EAST LEPPINGTON PRIMARY SCHOOL

Environmental Impact Statement

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Environmental Impact Statement
4
1 November 2019

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Approval for issue

Mina Suh  1 November 2019

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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 Regulation 2000.*

Environmental Assessment Prepared by:	
Name:	Mina Suh (Planning Leader) *Master of Planning, University of Technology Sydney* *Bachelor of Arts, Cultural Anthropology, University of California (Irvine) (Hon 1), USA*
Address:	RPS Group Pty Ltd Level 13, 255 Pitt St Sydney NSW 2000
In respect of:	NSW Department of Education

Applicant and Land Details:	
Applicant:	NSW Department of Education
Applicant Address:	105 Phillip Street, Parramatta NSW 2150
Land to be developed	Lot 9001 in Deposited Plan 1206596
Project:	Development of new public primary school to accommodate approximately 1,012 students including classrooms, open spaces and associated facilities.

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

- In accordance with, and meet the minimum requirements of *Environmental Planning and Assessment Regulation 2000* Schedule 2 Environmental impact statements;
- All available information that is relevant to the environmental assessment of the development to which the statement relates; and
- To the best of my knowledge the information contained in this report is neither false nor misleading.

Signature: 

Name: Mina Suh

Date: 01/11/2019

EXECUTIVE SUMMARY

Purpose of this Report

This Environmental Impact Assessment (EIS) has been prepared by RPS for the NSW Department of Education (DoE) in support of State Significant Development Application (SSD) 9476 for the proposed development of East Leppington Primary School at Commissioners Drive, Denham Court.

This EIS should be read in conjunction with the Secretary's Environmental Assessment Requirements (SEARs) issued on 10 August 2018 (Appendix A), and the supporting technical documents attached at Appendix B - Appendix BB.

The Proposal

The proposed development (herein also referred to as the proposed school) involves a new public primary school that will accommodate 1,012 students. Enrolments will naturally fluctuate depending on population changes and the proposed development will be able to accommodate such fluctuations. The proposed development will consist of 44 classrooms, a hall, an administration/staff centre, library resource centre, amenities and storage, staff car parking and site services.

The proposed development is designed to accommodate the increasing population and educational needs of East Leppington. The location of the school is consistent with the East Leppington (Part) Precinct and will provide a new school that is easily accessible for the primary school aged population anticipated in the Precinct.

Specifically, this EIS seeks development consent for the following works at the site to accommodate the proposed development:

- Construction and use of a new educational establishment to accommodate approximately 1,012 students including:
    - General learning areas
    - Multipurpose hall
    - Covered Outdoor Learning Areas (COLA)
    - Administration area
    - Staff area including amenities
    - Student amenities
    - Library
    - Canteen
    - Storage
    - Assembly court
    - Landscaping
    - Pedestrian circulation
    - Vehicle circulation, bulk waste pad, staff car parking, bus zone and bicycle storage area
    - Internal open space.

The Site

The site on which the proposed development is to be developed is located at the corner Commissioners Drive and Elkhorn Street within the Campbelltown Local Government Area (LGA). The site is located approximately 45 kilometres southwest of the Sydney Central Business District (CBD), 30 kilometres southwest of Parramatta CBD and 13 kilometres south of the proposed Western Sydney Airport. The site is comprised of one lot legally described as Lot 9001 Deposited Plan (DP) 1206596. The site comprises of vacant, cleared land devoid of structures and vegetation with a total site area of approximately 30,000m^2.

Assessment

This EIS assessed the proposed development under the relevant statutory planning and policy provisions, and applicable SEARs received from the Department of Planning, Industry and Environment (DPIE, formerly the Department of Planning and Environment) issued on 10 August 2018. The key environmental considerations that have been assessed as part of this EIS are:

- Built Form and Urban Design;
- Environmental Amenity;
- Noise and Vibration;
- Transport and Accessibility;
- Social Impacts;
- Heritage;
- Contamination;
- Flooding;
- Bushfire;
- Biodiversity;
- Sediment, Erosion and Dust Control;
- Geotechnical and Salinity;
- Waste; and
- Cumulative Impacts.

As part of this assessment, related consultation with government agencies and other public authorities was conducted. The proposed development meets all relevant requirements of State and regional local policies.

As detailed within Section 6 of this EIS, the proposed development demonstrates that all applicable onsite and offsite environmental impacts have been carefully considered and addressed. Environmental mitigation measures are outlined in Section 9.

Risk Assessment

An assessment of the key issues outlined above and other significant issues are identified in a risk assessment provided at Section 8. This considers baseline data, consideration of cumulative impacts and measures to avoid, minimise and offset predicted impacts.

Capital Investment Value and Planning Framework

As per the SEARs, a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the *Environmental Planning and Assessment Regulation 2000*) of the proposed development is to be included as part of this EIS.

This is provided via a Quantity Surveyors report outlined in Appendix D. This confirms:

- A CIV Calculation of $ 50,037,159 (ex. GST); and
- 394 estimated jobs that will be created by the proposed development during the construction phase of the development.

Justification

The proposed development is justified for the following reasons:

- The proposed development will support Greater Sydney's rising population and reduce pressure on other neighbouring local primary schools in the East Leppington region;
- The proposed development adheres to the requirements of environmental planning instruments and policies, state and local planning legislation, regulation and policies;
- The proposed development addresses the issues identified within the SEARs;
- The proposed development will result in minimal environmental impacts to the surrounding area and will be beneficial to the community of East Leppington;
- This EIS has been assessed under the relevant statutory planning and policy provisions and addressed the applicable SEARs issued 10 August 2018; and
- As detailed in Section 7 of this EIS, the proposed development demonstrates that applicable onsite and offsite environmental impacts have been carefully considered and addressed. The proposed development would not result in significant environmental impacts to the surrounding environment.

Environmental mitigation measures have been proposed to reduce environmental impacts, and based on this assessment, and implementation of mitigation measures, the proposed development is warranted for approval.

Section 94/94A Contribution Plans

The Campbelltown Local Infrastructure Contributions Plan 2018 identifies:

> *The requirement of contributions under Section 7.11 of the EP&A Act, or fixed development levy to be made towards the provision, extension or augmentation of Local Infrastructure as a consequence of development in the Campbelltown LGA, or which were provided in anticipation of, or to facilitate, such development.*

The proposed development is exempt from this plan as it is 'public infrastructure' to be carried out by or on behalf of any public authority. The *Environmental Planning & Assessment Act 1979* (EP&A Act) defines public authority as:

> *(a) a public or local authority constituted by or under an Act, or*
>
> *(b) a Public Service agency, or*
>
> *(c) a statutory body representing the Crown, or*

(d) a Public Service senior executive within the meaning of the Government Sector Employment Act 2013, or

(e) a statutory State owned corporation (and its subsidiaries) within the meaning of the State Owned Corporations Act 1989, or

(f) a chief executive officer of a corporation or subsidiary referred to in paragraph (e), or

(g) a person prescribed by the regulations for the purposes of this definition.

DoE is a public authority constituted by or under an Act and are therefore exempt from this plan. A potential multipurpose facility is proposed as joint use with Council and the community for the proposed development. This is discussed further in Section 3.

SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

On behalf of the NSW Department of Education, City Plan Services requested the SEARs for the construction of the new East Leppington Primary School on 13 July 2018. DPIE issued the SEARs on 10 August 2018.

Table 1 below provides the SEARs issued for the proposed development alongside a brief description of how the proposed development will achieve each requirement.

Table 1: SEARs requirement

SEARs Requirement	Comment/Description
General Requirements	
The Environmental Impact Statement (EIS) must be prepared in accordance with, and meet the minimum requirements of, clauses 6 and 7 of Schedule 2 the *Environmental Planning and Assessment Regulation 2000* (the Regulation). Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development. Where relevant, the assessment of the key issues below, and any other significant issues identified in the risk assessment, must include: • adequate baseline data. • consideration of potential cumulative impacts due to other development in the vicinity (completed, underway or proposed). • measures to avoid, minimise and if necessary, offset the predicted impacts, including detailed contingency plans for managing any significant risks to the environment. The EIS must be accompanied by a report from a qualified quantity surveyor providing: • a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the Regulation) 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 • certification that the information provided is accurate at the date of preparation.	The EIS has been prepared in accordance with the Secretary's Requirements and meets the minimum requirements specified in Schedule 2 of the *Environmental Planning and Assessment Regulation 2000.* The EIS includes a comprehensive assessment of the environmental risks and impacts associated with the development.
Key Issues	
The EIS must address the following specific matters: **1. Statutory and Strategic Context** Address the statutory provisions contained in all relevant environmental planning instruments, including: • *Biodiversity Conservation Act 2016* • *State Environmental Planning Policy (Sydney Region Growth Centres) 2006*	Refer to Sections 4 and 5.

• *State Environmental Planning Policy (State & Regional Development) 2011* • *State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017* • *State Environmental Planning Policy No. 64 – Advertising and Signage* • *State Environmental Planning Policy No.55 – Remediation of Land* • *Draft State Environmental Planning Policy (Remediation of Land) and* • *Draft State Environmental Planning Policy (Environment)* *Permissibility* Detail the nature and extent of any prohibitions that apply to the development. *Development Standards* Identify compliance with the development standards applying to the site and provide justification for any contravention of the development standards.	
2. Policies Address the relevant planning provisions, goals and strategic planning objectives in the following: • *NSW State Priorities* • *The Greater Sydney Region Plan, A Metropolis of three cities* • *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* • *Better Placed: An integrated design policy for the built environment of New South Wales, GANSW 2017* • *Crime Prevention Through Environmental Design (CPTED) Principles* • *Healthy Urban Development Checklist, NSW Health* • *Greater Sydney Commission's Western City District Plan and* • *Campbelltown City Council Growth Centre Precincts Development Control Plan 2016.*	Refer to Sections 4 and 5.
3. Operation • 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 Sections 2 and 3.
4. Built Form and Urban Design In consultation with the Government Architect NSW ensure that the proposal demonstrates design quality in accordance with the Design Quality Principals of State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 and the Design Guide for Schools, through consideration of the following:	Refer to Section 3.3, 6.2.3 and Appendix B and E.

• Address the contextual fit including height, bulk and scale, setbacks and interface of the proposal with the surrounding development, topography, streetscape and public open spaces. • Built form including overall site layout, planning and massing, façades, building articulation and scale, materials, colours. • Crime Prevention Through Environmental Design Principles. • Provide details of any digital signage boards, including size, location and finishes. • Clearly demonstrate 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* and the GANSW Design Guide for Schools. • Detail how services, including but not limited to waste management, loading zones, and mechanical plant are integrated into the design of the development. • Site and context including planning and massing options and preferred strategy for future development. • Landscape design, including consideration of equity and amenity of outdoor play spaces, and integration with built form, security, shade, topography and existing vegetation. • Visual impact including views to and from the site and any adjoining heritage items. • Demonstrate good environmental amenity including access to natural daylight and ventilation, acoustic separation, access to landscape and outdoor spaces and future flexibility. • Aboriginal culture and heritage, to be developed in consultation with the local Aboriginal community and cultural groups and incorporated holistically in the design proposal. • Environmental amenity including access to natural daylight and ventilation, acoustic separation, access to landscape and outdoor spaces and future flexibility. ESD principles including sustainability targets and integration of these in design approach.	
5. Environmental Amenity • Assess amenity impacts on the surrounding locality, including solar access, visual privacy, visual amenity, overshadowing and acoustic impacts. • 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). • 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.	Refer to Section 3 and Appendix B and E.
6. Staging Provide details regarding the staging of the proposed development (if any).	Refer to Section 3.10.
7. Transport and Accessibility Include a transport and accessibility impact assessment, which details, but is not limited to the following: • accurate details of the current daily and peak hour vehicle, existing and future public transport networks and pedestrian and	Refer to Section 3.6, 6.4 and Appendix I.

cycle movement provided on the road network located adjacent to the proposed development.

- projected student population growth over time.
- estimated trip distribution supported by evidence, such as student catchments or other suitable demographic data.
- an assessment of the local road network, lane widths and on-street parking environment for bus accessibility (standard 14.5m buses) from the regional road network.
- analysis of likely on-street parking impacts associated with student pick-up/drop-off, staff parking and bus waiting areas.
- 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 on Camden Valley Way, 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 improvement works, if required (Traffic modelling is to be undertaken using SIDRA network modelling for current and future years).
- 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.
- road safety assessments of likely pedestrian routes to / from the school within the school catchment.
- assessment of the travel needs for teachers and students on each mode of transport and associated parking / pick-up and set down areas.
- a traffic and parking management plan demonstrating safe and orderly movement of vehicles to/from the school.
- 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 sit.
- 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. The assessment must consider the impacts of any mandatory parking restrictions associated with proposed pedestrian safety facilities (such as pedestrian crossing, school crossing or similar). • 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: – assessment of cumulative impacts associated with other construction activities (if any) – an assessment of road safety at key intersection and locations subject to heavy vehicle construction traffic movements and high pedestrian activity – details of construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process – details of anticipated peak hour and daily construction vehicle movements to and from the site – details of 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. Relevant Policies and Guidelines: • Guide to Traffic Generating Developments (Roads and Maritime Services) • EIS Guidelines – Road and Related Facilities (DoPI) • Cycling Aspects of Austroads Guides • NSW Planning Guidelines for Walking and Cycling • Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development • Standards Australia AS2890.3 (Bicycle Parking Facilities) • Healthy Urban Development Checklist, NSW Health • Development Near Rail Corridors and Busy Roads – Interim Guideline (Department of Planning 2008) • Roads and Maritime Services Technical Directions	
8. Ecologically Sustainable Development (ESD) • 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.	Refer to Section 3.3.4 and Appendix N.

• 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: – hotter days and more frequent heatwave events – extended drought periods – more extreme rainfall events – gustier wind conditions and – how these will inform landscape design, material selection and social equity aspects (respite/shelter areas). • Climate change projections developed for the Sydney Metropolitan area are used to inform the building design and asset life of the project. Relevant Policies and Guidelines • NSW and ACT Government Regional Climate Modelling (NARCliM) • OEH (2015) Urban Green Cover in NSW Technical Guidelines	
9. Social Impacts • Include an assessment of the social consequences of the schools' relative location and decanting activities if proposed. • Provide details on accessibility and inclusiveness of the proposal for people of differing needs and capabilities. • Identify and describe how facilities are to be shared with the community outside of school hours.	Refer to Section 6.5.
10. Heritage • Provide a statement of significance and an assessment of the impact on the heritage significance of the heritage items on the site in accordance with the guidelines in the NSW Heritage Manual. • Address any archaeological potential and significance on the site and the impacts the development may have on this significance. • The HIS is to assess heritage impacts of: – the proposed works on the heritage significance of the site. – the visual impacts of the proposed development on views to and from surrounding heritage items. – the proposed works on the Upper Canal (SHR no. 01373), taking the Heritage Act 1977 and relevant Water NSW requirements and guidelines into consideration.	Refer to Section 6.6 and Appendix Y.
11. Aboriginal Heritage • Address Aboriginal Cultural Heritage (ACH) in accordance with the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (DECCW, 2011) and Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW). • The EIS must demonstrate attempts to avoid any impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH.	Refer to Section 6.6.1 and Appendix O.
12. Noise and Vibration • Identify and provide a quantitative assessment of the main noise and vibration generating sources during demolition, site preparation, bulk excavation, construction. Outline measures to	Refer to Section 6.3 and Appendix M.

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 facilities, and outline measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land. Relevant Policies and Guidelines: • NSW Noise Policy for Industry 2017 (EPA) • Interim Construction Noise Guideline (DECC) • Assessing Vibration: A Technical Guideline 2006 • Development Near Rail Corridors and Busy Roads – Interim Guideline (Department of Planning 2008).	
13. Contamination • Assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable for the proposed use in accordance with SEPP 55. • Undertake a hazardous materials survey of any existing structures and infrastructure prior to any demolition or site preparation works. Relevant Policies and Guidelines: • Managing Land Contamination: Planning Guidelines - SEPP 55 Remediation of Land (DUAP).	Refer to Section 6.7 and Appendix Q.
14. Utilities • 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.	Refer to Section 3.8 and Appendix T.
15. Contributions 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.	Refer to Executive Summary.
16. Drainage • 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. Relevant Policies and Guidelines: • Guidelines for development adjoining land and water managed by DECCW (OEH, 2013)	Refer to Section 6.12 and Appendix G.
17. Flooding • Identify any flood risk on-site (detailing the most recent flood studies for the project area) and consideration of any relevant provisions of the NSW Floodplain Development Manual (2005), including the potential effects of climate change, sea level rise and an increase in rainfall intensity. If there is a material flood risk, include design solutions for mitigation. • The EIS must assess:	Refer to Section 6.8.

– Whether the proposal incorporates specific measures to manage risk to life from isolation. – Emergency management, evacuation and access, and contingency measures for the development considering the full range or flood risk (based upon the probable maximum flood).	
18. 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 Bush Fire Protection 2006 (NSW RFS).	Refer to Section 6.9 and Appendix R.
19. Biodiversity Assessment • 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. • If the site is within an area to which a Biodiversity Certification Order has been issued, evidence of this Order is to be provided. • Where the land is subject to a Biodiversity Certification Order, evidence of this Order and the terms is to be provided. *Note: The Biodiversity Conservation Act 2016 requires that State Significant Development Applications be accompanied by a Biodiversity Development Assessment Report unless otherwise specified under the Act.*	Refer to Section 4.1, 6.10 and Appendix S.
20. Sediment, Erosion and Dust Controls Detail measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles. Relevant Policies and Guidelines: • Managing Urban Stormwater – Soils & Construction Volume 1 2004 (Landcom) • Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA) • Guidelines for development adjoining land and water managed by DECCW (OEH, 2013)	Refer to Section 6.11.
21. Waste Identify, quantify and classify the likely waste streams to be generated during construction and operation and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste. Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site.	Refer to Section 3.7, 6.13 and Appendix V.
22. Construction Hours Identify proposed construction hours and provide details of the instances where it is expected that works will be required to be carried out outside the standard construction hours.	Refer to Section 6.3, Appendix L.
Plans and documents	
The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Regulation. Provide these as part of the EIS rather than as separate documents. In addition, the EIS must include the following:	Section 6.2.3 and contained throughout EIS and within Appendices.

- Architectural drawings
  - showing key dimensions, RLs, scale bar and north point, including.
  - plans, sections and elevation of the proposal at no less than 1:200 showing indicative furniture layouts and program.
  - illustrated materials schedule including physical or digital samples board with correct proportional representation of materials, nominated colours and finishes.
  - details of proposed signage, including size, location and finishes.
  - detailed annotated wall sections at 1:20 scale that demonstrate typical cladding, window and floor details, including materials and general construction quality.
  - site plans and operations statement demonstrating the after hours and community use strategy.
- Site Survey Plan, showing existing levels, location and height of existing and adjacent structures / buildings site boundaries and remnant and planted vegetation on the site.
- Site Analysis Plan, including:
  - site and context plans that demonstrate principles for future development and expansion, built form character and open space network.
  - active transport linkages with existing, proposed and potential footpaths and bicycle paths and public transport links.
  - site and context plans that demonstrate principles for future network, active transport linkages with existing, proposed and potential footpaths and bicycle paths and public transport links.
  - sediment and Erosion Control Plan.
  - shadow Diagrams.
- View analysis, photomontages and architectural renders, including those from public vantage points.
- Landscape architectural drawings showing key dimensions, RLs, scale bar and north point, including:
  - integrated landscape plans at appropriate scale, with detail of new and retained planting, shade structures, materials and finishes proposed including articulation of playground spaces.
  - plan identifying significant trees, trees to be removed and trees to be retained or transplanted.
- Design report to demonstrate how design quality will be achieved in accordance with the above Key Issues including:
  - architectural design statement.
  - diagrams, structure plan, illustrations and drawings to clarify the design intent of the proposal.
  - detailed site and context analysis.
  - analysis of options considered including building envelope study to justify the proposed site planning and design approach.
  - visual impact assessment identifying potential impacts on the surrounding built environment and adjoining heritage items.
  - summary of feedback provided by GANSW and NSW State Design Review Panel (SDRP) and responses to this advice.
  - summary report of consultation with the community and response to any feedback provided.
- Geotechnical and Structural Report

• Accessibility Report • Arborist Report • Schedule of materials and finishes.	
Consultation	
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. You must consult with: • Campbelltown City Council • Government Architect NSW (through the NSW State Design Review Panel process) • NSW State Emergency Services (SES) • Transport for NSW (TfNSW) and • Roads and Maritime Services (RMS). Consultation should commence as soon as practicable to agree the scope of investigation. 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.	Refer to Section 7.
Further Consultation after 2 years	
If you do not lodge a development application and EIS for the development within two years of the issue date of these SEARs, you must consult further with the Secretary in relation to the preparation of the EIS.	Noted.
References	
The assessment of the key issues listed above must consider relevant guidelines, policies, and plans as identified.	See above and throughout EIS.

