



Environmental Impact Statement

State Significant Development (SSD-8873789)
New Primary School in Epping

PLANNING. URBAN DESIGN.
RETAIL AND ECONOMIC. HERITAGE

86 Chelmsford Road, Epping

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DECLARATION

ENVIRONMENTAL IMPACT STATEMENT

Applicant Name:	New South Wales Department of Education
Applicant Address:	Level 4, 35 Bridge Street, Sydney NSW 2000
Land to be developed:	86 Chelmsford Avenue, Epping
SSD Application Number:	SSD-8873789
Proposed development:	New Primary School
ENVIRONMENTAL IMPACT STATEMENT	This report is an Environmental Impact Statement which addresses all relevant matters required by Section 4.12(8) (formerly s.78A) of the <i>Environmental Planning and Assessment Act 1979</i> and Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i> .
DECLARATION	The undersigned certify that we have prepared the contents of this Environmental Impact Statement and to the best of our knowledge it: - addresses all relevant matters listed under Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>; - contains all available information that is relevant to the environmental assessment of the development to which the EIS relates; and - is not, by its presentation or omission of information, false nor misleading.
PREPARED BY Name: Qualifications: Address: Signature: Date:	Ellen Robertshaw B. App Sci (Environmental Planning) 11 Dartford Road, Thornleigh NSW 2120  20 May 2021
Name: Qualifications: Address: Signature: Date:	Stephen Earp B. Planning (Hons) 11 Dartford Road, Thornleigh NSW 2120  20 May 2021

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Abbreviations

AADT	annual average daily vehicle trips
AECG	Aboriginal Education Consultative Group
AEP	Annual Exceedance Probability
AS	Australian Standard
ASS	acid sulfate soils
BCA	Building Code of Australia
BC Act	<i>Biodiversity Conservation Act 2017</i>
CIV	capital investment value
CMP	construction management plan
COLA	covered outdoor learning area
Council	The Council of the City of Parramatta
CPTED	crime prevention through environmental design
DA	development application
DCP	development control plan
DDA	<i>Disability Discrimination Act 1992</i> (Cth)
DFP	DFP Planning Pty Limited
DoT	NSW Department of Transport
DP	Deposited Plan
DPIE	NSW Department of Planning, Industry and Environment
EEC	endangered ecological community
EFSG	Educational Facilities Standards and Guidelines
EIS	Environmental Impact Statement
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPA	NSW Environmental Protection Authority
EPBC	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth)
EPI	environmental planning instrument
ESCP	erosion and sedimentation control plan
ESD	ecologically sustainable development
FTE	full time equivalent
GANSW	Government Architect NSW
GFA	gross floor area
LALC	Local Aboriginal Land Council
LEP	local environmental plan
LGA	local government area
OSD	on site detention
PRG	project reference group
RAP	remediation action plan
RL	reduced level
RMS	NSW Roads and Maritime Services
SAII	Serious and Irreversible Impact
SDRP	State Design Review Panel
SEPP	State Environmental Planning Policy
SEARs	Secretary's Environmental Assessment Requirements
SINSW	School Infrastructure NSW
SRD SEPP	<i>State Environmental Planning Policy (State and Regional Development) 2011</i>
SSD	State Significant Development
TfNSW	Transport for NSW
VENM	Virgin Excavated Natural Material
WSUD	water sensitive urban design

Executive Summary

The Department of Education (DoE) via School Infrastructure New South Wales (SINSW) proposes to construct a new school. The proposed new development will result in a new purpose-built educational establishment to service the growing population of the Epping locality.

The development site is known as 86 Chelmsford Avenue, Epping (the site) and is located in the Local Government Area of the City of Parramatta (Council). The development site is a former NSW TAFE College which has been recently purchased by DoE.

The proposed development is for the establishment of a new K-6 primary school, master planned to cater for up to 1,000 students. The proposed development will comprise:

- Demolition of existing structures associated with the former use of the site as a TAFE campus;
- The connection of Grimes Lane with Second Avenue along part of the northern frontage of the site;
- Construction of new buildings on the eastern and central portions of the site.

Facilities will generally include:

- Home bases (classrooms) suitable for a school population of 1,000 students;
- Administration and staff areas;
- Hall and canteen;
- Library;
- COLAs;
- Special education unit;
- Play spaces in various locations;
- Accessible paths linking the school facilities; and
- A staff car park accessed from Second Avenue.

The proposal will also include tree/vegetation removal. Subject to further site investigations to be undertaken following demolition of existing buildings, remediation of the land might also be required.

The works are proposed to be undertaken in stages. The application will be lodged as a concept development application pursuant to Division 4.4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The application will also seek approval for the Stage 1 works.

The Stage 1 works will provide a total of 25 home bases and associated facilities together with a hall and canteen, administration facilities and play spaces. Car parking for the Stage 1 development will also be provided. The Stage 1 development will cater for 600 K-6 students and 38 staff.

The proposal is for a new school and therefore must be assessed as State Significant Development, pursuant to Schedule 1 Clause 15(1) of *State Environmental Planning Policy (State and Regional Development) 2011*.

This Environmental Impact Statement report has been prepared in accordance with the Secretary's Environmental Assessment Requirements for SSD-8873789 issued by the NSW Department of Planning, Industry and Environment pursuant to section 4.12(8) of the *Environmental Planning and Assessment Act 1979* and Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*.

This Environmental Impact Statement provides the NSW Department of Planning, Industry and Environment and relevant NSW State Government Agencies with all relevant information necessary to assess the proposed development and for the Minister to determine the Development Application in accordance with Section 4.38 of the *Environmental Planning and Assessment Act 1979*.

Executive Summary

The project team has carried out significant consultation with a number of stakeholders, including neighbouring and surrounding landowners, State agencies, Local Government, the Aboriginal community and community groups. The advice received throughout the consultation process has informed the consideration of the localised amenity impacts and ecological constraints of the site which have been taken into account in the design of the current proposal, reflecting a commitment to provide a quality and objective-driven outcome which is both fit for purpose and sympathetic to the environment and the setting in which it is located.

Key environmental considerations in relation to the proposed development include:

- **Built form:**

The building works have been sited towards the northern and eastern portions of the site in order to minimise impacts on the remnant Blue Gum High Forest Sydney blue gum trees on the southern and western portions of the site.

In Stage 1, two (2) buildings are proposed. These will address the street frontage on Grimes Lane and Chelmsford Avenue. Both buildings have been oriented to maximise solar access, cross ventilation, and view lines across the site. The buildings have been set back to allow a generous landscape setback to the street and adjoining development to the east.

The proposed material palette is inspired by the Sydney Blue Gum high forest is located on the site. Neutral light and dark grey tones are proposed to be used in conjunction with accented colours that are derived from the colours found on the bark of the Sydney blue gums. The cladding will be CFC cladding which is a versatile and durable material.

- **Traffic and Parking:**

The proposed works include the connection of Grimes Lane with Second Avenue along the northern boundary of the site. The one way connection (from east to west) will include a kiss and drop zone.

Two vehicular accesses to the site are proposed – one to the staff car parking area from the end of Second Avenue and the other at the eastern end of the site from Chelmsford Avenue. This entry will facilitate access to the special support unit drop off and pick up area and will also function as the service entry.

Separate pedestrian entries from the Grimes Avenue extension are also proposed.

Pedestrian infrastructure is required to promote walking and cycling to school by students. This infrastructure will provide health benefits as well as reduce congestion on local roads. SINSW is proposing to provide funding to Council for the delivery of footpath infrastructure upgrades in the vicinity of the site.

Assessment of traffic generation has been considered in the context of the green travel initiatives which are proposed to be implemented. The impacts on the local road network and intersection performance have been assessed as acceptable.

- **Tree Removal:**

The proposed works will require the removal of 65 trees, however 101 replacement trees will be provided as part of the overall landscaping works. Tree protection measures to be implemented for the 108 trees to be retained (but that might be impacted by the proposed works) have been detailed in the accompanying arborist report.

- **Biodiversity:**

Whilst the majority of the site already contains built form, cleared land and exotic vegetation, the site does contain remnant patches of native vegetation and planted native vegetation comprising the following plant community types (PCTs):

- PCT 1237 - Sydney Blue Gum – Blackbutt – Smooth barked Apple moist shrubby open forest on shale ridges of the Hornsby Plateau, Sydney Basin Bioregion; and
- PCT 1845 – Smooth-barked Apple – Red Bloodwood – Blackbutt tall open forest on shale sandstone transition soils in eastern Sydney.

Executive Summary

PCT 1237 conforms to Blue Gum High Forest, which is listed as part of the critically endangered ecological community (CEEC) under the *Biodiversity Conservation Act* and the *Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act)*.

A biodiversity development assessment report (BDAR) in relation to these PCTs has been prepared. This assessment concluded that the proposed development is unlikely to result in serious and irreversible impact on the PCT communities and that no ecosystem credits are required.

The proposed works will provide high quality learning and teaching spaces with flexible layout arrangements and durable finishes ensuring the proposal operates as a flexible, long-life, high utility and low-maintenance educational establishment. The works proposed under this SSDA will be subject to the recommendations of specialist reports to ensure appropriate heritage, geotechnical, contamination, traffic and acoustic outcomes are achieved.

The proposed works have been designed to, and will be carried out in, the interests of the public. The proposal will meet the project objectives to provide additional high-quality built form which has safe and efficient access for children, staff, visitors and service personnel.

Accordingly, it is recommended that the Minister for Planning and Public Spaces grant approval to the proposed State Significant Development application as set out in this report.

1 Introduction

1.1 Overview

1.1.1 Purpose of Report

DFP Planning Pty Ltd (DFP) has been commissioned by DoE and SINSW to prepare an Environmental Impact Statement (EIS) to accompany a State significant development application (SSDA) to the NSW Department of Planning, Industry and Environment (DPIE) for a proposed new primary school in Epping (the proposed development) which will be located at 86 Chelmsford Avenue, Epping (the site).

The proposed development is for a new school (*educational establishment*) and accordingly, is deemed to be State Significant Development (SSD) pursuant to Clause 15(a) of Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* (the SRD SEPP).

On 14 September 2020, the Secretary of the DPIE issued Secretary's Environmental Assessment Requirements (SEARs) (see **Appendix 1**).

This report has been prepared in accordance with the SEARs, Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (the Regulation) to provide the DPIE and relevant NSW State Government Agencies with all relevant information necessary to assess the proposed development and for the Minister to determine the DA in accordance with Section 4.38 of the EP&A Act.

1.1.2 Project Objectives and Summary

The Project Objectives are:

- To provide a modern, high quality and fit-for-purpose educational establishment to suit the needs of the Epping community;
- To provide a high-quality built form and open spaces that are adaptable and flexible to cater for future educational needs;
- To accommodate a growing school population in the locality;
- To establish improved traffic management system for the area by connecting Grimes Lane with Second Avenue; and
- To undertake the staged development of the school in accordance with the concept plan.

The Project is detailed in **Section 2** of this EIS report and can summarised as a new K-6 primary school master planned to cater for up to 1,000 students. The development will ultimately comprise:

- Demolition of existing structures associated with the former use of the site as a TAFE campus;
- The connection of Grimes Lane with Second Avenue along part of the northern frontage of the site;
- Construction of new buildings on the eastern and central portions of the site.

Facilities will generally include:

- Home bases (classrooms) suitable for a school population of 1,000 students;
- Administration and staff areas;
- Hall and canteen;
- Library;
- COLA;
- Special education unit;

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- Play spaces in various locations;
- Accessible paths linking the school facilities; and
- A staff car park accessed from Second Avenue.

In order to facilitate the works, some tree/vegetation removal will be required.

The works are proposed to be undertaken in stages. The Stage 1 works will provide a total of 25 home bases and associated facilities together with a hall and canteen, administration facilities and play spaces. Car parking (32 spaces including 1 accessible space) for the Stage 1 development will also be provided. The Stage 1 development will cater for 600 K-6 students and 38 staff.

Stage 2 will comprise an additional eight (8) teaching spaces to the school and an additional 22 car parking spaces. Stage 3 will provide an additional 11 teaching spaces.

1.2 Site Context

1.2.1 Location

The site is a former campus of the Northern Sydney Institute of TAFE NSW. It has an area of 2.067Ha and is located within the Parramatta City Local Government Area (LGA). **Figure 1** shows the site and locality context.

The site is approximately 1.5km south west of the Epping town centre and a similar distance south east of the Carlingford local centre which is located on the corner of Pennant Hills Road and Carlingford Road.

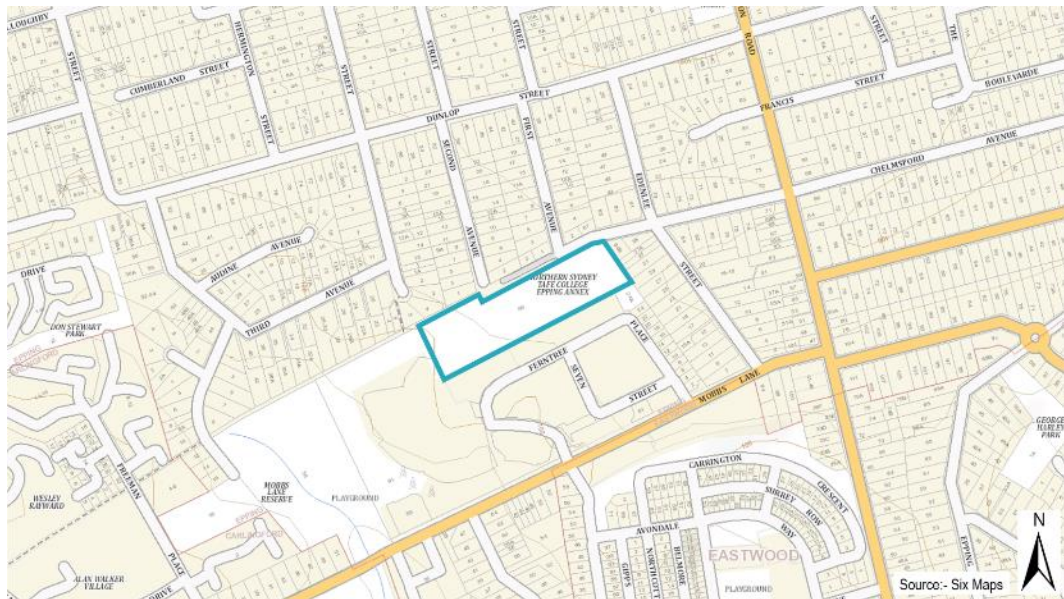


Figure 1 Site Location

Other public school developments in the vicinity of the site are:

- Epping West Public School, located at 96-104 Carlingford Road, Epping, is approximately 800m north of the site.
- Eastwood Public School, located on the corner of Rowe Street and Shaftsbury Road, Eastwood, is approximately 1.5km SSE of the site.
- Carlingford Public School, 5 Rickard Street, Carlingford, is approximately 1.3km west of the site.

