHY

An Urban Design Report has been prepared by Group GSA and is attached at **Appendix E**. The proposal incorporates the following urban design considerations:

- The main school entry is accessed from Cullen Avenue and the pickup and drop off zone is located along this frontage.
- The school buildings are located to the perimeter of the site as a visual and acoustic buffer to the schools play areas and to provide a visual presence for this important community facility.
- The buildings are arranged in a U-shape to create a central school heart and connect outdoor areas with teaching spaces.
- The proposed buildings are interconnected and linked by covered pathways that have been deemed suitable for the current educational planning principles.
- The school buildings are primarily two storeys in scale, which is in keeping with the predominate scale of the surrounding development.
- Covered outdoor play areas (COLAs) will provide a transition zone between indoor and outdoor spaces.
- The built form is broken into smaller components to allow permeability between buildings for pedestrians, natural light and ventilation.

- The built form provides a well-defined public face to the school along Cullen Avenue.
- The proposed buildings employ adequate setbacks and are kept distant from residential neighbours, reducing the chance of overshadowing and privacy issues.
- Play space is maximised in area.
- Solar access is maximised to play areas and teaching spaces.

The proposed design appropriately responds to the urban design opportunities and constraints of the site and will provide the best educational outcomes for future students, teachers and staff.

3.3. BUILT FORM AND URBAN DESIGN

The built form and urban design of the proposal has been appropriately developed to:

- Complement the existing and emerging surrounding built and natural character of Jordan Springs.
- Minimise amenity impacts on surrounding development and residences.
- Provide a superior educational environment that encourages collaborative learning, knowledge and play.

A detailed analysis of each of the above considerations is provided below and 3D perspectives of the proposed school buildings are provided in Figure 11.

3.3.1. Complements Surrounding Built and Natural Character

Jordan Springs is a rapidly developing suburb located to the north of Penrith. The suburb is predominantly comprised of low to medium density residential areas and contains a neighbourhood centre and a variety of open parklands and nature reserves. The entire suburb is surrounded by the Wianamatta Regional Park and directly to the east of the site is the Jordan Springs Village Oval precinct. The proposal has been specifically designed to complement the surrounding built and natural character. This has been achieved by:

- Providing a range of native flora, turfed areas, swales, bush play areas and gardens including a rainwater garden into the proposed landscaped design, which is characteristic of the surrounding parks and reserves and adjacent dry creek corridor.
- Designing the school to include a range of bright and colourful external materials and finishes that are representative of the surrounding area.
- Proposing to construct a range of sporting facilities at the site, including a large sports field and multiple sports courts; complementing the adjacent Jordan Springs Village Oval precinct which contains many other sports facilities.
- Designing the school to have a maximum building height that is consistent with the surrounding two storey buildings to the north and west.

3.3.2. Minimises Amenity Impacts on Surrounding Residents

The new Jordan Springs Public School is sited at the southern and eastern edge of the site and is arranged in a U-shape. This building form and arrangement:

- Maximises visual privacy, as the proposed new school buildings are kept distant from surrounding dwellings to the north and west as well as the existing childcare centre and community centre.
- Provides an acoustic buffer, as outdoor play and announcement noises will be concealed within the proposed internal courtyard space created by the U-shape configuration of the school buildings.
- Maximises solar access to the school and surrounding neighbours, as the buildings are low scale and arranged to ensure sun access planes are not obstructed.
- Does not result in any view loss impacts.

3.3.3. Provides a Superior Educational Environment for Students and Staff

Jordan Springs Public School will provide a superior educational environment for students. The arrangement of the buildings in a U-shape provides interconnected learning spaces and classrooms that encourage active

learning and play. This arrangement also ensures the future school provides a pedestrian circulation system that is highly permeable and representative of an inclusive built environment. The centre of the site is proposed to contain a central courtyard that provides direct access to the outdoor areas. This arrangement will encourage collaborative learning, knowledge and play amongst students and staff.

3.3.4. New School Buildings

Multiple double-storey, multi-purpose school buildings are proposed in the southern portion of the site to provide new school facilities, spaces and equipment for future students and teachers. The buildings will be connected by awnings and a continuous roof and will provide weather protection to the users. New school buildings proposed include:

- Collaborative learning spaces and classrooms.
- School hall.
- Specified toilets for males, females and staff.
- Private office space for teaches and administrative staff.
- Library.
- School canteen.
- Utilities/ services rooms.

Figure 10 – 3D perspectives of proposal from streetscape



Picture 7 – View from south west corner of site, Cullen Avenue

Source: Group GSA Architects



Picture 8 – View from south east corner of site, Cullen Avenue

Source: Group GSA Architects

Figure 11 – 3D perspectives of proposed buildings



Source: Group GSA Architects



Source: Group GSA Architects

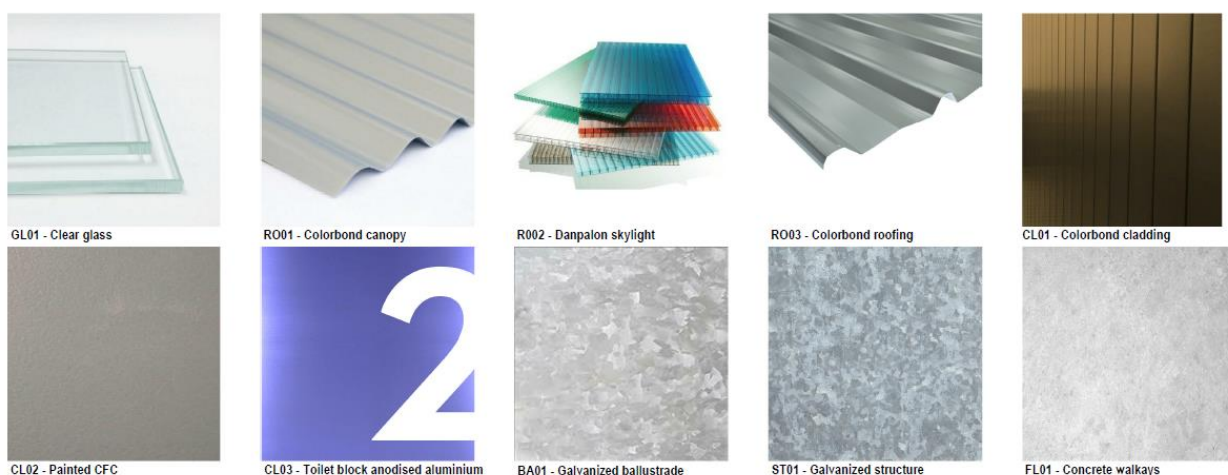
3.4. EXTERNAL MATERIALS AND FINISHES

The proposal has been appropriately designed with external materials and finishes that complement the surrounding natural and built environment of Jordan Springs. The building materials are durable, hardwearing, low maintenance and evoke smart building design (refer to Figure 12). The proposed external materials include:

- Clear glass;
- Colourbond canopy;
- Danpalon skylights;
- Colourbond roofing;
- Colourbond cladding;
- Painted CFC;
- Galvanised balustrades;
- Galvanised structures; and
- Concrete walkways.

For more details, refer to the elevations in the Architectural Plans provided in **Appendix B** and the Urban Design Report attached at **Appendix E**.

Figure 12 - Proposed external materials palette



Source: Group GSA Architects

3.5. SCHOOL OPERATIONS

Jordan Springs Public School will cater for students K- Year 6. The School will have the following capacity following completion of the development:

- 70 full time staff
- 1,000 students

General operating hours for the school will be Monday – Friday 8am - 5pm.

Out of school hours (OOSH) use of the school facilities will operate during weekdays at mornings 6.30am – 9am and afternoons 3pm – 6.30pm.

The hall is intended use by School during school hours. It will also occasionally be used during evenings for music performances, presentations, and parent/teacher nights with operating times restricted to 10pm.

The library is intended to be used by the School body only and will be in operation during general school operating hours only. It will also occasionally be used during evenings for presentations and parent/teacher nights.

At this point in time, there is no intended shared use of any of the School facilities by the community. Notwithstanding, we note that the DoE is currently exploring shared-use opportunities of the proposed school facilities for community use. This matter will most likely be addressed at the Response to Submissions stage subject to Joint Use Agreement with Penrith City Council.

3.6. PARKING AND SITE ACCESS

A Traffic Impact Assessment has been prepared by Bitzios Consulting and is contained at **Appendix G**. The report summarises the proposed parking and access provisions for the new Jordan Springs Public School. A summary is provided below.

3.6.1. Parking Provision

A new on-site carpark containing 62 spaces (including 2 accessible spaces) is proposed to be constructed near the western boundary of the site. The car park will have a two-way driveway provided off Lakeside Parade. Use of this carpark will be restricted to school staff only. The carpark will have an automatic sliding gate with access control. A further 2 additional parking spaces, accessed off Cullen Avenue are located within the school's frontage on the west side next to the bins, including one accessible space.

Overall, a total of 64 vehicle spaces including 3 accessible spaces are proposed.

3.6.2. Service Vehicles

A refuse vehicle area is proposed from Cullen Avenue opposite Charlotte Street via an approximately 7-metre-wide driveway. It will have an automatic sliding gate with access control, a turning bay on the eastern side, and storage for the bins at the northern end.

3.6.3. Drop-off and Pick-up Zone

A pick-up / drop-off zone is proposed along Cullen Avenue, along the main school frontage. The zone is approximately 50m long, allowing around eight (8) to nine (9) vehicles in the bay simultaneously. It is adjacent to the pedestrian access gates to the school.

3.6.4. Vehicular Access

The main vehicular entrance to the site is via one entrance off Lakeside Parade for staff parking, and one entrance off Cullen Avenue for maintenance vehicles. Student pickup occurs on Cullen Avenue, and indicative school bus stops are located on Lakeside Parade.

3.6.5. Pedestrian Access

Three separate pedestrian access points to the school are proposed as shown in Figure 13, including one immediately north of the staff carpark on Lakeside Parade, one to the west of the drop-off/pick-up zone on Cullen Avenue, and one positioned on the eastern side of the zone. The main visitor and student entrance to the site is off Cullen Avenue to the southern side of the administration building. All pedestrian entry points will have a sliding gate and a side hinged gate with access control. All pedestrian access routes connect to the existing pedestrian and shared cycling network. There is potential to provide openings to the creek to facilitate supervised outdoor learning.

3.6.6. School Bus Zone

A school bus layby is proposed to be located on Lakeside Parade adjacent to the onsite playing field. It is positioned on the school property frontage opposite Landsborough Street, north of the existing bus stop. A bus layby of 44 metres is determined to be adequate for the capacity of the school, providing space for at least two buses at a time.

3.6.7. Pedestrian Access to Bus Stops

Pedestrian access to the existing and proposed school bus stops on Lakeside Parade is likely to be provided using the proposed pedestrian entry and the existing footpath on the eastern side of the road, as well as the signalised crossings at the Water Gum Drive/Cullen Avenue/Lakeside Parade intersection. The proposed school bus layby area is located around 50-75 metres north of the pedestrian entry gate on Lakeside Parade. Access to the existing bus stop on Cullen Avenue is likely to be provided using the proposed

pedestrian gates adjacent to the drop-off/pick-up zone and the existing footpath on the northern side of the road.

3.6.8. Bicycle Parking

The proposal includes the provision of two (2) covered areas for bicycle parking for use by staff and students. These areas are to be located:

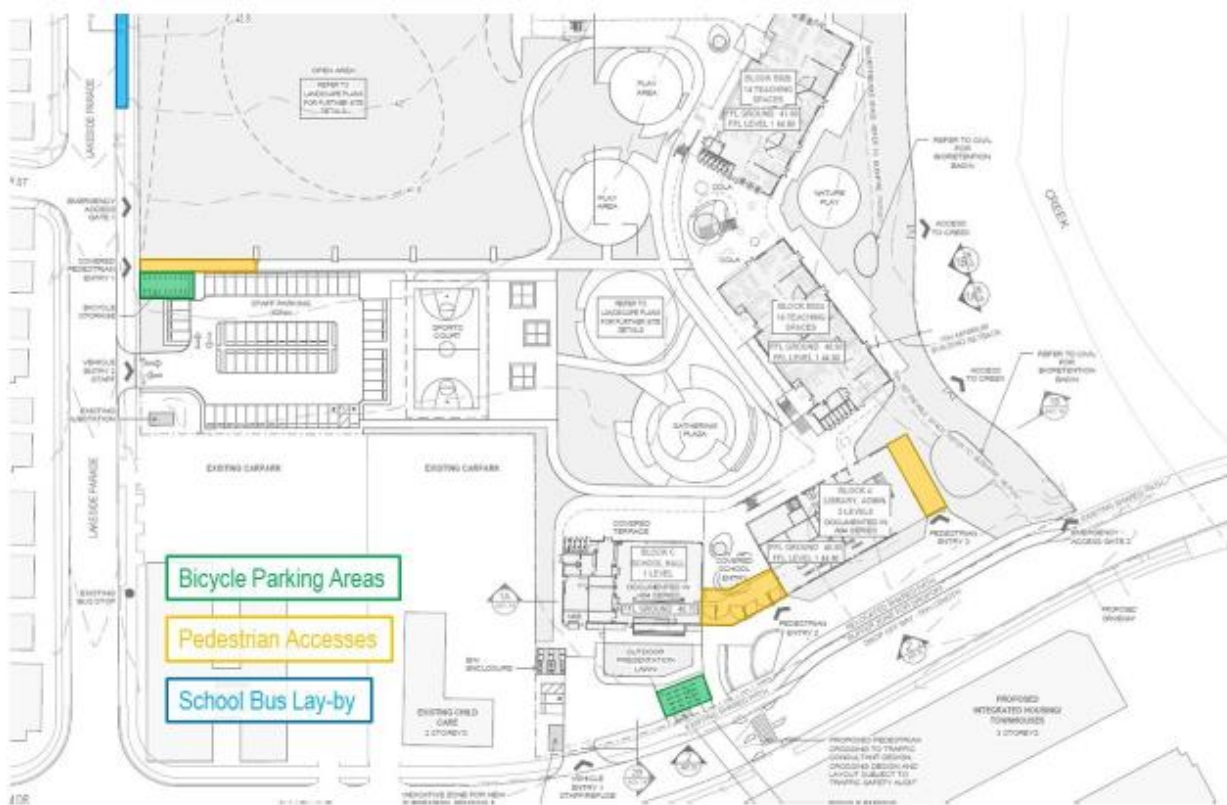
- On Lakeside Parade with Pedestrian Entry 1, adjacent to the staff carpark; and
- On Cullen Avenue next to Pedestrian Entry 2.

The two parking areas can accommodate up to 68 bicycles in total and are positioned near pedestrian access points, which allows for easier parking upon arriving to the site via bicycle.

3.6.9. Emergency Vehicle Access

Two access gates are proposed for emergency vehicles usage. One is located on Lakeside Parade on the north-west corner of the site, opposite Crimson Street, leading directly onto the school playing field. The other gate is located on Cullen Avenue on the south-east corner of the site, leading onto a garden space behind the school buildings. This access route maintains a 10-metre-wide easement for emergency vehicle movements on site.

Figure 13 – Proposed pedestrian access points, school bus zone and bicycle parking areas



Source: Bitzios

3.7. LANDSCAPING

A Landscape Strategy has been prepared by Group GSA and is attached at **Appendix F**. New landscaped areas, open space and sports facilities will be provided throughout the school. These spaces will enhance the learning experience provided by the development. The key aspects driving the landscape design of the school includes promoting social interaction, connecting indoor and outdoor learning spaces, providing safe and flexible outdoor spaces, creating a range of multi-sensory play experiences, providing diverse visual interest, and creating an environment of learning that incorporates the ecologically sustainable features of the built form as learning tools (refer to Figure 14).

The landscaping strategy is focused around a central gathering space containing open outdoor learning areas, COLAs, a sensory garden, nature play areas, passive communal areas and active play areas. The landscaping strategy includes the provision of seating, play equipment, drinking fountains and shade structures throughout the site.

Key elements of the landscape concept plan include:

- Dry creek bed landscape walkway with washed river gravel, native grasses, boulders and natural play items along eastern boundary of site;
- Rainwater garden with native plantings adjacent to the dry creek bed (also to act as bioretention area);
- Covered walkways and covered and open outdoor learning spaces throughout the site including outdoor library space;
- Circulation pathway connecting various elements of landscaped and outdoor areas;
- Buffer planting of trees for visual privacy to neighbouring residential dwellings to the north of the site;
- A central gathering plaza with shaded pergolas and tiered seating;
- Sensory gardens;
- Outdoor presentation lawn;
- In-situ concrete tiered seating with ornamental feature and street tree planting along Cullen Avenue frontage;
- Security fence to site boundary;
- Outdoor kitchen garden area;
- Small group learning zones;
- Nature play areas;
- Junior and senior play areas;
- Active outdoor play spaces including:
 - 1 x basketball court with concrete surface
 - 3 x handball courts in with soft fall surface
 - 1 x sports field
- Native low ground cover planting beds throughout;
- Natural and synthetic turf areas throughout;
- Various active outdoor play and learning areas; and
- Various passive communal gathering spaces with seating.

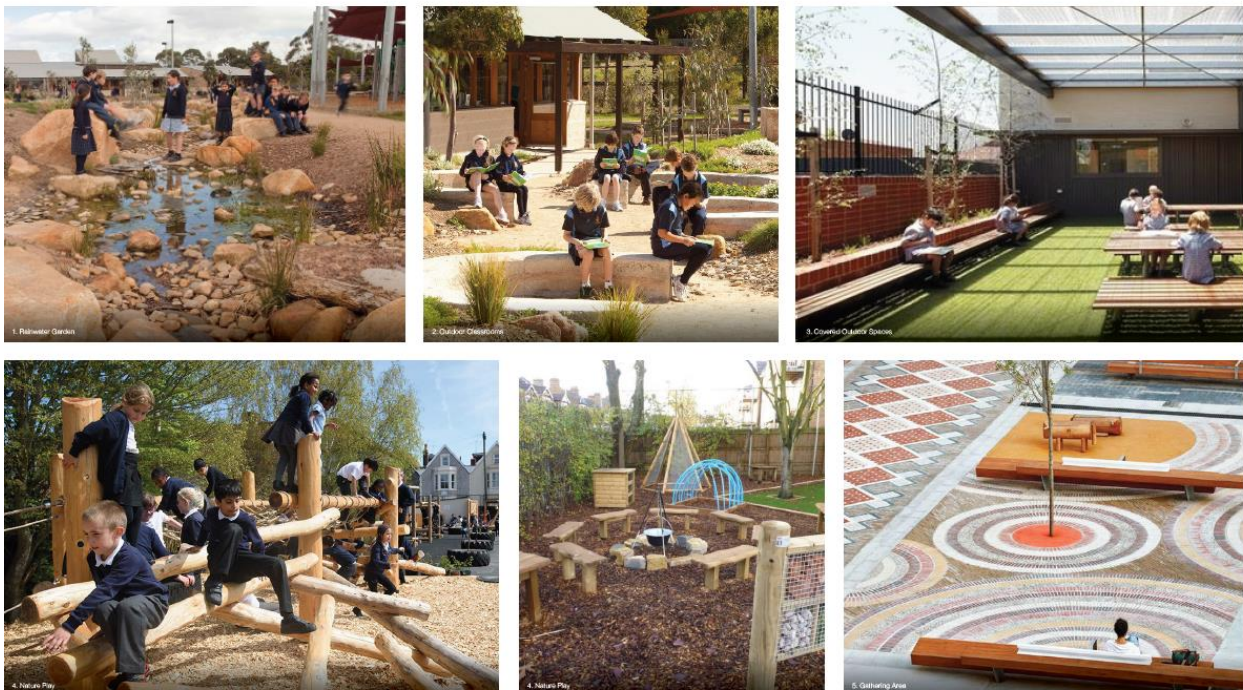
All new flora species proposed to be planted at the site have been chosen to ensure they are safe within a school environment.