1 INTRODUCTION

1.1 Overview

This Environmental Impact Assessment (EIS) has been prepared by RPS Group Pty Ltd on behalf of the New South Wales Department of Education (Applicant) in support of State Significant Development Application (SSD) 9476 for the proposed development of New East Leppington Primary School.

Specifically, this EIS seeks development consent for the following works at the site to accommodate the proposed development (herein also referred to as the proposed school):

- The proposed development involves a new public primary school that will accommodate 1,012 students, with the potential to cater to support potential fluctuations with enrolments and population changes.
    - General learning areas
    - Multipurpose hall
    - Covered Outdoor Learning Areas (COLA)
    - Administration area
    - Staff area including amenities
    - Student amenities
    - Library
    - Canteen
    - Storage
    - Assembly court
    - Landscaping
    - Pedestrian circulation
    - Vehicle circulation, bulk waste pad, staff car parking, bus zone and bicycle storage area
    - Internal open space.

1.2 Timing

Construction will take approximately nine (9) months from construction commencement.

1.3 Alternatives to the Proposed Development

The alternative to the development would be a do-nothing option which was considered during early planning phases for new school infrastructure projects in Western Sydney, including the proposed development.

The site on which the proposed development will be constructed has been strategically planned for new education infrastructure development as part of the wider precinct planning by State Government. This was identified to serve the education needs of the existing and growing community around the area, which is undergoing rapid and significant change from semi-rural to a low/medium density residential setting that is supported by local centres and other urban infrastructure. As such, a do-nothing option was not considered appropriate or feasible.

1.4 Project Context and Background

The NSW Government is investing $6 billion within the next 4 years to deliver more than 170 new and upgrades to schools to support communities throughout NSW. Subsequently, existing schools across NSW are experiencing substantial enrolment pressure, resulting in overcrowding.

The East Leppington Precinct is experiencing significant urban and population growth. In response, DoE has proposed a new primary school in East Leppington with flexible learning spaces to meet education infrastructure needs and reduce pressure on other local primary schools.

On behalf of DoE, City Plan Services requested the Secretary Environmental Assessment Requirements (SEARs) for the construction of a new public school at the corner Commissioners Drive and Elkhorn Street, Denham Court on 13 July 2018. The SEARs were issued by the Department of Planning, Industry and Environment (DPIE, then known as the Department of Planning and Environment) on 10 August 2018. This EIS addresses each of the SEARs.

1.5 Report Structure

This EIS provides the following:

- **Section 1:** An introduction to the purpose of the EIS
- **Section 2:** A description of the site and surrounding context
- **Section 3:** A detailed description of the proposed development
- **Section 4:** An assessment of the proposed development against the relevant strategic planning policies
- **Section 5:** An assessment of the proposed development against the relevant statutory planning controls
- **Section 6:** An assessment of the key issues and impacts generated by the proposed development
- **Section 7:** A detailed description of the consultation undertaken with respect to the proposed development
- **Section 8:** An outline of key recommendations and mitigation measures
- **Section 9:** Conclusion.

This EIS should be read in conjunction with the Secretary's Environmental Assessment Requirements attached (Appendix A) along with the supporting documents outlined in Section 1.6.

1.6 Project Team

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

Deliverable	Consultant	Appendix
Architecture	Perumal Pedavoli Architects	B
Site Survey	Hill & Blume Consulting	C
Quantity Surveyors Report	MBM	D
Design Analysis Report	Perumal Pedavoli Architects	E
Landscape Analysis Report	Taylor Brammer Landscape Architects	F
Civil Drawings	Northrop	G
Structural Drawings	Northrop	H
Transport Impact Assessment	ASON Group	I

Green Travel Plan	ASON Group	J
Construction Management Plan	Hansen Yuncken	K
Construction Traffic Management Plan	ASON Group	L
Acoustic Report	Northrop	M
ESD Report	Steensen Varming	N
Aboriginal Assessment	Biosis	O
Geotechnical Report	JK Geotechnics	P
Contamination Report	EIS	Q
Bushfire Report	Peterson Bushfire	R
BDAR Waver Request	Narla Environmental Pty Ltd	S
Infrastructure Management Plan	Hansen Yuncken	T
Accessibility Report	Du Chateau Chun	U
BCA Report	Group DLA	V
Waste Management Plan	ECCELL Environmental Management	W
Water Conservation	Woolacotts Consulting Engineers	X
Heritage Report	City Plan Services	Y
Risk Management Report	Hansen Yuncken	Z
Engagement Report	Hansen Yuncken	AA
Visual Impact Assessment	RPS	BB

2 THE SITE AND SURROUNDING CONTEXT

2.1 Subject Site

The proposed development is located in the suburb Denham Court on a block bound by Willowdale Drive to the east, Commissioners Drive to the south and Elkhorn Street to the west. The site is legally described as Lot 9001 in Deposited Plan (DP) 1206596. It is located within the East Leppington Precinct in the local government area (LGA) of Campbelltown and is part of the South West Priority Growth Area. The site has an area of approximately 30,000 m^2 and forms an irregular rectangular shape. The site is situated approximately 45 kilometres southwest of the Sydney Central Business District (CBD), 30 kilometres southwest of the Paramatta CBD, 10 kilometres north of Campbelltown CBD, 14 kilometres north west of Camden CBD and 13 kilometres south of the proposed Western Sydney Airport.

The site encompasses:

- **Existing development:** Vacant, cleared area of land devoid of structures and vegetation.
- **Gradient:** Falls from south to north, with a 4m cross-fall.
- **Access:** Access is provided from Willowdale Drive, Commissioners Drive and Elkhorn Street.
- **Total Site Area:** 30,000 m^2.

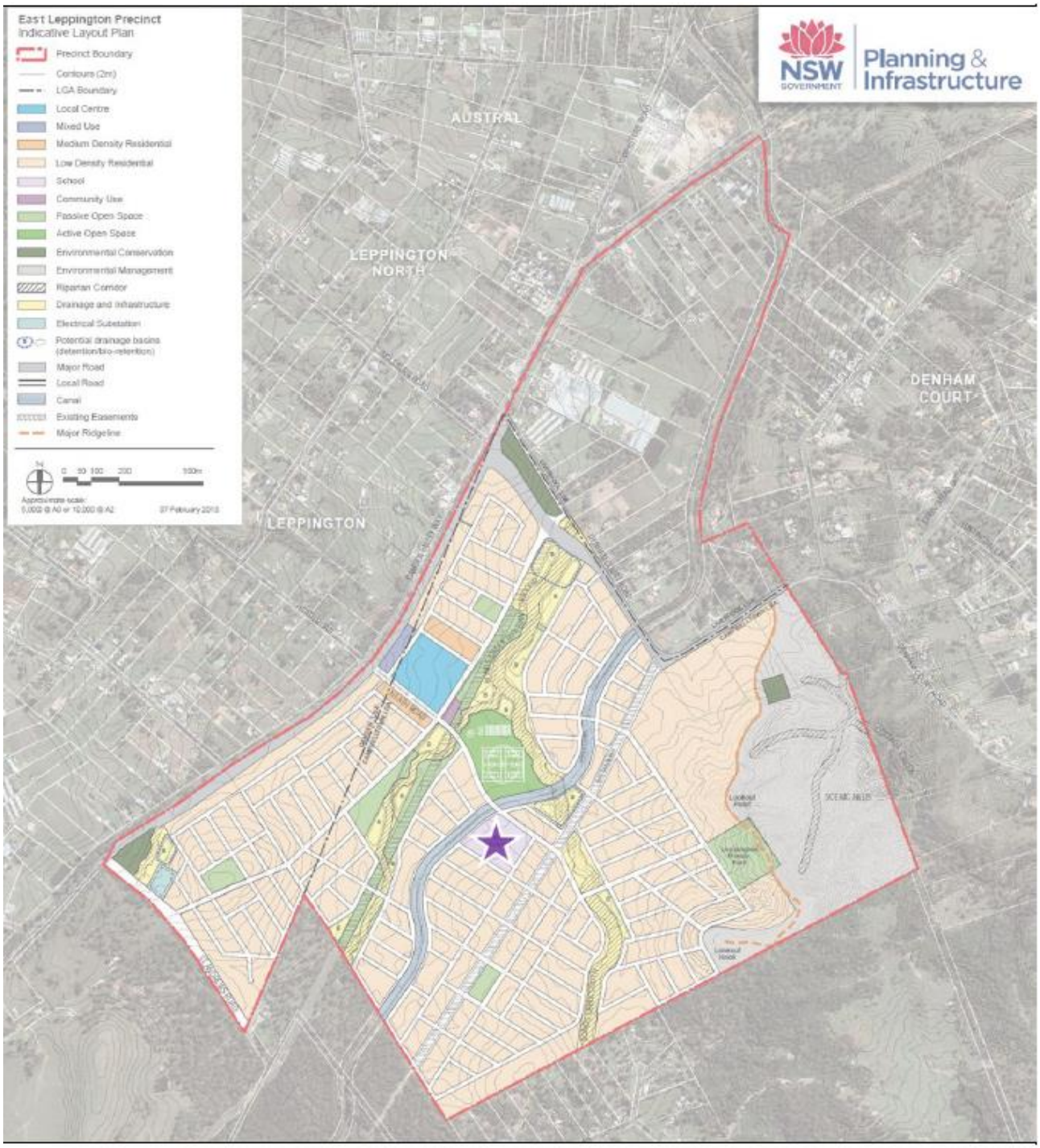
The site is zoned SP2 Educational Establishment under the *State Environmental Planning Policy (Sydney Region Growth Centres) 2006* (Growth Centres SEPP). The site is part of the East Leppington Precinct and the anticipated land use pattern under the precinct's Indicative Layout Plan is in Figure 2.

Further discussion of the land zoning plan and objectives are provided in Section 5.2.

Figure 1: Subject site

Source: SixMaps

Figure 2: Surrounding land use context



Source: NSW Department of Planning, Industry and Environment

2.2 Existing Development

The existing site is situated on greenfield land. The land is vacant, cleared land devoid of any structures and vegetation. The site is neighboured by low density residential development on the opposite side of Elkhorn Street to the southwest and Commissioners Drive to the southeast, water infrastructure to the northwest and a vacant lot on the opposite side of Willowdale Drive to the northeast.

Figure 3: Existing site photos

Source: Perumal Pedavoli Architects

2.3 Topography

The gradient of the land falls from south to north, with a 4m cross-fall. See Appendix C for the site survey.

2.4 Site Access

The site currently contains three access points. Access is provided from Willowdale Drive, Commissioners Drive and Elkhorn Street.

2.5 Flora and Fauna

2.5.1 Flora

A Biodiversity Assessment was undertaken for the proposed development. The assessment found a total of 14 flora species across the subject site. These were found to be common exotic ground covers typical of derived pastureland.

2.5.2 Fauna

Two (2) fauna species were identified at the site. This included the Brown Quail and Black-fronted Dotterel. These species were identified as both being common, mobile grazing species which show a preference to foraging on exotic grasses.

2.6 Heritage

2.6.1 European Heritage

The subject site is not identified as a heritage item, however, it is located adjacent to the boundary of the Upper Canal heritage item as listed on the State Heritage Register (SHR) 'Upper Canal System (Pheasants Nest Weir to Prospect Reservoir)' (SHR no. 01373), the S170 Register ('Upper Nepean Scheme', from Pheasants Nest to Prospect Reservoir (item no. 4580004; listed on the Sydney Water database as item no. 4575806) within Growth Centres SEPP (item no. 16).

A Heritage Impact Statement (HIS) was undertaken by City Plan Services on September 2019 and is attached at Appendix Y. For further details, refer to Section 6.6.

2.6.2 Aboriginal Heritage

On 18 December 2018, an Archaeological Survey Report (refer to Appendix N) was prepared by Biosis to undertake an Aboriginal cultural heritage assessment which included a search of the Aboriginal Heritage Information Management System (AHIMS) database of two AHIMS sites located within the subject site, and a review of regional and local archaeological reports.

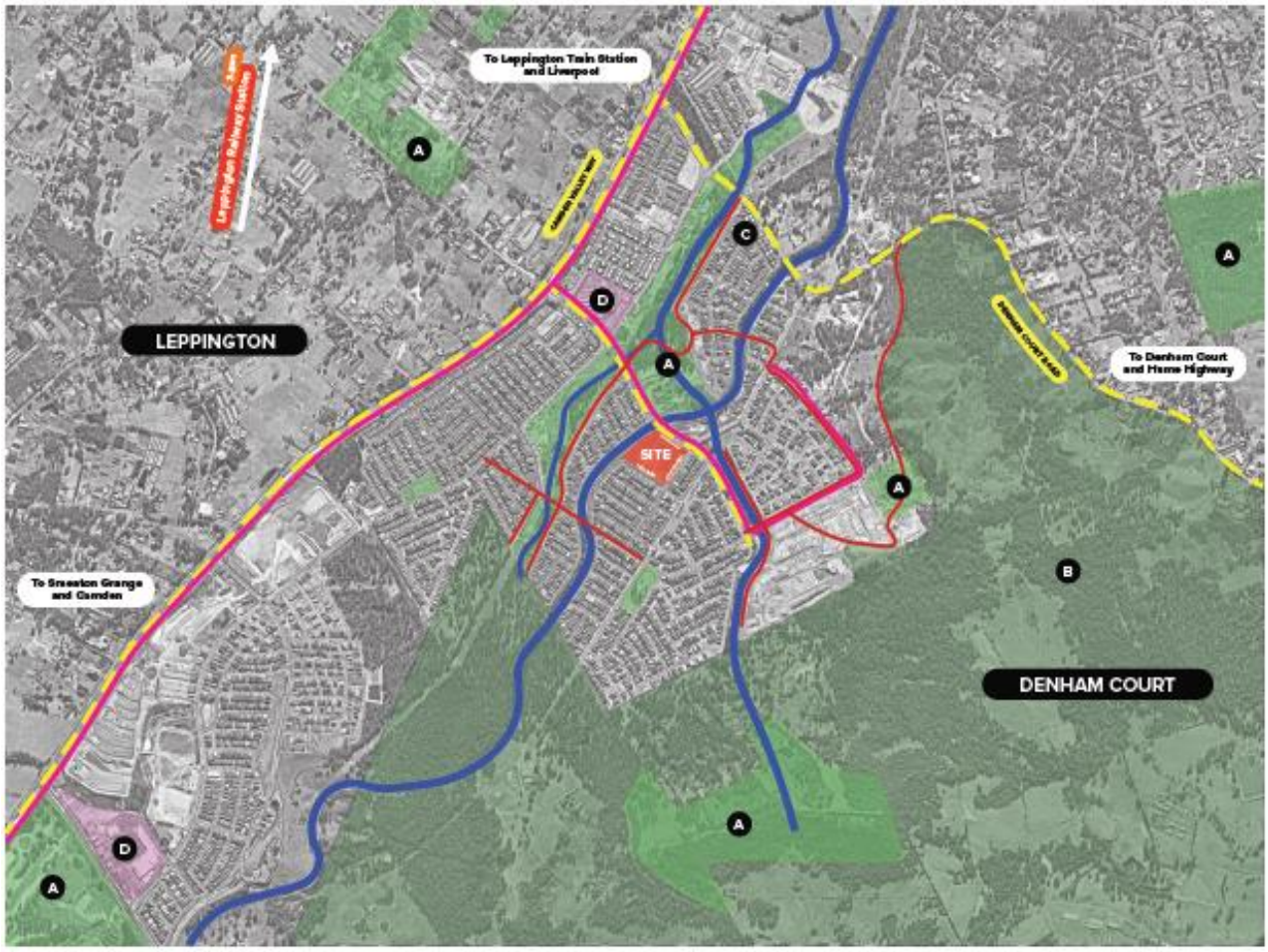
No Aboriginal sites were identified on the site. Further, no evidence of artefactual material or potential Aboriginal cultural heritage items remained. Despite the high levels of ground surface visibility from previous land clearing, no previously unrecorded Aboriginal objects or sites were identified. Overall, the archaeological potential of the study area has been assessed as low.

2.7 Site Context and Surrounding Development

The site is located in the 'East Leppington Precinct' within the South West Growth Area, an urban land release area identified for substantial housing growth. The 'East Leppington Precinct' adjoins other precincts within the South West Growth Area.

The land surrounding the site is predominately low density residential development. The site is within a growth precinct undergoing significant change to provide new housing and essential urban infrastructure to support the growth of Greater Sydney. The proposed development is part of that essential infrastructure to provide new education infrastructure to support the existing and future community primary school education needs. Once developed, the area will include a neighbourhood centre, open space and conservation areas, road infrastructure, and enhanced pedestrian and cycling connections as part of the East Leppington Precinct. The following describes the current context surrounding the site.

Figure 4: Context analysis



Source: Perumal Pedavoli Architects

- **North of the site:** Towards the north of the site is the heritage listed 'Upper Canal System'. Further north, across the canal, is newly completed low density residential zoned R2 Low Density Residential. Further north of the site is open recreational space zoned RE1 Public Recreation and SP2 Infrastructure Local Drainage. The Willowdale Shopping Centre, zoned B2 Local Centre, is located approximately 500 metres north of the site.
- **East of the site:** Directly east of the site on the opposite side of Willowdale Drive is vacant land and open recreational space zoned R2 Low Density Residential and SP2 Infrastructure Local Drainage. Further east is low density residential currently under development. Beyond that is undeveloped land zoned E3 Environmental Management.
- **South of the site:** Directly to the south of the site is newly developed low density residential. Further south is a mixture of recently completed and currently under development low density residential.
- **West of the site:** Consistent with the south, recently completed low density residential is located to the west of the site.

Figure 5: View northwest across subject site featuring the Upper Canal System

Source: City Plan

Figure 6: View northeast across subject site featuring the Upper Canal System

Source: City Plan

2.8 Transport Infrastructure

A Transport Impact Assessment has been undertaken by ASON Group and is attached at Appendix I. Below summarises transport infrastructure connecting to the proposed development.

2.8.1 Rail

Leppington Railway Station is located approximately 3 km to the north of the site and known as the western terminus of the South West Rail Line. It services the T2 Inner West and Leppington, and T5 Leppington Richmond train lines.

2.8.2 Bus Services

2.8.2.1 Regional Bus

The site is approximately 850 m south of the regional bus service on Willowdale Drove providing for East Leppington Precinct (ELP). This regional bus service is limited to the R4 Liverpool to Campbelltown route, operating along Camden Valley Way.

2.8.2.2 Bus Stops

The site is currently located in proximity to several bus stops. These bus services are listed below:

- Route 841 – Narellan to Leppington
    - Adjacent to the site
- Route 857 – Narellan to Liverpool
    - Approximately 11-minute walk to the site
- Route 858 – Oran Park Town Centre to Leppington.

The Campbelltown Growth Centre Precinct Development Control Plan (DCP) also indicates a proposed internal bus route running adjacent to the site on Willowdale Drive.

2.8.3 Bicycle

There is an off-road shared pedestrian and cycle path on Willowdale Drive, Commissioners Drive and Elkhorn Street connecting the site with the neighbouring residential precinct.