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1.2.2 Site Description

Table 1 is a summary of the site description.

Table 1 Summary of Site Description	
Aspect	Description
Site Address	86 Chelmsford Avenue, Epping
Site Area	2.067ha
Site Boundaries	NE – 65.075m NW – 278.4m SW – 80.525m SE – 286.655m
Lot/-/DP	Lot 1 in Deposited Plan (DP) 582172
Orientation	North east to south west
Street frontages	Chelmsford Avenue Grimes Lane/First Avenue Second Avenue
Topography	From east to west: • Eastern 25% - 1:40 slope from west to east • Adjoining 15% - 1:100 slope from south to north • Adjoining 20% - 1:20 slope from east to west • Remaining western 40% - 1:4 to 1:7.5 slope from east to west
Vegetation	• Blue Gum High Forest • Urban Exotic • Other Native vegetation
Access	From Grimes Lane/First Avenue and Chelmsford Avenue
Previous Use	Northern Sydney TAFE campus – Ryde Horticultural College
Existing structures	• 3 single-storey, former TAFE buildings • 5 lightweight glasshouse structures. • Accessways and pathways • Lighting • Car park

The development site is known as 86 Chelmsford Avenue, Epping, and is legally described as Lot 1 in Deposited Plan DP 582172. **Figure 2** is an aerial photo of the site and its Immediate surrounds.

Figure 3 is a site analysis plan prepared by Pedovoli Architects. This plan is included in the architectural plan set at **Appendix 2** to this EIS.

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Figure 2 The Site

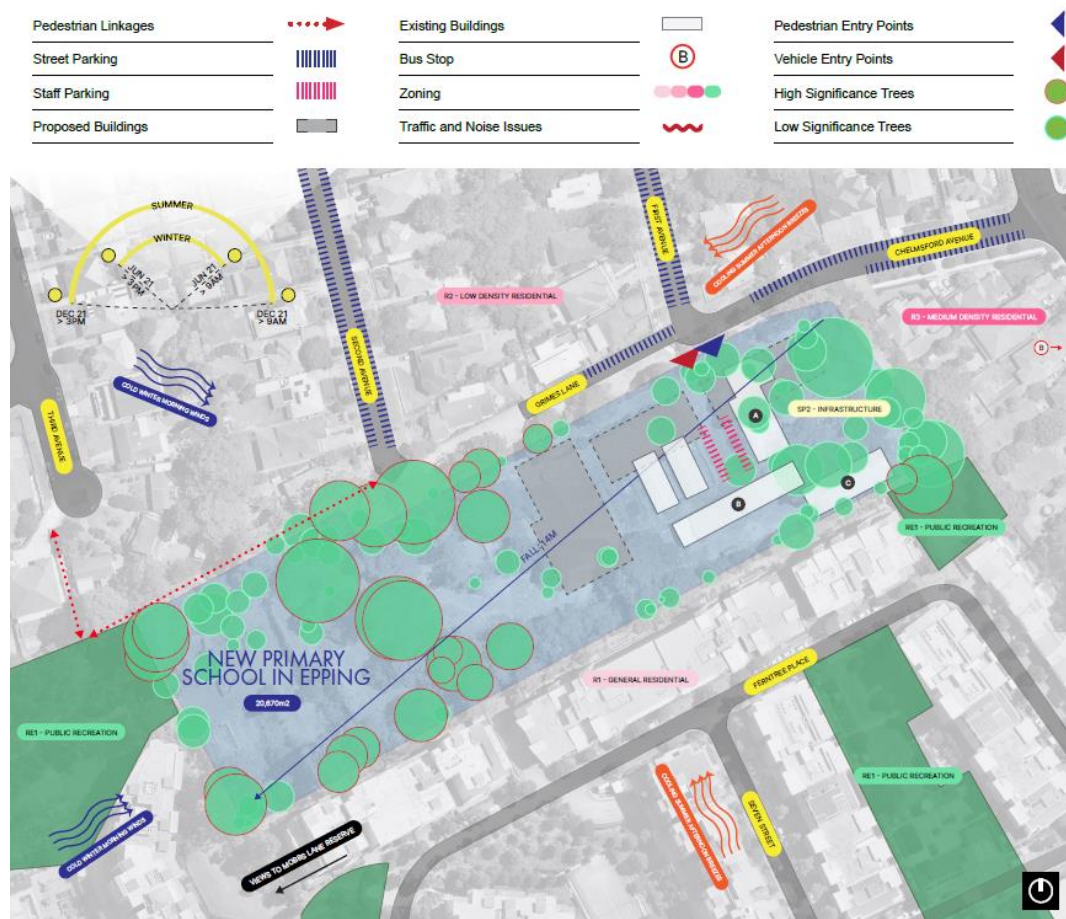


Figure 3 Site Analysis Plan prepared by Pedavoli Architects

There are three (3) buildings in the northeastern section of the site, with a large asphalted parking area and circulation route around a central group of greenhouse structures. The buildings are predominantly masonry, constructed in the 1970s and 1980s in association with the establishment of the Ryde campus of TAFE NSW (formerly Ryde School of Horticulture). Small sheds and other structures are also present on the site, generally grouped with the other buildings and greenhouses.

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Formal pathways or roads previously led down the slope at the southwest of the site to a pond/water retention basin. This area has become overgrown and pathways are no longer visible or accessible.

Remains of a greenhouse are visible amongst the vegetation in the bottom southwest corner of the site.

An existing on-site carpark and roadway is accessed from First Avenue/Grimes Lane.

Prior to the site being used by North Sydney TAFE, it was the location of the Camberwarra residence, which sat approximately where the existing car park is located.

Figures 4 – 11 are photographs of the site. These photographs also show development adjoining the site.



Figure 4 Looking south towards existing TAFE buildings to be demolished. Residential apartment buildings associated with Epping Park development in the background

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Figure 5 Existing garden/planted vegetation towards the eastern end of the site



Figure 6 Looking south from western half of the site

1 Introduction



Figure 7 Looking south west towards Mobbs Reserve and Epping Park development



Figure 8 Looking east along existing accessway parallel to the northern boundary

1 Introduction



Figure 9 Existing glasshouses to be demolished. Epping Park development in the background



Figure 10 Sydney Blue Gum tree at the end of Second Avenue. This tree will be retained.

1 Introduction



Figure 11 Looking west along constructed section of Grimes Lane. Existing residential development on the northern side of Grimes Lane is apparent on the right hand side of this photograph

The site is generally rectangular in shape with its long axis orientated north-east to south-west. The north-eastern half of the site, which has frontage to Chelmsford Avenue and Grimes Lane, is relatively flat. Some formerly terraced areas and pathways lead down the slope beyond the more level north eastern part of the site. Towards the south western third of the site the slope increases to approximately 1:7.5.

Figure 12 over page is a site analysis plan prepared by Taylor Brammer Landscape Architects which identifies the location of buildings, the slope across the various parts of the site and other improvements on the site as well as the low, medium and high significance vegetation.

SITE ANALYSIS

LEGEND

GENERAL

- SITE BOUNDARY
- ROAD
- PATHWAY
- SURROUNDING BUILDINGS
- ACCESSIBILITY
- EXTENT OF APZ
- EXTENT OF SYDNEY BLUE GUM COMMUNITY
- EXTENT OF SHALE/SANDSTONE TRANSITION FOREST

EXISTING TREES

- HIGH SIGNIFICANCE TREES
- MEDIUM SIGNIFICANCE TREES
- LOW SIGNIFICANCE TREES
- OTHER EXISTING TREES

TOPOGRAPHY

- 1:100 SLOPE
- 1:40 SLOPE
- 1:20 SLOPE
- 1:10 SLOPE
- 1:7.5 SLOPE
- 1:4 SLOPE
- BASIN



Figure 12 Site Analysis Plan prepared by Taylor Brammer Landscape Architects

1 Introduction

1.2.3 Vegetation

The site contains several areas of significant vegetation, including remnants of the early twentieth-century gardens and species associated with the critically endangered Blue Gum High Forest, as well as cleared land or exotic vegetation.

There are two (2) native Plant Community Types (PCT) on the site:

- PCT 1237 – Sydney Blue Gum - Blackbutt - Smooth-barked Apple moist shrubby open forest on shale ridges of the Hornsby Plateau, Sydney Basin Bioregion
- PCT 1845 - Smooth-barked Apple - Red Bloodwood - Blackbutt tall open forest on shale sandstone transition soils in eastern Sydney.

Figure 13 is an extract from the Biodiversity Development Assessment Report (BDAR) prepared by Ecological Australia which identifies the main vegetation groups and PCTs on the site.

Relevantly, adjacent to the south eastern boundary is an area identified as a Sydney Blue Gum Community. The presence of this community has been a site constraint around which the development has been designed.



Figure 13 Extract from Ecological BDAR report showing location of vegetation groups and PCTs on the site

1 Introduction

1.2.4 Surrounding Development

The site is surrounded by a mix of established low and high-density residential developments and open space. Adjoining development can generally be described as:

- North: Low-density residential. Immediately north of the site are one and two storey detached dwellings with frontages to First Avenue, Second Avenue and Grimes Lane.
- East: Low-density residential comprising one and two storey detached dwellings.
- South: High-density residential flat building development. The residential apartment buildings associated with the Epping Park development are evident in the photographs at **Figure 3** and **Figure 6**.
- West: High-density residential flat building development (**Figure 6**) and a public reserve known as 'Mobbs Lane Reserve'.

Figure 14 below shows an aerial image of the site and the surrounding locality.



Figure 14 Surrounding context

1.2.5 Surrounding Road Network

The roads in the vicinity of the site include Midson Road, Dunlop Road, Chelmsford Road, Mobbs Lane, Edenlee Street, First Avenue and Second Avenue. The road network surrounding the site of the new primary school in Epping is shown in **Figure 15**.

With the exception of Midson Road, all other roads in the vicinity of the site are local roads servicing the surrounding residential area.

Midson Road is a distributor road, providing a north-south connection between Beecroft in the north and Eastwood in the south. At its intersection with Terry Road, the road continues south (to its intersection with Victoria Road at West Ryde) but changes its name to Shaftsbury Road.

The roads that are in the immediate vicinity of the site are:

- Chelmsford Avenue, which intersects with First Avenue and Grimes Lane at the north-eastern corner of the site. Access to the site is currently provided via a driveway crossing off Chelmsford Avenue, opposite First Avenue.
- First Avenue, which runs in the north-south direction between Chelmsford Avenue and Dunlop Street.
- Second Avenue, which runs parallel to and west of First Avenue. Second Avenue currently terminates in a dead-end at its southern end – refer **Figure 16**.

1 Introduction

- Grimes Lane, which is a westward extension of Chelmsford Avenue, just east of its intersection with First Avenue. **Figure 17** is an aerial photograph with the cadastral boundaries included. This figure shows the road reserve of Grimes Lane.

Grimes Lane is only partially constructed west of its intersection with First Avenue and currently does not physically link with Second Avenue.

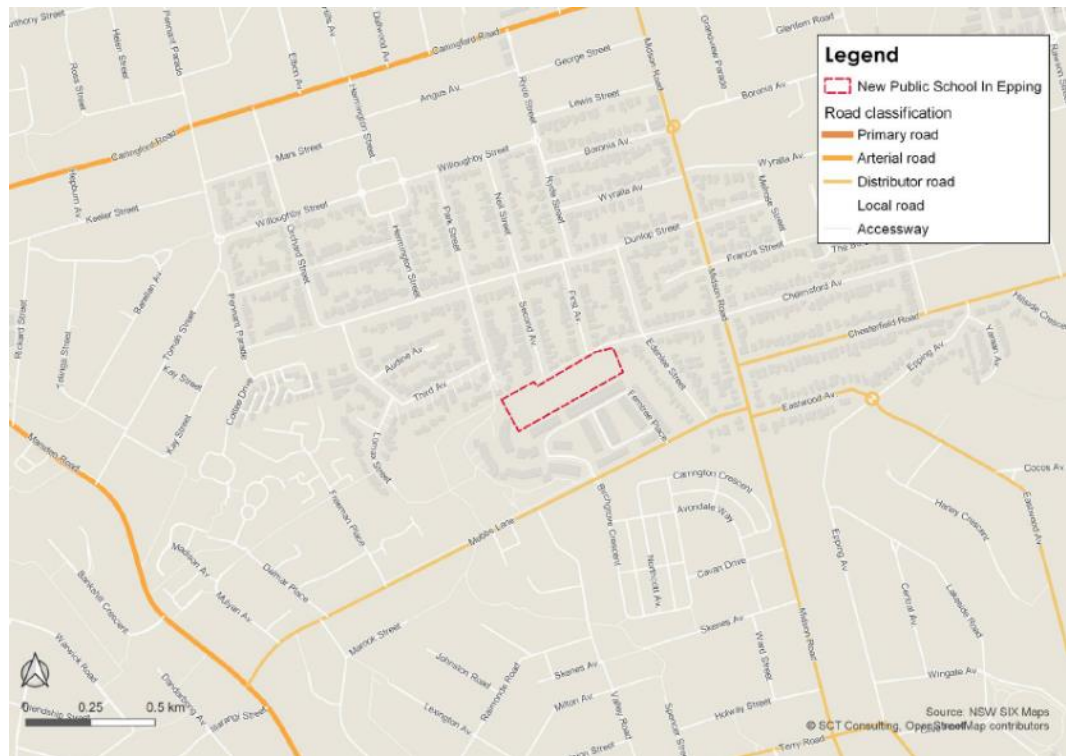


Figure 15 Road Classification Map (Source: SCT Consulting)



Figure 16 Southern extent of Second Avenue (Source: Google Streetview)

1 Introduction



Figure 17 Aerial photograph showing road reserve of Grimes Lane

1.2.6 Surrounding Pedestrian and Cycling Network

There are footpaths along Chelmsford Avenue, First Avenue, Second Avenue, Mobbs Lane and Edenlee Street, Midson Road and Dunlop Street however not all streets have footpaths on both sides of the street. Furthermore, there are missing sections of footpath in the immediate vicinity of the site.

There is one shared path (named “Heritage Walk”) along Madison Gardens, about 1 km to the west of the site. It is approximately 250m long and does not connect to any other cycleways.

According to NSW road rules, children under 16 years old are permitted to ride on a footpath for safety purposes. An adult rider who is supervising a bicyclist under 16 may also use a footpath. As such, footpaths provide cycle infrastructure for students.

1.2.7 Public Transport

Rail Services

The site is located approximately 1.5km (straight line distance) south west of Epping Station which provides a connection to rail services such as the T9 Northern Line and the Sydney Metro Northwest line.