Figure 14 – Proposed landscaping strategy



Picture 9 – Landscape master plan

Source: Group GSA



Picture 10 – Landscape concept strategy

Source: Group GSA

3.8. WASTE

3.8.1. Construction Waste

A Construction Waste Management Plan has been prepared by EcCell Environmental Management and is attached at **Appendix V**. The objective of this plan is to ensure all waste generated during the construction stage is carefully removed, packaged and transported from the site to an appropriate waste facility. This will minimise potential contact with the waste and reduce environment risk from an accidental release. Where appropriate, waste will be reused or recycled. Construction waste management strategies have been provided for the demolition, excavation and construction phases in **Section 8** of this EIS.

3.8.2. Ongoing Waste

An Operational Waste Management Plan has been prepared by The MACK Group and is attached at **Appendix W**. This report describes the waste management system proposed for the project, including:

- Estimates of waste quantity
- Waste space allocation and equipment
- Management of waste
- Waste segregation and minimization procedures
- Access

Based on the information provided and benchmark data from similar developments, the primary waste streams expected to be generated in the ongoing operation of the School would be:

- Cardboard/paper recycling;
- Comingled recycling;
- Food organics recycling; and
- General waste.

Additional smaller waste streams may include toner cartridge recycling, fluoro tube/globe recycling and battery recycling.

Accordingly, the following recommendations have been provided in relation to waste:

Waste equipment and access

- General waste estimate = 2 x 3,000L skips plus 3 x 1,100L bins, collected 1x per week.
- Recyclable waste estimate = 15 x 240L bins, collected 1x per week
- Other waste (e.g. yearly clean up) = Large 3000L bin. Collected on request.

Waste (general and recyclable/ comingled waste) will be initially collected in small bins placed throughout the school. The caretaker will collect and transport this waste to the central storage/collection area located on school grounds and near Cullen Avenue. The bin parking area will be designed in line with Council requirements. The garbage truck will enter the site from Cullen Avenue to the onsite loading area. Waste will be collected from there by a private collection contractor on a regular basis. Swept path diagrams contained in **Appendix G** confirms that suitable access is provided and that garbage trucks will be able to enter and exit the site in forward direction. Refer to **Section 8** of this EIS for mitigation measures and recommendations relating to operational waste.

3.9. SITE SERVICES

Inground servicing of the site will be subject to a separate approval. Notwithstanding, a Site Infrastructure Overview Report has been prepared by WSP and is contained at **Appendix P**. The report provides a general overview of existing and required infrastructure services (Electrical, Mechanical, Hydraulic and Fire Protection) for the new Jordan Springs Public School. The report confirms that as the site located in greenfield location, there are no known services within the site with the exception of an existing Endeavour Energy Pad Mounted substation (No. 29687) located on Lakeside Road near the proposed school carpark.

The report confirms that the existing substation does not have the sufficient spare capacity to serve the new school. Accordingly, a new 1,000kVA Endeavour Energy Pad Mounted substation will be installed along Cullen Avenue to provide power to the site whilst the existing substation will remain as installed for its existing use.

Service and infrastructure upgrades required to the site as part of this SSDA are summarised below:

- Underground consumer mains cabling will connect the new substation to a new main switchboard located in the Hall building. The main switchboard will supply power to sub-distribution boards located in the various site buildings for power provisions to final lighting, power and mechanical sub-circuits.
- A new telecommunications fibre connection will be provided to the school. The main communications room will be provided in the Library building and will provide telecommunication services to the various site buildings using a star topology. Each site building will be provided with a local building communication room for termination of field data outlets.
- Internal access lighting to illuminate circulation areas such as foyers, entry vestibules, corridors and stairs. Functional lighting to illuminate classroom, office, library, communal hall and etc. Illumination level to comply with AS1680 and DoE design guide.
- External lighting to illuminate building entrances, footpaths, sheltered walkways, roadways and car park. Illumination level to comply with AS1158.3.1.
- LED light source is proposed to achieve energy saving targets. External lighting to illuminate building entrances, footpaths, sheltered walkways, roadways and car park. Illumination level to comply with AS1158.3.1.
- Intelligent programmable lighting control system to be proposed to achieve automatic switch, timer control, dimer control, daylight harvesting and integration with period bell alarm.
- CCTV cameras to be proposed at campus high risk areas such as carpark, main entry, sick bay, library and etc. CCTV network video recorder is proposed in main communication room and CCTV monitors are to be in administration area.
- PV solar power grid-connect rooftop system to be provided to offset power consumption. The PV system will be designed by others.
- Split type air-conditioning system is provided to the communications and building distribution rooms in each block as applicable.
- Heating is to be provided to learning, library, canteen and administration areas by way of free-standing gas heating units with a low surface temperature. Access toilets to be provided with heating.
- Homebases and learning areas ventilation is achieved by naturally ventilating the spaces, with cross flow assistance measures where applicable, ceiling fans are also to be provided. The admin and library buildings are to be naturally ventilated where possible, with cross flow assistance measures where applicable, ceiling fans are also to be provided. The hall is to be provided with ceiling fans and roof ventilators for ventilation. The OOSH areas are to be naturally ventilated where possible.
- A mechanical supply and exhaust system to be provided for the kitchen, kitchen consultant advice to be provided at a later stage.
- Portable fire extinguishers will be provided throughout the school in accordance with AS2441 and BCA requirements. Further confirmation for fire protection services will be confirmed during detail design phase in consultation with the project Principle Certifying Authority (PCA) and Fire Safety engineer in order to establish minimum requirements for compliance to the relevant Australian Standards and *Building Code of Australia*.

3.10. STORMWATER MANAGEMENT

Inground stormwater servicing of the site will be subject to a separate approval. A Civil Design Report and associated Civil Plans have been prepared by Northrop and are attached at **Appendix Q** and **Appendix R** respectively. The report has been developed to integrate the existing system and accommodate the new works required for Jordan Springs Public School, as well as comply with Council's requirements. Stormwater will be managed through a series of controls to ensure the proposal does not adversely impact on

stormwater flows and water quality of the stormwater system downstream of the site. Northrop confirm that no OSD is required as detention is catered for in a regional basin downstream.

Proposed stormwater elements include:

- Construction of a series of stormwater pipes, drains and inlet pits to drain stormwater through the site;
- Construction of temporary bioretention basin in the eastern portion of the site;
- Planting of swales and retaining walls throughout to control movement and quality off stormwater;
- Installation of a 150m³ rainwater re-use tank rainwater harvesting and reuse; and
- Implementation of other sediment and erosion controls including sediment fencing, inlet filters, haybales and catch drains to reduce the amount of sediment laden runoff leaving the site.

The site stormwater system is designed to safely convey the flows through the site and within the capacity of the downstream system. The drainage system for the proposal is to be designed to collect all concentrated flows from the proposed buildings and surrounding surfaces. The piped drainage system is to be designed to convey the 1 in 20-year ARI with adequate provision for overflows in the event of a 1 in 100-year ARI event.

3.11. CONSTRUCTION MANAGEMENT

A number of reports have been prepared which detail the staging and proposed construction management of the new school site. These include:

- A Construction Traffic Management Plan (CTMP) prepared by Bitzios Consulting and contained at **Appendix I**;
- A Construction Waste Management Plan prepared by EcCell and contained at **Appendix V**; and
- An Environmental Management Plan prepared by Richard Crookes and contained at **Appendix AA**.

The CTMP provides a high-level overview of the construction traffic impacts and management works associated with the development. The plan identifies the impacts associated with construction on the local traffic network and outlines potential solutions or mitigating methods which are discussed in further detail in **Section 8** of this EIS.

All waste generated during the construction stage of development will be in accordance with the Construction Waste Management Plan.

An Environmental Management Plan contained at **Appendix AA** provides a high-level overview of all environmental management plans required prior to construction commencing on the site.

The construction of the school will be completed in one stage and will be based on the following program timeline:

- Site Establishment: 1 week (max)
- Main Works: 48 weeks (max)
- Handover: 1 week (max)

Delivery Plan

The construction methodology is based on the principles of efficiency, safety and sustainability. Proposed construction will aim to reduce machinery, waste and transport requirements. The benefits will be reduced disruption to residents from noise, air pollution and construction and delivery vehicles travelling to and from the site.

Work Zones

During the construction stage, temporary work zones will be established along both Cullen Avenue and Lakeside Parade frontages. It is expected that the construction site access points will be located on Cullen Avenue and Lakeside Parade. As such, Temporary Works Zones may be necessary at the following locations to control parking and pedestrian movements in the area:

- Northern side of Cullen Avenue east of Charlotte Street; and

- Eastern Side of Lakeside Parade between Crimson Street and Landsborough Street.

The construction area will be closed off using perimeter fencing. This will assist in mitigating issues associated with site safety, security, theft and vandalism.

Construction Work Hours

The proposed works will be undertaken during the following hours:

- Monday to Friday – 7.00am to 6.00pm
- Saturdays – 7.30am to 3.30pm
- Sundays / Public Holidays – No work

If required, after hours permits will be sought from the relevant authorities.

Construction Noise

The *Interim Construction Noise Guideline* provides five categories of works that might be undertaken outside the recommended standard hours. They are:

- The delivery of oversized plant or structures that police or other authorities determine require special arrangements to transport along public roads;
- Emergency work to avoid the loss of life or damage to property, or to prevent environmental harm;
- Maintenance and repair of public infrastructure where disruption to essential services and/or considerations of worker safety do not allow work within standard hours;
- Public infrastructure works that shorten the length of the project and are supported by the affected community; and
- Works where a proponent demonstrates and justifies a need to operate outside the recommended standard hours.

3.12. ACCESSIBILITY AND BCA

An Access Report has been prepared by Certis Access Consultancy and is attached at **Appendix X** of this EIS. This report represents a review of all aspects of access to, and within, the new building work, with respect to Disability Discrimination Act 1992 (DDA), the Building Code of Australia (BCA), Disability (Access to Premises – Building) Standard 2010, AS1428.1:2009 and other relevant Australian Standards as applicable to this project.

The report confirms accessibility has been appropriately addressed in the associated architectural documentation and confirms the Client's commitment to the development of an equitable and accessible environment for all.

The following scheme is proposed in relation to accessibility:

- Accessible doors, stairs, ramps, walkways and lifts are proposed to provide paths of travel within the site.
- Accessible toilets, ambulant cubicles and showers are proposed to provide sanitary facilities within the site.
- Common facilities including accessible car parking, signage, hearing augmentation, and lighting are proposed within the site.

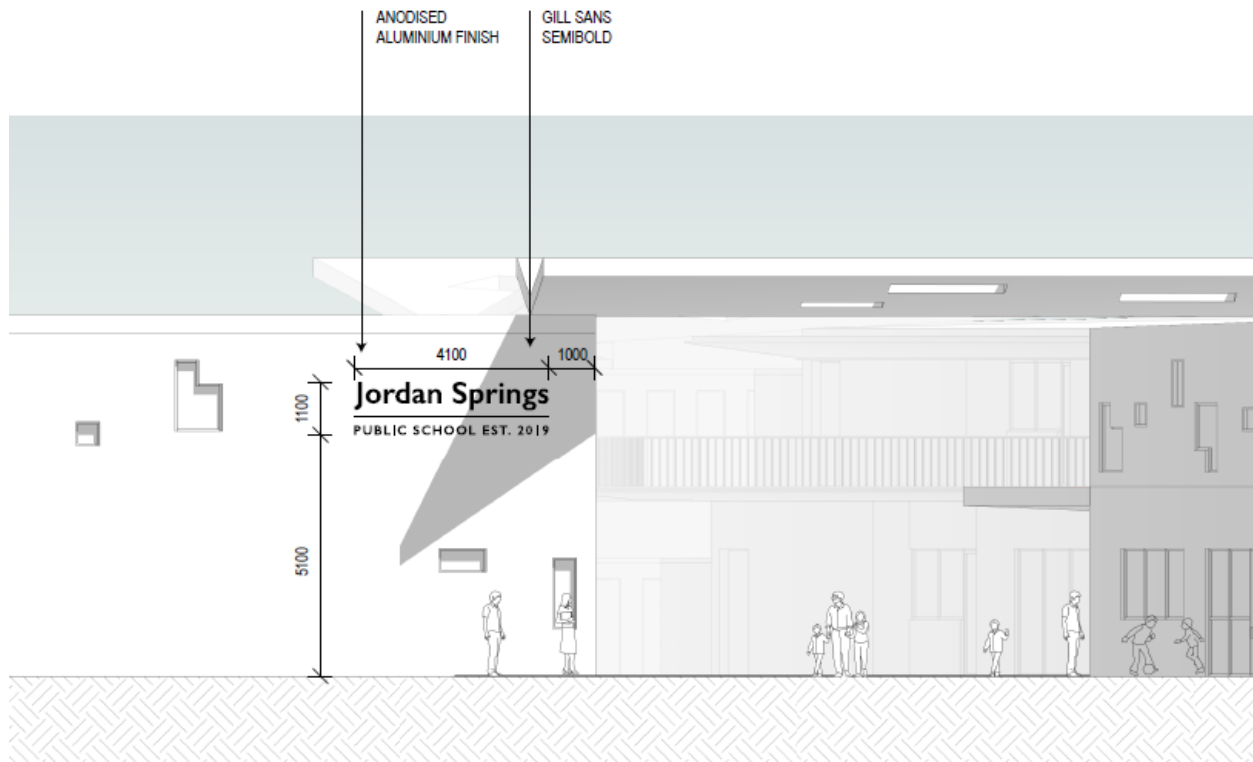
Certis will therefore work with the project team as the scheme progresses to ensure appropriate outcomes are achieved in building design and external domain design. On this basis, Certis believe that the development at present is capable of attaining the required compliance(s) without any major concern and that the buildings can achieve a reasonable level of access and meet statutory requirements once the items outlined within the report have been addressed.

A BCA Assessment Report has also been prepared by Modern Building Certifiers and is attached at **Appendix Y** which confirms the design is capable of achieving compliance with the BCA.

3.13. SCHOOL SIGNAGE

The proposal seeks consent for the main school entrance sign as shown in Figure 15 below. The sign will be located on the southern elevation of Block C (the School hall), adjacent to the primary entrance of the school. The sign will display the following content – 'Jordan Springs Public School Est. 2019' and will be made from an anodised aluminium finish. The signage zone will the following dimensions - it will be 4.1 meters wide and 1.1 metres in height. The signage zone is located on the upper level of the building elevation which ensures that the school sign is clearly visible to approaching pedestrians. Refer to Section 4.8 of this EIS for an assessment against the provision of SEPP 64.

Figure 15 – Proposed school signage



Source: Group GSA Architects

4. STATUTORY POLICY CONTEXT

In accordance with SEARs, the following statutory planning policies have been considered in the assessment of the proposal:

- *Biodiversity Conservation Act 2016*;
- *State Environmental Planning Policy (State & Regional Development) 2011*;
- *State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017*;
- *State Environmental Planning Policy 55 – Remediation of Land*;
- *State Environmental Planning Policy 64 Advertising and Signage*;
- *Sydney Regional Environmental Plan No. 30 – St Marys*;
- *Sydney Regional Environmental Plan No. 20 – Hawkesbury Nepean River (No. 2 1997)*;
- *Penrith Local Environmental Plan 2010*;
- *Western Precinct Plan and Development Control Strategy*; and
- *Penrith Development Control Plan 2014*.

Compliance with the relevant controls contained within the above statutory planning policies is discussed below.

4.1. BIODIVERSITY CONSERVATION ACT 2016

The *Biodiversity Conservation Act 2016 (BC Act)* requires that State Significant Development Applications be accompanied by a Biodiversity Development Assessment Report (BDAR). Accordingly, a BDAR has been prepared by Alphitonia and is contained at **Appendix U** which addresses the new biodiversity requirements.

The BDAR confirms that the site has been cleared of original vegetation and contains no significant habitat features or vegetation communities and no threatened species of flora or fauna were identified. The site is located entirely within the Cumberland Plain subregion and whilst remnant vegetation has been cleared from the subject land, some native vegetation is present in the grassland dominated by exotic species.

The BDAR confirms the site does not contain any areas of outstanding biodiversity value as defined under the BC Act. Accordingly, the proposal satisfies the provisions of the BC Act.

4.2. STATE ENVIRONMENTAL PLANNING POLICY (STATE AND REGIONAL DEVELOPMENT) 2011

State Environmental Planning Policy (State and Regional Development) 2011 identifies development types that are of state significance, or infrastructure types that are of state or critical significance. Under the *State Environmental Planning Policy (State and Regional Development) 2011*:

- (1) *Development for the purpose of a new school (regardless of the capital investment value).*
- (2) *Development that has a capital investment value of more than \$20 million for the purpose of alterations or additions to an existing school.*
- (3) *Development for the purpose of a tertiary institution (within the meaning of State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017), including associated research facilities, that has a capital investment value of more than \$30 million.*

The proposal is for a new school and is therefore a State Significant Development. Accordingly, an SSD application is to be lodged with DPE.

4.3. STATE ENVIRONMENTAL PLANNING POLICY (EDUCATIONAL ESTABLISHMENTS AND CHILD CARE FACILITIES) 2017

State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 (Education SEPP) aims to make it easier for child-care providers, schools, TAFEs and universities to build new facilities and improve existing ones by streamlining provisions and the approval processes so to deliver greater consistency across NSW. The Education SEPP balances the need to deliver additional educational infrastructure with a focus on good design.

In accordance with Clause 35(6) of the Education SEPP, the following must be considered for the assessment of a school development permitted with consent:

- (b) *the design quality of the development when evaluated in accordance with the design quality principles set out in Schedule 4, and*
- (c) *whether the development enables the use of school facilities (including recreational facilities) to be shared with the community.*

4.3.1. Schedule 4 – Design Quality Principles

Schedule 4 of the Education SEPP outlines the design quality principles that are to be considered for applications for school developments. The proposal responds to these design quality principles as follows:

- **Principle 1 – context, built form and landscape:** The built form respects the medium density scale and form of the neighbourhood and community precinct. The proposal will not exceed the maximum building height outlined in the St Mary's SREP and is considered an appropriate scale for the surrounding residential context. A Landscaping Concept Plan also accompanies the EIS.
- **Principle 2 – sustainable, efficient and durable:** The proposal will adopt a range of ESD initiatives and an ESD report accompanies the EIS. The proposal provides positive social and economic benefits for the local community particularly in terms of job creation and reducing pressure of surrounding public schools.
- **Principle 3 – accessible and inclusive:** The proposal is capable of complying with relevant provisions for accessibility, and an Accessibility report and BCA report accompany the EIS.
- **Principle 4 – health and safety:** CPTED measures have been incorporated into the design and management of the site to ensure a high level of safety and security for students and staff, such as appropriate fencing, access control measures, adequate lighting and wayfinding signage as well as the use of resistant and durable building materials. A range of open spaces and sports facilities are proposed for students to encourage passive recreation.
- **Principle 5 – amenity:** The proposal will provide high quality facilities, spaces and equipment for use by students and staff. These areas will provide students with an enhanced learning environment.
- **Principle 6 – whole of life, flexible and adaptive:** The proposal involves the construction of new school buildings, these will be designed to ensure flexibility and longevity.
- **Principle 7 – aesthetics:** The proposal will have high quality external finishes, which will be aesthetically pleasing. The proposal is an appropriate scale and form for the residential context.

4.3.2. Traffic Generating Development

This EIS addresses Part 7 - Clause 57 of the Education SEPP which stipulates that development for the purposes of an 'educational establishment' with 50 or more students and with access to any road will be referred to the RMS. The RMS have been consulted during the SEARs stage and in the preparation of this EIS. The Traffic Impact Assessment prepared by Bitzios Consulting, submitted at **Appendix G**, addresses the matters raised by the RMS in the SEARs. A referral to the RMS will be undertaken during the assessment of the EIS in accordance with Clause 57 of the Education SEPP.