3 THE PROPOSED DEVELOPMENT

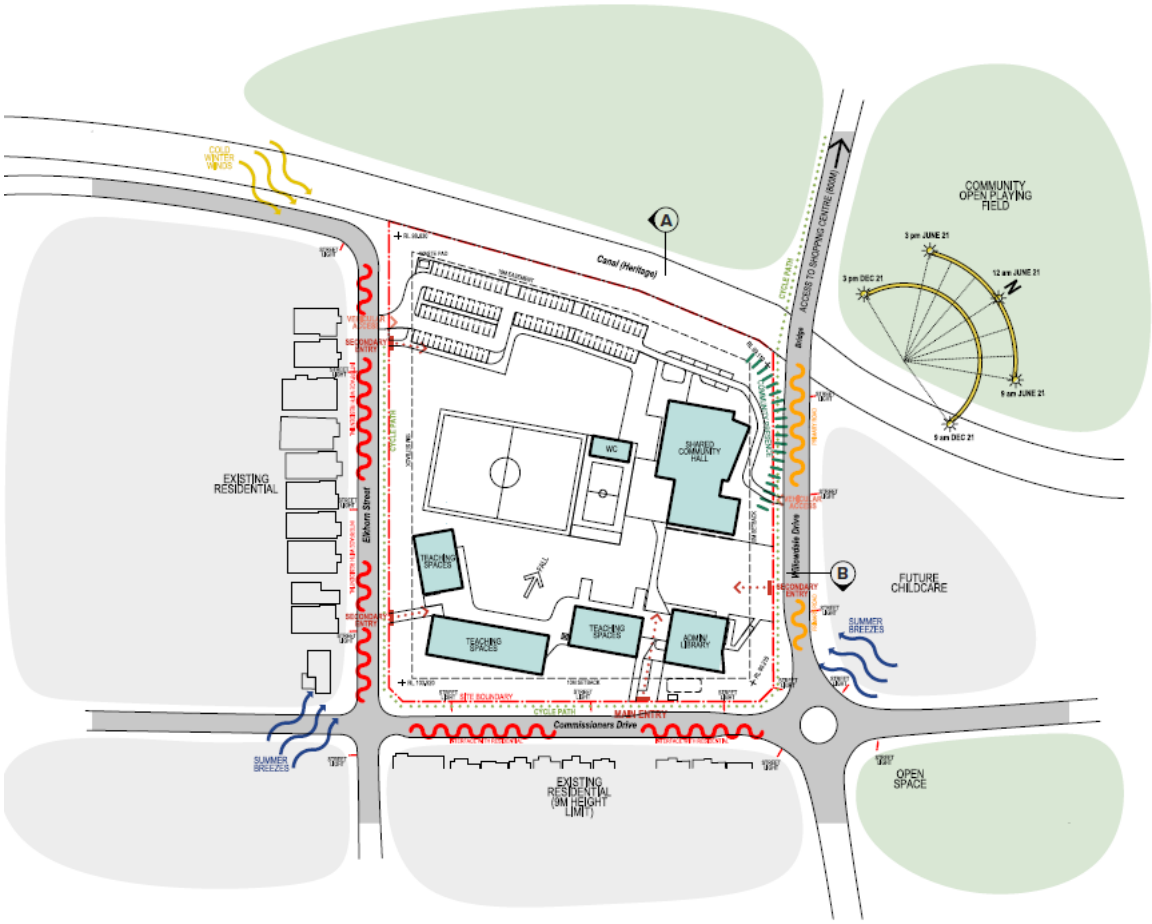
3.1 Overview

The proposed development involves a new primary school that will accommodate around 1,012 students. Enrolments will naturally fluctuate depending on population changes and the proposed development will be able to accommodate such fluctuations.

This EIS seeks development consent for the following works for the proposed development:

- Construction and use of a new educational establishment including:
    - General learning areas
    - Multipurpose hall
    - Covered Outdoor Learning Areas (COLA)
    - Administration area
    - Staff area including amenities
    - Student amenities
    - Library
    - Canteen
    - Storage
    - Assembly court
    - Landscaping
    - Pedestrian circulation
    - Vehicle circulation, bulk waste pad, staff car parking, bus zone and bicycle storage area.

Figure 7: Context site plan



Source: Perumal Pedavoli Architects

3.2 Building Design Philosophy

A Design Report has been prepared by Perumal Pedavoli Architects and is attached in Appendix E. This identifies the education and design principles that form the foundation of the proposed development's design. In summary:

- The proposed development has clear and well-defined entries, which clearly identify school and community access points. This will maximise separation between vehicles and pedestrians.
- Building mass is broken down into articulated blocks to avoid continuous bulk across the site, allowing views, opportunity for daylighting and ventilation of spaces
- Clear wayfinding strategies and circulation with main north-south axis and secondary east-west axis.

3.3 Built Form and Urban Design

The proposed buildings are situated along Commissioners Drive. The proposed development is for new school buildings, open spaces and parking facilities.

New School Buildings

Five (5) main multi-purpose school buildings are proposed as part of the development accompanied with designated amenity block. These buildings range between one (1) storey buildings to three (3) storey buildings.

- Block A: three (3) storey building on the site that have been distributed to collect the Administration, Staff and Library in one building located at the main focal corner of the site. It also contains designated special education space. This being the corner of Commissioners Drive and Willowdale Drive creating a marker for the main entry point of the site.
- Block B: three (3) storey teaching building, multi-purpose space, classrooms and amenities.
- Block C: three (3) storey teaching building and multi-purpose spaces.
- Block D: two (2) storey teaching building, multi-purpose spaces and amenities.
- Block E: one (1) storey multi-purpose hall will be provided, part of which is intended to be shared with the community in the future. DoE are in negotiations with Council currently to finalise the design, other operational matters, and funding arrangements for this joint-use portion of the hall. The architectural plans for this portion are indicative and designed as closely as possible to the final size. This is subject to refinement and finalisation once DoE and Council finalise their agreement.
- Block F: Amenities block.

Open Space and amenities

The proposed school buildings are situated at the perimeter of the site creating a useable and maximised open play space towards the centre of the school. The situation of the buildings allows for sun and wind breeze to permeate through the proposed buildings and into the centre of the site.

Site and parking facilities

Site planning facilities are illustrated in Figure 8 below. The proposed car park is located adjacent to the canal to avoid services easement along the rear boundary, in addition screened by landscaped designs to mitigate any visual impacts. The servicing of the site has been located away from main active spaces, screened by landscaping and in consideration of code compliance and service availability. Further, the waste pad is positioned towards the rear boundary of the site to ensure easy access by the waste management provider and to avoid conflict with students.

Figure 8: Proposed built form

Source: Perumal Pedavoli Architects

3.3.1 Height

The built form of the proposed development varies from one (1), two (2) and three (3) stories. The maximum height of proposed buildings are 14.82 m which are three storeys high. The building's height allows for configuration of the school's facilities including teaching rooms and outdoor and sufficient outdoor recreation space whilst being sympathetic to the height of neighbouring residential properties and minimising potential bulk, scale and overshadowing impacts.

3.3.2 Setback

The three storey buildings have an increased setback, incorporating appropriate landscaping to ameliorate any potential amenity and visual impacts. These setbacks have been implemented to ensure minimal overshadowing impacts while respecting the heritage item north of the site.

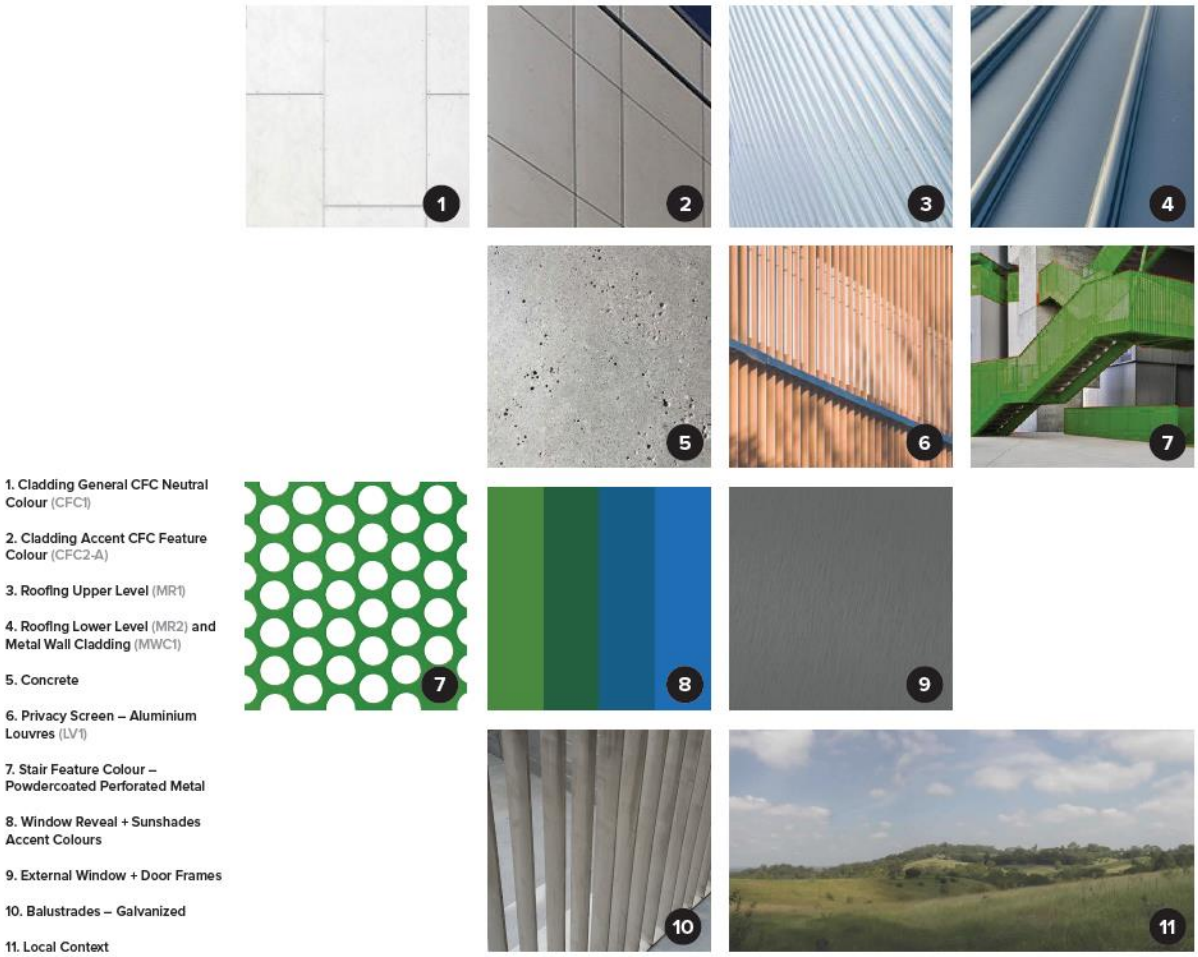
Figure 9: View of entrance from Commissioners Drive

Source: Perumal Pedavoli Architects

3.3.3 Material and Finishes

The materials will be robust and require low maintenance. The colours selected are based on a neutral palette which incorporate highlight accent materials and colours that have been drawn upon the local setting. This is illustrated in Figure 10: Materials and finishes. Materials and finishes are designed to complement the landscape and provide clear wayfinding. It will create a coherent language that will define the school and can be used to form the basis of the school branding and identity.

Figure 10: Materials and finishes



Source: Perumal Pedavoli Architects

3.3.4 Ecologically Sustainable Development

The Ecological Sustainable Development (ESD) initiatives considered for the proposed development aims to minimise environmental impacts associated with the built environment during construction and operation. To align with the definition of ESD as per the *Environmental Planning and Assessment Regulation 2000* (the Regulation) Clause 7(4), the development needs to incorporate sustainability aspects (including energy, water and material choice).

An ESD report is provided at Appendix N. The proposed development utilises a resource hierarchy approach, with emphasis on avoiding the reduction of energy, water, and materials.

- Thick coverage along western edge of site to protect from cold winter winds
- Allowance of air movement for natural ventilation for north to south summer winds
- High solar reflectance materials and finishes and planted vegetation to mitigate heat island effect
- Low flow fixtures and low water use landscaping will be specified as a minimum
- Supported of rainwater collection and storage
- Reuse for nonportable services and irrigation

- Designated and visible areas nominated for collection, sorting and recycling
- Use of off-site construction techniques to reduce construction waste
- Preference of materials that are produced off-site, non-toxic, contain high recycled content and/or highly recyclable.

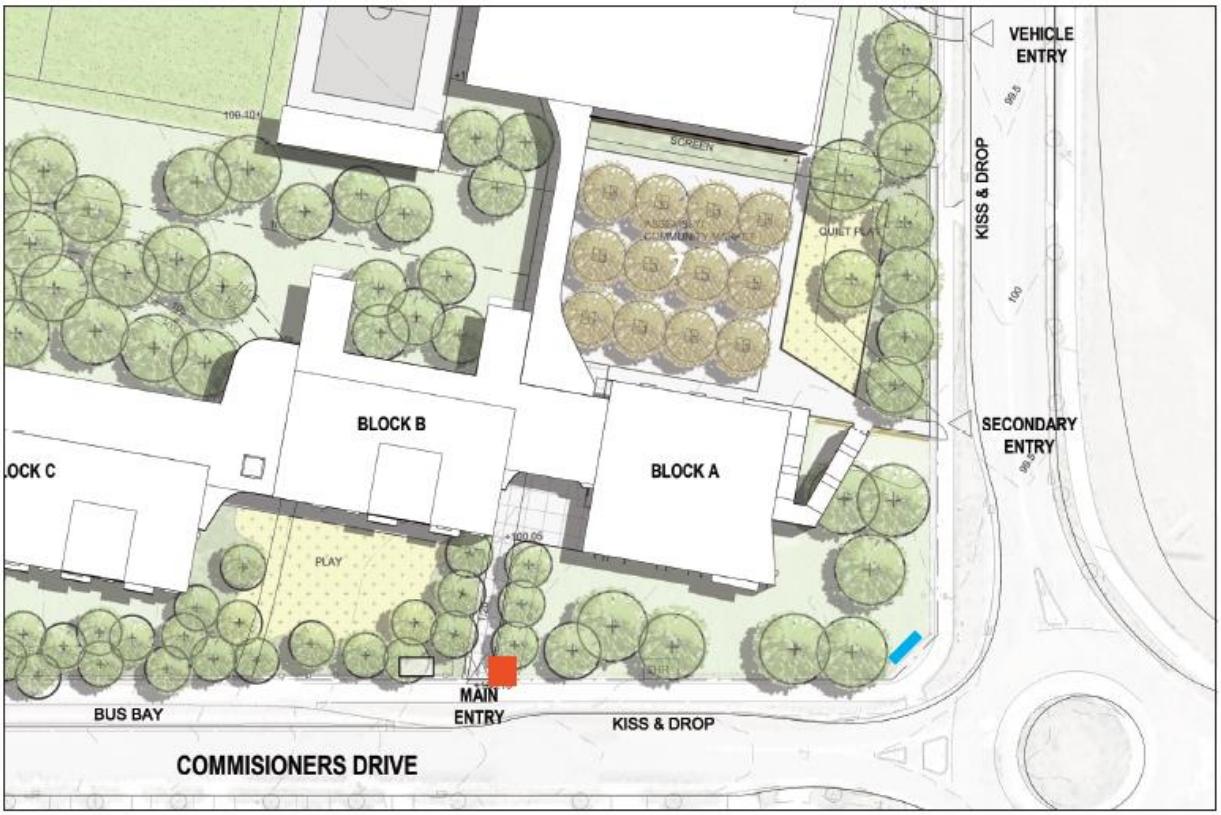
3.4 Signage

Wayfinding signage will provide a coherent language that will define the school and be used to form the basis of the school's branding and identity.

The entry bollard signage will identify 'East Leppington Public School' and will be a four sided. steel and aluminium sign fixed to a galvanised frame. This will be located at the main entry on Commissioners Drive. It will measure 3650mm x 300mm x 300mm. A digital school side is proposed at the corner of Commissioners Drive and Willowdale Drive. Digital signage for the proposed school is part of future works. Power and data conduits have been designed to consider signage in the future. The location is provided at Figure 11.

Refer to Section 5.5 of this EIS for an assessment against *State Environmental Planning Policy No. 64 – Advertising and Signage*.

Figure 11: Entry signage site plan

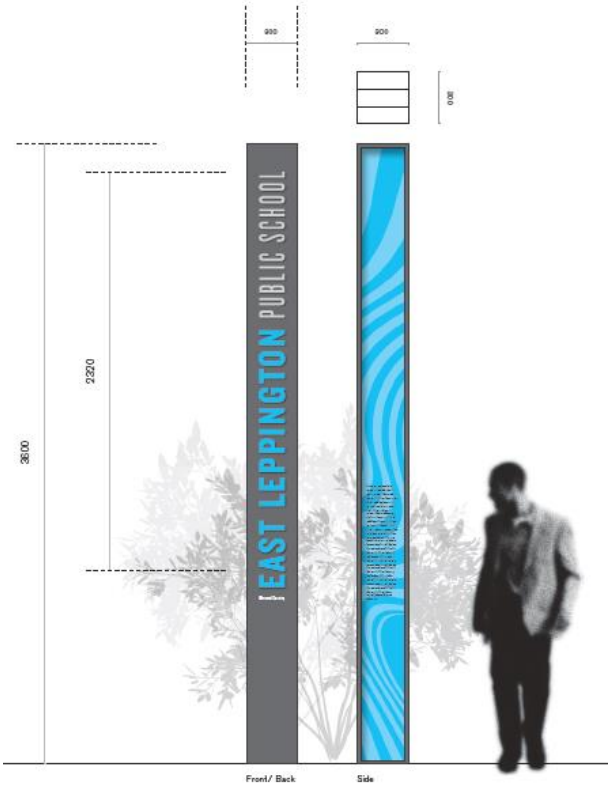


1.1 SITE PLAN: SIGN LOCATION

Entry sign located to Northern side of pathway leading into the school. Two sided sign provides visibility from both approaches.
Proposed location for digital school sign.

Source: Perumal Pedavoli Architects

Figure 12: New East Leppington Public School Sign



Source: Perumal Pedavoli Architects

3.5 Landscaping

New landscaped areas and open spaces are proposed as part of the proposed development. The landscape design has recognised Aboriginal and Non-Aboriginal history of the original landscape. Recognition of the Upper Canal and Nepean River is inherent in the landscape and signage and wayfinding scheme. A summary of the landscaping is provided below.

The Natural Environment

The proposed development is situated within the Cumberland Plain Woodland of Western Sydney, containing the most widespread ecological community. Within the area, there are visible bodies of water along with remnant riparian bushlands. This will be referenced within the school landscape through the integration of several indigenous plant species. A selection of shade and screening trees have also been included to combat the heat island effect during summer whilst addressing the urban cooling strategies of local and State Governments.

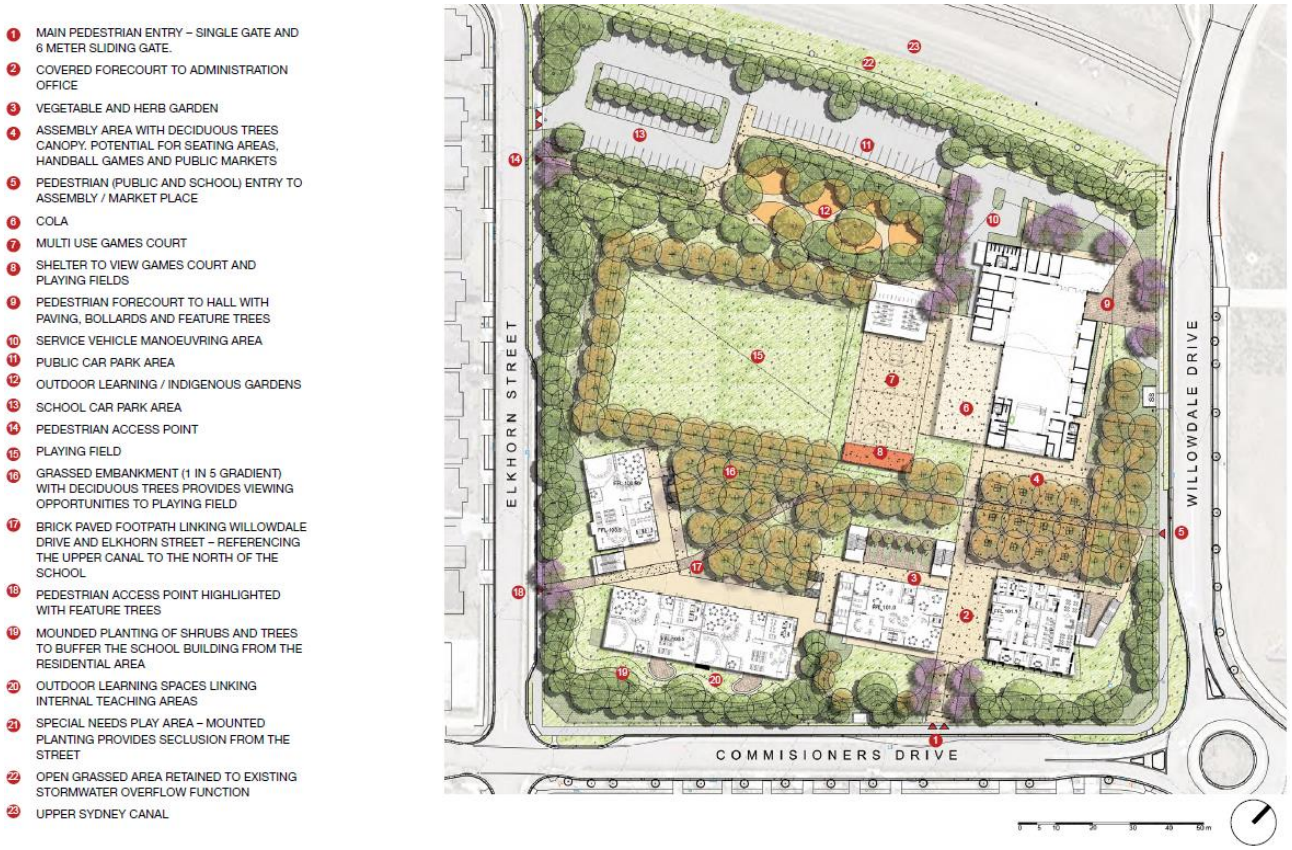
European Heritage

As the Upper Canal transverses through the landscape to the north of the site, recognition of the importance of it has been addressed through the sinuous brick-paved pedestrian link across the site.