Bus Services

Bus routes 521 and 541 provide services along Midson Road and Mobbs Lane. Both services link to Eastwood Station with Route 541 providing access to Epping Station. Route 541 also stops on Edenlee Street, within 150 m of the school. The frequency of both routes is approximately hourly.

1.3 Analysis of Design Alternatives

Design Objectives

In September 2020 Dialogic Learning in collaboration with BVN Architects prepared a series of concept designs for this site. These designs were informed following input from SINSW and DoE representatives at a number of workshops.

The key functional requirements that were identified for the new school included:

- Ensuring the front door or address of the school is accessible and visible to the community.
- Consider the use of buildings with multiple floors and covered outdoor learning areas (COLAs) to mass student numbers and maximise play space available.

1 Introduction

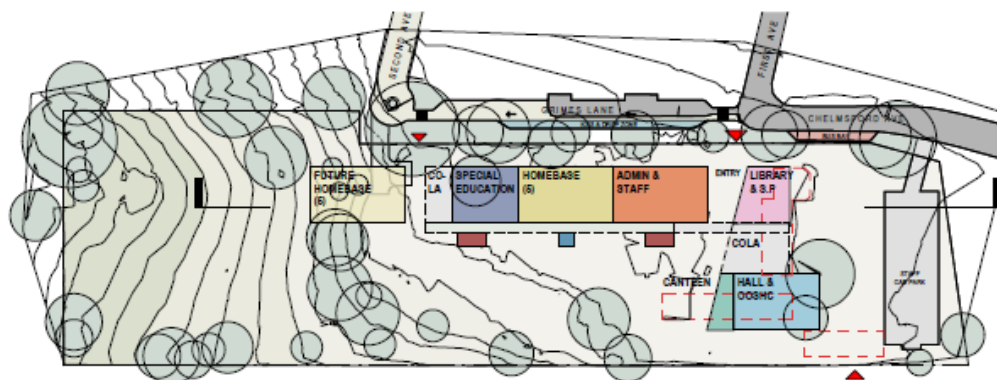
- This would also reduce building entry and exit points and increase the control and management of the site.
- Consideration of movement of large numbers of students is important. This could be achieved by the provision of access ramps, wide stairways that double as amphitheatre-style seating.
- The library should play a central role in the school site and the library and large gathering facilities should form a central hub for learning and connection across the school campus.
- New learning facilities should utilise outdoor learning spaces for each learning area by creating a functional external relationship to well-designed outdoor areas for every grade and stage.

These design objectives informed the preparation of a series of concept designs for the site. Following further consideration, the concept designs were narrowed down to two options.

Options Analysis

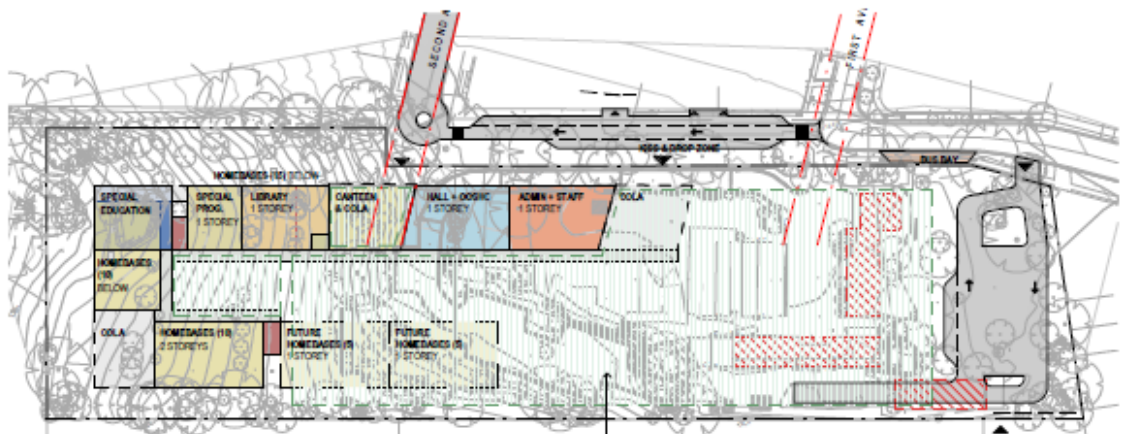
During the concept design phase of work, BVN Architects developed two options that were selected from the masterplan phase - Option 2A and Option 3B.

These options are provided in **Figures 18** and **19**.



BVN Option 2A

Figure 18 BVN Concept Option 2A



BVN Option 3B

Figure 19 BVN Concept Option 3B

1 Introduction

Due diligence investigations were then undertaken in relation to each option. It was determined that Option 3B could not proceed for the following reasons:

- The bushfire due diligence investigation identified that a potential asset protection zone (APZ) was required at the western third of the site. This meant that no buildings could be located on this part of the site.
- The building layout would require the removal of a large number of significant trees, including Sydney blue gum trees. This option was likely to result in a development that would be assessed as having a Serious and Irreversible Impact (SAIL) on the remnant Blue Gum High Forest on the site.
- This part of the site was assessed as having potential for flooding due to overland flow.

As a result, it was agreed that Option 3B was not viable.

Option 2A was then further developed as the preferred concept design. Design development of Option 2A was informed by:

- Advice from Arboricultural and Biodiversity consultants.
- Feedback from Educational Facilities Standards and Guidelines (EFSG) outlining that a 4 home-base cluster is the 'non-negotiable' maximum.
- The carpark was moved to the western side of the proposed buildings following consultation with the Project Reference Group (PRG) and EFSG teams, siting potential traffic conflicts with a carpark adjacent to the main pedestrian entry.
- The hall was relocated to correspond to the revised location of the car park.
- The special education learning unit (SELU) was moved to have separate driveway access at the eastern end of the site.

Development of Final Scheme

Option 2A was presented to the NSW Government State Design Review Panel (SDRP) on 19 November 2020.

Following feedback from the SDRP, Option 2A was further refined to incorporate the following:

- The car parking was redesigned to ensure the retention of highly significant tree T145;
- The re-planning of the Hall;
- The storerooms and amenities were relocated to shield the COLA and open play space from the carpark; and
- The proposed location of future stages buildings was revised to allow for better construction access to the future stages.

The carpark location as now proposed has been identified as appropriate from operational safety and efficiency perspectives and has been endorsed by SINSW and the School Working Group.

The segregation between the various vehicular activities (staff parking, kiss & drop and SELU drop off) will result in increased safety for pedestrians and reduce traffic issues.

The limited street frontage of the site restricts the possible carparking location as well as the buildings' location, therefore the masterplan has been designed to respond to these constraints while being mindful of minimising ecological disturbance of the site.

The preferred design can be undertaken with a minimal impact on significant vegetation and has been designed to work with the topography of the site in order to minimise the extent of earthworks.

2 Project Description

2.1 Concept Masterplan

The proposed development is a concept master plan for the establishment of a new K-6 primary school, master planned to cater for up to 1,000 students, including new buildings, car parking, landscaping and site facilities.

The works are proposed to be undertaken in stages. The application is lodged as a concept development application pursuant to Division 4.4 of the Environmental Planning and Assessment Act 1979 (EP&A Act). The application will also seek approval for the Stage 1 works. **Figure 20** is an extract from the architectural plans showing the staging of works.

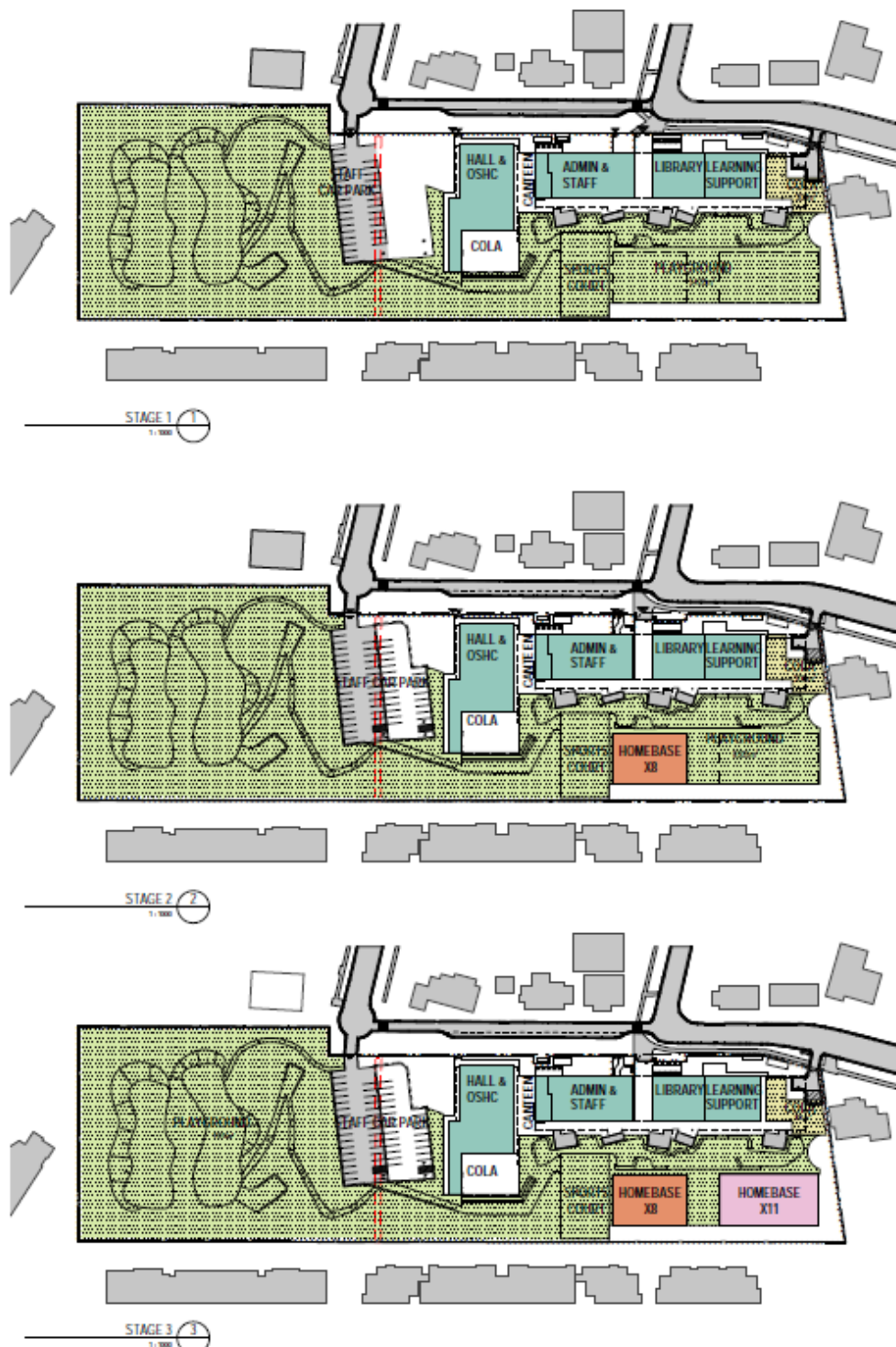


Figure 20 Site Plan showing staging of works

2 Project Description

The SSDA is seeking approval for the overall concept for a school comprising a new K-6 primary school, master planned to cater for up to 1,000 students, including new buildings, car parking, landscaping and site facilities, including building envelopes for the Stage 2 and Stage 3 buildings and works, as well as approval for the detailed works described as Stage 1 works.

The overall project for the new primary school in Epping will comprise a core 35 school with 44 teaching spaces with the works to be completed over 3 stages:

- **Stage 1:** Core 35 facilities and 25 teaching spaces and 3 x SELU teaching spaces. A staff car park with 32 spaces (including one accessible space) as well as play spaces to the south of the buildings and at the western end of the site.

The extension of Grimes Lane to link with Second Avenue will also be delivered as part of the Stage 1 works. Separated pedestrian and vehicular accesses from Chelmsford Avenue, Grimes Lane/First Avenue and Second Avenue will be provided.

A separate vehicular access with 2 drop off/pick up spaces for SELU students will be provided at the eastern end of the site. The access will also function as the service access, including access for collection vehicles to the waste storage area at the eastern end of the site.

Extensive landscaping, including an accessible path to the play spaces at the western end of the site will be provided in Stage 1.

- **Stage 2:** 8 additional teaching spaces together with the remaining 22 car parking spaces (including 2 accessible spaces (3 accessible spaces in total at the completion of Stage 2)). The Stage 2 building will occupy part of the play space provided in Stage 1 to the south of the Stage 1 buildings.
- **Stage 3:** 11 additional teaching spaces.

Relevantly, all core facilities, including administration facilities, library, and hall, will be delivered as part of the Stage 1 works. The car parking provided in Stage 1 will be sufficient for the Stage 1 development only. Additional car parking will be provided in Stage 2.

2.2 Stage 1 Development

The key aspects and features of the Stage 1 proposal are set out in **Table 2** and shown in the architectural plans prepared by Pedavoli Architects (PA) (**Appendix 2**) and the landscape plans prepared by Taylor Brammer Landscape Architects (**Appendix 17**).

Table 2 Summary of Key Aspects of Stage 1	
Aspect	Description
Site Preparation ¹	• Demolition of existing structures • Site remediation (if required) • Bulk earthworks • Tree removal • Tree protection
Built Form	• A three (3) storey building comprising 25 homebases, three (3) special education learning areas, administration and staff areas, canteen, library and amenities. • A single storey hall/OOSH building with associated COLA.
Other works	• Extension of Grimes Lane to link with Second Avenue • Car parking area for 32 cars, including one accessible space
Setbacks	To Grimes Avenue extension: • 4.04m to hall • 7.14m to three storey Admin/Homebase building To eastern site boundary: • 6.25m

¹ The opportunity to undertake some early works via other planning pathways will be explored and considered.