4.4. STATE ENVIRONMENTAL PLANNING POLICY NO. 55 - REMEDIATION OF LAND

State Environmental Planning Policy No.55 – Remediation of Land (SEPP 55) provides a state-wide planning approach for the remediation of land and aims to promote in the remediation of contaminated land to reduce the risk of harm to human health or the environment. Clause 7(1) requires the consent authority to consider whether land is contaminated prior to consent of an application.

A Preliminary Stage 1 Environmental Site Assessment was undertaken by Environmental Investigation Services and is attached at **Appendix M**. Results of the Stage 1 assessment indicated that there is a low to moderate potential for site contamination. Environmental Investigation Services identified the following potential contamination sources/AEC:

- Fill (either imported, or locally sourced);
- Fuel storage;
- Use/storage of pesticides; and
- Hazardous building materials.

In addition, the site appears to have been used for defence purposes which is listed in Table 1 of the *SEPP55 Planning Guidelines* as an activity that may cause contamination. On this basis and considering the sensitivity of the proposed land use (i.e. a primary school), Environmental Investigation Services recommended the following:

- All historical reports relevant to site contamination assessment and remediation should be obtained and reviewed. Following the review, an assessment should be made as to whether further investigation is warranted (or required in order to obtain development consent); and
- A preliminary site investigation should be designed and implemented (if required) based on the outcome of the review.

Considering the above and following a review of all relevant documentation, a Stage 2 Detailed Environmental Site Investigation was undertaken by WSP and is provided at **Appendix O**.

The Stage 2 investigation included:

- Assessing the current contamination status of the site;
- Assessing the potential risks associated with contamination (if identified) at the site, with respect to the proposed future land use as a school;
- Providing recommendations for potential management or remediation requirements, if required; and
- Undertaking salinity testing and provide a salinity assessment for the site.

The investigation involved mechanical boring and collecting soil and asbestos sampling at 40 different locations across the site. Selected soil and asbestos samples were then tested in a laboratory analysis for any contaminants of concern identified at the site, including an assessment on salinity. Based on the results, there was negligible soil contamination identified on or beneath the site. With regards to salinity, results indicated that surface soils are generally non-saline to slightly saline. This indicates that in the sites' current form, site structures at the surface are unlikely to be affected by dryland urban salinity. Salinity on the site appears to generally increase with depth. Deeper structures (including footings, piles and service trenches) should therefore have salinity resistant materials incorporated into their design.

Based on the findings of the Stage 2 investigation, soil samples reported no contaminants of concern. WSP conclude the site is suitable for the proposal.

4.5. DRAFT STATE ENVIRONMENTAL PLANNING POLICY (REMEDIATION OF LAND)

As part of the NSW Government's review program for existing State Environmental Planning Policies (SEPPs), DPE publicly exhibited the draft *Remediation of Land SEPP* and draft planning guidelines (the draft Remediation of Land SEPP) between 31 January and 13 April 2018.

The draft Remediation of Land SEPP presents proposed changes to SEPP 55 and relates to remediation of contaminated land as well as matters to be addressed in a plan of remediation. It is proposed the new land remediation SEPP will:

- provide a state-wide planning framework for the remediation of land
- maintain the objectives and reinforce those aspects of the existing framework that have worked well
- require planning authorities to consider the potential for land to be contaminated when determining development applications and rezoning land
- clearly list the remediation works that require development consent
- introduce certification and operational requirements for remediation works that can be undertaken without development consent.

Notwithstanding the above draft amendments to SEPP 55, the contamination assessments carried out and summarised in **Section 4.4** of this EIS remain valid and consistent with the objectives of the proposed amendments.

4.6. SYDNEY REGIONAL ENVIRONMENTAL PLAN NO 20 – HAWKESBURY-NEPEAN RIVER (NO.2 – 1997)

The *Sydney Regional Environmental Plan No 20 – Hawkesbury- Nepean River (No. 2 – 1997)* (SREP) aims to protect the environmental of the Hawkesbury-Nepean River system by ensuring that the impacts of future land uses are considered in the regional context; the SREP applies to the Penrith Local Government Area.

The proposal will not have any adverse environmental impacts on an environmentally sensitive area, areas of high scenic quality, wetland areas, areas of high cultural heritage or impact on the water quality of the Hawkesbury Nepean River. The proposal contributes to improved water quality by employing stormwater initiatives as described in the Civil Design Report contained at **Appendix Q** and shown in the Civil Plans at **Appendix R**. The development controls outlined in Part 3 of the SREP have been reviewed and do not relate to this development application as there are no controls for educational establishments.

4.7. DRAFT STATE ENVIRONMENTAL PLANNING POLICY (ENVIRONMENT)

The draft *State Environmental Planning Policy (Environment) 2017* (Environment SEPP) aims to consolidate seven environmental existing SEPPs including the *Sydney Regional Environmental Plan No 20 – Hawkesbury- Nepean River*. The consolidation will modernise provisions to remove duplication, respond to new evidence, changed circumstances and better align with community expectations.

The draft SEPP will result in a new Ministerial 117 Direction for preparing LEPs including for the Hawkesbury-Nepean River catchments. The Explanation of Intended Effect (EIE) for the Environment SEPP was on exhibition from 31 October 2017 until 31 January 2018. The EIE explains that the consolidated SEPP proposes to simplify the planning rules for a number of water catchments, waterways, urban bushland, and Willandra Lakes World Heritage Property.

The proposal is consistent with the draft SEPP (Environment) as it provides a Civil Design Report and Civil Plans contained at **Appendix Q** and **Appendix R** respectively which address methods to minimise water consumption, reduce stormwater runoff and improve water quality to ensure impacts to the Hawkesbury-Nepean River system are minimised.

4.8. STATE ENVIRONMENTAL PLANNING POLICY NO. 64 – ADVERTISING AND SIGNAGE

State Environmental Planning Policy No.64 – Advertising and Signage (SEPP64) aims to ensure signage is compatible with the desired amenity and visual character of an area, provides effective communication in suitable locations and is of a high-quality design and finish.

SEPP 64 applies to the proposed development as content is sought for the main school signage which will be visible to the surrounding road network. Clause 8 and Clause 13 of SEPP 64 prevents development consent from being granted to signage unless the consent authority is satisfied that it is consistent with the objectives of the SEPP and has satisfied the assessment criteria specified in Schedule 1.

An assessment of the proposed main school signage against the SEPP 64 assessment criteria has been undertaken and summarised in **Table 3** below. This assessment demonstrates that the proposed sign satisfies the relevant provisions of SEPP 64, including achieving the aims and objectives of the policy.

Table 3 – SEPP 64 Schedule 1 Assessment Criteria

Assessment Criteria	Comment	Compliance
Clause 3- Aims and Objectives		
(a) to ensure that signage (including advertising): is compatible with the desired amenity and visual character of an area, and provides effective communication in suitable locations, and is of high-quality design and finish, and	The scale of the sign proposed is compatible with existing signage structures along the Cullen Avenue and in the Jordan Springs Town Centre. The signage is also consistent with that of typical signs for schools. The location of the sign on the upper level elevation of Block C (school hall) ensures that the sign will be clearly visible from the Cullen Avenue frontage of the school, allowing for effective legibility of the site. The sign incorporates quality materials and finishes and provides a coherent and integrated colour theme consistent with the school development.	✓
(b) to regulate signage (but not content) under Part 4 of the Act, and	Noted.	✓
(c) to provide time-limited consents for the display of certain advertisements, and	The sign is proposed for the life of the development.	✓
(d) to regulate the display of advertisements in transport corridors, and	The sign will be restricted to the location indicated on the plans provided in Appendix B.	✓
(e) to ensure that public benefits may be derived from advertising in and adjacent to transport corridors.	The proposed sign will be located at pedestrian entry/exit points to the school off Cullen Avenue and will appropriately identify the school to the community.	✓
Schedule 1- Assessment Criteria		
<u>Character of the Area</u> Is the proposal compatible with the existing or desired future character of the area or locality in which it is proposed to be located?	The proposed sign is compatible with the existing and future character of the area for the following reasons: <ul style="list-style-type: none"> The scale and location of the structure is consistent with existing signage along Cullen Avenue. 	✓

Assessment Criteria	Comment	Compliance
Is the proposal consistent with a particular theme for outdoor advertising in the area or locality?	<ul style="list-style-type: none"> It is commensurate to other school signage for new schools in NSW. 	
<u>Special Areas</u> Does the proposal detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas?	The site is not located in a special area. The sign will not detract from the amenity or visual quality of nearby residential land uses. The sign is of a scale and appearance that is compatible with the future built form of the school.	✓
<u>Views and Vistas</u> Does the proposal obscure or compromise important views? Does the proposal dominate the skyline and reduce the quality of vistas? Does the proposal respect the viewing rights of other advertisers?	<p>The sign will not obscure any views and will sit flush against the upper elevation of school hall building. It has been sited and designed to ensure the sign sits below the future roof line of the school buildings. The sign is also not of a bulk or scale that would impede any view from the street.</p> <p>The sign is of a scale and height consistent with existing signage in the locality and the proposed buildings within the site.</p> <p>The signage will not adversely impact on views or vistas from other properties, nor will it impede the visibility of any other existing signage.</p>	✓
<u>Streetscape, setting and landscape</u> Is the scale, proportion and form of the proposal appropriate for the streetscape, setting or landscape? Does the proposal contribute to the visual interest of the streetscape, setting or landscape? Does the proposal reduce clutter by rationalising and simplifying existing advertising? Does the proposal screen unsightliness? Does the proposal protrude above buildings, structures or tree canopies in the area or locality?	<p>The proposed sign is compatible with the scale of surrounding streetscape, setting and character of the nearby Jordan Springs Town Centre. The sign will therefore complement the existing signage in the wider precinct, with no adverse impacts to the streetscape.</p> <p>The proposal does not screen unsightliness and will not contribute to visual clutter as the signage panels are unified.</p> <p>The sign will not protrude above any structures or tree canopies.</p>	✓

Assessment Criteria	Comment	Compliance
<u>Site and building</u> Is the proposal compatible with the scale, proportion and other characteristics of the site or building, or both, on which the proposed signage is to be located? Does the proposal respect important features of the site or building, or both? Does the proposal show innovation and imagination in its relationship to the site or building, or both?	The sign is appropriately sized and sited with consideration to the existing and proposed built form of the school and surrounds. The proposed sign will not protrude above the building line and will utilise modern technology and be built with contemporary materials that are consistent with the current and future context of the site.	✓
<u>Associated devices and logos with advertisements and advertising structures</u> Have any safety devices, platforms, lighting devices or logos been designed as an integral part of the signage or structure on which it is to be displayed?	All required safety devices will be concealed within the signage structure.	✓
<u>Illumination</u> Would illumination result in unacceptable glare? Would illumination affect safety for pedestrians, vehicles or aircraft? Would illumination detract from the amenity of any residence or other form of accommodation? Can the intensity of the illumination be adjusted, if necessary? Is the illumination subject to a curfew?	The proposed sign will not be internally lit and will therefore comply with the relevant codes to ensure there is no interference with driver or pedestrian sight lines.	✓
<u>Safety</u> Would the proposal reduce the safety for any public road? Would the proposal reduce the safety for pedestrians or bicyclists? Would the proposal reduce the safety for pedestrians, particularly children, by obscuring sightlines from public areas?	The proposed sign will not interfere with pedestrian or vehicular sight-lines as it will comply with all relevant Australian Standards and codes. The sign will not distract motorists as will be located well away from the street verge and won't resemble a traffic sign or contain a facsimile of a traffic sign.	✓

4.9. SYDNEY REGIONAL ENVIRONMENTAL PLAN NO 30 – ST MARYS

The *Sydney Regional Environmental Plan No 30—St Marys* (SREP No 30 – St Marys) is a planning instrument that has guided the development of the old armed forces site at St Marys since 2001. The SREP No 30 – St Marys is the principal environmental planning instrument governing development at the site. An assessment against the relevant controls of the SREP has been undertaken below.

4.9.1. Zoning and permissibility

Under the Penrith LEP 2010 land zoning map (LZN_012), Jordan Springs is zoned 'SM' which refers to SREP No. 30- St Marys. SREP 30 provides the primary planning framework to guide development. The site

is identified as part of the Western Precinct and shaded 'Urban' area as shown in **Figure 16**. The SREP states:

2) *In the Urban zone:*

(a) *development for the purpose of the following is allowed with the consent of the consent authority:*

*advertisements, amusement centres, backpackers' hostels, bed and breakfast establishments, boarding houses, bush fire hazard reduction, centre-based child care facilities, clubs, community facilities, drains, **educational establishments**, essential community services, exhibition homes, exhibition villages, fast food take-away restaurants, flood mitigation works, general stores, guesthouses, home activities, home businesses, hospitals, hotels, housing, local retail or commercial premises, medical centres, motels, nursing homes, parks, places of assembly, places of worship, professional consulting rooms, public buildings, recreation establishments, recreation facilities, regeneration activities, restaurants, retail plant nurseries, roads, service stations, shops.*

(b) *any other development (except that identified by this plan as exempt or complying) is prohibited.*

Within this zone, 'educational establishments' are permitted with consent. As per the SREP, an education establishment is defined as:

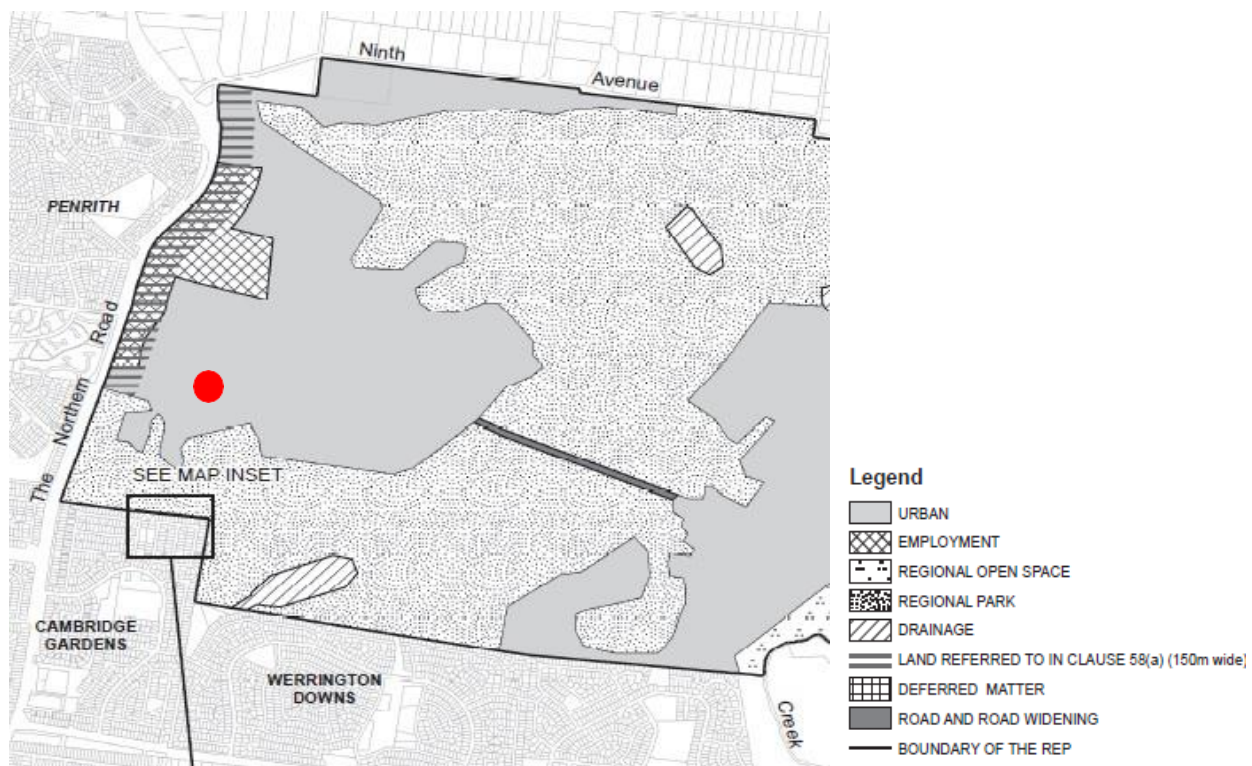
"a building or place used for education (including teaching), being:

(a) ***a school**, or*

(b) *a tertiary institution, including a university or a TAFE establishment, that provides formal education and is constituted by or under an Act".*

The proposal is therefore permitted with consent.

Figure 16 – Zoning map



Source: SREP No. 30

4.9.2. Zoning objectives

The relevant objectives of the Urban zone are as follows:

- *to ensure that buildings and works within the zone are primarily used for residential purposes and associated facilities, and*

- to limit the range and scale of non-residential uses to ensure that they are compatible with residential amenity and primarily serve local residents, and
- to provide for local retailing and related services, including supermarkets, which will complement established centres in the Blacktown City and Penrith City local government areas and not have a significant adverse effect on the viability of established retail centres, and
- to provide for medium density residential development in locations which provide optimum access to employment, public transport and services, while ensuring residential amenity, and
- to promote home based industries where such activities are unlikely to adversely affect the living environment of neighbours, and
- to ensure that development adjacent to the Regional Park zone does not have a negative impact on biodiversity or conservation within that zone.

The proposal is consistent with these objectives as:

- The new school will be two storeys in scale, which is in keeping with the predominant scale of surrounding residential development.
- The proposal includes a landscape concept plan that provides gardens, outdoor play areas and sporting facilities that will complement the existing and future neighbourhood character of Jordan Springs.
- The new school will satisfy the educational and recreational needs of current and future students in the area and provide significant employment opportunities through construction jobs and ongoing teaching places.

4.9.3. Other SREP Provisions

An assessment against the relevant controls of the SREP has been undertaken in the table below.