Indigenous Heritage

A recognition of the D'harawal people, the traditional owners of the land on which the proposed development is located and waterways adjacent to the proposed development is integrated through the selection of landscape planting. Through incorporating water play into the landscape with water flowing over rocks/dry creek beds fed by a hand pump within the play space acknowledges the indigenous heritage of the site.

Figure 13: Landscape master plan



Source: Taylor Brammer Landscape Architects

3.6 Transport and Accessibility

A Transport Impact Assessment (TIA) has been prepared by ASON Group and is attached at Appendix I. The TIA provides an assessment of the relevant access, traffic and parking characteristics of the development and the impacts of the development on the local road, parking and active transport environment. These details are summarised below.

3.6.1 Vehicular Access

The staff car park is located along the western boundary of the site and will be accessed via a two-way driveway to Elkhorn. Arrival access will also be available via the one-way internal driveway from Willowdale Drive. Drop-off and pick-up (DOPU) demand will be provided for in both Commissioners Drive and Elkhorn Street, both will be signposted for short-term parking during school peak periods. The car park will accommodate a total of 100 spaces. Refer to Appendix I for more detail.

A waste collection area is located off Elkhorn Street within the staff car park. Waste collection vehicles will enter the site strictly outside of proposed development peak periods from Willowdale Drive, stop and collect the waste, then depart the Site to Elkhorn Street via a one-way internal driveway.

For further detail, refer to Appendix I (TIA) and Section 6.4 of this EIS.

3.6.2 Pedestrian Access

A shared path is provided on the school side of the road along each of the site frontage roads. This allows for immediate access to the school's access points in Commissioners Drive, Willowdale Drive and Elkhorn Street.

Proposed pedestrian refuges are located within the median approaches on each leg of the Willowdale Drive & Commissioners Drive intersection. As part of the SSDA, a zebra crossing is proposed in Willowdale Drive, west of Commissioners Drive which would link the existing shared path crossing points on both sides of Willowdale Drive. The implementation of these provisions will contribute to a safe and efficient active transport connectivity between the proposed development and the entire East Leppington precinct active transport network.

3.6.3 Traffic

ASON Group has undertaken a detailed review of the Roads and Maritime Services (RMS) School Survey, identifying schools with similar characteristics to the proposed development. A summary of the RMS surveyed schools has been provided at Table 2 of Appendix I. Data was adopted from Harrington Street Public School as it was identified with the most similar characteristics to the proposed development and is located in close proximity to the site. As such, it is estimated that proposed development will have the following trip generation:

- AM school peak hour: 638 vehicle trips
- PM school peak hour: 526 vehicle trips

For more information, refer to Appendix I.

3.6.4 Parking

The proposed car park is located at the north corner of the site off Elkhorn Street. It would provide a total of 100 off-street parking spaces, thus compliant with the requirements of the Campbelltown DCP. The proposed number or parking spaces would provide additional capacity for the use of the joint-use portion of the hall, however, that is subject to continued consultation with Campbelltown Council which is progressing.

3.6.5 Bus

The proposed local route illustrated in Figure 14 provides excellent coverage of the East Leppington Precinct (ELP). However, there is potential that the frequency of the local services along this route will not be sufficient in accommodate the peak school demand. The TIA recommends a school bus route to reduce the reliance on cars for dropping and collecting children from the school as the majority of East Leppington precinct is outside of the primary school's 400 m walking catchment.

Figure 14: District and local bus services

Source: Campbelltown City Council

Although the proposed local route provides sufficient coverage of ELP, it still holds the potential of insufficient frequency to accommodate the peak school demand. Further, as previously mentioned, the majority of ELP is outside the proposed development's 400 m walking catchment, the provision of additional school period services along this route will support reducing car trips.

3.6.6 Bicycle

A comprehensive bicycle network is proposed for the overall ELP linking the Willowdale town centre, the proposed development, recreational facilities and residential areas internally; and then with the sub-regional and regional cycle network and public transport interchanges.

The bicycle network primarily consists of off-road shared paths as well as on-road cycle lanes. In the vicinity of the Site, shared paths are provided directly adjacent to the School in Willowdale Drive, Commissioners Drive and Elkhorn Street.

Further, bicycle parking rails will be provided for students and staff at the southern side of Block C and D, also on the western side of Block F. This will be accompanied with end of journey facilities including showers and lockers.

3.7 Waste

3.7.1 Construction Waste

The proposed development will comply with the intent of the Construction Waste Management Plan found in Appendix W to ensure waste is transported to the appropriate waste facility. The proposed development will also ensure that where possible, cut and fill is reused, and where possible, other waste will be reused or recycled. It is expected that detailed management of construction waste would be incorporated into the Construction Environmental Management Plan and its sub-plans (including Construction Waste Management Plan) once the proposed development is approved, and as part of its consent conditions.

3.7.2 Ongoing Waste

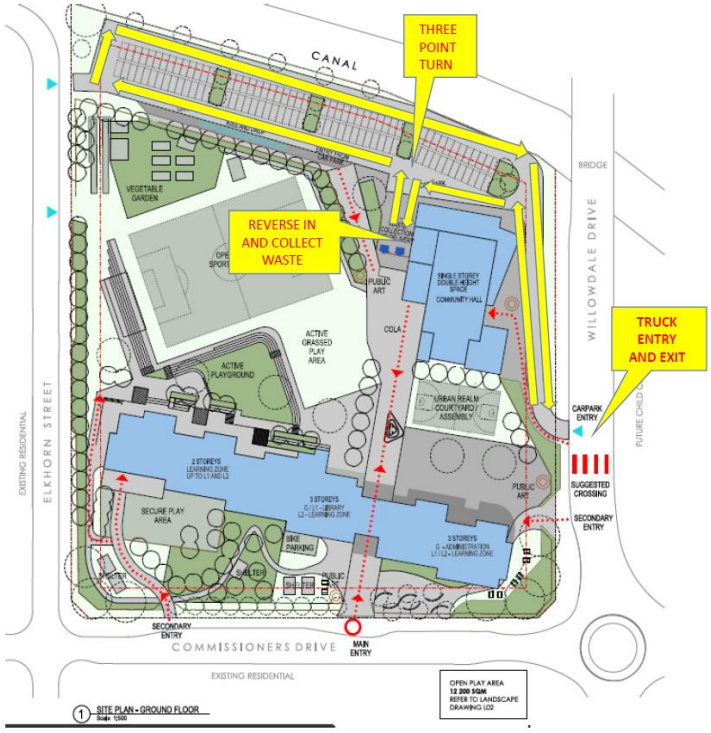
An Operational Waste Management Plan has been prepared by Environmental Management Pty Ltd in Appendix W. This report states that a Waste Collection Point has been incorporated into the design, including a waste storage and pad area.

Figure 15: Waste Collection Zone

Source: ECCELL Environmental management

It is proposed general waste would be held in 4 x 1,100L, 7 x 660L or 18 x 240L garbage bins. It is proposed general recycling would be held in 2 x 1,100L or 4 x 660L, or 9x 240L garbage bins. Bins will be located around the school and correctly labelled to ensure waste is collected in separate bins. Waste collection trucks will enter through the car park entry and will be collected from the 'reverse in and collect waste' point, outlined in Figure 15 and Figure 16.

Figure 16: Waste collection points and traffic flow



Source: ECCELL Environmental management

3.8 Site Services

An Infrastructure Management Plan has been prepared by Hansen Yuncken and is attached at Appendix T. The report provides an overview of existing and required infrastructure services.

The report confirms that a new 1000 kVA substation will be provided, although the final substation location and other details are subject to change.

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

- The new substation will connect to a new main switchboard located within the hall building and distribute power to the buildings.
- The new substation will connect to a new main switchboard located within the Hall building. The main switchboard will supply power to sub-distribution boards located throughout the various buildings on campus. This will consist of submains cable which originate at the main switchboard and are reticulated through either a building or underground to supply power to distribution board, mechanical switchboards and other miscellaneous load centres requiring a power supply.
- A new telecommunications fibre connection will be provided to the proposed school. A communications room / campus distributor will be provided within the administration / library buildings for the school to which the incoming telecommunications connection will be reticulated. These rooms will serve as the site main communications room from which fibre optic cable links will be established to the various building distributor provided throughout the school.
- The school will be provided with a combination of artificial and natural lighting sources. All artificial lighting proposed will be specified to achieve the energy efficiency ratings required and will be linked to the school's Building Management System (BMS). A computer monitored single point emergency exit / lighting system is proposed for the new school. Each emergency fitting will be LED and complete with backup battery.

- External lighting will be provided to nominated spaces on campus such as car parks, access roads and pedestrian pathways. It is proposed that external lighting will be controlled through a time lock and PE cell system.

- Closed Circuit Television (CCTV) coverage will be provided in various areas such as sick bays and libraries. Alarm call buttons will be installed in various areas such as sick bays, clinics, access toilets and access showers. An intruder detection alarm system will be provided tall subsidiary exit doors to the school library.

- Ceiling and wall mounted fans will be installed in accordance with Educational Facilities Standards Guidelines (EFSG). Ceiling fans will be provided together with fan speed controllers from a recognised and approved supplier that offers equipment that has been assessed as suitable for school use.

- The proposed development will incorporate a photovoltaic solar power system. The system will be provided by a separate subcontractor. Provisions have been made within the electrical specifications.

- An existing 150 mm diameter water main is available along Commissioners Drive. The connections to water mains have not been finalised. An application separate to this EIS will be submitted to Sydney Water for review and approval.

- Within the site boundary is a sewerage maintenance shaft and multiple maintenance holes. It is a 225 mm diameter PVC pipe and runs along the north-west to north-east boundary of the site. At this stage, the connection to the sewer main has not been finalised. An application separate to this EIS will be submitted to Sydney Water for review and approval.

- There are no known gas services on site. The closest gas main to the site is located along Willowdale Drive. The connection for the gas main has not been finalised. An application will be submitted to Jemena for approval prior to construction.

- The site has no formal drainage on site. All current overland flows travel towards the north eastern side of the site into a stormwater drainage pipe which drains into a bio-retention basin and discharges into Bonds Creek Tributary.

- Learning spaces such as homebases are to be served by a mixed mode ventilation strategy utilising natural ventilation for space cooling when possible. Administration and staff areas are to be naturally ventilated and heated only.

- The extent of fire services provided are wet services only and include fire hydrants, fire hose reels and portable fire extinguishers. Buildings will also be provided with a smoke detection and alarm system. Portable fire extinguishers will be installed in accordance with the requirements of the Building Code of Australia AS 2444. Generally, places of potential hazard will be provided with extinguishers, such as electrical switch room, mechanical and plant rooms.

3.9 Stormwater Management

A stormwater design report was developed by Northrop, see Appendix G. This identifies the site is not situated on flood prone land and therefore is not subject to any flooding.

The site is to connect to the legal point of discharge located at the north western corner within the existing stormwater easement. A series of grassed swales are proposed around the school to convey overland flow to the discharge location. All stormwater works will be designed and installed in accordance with Managing Urban Stormwater: Soils and Construction “The Blue Book” 2004 (4th edition).

3.10 Staging and Construction Management

3.10.1 Construction Staging

The proposed development is to be constructed using a combination of offsite and onsite construction techniques to deliver a high-quality state of the art school whilst minimising construction impacts associated

with onsite works as much as possible. As outlined in the Construction Traffic Management Plan prepared by ASON Group at Appendix L, the construction will proceed in the following manner:

Stage 1 - General earthworks and benching and the construction of temporary access will be developed. This will also form the final access way for the proposed development via Willowdale Drive.

Stage 2 - The general construction and landscape works will be undertaken.

The construction will take approximately nine months from commencement. The proposed development is staged for construction purposes only. It is expected that the conditions of consent for the proposed development would include conditions related to staging that allow suitable provisions for the proposed development to prepare, submit and updated strategies, plans or programs to suit construction requirements that would be subject of approval from the Planning Secretary.

3.10.2 Construction Hours

All works will be in accordance with standard construction working hours and would be as follows:

- Monday to Friday: 7am - 6pm
- Saturday: 7am - 3pm.

No construction works will be undertaken on Sundays and Public Holidays.

Out of office works will be required from time to time, as well as deliveries of heavy machinery, and materials may be required out of the proposed hours of operation to ensure conformance is met regarding overriding requirements of RMS.

3.11 School Operation

The proposed development will accommodate 1,012 students in accordance with EFSG, with the ability to support population changes over time and enrolment needs within the school's catchment. The proposed school will have around 65 full time staff to support school operations.

The proposed development would operate between 9 am to 5 pm Monday to Friday during school term. The design incorporated Out of School Hours facilities, which would operate between 6:30 am to 9 am and from 3 pm to 6:30 pm Monday to Friday during school term, and 7 am to 6 pm Monday to Friday during school holidays.

The joint use portion of the school hall is being discussed with Council. Exact hours for this are not yet determined and would be subject to negotiations between the school and the community/Council.

3.12 Accessibility and BCA

A BCA Design Compliance Review has been prepared by Group DLA see Appendix V. This confirms that the proposed development will accord with the relevant principles and provisions of the Building Code of Australia 2019 subject to the installation of nominated fire safety systems and compliance with Conditions of Consent.

4 STRATEGIC PLANNING CONTEXT

In accordance with SEARs, relevant strategic planning policies are addressed below:

- *NSW State Priorities*
- *The Greater Sydney Region Plan, A Metropolis of Three Cities*
- *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*
- *Better Placed: An integrated design policy for the built environment for New South Wales (GANSW, 2017)*
- *Crime Prevention Through Environmental Design (CPTED) Principles*
- *Healthy Urban Development Checklist, NSW Health*
- *Greater Sydney Commission's Western City District Plan*
- *Campbelltown City Council Growth Centre Precincts Development Control Plan 2016.*

The strategic policies listed above are considered in further detail below.

4.1 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:** 150,000 new jobs by 2019.

The proposed development will create 394 jobs during construction and around 65 full-time staff during operation. Additionally, the commencement of the New East Leppington School will increase job opportunities in teaching and administration roles.

- **Delivering Infrastructure:** Key metropolitan, regional and local infrastructure projects to be delivered on time and on budget.

The proposed development is a significant development opportunity for the state providing vital services for the local community and creating job opportunities to support the growing population of Greater Sydney. As the precinct continues to grow, the delivery of the school will reduce enrolment pressure off existing local schools.

- **Improving education results:** Increase the proportion of NSW students in the top two NAPLAN bands by eight per cent by 2019.

The proposed development will contain special programs rooms, learning spaces within the library, and facilities for special needs students. This will provide opportunity to develop and improve on their literacy and numeracy skills.

4.2 The Greater Sydney Region Plan, A Metropolis of Three Cities

The Greater Sydney Region Plan, A Metropolis of Three Cities aims to rebalance growth and deliver benefits to residents across Greater Sydney through implementing appropriate infrastructure, productivity and liveability guidelines.

Between 2016 and 2036, several infants aged 0-4 years is projected to increase by 85,000, with 333,000 more children and young people aged 5-19 than today. This strategy acknowledges there is an increase in number of children across the region, leading to pressure for access to education services. The proposed development addresses the relevant objectives of this plan below.

- **Objective 1:** The proposed development will support the three cities through delivering education infrastructure in Western Sydney. This will support the population growth in the area, and across the region.

- **Objective 2:** The proposed development will accommodate the growing population of children and respond to the residential and employment growth in East Leppington.

- **Objective 3:** The proposed development is responded to the future needs of social and school infrastructure in Greater Sydney. It will provide a modern, and innovative learning space that will respond to the needs of a young growing population.

- **Objective 6:** The proposed development supports this objective, providing a service and infrastructure to meet the significant increase in young children. Schools are essential infrastructure, and this development will support young families in the South West Growth Area.

- **Objective 7:** The proposed development will contribute to a more healthy, resilient and socially connected community. It is well placed to support a vibrant neighbourhood and will increase foot and cycle traffic within the area. North of the proposed development provides for open space and sport facilities contributing to an active healthy lifestyle.

- **Objective 14:** The proposed development provides safe walking and cycling links to the new school and encourages children to be more active through incidental exercise. As it is already close to established bike paths, residential development and bus routes, students and teachers will be encouraged to use these for active and public transport. In result, this will reduce car use and congestion on the roads.

4.3 Future Transport Strategy 2056

Future Transport Strategy 2056 sets a 40-year vision, directions and outcomes framework for customer mobility in NSW. It encompasses a suite of strategies and plans for transport to provide an integrated vision for the state.

This strategy acknowledges children are an important group of customers who need access to safe accessible transport to school. It emphasises that safety of customers is the highest priorities and continues to educate people on encouraging save behaviours within children. In addition, children will be encouraged to use active travel, and public transport.

The proposed development supports this strategy through providing multiple bicycle storage areas across the vicinity of the site. Please refer to Section 5.5 regarding the support for active travel and public transport use.

4.4 State Infrastructure Strategy 2018 – 2038 Building the Momentum

The *State Infrastructure Strategy 2018 – 2038 Building the Momentum* plan is a 20-year strategy that sets out Infrastructure NSW's independent advice on the current state of NSW's infrastructure and the needs and priorities within the next 20 years. Their strategic objective for education in NSW is to deliver infrastructure to keep pace with student numbers and provide modern, digitally enabled learning environments for all students.

This strategy acknowledges NSW's population is forecast to growth to over 12 million by 2056. To support this growing population, supporting infrastructure such as schools are required for a fast-growing population. Nearly 200,000 more students will be enrolled into public schools by 2036.

The proposed development responds to the population pressure through the provision of social infrastructure and building schools. This development will support a young population that will benefit from well designed, modern designed school infrastructure. It embodies this strategy by providing a variety of open and shared learning spaces combined with practical activity area to deliver a modern and innovative learning experience for children.

4.5 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. Habit often prevents alternative use of transport. This development will support the ability for children to get to school every day using new facilities such as bicycle parking areas and future cycle ways to the East Leppington neighbourhood precinct.

There is an off-road shared pedestrian and cycle path on Willowdale Drive, Commissioners Drive and Elkhorn Street connecting the site with the neighbouring residential precinct. Regional cycle routes are still under development. Despite this, the existing cycle route will continue the encourage a healthier travel option for students and teachers.

A Green Travel Plan (GTP) was prepared by ASON Group and is attached at Appendix J. The GTP is intended to encourage the use of active transport. The GTP includes mode share targets for cycling of 5% for the school's staff and 10% for students. The GTP includes a number of actions to promote active transport including:

- Establishing a Travel Plan Coordinator, in addition to a transport coordinator, to take responsibility for ongoing review and monitoring of the GTP.
- Providing a 'Travel Welcome Pack' to new staff highlighting alternate modes of transport.
- Lobbying Council/DPIE for improved cycle connection in the broader area and an updated cycle strategy.
- Promotion of participation in community activities which encourage cycling such as National Ride2Work Day.
- Provision and maintenance of clearly signposted bicycle parking within the site.
- Provision of sufficient secure parking and 'End of Journey' facilities.

4.6 Sydney's Walking Future 2013

Sydney's Walking Future (2013) aims to promote walking as an effective means of transport by encouraging the investment in creating more convenient, permeable and safer walking networks.

Walking is part of everyday life and is an integral part of Sydney's transport system. There are various barriers to walking, such as carrying heavy bags, habit and multi-destination trips, dropping children at school. As the population increases, an increased number of children in NSW will be walking. The site for the development is surrounded by newly built residential, therefore walking for some children could be used as their preferred mode of transport to school.

The proposed development supports Safety Around Schools Program, by providing a safe environment for young pedestrians, focusing on the visibility of school zone signage.

The proposed development encompasses connected and open walkways providing safe access for students to and from school. The clear open space aims to provide walkway transitions between various areas and promote easy and direct circulation, enhanced by the proposed wayfinding signage. An accessible walkway is also provided to facilitate the connection to the hall, connecting to retail and open space networks to the north of the site. Shared paths are also provided along each of the site frontage roads allowing immediate access to the school's access points in Commissioners Drive, Willowdale Drive and Elkhorn Street.

The GTP prepared by ASON Group, and attached at Appendix J. The GTP includes mode share targets for walking of 5% for the proposed school's staff and 20% for students. In addition to the measures outlined for active transport in relation to cycling, The GTP includes a number of actions to promote walking including:

- Promoting participation in community activities and events such as Walk to Work Day.
- Development of school-specific activities designed to get people walking with a reward for participation. The GTP provides the example of a competition to see which staff and/or student each year can get the most steps in a given time period.