2 Project Description

Table 2 Summary of Key Aspects of Stage 1

Aspect	Description
	To southern site boundary: • 25.6m to southern side of toilet block off hall building • 34.78m to southern side of stairs/circular areas for three storey building
GFA/FSR	Total Gross Floor Area – 5,095.66m² Floor Space Ratio – 0.25:1 (based on a site area of 20,670m²)
Landscaping	• Play spaces including a multi purpose sports court. • Landscaping which integrates with existing/retained vegetation. • Accessible paths linking school facilities. • Plant species selected from endangered ecological communities of the Shale/Sandstone Transition Forest and Blue Gum High Forest.
Tree Removal Tree Protection Tree Replacement	Tree Removal – A total of 65 trees are proposed to be removed • High significance trees - 2 trees (Tree Nos: 23 and 169) • Medium significance trees - 15 trees (Tree Nos: 22, 28,30, 44-49, 142, 143, 146, 149-151) • Low significance trees - 48 trees (Tree Nos: 1, 3-8, 11, 13, 18, 21, 24-27, 29, 31-37, 39, 40, 43, 52-54, 60, 61, 65, 109, 111, 112, 116, 126, 128-133, 140, 141, 144, 147, 152, 153) Tree Protection - A total of 101 trees will be retained and protected. NOTE: This does not include all trees to be retained on the site. The tree protection measures for the 101 trees to be protected relate to those trees that are located within areas proximate to the areas within which the demolition and construction works will occur. Tree Replacement – 66 trees from Blue Gum High Forest community and 60 trees from Shale/Sandstone Transition Forest community: • BGHF trees: ○ Lilly Pilly – 15 ○ Rose she-oak – 15 ○ Red Ash - 12 ○ Blueberry Ash – 12 ○ Native Daphne – 12 • S/STF trees: ○ Black She-oak – 10 ○ Rough-barked Apple – 10 ○ Yellow Bloodwood – 10 ○ Spotted Gum – 10 ○ Narrow-leaved Ironbark – 10 ○ Turpentine - 10
Stage 1 Capacity	• 600 K-6 students and 38 staff (28 teaching staff and 10 support staff).
Infrastructure	• Stormwater drainage including rainwater tank (50,000 litre) and on site detention tank (360m³). • Extension of Grimes Lane to link with Second Avenue in a one-way traffic flow from east to west. • Provide Kiss and Drop zone along the school side (southern edge) of Grimes Lane, plus associated footpath infrastructure. • Provide cul-de-sac bubble at the southern end of Second Avenue. • New vehicular crossing at the eastern end of the site to access SELU drop off/pick up area and service area. • New staff car park with 32 parking spaces. • Associated footpath upgrades in Chelmsford Avenue. • Make good existing crossing opposite First Avenue • Provide new pedestrian access from Grimes Lane (main entry). • New vehicular crossing from Second Avenue to staff car park
Remediation	The detailed site investigation has determined that those parts of the site which could be tested do not require remediation. Upon demolition of the existing buildings, further site investigations will be undertaken. If contamination is located under these buildings, remediation of the site will be required.
Access	• Main pedestrian access from Grimes Lane, near First Avenue • A secondary pedestrian access will be provided from Grimes Avenue, near the proposed hall/OOSH building • Access to staff car park from Second Avenue • Access to SELU car park and service area from Chelmsford Avenue

2 Project Description

Table 2 Summary of Key Aspects of Stage 1

Aspect	Description
Community Use	At this stage, as the school is a new school with no existing operation, an assessment of community use of the school facilities cannot be made.
Operational Details	Hours of operation: - Standard school operation – 9am – 3pm - Before and After school care – 7.00am – 8.30am and 3.00pm – 6.00pm (TBC). School population: - Students – 575 - 600 - Staff - 38
Car parking	31 spaces, including 1 accessible space
Bicycle parking	60 bicycle racks
Signage	Building identification signage at the main pedestrian entry to the school site. Signage will comprise a two sided pylon sign measuring 2800mm (h) x 600mm (w) x 100mm (d).
Operational waste management	All servicing, including waste management, will occur via the driveway access from Chelmsford Avenue at the eastern end of the site. The waste bins will be located in a screened area adjacent to the service turning area.
Jobs	School Staff: 28 teaching positions 10 support staff Construction phase jobs: 96 FTE
CIV	\$43,268,699

2.3 Future Stages 2 and 3

Stage 2 will provide an additional eight (8) teaching spaces to the school. This will provide accommodation for a further 200 students, resulting in a total school population of approximately 800 students and 48 staff. The car parking area will be expanded in Stage 2 to provide a further 23 spaces (a total of 54 in Stages 1 and 2), including 2 additional accessible spaces (3 in total).

Stage 3 will provide an additional 11 teaching spaces. Upon completion of Stage 3, the school will be capable of accommodating a total of approximately 1,000 students.

Stages 2 and 3 have been located towards the southern boundary to allow the street frontage to be dedicated to the core facilities to facilitate functionality and community access.

The Stages 2 and 3 buildings have been setback from the southern boundary and scaled to minimise overshadowing to the southern residential development during mid-winter.

Following construction of the future buildings, a protected courtyard/play space will be created which will provide a variety of spaces for activities and learning including quiet activities, small group gatherings, sustainable learning, sport courts, leaving the nature play space to extend to the full extent of the site on the western boundary. These spaces are designed for accessibility and inclusivity, with the aim to provide equitable access across the site underpinned by clear visual circulation and wayfinding.

2.4 Access – School Operations

Four (4) school entrances (including two (2) vehicular entrances) are proposed to be located along Grimes Lane and Chelmsford Avenue (**Figure 21**).

2 Project Description

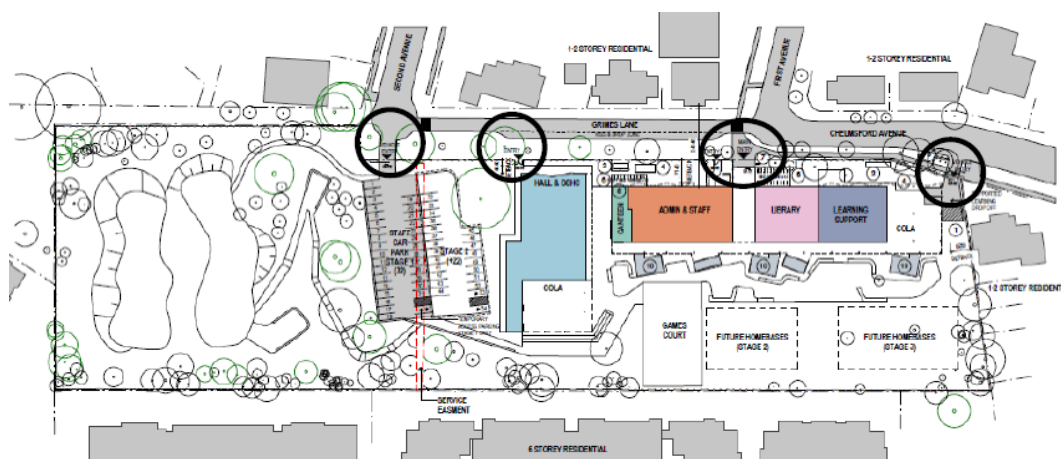


Figure 21 Proposed access points (Source: Pedavoli Architects)

The location of pedestrian and vehicle entry gates relative to transport facilities is indicated in Figure 22.

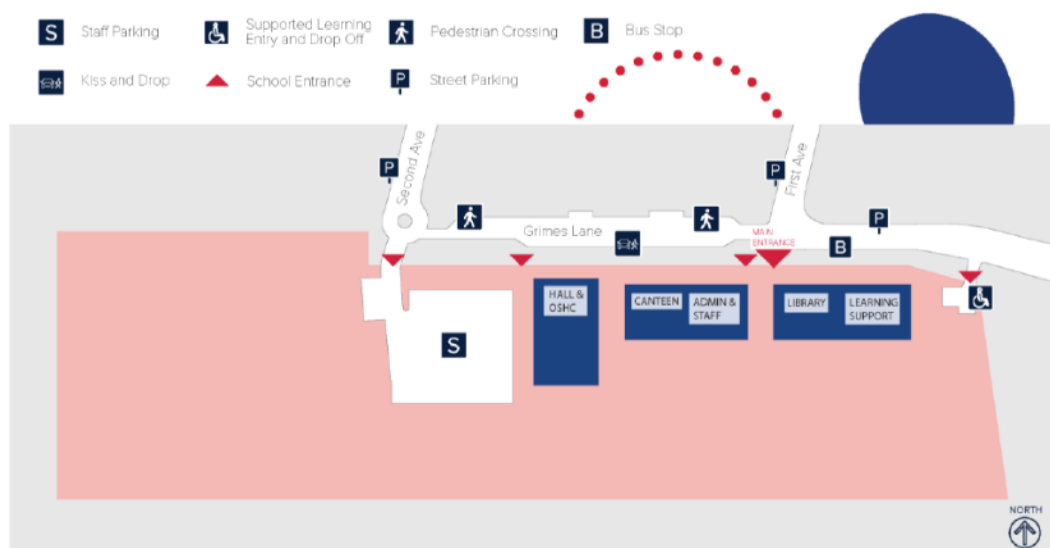


Figure 22 Location of gates and transport facilities (Source: SCT Consulting)

Pedestrian and vehicular access points have been purposely separated to minimise potential conflicts.

Vehicles will be able to access the site at the western most entry point to the staff car park and at the eastern most entry point for special support unit drop off and pick up. All vehicles will be able to enter and leave the site in a forward direction.

2.5 Construction Management

The development has been designed to facilitate continued operation of the school whilst subsequent stages of works (Stages 2 and 3) are undertaken. Access to the works areas for Stages 2 and 3 will be available via the service driveway at the eastern end of the site with a temporary access road to be provided adjacent to the eastern boundary.

The staged growth of the school is envisaged to be facilitated by modular construction to minimise impacts to the function of school and the surrounding area.

The Stage 2 building will be located to the west of the Stage 3 building to ensure access clearances for the Stage 3 building can be provided. Both buildings have been designed in accordance with the design principles outlined in architectural design report; Government Architect NSW feedback, State Environmental Planning Policy (Educational Establishments

2 Project Description

and Child Care Facilities) 2017; Government Architect NSW Design Guide for Schools; and Government Architect Better Placed policy.

2.5.1 Construction Access Routes and Parking

During construction works, construction vehicles will access the site via Chelmsford Avenue. Proposed construction routes are identified in **Figure 23**. During the construction periods, temporary parking restrictions may need to be implemented in Midson Road, Chelmsford Avenue and Grimes Lane to provide access for oversized construction and delivery vehicles.

Construction workers will utilise on-street parking in the local area, although workers will be encouraged to carpool or utilise public transport to reduce the minimal parking demand in the Epping area.

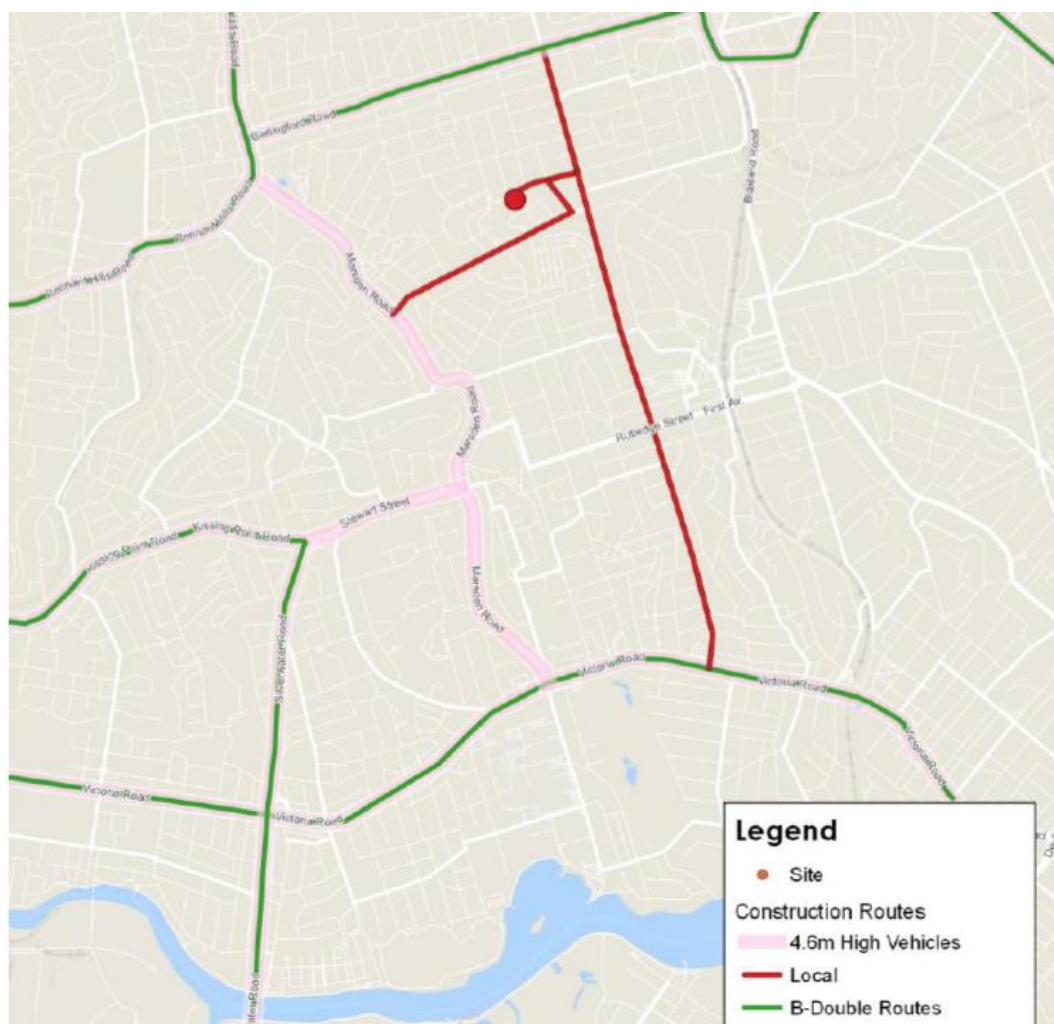


Figure 23 Proposed construction vehicle routes (Source: SCT Consulting)

2.6 Green Travel Plan

A Green Travel Plan (GTP) has been prepared by SCT Consulting. The GTP is appended to the Traffic and Accessibility Impact Assessment at **Appendix 23** to this EIS.

The GTP recommends a number of initiatives to minimise travel to the school by private vehicle and maximise walking and cycling as the most attractive modes of travel to and from the school.

Notwithstanding that travel via private transport is not the preferred method of accessing the school, SCT recognise that this will likely occur in the initial stages and until other infrastructure, such as upgraded footpaths and cycle paths, is constructed. Therefore, a kiss and drop facility with ten (10) car spaces is proposed along the Grimes Lane extension

2 Project Description

between the middle two entry gates to the school and an additional two (2) spaces for the SELU off the Chelmsford Avenue access. The Grimes Lane kiss and drop facility will be managed with a 2-minute parking restriction.

Pedestrian infrastructure upgrades are required to promote walking and cycling to school by students. This infrastructure will provide health benefits as well as reducing congestion on local roads. Accordingly, SINSW is proposing to provide funding to Council for the delivery of the following footpath infrastructure:

- Chelmsford Avenue, between First Avenue and Edenlee Street (north side); and
- First Avenue, between Chelmsford Avenue and Dunlop Street (east side).

Additional funding is also being considered for footpath upgrades in:

- Edenlee St, Chelmsford Ave to Dunlop St;
- Edenlee St, Mobbs Lane to Chelmsford Ave;
- Dunlop St, Ryde St to Park St; and
- Dunlop St, Hermington St to Orchard St.