Table 4 – SREP No. 30 Compliance Table

Consideration	Control	Comment
Clause 22 – Ecologically sustainable development	Development on the land to which this plan applies is to be planned and carried out so that it supports the goal of ecologically sustainable development within the region declared under the Act and known as the Sydney Region.	The proposal adopts a range of ESD initiatives as outlined the ESD report contained at Appendix J .
Clause 23 – Air quality	Development on the land to which this plan applies should contribute to improved regional air quality by containing growth in vehicle kilometres travelled, by achieving higher than normal public transport use, encouraging walking and cycling, and promoting energy-efficient businesses and homes.	A Construction Traffic Management Plan (CTMP) has been submitted with the EIS at Appendix I and outlines methods to control dust and improve air quality during construction. A Green Travel Plan has been prepared and submitted at Appendix H which encourages modes of transport other than private vehicles.
Clause 25 – Heritage	Regard for, and education and understanding of, the identified items of environmental heritage on the land to which this plan applies are to be promoted.	In terms of European heritage and archaeology, the site does not contain any items of heritage significance nor is it located adjacent to any items or within a conservation area. A Historical Archaeological Impact Assessment contained at Appendix BB confirmed the site may contain

Consideration	Control	Comment
	<p>Development is not to adversely affect the heritage significance of items of environmental heritage and their settings.</p> <p>The Aboriginal community is to be given the opportunity to comment regarding any potential impacts of development on, and proposals for mechanisms for the management of, items of Aboriginal heritage significance.</p>	<p>archaeological materials, however these possible archaeological materials have been assessed as not holding any heritage significance. An unexpected finds policy will be implemented to identify and record any archaeological material that may be encountered during construction.</p> <p>In terms of Aboriginal cultural heritage and archaeology, an Aboriginal Cultural Heritage Assessment Report (ACHAR) and accompanying Archaeological Report have been prepared by Biosis and are submitted with the EIS at Appendix L and Appendix EE respectively.</p> <p>The assessment did not identify any Aboriginal sites or areas of archaeological potential within the study area during the field survey located within, or in close proximity to the study area. The entire study area was deemed to have been highly disturbed with ongoing modifications of the adjacent creek line since the 1940s, as well as more recent remediation works and subsequent cut and fill works.</p> <p>Biosis concludes that the expected potential harm to Aboriginal archaeological sites from development in the study area ranges from negligible to low. Notwithstanding the above, strategies to avoid or minimise harm to Aboriginal heritage in the study area have been provided and are contained in Section 8 of this EIS.</p>
Clause 27 - Open space and recreation	A range of open space and recreation areas and facilities for passive and active recreation is to be provided, including local playgrounds and neighbourhood parks. The accessibility and utility of open space areas are to be maximised to allow use by the community. Recreational activities and facilities within each precinct are to be located and designed to maximise conservation of the cultural and natural environmental values of buildings, works and places within the precinct.	The new School will provide a range of open space and recreational areas that facilitate and encourage active and passive recreation and outdoor learning opportunities for students. A Landscape Plan has submitted with the EIS at Appendix F .
Clause 28 – Water cycle	Impacts upon water quality are to be minimised.	A Civil Design Report and Civil Plans are provided at Appendix Q and Appendix R respectively and address the methods to

Consideration	Control	Comment
	<p>The use of the land to which this plan applies is to incorporate stormwater management measures that ensure there is no net adverse impact upon the water quality.</p> <p>Water usage on and the importation of potable water on to the land to which this plan applies are to be minimised.</p> <p>Ensure that there is no significant increase in the water table level and that adverse salinity impacts will not result.</p>	<p>minimise water consumption and improve water quality.</p>
Clause 29 - Soils	<p>Development is to have regard to soil constraints to ensure that the risk of adverse environmental and economic impacts is minimised.</p>	<p>A Geotechnical Investigation has been submitted this EIS at Appendix O which ensures the proposal has regard for any potential soil constraints.</p>
Clause 30 – Transport	<p>Development should support creation of effective public transport and bicycle links.</p>	<p>A Transport Impact Assessment has been submitted with this EIS at Appendix G and addresses how the proposal will make use of public and passive forms of transport.</p>
Clause 31 - Urban form	<p>Development of the land to which this plan applies is to result in an attractive and safe built environment which satisfies a diverse range of community needs.</p> <p>Development is to integrate the new community with existing adjoining communities.</p> <p>Development on the land to which this plan applies is to include:</p> <p>(a) a diverse range of building types and designs, and</p> <p>(b) residences in close proximity (that is, a comfortable walking distance) to public transport, human services and retail, community and recreation facilities, and clearly distinguished public and private spaces, and</p> <p>(d) a legible street layout.</p>	<p>The built form and urban design of the new School has been appropriately developed to:</p> <ul style="list-style-type: none"> • Complement the existing and emerging surrounding built and natural character of Jordan Springs; • Minimise amenity impacts on surrounding development and residences; and • Provide a superior educational environment that encourages collaborative learning, knowledge and play. <p>The proposal has been appropriately designed with external materials and finishes that complement the surrounding natural and built environment of Jordan Springs. The building materials are durable, hardwearing, low maintenance and evoke smart building design. An Urban Design Report has been prepared by Group GSA and is attached at Appendix E. A detailed analysis of the built form and materiality of the proposal is outlined in Section 3.3 of this EIS.</p>

Consideration	Control	Comment
	The overall development of the land to which this plan applies is to incorporate urban design measures to discourage crime and facilitate safety and access for disabled persons	
Clause 34 – Energy Efficiency	Development on the land to which this plan applies is to incorporate best practice energy management and implement energy efficient principles wherever possible.	The new School will incorporate ESD measures to minimise consumption of resources, water and energy and ensure a sustainable operation. An ESD Report has been submitted with this EIS at Appendix J which provides a summary of all ESD elements to be included in the design.
Clause 35 – Waste Management	Buildings are to be designed and constructed in a way that minimises the production of unnecessary waste. Development is to facilitate appropriately designed and scaled local activities which reuse, recycle and reprocess wastes.	An Operational Waste Management Plan (WMP) has been prepared by The MACK Group and is attached at Appendix W . The WMP provides an overview of the estimated waste generation of the new School and outlines the required waste equipment to be provided and waste management procedures. The WMP confirms all waste will be sorted and stored in a dedicated bin store room with sufficient capacity provided for the bins.
Clause 36 – Zoning	Urban Zone	‘Educational establishments’ are permitted with consent in the ‘Urban’ zone under SREP 30.

4.10. WESTERN PRECINCT PLAN

The Western Precinct Plan was prepared by JBA in May 2009 following the gazettal of Amendment No. 2 of SREP 30 in February 2009 which rezoned the Western Precinct as ‘Urban’. The Precinct Plan establishes planning strategies, development principles and development controls to guide development in the St Marys area.

Figure 17 - Western Precinct map (approximate location of site marked with red circle)



The following sub sections consider Part 4 of the Precinct Plan which provides the framework and environmental management considerations for the area.

4.10.1. Future Character Areas

The site is located with the Northern Road Interface. All development in this area should have regard to the following:

The Northern Road Interface will partially comprise residential development which may require alternate design solutions subject to detailed noise assessment at DA stage. The results of such assessment may require solutions for landscape treatment, setbacks, road layout, frontages, lot sizes, acoustic attenuation both on the lot and dwelling and potential measures such as earth mounding / acoustic barriers. Indicative treatment options are contained at Appendix E. This area will comprise a range of attached, semi-detached and detached dwellings, 1-2 storeys in height. The area is also proposed to contain open space uses.

Key considerations will be the visual qualities along The Northern Road corridor and of the proposed subdivision, pedestrian connectivity and connections to surrounding residential areas, and potential views from The Northern Road into the site. The interface with existing residential development along The Northern Road in Cranebrook will also be considered, as will the identification of clear and logical entry points to the site.

The proposal provides building heights of between 1-2 storeys which is consistent with the built form vision for the area. The site is located well away from the Northern Road, and as such, there will be no visual impact to the corridor.

4.10.2. Landscape and open space network

The site is identified as an 'active open space'.

Figure 18 – Landscape and open space network map (approximate location of site marked with red circle)



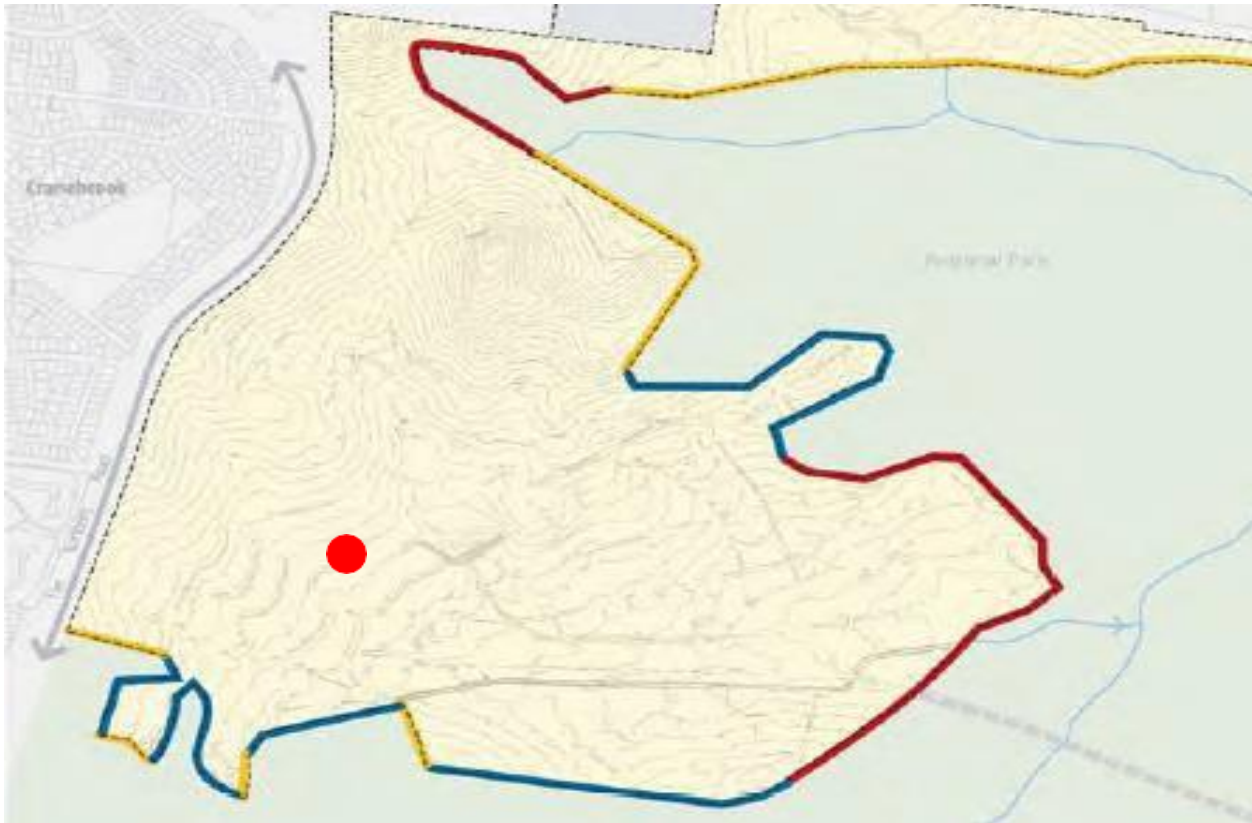
Source: NSW Department of Planning

The proposal involves the delivery of a new school on a site that has been zoned and specifically identified for the purposes of providing an educational establishment. The proposed Jordan Spring Public School will provide significant areas of open space and landscaping which satisfies the provisions. For more details, refer to the landscape plans and strategy submitted at **Appendix F**.

4.10.3. Bushfire measures

The Western Precinct is identified as bushfire prone land as shown in Figure 19.

Figure 19 – Bushfire prone map (approximate location of site marked with red circle)



Source: NSW Department of Planning

The site is not identified as an Asset Protection (APZ). Notwithstanding, a Bushfire Impact Assessment has been submitted with this EIS at **Appendix T** and confirms that the proposal is considered acceptable from a bushfire perspective, subject to the adoption of recommendations contained in **Section 8** of this EIS.

4.10.4. Cultural heritage

The site is not identified on or near an item or site of cultural heritage as shown in Figure 20.

Figure 20 – Cultural heritage map (approximate location of site marked with red circle)



Source: NSW Department of Planning

Notwithstanding the above, an Aboriginal Cultural Heritage Assessment Report has been submitted with this EIS at **Appendix K** which confirms that the proposal is considered acceptable from an Aboriginal heritage perspective, subject to the adoption of recommendations contained in **Section 8** of this EIS.

4.11. DEVELOPMENT CONTROL STRATEGY

The Development Control Strategy (DCS) of the Western Precinct Plan contains specific development standards for urban design, built form and environmental management. These standards are designed to ensure that the development principles and key elements of the framework plan and environmental strategies identified in the preceding sections of the Precinct Plan are implemented.

Notwithstanding the above, there are no controls that specifically relate to educational establishments within the Northern Road Interface Character Area and therefore the provisions of the DCS do not apply.

4.12. PENRITH LOCAL ENVIRONMENTAL PLAN 2010

The *Penrith Local Environmental Plan 2010* (PLEP) is the principal environmental planning instrument governing development in the Penrith Local Government Area (LGA). However, as the site is located within the Western Precinct of the St Marys area, the primary planning instrument is the SREP No 30 – St Marys and the accompanying Western Precinct Plan and Development Control Strategy.

Accordingly, the proposal is not required to be assessed against the provision of the PLEP.

4.13. PENRITH DEVELOPMENT CONTROL PLAN 2014

The Penrith Development Control Plan 2014 (PDCP 2014) provides detailed controls for specific development types and locations including 'educational establishments'. Most controls in the PDCP 2014 relate to character, streetscape, car parking and public domain works.

Under Clause 11 of the *Statement Environmental Planning Policy (State and Regional Development) 2011*, the application of Development Control Plans is excluded when assessing SSD projects. Notwithstanding this, an assessment against the relevant controls of the PDCP 2014 has been undertaken in the table below.

Table 5 – Penrith DCP 2014 Compliance Table

Provision	Proposal	Compliance
Part C - Site Planning and Design Principles		
C1 Site Planning		
1.1.1. Site Analysis	The EIS is accompanied by Architectural Plans which includes a site analysis plan at Appendix B . The proposal has been designed with consideration of the natural and built context.	Yes
1.1.2. Key Areas with Scenic and Landscape Values	The site is not located within a scenic and landscape value area as per the Penrith LEP 2010 Scenic and Landscape Values map. These provisions therefore do not apply.	N/A
1.2 Design Principles		
1.2.2. Built Form - Energy Efficiency and Conservation	The EIS is accompanied by an ESD report at Appendix J to ensure the proposal achieves suitable energy efficiency targets. Refer to Section 6.3 of this EIS for further discussion.	Yes
1.2.3. Building Form – Height, Bulk and Scale	<p>The proposed school buildings will have a maximum building height of 7.65 meters.</p> <p>The proposal has the following setbacks:</p> <p>Front setback - ranges from 15 metres to Cullen Avenue.</p> <p>Side setback - 10 metres to the eastern boundary.</p> <p>Rear setback – 12 metres to dwellings to the north.</p> <p>The school buildings are appropriate and suitable to the surrounding context. The school is predominantly two storeys in height and the buildings are generally well setback from boundaries to ensure privacy is maintained. Landscaped elements reduce the bulk of the School. Refer to Appendix E for further details.</p>	Yes
1.2.5. Safety and Security (Principles of Crime Prevention through Environmental Design)	The proposal incorporates a number of CPTED features to ensure the safety of future users of the School including staff, students and parents. The main pedestrian entrance to the School is oriented towards the front of the site and Cullen Avenue. Clear signs will allow for easy wayfinding. No blank walls are proposed along buildings addressing the street frontage. Refer to Section 5.9 of this EIS for further discussion.	Yes
C3 Water Management		

Provision	Proposal	Compliance
3.2. Catchment Management and Water Quality	The EIS is accompanied by Civil Design Report and associated Civil Plans at Appendix Q . Refer to Section 3.10 of this EIS for further discussion.	Yes
3.6 Flood Planning	The EIS is accompanied by a Flood Risk Report at Appendix S . Refer to Section 6.7 of this EIS for further discussion.	Yes
3.6. Stormwater Management and Drainage	The EIS is accompanied by Civil Design Report and associated Civil Plans at Appendix Q . Refer to Section 3.10 of this EIS for further discussion.	Yes
3.7. Water Retention Basins/Dams	The design and the location of the proposed bioretention basin has been carefully considered given the topography and hydrology of the site and surrounding catchment area. Refer to Civil Design Report contained at Appendix Q for further details.	Yes
C4 Land Management		
4.3. Erosion and Sedimentation	An erosion and sediment control plan contained within the civil plans are submitted with this application at Appendix R .	Yes
C5 Waste Management		
5.1. Waste Management Plans	An operational waste management and construction waste management plan is submitted with this application at Appendix W and Appendix V respectively. Refer to Section 3.8 of this EIS for further discussion.	Yes
C6 Landscape Design		
6.1 Controls	The EIS is accompanied by a Landscape Concept Plan and Strategy at Appendix F . Refer to Section 3.7 of this EIS for further discussion. A Tree Survey is not required as the site has been cleared of all vegetation.	Yes
C7 Cultural heritage		
7.1. European Heritage	The site does not contain any heritage items, nor is it located within a heritage conservation area. Notwithstanding, a Historical Archaeological Report has been submitted with this application at Appendix BB which confirms that any potential remains are considered not to hold historical, cultural, social, aesthetic or associative significance, nor would these remains likely be considered rare, representative or hold research potential. Accordingly, the proposal is	Yes

Provision	Proposal	Compliance
	considered suitable from a European archaeological perspective.	
7.2 Aboriginal Culture and Heritage	<p>An Aboriginal Cultural Heritage Assessment Report (ACHAR) and accompanying Archaeological Report are submitted with this EIS at Appendix L and Appendix EE respectively. The assessment did not identify any Aboriginal sites or areas of archaeological potential within the study area during the field survey located within, or in close proximity to the study area. The entire study area was deemed to have been highly disturbed with ongoing modifications of the adjacent creek line since the 1940s, as well as more recent remediation works and subsequent cut and fill works. Biosis has therefore concluded that there is a low likelihood of Aboriginal cultural heritage occurring within the study area and that the scientific significance of the entire study area is assessed as low. It is therefore expected that the potential of harm to Aboriginal archaeological sites from development in the study area ranges from negligible to low.</p> <p>Notwithstanding the above, strategies to avoid or minimise harm to Aboriginal heritage in the study area have been provided and are contained in Section 8 of this EIS.</p>	Yes
C10 Transport, Access and Parking		
10.2 Traffic Management and Safety	The EIS is accompanied by a Traffic Impact Assessment contained at Appendix G , a Construction Traffic Management Plan at Appendix I and a Green Travel Plan at Appendix H . Refer to Section 3.5 and Section 6.2 of this EIS for further discussion.	Yes
C12 Noise and Vibration		
12.1. Road Traffic Noise	The EIS is accompanied by an Environmental Noise and Vibration Assessment at Appendix L which demonstrates the proposal will be acceptable from an acoustic perspective, subject to the adoption of outlined in Section 8 of this EIS.	Yes
C13 Infrastructure and Services		
13.2. Utilities and Service Provision	The EIS is accompanied by a Site Infrastructure Overview contained at Appendix P . Refer to Section 3.9 of this EIS for further discussion.	Yes
Part D – Land Use Controls		

Provision	Proposal	Compliance
D5 Other Land Uses		
5.4 Educational Establishments		
Location and Design	The total site area is approximately 2.84ha which complies with the minimum area required for a primary school. Landscaping elements will reduce the bulk and scale of School buildings. The design maximises visual privacy, as the proposed new School buildings are kept distant from surrounding dwellings to the north and west. Outdoor play and announcement noises will be concealed within the proposed internal space created by the U-shape configuration of the school buildings creating a buffer between the School and surrounding residential dwellings. The proposal also maximises solar access to the school and surrounding neighbours, as the buildings are predominantly two storeys in scale and arranged to ensure sun access planes are not obstructed.	Yes
Servicing	The new School will be connected to essential services including water, power and sewer as outlined in the Site Infrastructure Overview contained at Appendix P .	Yes
Transport, Access and Parking	<p>The School will have access to public transport connections as outlined in Section 8 of the EIS. A Green Travel Plan has been prepared at Appendix H which provides a number of potential measures to encourage staff and students to use active or passive transport options.</p> <p>The proposal provides a separate car park for staff, accessed via Lakeside Parade.</p> <p>A pick-up / drop-off zone is proposed along Cullen Avenue, along the main school frontage. The zone is approximately 50 metres long, allowing around eight (8) to nine (9) vehicles in the bay simultaneously. It is adjacent to the pedestrian access gates to the school.</p> <p>A school bus zone is proposed on Lakeside Parade adjacent to the onsite playing field. It is positioned on the school property frontage opposite Landsborough Street, north of the existing bus stop. A bus zone of 44 metres is determined to be adequate for the capacity of the school, providing space for at least two (2) buses at a time.</p> <p>Pedestrian access to the existing and proposed school bus stops on Lakeside Parade is likely to be provided</p>	Yes

Provision	Proposal	Compliance
	using the proposed pedestrian entry and the existing footpath on the eastern side of the road, as well as the signalised crossings at the Water Gum Drive/Cullen Avenue/Lakeside Parade intersection.	

4.14. CONTRIBUTIONS

Section 4.33 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) sets out specific provisions relating to the determination of Crown DAs. It states:

(1) A consent authority (other than the Minister) must not:

(a) refuse its consent to a Crown development application, except with the approval of the Minister, or

(b) impose a condition on its consent to a Crown development application, except with the approval of the applicant or the Minister.

On this basis, the consent authority has no power to issue a refusal or issue an approval subject to conditions of consent to which the DoE does not agree. The limitation on the power to impose a condition of consent extends to the consent authority's ability to require contributions to be paid, including contributions pursuant to Section 7.11 and 7.12. Contributions occur by way of conditions of consent. Therefore, neither Council or DPE can impose conditions relating to contributions without the DoE's consent.