4.7 Sydney's Bus Future 2013

Sydney's Bus Future (2013) plan seeks to deliver a simpler and more efficient bus service to cater to the current and future growth of Greater Sydney.

As outlined within the Traffic Impact Assessment completed by ASON Group in Appendix I, the proposed development will present the potential for accompanying expansion in the bus service network to connect key destinations within the region.

The GTP completed by ASON Group and attached in Appendix J includes mode share targets for bus travel for 4% for the school's staff and 15% for students. The GTP's action plan includes specific actions to encourage greater use of public transport such as:

- Displaying bus route maps and timetables on noticeboards, regular flyers, emails and social media.
- Advocate for TfNSW to improve public transport services in response to increase development within the surrounding area.
- Undertake a review to promote initiatives for staff using public transport.

4.8 Crime Prevention Through Environmental Design (CPTED) Principles

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

CPTED aims to create a perception that the costs of committing crime is greater than the likely benefits. This can be conducted by applying four key strategies to limit crime. These are assessed against the proposed development in Table 2: CPTED principles assessment below.

Table 2: CPTED principles assessment

Principle	Comment
Territorial Re-enforcement	The site has a frontage to the public domain along Willowdale Drive, Commissioners Drive and Elkhorn Street. The proposed development will be fenced in accordance with the SINSW security requirements therefore delineating ownership and access. The built form, signage and fencing clearly define the entry points.
Surveillance	As the proposed development delineates clear circulation paths, it promotes a strong natural surveillance of both eh public domain and the interior areas of the site. During weekends and after-hours periods, the site will be secured with site fencing and the building will be fitted with a Back to Base Alarm System. Additionally, external lighting will be designed in accordance with the relevant Australian Standards & Schools Security Unit (SSU) requirements.
Access Control	The proposed development intends to utilise fencing to all boundaries and with gates to provide controlled access points. Fencing will not

	restrict surveillance opportunities, rather constructed with optically permeable materials in accordance with EFSG & SSU.
Space/Activity Management	Space and activity management is achieved through the design of the buildings orientated towards the exterior of the site, promoting the protection of the interior open space from the public domain. During school operation, students will be contained generally within the interior of the site. Graffiti resistant materials will be used wherever practicable to assist in removal.

4.9 Healthy Urban Development Checklist

The *Healthy Urban Development Checklist* (NSW Health) aim is to guide involved organisations to determine whether the proposed development promotes a sustainable and healthy outcome for the community. An increase in population growth needs to be planned for and managed to contribute positively to the health of the community.

The proposed development supports pedestrian movements which will support children walking to school or playing outside in other forms of explicit and incidental exercise. The site for this development is surrounded by newly built residential, therefore walking for some children could be incidental exercise and their preferred mode of transport to school. A comprehensive bicycle network is proposed at East Leppington Precinct connecting the proposed development, Willowdale town centre, recreational facilities and residential areas internally. It will consist of shared paths as well as on-road cycle lanes. This will support objectives found in the *Healthy Urban Development Checklist* and promote positive health benefits to the community.

4.10 Better Placed: An integrated design policy for the built environment of New South Wales

Better Placed (GANSW, 2017) is an integrated design policy that seeks to create a clear approach for places where we work, live and play, ensuring the importance of good design as the centre of all development processes. New development can improve quality of life for people and enhance the environment. The design of buildings, place and space that supports inclusiveness, connectivity and diversity is important to provide optimal opportunity and reduce social disparity.

The design of the proposed development will provide a vibrancy to the neighbourhood and considered the design of street frontage to ensure it provides a welcoming and accessible environment. The proposed development will be designed to be practical and purposeful, resulting in better learning and teaching outcomes, and increased productivity.

4.11 Western City District Plan

The *Western City District Plan* (Greater Sydney Commission), updated in March 2018, includes a range of priorities and actions to appropriately support the strategic growth of Sydney's Western City District. The *Western City District Plan* identifies the following:

- Campbelltown will have the greatest growth in students in the District (13,541 students).
- The NSW Department of Education estimates an extra 77,978 students will need to be accommodated in both government and non-government schools in the district by 2036.

As the figures above projects significant increase of students by 2036, it is necessary to provide appropriate school infrastructure to cater to the growth. Evidently, it has been marked as a priority in the Western City District Plan that:

> *"Planning for new schools, and the use of existing schools, must respond to growth and changing demand in innovative ways such as more efficient use of land, contemporary design, greater sharing of spaces and facilities, and flexible learning spaces. Safe walking and cycling links to schools encourage young people to be more active and better connect schools with local communities."*

As outlined Planning Priority W3, facilities such as schools can be the focus of neighbourhoods. School design must consider how it contributes vibrancy to a neighbourhood, and how it can provide safe and easy access for children. Schools will require safe active transport connections which can be used by all types of people.

As outlined in Planning Priority W4, to foster healthy, creative and culturally rich, socially connected communities, walkable streets are required. This will provide connections from homes, to schools, and to daily needs and facilities. The design of the development has considered pedestrian connections to residential development in the area.

5 STATUTORY PLANNING CONTEXT

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

- *Biodiversity Conservation Act 2016*
- *State Environmental Planning Policy (Sydney Region Growth Centres) 2006*
- *State Environmental Planning Policy (State & Regional Development) 2011*
- *State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017*
- *State Environmental Planning Policy No. 64 – Advertising and Signage*
- *State Environmental Planning Policy No. 55 – Remediation of Land*
- *Draft State Environmental Planning Policy (Remediation of Land)*
- *Draft State environmental Planning Policy (Environment and Permissibility).*

The relevant controls contained within the statutory planning policies listed above are elaborated in further detail below.

5.1 Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act 2016* (BC Act) aims to maintain a healthy, productive and resilient environment for the present and future by implementing provisions, consistent with the principles of ecological sustainable development. These provisions will provide a guideline to maintaining and conserving biodiversity on a State scale.

A Biodiversity Development Assessment Report waiver was requested on 30 November 2018 by Narla Environmental.

A site assessment was undertaken of the native vegetation and threatened species habitat values. The assessment found a total of 14 flora species across the site which were all common groundcovers and two fauna species, also common, mobile grazing species. The site assessment found no native trees occurring on and around the proposed development site. The proposed development would not impact upon any area of remnant, native vegetation. There are no threatened species or ecological communities found on the site, nor are considered likely to occur.

A table outlining the significance of impacts of the development on biodiversity values is outlined in Appendix S. The proposed development requests a Biodiversity Development Assessment Report Waiver (see Section 6.10)

5.2 State Environmental Planning Policy (Sydney Region Growth Centres) 2006

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Growth Centres SEPP) sets out the provisions for development that is located within the Sydney Priority Growth Areas. Appendix 10 Campbelltown Growth Centres Precinct Plan of the Growth Centres SEPP identifies the site of East Leppington Primary School. As such, development controls relating to the site are outlined in this Precinct Plan.

5.2.1 Zoning

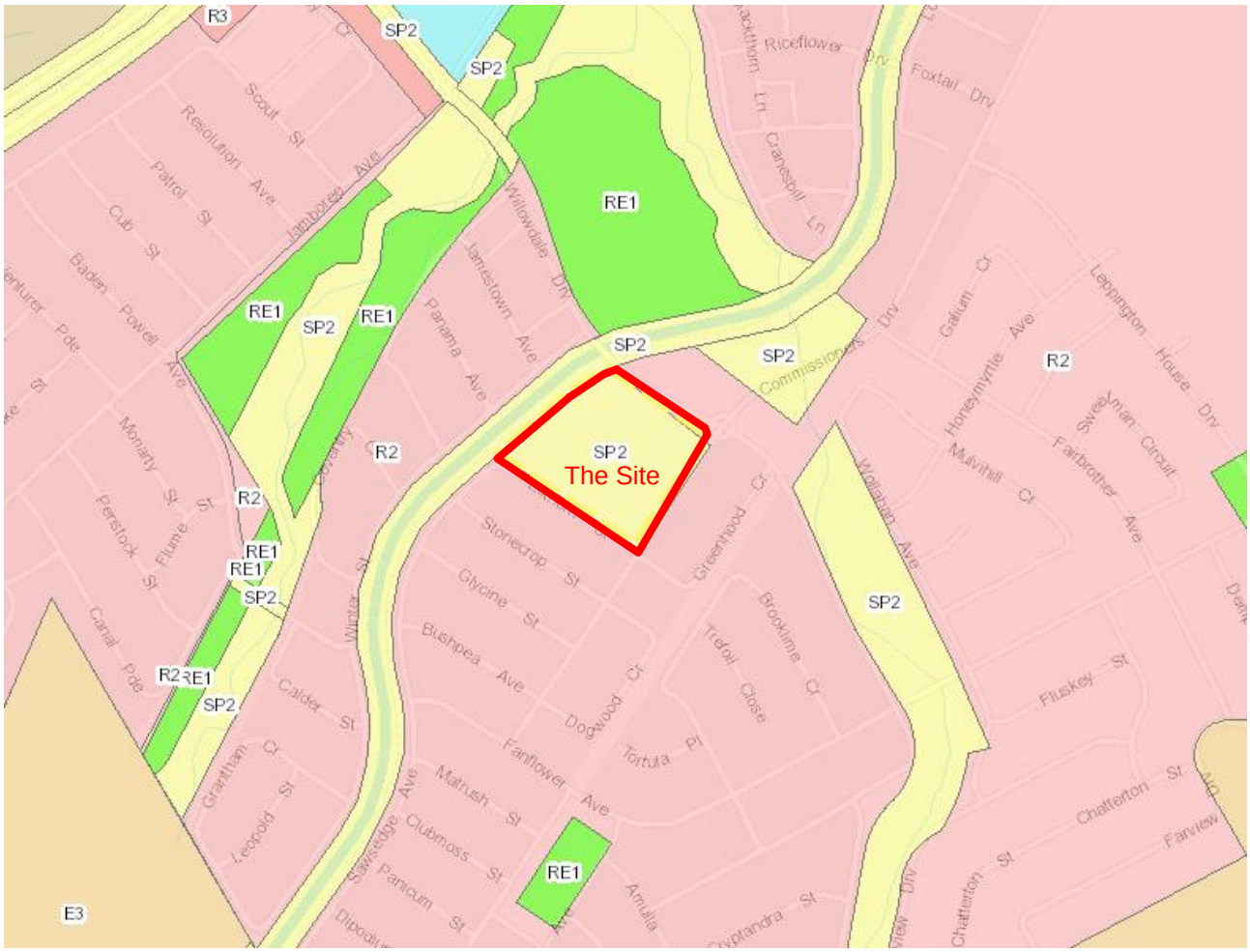
Under Appendix 10 of the Growth Centres SEPP, the subject site is zoned SP2 Infrastructure – Educational Establishment.

Educational establishments are permitted with consent in this zone. Pursuant to the Growth Centres SEPP, an educational 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 proposed development is for a school, which is a permitted land use with development consent under Appendix 10 of the Growth Centres SEPP.

Figure 17: Subject site on zoning map



Source: Growth Centres SEPP Lot size via DPIE Planning Portal

Table 3 below provides an assessment of the proposed development against the relevant provisions of the Growth Centres SEPP.

Table 3: Growth Centres SEPP 2006 assessment

State Environmental Planning Policy (Sydney Region Growth Centres) 2006		
Provision	**Comment**	**Compliance**
4.3 Height of buildings (1) The objectives of this clause are as follows:	The proposed development has a maximum height of 14.82m.	Yes.

(a) to establish the maximum height of buildings, (b) to minimise visual impact and protect the amenity of adjoining development and land in terms of solar access to buildings and open space, (c) to facilitate higher density development in and around commercial centres and major transport routes. (2) The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.	There is no maximum height stated in the Growth Centres SEPP 'Height of Building Map'.	
4.5 Calculation of floor space ratio and site area (1) Objectives The objectives of this clause are as follows: (a) to define floor space ratio, (b) to set out rules for the calculation of the site area of development for the purpose of applying permitted floor space ratios, including rules to: (i) prevent the inclusion in the site area of an area that has no significant development being carried out on it, and (ii) prevent the inclusion in the site area of an area that has already been included as part of a site area to maximise floor space area in another building, and (iii) require community land and public places to be dealt with separately.	The floor space ratio (FSR) has been calculated according to the gross floor area (GFA) and site area. The FSR of the proposed development is 0.25:1.	Yes.
(3) Site area In determining the site area of proposed development for the purpose of applying a floor space ratio, the site area is taken to be: (a) if the proposed development is to be carried out on only one lot, the area of that lot, or (b) if the proposed development is to be carried out on 2 or more lots, the area of any lot on which the development is proposed to be carried out that has at least one common boundary with another lot on which the development is being carried out. In addition, subclauses (4)–(7) apply to the calculation of the site area for the purposes of applying a floor space ratio to proposed development.	The proposed development is carried out on only one lot, requiring a site area. The site area of the proposed development is 30,018 m^2.	Yes.
(4) Exclusions from site area The following land must be excluded from the site area: (a) land on which the proposed development is prohibited, whether under this Precinct Plan or any other law, (b) community land or a public place (except as provided by subclause (7)).		
(5) Strata subdivisions The area of a lot that is wholly or partly on top of another or others in a strata subdivision is to be included in the calculation of the site area only to the extent that it does not overlap	N/A	N/A

with another lot already included in the site area calculation.		
(6) Only significant development to be included The site area for proposed development must not include a lot additional to a lot or lots on which the development is being carried out unless the proposed development includes significant development on that additional lot.	The development is proposed on one lot.	N/A
(8) Existing buildings The gross floor area of any existing or proposed buildings within the vertical projection (above or below ground) of the boundaries of a site is to be included in the calculation of the total floor space for the purposes of applying a floor space ratio, whether or not the proposed development relates to all of the buildings.	The GFA of each building and each floor has been calculated within the total floor space. The total GFA of the proposed buildings is 7540.35 m^2.	

5.3 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. The proposed development is defined as 'Educational establishments' under the *State Environmental Planning Policy (State and Regional Development) 2011* clause 15:

> *(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 proposed development is for the purpose of a new school and thus is SSD in accordance with Clause 15(1).

5.4 State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017

State Environment Planning Policy (Educational Establishment and Child Care Facilities) 2017 (Education SEPP) provides state-wide planning controls for Educational Establishments. The Education SEPP came into force on 1 September 2017 and replaces the education provisions in the *State Environmental Planning Policy (Infrastructure) 2007*.

According to Clause 35(6) of the Education SEPP, the following must be taken under consideration for the proposed development to be permitted with consent:

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

Pursuant to Clause 35(6), the design principles are outlined in Schedule 4 of the Education SEPP and are to be considered against the proposed school development. The proposed development responds to these design quality principles in Table 4 below.

Table 4: Design quality principles

Design Quality Principles	Comment
Principle 1 – context, built form and landscape	The design for the proposed development allows for breezes and sunlight to penetrate the centre of the site. It utilises the landscape to encourage wildlife back to the school. The massing of the building and landscape design responds to this via avoiding continuous built forms and integrating endemic planting on site. The main functions of Administration, Library and Hall are designed to front both Commissioners Drive and Willowdale Drive to clearly emphasise the entry points. The potential joint community use determines it location on the major road closest to the centre of the suburb's community activities. The gradient of the land has informed the building massing with massing steps down the slope implemented to ensure entry points are close to being at grade with the public domain. The sense of ease and accessible entry encourages community interaction. The three storey buildings have an increase setback to mitigate any environmental impacts. Further, the buildings are situated towards a north facing orientation to maximise sunlight, correspondingly allocated with appropriate sun shading to control solar gain. The overall form, site layout and landscape approach ensure that negative impacts for neighbours have been mitigated.
Principle 2 – sustainable, efficient and durable	The proposed development has been designed with consideration of ESD principles. The building orientation, sun shading and passive thermal design elements are a steppingstone to creating a sustainable building. This is further enhanced by the inclusion of a rainwater tank used for irrigation, solar power and the selection of long lasting, low maintenance materials. The combination of concrete and steel framing provide for the structural system of the building. This structure alleviates pressure off internal walls allowing for reconfiguration in the future if deemed necessary. Through collaboration with Steensen Varming, the building design has been optimised to facilitate good daylighting and natural ventilation. The ESD report (refer to Appendix N) further elaborates on energy conservation, water conservation and other relative sustainability measures.
Principle 3 – accessible and inclusive	The site has been designed to provide and accessible ground plane with the main premise such that the buildings are all served by ramps and/or lifts. The design of the open space aims to provide clear walkway transitions between various areas creating equitable access for all users. The site layout is clear and simple, promoting smooth and direct circulation. This will be enhanced by wayfinding signage. The layout of the various functions that can be used by the community have been designed to facilitate secure after hours use. The hall and library are located at the street edge with clearly defined entries to allow easy and delineated access by the community. The school has the potential to connect to the surrounding community open spaces via the existing pedestrian and bicycle network.
Principle 4 – health and safety	The proposed development is designed to ensure a healthy and safe learning environment is developed through allowing natural light, ventilation and acoustics.

	The school site is to be fenced around the perimeter of the school ensuring security and safety for students. The proposed landscaping bordering the site also contributes to providing security yet integrated into the public domain. There are multiple entrances to manage the large student numbers on site, with these access points opening at the start and end of the day only. During school hours, the access points will be locked to ensure that all visitors and students enter and leave via the main entry during these hours.
Principle 5 – amenity	The objective of the proposed layout design is to provide a variety of teaching and learning spaces that have access to natural light and ventilation and have good internal acoustics to facilitate comfortable learning environments. The typical learning clusters contain four homebases, a large practical activity/maker space area and presentation space. This arrangement provides opportunity for future focussed learning within a range of fixed and flexible spaces. These spaces are complemented on site by special programs rooms, learning spaces within the library and facilities for special needs students. The hall has the potential for community joint use and as such provides the opportunity for the school to have access to a larger facility. In addition, a range of outdoor learning and play spaces are provided with the aim to encourage learning from the natural environments and the buildings themselves. Some spaces are designed to be multipurpose to cater for a range of school uses as well as community use through coordination with the school management. This includes the Hall, Library and playing fields. The layout of the school provides a perimeter street edge building that encloses the main outdoor activities. This has the benefit of protecting the amenity of the local neighbourhood and the safety of the students
Principle 6 – whole of life, flexible and adaptive	These spaces are complemented on site by special programs rooms, learning spaces within the library and facilities for special needs students. The hall has the potential for community joint use and as such provides the opportunity for the school to have access to a larger facility. In addition, a range of outdoor learning and play spaces are provided with the aim to encourage learning from the natural environments and the buildings themselves. Some spaces are designed to be multipurpose to cater for a range of school uses as well as community use through coordination with the school management. This includes the Hall, Library and playing fields. The layout of the school provides a perimeter street edge building that encloses the main outdoor activities. This has the benefit of protecting the amenity of the local neighbourhood and the safety of the students
Principle 7 - aesthetics	The school is designed to provide an articulated and dynamic built form. The Hall building fronts Willowdale Drive, accentuating the entry to facilitate use by the community. This site strategy reinforces its connection to the neighbourhood and provides a school campus that is connected with the wider context. The landscape design, signage and wayfinding strategy reinforce this relationship to site. The site narrative of “Connecting to Country” bring these elements together with a strong connection to the indigenous history and culture. These themes will be explored further during design development to ensure that the local and indigenous history permeate the design. The learning buildings have an articulated façade that provide a subtle playfulness towards the street. The façade employs cantilevered boxes that not only articulate the

	face, but can also be used by the teaching staff to enhance the learning by providing an intimate space within the open learning areas. This is accentuated with the use of accents colours that are drawn from the colours derived by the research in preparing the site narrative. These ideas, combined with the passive environmental principles described above, produces an aesthetic that is both dynamic yet responsive to climate and context. The combination of the building forms and landscape setting will provide a sense of identity for the neighbourhood.

5.5 State Environmental Planning Policy No. 64 - Advertising and Signage

The *State Environmental Planning Policy No. 64 – Advertising and Signage* (SEPP 64) applies to all signage that can be displayed with or without development consent and is visible from any public place or public reserve.

The proposed development will have a school entry sign (3650mm x 300mm x 300mm). Under clause 13 of SEPP 64, the proposed signage is to be assessed against the assessment criteria pursuant to Schedule 1 of the SEPP 64 for development to be permitted with consent. An assessment against relevant criteria of the proposed signage has been undertaken in Table 5 below.