With regard to public transport, given that the catchment is predominately within the 1.6km or 2.3km STSS exclusion area, where bus travel is not free, it is considered that bus use for travel to and from the school will form only a small part of the transport mode share. Notwithstanding, a bus stop is proposed on Chelmsford Avenue, adjacent to the site. This will facilitate parking for buses for excursions and school sporting outings and for a regular bus services if demand warrants a change of service routes by the bus operators.

2.7 Physical Layout and Design – Stage 1

The physical layout and design of the proposed buildings to be constructed in Stage 1 is shown in **Figures 24 to 28**.

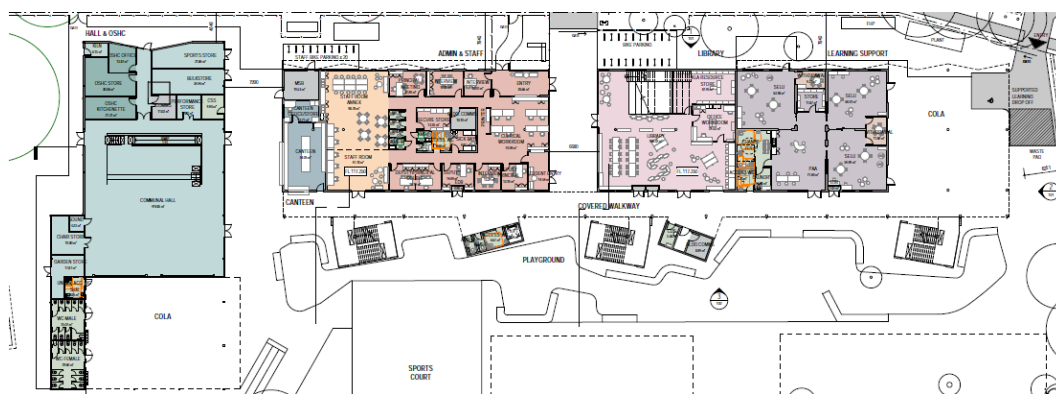


Figure 24 Layout – Ground Floor Plan

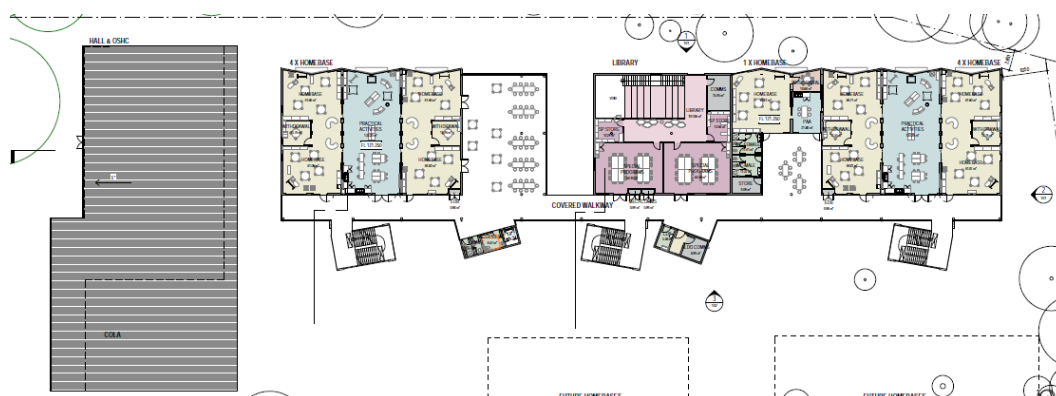


Figure 25 Layout – First Floor Plan

2 Project Description



Figure 26 Layout – Second Floor Plan



Figure 27 Northwest elevation (Grimes Lane)



Figure 28 Perspective from northern (Grimes Lane) view

2.8 External Civil Works – Stage 1

Grimes Lane is currently an unformed road corridor (**Figure 29**). Accordingly, to facilitate school access and operations, civil works are proposed to construct Grimes Lane and connect it with Second Avenue (**Figure 30**). These works will be undertaken as part of the Stage 1 works.

2 Project Description



Figure 29 Current image of Grimes Lane (site boundary in blue) (Source: Nearthmap)

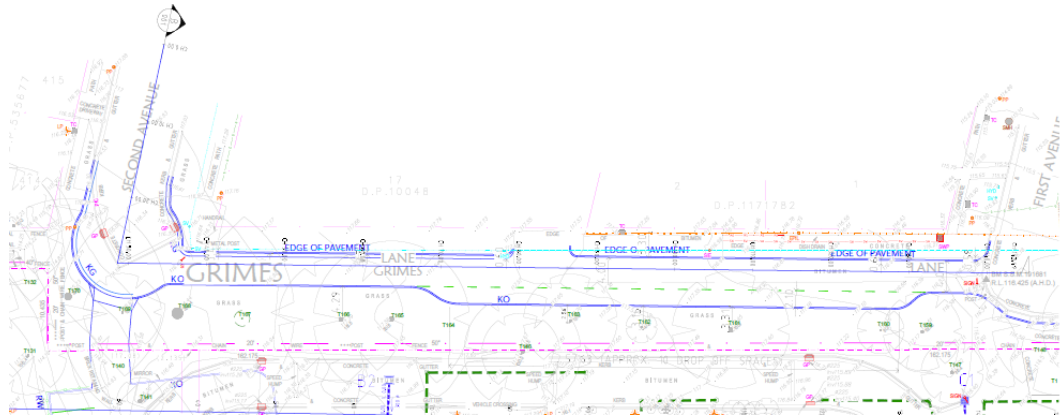


Figure 30 Proposed civil works to Grimes Lane (Source: PTC)

The civil plans provide one way access along Grimes Lane (east to west) with a kiss and drop lane along a portion of the site. The kiss and drop zone will accommodate 10 vehicles. The length of the kiss and drop lane is governed by the retention of significant trees in the road reserve.

In addition to these works, the following civil works are also proposed in Stage 1:

- Provision of a new driveway crossing to the new staff car park from the southern end of the cul-de-sac bubble to be constructed at the end of Second Avenue.
- Construction of a new driveway crossing off Chelmsford Avenue to provide access to the SELU drop off/pick up spaces and service area at the eastern end of the site. This access will also be used by waste collection vehicles. The waste storage area will be located adjacent to the eastern property boundary.
- Pedestrian access points from Grimes Lane. The main pedestrian access will be located opposite First Avenue. A second access will be located at the western end of the kiss and drop zone adjacent to the hall.
- A bus stop on Chelmsford Avenue. No public buses currently run on Chelmsford Avenue. This stop will cater for potential future routes as well as excursion buses.

2 Project Description

2.9 Operational Waste Management – All Stages

Based on similar developments, the primary waste streams expected to be generated as a result of the ongoing operation of the school will be:

- General waste and food organics.
- Comingled recycling.
- Smaller waste streams including recyclable toner cartridges, recyclable fluorescent tubes/light bulbs, recyclable batteries.

It has been estimated that the school operation and canteen will generate the following waste volumes:

Premises Type	Average Waste Generation	Average Recycling Generation
Primary Education	10L / 100 sqm / per day	10L / 100 sqm / per day
Takeaway	100L / 100 sqm / per day	500L / 100 sqm / per day

Source: Operational Waste Management Plan prepared by John Staff – Appendix 31 to EIS

It is estimated that the new school will produce approximately 9,500L of waste per week (based on a total population of 1,000 students) or 9.5L per student per week.

Separate bins (mobile waste containers (MGBs) for general waste and recyclables will be located around the school grounds.

MGBs will be collected as required by general duties staff and taken to the collection area (located at the eastern end of the site) and waste will then be transferred in the bulk storage bins pending collection.

Smaller bins (15L) for general waste and recyclables will be located within classrooms and office areas. These will be collected by cleaning staff and emptied into MGBs as required.

It is anticipated that the school will be required 5 x 1,100L bulk storage bins. Collection is anticipated to occur twice a week ideally before or after peak drop off/pick times for the school.

2.10 Stormwater Management

A Stormwater Management strategy for the site has been prepared by PTC (refer **Appendix 18** to this EIS. The strategy has been prepared in accordance with the requirements of Parramatta LEP and DCP, Landcom Managing Urban Stormwater – Soils and Construction 2004, Australian Rainfall and Runoff – A guide to Flood Estimation 2016, Sydney Water On-site stormwater detention policy 2020, and other relevant policies, standards and requirements.

2.10.1 Water Quality

In order to achieve the required targets with respect to water quality, the following measures are proposed:

- A 50,000 litre rainwater reuse tank.
- OceanGuard (Enviropod 200) pit baskets.
- Buffer, swale.
- Bioretention and StormFilter cartridges.

The MUSIC modelling confirms that the proposed water quality strategy will achieve the pollutant reduction targets at both Stage 1 and at the completion of Stage 3

Prior to commencement of works the following erosion and sediment control measures will be implemented:

2 Project Description

- Sediment diverting measures to minimise sediment in Council's stormwater drainage networks (i.e. sandbags and/or geo-textile filter fabric protecting existing and proposed drainage pits).
- Covering and revegetating disturbed areas (as soon as practicable and as required to prevent sediment laden runoff from leaving the site).
- Provision of a temporary sediment basin at the western end of the site.

2.10.2 Water Quantity

The majority of existing in-ground stormwater infrastructure is considered redundant and will need to be decommissioned.

A new in-ground piped drainage system has been designed to convey the 1 in 100-year ARI storm to an underground on site detention (OSD) tank which will be located under the staff car park in Stage 1. The OSD tank will have a capacity of 360m³ and has been sized to accommodate all stages of the proposed development.

All pipework upstream of the OSD system will need to convey the 1 in 100-year ARI storm.

Adjusted stormwater infrastructure associated with the road upgrade of Grimes Lane will connect into the existing system in Second Avenue.

The new on site stormwater system is proposed to discharge via the existing headwall immediately west of the site. The headwall outlet is located outside the site boundary (in Mobbs Reserve) and ongoing consultation with Council will be conducted to determine if connection to this existing infrastructure can be facilitated. If Council does not agree to the connection, stormwater will be discharged via a headwall with level spreader and scour protection at the western end of the site.

2.11 Earthworks

Civil works plans, including bulk earthworks plans, have been prepared by PTC (**Appendix 22**). Due to the topography of the site, cut and fill is required to facilitate the proposed built form, to provide for accessibility across the site, to manage overland flow and mitigate flood impacts (see discussion in **Table 10** and **Table 11** of this EIS). **Figure 31** is an extract of the bulk earthworks plan indicating the depth of cut and fill required across the site. Cut shown in red ranges between -1.97 to -1m in depth and pink, ranging from -1m to 0m in depth. Fill is shown in three shades of light green (0m to 0.5m; 0.5 to 1m; and 1m to 2m) and dark green (2m to 3.83m).

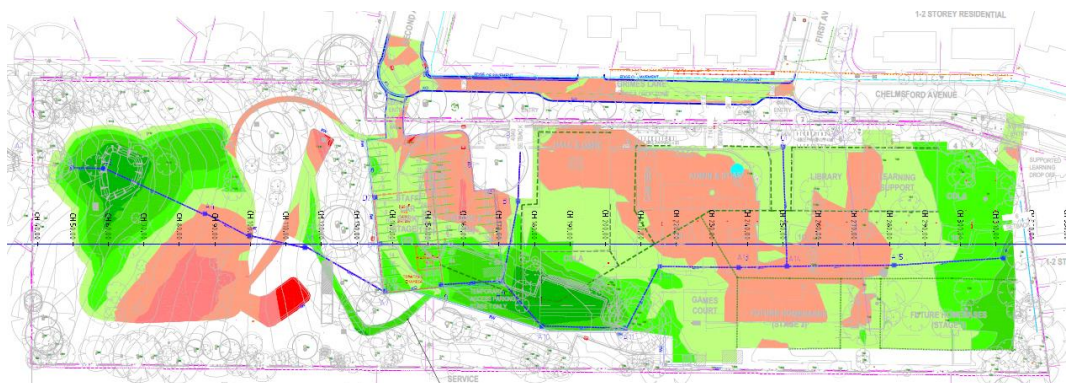


Figure 31 Bulk Earthworks Plan – (Source: PTC)

3 Strategic Context

3.1 Strategic Justification and Project Need

Over the coming four (4) years, the NSW Government is investing \$7 billion to deliver 190 new and upgraded schools to support communities across NSW. By 2031, it is expected that there will be a 21% growth in student numbers across the State, 164,000 of which will be in the public schools' system, with 80% of this growth anticipated in the Sydney Metropolitan region.

The proposed new Primary School in Epping is planned to address the NSW Department of Education's legislative obligation to provide places for students seeking to be educated at a public school. This will be achieved through the redevelopment of the former NSW TAFE College for the purpose of a new primary school that proposes to cater for an enrolment capacity for up to 1,000 students.

The proposed school will cater for the growing population of the Epping area and relieve overcrowding in other nearby schools.

The proposal provides appropriate core permanent facilities in line with the Department's Education Facilities Standards and Guidelines (EFSG) and will facilitate 21st Century and future focused learning objectives.

The new Primary School in Epping is subject to a range of drivers, allowing for a response to population demand, accommodating the needs of the catchment population, achieving asset suitability and incorporating sustainability into the design of the proposed new school.

3.2 Strategic Plans

3.2.1 State Policies

Table 3 provides a summary assessment of the proposed development against the relevant provisions, goals and objectives of relevant State policies.

Table 3 Response to Provisions, Goals and Objectives of State Policies	
State Policy	Response
NSW State and Premier's priorities - Improving education results for children - Increasing the number of Aboriginal young people reaching their learning potential - Greening our city	The proposal is consistent with relevant State and Premier priorities as it will: - Create new jobs for construction workers, teachers, support staff and maintenance workers; - Provide educational infrastructure to support the growing population in the Epping locality; - Provide a high-quality environment to enable a high-quality publicly funded education; - Provide a safe learning environment and education regarding personal protection and welfare; and - Retain existing significant trees and provide on-site landscaping to assist in greening the city.
The Greater Sydney Regional Plan, A Metropolis of three cities: Central District Plan	The project is consistent with Greater Sydney Regional Plan as it proposes to provide a new primary school that creates modern educational facilities to accommodate meet the future educational needs of the community. The proposal has also considered the growing population of Epping and the need to facilitate the growing demand for primary school education within the locality.
Future Transport Strategy 2056 Relevant vision outcomes: - Successful places - Accessible services - Sustainability	The strategy sets six state-wide outcomes to guide investment, policy and reform and service provision. The proposal will support the relevant vision outcomes identified in the NSW Future Transport Strategy 2056 in the following manner: - The site is located adjacent to high-density housing developments to the south and within a largely residential context to the north, east and west, thereby providing for ease of access by walking and cycling. - The development will result in the provision of an additional school in an area experiencing population growth. Its establishment will subsequently reduce the catchment area of schools, therefore promoting walking not just to this new school but other schools.