The following planning policies support the best practice of exempting community infrastructure from paying contributions:

Circular D6 – Crown Development Applications and Conditions of Consent

Exemption from contributions is supported by Planning Circular (Circular D6) relating to Crown Development Applications, issued by the then Department of Urban Affairs and Planning. Circular D6 sets out the circumstances in which it is appropriate for a consent authority to seek the approval of the applicant or the Minister to impose conditions of consent. Circular D6 notes that where a consent authority intends to levy contributions on Crown Development, they must be justified, and consideration should be given to the Crown's role in providing a community service, the cost of which is accountable to all taxpayers in the State.

The currency of Circular D6 is confirmed in the Draft Development Contributions Practice Note – July 2005, which states "*the current limitation on imposition of levies on Crown Developments as outlined in Circulate D6...remain in force.*"

Draft Local Development Contributions Guidelines

The Guidelines outline the best practice approach to developer contributions on the public sector:

8.3 Public sector development

The current limitations on the imposition of development contributions on public sector developments as outlined in Circular D6 – Crown Development Applications and Conditions of Consent remain in force.

Public sector development generally falls into the following 2 categories:

- *Development that is carried out with an underlying philosophy of community service such as a courthouse, school, hospital or social housing; or*
- *Development that is carried out on a profit-making basis*

Council can, in its contribution plan, identify those types of developments that are exempt from contributions.

Council can, in its contribution plan, identify those types of developments that are exempt from contributions. In this regard it is considered best practice to exempt those developments provided by the Crown with an underlying philosophy of community service, such as a courthouse, school or

community centre, should not be levied a contribution as the material public benefit that is derived from the development exceeds any demand that it creates on existing infrastructure.

Where development is carried out by the public sector on a profit-making capacity they should pay a level of contribution equal to that applicable to the private sector.

Comment: DPE must acknowledge that to impose a contribution on this project, it would need to have the agreement of the Minister. Planning Circular D6 notes that consideration should be given to the Crown's role in providing a community service (not provided for by Council).

5. STRATEGIC PLANNING CONTEXT

In accordance with SEAR's, the following strategic planning policies have been considered in the assessment of the proposal:

- *NSW State Priorities;*
- *The Greater Sydney Regional Plan, A Metropolis of three cities;*
- *NSW Future Transport Strategy 2056;*
- *State Infrastructure Strategy 2018 – 2038 Building the Momentum;*
- *Sydney's Cycling Future 2013;*
- *Sydney's Walking Future 2013;*
- *Sydney's Bus Future 2013;*
- *Crime Prevention Through Environmental Design (CPTED) Principles;*
- *Healthy Urban Development Checklist, NSW Health; and*
- *Greater Sydney Commission's Western City District Plan.*

Consistency with the relevant goals contained to the above strategic policies is discussed below.

5.1. NSW STATE PRIORITIES

NSW State Priorities is the State Government's plan to guide policy and decision making across the State. The proposed redevelopment at the site is consistent with key objectives contained within the plan, including:

- *Creating Jobs: Create 150,000 new jobs by 2019*

The proposal will create temporary job opportunities in manufacturing, construction and construction management during the project's construction phase of works, and job opportunities in teaching and administration at the project's completion.

- *Building Infrastructure: Infrastructure projects to be delivered on time and on budget across the state.*

The proposal provides a significant development opportunity for the State that will create jobs, stimulate the economy and deliver a vital service for the community. Significant population growth within Sydney's outer west has placed substantial pressure on public schools within the area. The proposal will provide a high-quality facility to the community and take enrolment pressure off existing schools in the area.

- *Improving Education Results: Increase the proportion of NSW students in the top two NAPLAN bands by eight per cent.*

The proposal will contain high quality facilities, spaces and equipment for use by students and staff. This will provide students with learning difficulties with greater opportunities to learn and improve their numeracy and literacy skills.

Overall, it is considered that the proposal is consistent with the goals and objectives set out within the *NSW State Priorities*.

5.2. THE GREATER SYDNEY REGIONAL PLAN, A METROPOLIS OF THREE CITIES

The *Greater Sydney Regional Plan, A Metropolis of Three Cities* is an update of *A Plan for Growing Sydney* and includes a range of goals, directions, objectives and actions that aim to support the strategic growth of Sydney over the long term. The following key directions contained in the Plan are relevant to the proposal:

‘A city supported by infrastructure’

Providing adequate infrastructure to support population growth is essential to creating strong communities. In accordance with the Plan, this SSDA will ensure that a new public school can be delivered to meet Sydney’s growing educational needs, particularly in rapidly growing locations such as Jordan Springs. The proposal will take enrolment pressure off other schools in the locality currently exceeding student capacity and ensure a high quality educational facility is provided for the future population of Penrith LGA.

‘A city for people’

A growing Greater Sydney presents an opportunity to build social and cultural networks and to enhance individual and community health outcomes. The changing demographics of neighbourhoods across Greater Sydney will influence local demand for social infrastructure. The proposal will deliver a sustainable, well-designed school that promotes the use of public and active transport for staff. The redevelopment of the site will make a valued contribution to economic growth in Sydney and provide increased learning opportunities for students with employment opportunities for teachers. The proposal delivers a new school in an accessible and walkable location that will contribute to the social and cultural identity of the locality and improve the health outcomes of the children living in the area. The new school has been designed to embrace the surrounding natural and built environments and includes the provision a variety of sporting facilities to encourage students to participate in active outdoor activities.

The proposal is also consistent with a number of underlying objectives that support the wider goals and directions contained within the Plan, including:

- ***Objective 1: Infrastructure supports the three cities***

Schools are essential local infrastructure. The proposal will deliver a vital piece of educational infrastructure in western Sydney that will take enrolment pressure off existing schools.

- ***Objective 2: Infrastructure aligns with forecast growth – growth infrastructure compact***

Jordan Springs is a rapidly growing residential suburb and the surrounding area is forecast to experience significant residential and employment growth. Accordingly, the new school will provide educational services that seeks to accommodate the growing student population and take enrolment pressure of existing schools in the area. The new school will provide contemporary facilities to meet future educational standards and provide increased jobs and growth for Jordan Springs.

- ***Objective 3: Infrastructure adapts to meet future needs***

The NSW Department of Education estimates that an extra 270,000 students will need to be accommodated in government and non-government schools in Greater Sydney by 2036. The proposed new school has been designed to be adaptable to meet the future needs of the community. The new school provides an innovative contemporary design, flexible learning spaces and a more efficient use of land that will be essential in responding to growth and changing demands.

- ***Objective 6: Services and infrastructure meet communities’ changing needs***

Joint and shared use of facilities is encouraged to make school assets available to the community outside school hours and to give schools access to community facilities. At this point in time, there are no shared use or joint use arrangements in place for the new Jordan Springs Public School. Notwithstanding, the DoE will continue to explore opportunities for shared and joint use of its facilities.

- ***Objective 7 Communities are healthy, resilient and socially connected***

The proposal provides a new school which will allow for a more socially connected community and help to create and support an inclusive and vibrant neighbourhood. The site is located in the heart of an emerging walkable neighbourhood and will increase opportunities for students and staff to walk and cycle to school resulting in a school that is well connected with its surrounding community. The proposal also includes a range of open spaces, playgrounds and sports facilities to encourage active and passive recreation.

- ***Objective 14: A Metropolis of Three Cities – integrated land use and transport creates walkable and 30-minute cities***

The proposal provides safe walking and cycling links to the new school and encourages young people to be more active. The site is close to bike paths, established residential neighbourhoods and multiple bus routes. Future employees and students will be encouraged to access the site via public transport, cycling or walking. This will reduce reliance on cars, decrease road congestion and generally create a healthy built environment.

5.3. WESTERN CITY DISTRICT PLAN

The Western City District Plan includes a range of priorities and actions to appropriately support the strategic growth of Sydney's Western District. The Plan identifies the following:

- There will be a 43% growth in school-aged children to 2036 within the District;
- The NSW Department of Education estimates that an extra 77,978 students will need to be accommodated in both government and non-government school in the District by 2036; and
- The largest projected growth in school-aged children within the District is expected in the Camden (26,403), Liverpool (21,072), Campbelltown (13,541) and Penrith (11,008) local government areas.

These figures demonstrate there is a demand for school places which has necessitated planning for new and more innovative use of existing school sites. If no additional classrooms are provided until 2036 there will be significant shortfalls. In response, the District Plan notes that DoE is funding the construction of new government schools and upgrades to existing government schools to provide additional classrooms to the Western District to address issues of supply. Accordingly, this SSDA is consistent with the District Plan, as it supports the DoE's substantial investment in the development of Jordan Springs Public School.

5.4. NSW FUTURE TRANSPORT STRATEGY 2056

Future Transport 2056 is an update of NSW's *Long-Term Transport Master Plan* which seeks to promote the use of public transport as an effective travel option. The site benefits from being located:

- Near dedicated cycleways and bicycle friendly roads;
- Within an area well serviced by buses; and
- Within an existing residential neighbourhood containing appropriate footpaths.

Accordingly, future employees and students can easily cycle, walk or catch the bus to the School. This will reduce reliance on cars, decrease congestion and promote in sustainable outcomes. A Green Travel prepared by Bitzios Consulting and attached at **Appendix H** proposes a range of strategies aimed at encouraging public and active transport use, which will further reduce reliance on private vehicle use.

5.5. STATE INFRASTRUCTURE STRATEGY 2018 – 2038 BUILDING THE MOMENTUM

The Strategy outlines a 20-year strategy for infrastructure development in NSW in order to address a number of key challenges and opportunities, including population growth, demographic change, climate change and an emerging fiscal gap. The Strategy identifies that the NSW economy is expected to grow from \$539 million to \$1.4 trillion over the next 40 years. The projected economic growth will increase the demand for economic and social infrastructure.

The proposal will deliver a new educational facility and consequently will provide state of the art educational infrastructure to meet the needs of a growing population and a growing economy.

5.6. SYDNEY'S CYCLING FUTURE 2013

Sydney's Cycling Future (2013) seeks to make bicycle riding a feasible transport option within Sydney by encouraging in the use of Sydney's existing bicycle network.

The proposal provides two covered bicycle parking areas for future students and employees of the new School. The site is well serviced by existing dedicated cycle routes and can also be accessed from a network of smaller, more accessible local streets. Future parents, students and employees of the school will be able to use these roads to access the site via bike. This will reduce reliance on cars, decrease congestion and promote sustainable outcomes.

5.7. SYDNEY'S WALKING FUTURE 2013

Sydney's Walking Future (2013) aims to promote walking as a means of effective transport within Sydney by encouraging investment in safe, permeable walking networks.

The school is located in an emerging but effectively established residential neighbourhood. Students, teachers and parents can access the site easily by walking. This will promote healthy practise and decrease vehicular use.

5.8. SYDNEY'S BUS FUTURE 2013

Sydney's Bus Future (2013) outlines the NSW Government's long-term plan to deliver fast and reliable bus services within Sydney to meet current and future customer needs.

The site is located within easy walking distance of several bus stops. Bus Route 783 – Penrith to Jordan Springs is the primary bus service currently operating near the site and surrounding areas. Two additional bus routes operate along The Northern Road, approximately 600 metres west of Lakeside Parade, including:

- Route 677 – Richmond to Penrith; and
- Route 786 – Penrith to Cranebrook.

However, these routes do not directly service the Jordan Springs precinct aside from The Northern Road. The area is also serviced by a number of school bus services. Students, teachers and parents will therefore be able to easily access the site via bus, deterring the need to drive.

5.9. CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED) PRINCIPLES

The Crime Prevention Through Environmental Design (CPTED) guidelines were prepared by the NSW Police in conjunction with the DPE. CPTED provides a clear approach to crime prevention and focuses on the 'planning, design and structure of cities and neighbourhoods.

The main aims of the policy are to:

- Limit opportunities for crime;
- Manage space to create a safe environment through common ownership and encouraging the public to become active guardians; and
- Increase the perceived risk involved in committing crime.

The guidelines provide four key principles to limit crime. These are outlined in **Table 6** below.

Table 6 – CPTED Principles

	Principle	Definition
1	Natural Surveillance	Natural surveillance is a by-product of well-planned, well-designed and well-used space. It involves maximising opportunities for passers-by and users to observe what happens in an area (the 'safety in numbers' concept). Higher risk locations can also benefit from organised surveillance, which involves the introduction of formal measures such as on-site security guards or CCTV.
2	Access Control	Control of who enters an area so that unauthorised people are excluded, for instance, via physical barriers such as fences, grills etc.
3	Territorial Reinforcement	People are more likely to protect territory they feel they own and have a certain respect for the territory of others. This can be

	Principle	Definition
		expressed through installation of fences, paving, signs, good maintenance and landscaping. Territoriality relates to the way in which a community has ownership over a space.
4	Space Management	Ensures that space is appropriately utilised and cared for. Space management strategies include: activity coordination (i.e. having a specific plan for the way different types of activities are carried out in space), site cleanliness, rapid repair of vandalism and graffiti, the replacement of burned out lighting and the removal or refurbishment of decayed physical elements.

The proposal will incorporate natural surveillance, access control, territorial reinforcement and space management design principles to deter crime. A summary of these recommendations, informed by best-practice CPTED principles for schools, is provided within the subsections below:

5.9.1. Natural Surveillance

- Incorporate an open palisade fence around the perimeter of the site to allow for passive surveillance both into the site and onto surrounding streets.
- Provide adequate lighting throughout the site, including at footpaths, entrances and at the proposed staff carpark.
- Orientate the proposed buildings to ensure they do not conceal passive surveillance to the school's proposed driveway and vehicular entrance and exit points off Cullen Avenue.
- The upper levels of the proposed school buildings should be designed with balconies and windows to ensure passive and informal surveillance is available onto the surrounding open space and streets.

5.9.2. Access Control

- High quality fencing should be contained to the entire perimeter of the site to restrict access.
- During school hours, visitor access to the school should only be able to occur once visitors sign-in at the main reception. Accordingly, internal signs should be installed to direct visitors to report at reception before accessing school buildings.
- Landscaping should be designed to respond to pedestrian movement paths help guide people to entries and public spaces.
- All doors to be used at the site should be built from resistant materials to prevent break-ins and vandalism.
- Proposed school rooms with valuable equipment should be made physically secure and locked when not in use.
- Wayfinding signage should be provided throughout the site to mark school buildings. Signs should also be provided at the staff carpark to appropriately manage vehicles entering and exiting.

5.9.3. Territorial Reinforcement

- Signs depicting the name of the school should be displayed at the vehicular site entrance (Williamson Crescent).
- Proposed school entry and exit points should be monitored by staff and/or CCTV and be locked after-hours as appropriate.
- An open palisade fence should be provided around the perimeter of the site to allow views into the site from the surrounding streets.

- A strong teacher presence should be felt throughout the school to encourage safety and security among students.

5.9.4. Space Management

- All outdoor lighting fixtures, equipment and furniture should be sturdy and designed to be 'vandal-proof'.
- Break-resistant materials should be used for windows and access points where appropriate to limit the potential for building damage.
- The proposed school buildings should be regularly maintained and monitored for potential graffiti or damage.
- A rapid removal of graffiti strategy should be developed by the school to ensure the prompt removal of graffiti and/or tags.
- A School Plan of Management should be developed by the school that includes maintenance and repairing strategies, complaint management measures, emergency procedures, waste removal procedures, evacuation procedures, safety procedures for large events and monitoring measures.

The above recommendations have been or can be incorporated into the final school design. Accordingly, the proposal will provide a high level of security and be designed to deter criminal behaviour.

5.10. HEALTHY URBAN DEVELOPMENT CHECKLIST, NSW HEALTH

Prepared by NSW Health, the *Healthy Urban Development Checklist* seeks to ensure built environments are created within New South Wales that are sustainable and promote healthy habits. The proposal satisfies a range of items contained to the checklist, including:

- *Encourage incidental physical activity;*
- *Promote opportunities for walking, cycling and other forms of active transport;*
- *Promote access to usable and quality public open spaces and recreational facilities;*
- *Reduce car dependency and encourage active transport;*
- *Improve location of jobs to housing;*
- *Provide access to a range of facilities to attract and support a diverse population; and*
- *Respond to existing (as well as projected) community needs and current gaps in facilities and/or services.*

The proposal aids in promoting a healthy and sustainable built environment.

6. ASSESSMENT OF KEY ENVIRONMENTAL ISSUES

The following issues as per the SEARs have been assessed, with the impacts noted and mitigation measures proposed where necessary in this report:

- Environmental Amenity;
- Transport and Accessibility;
- Ecologically Sustainable Development (ESD);
- Social and Economic Impacts;
- Biodiversity (refer **Section 4.1**);
- Heritage and Archaeology;
- Noise and Vibration;
- Contamination (refer **Section 4.4**);
- Flooding;
- Bushfire; and
- Sediment, Erosion and Dust.

6.1. ENVIRONMENTAL AMENITY

6.1.1. Solar Access and Overshadowing

The Site:

The proposal has been appropriately designed to provide maximum solar access to all school buildings and open spaces. Importantly, the classrooms and open space areas receive sunlight during winter and are appropriately screened for sun in summer.

The proposal will result in only minimal overshadowing to the site, primarily along the eastern boundary, and does not impact on any open spaces or proposed school buildings.

Adjoining Sites:

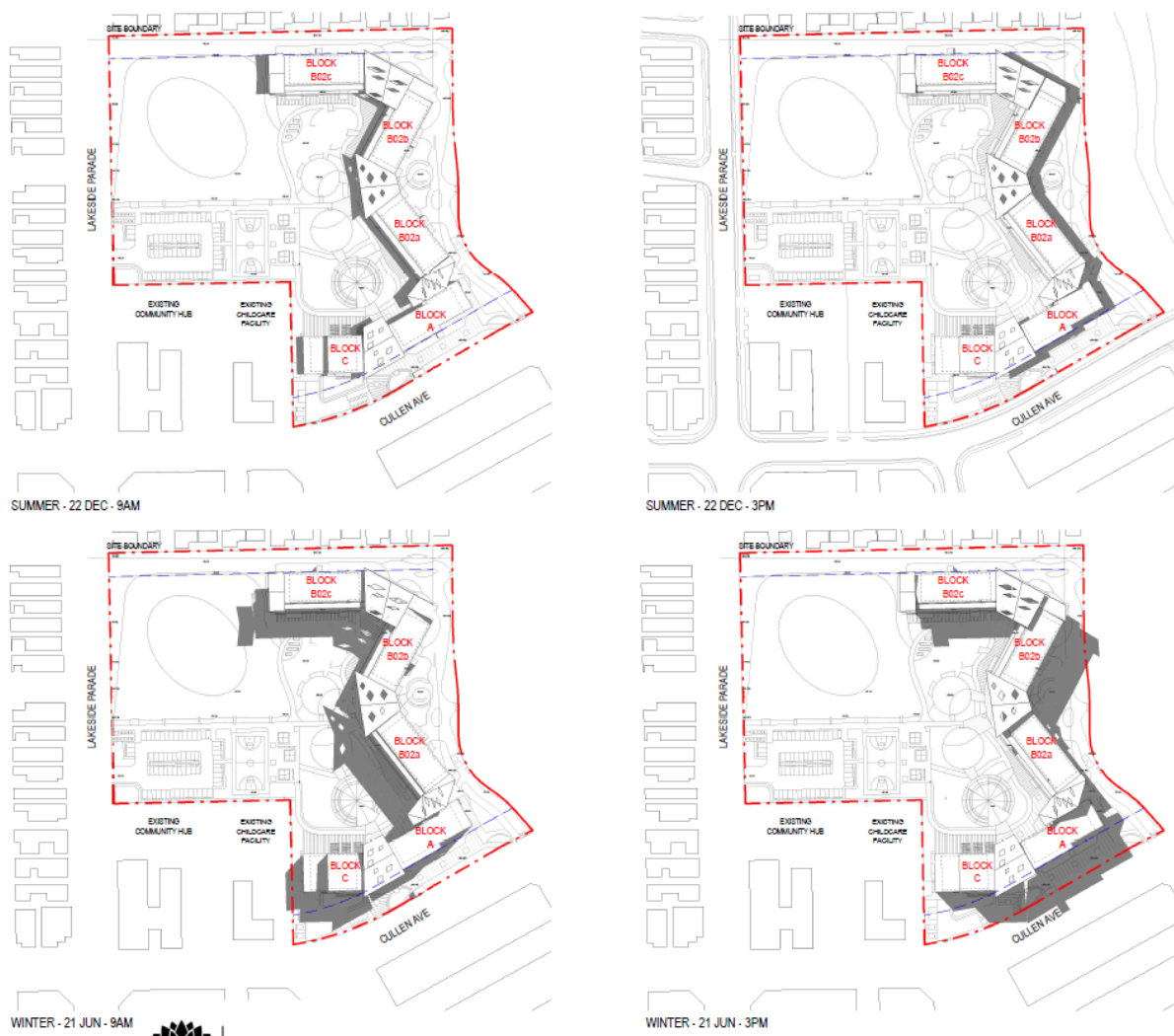
Shadow diagrams for 9am, 12pm and 3pm during the winter and summer solstice have been prepared by Group GSA and shown in Figure 21 and attached at **Appendix B**. The shadow diagrams demonstrate that there are no overshadowing impacts caused by the construction of the new school premises on neighbouring residential sites or the adjacent childcare centre and community hub.