Table 5: Schedule 1 assessment criteria

Schedule 1 Assessment Criteria		
Criteria	**Comment**	**Compliance**
1 Character of the area • Is the proposal compatible with the existing or desired future character of the area or locality in which it is proposed to be located? • Is the proposal consistent with a particular theme for outdoor advertising in the area or locality?	The proposed signage is minor in scale and provide an opportunity for a Dharwal Welcome to country message or other interpretative information. The colours proposed for the sign are supportive of the surrounding environment. It incorporates the representation of water flow and its importance to the East Leppington Area as water catchment, and the canal on the north-western boundary of the school.	Yes.
2 Special areas • 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 proposed signage will use colours drawn from the design of the proposed development. It will not detract from amenity and will be complementary to the surrounding environment.	Yes.
3 Views and vistas • 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?	The proposed signage does not obscure or compromise important views. It also will not dominate skyline, reduce quality of vistas. The proposed development is located in a low residential area and is not in the vicinity of other advertisers.	Yes.
4 Streetscape, setting or landscape • Is the scale, proportion and form of the proposal appropriate for the streetscape, setting or landscape?	The proposed signage is designed to be in proportion with the proposed development, therefore is appropriate for	Yes.

Schedule 1 Assessment Criteria		
• 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? • Does the proposal require ongoing vegetation management?	the site setting. It is sympathetic to the streetscape and surrounding landscape. The proposed signage will positively contribute to the visual interest of the streetscape and provide clear identification of brand and clear direction for students and teachers. The proposed signage is not in the vicinity of existing advertising. The proposed signage does not protrude above buildings, structures or tree canopies, and does not require vegetation management.	
5 Site and building • 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 proposed signage is scaled with the proposed development. It will not be higher than the walls of the proposed development. The proposed signage is modern and clearly identifies the school, using graphics that contribute broadly to the site aesthetics.	Yes.
6 Associated devices and logos with advertisements and advertising structures • 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?	The proposed signage does not have any safety devices, or platforms or lighting devices. It will act as a way-finding tool to identify the letters 'East Leppington Public School'.	Yes.
7 Illumination • 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?	No illumination will be required for both signage therefore this clause is not applicable.	N/A
8 Safety • 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 signage will not reduce safety on public roads, or for pedestrians or bicyclists. It will also not reduce safety by obscuring sightlines from public areas.	Yes.

5.6 State Environmental Planning Policy No. 55 - Remediation of Land

The *State Environmental Policy No 55 – Remediation of Land* (SEPP 55) provides a state-wide planning approach to the remediation of contaminated land. Contaminated land is defined in SEPP 55 and the EP&A Act. as:

> *Contaminated land means land in, on or under which any substance is present at a concentration above the concentration at which the substance is normally present in, on or under (respectively) land in the same locality, being a presence that presents a risk of harm to human health or any other aspect of the environment.*

Pursuant to Clause 7(1) of SEPP 55, consent authority must not grant consent to a development application unless it has considered whether the land is contaminated.

An Environmental Site Investigation was undertaken by Environmental Investigation Services on 30 November 2018 and is attached at Appendix P. The results indicate that the site is suitable for the proposed development with relatively low potential for contamination-related unexpected finds during proposed development works.

The groundwater assessed found elevated concentrations of zinc. The assessment concludes that these elevations could be associated with the leaching of metals from the fill or urban background sources.

The assessment recommends that if in the event that groundwater seepage management or dewatering is required for development, additional testing of groundwater may be required. Dewatering and/or groundwater disposal approvals should be sought from relevant authorities.

The assessment identified saline conditions at the site which warrant management. In result, further investigations for salinity will be undertaken as part of detailed design. A salinity management plan will be prepared prior to the commencement of construction of the site and forwarded to DPIE for information.

5.7 Draft State Environmental Planning Policy (Remediation of Land)

DPIE is currently undertaking a review of SEPP 55 and has publicly exhibited a proposed new Remediation of Land SEPP. DPIE will next identify further steps in consultation and plan making which will include further consultation with stakeholders.

New provisions which are proposed to be added in the new Remediation of Land SEPP include:

- Requiring all remediation works that is to be carried out without development consent, to be reviewed and certified by a certified contaminated land consultant.
- Categories remediation work based on the scale, risk and complexity of the work.
- Require environmental management plans relating to post-remediation management of sites or ongoing operation, maintenance and management of on-site remediation measures (such as a containment cell) to be provided to council.

The main implication of these changes to the proposed development would be that any remediation works would need to be reviewed and certified by a certified contaminated land consultant.

5.8 Draft State Environmental Planning Policy (Environment Permissibility)

A new proposed State Environmental Planning Policy (Environment Permissibility) has been proposed by DPIE to combine seven existing SEPPs including the No.2 SREP, into a simple, modern and accessible instrument. The proposed SEPP (Environment) aims to deliver a planning framework that maintains and improves environmental protections in existing SEPPs through:

- Consolidating existing state level planning provisions into a single instrument
- Providing a flexible format capable of being expanded and amended to cater for future needs
- Reflects and coincides with other legislation and environmental planning instruments
- Maintains and improves environmental protections in existing SEPPs.

The significance of these changes to the proposed development would be to encourage proper management, development and conservation and any implications the proposed development might have on the surrounding environment. It will provide a smoother and clearer guideline in maintaining the existing natural environment to the proposed development.

5.9 Campbelltown City Council Growth Centre Precincts Development Control Plan 2016

Campbelltown City Council Growth Centre Precincts Development Control Plan (DCP) 2016 establishes planning, design and environmental objectives and controls to provide guidance for developments within Campbelltown LGA. It is to be read in conjunction with the Growth Centres SEPP and Appendix 10 Campbelltown Growth Centres Precinct Plan under the Growth Centres SEPP.

In accordance with Clause 11 of the *State Environmental Planning Policy (State and Regional Development) 2011*, the application of DCPs are excluded when assessing SSD projects. The proposed school has been assessed in the interest of provided a comprehensive application, and to fulfil the obligations of the proposed school under the issued SEARs for the project.

Table 6 below provides assessment against the provisions of the Campbelltown City Council Growth Centre Precincts DCP.

Table 6: Campbelltown City Council Growth Centre Precincts DCP 2016

2 Precinct Planning Outcomes		
Provision	**Comments**	**Compliance**
2.2 The Indicative Layout Plan	The overall site plan outlined in Appendix B identifies the road network, public transport routes, open space, drainage networks, and location of the development. It is acknowledged that there is a heritage item and adequate protection of the Upper canal is identified in a Heritage Impact Assessment in Appendix Y.	Yes.
2.3 East Leppington Precinct Vision	The proposed development will meet the needs of a diverse and growing population, in East Leppington Precinct. It aligns with Ecological Sustainable Development principles outlined in Appendix N and compliments the historic, environmental and visual elements of the East Leppington precinct.	Yes.
2.6 Crime Prevention through Environmental Design	The bulk of the buildings overlook streets, lanes and other public areas to provide casual surveillance.	Yes.

	Appropriate lighting has been considered to ensure sufficient lighting and ensure a high level of safety. The development addresses the Crime Prevention Through Environment Design (CPTED) and is outlined in Section 5.8 of this EIS.	
2.7 Earthworks	All earthworks are to be carried out in accordance with Council requirements. There are no potential risks associated with contamination. A Construction Management Plan will consider recommended best practice measures for erosion and sedimentation control outlined in Appendix K.	Yes.

6 Site Specific Controls

Provision	Comments	Compliance
6.8 Land adjacent to the Sydney Catchment Authority Upper Canal 1. Where major development (including subdivision) is proposed adjacent to the Upper Canal corridor, applicants shall consult with the Sydney Catchment Authority (SCA) as part of the process of preparing the development application. Development is to be consistent with the SCA publication "Guidelines for development adjacent to the Upper Canal and Warragamba Pipelines". Any written requirements of the SCA shall be submitted with the DA and the DA documentation shall show how the requirements have been addressed.	The proposed development is adjacent to the Upper Canal.	No - Consultation with Sydney Catchment Authority (SCA)/Water NSW was not evidenced as part of the proposed development. It is recommended consultation is undertaken as part of agency consultation during the public exhibition period, to ensure the proposed development is consistent with "Guidelines for development adjacent to the Upper Canal and Warragamba Pipelines".
2. Prior written approval shall be obtained from the SCA for any access that may be required to the Upper Canal corridor during the investigation and construction phases.	Fencing will prevent entry to the Upper Canal from the proposed development. The site was already separated by a pre-existing wrought iron fencing.	No – written approval has not been obtained from Sydney Catchment Authority (SCA)/Water NSW for any access. However, it is recommended consultation is undertaken during the public exhibition period.
3. Access points to the Upper Canal for SCA staff and contractors to carry out inspections and maintenance shall be retained or provided in accordance with SCA requirements.	Acknowledged.	N/A
4. Site preparation and construction works carried out adjacent to or crossing the Upper Canal shall avoid impacting on water quality and damaging the Canal infrastructure, in accordance with SCA requirements.	A Final Construction Management Plan will consider site preparation and construction works to mitigate impacts to water quality and damaging the Canal infrastructure in accordance with SCA requirements.	Yes.
5. Stormwater systems serving development adjacent to the Upper Canal shall be designed to ensure that stormwater does not enter the Canal. Stormwater management measures	The proposed development has no formal drainage on site. All current overland flows travel towards the northern side of the site into an existing easement consisting of	Yes.

shall accommodate and not impede upstream flows from any systems that convey stormwater across, along or under the Upper Canal. Detailed plans showing the proposed stormwater management and runoff from development are to be submitted with the development application. The plans must demonstrate that stormwater will be managed up to the 1 in 100 year flood event to prevent runoff from within the Precinct entering the Canal.	stormwater drainage infrastructure, which in turn drains into a bio-retention basin. System was designed for the 1 in 10 year ARI storm event, with the 1 in 100 year storm event overland. Detailed plans of stormwater are outlined in Appendix G.	
6. Shareways may be located to the front or side boundary of a lot. Where shareways are to the side boundary, fences are to be maximum 1.8m high to the rear yard only. Side fences are to be 1.2m to corners.	The proposed development does not involve a share way therefore this clause is not applicable.	N/A
7. Appropriate security fencing shall be provided, or existing fencing retained along the length of development boundaries that directly adjoin the Upper Canal corridor, in accordance with SCA requirements.	The proposed development will be separated by pre-existing fencing situated on either side of the Canal.	N/A
8. Road, pedestrian and cycleway crossings of the Upper Canal shall be minimized and located and designed in accordance with SCA requirements.	There are no road, pedestrian and cycleway crossings as part of the proposed development.	N/A
9. A local road, shareway or pedestrian/ cycle way is to be provided, between development and the Upper Canal corridor (refer to Figure 6-18). Wherever possible a road is to contain a landscaped verge between the carriageway and Upper Canal corridor. A footpath is not required to be constructed on the Canal side road verge as part of subdivision of adjoining land.	The pre-existing iron wrought fence does not prevent entry to the Canal, therefore a local road, share way or pedestrian/cycleway cannot be provided between the development and the Upper Canal corridor.	No – however the proposed development is separated by a pre-existing iron wrought fence. Additional fencing is proposed to ensure that there is no possibility of foot traffic that will adversely affect the heritage significance.
10. The State Heritage status of the Upper Canal should be taken into account when designing development adjacent to the Canal corridor.	The proposed development is sensitive to the Upper Canal as it is sufficiently set back and separated by the pre-existing fencing.	Yes.

6 KEY ASSESSMENT ISSUES

The following key issues pursuant to SEARs have been assessed, with impacts recognised and mitigation measures proposed where necessary.

- Built Form and Urban Design;
- Environmental Amenity;
- Noise and Vibration;
- Transport and Accessibility;
- Social Impacts;
- Heritage;
- Contamination;
- Flooding
- Bushfire
- Biodiversity;
- Sediment, Erosion and Dust Control;
- Geotechnical and Salinity;
- Waste; and
- Cumulative Impacts.

6.1 Built Form and Urban Design

The proposed layout of the development includes breaks between volumes to provide visual articulation as well as increased external wall area allowing for an increase in daylight and ventilation opportunities. The proposed development utilises the building form and landscape to provide a positive streetscape setting. The massing of the form is broken down into a series of smaller volumes that assist the fall of the land with the objective of providing on grade access points into the school.

The material and finishes complement the landscape and are based on a neutral palette with selected highlight accent materials and colours, reflecting a modern school design.

The landscape design acknowledges the history and the local site context as an integral part of the site planning. It provides spaces that encourage interaction between learning areas, equal access to all areas of the site, and a strong sense as a communal hub. The design provides a modern free play area, balance logs, adventure play, nature play and play spaces for younger or special needs children. It also incorporates shade through trees and sails, and alongside the built form, provides a positive streetscape setting.

6.2 Environmental Amenity

6.2.1 Solar Access and Overshadowing

Built form has the potential for overshadowing on neighbouring properties and future neighbouring development. The proposed development has carefully considered the massing of the built form to mitigate this potential impact. The proposed development has considered solar access.

Shadow diagrams for 9 am, 12 pm and 3 pm during winter solstice have been prepared by Perumal Pedavoli Architects provided at Appendix B.

- Residential development south-west of the proposed development will be affected by minimal overshadowing at 9 am, however will not be impacted by overshadowing during 12 pm and 3 pm.
- Residential development south-east of proposed development will be affected by minimal overshadowing at 3 pm, however will not be impacted by overshadowing during 9 am and 12 pm.
- Any future development to the east of the site will not be affected by the proposal, therefore will receive continual access to sunlight.

Figure 18 Shadow at 21 June 9 am

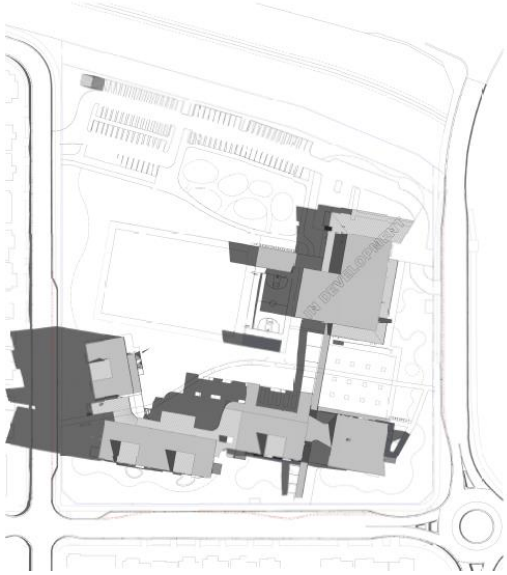


Figure 19 Shadow at 21 June 12 pm

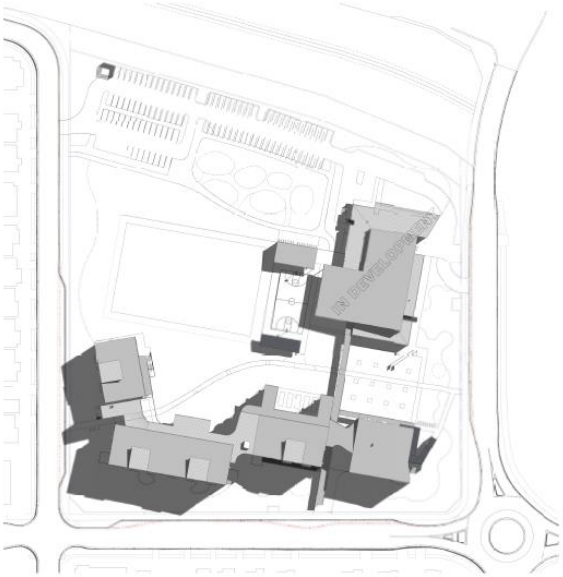
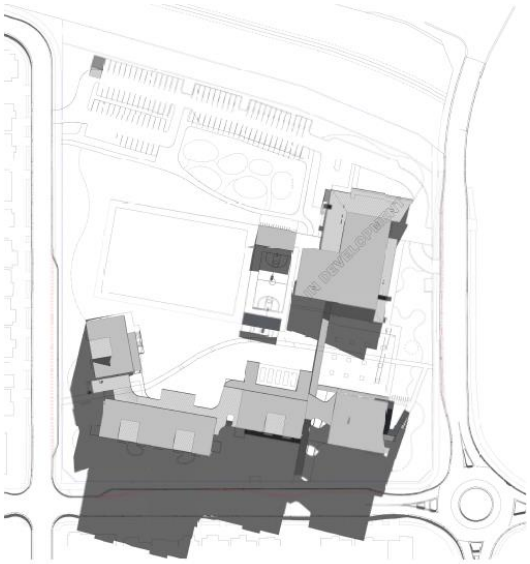


Figure 20 Shadow at 21 June 3 pm



Overall, there are no significant overshadowing impacts caused to adjoining residential receivers.

6.2.2 Privacy

Built form has the potential for impacting privacy on neighbouring properties and future neighbouring development. The proposed development has carefully considered this through the orientation, appropriate setbacks and landscape designed.

The proposed development will provide no unreasonable privacy impacts because:

- The school is bounded by roads on three boundaries (west, south and east) and a future sporting field to the north-west. The proposed school buildings are to be well setback from the site boundaries. Despite there being no specific set back controls for the site, the proposed development is appropriately set back to ensure privacy levels are maintained between school buildings and residential properties on the opposite sides of Elkhorn Street and Commissioners Drive.

- Planting will be provided between the school buildings and the site boundary, enhancing privacy between the school and neighbouring residential properties.

- Outdoor recreational areas are positioned facing towards the future sports field to the north-west of the site. The proposed development's buildings provide a buffer between the outdoor recreation and neighbouring properties opposite Commissioners Drive. A wide buffer of tree planting will provide visual privacy to properties to the west of the proposed development.

6.2.3 Visual Amenity

A Visual Impact Assessment has been undertaken by RPS detailing the potential impacts on the surrounding built environment and adjoining heritage item, see Appendix BB.

The proposed development is located on land completely cleared of trees and is zoned specifically for educational establishments. There are newly constructed single dwellings northwest, and southwest of the site on Elkhorn Street and Commissioners Drive. There is a potential future childcare north east of the proposed development on Willowdale Drive. Block A-C will be three storeys orientated along

Commissioners Drive and step naturally with the existing ground line. Block D will be two storeys and are orientated along Elkhorn Street.

Figure 21: View from Commissioners Drive

The maximum height is worked into the natural ground line and the proposed new ground line, working with existing topography to maximise learning facilities while minimising visual impacts. The setbacks proposed along all boundary lines, which then are fronted by local roads, ensure that separation from nearly residential receivers is maximised. The site has considered adequate protection of the heritage item, the 'Upper Canal System', and is appropriately set back with separation provided by a pre-existing iron wrought fence. The proposed development will allow for positive and improved views of the heritage item, as views are currently unavailable on the site.

New plantings along the site boundary and material selection for building construction will ensure that the proposed school provides positive visual amenity, and buffer edges of the site. It will also maintain clear sight lights throughout the site. Building articulation, colour selection and modern architectural design is considered well-integrated with the existing landscape. It is sensitive towards the site which was once the Cumberland Plain Woodland and new plants incorporate a selection of shade and screening. The proposed development's design has been developed and refined in consultation with the Government Architect NSW and Campbelltown Council, who provided valuable feedback to ensure that the proposed school delivers positive visual amenity and design qualities.

6.3 Noise and Vibration

It is anticipated the construction and operation of the proposed development has the potential to generate noise and vibration impacts. The proposed development has carefully considered this through an Acoustic Report prepared by Northrop Consulting Engineers. It is attached at Appendix L. The report identifies nearby sensitive receivers and noise sources with potential to impact neighbouring development. These noises included the following:

- Noise from mechanical plant, PA system and school bells
- Noise emissions from use of school facilities out of hours

- Students' external and sporting activities
- Vibration from the development
- Waste removal truck noise
- Traffic and carpark noise.

The surrounding area includes completed residences to the south and west of the development and areas to the east of the site which will be developed in the near future. Both unattended and attended noise measurements were conducted to measure the existing noise levels at the site. The report identifies the recommended approach for managing the construction and operation noise to be generated by the proposed development.