3 Strategic Context

Table 3 Response to Provisions, Goals and Objectives of State Policies

State Policy	Response
	By supporting more environmentally sustainable travel by providing for sufficient onsite bicycle parking to discourage private car use in favour of more sustainable means.
State Infrastructure Strategy 2018-2038 Building the Momentum	The proposal is consistent with this Strategy as it provides direct investment to address forecast growth in enrolment. The development will provide a modern digitally enabled learning environment for students that can be shared with the community.
Sydney's Cycling Future 2013	The proposal includes the provision of 60 bicycle parking spaces on site to promote active transport use for staff and students. Although not directly linked to the proposal, the City of Parramatta has prepared a Bike Plan which will provide a substantial improvement on selected corridors by delivering shared paths that allow greater width for manoeuvring. Implementation of the CoP Bike Plan will encourage more use of bicycles as a means of accessing the school.
Sydney's Walking Future 2013	Pedestrian access to the site is aided by footpaths to improve safety for pedestrians. SINSW is proposing to provide funding to Council for the delivery of the following footpath infrastructure: - Chelmsford Avenue, between First Avenue and Edenlee Street (north side); and - First Avenue, between Chelmsford Avenue and Dunlop Street (east side). Additional funding is being considered for the following routes: - Edenlee St, Chelmsford Ave to Dunlop St; - Edenlee St, Mobbs Lane to Chelmsford Ave; - Dunlop St, Ryde St to Park St; and - Dunlop St, Hermington St to Orchard St. Delivery of these footpaths will encourage walking to school as an alternative to using private vehicles.
Sydney's Bus Future 2013	Bus routes 521 and 541 provide services along Midson Road and Mobbs Lane. Both services link to Eastwood Station with Route 541 providing access to Epping Station. Route 541 also stops on Edenlee Street, within 150 m of the school. The frequency of both routes is approximately hourly. Works in Chelmsford Avenue to facilitate a bus stop should demand for a service be generated by the school are proposed.
Crime Prevention Through Environmental Design (CPTED) Principles	This report provides a CPTED assessment of the proposal at Table 10 and Appendix 7. The assessment considers the objectives and desired outcomes of the principles/strategies employed by CPTED. Territorial Re-enforcement – The built form and signage will clearly present the site as an educational establishment. Fencing will create a clear boundary and entry points are clearly defined. Surveillance – The site has frontage to four roads (Grimes Lane, Chelmsford, First and Second Avenue), which will provide natural surveillance along the areas visible from the public domain. The proposed circulation paths promote strong natural surveillance of both the public domain and interior of the site. External lighting will help to deter night-time crime. Access Control – Visually permeable fencing along all site boundaries will govern access control to the main pedestrian and vehicle access points. Space/Activity Management – The buildings are oriented to the exterior of the site, which protects and separates interior open spaces from the public domain. Landscaping will screen teaching and play spaces from the adjoining medium density residential development.
Healthy Urban Development Checklist, NSW Health	The design of the proposed state-of-the-art educational facilities is consistent with the relevant aspects of the Healthy Urban Design Checklist as it will: - Give students access to fresh, nutritious and affordable food. - Make use of land zoned for the purposes of education and thereby not reduce the availability of agricultural land. - Include recreational facilities promoting physical activity. - Promote walking and cycling through provision of appropriate infrastructure in order to access the site.

3 Strategic Context

Table 3 Response to Provisions, Goals and Objectives of State Policies

State Policy	Response
	- Promote public transport use as the site is within walking distance of bus stops. - Be located proximate to housing thereby reducing trip generation and car dependence. - Include CPTED principles in its design to promote a safe environment for students and visitors to the school. - Provide equitable access to facilities.
Better Placed: An integrated design policy for the built environment of NSW (GANSW, 2017) This policy aims to ensure a well-designed built environment that is: - Healthy for the community - Responsive to the needs and aspirations of local people - Integrated - Equitable and - Resilient	The project meets the objectives of this policy as follows: - The development has been designed to retain and protect significant trees, including Sydney blue gum trees. - The project has been developed with ecological sustainability integrated from first principles including: - passive heating and cooling design. - flexibility of buildings for future uses. - provision for a photovoltaic system on the roof. - selection of durable, long lasting materials. - The site is located in a walkable environment and provides a range of play spaces designed to promote physical activity. - The proposal is responsive to the needs and aspirations of the community by providing additional, state-of-the-art educational facilities. - The proposal is integrated into the community being adjacent to residential community, nearby to public transport, cycling and pedestrian infrastructure. - The proposal provides educational facilities for all students including those with special needs. - The location of the proposed buildings was determined considering equitable access to and throughout the site as well as considering community access to the hall and OSHC facilities. The provision of lift access to Building A will give access for everyone to all of the necessary spaces for students and teachers. - A variety of outdoor environments suitable for different learning experiences. - The school has been designed to address the street frontages thereby connecting it to its surrounding context. - The key access points on the street frontage will assist visitors and students in wayfinding and ensure access to the school is safe and controlled. - The main entry passes by the administration area which allows for passive surveillance of those entering and exiting the school. - Solar access, natural ventilation and access to landscaped open space has been integrated into the design from first principles providing the students and staff with a quality learning environment. - The homebase modules have been arranged spatially to establish fit for purpose learning environments that are adaptable to future changes. - The layouts of the homebases and core school facilities consider circulation pathways and the necessary uses of each space to create an efficient functional layout. - The consideration of the future stages provides ease of access during the construction of future homebase modules without impacting on the operation of school. The core facilities have been designed for increased capacity allowing the school to grow as required. - The façade of the main building is articulated in a regular pattern over the homebases that provides an opportunity for colour to add to the depth to the façade. The variation in the program of spaces in both buildings A and B gives relief to the façade and assists in identifying the main entry to the school.
Design Guide for Schools (GANSW, 2018) This policy aims to: Promote and champion good design processes and outcomes for schools across NSW; and	Schedule 4 of the Education SEPP sets out the seven (7) design quality principles which must be addressed as part of any development application for a school. the Design Guide for Schools provides further guidance around each of the seven (7) design principles, and outlines design considerations to be considered for school projects.

3 Strategic Context

Table 3 Response to Provisions, Goals and Objectives of State Policies

State Policy	Response
- Deliver schools that respond positively to their physical, social and environmental context; and - Support the delivery of excellent learning environments.	The Design Analysis Report (Appendix 7) provides an analysis of the design against the design quality principles and demonstrates that the proposal satisfies the key principles, including: - Responses to heritage context. - Recognition and retention of biodiversity values. - Consideration of site circulation/accessibility. - Design for safety and security. - Consideration of amenity of learning spaces. - Ensuring that the development provides for adaptable and variable learning environments.
Environmental Design in Schools (GANSW, 2018) This policy aims to provide school principals and school communities with a holistic understanding of environmental design.	The Environmental Design guide presents strategies for passive design as opportunities for making positive, sustainable change in the building or running of a school. The strategies set out in the Environmental Design guide have been incorporated into the proposal with common objectives with the EFSG and green star system, seeking to achieve environmentally sensitive design (ESD) and ensure its integration into school development. The proposal implements ESD principles and the development will achieve a superior resource efficiency.
Greater Sydney Commission's Central District Plan 2006 sets out the following relevant goals for infrastructure: - Infrastructure to align with forecast growth. - Infrastructure adapts to meet future needs. - Infrastructure use in optimised	The project is consistent with the infrastructure goals of the Central District Plan as it will provide additional, modern, educational facilities to accommodate existing and forecast population growth and will assist in meeting the future educational needs of the community. The proposal has been designed to adapt to the future needs of students and staff, whilst optimising the use of infrastructure to facilitate the functioning and operations of the proposed school.

4 Statutory Context

4.1 Planning Approval Pathway

The proposal comprises the construction of new educational establishment facilities. Pursuant to Clause 15(1) of the SRD SEPP, the proposed works are classified as an SSDA, regardless of the CIV.

4.2 Permissibility

The site for the new primary school in Epping is zoned SP2 Infrastructure (Educational Establishment) pursuant to Parramatta Local Environmental Plan 2011 (Parramatta LEP 2011). **Figure 32** is an extract of the land use zoning plan accompanying Parramatta LEP 2011.

The SP2 zone is a prescribed zone under the Education SEPP and educational establishments are permissible with consent in the SP2 zone.

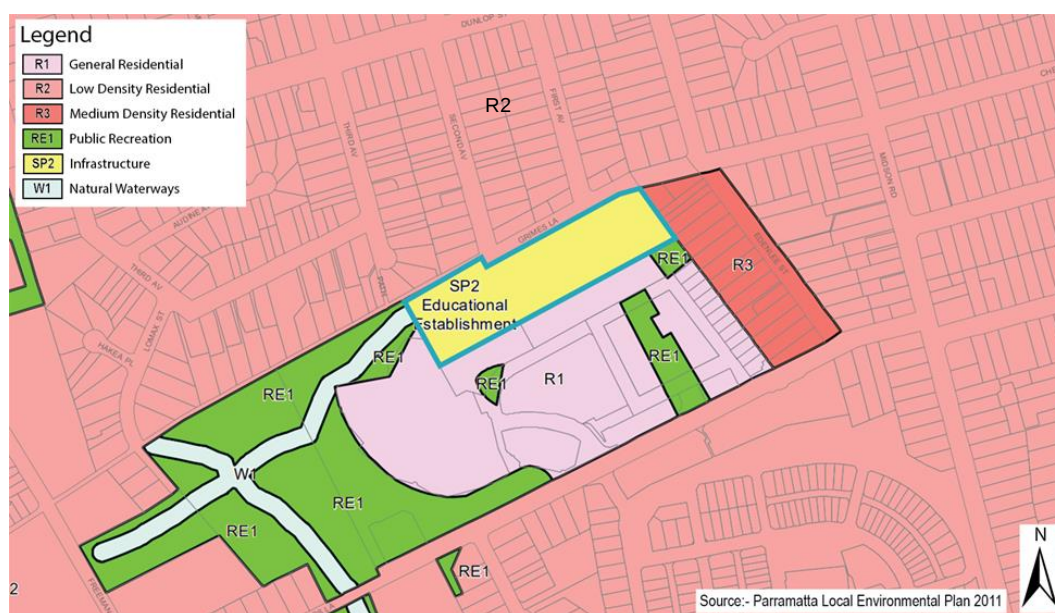


Figure 32 Extract from Parramatta LEP zoning map

The development also includes works beyond the boundary of Lot 1 DP582172. These works include the linking of Grimes Lane with Second Avenue as well as other incidental road works.

As shown in **Figure 32** above, the road reserve of Grimes Lane is zoned R2 Low Density Residential. Roads are included as a land use permitted with consent in the R2 zone.

4.3 Relevant Commonwealth Acts

4.3.1 Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act)

Part 3 Division 1 Subdivision C of the EPBC Act provides, amongst other things, that a person must not take an action that has, will have or is likely to have a significant impact on:

- a listed threatened species included in the extinct in the wild, critically endangered, endangered or vulnerable categories; or
- a listed threatened ecological community included in the critically endangered or endangered categories;

unless a '*controlled action*' approval has been granted under Part 9 Section 133 of the EPBC Act. The Commonwealth Minister for the Environment and Energy is responsible for the decision on such an approval.

4 Statutory Context

A BDAR prepared by Eco Logical Australia (**Appendix 32**) has identified the following species on site that are listed under the EPBC Act:

- PCT 1237 – Sydney Blue Gum – Blackbutt – Smooth-barked Apple moist shrubby open forest on shale ridges of the Hornsby Plateau, Sydney Basin Bioregion is listed as a threatened ecological community;
- PCT 1845 – Smooth-barked Apple – Red Bloodwood – Blackbutt tall open forest on shale sandstone transition soils in eastern Sydney
- *Pteropus poliocephalus* (Grey-headed Flying-fox), which is listed as a vulnerable species.

A detailed assessment of the impacts on these species is contained at **Section 6.4.2** of this EIS. The BDAR concludes the proposed works are not considered likely to cause a significant impact on a threatened species or a threatened ecological community that is listed under the EPBC Act and accordingly, a controlled action approval is not required under section 133.

4.4 Relevant NSW Legislation

4.4.1 Heritage Act 1977

The *Heritage Act 1977* contains provisions relating to the protection of items of State heritage significance or items of potential significance.

Section 57 relates to items listed in the State Heritage Register or to which an interim heritage order applies and development relating to such items triggers the integrated development provision of the EP&A Act. As detailed in the Heritage Impact Statement prepared by GML Heritage (**Appendix 21**), the site does not comprise of an item listed on the State Heritage Register nor is it subject to an interim heritage order.

Therefore, the provisions of the Heritage Act 1977 are not triggered by the proposed development.

4.4.2 National Parks and Wildlife Act 1974 (NPW Act)

The NPW Act contains provisions relating to the protection of native terrestrial fauna, flora and Endangered Ecological Communities (EEC) and contains the primary statutory controls relating to Aboriginal heritage in NSW.

Section 90 of the NPW Act does not apply to SSD pursuant to Section 4.41 of the EP&A Act, however provisions relevant to Section 90 of the NPW Act have been considered in the body of this assessment and in the relevant reports appended to this EIS.

An Aboriginal Cultural Heritage Assessment Report (ACHAR) has been prepared by Comber Consulting (**Appendix 10**), which provides an assessment of the Aboriginal cultural heritage and archaeological values of the site. The findings of the ACHA are discussed in detail at **Section 6.2.1**.

In accordance with the recommendations of the ACHRA, if suspected Aboriginal objects are located, works must cease, and an archaeologist called in to assess the find. DPIE (formerly OEH) will be required to be notified under Section 89A of the EP&A Act.

4.5 Transport for NSW (TfNSW) – NSW Roads and Maritime Services (RMS)

4.5.1 Roads Act 1993

Section 138(1) of the *Roads Act 1993* relates to works associated with public roads and provides that a person must not:

- “(a) erect a structure or carry out a work in, on or over a public road, or
- (b) dig up or disturb the surface of a public road, or
- (c) remove or interfere with a structure, work or tree on a public road, or

4 Statutory Context

- (d) pump water into a public road from any land adjoining the road, or
- (e) connect a road (whether public or private) to a classified road, otherwise than with the consent of the appropriate roads authority.”

The site has a northern frontage to Chelmsford Avenue, Grimes Lane/First Avenue and Second Avenue. Works within the road reserve of Grimes Lane, Second Avenue and Chelmsford Avenue are proposed. These works will require the consent (as part of the SSDA) and will also require approval of the roads authority, being City of Parramatta Council, under s138 of the Roads Act, 1993.