Specifically:

- Residential properties to the north will be unaffected by the proposal and will continue to have access to sunlight.
- Residential properties to the west will be unaffected by the proposal and will continue to have access to sunlight.
- The childcare centre to the south west will be unaffected by the proposal and will continue to have access to sunlight. Overshadowing from the childcare centre extends over a small section of the service parking area.
- The community hub to the south west will be unaffected by the proposal and will continue to have access to sunlight.

Due to the chosen arrangement and scale of the proposal, there are no significant overshadowing impacts caused on neighbouring residential sites. The proposal will not impact adjacent residential properties ability to receive at least 3 hours of sunlight between 9am and 3pm at the winter solstice, as per the Penrith DCP.

Figure 21 – Shadow diagrams



Source: Group GSA Architects

6.1.2. Privacy

There will be no unreasonable privacy impacts from the proposal because:

- The new School buildings are well setback behind the proposed pick up and drop off zone along the southern edge of the site adjacent to Cullen Avenue. Front setback is 15 metres. Cullen Avenue provides a high level of separation, which ensures that privacy levels are maintained at the interface between the school buildings and any new residential properties constructed to the south.
- To the north of the site, Block B02C has a proposed setback of 12 metres to the neighbouring residential dwellings ensuring visual privacy is maintained. A security fence will act as a buffer between the School and dwellings to the north to ensure safety and privacy is maintained.
- To the west of the site, a new sports field and staff carpark separates the School from existing dwellings along Lakeside Parade.
- To the south west of the site is the childcare centre site. There is sufficient building separation to ensure privacy is maintained. Limited windows are provided to the western elevation of Block C to limit overlooking to the childcare centre, windows that are provided will be fitted with aluminium louvres to protect privacy of the school and childcare.
- Also to the southwest of the site is the community hub. The layout of the carpark and sports courts adjacent to the boundary of the community hub ensures that overlooking is minimised.
- A dry creek bed and remnant bushland exists to the east of the site. Consequently, no privacy concerns occur.

- The school will operate standard school hours, when most residents will be at work. This will maintain privacy in the morning, evenings and night time, which are the primary times residents will be home.

Accordingly, the proposal is appropriate in terms of visual privacy given the distance to residential properties and the separation between the proposed school buildings and other land uses.

6.1.3. View Impacts

There are no views across the site. Therefore, there is no view loss from the proposal.

The built form is predominantly 2 storey massing, with monopitch shapes that relate to the surrounding streetscape. The proposed Hall to the west of the main entry is in scale with the adjoining 2 storey childcare building. The interplay of the first-floor windows to the Hall, Admin/Library and Homebase buildings bring visual interest to the façade and provide a pleasant street presentation.

6.2. TRANSPORT AND ACCESSIBILITY

6.2.1. Car Parking

A Traffic Impact Assessment (TIA) has been prepared Bitzios Consulting and is contained at **Appendix G**. The proposal seeks to provide a total of 64 off-street parking spaces, including three (3) PWD spaces. 62 of these parking spaces are provided in the main staff car park, accessed via Lakeside Parade. The remaining two (2) spaces are located on the south side of the site, closer to the main school entrance, accessed from Cullen Avenue.

Council's DCP does not provide parking rate for primary schools and therefore a site-specific car parking analysis was undertaken to ensure an acceptable level of parking is provided. Accordingly, data from the 2016 Census was accessed via the Australian Bureau of Statistics (ABS) to determine journey to work modal splits specifically for staff members working in primary education in the Penrith LGA.

The results indicate that approximately 85% of teachers/staff travel to work via private vehicle, either as a driver or passenger. For consideration, it's assumed here that all teachers travelling to school via private vehicle are driving and parking on-site. Applying this to the 70 staff members for the Jordan Springs Public School, approximately 60 staff members are expected to drive to work (and hence require parking). In combination with the proximity to existing public transportation, it is expected the provided parking supply is capable of meeting the parking demand of the 70 staff via on-site parking.

6.2.2. Vehicle and Pedestrian Access

The new school proposes a dedicated staff car park accessible via Lakeside Parade and a separate dedicated drop-off/pick up zone for parents/students along Cullen Avenue. A pedestrian access point will be provided off Lakeside Parade adjacent to the staff car park whilst the primary pedestrian access into the school will be via Cullen Avenue adjacent to the proposed pickup/drop off zone. The proposed separate pedestrian entrances and exits are compliant with AS2890.1. A swept path analysis of manoeuvres in and out of the staff parking spaces and waste and loading bay was undertaken and is contained in the Traffic Impact Assessment at **Appendix G**. The analysis confirms all vehicles (B85 and B99) are capable of accessing and exiting the site in a forward direction via the proposed access driveways. Furthermore, the design ensures that a refuse collection vehicle (a 12.5m HRV) is capable of turning into the site, turning into the turning bay, reversing towards the bin enclosure, and then exiting site in a forward direction onto Cullen Avenue.

6.2.3. Active Transport Options

Walk only trips are likely to be generated by both students and staff given the surrounding residential context. Walking and cycling infrastructure are available to and from the site and additional pedestrian and bicycle routes are proposed under the Jordan Springs Precinct concept plan, which will provide links to multiple local areas. There is good potential for cycle only trips given the broader connectivity of the School to the sub-regional cycle network, but cycle trips may also be part of a mixed public transport trip, noting that the School will provide secure bicycle parking on-site as well as shower and locker facilities.

6.2.4. Children's Crossing on Cullen Avenue

The implementation of a potential pedestrian children's crossing on Cullen Avenue provides benefit as it creates a safe opportunity for parents travelling from eastern areas of Jordan Springs to drop off their children and use the facility, as well as to access the adjacent childcare centre.

6.2.5. Traffic Generation

The proposed new School is estimated to generate the following total trips in the peak periods:

Table 7 – Trip generation of proposal

Trips	Trip Generation Rate	Total Trip Generation
AM Peak		
Trips per student*	1.60 trips per student	1,600
Vehicle trips per student	0.67 vehicle trips per student	670
PM Peak		
Trips per student*	1.70 trips per student	1,700
Vehicle trips per student	0.53 vehicle trips per student	530

The TIA assesses the traffic impact of the proposal on the surrounding road network. The trip distribution for the proposed Jordan Springs Public School is assumed, taking into consideration the existing local catchment area, the road network to and from the development, and nearby primary schools. The estimated trip distribution is estimated as follows:

Table 8 – Trip distribution to proposal

Location	% of trip distribution	Number of vehicle trips (AM and PM)
Within the Jordan Springs Precinct	60%	720
Cranebrook	30%	360
The Northern Road	10%	120

During the morning, the school peak period often coincides with the commuter peak, therefore these trips are primarily expected to be pass by or chain trips. Parents within Jordan Springs that drop off their children to school then proceed to The Northern Road are not included as new outbound trips. Trip distribution may also include the developed areas of Cranebrook on the other side of The Northern Road, depending upon the arrangement of school catchments in the area once the school is opened. Cranebrook is currently serviced by public schools; however, they are located on the northern side of the suburb. During the PM peak period, the distribution of trips internally within the Jordan Springs road network is a high-level assumption based on the existing catchment sizes.

Results of the projected future operations on the intersections during the AM and PM peak traffic periods are summarised in the port and a comparison of both the 'without development' and 'with development' (i.e. without and with the school trips) is also shown. The results indicate the following:

- The results show that all intersections will continue to operate at the same level of service as current, with or without the school development;
- At most of the intersections, only a minor increase in delays is observed due to the introduction of school traffic (maximum 3 seconds); and
- The degree of saturation (for the worst movement) of the Water Gum Drive/Cullen Avenue/Lakeside Parade intersection is shown to be 0.686 with the school development, compared with only 0.150 without the development.

Therefore, based on the above analysis, it is assumed that the school's development traffic generation and impacts to the surrounding road network can be adequately catered for by the existing intersection

configurations. In light of the above, Bitzios Consulting conclude that the proposal is supportable on traffic planning grounds and will operate satisfactorily.

6.2.6. Green Travel Plan

A Green Travel Plan (GTP) has been prepared by Bitzios and is provided at **Appendix H** of this EIS. The GTP proposes a range of strategies aimed at encouraging public and active transport use. The following GTP initiatives are proposed:

- A travel information pack will be provided to staff, parents and students to provide easily accessible information on alternative transport modes to all stakeholders;
- Implement parking restrictions during school zone hours to reduce reliance of on street parking and long-term parking and queueing during school drop-off and pick-up periods;
- Provide a travel survey to inform the school on different travel methods and transport issues;
- Investigate installing extra bicycle rails or racks onsite if proposed covered bicycle parking is insufficient so to reduce car trips, congestion and emissions and encourage bicycle use; and
- Support Council in establishing additional off-street and on-street cycling infrastructure in the local area to reduce car trips, congestion and emissions.

6.2.7. Construction Traffic

The Construction Traffic Management Plan (CTMP) provided in **Appendix I** outlines traffic management impacts during the construction of Jordan Springs PS. A summary is provided below:

Construction Hours

It is expected that construction would only be undertaken during 'standard' construction hours, likely 7:00am to 6:00pm Monday to Friday, and 7:30am – 3:30pm Saturdays; no construction work would be undertaken on Sundays or public holidays.

Traffic Generation and Impacts

At this stage, details on truck and delivery schedules have not been confirmed, therefore construction vehicles traffic volumes cannot be quantitatively assessed.

Notwithstanding, a high-level assessment confirms that construction traffic volumes will not have significant impacts on the operation and efficiency of The Northern Road for the following reasons:

- The signalised intersections into Jordan Springs on The Northern Road have high capacities, each with four northbound approach lanes and three southbound approach lanes;
- During the existing peak hour periods, there are between 40-70 heavy vehicles traveling along The Northern Road; and
- Given the standard work hours during the week, construction workers making the journey to site via car are likely to be travelling outside of commuter peak periods. Furthermore, it is expected that heavy vehicle trips will occur outside peak traffic periods.

Considering the above, as a high-level assessment, it is not expected that construction traffic volumes will have significant impacts on the operation and efficiency of The Northern Road.

Site access

It is expected that the bulk of the construction traffic will access Jordan Springs from The Northern Road, traveling towards the site from the west. It is expected that the construction site access points will be located on Cullen Avenue and Lakeside Parade. As such, Temporary Works Zones may be necessary at the following locations to control parking in the area:

- Northern side of Cullen Avenue east of Charlotte Street; and
- Eastern Side of Lakeside Parade between Crimson Street and Landsborough Street.

Impacts to pedestrians and cyclists

Due to construction vehicle traffic to and from the site via the access locations, construction activities that are expected to impact pedestrian movements near the site include:

- Excavation;
- Removal of spoil;
- Material delivery;
- Bulky equipment delivery (pile drivers); and
- Concrete pouring.

During these works, temporary closures of the footpath on the northern side of Cullen Avenue and on the eastern side of Lakeside Parade may be necessary. In addition, during construction, full closures of the pedestrian footpath will be necessary on Cullen Avenue and Lakeside Parade to facilitate construction of the access driveways on both streets, the drop-off / pick-up zone on Cullen Avenue and the raised children crossing on Cullen Avenue with accompanying kerb blisters. In terms of impact to cyclists, no formal cycling infrastructure is located to the immediate south or west of the site. Accordingly, shared paths on The Northern Road and along Lakeside Parade are not expected to be impacted by any construction works for the proposed school development due to their distance from the site.

Based on the assessment, the proposal is acceptable in terms of construction traffic and will not negatively impact on the amenity of pedestrians, motorists or cyclists provided that the recommendations of the CTMP contained in **Section 8** of this EIS are adopted and included in the conditions of consent.

On-street Parking

On-street kerbside parking is currently largely unrestricted in the vicinity of the site along Cullen Avenue and Lakeside Parade. Temporary restrictions to car parking in these areas may be required for areas immediately adjacent to the site to allow access and egress of construction vehicles to and from the site.

6.3. ECOLOGICALLY SUSTAINABLE DEVELOPMENT

An Ecologically Sustainable Development (ESD) Report has been prepared by WSP and is attached at **Appendix J**. The report outlines that the proposal will include the following ESD initiatives (amongst others):

ESD principles

- Design is consistent with the requirements of Penrith DCP 2014.

Best practice

- The proposed design has been benchmarked against the Green Star Performance v1.2 tool.

ESD measures

Resources

- Use of certified/best practice materials for steel, timber and permanent formwork.
- Consideration of characteristics including durability, recycled content, location, embodied carbon and toxicity where feasible for other materials selection such as plasterboard, AFS or FSC certified timber and concrete with supplementary cementitious materials.

Energy

- Building envelope performance – efficient building fabric and glazing selection to reduce thermal comfort demands.
- Efficient systems selection to reduce operational energy consumption.
- Effective control strategies.
- Reduction in peak demand and grid electricity consumption through onsite renewable energy generation.

Water

- Rainwater harvesting for use in irrigation and toilet flushing, to reduce use of drinking water in non-potable applications.
- Selection of high efficiency fittings and fixtures to reduce operational consumption of potable water.
- Air cooled heat rejection system has been designed for the new development.
- Implement water sensitive urban design (WSUD) initiatives to improve the water quality of stormwater and reduce peak flow and runoff.
- Plant species selected for the site will be native or have a low irrigation demand.

6.4. ABORIGINAL CULTURAL HERITAGE

An Aboriginal Cultural Heritage Assessment Report (ACHAR) and accompanying Archaeological Report have been prepared by Biosis and are contained at **Appendix K** and **Appendix CC** respectively. The assessment did not identify any Aboriginal sites or areas of archaeological potential within the study area during the field survey located within, or in close proximity to the study area. The entire study area was deemed to have been highly disturbed with ongoing modifications of the adjacent creek line since the 1940s, as well as more recent remediation works and subsequent cut and fill works. Whilst results of regional assessments suggest the wider area was used for Aboriginal occupation prior to European occupation, in the absence of any archaeological evidence of Aboriginal occupation, Biosis has concluded that there is a low likelihood of Aboriginal cultural heritage with archaeological (scientific) value occurring within the study area and that the scientific significance of the entire study area is assessed as low. It is therefore expected that the potential of harm to Aboriginal archaeological sites from development in the study area ranges from negligible to low.

Accordingly, the proposal is considered acceptable from an aboriginal heritage perspective, provided that the mitigation measures contained in **Section 8** of this EIS are adopted.

6.5. EUROPEAN HERITAGE AND HISTORICAL ARCHAEOLOGY

In terms of European heritage, the site does not contain any items of heritage significance nor is it located adjacent to any items or within a conservation area. A Historical Archaeological Impact Assessment prepared by Biosis and contained at **Appendix BB** confirmed the site may contain archaeological materials below recent levelling fill and to potential landscape features such as historical fence lines. The assessment confirms possible archaeological materials on the site may consist of postholes, remnant posts and associated cuts, wall foundations or footings, kiln chamber foundations, wall cuts and fill deposits, compacted floor surfaces, yard surfaces, post holes and surface artefact scatters. However, it is highly likely that these materials have been disturbed or removed due to remediation works undertaken in 1990s and therefore the possible archaeological materials have been assessed as not holding heritage significance.

Accordingly, the proposal is considered acceptable, provided that an unexpected finds policy is implemented to identify and record any archaeological material that may be encountered during the proposed works.

6.6. NOISE AND VIBRATION

An Environmental Noise Impact Assessment has been prepared by Acoustic Logic and is attached at **Appendix L**. The report identifies nearby sensitive receivers and noise sources with the potential to adversely impact nearby development. These included the following:

- Noise from internal areas
- Noise from mechanical plant, PA system and school bells.
- Traffic generation
- Waste removal
- External activities
- Operational vibration
- Construction activities

The surrounding area includes residential receivers to the north and west as well as the childcare centre to the south west. Both unattended noise logging and attended noise measurements were conducted to quantify the existing environmental at the site as shown in Figure 22. The report addresses the recommended approach for managing the construction and operational noise to be generated by the proposed Jordan Springs Public School. These recommendations are outlined in **Section 8** of the EIS.

6.6.1. Operational Noise

An assessment of noise impact from the school operating to surrounding receivers was undertaken. An analysis of noise from classrooms, the school bell/PA system, the school hall, traffic movements and from mechanical equipment indicates that compliance with noise emission goals for the site is both possible and practical. **Table 9** shows the background noise level. The intrusiveness criteria is that noise generation is to be no more than 5dB(A) above existing background noise levels. Noise sources will include internal area/classrooms and mechanical services.

Table 9 – Acoustic Intrusiveness Criteria

Time of day	Rating background noise level dB(A) _{L90}	Intrusiveness noise objective dB(A) _{Leq(15min)} (Background + 5dB)
Day time (7am-6pm)	41	46
Evening (6pm-10pm)	34	39

Figure 22 - Noise measurement locations



Source: Acoustic Logic

Key findings of the assessment include:

- The administration and teaching spaces generate low to medium levels of noise. The teaching spaces are typically at least 35 metres from any residential receiver and emissions from these buildings, or the Block A Administration and Library Building, would clearly not exceed the Educational SEPP criteria.

- Block B.02c is located approximately 12 metres from the northern (residential) boundary but would typically still not exceed the criterion provided the openable area is limited to 5% of the floor area on the north facing façade.
- The most potentially impacted receivers would be the child care centre and residential receivers to the south. Where activities are held in the evening there would be no impact to the adjacent child care centre as it will not be operating at that time.
- Detailed acoustic assessment of all ventilation other plant items should be undertaken at CC stage, once equipment items are selected and location is finalised.
- With regards to the school bell/PA system:
 - The system should minimise noise spill to adjacent properties. The speaker location and direction can be used to reduce noise spill to neighbouring properties while still maintaining suitable noise levels within the school grounds (typically 70- 75dB(A)).
 - Broadly speaking, more speakers, closer to the noise receiver is a more effective way to provide coverage of the external areas while reducing noise spill to neighbouring properties.
 - Similarly, highly directional speakers (angled downwards) will also reduce noise spill. Speakers with a drop of at least 5dB(A) for mid-frequencies noise for each 10 degrees in the horizontal plane outside of the coverage area should be considered.
- The noise levels generated by traffic movements associated with the school would not cause a significant increase in traffic noise on these roads.
- The background + 5 dB(A) noise emissions criteria are not exceeded except at the residences to the south when operating during the evening. Closing the south facing door during the evening would achieve compliance at all times.
- There would be no vibration impact from the proposal as there would be no vibration sources that would produce noticeable vibration on any surrounding property.

Based on the assessment, the proposal is acoustically acceptable and will not negatively impact on the acoustic amenity of surrounding receivers provided that the recommendations of the acoustic report contained in **Section 8** of this EIS are adopted and included in the conditions of consent.