6.3.1 Operational Noise

Key findings from the assessment include:

- Traffic noise levels from Commissioners Drive is currently low. A 5 dB allowance will be incorporated into the design of the school facade and glazing to allow for future increases in traffic movements.
- Mechanical plant will be acoustically treated to achieve the Project Noise Trigger Level criteria. The project Noise Trigger Level criteria at the nearest affected residence on Commissioners Drive are 53 LAeq during the day, 50 LAeq during the evening and 45 LAeq during the night. On Elkhorn street, the Noise Trigger Level criteria are 48LAeq during the day, 43 LAeq during the evening, and 38 LAeq during the night.
- Public Address (P.A.) systems and electric school bells shall be calibrated such that the Project Noise Trigger Level criteria at the nearest affected residence are 48 LAeq are not exceeded during their operation.
- Noise generated within the school's internal spaces will be typically low, with noise within the communal spaces and indoor activities expected to be higher than other spaces.
- General student outdoor activities are not anticipated to exceed the project noise trigger level criteria of 48 LAeq during the day at the nearest affected residence.
- All vibration generating equipment (such as mechanical plant) and activities (basketball court) will be vibration isolated such that the vibration transmission does not exceed the recommended levels as specified in the NSW Office of Environment & Heritage "Assessing Vibration: A Technical Guideline 2006" at the neighbouring residences and within the school, following completion of the school.
- Regarding waste removal, the assessment identifies that the façade of the nearest residence at Commissioners Drive is approximately 80 metres from the waste pickup location. The noise for waste removal is predicted at 68 dB(A). The predicted noise level inside a bedroom at the residence facade is 58 dB(A) with window opened and 43 dB(A) with window closed. The assessment refers to NSW Road Noise Policy (2011) and research on sleep disturbance to date which concludes that maximum internal noise levels of below 50-55 dB(A) are unlikely to awaken people from sleep and that one or two noise events per night, with maximum noise levels of 65-70 dB(A), are not likely to affect health and wellbeing significantly. The assessment recommends that waste collection be carried out after 6:30 am to minimise sleep disruption at the nearest residence on Elkhorn Street.
- The operation of the new car park is expected to increase the background noise due to increased vehicular activity. Based on the movement of 25 cars over a 15 minute period, the operation of the car park is expected to generate noise levels in the order of 76 dBw(A) in the carpark an average distance of 40 metres from the car park to nearest residence, the predicted noise level at just outside the nearest residence is 36dB(A) which is below the daytime (7 am-6 pm) Project Noise Tigger Level of 48dB(A) at the nearest residence. For the night-time (10 pm-7 am) period, based on the movement of 1 car over a 15 minute period, the operation of the car park is expected to generate noise levels in the order of

62 dBw(A) in the carpark. At an average distance of 40 metres from the car park to nearest residence, the predicted noise level contribution at just outside the nearest residence is 26 dB(A) which is below the night-time (10 pm-7 am) Project Noise Tigger Level of 38 dB(A) at the nearest residence.

6.3.2 Construction Noise

An assessment of the likely construction noise impacts has been undertaken by Northrop Consulting Engineers see Appendix M. The daytime 'rated background noise level' (RBL) at the nearest residence at Commissioners Drive is 45 dB(A). The assessment identifies that construction noise levels at the residential boundary of 55 dBLAeq or less is acceptable during the construction periods.

All practicable measures will be undertaken to reduce noise arising from construction and will not exceed the limits set out by the Environment Protection Authority (EPA). No machine work will occur approved outside the working hours unless additional approval has been requested. The proposed development complies with the appropriate standards during the construction phase of the project.

6.4 Transport and Accessibility

The proposed development has the potential to generate traffic and related congestion during construction and operation. The proposal has carefully considered this through incorporating on-site parking summarised in the TIA prepared by ASON Group and is attached at Appendix I.

6.4.1 Car Parking

The proposed development provides for a total of 100 off-street parking spaces and thus has full compliance with requirements set in the Campbelltown DCP.

In accordance with the Campbelltown GCP DCP, the parking requirements for primary schools are:

- 1 space per staff member; plus
- 1 space per 100 students.

Based on these rates, the proposed development is required to provide 76 parking spaces.

The proposed car park is located at the north corner of the site off Elkhorn Street. It would provide a total of 100 off-street parking spaces, thus compliant with the requirements of the Campbelltown DCP in regard to the school. The proposed number or parking spaces would provide additional capacity for the use of the joint-use portion of the hall, however, that is subject to continued consultation with Campbelltown City Council which is progressing.

ASON Group have also completed a Green Travel Plan (GTP), attached at Appendix J The action plan proposes a review of initiatives for staff to promote carpooling, and encourage the use of active transport modes in result reducing reliance on motor vehicles.

6.4.2 Parking during construction

A Construction Traffic Management Plan has been prepared by ASON Group on 5 September 2019 and is attached at Appendix K.

During the construction of the proposed development, it is generally associated that there will be light vehicle traffic generation to and from the site. It is expected that the Heavy Vehicles would generally arrive outside the peak periods, therefore will not contribute to the estimated peak hour volumes.

During the construction of the proposed development, it is intended that contractor and construction vehicle parking will be accessed via the designated construction gate. No construction vehicles will be permitted on the public roadway, in result reducing the minimal parking demand. Contractors will be encouraged to carpool or utilise public transport to further reduce the minimal parking demand.

The final Construction Traffic Management Plan will be submitted to DPIE prior to construction.

6.4.3 Vehicle and Pedestrian Access

The TIA (Appendix I) has utilised data from other similar primary schools and applied it to the proposed development demand for the PM school peak pick-up demand. The on-street set down space available immediately adjacent to the School will provide more than enough capacity to meet the peak drop off and pick up demand (DOPU), approximately 10 minutes prior to the commencement of school. .

The total length of the site boundary on Elkorn Street and Commissioners Drive is 353.52m. The provision of DOPU space in both Commissioners Drive and Elkhorn Street could provide the capacity required to accommodate the peak demand with an estimated peak queue of 33 vehicles, or a length of approximately 200m.

6.4.4 Active Transport Option

A shared pedestrian and cyclist path is provided in the vicinity of the site directly adjacent to the proposed development in Willowdale Drive, Commissioners Drive and Elkhorn Street. Pedestrian refuges are located within the median approaches on each leg of Willowdale Drive and Commissioners Drive intersection,

In addition, the GTP prepared by ASON Group and attached at Appendix J includes a number of specific actions to encourage greater uptake of walking and cycling.

6.4.5 Green Traffic Plan

A GTP was prepared by ASON Group and is attached at Appendix J. The GTP's objectives are to encourage the use of active transport and reduce the reliance upon private motor vehicle journeys. The GTP sets mode share targets for students and staff. An action plan is proposed to encourage alternate modes of transport and includes the following:

- Establishment of a Travel Plan Co-ordinator, in addition to transport co-ordinator to provide review and monitoring of the GTP and communicate directions with parents and staff.
- Provision of a 'Travel Welcome Pack' for newly employed staff highlighting alternate modes of transport.
- Preparation of a Transport Access Guide.
- Lobbying Council/DPIE for improved cycle connections and updated cycle strategy
- Promotion of active transport community activities and events such as Ride2Work Day and Walk to Work Day.
- Provision and maintenance of clearly signposted bicycle parking within the site in addition to end of journey facilities.
- Communication of public transport route maps and timetables to students and staff.
- Advocating for TfNSW to improve public transport services in response to increased development within the surrounding area.
- Review of initiatives to promote staff car-pooling.

6.4.6 Construction Traffic

A Preliminary Construction Traffic and Pedestrian Management Plan has been developed by ASON Group, see Appendix L.

Access to the site during the construction will be via the Willowdale Drive and Elkorn Street. Trucks and heavy vehicles will access the site via Willowdale Drive, and contractor/light vehicles will be directed to use Elkorn Street access via a temporary car park at the north-west corner of the site. Emergency vehicle access to the site will be available at all times during construction of the proposed development.

Light traffic generation is expected during construction. It is expected that the volume of traffic will not exceed the proposed operational volumes, therefore generating far less traffic when the proposed school is in operation.

Construction hours are likely to be the following:

- Monday to Friday 7am - 6:00pm
- Saturday 7am - 3:00pm.

No works will be undertaken on Sundays and Public holidays.

Construction staff will arrive and depart during these periods. Heavy vehicles would arrive outside of the peak periods, therefore, not contribute to the estimated peak hour volumes. The estimated construction traffic flows for the proposed construction activities would not result in adverse impact on the operational capacity of the surrounding road network.

6.4.7 Operation Traffic

Based on what are considered to be very conservative trip rates in the context of site and surrounding neighbourhood, the proposed development is estimated to generate up to 638 vph in the AM school peak and 526 vph in the PM school peak; the majority of these trips will be generated to and from the on-street set down areas. With specific regard to the potential impact of these trips:

The local intersections have significant spare capacity by which to accommodate these trips while continuing to operate with only moderate delays. Give the local catchment of the proposed development and immediately adjacent residential areas, there will be no expectation of a significant level of trip generation to and from the intersection of Camden Valley Way, and Health Road. Key intersections will provide access to the proposed development and are expected to accommodation the generation of the School without significant impact on the nearby intersections on Camden Valley Way.

- The site for the proposed development has always been intended to be for a new school, as per the Growth Centre Precinct Plans, and in result traffic impacts have been considered.
- The on-street set down space available immediately adjacent to the School provides more than enough capacity to meet the peak drop-off and pick-up demand in both the AM and PM school peak periods.
- A traffic and parking management plan will be prepared by the proponent prior to the proposed development opening, which will provide further detail to parking areas, pedestrians and the operation of the drop off pick off area.

6.5 Social Impacts

The proposed development has anticipated an increase in enrolments across the Campbelltown LGA and this part of Greater Sydney and will alleviate pressure of surrounding schools. It will provide modern facilities and in result a high-quality learning environment for students on land that is earmarked for education infrastructure as part of the wider land use and infrastructure planning framework in the region. The proposed development is sensitive to neighbouring properties and has incorporated elements of the natural environment through complimentary materials and finishes.

The proposed development will generate positive benefits for the Campbelltown LGA, and the neighbouring East Leppington/Denham Court community. The following social impacts have been outlined below. The proposed development will:

- Provide opportunity for 1,012 students (with the potential to cater to support potential fluctuations with enrolments and population increase) with modern teaching and learning facilities with a mix of learning and play facilities. This will enable the best teaching outcomes, and in result better opportunities for young children in the area;

- Provide 394 jobs when the school is in construction and 65 jobs in operation;
- Alleviate enrolment pressures in neighbouring schools, and support the projected population growth of the Western District;
- Encourage the use of the existing bicycle and walking routes to encourage incidental exercise to support a healthy lifestyle for students and teachers;
- Reduce energy and water use through the use of a water retention tank, and allow for passive building features such as solar shading and control glazing;
- Inclusiveness is reflected in the diversity of teaching spaces and play areas for all ages and learning abilities such as:
    - Pedestrian access pathways designed to comply with AS1428-maximum path grades at 1:20 or less;
    - Wheelchair seating spaces provided in areas where fixed seating is available complying with Australian Standards;
    - A lift which will provide access to all storeys of the building;
    - Tactile and braille signage; and
    - All accessible facilities will be designed and constructed with appropriate selection and placement of fixtures and fittings to meet all types of needs.
- Designed in accordance with CPTED, Education SEPP Design principles and in consultation with Government Architect NSW; and
- The future shared use of the multi-purpose hall will benefit the neighbouring Campbelltown community, DoE are in negotiations with Council currently to finalise the design, other operational matters, and funding arrangements. The architectural plans for this portion are indicative and designed as closely as possible to the final size of the joint-use portion of the hall. This is subject to finalisation.

As a result, the proposed school will provide opportunities for community collaboration, shared use and complement the existing neighbourhood and natural environment. The proposed school has the potential to provide more shared facilities into the future.

6.6 Heritage

The proposed development is not identified as a heritage item, however is in proximity to heritage items outlined in Section 2.6.1 of this report. Due to the proximity of heritage items, the proposed development has assessed the impact of the heritage significance in accordance with the NSW Heritage Manual.

A Heritage Impact Statement (HIS) was undertaken by City Plan Services and is attached at Appendix Y. This report assess heritage impacts of the proposed works on the heritage significance of the site, and visual impacts of the proposed developments on views to and from surrounding heritage items.

The proposed development will be set back from the Upper Canal heritage item and separated from a pre-existing tall wrought iron fence. The pre-existing separation will minimise physical access to the heritage item. Views toward the heritage item will be positively increased, in its current condition the heritage item has little visibility from the site due to the topography of the site. Views from the heritage item, due to the lowered elevation of the canal, will remain primarily unaffected. Overall the proposed development will have a positive to neutral effect on the adjacent section of the Upper Canal.

Generally, the report finds the proposed development will result in positive to neutral impact to the heritage significance of the surrounding heritage items.

6.6.1 Aboriginal Heritage

The proposed development has assessed the impact to Aboriginal Cultural Heritage in accordance with relevant guidelines. A site investigation was undertaken by Biosis in Appendix O. The report outlines the site possesses a low archaeological potential based on the results of field survey due to high disturbances within the study area.

No previous unrecorded archaeological sites or PADs were recorded during the field survey despite high level of ground surface visibility and exposure. The AHIMS sites 45-5-4234 and 45-5-3472 were revisited during the field survey however no archaeological potential was evident. This could be attributed to high levels of disturbance within the site or potentially the prior collection of these sites under AHIP 1132181.

Despite there being no archaeological finds the following recommendations should be considered:

- Prior to commencement of works, it is recommended the proponent engage the current AHIP holder to confirm whether AHIMs sites 45-5-4234 and 45-5-3472 have been subject to community collection. If they have not been collected, the proponent should follow conditions of AHIP 1132181;

- If AHIMS sites 45-5-4234 and 45-5-3472 have been collected; or following community collection as per the conditions of the AHIP, no further archaeological work is required in the study area as it has a low archaeological potential;

- Should any Aboriginal objects be encountered during works associated with the proposed development, work must cease in the vicinity and the finds should not be moved until assessed by a qualified archaeologist. If a find is determined to be an Aboriginal object, work must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. Finds can only be determined by a qualified archaeologist who will advise on further recommendations. This may include notification to the Office of Environment and Heritage (OEH) and relevant Aboriginal stakeholders; and

- If any suspected human remains are discovered during the activity of the proposed development, all activity must cease immediately. The remains must be left in place and protected from harm and damage. A contingency plan describes the immediate action that must be taken in instances where human remains or suspected human remains are discovered. Further detail is outlined in Appendix O.

6.7 Contamination

The proposed development has low contamination occurring on the site, therefore the possibility to be situated on land that poses potential contamination sources and contaminants of concern is low. A soil and groundwater contamination assessment has been undertaken by Environmental Investigation Services. The report has been prepared to address SEPP 55 – Remediation of Land (refer to Appendix Q). In summary the report outlines:

There are relatively low potential for contamination related finds to occur on the site during construction. Unexpected finds would typically be identified by visual or olfactory indicators.

In result, the site is considered suitable for the proposed development. A salinity management plan should be prepared once a contractor is awarded. In the event there are unexpected finds of contamination the following recommendations should be considered:

- All work in the immediate vicinity should cease and temporary barricades should be erected to isolate the area;

- A suitably qualified contaminated land consultant should be engaged to inspect the find and provide advice on the appropriate course of action; and

- Any actions should be implemented and validated to demonstrate that there are nonacceptable risks to the receptors.

6.8 Flooding

The stormwater management system is designed for the 1 in 10 year ARI storm event, with the 1 in 100 year storm event overland.

A Stormwater Design Report has been prepared by Northrop at Appendix G identifying that the site is not affected by flooding. Furthermore, Campbelltown Council advised that there is no flooding associated with the existing stormwater easement located along the rear of the site.

6.9 Bushfire

The proposed development must assess the impact of bushfire as the site is situated on bushfire prone land according to the Campbelltown Bushfire Prone Land Map. However, the map is out of date and does not reflect the land clearing that has occurred. The revegetation of the drainage corridor to the east would still place the site in bushfire prone land, however, would not impact the buildings of the proposed development.

The bushfire prone vegetation affecting the site lies to the east, greater than 80m from the boundary of the site. A Bushfire Assessment was undertaken by Peterson Bushfire on 30 September 2018.

The assessment outlines that the Campbelltown Bushfire Prone land Map identifies the subject site as being affected by grassland within 100m of woodland vegetation. However, the assessment outlines that the Campbelltown Bushfire Prone Land Map is out of date and does not reflect the fact that this vegetation has since been removed. The assessment notes that revegetation of drainage corridors to the east would still place bushfire prone land affectation on the site, however it would not affect the proposed school buildings.

The assessment concludes that the proposed buildings will not be within bushfire prone land, and will be greater than 100m from woodland hazard, and 50m from the grassland hazard located within the drainage corridors to the east. Specific asset protection zones (APZ) are not required and AS 3959 BALS do not apply to the buildings.

The assessment concludes the proposed development complies with the provision of *Planning for Bushfire Protection 2006* (PBP) subject to the adoption of several recommendations including:

- Proposed landscaping should comply with the principles listed within Appendix 5 of PBP.
- Hydrants are to be installed to achieve compliance with AS 2419.1 – 2005 Fire Hydrant Installations - System Design, Installation and Commissioning (AS 2419).
- 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).

6.10 Biodiversity

6.10.1 Biodiversity Assessment Report Waiver

Biodiversity assessors from Narla Environmental carried out a biodiversity assessment of the flora and fauna values on the site on the 30 November 2018. The assessment found that the proposed development will not impact upon any area of remnant, native vegetation.

The subject site does not hold potential threatened species or ecological communities. A Biodiversity Development Assessment Report Waiver (see Appendix S) is requested as part of this application.

Despite the site not identifying potential threatened species or ecological communities, the proposed school has carefully considered the existing site and its biodiversity value. The findings are discussed below.

The site was cleared of all native vegetation before 2002, and in result no native vegetation remains on the site. It now comprises of exotic dominated grassland, typical to the urban environment. The derived grasslands provide foraging grounds for common foraging grounds for a common, mobile fauna such as the Brown Quail. This habitat is not considered significant to this mobile wide-ranging common species.

A Biodiversity Development Assessment Report Waiver (see Appendix S) Is requested as part of this application.

6.11 Sediment, Erosion and Dust Control

Construction of the proposed development has the potential to cause stormwater, erosion and sediment runoff into adjacent watercourses during construction. The proposal has carefully considered recommendations and statutory requirements to mitigate these potential impacts.

Sediment and Erosion Controls will be in accordance with Statutory Requirements, 'Blue Book' Managing Urban Stormwater Soils and Construction' Produced by the Department of Housing and Councils Policies.

To minimise soil erosion hazards the following recommendations were outlined in the Civil Drawings Specification Notes by Northrop in Appendix G. These could be incorporated:

- Installation of a 1.8 m high chain wire fence covered with geo-textile filter fabric, to the perimeter of the work site area where required;
- Incorporating sediment diverting methods to minimize sediment in Council's stormwater drainage network using sandbags around kerb inlet pits and geo-textile filter fabric around drop inlet pits;
- The provision of a sediment basin towards the perimeter of the site where stormwater runoff should be channelled and treated during construction;
- Temporary truck wash down facility to service vehicles exiting the site during construction;
- Construction will consider weather, windy and dry weather and ensure large unprotected areas are kept stabilised and noise to keep dust under control;
- Any sand used in concrete curing will be removed as soon as possible and within 10 working days from placement;
- Water shall be prevented from entering the permanent drainage systems unless the catchment has been stabilised and/or likely any sediment has been filtered out;
- Temporary soil and water management structures to be removed after the lands are protected, and stabilised and rehabilitated;
- Allow for grass stabilisation of exposed areas during construction; and
- If temporary sediment basins are required, safe batter slopes must be implemented in accordance with the Geotechnical Report prepared by JK Geotechnics in Appendix P.

Erosion and sediment controls are to be inspected to ensure they are operating effectively.

6.12 Geotechnical and Salinity

The proposed development is suitable for the site as evidenced by the Geotechnical Fieldwork Investigation in Appendix P. This report aims to investigate and obtain information regarding the condition of the land, providing appropriate recommendations to mitigate these potential impacts.

Further investigations on salinity will be undertaken as part of detailed design of the proposed school.

6.12.1 Geotechnical

A geotechnical fieldwork investigation was carried out between the 9 and 12 October 2018 and a report has been prepared by JK Geotechnics in Appendix P. The findings of the investigation indicated that the site is underlain by shale, carbonaceous claystone and laminate. The investigation discovered a generalised

subsurface profile comprising surficial fill overlying residual silty clays with siltstone bedrock encountered at shallow depths.

Additionally, the clay soils at the site have been found to embody very poor engineering properties with the need to ensure proper handling and treatment of these soils to obtain good results.

The site will require good drainage to promote run-off and reduce ponding. The placement of a blinding layer of durable granular fill or sub-base material to provide a trafficable surface during construction may assist to maintain cross falls during construction. All drainage for the proposed development will be constructed with adequate falls to the discharge points to reduce the risk of ponding in the base of drains. Further recommendations are outlined in the Stormwater Management Report in Appendix G.

The site will require satisfactory completion of earth works to ensure high performance of flood slabs and pavements. A quality assurance program should consider critical factors selection of fill materials, subgrade preparation, control of moisture content and drainage.

6.13 Waste

The proposed development will generate waste during construction and operation stages. The waste generated places potential impacts on the environment to which is to be disposed of in appropriate manner. These impacts are carefully considered below through the preparation of a Waste Management Plan.

6.13.1 Construction Waste

A Construction Waste Management Plan (CWMP) has been prepared by Environmental Management Pty Ltd (refer to Appendix W). It is estimated that the construction waste management will be split into two stages:

- Excavation; and
- Construction.

It is estimated that 1,200 tonnes of excavated materials have been proposed for reuse on the site. Most of the construction materials will be recycled (1,110 m^3) and 230 m^3 will be disposed of through a licensed landfill.