The proposed works have been discussed with City of Parramatta Council and Council has provided in principle support for the works.

4.6 Mandatory Matters for Consideration

4.6.1 Environmental Planning and Assessment Act 1979

Section 1.3 – Objects of the EP&A Act

Section 1.3 of the EP&A Act sets out the Objects of the Act. An assessment of the proposed development’s consistency with these Objects is provided at **Appendix 4**. The assessment concludes that the proposal is consistent with the Objects of the Act.

Section 1.7 – Application of Part 7 of Biodiversity Conservation Act 2016 and Part 7A of Fisheries Management Act 1994

Section 1.7 states that the EP&A Act has effect subject to the provisions of Part 7 of the *Biodiversity Conservation Act 2016* (it is noted that the *Fisheries Management Act* does not apply to the site) that relate to the operation of the EP&A Act in connection with the terrestrial and aquatic environment.

The impacts of the proposed works on the biodiversity values of the site are assessed at **Section 6.4.2** of this EIS and in the BDAR at **Appendix 32** to this EIS. The assessment concludes that the works will not have a significant impact on critically endangered, threatened or vulnerable species and therefore no ecosystem credits are required as a result of the proposed works.

Section 4.33 – Determination of Crown Development Applications

The proposed development is submitted by the NSW Department of Education and therefore is classified as a *Crown development application* under Section 4.32. Section 4.33 of the EP&A Act sets out matters to be considered by consent authorities in the determining or imposition of a condition upon a Crown development application.

Section 4.41 – Approvals etc Legislation that Does Not Apply

Section 4.41 outlines a range of authorisations that are not required for SSD. The ACHAR (**Appendix 10**) identifies that the site is a registered site containing a known Aboriginal object with the potential to contain further objects. Therefore, Aboriginal archaeological salvage excavations must be undertaken. However pursuant to Section 4.41 of the EP&A Act, as the application is SSD, the requirement to apply for an Aboriginal Heritage Impact Permit (AHIP) does not apply. This is discussed further at **Section 6.2.1**.

Section 6.28 – Crown subdivision, building, demolition and incidental work

The EP&A Act requires that Crown building work cannot commence until it is certified that the work complies with the Building Code of Australia (BCA). As discussed in **Section 6.10** and set out in **Appendix 28**, the proposed works are capable of satisfying the provisions of the BCA.

4 Statutory Context

4.6.2 Biodiversity Conservation Act 2016

Part 7 of the *Biodiversity Conservation Act 2016* (BC Act) sets out provisions relevant to biodiversity assessment and approvals under the EP&A Act. Specifically, Clause 7.9 applies to an application for development consent under Part 4 of the EP&A Act for SSD. This includes the proposed development.

Clause 7.9(2) and (3) set out the following requirements:

- (2) *Any such application is to be accompanied by a biodiversity development assessment report unless the Planning Agency Head and the Environment Agency Head determine that the proposed development is not likely to have any significant impact on biodiversity values.*
- (3) *The environmental impact statement that accompanies any such application is to include the biodiversity assessment required by the environmental assessment requirements of the Planning Agency Head under the Environmental Planning and Assessment Act 1979.*

Eco Logical Australia has prepared a Biodiversity Development Assessment Report (BDAR) (**Appendix 32**) which meets the requirements of the Biodiversity Assessment Method 2016 (BAM) established under Section 6.7 of the BC Act.

The BDAR outlines the measures taken to avoid, minimise and mitigate impacts on the vegetation and species habitat present within the development footprint and measures to minimise impacts during construction and operation of the development. Following consideration of these aspects, the residual unavoidable impacts of the project were calculated in accordance with BAM by using the Biodiversity Assessment Method Credit Calculator (BAMC) and it was determined that *there are no impacts associated with the development that require offset*.

A detailed assessment of the biodiversity impacts of the proposal is provided in **Section 6.4.2** of this EIS.

4.6.3 State Environmental Planning Policy (State and Regional Development) 2011

Clause 15(1) of Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* (SEPP SRD) identifies the proposal as SSD as it is a new school.

Being SSD, Clause 11 of the SRD SEPP will apply to the proposal which outlines that DCPs (whether made before or after the commencement of the SEPP) do not apply to SSDs. Notwithstanding, an assessment of the proposal against the relevant controls in Parramatta DCP 2011 has been made. That assessment is included in **Appendix 4** to this EIS.

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

Part 4 of the Education SEPP sets out specific development controls for schools, which are addressed in **Table 4**.

Table 4 Education SEPP Part 4 - Schools

Requirement	Response
Clause 33: Prescribed zones	The site is located within a SP2 zone which is a prescribed zone. Schools are permitted with consent in prescribed zones.
Clause 34: Student Accommodation Clause 35(11)	No student accommodation is proposed
Clause 35(1):	The development is located within a prescribed zone
Clause 35(2) Clause 35(3) Clause 35(4)	The site is not an existing school site

4 Statutory Context

Table 4 Education SEPP Part 4 - Schools

Requirement	Response
Clause 35(5): Development consent required for community use	The school is a new facility and community use of the school facilities is not available at this stage
Clause 35(6)(a): Evaluation of design quality principles in Schedule 4	PA has prepared a Design Analysis Statement (Appendix 7) which provides an evaluation of the proposal against the design quality principles under Schedule 4.
Clause 35(6)(b): Does development enable shared community use of school facilities	Shared community use of school is not precluded by the development.
Clause 35(7) Clause 35(8): Competitive design process	There is no requirement to undertake a competitive design process for this site.
Clause 35(9): DCP controls relating to Clause 35 subclauses (1), (2), (3), or (5) does not apply	Noted, but notwithstanding, an assessment against DCP controls has been provided at Appendix 4 .
Clause 35(10): Centre based child care	The site is not an existing school
Clause 36: Development without consent Clause 37	The works are not able to be undertaken under Part 5 of the EP&A Act
Clause 38: Exempt Development – existing schools	The site is not an existing school. The works are not able to be undertaken as exempt development
Clause 39: Complying Development – existing schools	The site is not an existing school The works are not able to be undertaken as complying development.
Clause 40: School based child care – complying development	The site is not an existing school.
Clause 41: Complying Development Certificates – additional conditions	N/A as the works cannot be undertaken as complying development
Clause 42: Development consent may be granted even though development would contravene a development standard imposed by this or any other EPI.	N/A – The proposed development will not contravene any development standards
Clause 57 Traffic generating development: Referral to RMS required if development will result in educational establishment being able to accommodate 50 or more additional students.	Proposal will result in accommodation of 50 or more additional students. Accordingly, DPIE must give written notice of the application to TfNSW (formerly RMS). As discussed at Section 6.3 of this EIS, the project team has carried out consultation with TfNSW and has incorporated that feedback into the body of this EIS.
Schedule 4 – Design Quality Standards	An assessment against the design quality standards of the ESEPP is included in the Architectural Design Statement at Appendix 7 .

The proposed development satisfies or is capable of satisfying the relevant provisions of the Education SEPP.

4.6.5 State Environmental Planning Policy (Infrastructure) 2007

The Infrastructure SEPP does not contain any provisions relevant to the proposed development. Specifically, the site does not have access to a classified road or to road that connects to classified road within 90 metres. Therefore, the provisions of Division 17 Subdivision 2 of the Infrastructure SEPP do not apply to the proposal.

Traffic generation resulting from educational establishments is considered via clause 57 of *State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017* (refer **Section 4.6.4** of this EIS).

4 Statutory Context

4.6.6 State Environmental Planning Policy No 19—Bushland in Urban Areas (SEPP 19)

The general aim of SEPP 19 is to protect and preserve bushland within the urban areas of the Local Government Areas (LGAs) referred to in Schedule 1² of the SEPP because of:

- its value to the community as part of the natural heritage,
- its aesthetic value, and
- its value as a recreational, educational and scientific resource.

SEPP 19 generally applies to land zoned or reserved for public open space. The site is located within the SP2 for the purposes of an educational establishment. However, land to the west of the site is zoned for public recreation purposes (RE1 Zone). Therefore, the site adjoins land zoned for public open space purposes and the provisions of clause 9 of SEPP 19 apply.

Clause 9 states the following:

- (1) *This clause applies to land which adjoins bushland zoned or reserved for public open space purposes.*
- (2) *Where a public authority:*
 - (a) *proposes to carry out development on land to which this clause applies, or*
 - (b) *proposes to grant approval or development consent in relation to development on land to which this clause applies,**the public authority shall not carry out that development or grant the approval or development consent unless it has taken into account:*
 - (c) *the need to retain any bushland on the land,*
 - (d) *the effect of the proposed development on bushland zoned or reserved for public open space purposes and, in particular, on the erosion of soils, the siltation of streams and waterways and the spread of weeds and exotic plants within the bushland, and*
 - (e) *any other matters which, in the opinion of the approving or consent authority, are relevant to the protection and preservation of bushland zoned or reserved for public open space purposes.*

Much of the existing areas of vegetation concentrated along the west of the subject site is proposed to be retained. By retaining this part of the site as vegetated land, a transition is formed between the RE1 zoned land to the west and bushland located along the western side of the site.

The new stormwater system is proposed to discharge via the existing headwall immediately west of the site. This is located within the adjoining reserve. Should connection to the existing headwall within the reserve not be acceptable to Council, discharge via a headwall with level spreader and scour protection will be implemented as an alternative.

Stormwater drainage from the site will be managed to reduce site stormwater discharge and manage the project's broader impact on urban stormwater flows. Onsite water detention and treatment has been included to reduce flows and minimise the impacts on council's stormwater systems. The project is aiming to achieve a post-development peak event discharge from the site which does not exceed the pre-development peak event discharge using the design Average Recurrence Interval (ARI).

WSUD measures will be implemented to reduce dissolved pollutants in stormwater discharged from the site.

² Parramatta LGA is included in Schedule 1 of SEPP 19

4 Statutory Context

Prior to the commencement of works on the site, erosion and sediment control measures will be installed on the site to ensure any runoff from the site is appropriately treated. These measures will be retained and maintained until the disturbed areas of the site are stabilised.

4.6.7 State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017

The Vegetation in Non-Rural Areas SEPP aims to protect the biodiversity values of vegetation and preserve local amenity through their preservation. The proposed development entails the removal of trees from the site and accordingly, the provisions of the Vegetation SEPP will apply.

Assessment of the proposal's impact on vegetation and biodiversity is discussed in **Section 6.4.2** of this EIS and supported by an Arboricultural Impact Assessment (**Appendix 11**) and the Biodiversity Development Assessment Report (**Appendix 32**).

The aims of the SEPP are:

- (a) *to protect the biodiversity values of trees and other vegetation in non-rural areas of the State, and*
- (b) *to preserve the amenity of non-rural areas of the State through the preservation of trees and other vegetation.*

The proposal is considered to be consistent with the aims of the Vegetation SEPP as it has been designed to retain and protect the majority of significant mature trees on the site.

4.6.8 State Environmental Planning Policy (Koala Habitat Protection) 2021

The City of Parramatta LGA is not land to which the Koala Habitat SEPP 2021 applies. Therefore the provisions of this SEPP do not apply.

The BDAR excluded consideration of koalas as the habitat connectivity is fragmented within the urbanised locality such that this species is unlikely to be present. There are no historical records for this species within the development site and there are substantial hardstand barriers between areas of vegetation throughout the locality. Therefore, the site was not considered potential habitat for koalas.

4.6.9 State Environmental Planning Policy No. 55 – Remediation of Land

SEPP 55 relates to remediation of contaminated land and requires, amongst other things, investigations to be undertaken as part of the development assessment process, to determine whether the subject land is likely to be contaminated and if so, what remediation work is required.

According to the detailed site investigation (DSI) (**Appendix 14**) prepared by Douglas Partners (DP), no contamination requiring remediation was identified on those parts of the site on which testing was undertaken.

The investigation undertaken by DP included a review of previous investigations undertaken at the site, soil sampling from 44 locations, groundwater sampling from one location, surface water sampling from one location (being the location of the existing dam), laboratory analysis for contaminants of potential concern (COPC) and interpretation of results with reference to current NSW EPA endorsed guidelines.

Key potential sources of contamination identified from previous investigations included former agricultural land use, demolition / deterioration of former and current buildings, potential disturbed / levelled / filled ground, former surrounding site uses including a television studio and brickworks to the south of the site, previous horticultural education land use and on-site dangerous goods / chemical storage associated with the use of the site by TAFE.

4 Statutory Context

According to DP:

The results of the investigation indicated the general absence of gross contamination of fill at the site. Concentrations of all contaminants tested in soil / fill, were below the adopted SAC except for TPH fraction F3 (>C16-C34) in one sample (SS126/0.0-0.1), which exceeded the sample-specific EIL and TRH in some samples which did not undergo silica-gel clean-up analysis. SS126 was located within a shed with flammable goods storage but was taken from on top of a concrete slab. The presence of TRH in samples across the site and TPH following silica gel clean-up suggest a potential for some localised areas of petroleum contamination in surface soils, particularly in the footprint of the Dangerous Goods Stores near the southern site boundary.

The groundwater investigation suggested the general absence of gross contamination in groundwater and surface water at the site. Slightly elevated concentrations of metals in groundwater and surface water (namely copper and zinc) are considered to be associated with the urbanised nature of the area. TRH and BTEX were detected in groundwater and surface water and may be associated with the dangerous good stores near BH113. Additional groundwater and surface water investigation is recommended to further assess the recorded TRH and BTEX in these media.

Whilst no contamination requiring remediation has been identified by DP, DP has identified some gaps in the data, specifically on those parts of the site on which existing buildings are located.

Therefore, DP has recommended that additional testing be undertaken following demolition of these buildings to ensure the site is suitable or can be made suitable for the proposed development.

For abundant caution, a remedial action plan (RAP) has been prepared by DP to address the possibility of the land beneath the existing building being contaminated and in need of remediation. A copy of the RAP is included at **Appendix 15**.

Both the DSI and the RAP have been reviewed by an independent auditor who has confirmed that the methodology and testing that has been carried out (under the DSI) is appropriate and the RAP methodology is acceptable – refer **Appendix 15**.

Pursuant to clause 7 of SEPP 55, the site can be made suitable for the proposed development.

4.6.10 State Environmental Planning Policy 64 – Advertising and Signage

The proposed development includes a building identification sign. The sign is proposed to be located adjacent to the main pedestrian entry gate. The sign will identify the site as a primary school (exact wording to be determined once the name of the new school is decided) and provide way finding information to various parts of the school.

Building identification signs are not specifically listed as a permissible use in the SP2 zone under Parramatta LEP 2011. However, development for *the purpose shown on the Land Zoning Map* [in this case Educational Establishment], *including any development that is ordinarily incidental or ancillary to development for that purpose* is permitted. The proposed signage relates to the use of the site as a school and therefore is considered to be development that is ordinarily incidental or ancillary to the school. The signage is therefore permissible with consent.