Construction Noise

An assessment of the likely construction noise impacts has also been undertaken by Acoustic Logic. There is potential for noise and vibration impacts during construction of the proposed school, due to the proximity of surrounding residences and the adjacent child care centre. The greatest noise impact will be at the residences immediately to the north of the site and the child care centre. The residences to the east will be relatively lightly impacted. Typically, the most significant sources of noise or vibration generated during a construction project will be demolition, ground works and building structure works.

Without mitigation measures, noise at the sensitive receivers around the site will exceed the noise affected level, and in some cases the highly noise affected level. Accordingly, careful management will be required to minimise acoustic and vibration impacts on the child care centre and residences. These measures should be determined in detail when a contractor has been engaged. Notwithstanding, project-specific mitigation measures have been recommended in **Section 8** of this EIS.

6.7. FLOODING

A Flood Risk Assessment has been prepared by WSP and is contained at **Appendix S**. The report confirms that the site is not identified as flood prone by state, regional or local mapping. As such no further flood modelling at the site is required. Stormwater from the site will be collected and treated before discharging to the nearby creek. The concept stormwater drainage and management system is designed for the 1 in 20 year ARI event and is not anticipated to adversely impact on stormwater flows and water quality of the stormwater system downstream of the site. An overland flow strategy for the site will be confirmed during the detailed design phase and will be designed to maintain flow direction and cater for the 100-year ARI storm event.

Accordingly, the proposal is considered acceptable from a flood perspective, subject to the adoption of recommendations outlined in **Section 8** of this EIS.

6.8. BUSHFIRE

A Bushfire Impact Assessment has been prepared by Peterson Bushfire and is contained at **Appendix T**. The proposal consists of a new primary school on a lot not identified as bushfire prone. The nearest hazard is located within Wianamatta Regional Park over 500 m to the north-east and 320 m to the south. As such, bushfire protection measures such as Asset Protection Zones (APZ) and Bushfire Attack Levels (BAL) do not apply to the development. A narrow drainage reserve containing minimal fuels adjacent the eastern boundary presents a low threat to the subject land. A nominal 10 m 'defendable space' between the boundary and school buildings will provide access for maintenance and suppression if required. In addition, the surrounding infrastructure such as roads also comply with 'Planning for Bushfire Protection 2006'. This assessment concludes that, with the adoption of the recommendations (see Section 5.2 below), the proposal complies with the provisions of *Planning for Bushfire Protection 2006*. As such, this assessment demonstrates compliance with the Secretary's Environmental Assessment Requirements (SEARs) Item No. 17 "*Bushfire: Address bushfire hazard and, if relevant, prepare a report that addresses the requirements for Special Fire Protection Purpose Development as detailed in Planning for Bushfire Protection 2006 (RFS 2006) guidelines*."

Accordingly, the proposal is considered acceptable from a bushfire perspective, subject to the adoption of recommendations outlined in **Section 8** of this EIS.

6.9. SEDIMENT, EROSION AND DUST CONTROLS

An Erosion and Sediment Control Plan are contained in the Civil Plans attached at **Appendix R**. These plans have been prepared for the proposal to reduce the amount of sediment laden runoff leaving the site. It details measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles into the adjacent watercourse.

Accordingly, the proposal is considered acceptable from a sediment and erosion perspective, subject to the adoption of recommendations outlined in **Section 8** of this EIS.

6.10. GEOTECHNICAL AND SALINITY

A Geotechnical Report prepared by JK Geotechnics is provided and attached at **Appendix O**. The investigation reveals a generalised subsurface profile comprising interbedded silty clay, clayey silt and silt deposits. Neither groundwater nor bedrock were encountered within the investigating depth.

The site is located in an area where soil and groundwater salinity may occur. Salinity can affect the longevity and appearance of structures as well as causing adverse horticultural and hydrogeological effects. The local council has guidelines relating to salinity issues which should be checked for relevance to this proposal.

Accordingly, the proposal is considered acceptable from a geotechnical and salinity perspective, subject to the adoption of construction recommendations outlined in **Section 8** of this EIS.

6.11. SOCIAL AND ECONOMIC IMPACTS

The proposal will generate numerous beneficial social and economic impacts for Jordan Springs and the wider Penrith LGA. The anticipated social and economic impacts include:

- The proposed new school will provide significant job opportunities. These include temporary job opportunities during demolition and construction, and ongoing teaching and administration jobs at the project's completion. It is anticipated that 70 staff members will be required following the completion of the School;
- The proposed new school will alleviate pressure off other school enrolments and cater for future population growth;
- The new school will have sufficient areas for indoor and outdoor recreation to improve the health and wellbeing of future students;

- The design will create a series of teaching spaces which are flexible and promote increased social interaction among students and teachers;
- The proposal will provide future students with learning difficulties new facilities and spaces, enabling high-quality teaching;
- The proposal will create a safe and nurturing environment to cater for student's education needs and foster learning in an appropriate setting;
- The proposed built form has been designed to ensure residential amenity will be maintained to surrounding residential dwelling, the childcare centre and the community hub;
- The proposal delivers a new School that is sustainable and efficient; incorporating positive environmental measures including PV panels, rainwater tanks and WSUD initiatives;
- The external materials and finishes to be used complement the surrounding built and natural environment of Jordan Springs. Accordingly, no negative impacts on the existing character of the area will be generated; and

The proposal has been designed in accordance with CPTED design principles to deter crime. Accordingly, the proposal will positively activate the site, provide opportunities for passive surveillance and be designed of materials that are 'vandal-proof'.

7. CONSULTATION

A Consultation Outcomes Report prepared by TSA and provided at **Appendix Z** and has been prepared to document engagement activities and feedback from residents and the school community throughout the design process. Key stakeholders identified in the Consultation Outcomes Report are:

- Local community;
- Service providers:
- Transport for NSW (TfNSW);
- Government Architects Office NSW;
- Penrith City Council;
- Roads and Maritime Services; and
- Aboriginal Stakeholders.

The following sections are a summary of the consultation undertaken to date.

7.1.1. School Engagement Activities

Project Reference Group meetings

The project established a Project Reference Group (PRG) which includes the School Director, Principle's Representative, Asset Management Unit representative, Architect, and Project Manager. It should be noted that as this is a new School, there are no current teacher or P&C representatives. Meetings with the PRG have been held on a regular basis, noting the project was on hold from December 2017 to May 2018. To date, 11 PRG meetings have been held. Key outcomes from the PRG discussions include:

- Determining scope priorities
- Masterplan building locations and overall site and building relationship
- Determining an appropriate learning model
- Specific requirements for the special programs and library spatial allowance to facilitate performance space, technology hub and community use
- Determining scope and use for the Library and Staff area allocation in the brief
- Understanding the school key issues in relation to safety and operations of the new building
- Establishing priorities for the landscape design and the school's learning precincts K-2, 3-4, 5-6
- Stage 2 requirements and site access during construction.

A summary of the outcomes can be found in the Urban Design Report contained at **Appendix E**.

Educational Consultant engagement

During the design phase of Jordan Springs Public School attended an education workshop to discuss the appropriate learning model and pedagogy for the proposed learning space. This workshop was facilitated by Dr Julia Atkin, Educational Consultant. Key outcomes from the workshop include:

- Jordan Springs Public School Hopes: enhanced student engagement and learning through new learning environments, enthusiasm around multi-purpose tiered seating as a learning space, design for team teaching, and flexibility and adaptable learning settings offered
- Jordan Springs Public School Concerns: Acoustics, lack of structured environment is not suitable for all children, adequate storage, and lack of community understanding to adjust to the new pedagogy
- Jordan Springs Public School Suggestions: Education community of pedagogy, assist in the teachers' transition to the new space to avoid regressing to cellular style of learning.

Refer to **Appendix Z** for further details.

7.1.2. Community Engagement Activities

Community Information Booths

Information booths have been held at the local community in Jordan Springs. The details of the booths are published on the SINSW project website.

7.1.3. Service Providers

Consultation with relevant infrastructure providers was undertaken by the relevant sub consultants to confirm the existence and capacity of infrastructure such as electricity, waste, water, and gas.

Refer to **Appendix Z** for further details.

7.1.4. Service Providers

Infrastructure providers were consulted via the Civil sub-contractor to confirm the existence and capacity of infrastructure such as electricity, waste, water, and gas. Further engagement is anticipated in the later stages of design.

Refer to **Appendix Z** for further details.

7.1.5. Government Architects Office NSW

The project team have consulted with the Government Architect's Office and it has undergone a review with the State Design Review Panel. The SDRP advised they were generally happy with the design and further review with the panel was not required for the Concept Design.

A summary of the outcomes and the design response can be found in the Urban Design Report contained at **Appendix E** and in the table below.

Table 10 – Response to GANSW

GANSW comment	Response
The location of the additional Stage 02 Building needs to be further considered. The proposed position behind one of the building pavilion blocks is not supported.	<p>The master plan of the school learning buildings has been workshopped further with the project team to address GANSW's concerns. The revised master plan associated with this proposal strengthens the school's connection to the creek and open play spaces as a result, in the following ways:</p> <ul style="list-style-type: none">• The School Heart is expanded to the north to create two distinct landscape 'zones', which provides the integrated connection with the open play space and northern school buildings.• The building locations have been modified to effectively 'wrap' around the School Heart, which enhances visibility and supervision of all buildings. Covered Outdoor Learning Areas connect the individual buildings and provides opportunity to traverse smoothly between the School Heart and the Creek.• The revised building locations provide more meaningful zones for outdoor learning facing the creek, which is continuous along the eastern boundary.

GANSW comment	Response
The potential for two popular points of entry needs to be considered and the impact on the masterplan of the site.	Two main points of pedestrian entry are proposed. The primary entry on Cullen Avenue facilitates the community interface and administration connection. The secondary entry on Lakeside parade is supported by bicycle parking and the proposed school bus stop, where it is envisaged will be widely used for getting to and from school.
Circulation around the building forms and the relationship to the green open spaces and to the carpark needs to be addressed. Careful integration with landscape is strongly encouraged by the panel	The landscape design considers indoor/outdoor connections as integral to the learning outcomes. Please refer to the landscape design strategy contained at Appendix F . The carpark is located to provide minimum interruption to the community use and landscape design principles. Furthermore, its adjacency to the neighbouring Community Centre carpark allows opportunity for overflow parking if/where required in future.
The treatment of the easement between the Creek and building forms must also be addressed.	The landscape design and revised master plan has been considered in detail to be integral to the character of the school. Building facades address the creek in a consistent manner across the eastern boundary.
The treatment of the boundary fence must be such that it provides the requisite security while creating a welcoming character and allowing the community shared use that is sought by the Department of Education.	The landscape design suggests multiple connection points to provide opportunity for supervised interaction with the creek. The fence openings are located near outdoor learning and nature play areas.
The treatment of the easement between the Creek and building forms must also be addressed. The treatment of the boundary fence must be such that it provides the requisite security while creating a welcoming character and allowing the community shared use that is sought by the Department of Education.	The landscape design and revised masterplan has been considered in detail to be integral to the character of the school. Building facades address the creek in a consistent manner across the eastern boundary. The landscape design suggests multiple connection points to provide opportunity for supervised interaction with the creek. The fence openings are located near outdoor learning and nature play areas.
The built form and its 'kit of parts' needs to be flexible enough to allow for stronger ESD principles: particularly in areas such as window shading, depth of window sills, depth of building volumes. Passive lighting, sun penetration, cross ventilation, extensive shaded outdoor areas are strongly encouraged by the SDRP panel. Integration of ESD principles	The 'kit of parts' approach to facade elements allow sufficient flexibility to respond to differing orientations. For example: <ul style="list-style-type: none"> To the north, horizontal awnings and deep reveals provide shading to window and door openings

GANSW comment	Response
<p>should be a priority and clearly emphasized in the design of this scheme.</p>	<ul style="list-style-type: none"> • To the east, deep reveals and vertical blades provide shading to window and door openings. • To the west, covered walkway slabs and roofs provide sufficient shading depth. <p>The ESD Report details ESD principles that have/will be integrated to the development. Refer to Appendix J.</p> <p>Shading is provided in the architectural landscape design by various covered outdoor learning areas and extensive tree planting.</p>
<p>Local context and character needs to be addressed in the building form. It is recommended that local context inspiration be drawn to ensure the architecture and landscape plans reflect the site and its unique character.</p>	<p>Local context and character has been addressed in the following ways:</p> <ul style="list-style-type: none"> • Continuing the bulk and scale of the existing community use corridor on Cullen Avenue; • Respecting the lower density residential developments to the west through placement of the buildings; and • Connecting to the creek to the east through shaping of outdoor areas and considered landscape features and providing opportunities for outdoor & nature play along the creek boundary.
<p>The relationship between the built forms, especially on ground and first floor levels and the creek needs to be strengthened.</p>	<p>The built forms are connected both in the ground plan and at the first floor. Each building is connected by covered outdoor learning areas, which provide opportunity for traversing between the School Heart and outdoor areas along the creek. Stairs up to the first floor are distributed across the built forms, and located to provide efficient movement from key outdoor spaces on the ground floor.</p>

7.1.6. Penrith City Council

Penrith City Council have been engaged throughout the design process to keep them informed of the project. Council's key concerns include:

- Traffic management, particularly pick up/drop off points;
- High density housing estates have poor public transport services;
- Catchment area, to be clarified by the Department of Education; and
- Community Use of the School's facilities.

Shared use of the adjacent oval has been discussed however, access and availability will need to be resolved.

7.1.7. Roads and Maritime Services

Bitzios Consulting have consulted with Roads and Maritime Services (RMS) having provided their Traffic Report for comment. In summary, the RMS requested an updated traffic modelling and impact assessment of the 670 extra vehicle trips on the Northern Road intersections. Bitzios have subsequently responded to the concerns in their updated Traffic Impact Assessment.

Refer to **Appendix Z** for further details.

7.1.8. Transport for NSW

Consultation has commenced with Transport for NSW (TfNSW), as undertaken by the Traffic Engineer, Bitzios. Mr Ken Ho (Transport Planner) provided commentary regarding the design, which has since been responded to via Bitzios' Traffic Impact Assessment report. TfNSW raised the below issues:

- Parking management, particularly staffing requirements;
- Bus access; and
- Pedestrian access.

7.1.9. Aboriginal Stakeholders

Consultation with the Aboriginal community has been undertaken by Biosis in compliance with the consultation requirements. In accordance with the guidelines, Biosis notified the following bodies regarding the proposal:

- Penrith City Council
- OEH
- NSW Native Title Services Corporation Limited (NTSCORP Limited)
- Office of the Registrar, Aboriginal Land Rights Act 1983 of Aboriginal Owners
- National Native Title Tribunal (NNTT)
- Greater Sydney Local Land Services
- Deerubbin Local Aboriginal Land Council (LALC).

A search conducted by the Office of the Registrar, *Aboriginal Land Rights Act 1983* (NSW) listed no Aboriginal Owners with land within the study area. A search conducted by the NNTT also listed no Registered Native Title Claims, Unregistered Claimant Applications or Registered Indigenous Land Use Agreements within the study area.

In accordance with the guidelines, a public notification was placed in the following newspaper:

- *Penrith Press* (11 October 2018)

A copy of the public notice is contained within **Appendix K**. The advertisements invited Aboriginal people who hold cultural knowledge to register their interest in a process of community consultation to provide assistance in determining the significance of Aboriginal object(s) and/or places in the vicinity of the study area. Aboriginal groups were also sent a letter inviting them to register their interest in a process of community consultation to provide assistance in determining the significance of Aboriginal object(s) and/or places in the vicinity of the study area. In response to the letters and public notice, a total of 18 groups registered their interest in the project, one of whom did not wish to have their details provided to OEH or the LALC. Full responses to registration from Aboriginal parties are provided in **Appendix K**.

A full list of Aboriginal parties who registered for consultation is provided below:

- A1 Indigenous Services
- Aboriginal Archaeology Service
- Amanda Hickey Cultural Services
- Barking Owl Aboriginal Corporation

- Barraby Cultural Services
- Butucarbin Aboriginal Corporation
- Darug Aboriginal Land Care, Des Dyer
- Darug Boorooberongal Elders Aboriginal Corporation
- Darug Land Observations
- Darug Tribal Aboriginal Corporation
- Deerubbin Local Aboriginal Land Council
- Didge Ngunawal Clan
- Phil Khan
- Wailwan Aboriginal Digging Group
- Widescope Indigenous Group
- Yulay Cultural Services
- Yurrandaali Cultural Services

On 5 November 2018 Bosis provided RAPs to all registered parties with details about the proposal works including the project methodology (project information pack). A copy of the project information pack is provided in **Appendix K**. RAPs were given 28 days to review and prepare feedback on the proposed methodology.

The following feedback was received in relation the proposed methodology and the wider proposal:

- Barraby Cultural Services, Yurrandaali Cultural Services, Yulay Cultural Services, A1 Indigenous Services, Aboriginal Archaeology Service and Butucarbin Aboriginal Corporation all supported the methodology.
- The Darug Aboriginal Land Care / Uncle Des Dyer, did not object to the planned development, and agreed with the recommendations and methodology. This group also requested that native plants be used in the landscape, and that if any artefacts are uncovered during the development that work stops until the artefacts can be salvaged and moved, asking that all artefacts be reburied on site out of harm's way, put in the local museum, or displayed in the foyer of new building with signage on where they came from, and that any rock caverns and scared tree be preserved, were possible, and be recorded.
- The Darug Land Observations supported the methodology and requested that recovered artefacts should be reburied on Country (within the study area).
- Aboriginal Archaeology Services agreed with the recommendations and like to see any artefacts collected displayed for all to see in the museum, local library or local government building or reburied in close proximity of the area.

8. RECOMMENDATIONS AND MITIGATION MEASURES

A range of mitigation measures are proposed to reduce any potential environmental and social impact of the proposal. **Table 11** below provides a summary of the environmental management measures proposed.

Table 11 – Mitigation Measures

Item	Potential Impact	Mitigation Measures
Overshadowing	Overshadowing of adjoining residential properties.	<ul style="list-style-type: none"> The chosen orientation, bulk and scale of the proposed School buildings minimise overshadowing impacts.
Privacy	Adverse visual and acoustic privacy impacts on surrounding residents and childcare centre.	<ul style="list-style-type: none"> Proposed buildings achieve minimum setback distances. Implementation of recommendations outlined within the Environmental Noise Assessment provided at Appendix L.
Biodiversity	Vegetation clearing, loss of fauna habitat, threatened species	<ul style="list-style-type: none"> While the subject land does not contain vegetation or habitat features of value, some measures will be implemented to reduce impacts where possible, such as a Construction Environmental Management Plan (CEMP). Excluding the need for a CEMP, no additional adaptive management measures are required. No ecosystem or species credits are required to offset the development.
Transport and Accessibility	Traffic impacts, demand for on-site staff car parking.	<p>Implementation of measures outlined within the Traffic Impact Assessment and Green Travel Plan including:</p> <ul style="list-style-type: none"> Additional public and school bus services should be provided in line with the school's development. Future urban development and proposed cycleway in the area should maximise public and active transport use. Various strategies can be adopted by the school to improve the safety of students accessing the school and surrounding streets and reduce potential vehicular/pedestrian conflicts. These include, but are not limited to: <ul style="list-style-type: none"> a new pedestrian (children) crossing on Cullen Avenue; refuse vehicles accessing the school outside of AM and PM peak periods and/or school hours; supervision of students in proximity to pedestrian access points to the school and adjacent school driveways; low landscaping and permeable site boundary to maximise pedestrian visibility; and 'Staff Parking Only' and directional signage to the drop-off/pick-up zone at the staff car park entrance

Item	Potential Impact	Mitigation Measures
		as recommended by the NSW Department of Education.
Construction Vehicles	Adverse construction vehicle impacts on surrounding residents.	<p>Implementation of measures outlined within the Construction Traffic Management Plan including:</p> <ul style="list-style-type: none"> • Traffic Control Plans (TPCs) are to be prepared as necessary for the site-specific CTMP once the aforementioned information is available. • Diversions across the roadway to the other footpath may be required due to potential footpath closures on the eastern side of Lakeside Parade and the northern side of Cullen Avenue during construction works. • Any changes (including temporary relocations) of bus stops must be communicated with Transport for NSW. • Safety barriers and/or hoarding should be implemented to protect pedestrians near the work site. • Access to the existing access driveways in vicinity of the construction site on Cullen Avenue (including the adjacent childcare centre and Jordan Springs Anglican Church), must be maintained during construction activities. • Upon determination of the construction vehicles required, vehicle swept path diagrams along the proposed haulage route are to be prepared for the site-specific CTMP. • A dilapidation survey is to be undertaken for the roads along the proposed haulage route to the site. • Construction works areas that necessitate an occupancy of the road reserve (including the public footpath) will require a Temporary Road Occupancy Permit from Penrith City Council. • In all cases where the construction activities require an obstruction, deviation or otherwise interfaces with pedestrian facilities and public spaces, hoarding or fencing must be installed to maintain separation of the construction work site. • At construction site access gates (construction vehicle crossover locations), warning signage is to be installed to maximise pedestrian awareness of vehicle movements. Functional lighting is to be installed at the corresponding locations and operated under low-light conditions.