All waste will be co-mingled and taken for onsite separation and reuse and recycling except pallets an reels. Liquid waste will be sent to landfill for processing.

It is expected that detailed management of construction waste would be incorporated into the CWMP once the proposed development is approved, and as part of its conditions of consent.

6.13.2 Operational Waste

An Operational Waste Management Plan (OWMP) has been prepared by Environmental Management Pty Ltd (refer to Appendix W). It is estimated that the proposed development will produce approximately 4,432 litres of waste per week, and 2,200 litres of recycling per week. This would include:

- General Waste (food scraps, napkins, scraps from the canteen); and
- General recycling (paper, mixed plastic 1-7), plastic bottles, cardboard, mixed metals, aluminium cans).

Both would be cleared weekly and will be collected before 8 am and after 4 pm to minimise noise impacts to adjoining neighbours. A waste collection point has been incorporated into the design of the proposed development to allow for easy access. It has considered waste storage and pad areas which is found in Appendix W.

It is expected that detailed management of operation waste would be incorporated into the OWMP once the proposed development is approved, and as part of its conditions of consent.

6.14 Cumulative Impacts

Cumulative impacts occur when two or more projects are carried out concurrently and in close proximity to one another. The impacts may be caused by both construction and operational activities and can result in a greater impact to the surrounding area than would be expected if each project was undertaken in isolation.

A search of the Department of Planning, Infrastructure and Environment Major Projects register and the Campbelltown Council Development Application register in July 2019 was undertaken for East Leppington and the surrounding region. No projects were identified that would be likely to result in cumulative impacts, due to identified impacts of the proposed development, on the surrounding area or sensitive receptors.

Surrounding the subject site, majority of activity undertaken are minor residential works including construction of dwellings, subdivisions and associated earthworks.

The proposed development incorporates some off-site construction to minimise impacts associated with construction on-site. This enables reduction of construction traffic movements, noise and air quality impacts to surrounding sensitive receivers.

This will also support minimising potential cumulative impacts with other construction activities in proximity to the site.

7 CONSULTATION

As outlined in the SEARs, consultation with the relevant local, State or Commonwealth Government authorities, service providers, community groups, special interest groups including local Aboriginal land council and registered Aboriginal stakeholders, and affected landowners is required. Key stakeholders we have consulted with in the preparation of this EIS are outlined below.

7.1 Campbelltown City Council

Campbelltown City Council was provided an update on the project on 7 August 2019. This meeting was primarily to discuss the intended use of the multi-purpose hall and the joint use component. This aimed to ensure that the design was aligned with Council to provide a positive outcome for both the community and the School. The joint use components for the proposed development haven taken into consideration Council's feedback. Stakeholders who attended the meeting are outlined in Appendix AA.

7.2 Government Architect NSW

Government Architect NSW (GANSW) was engaged throughout the project to ensure design principles were established. A status update meeting occurred on 13 June 2018. An initial State Design Review Panel (SDRP) meeting was held on 31 October 2018. An update on the project occurred on the 13 June 2019, a review for draft submission for State Design Review Panel (SDRP) occurred on 24 July 2019, and the final SDRP occurred on the 31 July 2019.

Detailed responses to GANSW feedback from the SDRP is in the Design Analysis Report, in Appendix E. In result, GANSW were generally supportive of the design development of the proposed school as it aligns with the Education SEPP Design Principles. Stakeholders who attended the meeting are outlined in Appendix AA.

7.3 Aboriginal Stakeholders

The site is located on D'harawal land and an Aboriginal site walk occurred on the 2 August 2019 with Uncle Ivan and Uncle Eddy who are elders of the Aboriginal community. It was acknowledged that air and sun are important to the site and the design of the proposed development. This consultation was incorporated into the building massing and landscape design to avoid continuous build form and utilise endemic planting on the site.

7.4 Office of Environment and Heritage

As outlined in Appendix S, there is no flora or fauna of high biodiversity value. It is assumed OEH was consulted with prior to lodgement of SEARs on 10 August 2018. No formal feedback has been provided at this stage, however it is expected consultation with OEH will continue throughout the public exhibition stage of this project.

7.5 Transport for NSW

It is assumed Transport for NSW (TfNSW) was consulted with prior to lodgement of SEARs on 10 August 2018. No formal feedback has been provided at this stage, however it is expected consultation with TfNSW will continue throughout the public exhibition stage of this project.

7.6 Roads and Maritime Services

It is assumed that RMS was consulted with prior to lodgement of SEARs on 10 August 2018. No formal feedback has been provided at this stage, however it is expected consultation will continue throughout the public exhibition stage of this project.

8 RISK ASSESSMENT

The assessment of the key issues in Section 8 have been identified in the below risk assessment using *Australian Standard AS4369.1999 Risk Management and Environmental Risk Tools*. The Risk Assessment Matrix illustrates how the residual environmental impacts of a proposal are assigned. It provides an indicative ranking of potential residual impacts after the mitigation measures are implemented as follows:

The significance of impact is assigned a value between 1 and 5 outlined in

- The receiving environment;
- The level of understanding of the type and extent of impacts; and
- The likely community response to the environmental consequence of the project.
- The manageability of environmental impact is assigned a value between 1 and 5 based on:
    - The complexity of mitigation measures;
    - The known level of performance of the safeguards proposed; and
    - The opportunity for adaptive management.

The sum of the values assigned provides an indicative ranking of potential residual impacts after the mitigation measures are implemented.

Figure 22: Risk assessment matrix

Significance of impact	Manageability of impact				
	5 Complex	4 Substantial	3 Elementary	2 Standard	1 Simple
1 – Low	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)	2 (Low)
2 – Minor	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)
3 – Moderate	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)
4 – High	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)
5 – Extreme	10 (High)	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)

In accordance with the SEARs, the ERA addresses the following significant risk issues:

- The adequacy of baseline data;
- The potential cumulative impacts arising from other developments in the vicinity of the site; and
- Measures to avoid, minimise, offset the predicted impacts where necessary involving the preparation of detailed contingency plans for managing any significant risk to the environment.

An additional overall project risk report has been developed, see Appendix Z.

Table 7: Risk assessment

Item	Phase	Potential Environemental Impacts	Proposed Mitigation Measures and/or Comment	Significance of Impact	Manageability of impact	Residual impact
Key: **C – Construction** **O – Operation**				Low Medium High	1-5	
Built Form and Urban Design	O	• Visual impact of the development • Visual impact of the development when viewed from State Heritage items	• Incorporating appropriate measures to minimise visual impact of development.	O – 2	O-2	O - 4 (low/medium)
Surrounding Environmental Amenity	O	• Impact on privacy of neighbouring properties • Potential overshadowing of neighbouring properties	• The building has been designed to ensure minimal overshadowing of neighbouring properties. • Design inputs have been applied to ensure maximum privacy on neighbouring properties.	O – 2	O – 2	O - 4 (low/medium)
Transport and Accessibility	C + O	• Increase in construction traffic on local roads • Increase in traffic and parking on local roads	• Ensure appropriate road/street signs are displayed. • A Construction Traffic Management Plan is to be followed during the construction phase of the project to minimise traffic impacts arising from construction traffic. • The existing public roads will not be adversley impacted, and parking is allocated via on-site parking areas.	C-3 O- 2	C- 2 O- 1	C – 5 (low/medium) O – 3 (low)
Heritage	C + O	• Potential new archaelogical finds during construction • Impacts to views	• Heritage item adjacent to the proposed development is already protected by a pre-existing iron wrought fence to prevent potential foot traffic from the site. • Finds procedure to be implemented and a qualified archaeological consultant to be engaged to ensure protocols are implemented. • Design inputs are sensitive towards to surrounding heritage.	C – 1 O – 1	C – 0 O – 0	C - 1 (low) O – 1 (low)

Noise and Vibration	C + O	• Increased noise and vibration • Increased noise levels of the school	• Following Construction Noise and Vibration mitigation measures as per the Conditions of Consent. • Appropriate selection of activity within hours of construction and operation.	C – 3 O – 1	C- 2 O – 2	C – 5 (low/medium) O – 3 (low)
Air Quality	C	• Increased dust during construction • Potential for reduced quality in air and water during construction	• Develop an air and water strategy CEMP. • Where practical implement wet processes in construction methods. • Monitor weather conditions.	C3	C -2	C – 5 (low/medium)

9 RECOMMENDATIONS AND MITIGATION MEASURES

A range of mitigation measures are proposed to reduce the potential environmental and social impacts of the proposed development. The following table provides a summary of the mitigation measures proposed to be undertaken as part of the proposed development.

Table 8: Mitigation measures

Item	Potential Impact	Mitigation Measures
Solar Access and Overshadowing	Overshadowing of adjoining residential properties	1. Despite there being minimal solar access and overshadowing impacts, building finishes and materials must not be designed to result in glare that causes discomfort or threatens safety of pedestrians or drivers.
Privacy	Adverse visual and acoustic privacy impacts on surrounding residents	2. Implementation of noise mitigation measures found in the Acoustic Impact Assessment provided in Appendix M.
Visual Amenity	Potential visual and acoustic privacy impacts on surrounding and future residents	3. Adhere to setbacks and design as per Appendix B to ensure the construction delivers positive visual amenity and design qualities.
Noise and Vibration	Noise generated during construction and operation of the school	During construction: 4. Works to be undertaken within the approved standard hours where reasonably practicable with noise that is audible to other premises. 5. Approval to be requested for Works undertaken outside standard hours. 6. The use of noise reduction techniques, such as barriers, enclosers and silences to be employed to ensure compliance with construction noise criteria. 7. Planning is to be undertaken of all appropriate routes to travel to and from the site. 8. Discussions are to be undertaken with Council, and RMS to identify roads of interest to be assessed in order to quantifiably measure the condition of the road before and after construction. 9. Options are to be provided for workers to carpool to and from site. 10. Gates to and from the site are to be locked at all times outside of construction hours. 11. The CTMP is to be continually reviewed to identify any shortfalls and develop an updated action plan to address said issues. 12. It is proposed to complete the work in the shortest reasonable duration to reduce the impact on roads. 13. Traffic Control Plans (TCPs) are to be prepared for all works undertaken in order to improve road safety. 14. Prior to travel, drivers must be made aware of the Driver Code of Conduct (within the CTMP), which is to be handed to all construction employees. 15. Public roads and access points must not be obstructed by any materials, vehicles, skips or the like.

		16. All loads travelling to and from the site shall be covered at all times. 17. Notification of any adjoining residents or businesses will be undertaken prior to construction. It is proposed that all affected properties will be notified at least 14 days in advance of any impacts (including road closures). 18. Appropriate approvals must be obtained prior to construction in the relevant area from private residences, road authorities, utility providers and any other stakeholder requiring preapproved access. During operation: 19. Prepare a Framework Travel Plan (FTP) to inform the future Green Travel Planning for the development 20. Prepare a Traffic and Parking Management (TPM) Plan outlining the strategies to provide for efficient operations on and off site. The TPM Plan is to include strategies relating to: the use of the staff car park; the use of the Drop Off Pick Up (DOPU) areas; Bus loading and unloading; and Safe Routes to Schools measures.
Transport and Accessibility	Traffic impacts Demand for on-site staff parking	During construction: 21. Restrict construction vehicle movements to designated routes to and from the site and prioritise these as required. 22. always Establish a safe pedestrian environment. 23. Inform Head Contractor and set ground rules for managing construction traffic. 24. Planning is to be undertaken of all appropriate routes to travel to and from the site. 25. Discussions are to be undertaken with Council, and RMS to identify roads of interest to be assessed in order to quantifiably measure the condition of the road before and after construction. 26. Options are to be provided for workers to carpool to and from site. 27. Gates to and from the site are to be locked at all times outside of construction hours. 28. The CTMP is to be continually reviewed to identify any shortfalls and develop an updated action plan to address said issues. 29. It is proposed to complete the work in the shortest reasonable duration to reduce the impact on roads. 30. Traffic Control Plans (TCPs) are to be prepared for all works undertaken in order to improve road safety. 31. Prior to travel, drivers must be made aware of the Driver Code of Conduct (within the CTMP), which is to be handed to all construction employees. 32. Public roads and access points must not be obstructed by any materials, vehicles, skips or the like. 33. All loads travelling to and from the site shall be covered at all times. 34. Notification of any adjoining residents or businesses will be undertaken prior to construction. It is proposed that all affected properties will be notified at least 14 days in advance of any impacts (including road closures).

		35. Appropriate approvals must be obtained prior to construction in the relevant area from private residences, road authorities, utility providers and any other stakeholder requiring preapproved access. During operation: 36. Prepare a Framework Travel Plan (FTP) to inform the future Green Travel Planning for the development. 37. Prepare a Traffic and Parking Management (TPM) Plan outlining the strategies to provide for efficient operations on and off site. The TPM Plan is to include strategies relating to: the use of the staff car park; the use of the Drop Off Pick Up (DOPU) areas; Bus loading and unloading; and Safe Routes to Schools measures.
Social Impacts	Impacts to the Campbelltown Community	38. Design and implement CPTED, Education SEPP Design Principles. 39. Continuous engagement with the community through the construction of the proposed development. 40. Utilising a consultation/complaint register throughout the project. 41. Encouraging active transport initiatives during the construction and operation of the proposed development.
Heritage	Value of heritage items, and items encountered during construction	**Aboriginal heritage** 42. Prior to commencement of works, it is recommended the proponent engage the current AHIP holder to confirm whether AHIMs sites 45-5-4234 and 45-5-3472 have been subject to community collection. If they have not been collected, the proponent should follow conditions of AHIP 1132181. 43. If AHIMS sites 45-5-4234 and 45-5-3472 have been collected; or following community collection as per the conditions of the AHIP, no further archaeological work is required in the study area as it has a low archaeological potential. 44. Should any Aboriginal objects be encountered during works associated with the proposed development, work must cease in the vicinity and the finds should not be moved until assessed by a qualified archaeologist. If a find is determined to be an Aboriginal object, work must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. Finds can only be determined by a qualified archaeologist who will advise on further recommendations. This may include notification to the Office of Environment and Heritage (OEH) and relevant Aboriginal stakeholders. 45. If any suspected human remains are discovered during the activity of the proposed development, all activity must cease immediately. The remains must be left in place and protected from harm and damage. A contingency plan describes the immediate action that must be taken in instances where human remains or suspected human remains are discovered. Further detail is outlined in Appendix O. **Non-Aboriginal heritage** 46. If unexpected heritage items or archaeological remains are encountered during construction, work is to cease and mitigation and management measures are to be followed in accordance with the applicable legislation.

		47. A 'Finds Procedure' to be put in place should Non-Aboriginal Heritage be identified during construction works. This should be developed by a qualified archaeologist. 48. Any works carried out adjacent to or crossing the Upper Canal shall avoid impacting on water quality and damaging the Canal infrastructure, in accordance with SCA requirements.
Contamination	Contamination findings during construction	49. If contamination is found, all work in the immediate vicinity should cease and temporary barricades should be erected to isolate the area. 50. A suitably qualified contaminated land consultant should be engaged to inspect the find and provide advice on the appropriate course of action. 51. Any actions should be implemented and validated to demonstrate that there are no unacceptable risks to the receptors. 52. If contamination is discovered on the site, a Site Audit Report and Statement must be prepared by an EPA accredited site auditor. This site audit will verify if land is suitable for the use proposed as part of the works. 53. Any new information come to light during construction works which has the potential to alter previous findings about site contamination, must immediately be notified and work must cease.
Drainage	Construction run-off	54. Incorporating sediment diverting methods to minimize sediment in Council's stormwater drainage network using sandbags around kerb inlet pits and geo-textile filter fabric around drop inlet pits. 55. The provision of a sediment basin towards the perimeter of the site where stormwater runoff should be channelled and treated during construction. 56. Water shall be prevented from entering the permanent drainage systems unless the catchment has been stabilised and/or likely any sediment has been filtered out. 57. If temporary sediment basins are required, safe batter slopes must be implemented in accordance with the Geotechnical Report prepared by JK Geotechnics [Appendix P].
Flooding	Potential flooding	58. The site is not situated on flood prone land, therefore is not subject to flooding.
Bushfire	Impacts to the proposed development due to bushfire	59. Proposed landscaping should comply with the principles listed within Appendix 5 of PBP. 60. Hydrants are to be installed to achieve compliance with AS 2419.1 – 2005 Fire Hydrant Installations - System Design, Installation and Commissioning (AS 2419).

		61. 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).
Biodiversity	Impacts to potential biodiversity	62. Whilst the site does not contain vegetation or biodiversity value, some measures will be implemented to reduce impacts where possible through a CEMP.
Sediment, Erosion and Dust Control	Impacts from stormwater, erosion and sediment runoff into adjacent watercourse;	**<u>During construction:</u>** 63. Erosion and sediment control measures must be implemented until such time all ground disturbed by the works has been stabilised and rehabilitated so that it no longer acts as a source of sediment. 64. A Construction Soil and Water Management plan be compiled by a suitably qualified expert in consultation with Council describing all erosion and sediment controls to be implemented during construction. 65. Storm water pits are to be covered with geotextile fabric and sandbags. 66. Crossovers entering / exiting the site will be regularly swept. 67. Shaker grid will be installed at the site exit point. 68. Silt fences installed where required to prevent sediment runoff from leaving the site and entering the surrounding environment.
Geotechnical and Salinity	Impacts to foundations of the proposed development	69. All earthworks recommendations provided below should be complemented by reference to AS3798-2007 'Guidelines on Earthworks for Commercial and Residential Developments'. 70. A waste classification will need to be assigned to any soil excavated from the site prior to offsite disposal.
Construction Waste	Excess in waste generation	71. Emphasise the importance of recycling and waste reduction. 72. Reduce the amount of waste material produced on the project by ensuring that only enough materials required to perform the works are ordered. 73. Any excess materials from work areas are to be retained and incorporated into other work areas where practical. 74. Encourage "just in time" delivery of construction materials (minimum storage on site) to reduce the potential of loss / waste due to damage prior to usage. 75. Encourage the use of recycled materials where it is reasonably practical. 76. Minimise the use of packaging materials and recycle packaging materials where possible. 77. Waste concrete to be sent to a concrete recycling plant where possible. 78. Separate removed native vegetation from general construction waste, mulched and stockpiled for re-use. 79. Non-recyclable general waste will be disposed of at an approved waste disposal facility

		80. Removal of hazardous materials and disposal at an approval waste disposal facility in accordance with the requirements of the relevant legislation, codes, standards and guidelines, prior to the commencement of any building works. 81. Asbestos removal must consider the requirements of the *Protection of the Environment Operations (Waste) Regulation 2014*.
Operational Waste	Excess in waste generation	82. An Operational Waste Management Plan (OWMP) should be developed to consider recycling methods and options to reduce waste and targets for reduction of waste disposal and recycling. 83. A valid and current contract with a licensed contractor for waste and recycling collection to be maintained.

10 SUMMARY AND CONCLUSION

10.1 Conclusion

This Environmental Impact Statement has been prepared in support of the proposed new East Leppington Primary School.

The proposed development has the following objectives:

- Support Greater Sydney's rising population and reduce pressure on other neighbouring local primary schools;
- Deliver the necessary school infrastructure identified for the growing precinct;
- Successfully engage with stakeholders to ensure the best outcomes for students and staff; and
- Ensure the proposal is undertaken in a safe manner, adhering to work health and safety legislation.

This EIS has been assessed under the relevant statutory planning and policy provisions and addressed the applicable SEARs issued 10 August 2018.

As detailed in Section 7 of this EIS, the proposal demonstrates that applicable onsite and offsite environmental impacts have been carefully considered and addressed. The proposed development would not result in significant environmental impacts to the surrounding environment.

Environmental mitigation measures have been proposed to reduce environmental impacts, and based on this assessment, and implementation of mitigation measures, the proposed development is warranted for approval.

Appendix A Secretary's Environmental Assessment Requirements

Appendix B Architectural Drawings

Appendix C Site Survey Plan

Appendix D Quantity Surveyors Report

Appendix E Design Analysis Report

Appendix F Landscape Analysis Report

Appendix G Civil Drawings

Appendix H Structural Drawings

Appendix I Transport Assessment

Appendix J Green Travel Plan

Appendix K Construction Management Plan

Appendix L Construction Traffic Management Plan

Appendix M Acoustic Report

Appendix N ESD Report

Appendix O Aboriginal Assessment

Appendix P Geotechnical Report

Appendix Q Contamination Report

Appendix R Bushfire Report

Appendix S BDAR Waiver Request

Appendix T Infrastructure Management Plan

Appendix U Accessibility Report

Appendix V BCA Report

Appendix W Waste Management Plan

Appendix X Water Conservation

Appendix Y Heritage Report

Appendix Z Risk Management Report

Appendix AA Stakeholder Engagement

Appendix BB Visual Impact Assessment