Item	Potential Impact	Mitigation Measures
Crime and Safety	Crime risk to safety of students, staff and visitors.	<p>The proposal incorporates CPTED principles to deter crime. Incorporated principles include:</p> <ul style="list-style-type: none"> • Incorporating an open palisade fence around the perimeter of the site; • Providing adequate lighting throughout the site. This includes at footpaths and entrances; • Installing identification signs depicting the name of the school at the Cullen Avenue and Lakeside Parade site entrances to reinforce the School presence; • Ensuring that a strong teacher presence will be felt throughout the School; • Incorporating sturdy and well-designed outdoor lighting fixtures, equipment and furniture; and • Providing balconies and windows at the upper levels of the proposed school buildings to ensure passive and informal surveillance is available onto surrounding streets.
Acoustics and Vibration	Noise generation during operation of the School.	<p>Implementation of measures outlined within the Environmental Noise and Vibration Assessment including:</p> <ul style="list-style-type: none"> • Operation of the school should be limited to the activities and times of operation indicated in Table 2 of this report, subject to additional mitigation of noise for certain activities and operating times as indicated below. • Detailed acoustic review of all external plant items should be undertaken following equipment selection and duct layout design. All plant items will be capable of meeting noise emission requirements of Council and the EPA Noise Policy for Industry, with detailed design to be done at CC stage. • External activities by non-school uses are not proposed at this stage. If uses are proposed in the future they should be assessed for noise impact and appropriate mitigation and management implemented to prevent adverse impacts on surrounding properties. As part of the assessment appropriate assessment criteria should be developed depending on the frequency of use, time of day, type of activity, etc. • External speakers for PA and bells should be designed to minimise noise spill, be directional facing away from residential receivers.

Item	Potential Impact	Mitigation Measures
		<ul style="list-style-type: none"> • Waste removal times should be co-ordinated with the child care centre to avoid child rest periods. • The school hall doors should be closed after 6pm where the activity involves amplified or loud music or speech. Use of the presentation lawn for noise producing activities should be limited to normal school hours. • The south, east and west facing windows of Block A should have minimum 6.38mm glass fitted into openable frames to give a minimum Rw of 30. • Any glazing in the south, and east façades of the Hall should have minimum 6.38mm glass fitted into openable frames to give a minimum Rw of 30. Any doors should have a minimum Rw of 20. • In the event of complaints, there are a number of noise mitigation strategies available which can be considered including acoustic barriers, treatment of specific equipment or the establishment of site practices.
Construction Noise and Vibration	Noise and vibration generation during construction of the School.	<p>Implementation of measures outlined within the Environmental Noise and Vibration Assessment including:</p> <ul style="list-style-type: none"> • Operation of large earthmoving equipment (bulldozers and excavators) between 7am and 8am within 30m of the northern site boundary should be avoided. • Liaise with the child care centre to schedule very noisy activities such as excavator operation close to the boundary during noise sensitive periods such as sleep periods. • Erect a temporary barrier along the child care centre boundary with the school site. Barrier to be min 1.8m high and constructed from a solid material such as plywood or sheet metal having a surface density exceeding 3 kg/m² with no gaps. • Quiet work methods/technologies: <ul style="list-style-type: none"> – The primary noise generating activity at the site will be the ground work period. As much as practicable, use of quieter methods is adopted. – Concrete pump trucks should be located within the bounds of the site (rather than on nearby roads at the perimeter of the site) where possible. • Materials handling/vehicles: <ul style="list-style-type: none"> – Trucks and bobcats to use a non-tonal reversing beacon (subject to OH&S requirements) to minimise potential disturbance of neighbours.

Item	Potential Impact	Mitigation Measures
		<ul style="list-style-type: none"> – Avoid careless dropping of construction materials into empty trucks. – Trucks, trailers and concrete trucks (if feasible) should turn off their engines during idling to reduce noise impacts (unless truck ignition needs to remain on during concrete pumping). • In respect of pneumatic/hydraulic hammering (if required) noise impacts should be addressed via the imposition of respite periods, typically limiting operation to: <ul style="list-style-type: none"> – 9am – 12pm, Monday to Friday – 3pm – 5pm Monday to Friday; and – 9am to 12pm, Saturday • Noisy activities should not be carried out after 1pm Saturdays. • A detailed noise management plan should be developed by the main contractor that describes in detail the construction phases, programme, processes and equipment used, noise impact assessment and proposed mitigation and management. • In respect to site induction: <ul style="list-style-type: none"> – A copy of the Noise Management Plan is to be available to contractors. The location of the Noise Management Plan should be advised in any site induction. – Site induction should also detail the site contact is to be notified in the event of noise complaint.
Bushfire	Impacts from bushfire	<p>Implementation of measures outlined within the Bushfire Impact Assessment including:</p> <ul style="list-style-type: none"> • A 'defendable space' of 10 m is recommended between school buildings and the eastern boundary of the subject land. A defendable space is an area which can be accessed to undertake maintenance or property protection should there be a nuisance fire (such as a grassfire) at the boundary. The defendable space can consist of lawns, playground, car parking and access ways. Any proposed landscaping within the 10m defendable space is to comply with an Inner Protection Area (IPA) standard as described by PBP. • Hydrants are to be installed to achieve compliance with AS 2419.1 – 2005 Fire Hydrant Installations - System Design, Installation and Commissioning (AS 2419).

Item	Potential Impact	Mitigation Measures
		<ul style="list-style-type: none"> Any gas services are to be installed and maintained in accordance with AS/NZS 1596-2008 The storage and handling of LP gas (Standards Australia, 2008).
Water Management, erosion and sediment control	Impacts from stormwater, erosion and sediment runoff into adjacent watercourse.	<ul style="list-style-type: none"> Implementation of proposed stormwater management strategies and erosion and sediment control plan. In terms of stormwater management, the following measures are recommended: <ul style="list-style-type: none"> Construction of a system of downpipes, roof water drainage, stormwater pits including grated and junction pits, installation of gross pollutant traps, and connection to a 650m³ rainwater tank. All pipes are to be concrete encased if cover is less than 450mm. Hydraulic connections are to be designed at later stage. Turnouts are to be incorporated to prevent concentration of flows. All buildings are to be connected to the downpipe locations and the stormwater pits as shown in the civil plans. In terms of sediment, erosion and dust, the following measures are recommended: <ul style="list-style-type: none"> Use of sediment fences, stockpiles, haybale barriers, geotextile inlet filters, mesh and gravel inlet filters, and portable gravel kerb inlet sediment traps to filter stormwater runoff. Construction of a bioretention sedimentation basin to treat and store stormwater runoff. Construction of a perimeter security fence with wind barrier and silt fence. Stabilised site entry/exit points must be established. Sediment fences should be constructed as close as possible to being parallel to the contours of the site, but with small returns to limit the catchment area of any one section. The catchment area should be small enough to limit water flow if concentrated at one point to 50 litres per second in the 10-year flood event.

Item	Potential Impact	Mitigation Measures
		<ul style="list-style-type: none"> – A 150mm deep trench should be cut along the upslope line of the fence for the bottom of the fabric to be entrenched. – 1.5 metres long star pickets should be inserted into the ground at 2.5 metre intervals at the downslope edge of the trench. – Ensure that all star pickets are fitted with safety caps. – Fix self-supporting geotextile to the upslope side of the posts ensuring it goes to the base of the trench. Fix the geotextile with wire ties. – Stockpiles should be placed more than 2 metres from existing vegetation. – Stockpiles should be constructed on the contours as low, flat, elongated mounds. – Where there is sufficient area, topsoil stockpiles shall be less than 2 metres in height.
Operational Waste	Excessive waste generation.	<p>Implementation of the Operational Waste Management Plan including:</p> <ul style="list-style-type: none"> • Waste generated during construction for disposal to be removed by a licensed waste contractor and disposed of in a licensed landfill facility if/as required. • Segregate and recycle solid wastes generated by construction activities. • Reduce wastes by selecting, in order of preference, avoidance, reduction, reuse and recycling. • Make purchasing decisions that consider recycled products. • Consider measures and performance based targets for reduction, reuse and recycling. <p>The following general recommendations have also been provided by the MACK Group in relation to waste:</p> <ul style="list-style-type: none"> • Waste compound to be suitably screened from view. • The bin and truck parking area to be level. • General waste and recyclable waste collected by separate trucks

Item	Potential Impact	Mitigation Measures
		<ul style="list-style-type: none"> • Skips are too heavy to move by hand and need to be located next to the truck, parking space with easy truck access to the skip has been provided. • The path of travel from the compound to the truck needs to be level. • If a ramp is required, then gradient must be maximum 1:14 for 240L bins. • If a ramp is required, then use will need to be made of a bin tow able to negotiate ramps. Skips cannot be placed on a ramp. • Access to be designed to suit the collection trucks – to be verified by the traffic consultant. • School to be encouraged to adopt recycling practices. • Separate colour coded bins to be provided at strategic locations for waste. • Caretaker to collect waste on a regular basis and transport it on a trolley to the main waste compound. • The final sizing of waste stores and frequency of waste collection will be made once final agreements are in place.
Construction Waste	Waste generated during construction.	<p>Implementation of Construction Waste Management Plan including:</p> <ul style="list-style-type: none"> • In terms of design: <ul style="list-style-type: none"> – Use of modular components in design – Use of prefabricated components in design – Design for materials to standard sizes – Design for operational waste minimisation • In terms of procurement: <ul style="list-style-type: none"> – Select recycled and reprocesses materials – Components that can be reused after deconstruction • In terms of onsite construction: <ul style="list-style-type: none"> – Use the avoid, reuse, reduce, recycle principles – Minimisation of recurring packaging materials – Returning packaging to the supplier

Item	Potential Impact	Mitigation Measures
		<ul style="list-style-type: none"> – Separation of recycling of materials off site – Audit and monitor the correct usage of bins and the waste contractor.
Geotechnical	Structural impact to soils	<p>Implementation of recommendations contained within the Geotechnical Investigation including:</p> <ul style="list-style-type: none"> • Earthworks control testing records be obtained to confirm that the fill compaction was undertaken in an appropriate manner with conforming density tests (i.e. controlled fill). If there are no records of earthworks control testing, then this obviously places some doubt on the integrity of the fill. • The exposed subgrade should be proof-rolled using a 5-tonne minimum, deadweight, smooth drum vibratory roller. Proof-rolling should be carried out under the direction of an experienced earthworks foreman or geotechnical engineer to assist in the detection of unstable areas which were not disclosed by this investigation. • Any unstable areas identified during proof-rolling should be locally excavated down to a competent base and replaced with engineered fill. • The existing clays may be reused as engineered fill provided unsuitable (over wet and over size) material and any organics and building rubble are excluded. • The fill for earthworks platforms should be compacted in layers of not greater than 200mm loose thickness to a density strictly between 98% and 102% of Standard Maximum Dry Density (SMDD) and within 2% of Standard Optimum Moisture Content (SOMC). Some moisture conditioning will possibly be required as the insitu moisture content of the upper clay fill was shown by the laboratory testing to be drier than its respective Plastic Limit. • All compacted fill should be retained or, alternatively, battered to a permanent slope no steeper than 1 Vertical (V) in 2 Horizontal (H). All exposed fill batters should be protected from erosion by quickly establishing a grass cover. • Density testing of placed fill should be carried out at the frequency indicated in AS3798 for the volume of fill involved. At least Level 2 testing of earthworks should be carried out in accordance with AS3798. Preferably the Geotechnical Testing Authority should be engaged

Item	Potential Impact	Mitigation Measures
		<p>directly on behalf of the client and not as part of the earthworks contract.</p> <ul style="list-style-type: none"> Effective site drainage should be provided both during construction and for long term site maintenance. Earthworks platforms should be graded to maintain cross falls during construction. If soil softening occurs, the subgrade be over excavated to below the depth of moisture softening and that excavated material be replaced with a clean well graded fill compacted as specified above.
Salinity	Impacts from high levels of salinity	<ul style="list-style-type: none"> Salinity on the site appears to generally increase with depth. Deeper structures (including footings, piles and service trenches) should have salinity resistant materials incorporated into their design.
Flooding	Impacts from flooding	<ul style="list-style-type: none"> Overland flow strategy for the site will be confirmed during the detailed design phase and will be designed to maintain the flow direction and cater for the 100-year ARI storm event.
Aboriginal heritage	Impacts to Aboriginal cultural heritage and archaeological sites	<p>Implementation of recommendations contained within the Aboriginal cultural heritage and archaeological report including:</p> <ul style="list-style-type: none"> Conditions of AHIP 10996059. Although SSD projects are not required to comply with Part 6 of the NPW Act, OEH advises that conditions of valid AHIPs are followed by SSDs in order to reduce the risk of impacting Aboriginal heritage values. OEH also advises that the holder of the AHIP should be contacted to confirm the works that are intended on the area covered by the AHIP. Works may proceed with caution. No Aboriginal objects, sites, or areas of sensitivity were identified within the study area. No further archaeological works are required. The proposed works may proceed with caution. Discovery of unanticipated Aboriginal objects and/or Aboriginal ancestral remains. All Aboriginal objects and Places are protected under the NPW Act. It is an offence to knowingly disturb an Aboriginal site without a consent permit issued by the OEH. Should any Aboriginal objects be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object the archaeologist will provide further

Item	Potential Impact	Mitigation Measures
		<p>recommendations. These may include notifying the OEH and Aboriginal stakeholders. Aboriginal ancestral remains may be found in a variety of landscapes in NSW, including middens and sandy or soft sedimentary soils. If any suspected human remains are discovered during any activity you must:</p> <ul style="list-style-type: none"> – Immediately cease all work at that location and not further move or disturb the remains. – Notify the NSW Police and OEH's Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location. – Not recommence work at that location unless authorised in writing by OEH. <ul style="list-style-type: none"> • Continued consultation with the registered Aboriginal stakeholders - As per the consultation requirements it is recommended that the proponent provides a copy of this draft report to the Aboriginal stakeholders and considers all comments received. The proponent should continue to inform these groups about the management of Aboriginal cultural heritage sites within the study area throughout the life of the project.
European heritage	Impacts to potential European heritage and archaeological sites	<p>Implementation of recommendations contained within the Historical Archaeological Impact Assessment including:</p> <ul style="list-style-type: none"> • No further assessment required. This assessment has identified no items of heritage significance or archaeological potential within the study area, and no negative heritage impacts to surrounding heritage items. As such, no further assessment is required prior to the approval of the SSD application. Prior to any ground disturbance occurring within the study area, an unexpected finds procedure should be implemented as outlined below. • Development of Construction Heritage Management Sub-Plan. A Construction Heritage Management Sub-Plan must be prepared following approval of the SSD submission in order to establish an unexpected finds policy in the event that works encounter unexpected historical structural or depositional remains, or any Aboriginal objects or places. In both these instances all works should cease. A determination should then be made by an appropriately qualified archaeologist of whether the remains identified are likely to be "relics" under the NSW Heritage Act 1977 or an Aboriginal object or place. Where the remains are identified as being 'relics', the Heritage Council of NSW must be

Item	Potential Impact	Mitigation Measures
		<p>notified in accordance with section 146 of the NSW Heritage Act 1977. Failure to notify the Heritage Council is considered an offence under the act, with penalties including fines and imprisonment. After contacting the Heritage Council, a permit or exemption should be sought under the relevant section of the act to allow works to recommence. All Aboriginal objects and places are protected under the NPW Act. It is an offence to knowingly disturb an Aboriginal site without a consent permit issued by the OEH. If the find is determined to be an Aboriginal object, the archaeologist will provide further recommendations. These may include notifying the OEH and Aboriginal stakeholders.</p>

9. SUMMARY AND CONCLUSIONS

The proposal has been assessed against all items contained to the SEARs and we conclude that:

- The proposal satisfies the applicable local and state planning policies;
- The design positively responds to the site conditions and future urban morphology;
- The proposal is highly suitable for the site;
- The proposal is in the public's best interest; and
- The proposal appropriately satisfies each item within the Secretary's Environmental Assessment Requirements.

The site is considered highly suitable for the proposal for the following reasons:

- The land is zoned 'Urban' under the St Marys SREP. The proposal is permissible with consent and consistent with the land use objectives of this zoning;
- The proposal is consistent with the objectives of all relevant planning controls and achieves a high level of planning policy compliance;
- There are no significant environmental constraints limiting development on the site; and
- The proposal will not generate unreasonable impacts on the surrounding locality.

The proposal is in the public interest because:

- The proposed works are permissible with consent and have been prepared having regard to Education SEPP, St Marys SREP and PLEP;
- The proposal has been prepared having regard to Council's planning policies and generally complies with the aims and objectives of the controls for the site;
- The proposal is suitable for the site as evidenced by the site analysis and various site investigations, including geotechnical, bushfire, site contamination and biodiversity;
- Subject to the various mitigation measures recommended by the specialist consultants, the proposal does not have any unacceptable impacts on adjoining or surrounding properties or the public domain in terms of traffic, social and environmental impacts;
- The site is well serviced by public transport and walking and cycling routes. The proposal encourages non-private vehicles options for staff to access the site.
- The proposal will result in a high-quality educational environment for staff and students with learning difficulties that;
 - Provides expanses of open space for students;
 - Enables an excellent academic programme;
 - Supports a fulfilling and diverse extra-curricular experience;
 - Provides an inclusive, supportive and secure pastoral environment; and
 - Provides efficient and environmentally sustainable facilities.
- The proposal will make a positive contribution to the built form of Jordan Springs and create an attractive streetscape along Cullen Avenue; and
- The proposal will contribute positively to energy efficiency and environmental sustainability. The design has incorporated many ESD features to reduce energy consumption during the life of the proposal.

Considering the above and the content contained to this EIS, it is recommended that this SSDA be approved, subject to appropriate conditions.

DISCLAIMER

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This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

APPENDIX A SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

APPENDIX B ARCHITECTURAL DRAWINGS

APPENDIX C SITE SURVEY PLAN

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APPENDIX G TRAFFIC IMPACT ASSESSMENT

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APPENDIX K ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT

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APPENDIX M PRELIMINARY ENVIRONMENTAL SITE INVESTIGATION

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APPENDIX V CONSTRUCTION WASTE MANAGEMENT PLAN

APPENDIX W OPERATIONAL WASTE MANAGEMENT PLAN

APPENDIX X ACCESS REPORT

APPENDIX Y BCA ASSESSMENT REPORT

APPENDIX Z CONSULTATION OUTCOMES REPORT

APPENDIX AA PLAN

ENVIRONMENTAL MANAGEMENT

APPENDIX BB

HISTORICAL ARCHAEOLOGICAL IMPACT ASSESSMENT

APPENDIX CC

ARCHAEOLOGICAL REPORT



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