An assessment of the proposed signage against the provisions of Clause 3 and Schedule 1 of SEPP 64 is included in **Appendix 4** to this EIS.

4.6.11 Draft State Environmental Planning Policy (Remediation of Land)

The Department of Planning and Environment (now DPIE) exhibited the proposed SEPP from 1 January to 13 April 2018. It is proposed the new land remediation SEPP will:

- Provide a state-wide planning framework for the remediation of land maintain the objectives and reinforce those aspects of the existing framework that have worked well;

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- Require planning authorities to consider the potential for land to be contaminated when determining development applications and rezoning land;
- Clearly list the remediation works that require development consent; and
- Introduce certification and operational requirements for remediation works that can be undertaken without development consent.

In light of the above, it is considered that the assessment of the proposed development within **Section 4.6.9** of this report satisfactorily considers relevant matters, and that the proposal is acceptable in this regard.

4.6.12 Draft State Environmental Planning Policy (Environment)

DPIE exhibited the proposed SEPP until 31 January 2018 which seeks to protect and manage the natural environment and proposes to simplify the planning rules for a number of water catchments, waterways, urban bushland, and Willandra Lakes World Heritage Property.

It proposes consolidating the following seven existing SEPPs:

- State Environmental Planning Policy No. 19 – Bushland in Urban Areas
- State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011
- State Environmental Planning Policy No. 50 – Canal Estate Development
- Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment
- Sydney Regional Environmental Plan No. 20 – Hawkesbury-Nepean River (No.2-1997)
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005
- Willandra Lakes Regional Environmental Plan No. 1 – World Heritage Property.

It is considered that the environmental assessment within **Section 4.6.6** and **Section 6** of this EIS satisfactorily considers relevant matters and the proposal is acceptable.

4.6.13 Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

SREP 2005 covers all the waterways of the Harbour, the foreshores and the entire catchment area. SREP 2005 includes a range of matters for consideration by consent authorities assessing development within the Foreshores and Waterways Area of the Plan.

Whilst the site is located within the mapped catchment area under the SREP, it is not located within a Foreshores and Waterways Area. Nor is the site a strategic foreshore site, a heritage item (under the SREP) or wetlands (as mapped under the SREP). Therefore, Part 2 Planning Principles are the matters for consideration in relation to the site and the proposed development. The principles in Part 2 are (in accordance with clause 12(2) of SREP 2005) only to be considered:

- (a) *in the preparation of environmental planning instruments and development control plans under Part 3 of the Act, and*
- (b) *in the preparation of environmental studies and master plans for the purposes of the Act.*

Notwithstanding, **Table 5** is an assessment of the proposed development against the planning principles for land within the Sydney Harbour Catchment.

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Table 5 Assessment against Planning Principles in Sydney Harbour Catchment REP 2005

Principle	Assessment/Comment
(a) development is to protect and, where practicable, improve the hydrological, ecological and geomorphological processes on which the health of the catchment depends,	The development has been designed to maintain significant trees where possible and to respect the existing topography of the site. By locating the buildings towards the eastern end of the site, site works have been able to be minimised thus ensuring disturbance of the hydrological, ecological and geomorphological processes is limited.
(b) the natural assets of the catchment are to be maintained and, where feasible, restored for their scenic and cultural values and their biodiversity and geodiversity,	The development has been designed and located to respect the existing site features and topography. Existing significant trees on the site have been retained where possible and retained vegetation will be protected during the construction phase. Stormwater drainage from the site will be managed to reduce site stormwater discharge and manage the project's broader impact on urban stormwater flows. Onsite water detention and treatment has been included to minimise the impacts on council stormwater systems. The project is aiming to achieve a post-development peak event discharge from the site which does not exceed the pre-development peak event discharge using the design Average Recurrence Interval (ARI). WSUD measures will be implemented to reduce dissolved pollutants in stormwater discharged from the site. Prior to the commencement of works on the site, erosion and sediment control measures will be installed on the site to ensure any runoff from the site is appropriately treated. These measures will be retained and maintained until the disturbed areas of the site are stabilised.
(c) decisions with respect to the development of land are to take account of the cumulative environmental impact of development within the catchment,	The proposed development is unlikely to result in cumulative impacts within the wider Sydney Harbour Catchment that would result in the aims of the SREP not being achieved.
(d) action is to be taken to achieve the targets set out in Water Quality and River Flow Interim Environmental Objectives: Guidelines for Water Management: Sydney Harbour and Parramatta River Catchment (published in October 1999 by the Environment Protection Authority), such action to be consistent with the guidelines set out in Australian Water Quality Guidelines for Fresh and Marine Waters (published in November 2000 by the Australian and New Zealand Environment and Conservation Council),	The stormwater drainage for the development has been designed to achieve these targets.
(e) development in the Sydney Harbour Catchment is to protect the functioning of natural drainage systems on floodplains and comply with the guidelines set out in the document titled Floodplain Development Manual 2005 (published in April 2005 by the Department),	The site is not located within a floodplain
(f) development that is visible from the waterways or foreshores is to maintain, protect and enhance the unique visual qualities of Sydney Harbour,	The site is not visible from the waterways or foreshores areas
(g) the number of publicly accessible vantage points for viewing Sydney Harbour should be increased,	The site is not a publicly accessible vantage points from which Sydney Harbour can be viewed.
(h) development is to improve the water quality of urban run-off, reduce the quantity and	See assessment against (b) above

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Table 5 Assessment against Planning Principles in Sydney Harbour Catchment REP 2005

Principle	Assessment/Comment
frequency of urban run-off, prevent the risk of increased flooding and conserve water,	
(i) action is to be taken to achieve the objectives and targets set out in the Sydney Harbour Catchment Blueprint, as published in February 2003 by the then Department of Land and Water Conservation,	A copy of the Sydney Harbour Catchment Blueprint, as published in February 2003 by the then Department of Land and Water Conservation, could not be sourced. It is assumed that the objectives and targets of the Blueprint are similar to those of the SREP 2005. In this regard, it is considered that the proposed development is not inconsistent with the aims of the SREP 2005.
(j) development is to protect and, if practicable, rehabilitate watercourses, wetlands, riparian corridors, remnant native vegetation and ecological connectivity within the catchment,	See assessment against (a) and (b) above
(k) development is to protect and, if practicable, rehabilitate land from current and future urban salinity processes, and prevent or restore land degradation and reduced water quality resulting from urban salinity,	See assessment against (b) above
(l) development is to avoid or minimise disturbance of acid sulfate soils in accordance with the Acid Sulfate Soil Manual, as published in 1988 by the Acid Sulfate Soils Management Advisory Committee.	The site is mapped as Class 5 ASS. The results of the geotechnical soil samples (Appendix 13) indicate that the soils are generally non-saline to slightly saline. Accordingly, the ASS and salinity are not matters of concern for the proposed works.

Clause 65 of SREP 2005 requires that development consent be obtained for demolition. The demolition of existing structures forms part of this SSDA.

4.6.14 Parramatta Local Environmental Plan 2011 (PLEP 2011)

The site is zoned SP2 Infrastructure (Educational Establishment) under Parramatta LEP 2011. Educational establishments and associated works are permissible with consent in the SP2 zone. The SP2 zone is also a prescribed zone under the Education SEPP.

The objectives of the SP2 zone are:

- *To provide for infrastructure and related uses.*
- *To prevent development that is not compatible with or that may detract from the provision of infrastructure.*

The proposed use is for an Educational Establishment. In accordance with the land zoning map, an Educational Establishment is a permissible use on the site. Therefore, the proposal is consistent with the zone objectives.

The site is not subject to building height, floor space or minimum lot size development standards. Accordingly, there are no development standards relevant to the site or this development.

The development includes road works outside the boundary of the allotment on which the school will be located. These works are within existing road reserves which are zoned R2 Low Density Residential under Parramatta LEP 2011. Development for the purposes of roads is permitted with consent in the R2 zone.

A detailed assessment of the proposed development against the relevant provisions of Parramatta Local Environmental Plan 2011 (LEP) is provided in **Appendix 4**. In summary, the proposal is consistent with the provisions of the LEP.

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4.6.15 Parramatta Development Control Plan 2011

It is noted that Clause 11 of the State and Regional Development SEPP and Clause 35(9) of the Education SEPP exclude the application of Development Control Plans to SSDAs.

Notwithstanding, an assessment of the proposed development against the provisions of Parramatta DCP 2011 that may otherwise be deemed relevant is provided at **Appendix 4**.

The proposal is consistent with the provisions of the DCP.

5 Consultation

5.1 General

The project team has carried out consultation with a wide range of stakeholders, including neighbouring and surrounding landowners, State agencies, Local Government, the Aboriginal community and community groups. The advice received throughout the consultation process to date has informed many aspects of the project including local amenity considerations, heritage significance, and the needs and functions of the future school.

The SEARs issued by the DPIE requires the following consultation be undertaken:

During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups, relevant special interest groups, including local Aboriginal land councils and registered Aboriginal stakeholders and affected landowners. In particular, you must consult with:

- the relevant Council
- Government Architect NSW (through the NSW SDRP process)
- Transport for NSW.

Consultation should commence as soon as practicable to inform the scope of investigation and progression of the proposed development. The EIS must describe and evidence 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.

Additionally, the SEARs requires that:

- The Aboriginal Cultural Heritage Assessment Report (ACHAR) incorporates consultation with Aboriginal people in accordance with Aboriginal Cultural Heritage Consultation Requirements for Proponents (Department of Environment, Climate Change and Water, 2010);
- Flood risk on-site has been identified in consultation with Council; and
- Where any drainage and stormwater infrastructure is to be handed over to Council, the hydraulic details, plans and specifications have been prepared in consultation with Council.

A Community Consultation Summary Report has been prepared by SINSW (**Appendix 9**) provides an explanation of the consultation approach being undertaken, consultation and feedback received to date, and future consultation actions planned.

5.2 Community Engagement

5.2.1 Project Reference Group

A Project Reference Group (PRG) was established and commenced monthly meetings in February 2020 to receive project briefs and exchange ideas between the project team members, the school leadership team and a Parent and Community representative.

The main role of the PRG is to provide feedback and local knowledge to the project team and where appropriate to act as a communication channel through which to feed information between the wider School community and project team. The PRG is a consultative forum and not a decision-making forum. To date the PRG have met on 11 occasions, assisting with the design development process. The PRG will continue to meet monthly until construction commences when a Project Control Group (PCG) will be established.

Additionally, eight (8) meetings with the Department's Technical Stakeholders Group including the Educational Facilities Standards and Guidelines (EFSG), ICT, Maintenance and Cleaning, Security, Work Health & Safety, Future Learning Unit, and Demountables unit have been held.

5 Consultation

5.2.2 Community and Community Groups

The following communication channels have been made available in order to facilitate engagement with the local community:

- Project Review Group meetings, workshops and design user group sessions - representatives from the new primary school in Epping including staff have tested options and provided feedback on the school's proposed design.
- Project website, information packs and public notification of project updates - publication of project information to keep the community informed and to provide contact details of the project team.
- Email address and 1300 phone number - the project team has responded directly to one (1) phone call and eight (8) email enquiries which raised issues concerning:
 - Preservation of large mature and indigenous trees on the site;
 - Preservation of wildlife, birds and animals on the site; and
 - Request for specific tree to be removed from the site.

5.3 Public Authority Engagement

5.3.1 Government Architect/ State Design Review Panel

The project was presented to the State Design Review Panel (SDRP) on 23 September 2020. Detailed discussion about SDRP's comments and the architect's response is provided in the Design Analysis Report at **Appendix 7**.

An overview of the key issues raised and those that were supported or required further resolution are indicated in **Table 6** below.

Table 6 SDRP Comments and Responses	
SDRP comments	Architectural response
Location of Stage 1 built form supported	N/A
Concerns raised about the feasibility of Stage 2 & 3 construction without major disruption to the school.	The location of Stages 2 and 3 is such that these can be undertaken with minimal disturbance to the operations of the school
Location and size of carpark unsupported due removal of significant tree and division of campus	Carpark has been re-oriented to preserve a significant tree, however, cannot be relocated on safety and practicality grounds.
Relationship between indoor and outdoor spaces not clearly illustrated.	Architectural plans have been further developed in associated with detailed landscape plans to enhance this relationship
Retention of the western open green spaces and the incorporation of playground areas are supported.	Western open spaces have been retained in the landscape design.
Further integration of Aboriginal cultural Heritage into a coherent narrative to inform a whole-of-site strategy.	Detailed narrative, wayfinding strategy included in Design Analysis Report (Appendix 7). Landscape plan has integrated remnant forest on site as a key feature of the landscape approach (Appendix 17). ACHA report details indigenous consultation during concept design phase (Appendix 10).
Clarify how bushfire APZ requirements are integrated into landscape plan.	Proposed landscape plan and planting schedule comply with bushfire APZ requirements.
Provide information on how this project will help deliver on the Parramatta Ways strategy for active movement links.	The TAIA provides detailed discussion on the <i>Parramatta Ways Walking Strategy</i> (Appendix 23) and confirms that First Ave, Ryde St, Chelmsford Ave, Edenlee St, and Mobbs Lane are identified as major routes and will facilitate and encourage safe pedestrian movements to and from the school.

5 Consultation

Table 6 SDRP Comments and Responses

Further work required to demonstrate a contextual response to the unique attributes of the site or a distinct character for the built elements.	This is discussed in the Architectural Design Report at Appendix 7 .
Demonstrate a rigorous and innovative response to ESD	A detailed ESD report is provided at Appendix 30 , which details
Detail proposed passive solar design strategies and demonstrate how sunlight penetration to deep floor plates, natural ventilation and cross ventilation, and treatment of façade openings for year round thermal performance.	The ESD report (Appendix 30) details energy efficiency strategies through natural ventilation, improved building fabric and glazing performance, adaptive thermal comfort control, highly efficient lighting system and onsite renewable energy via rooftop solar array. In addition, the indoor environment has excellent daylight penetration, interior noise level controls, access to external views, and considered material selection.

Another meeting has been scheduled with GANSW for 26 May 2021.

5.3.2 City of Parramatta

The project team has consulted with a number of different departments within the City of Parramatta Council (Council):

- Planning, Social Outcomes, Urban Design, Development & Traffic Services, Recreation Facilities & Services, and Place Services – 8 July 2019. This meeting and subsequent feedback provided valuable initial advice on site planning, connectivity, traffic and parking, open and indoor space, which fed into the design development.
- Ecology Meeting on 30 November 2020. This meeting discussed the importance of preserving Blue Gum High Forest on the site and Council's team indicated they were generally supportive of the proposed plans.
- Flood Correspondence – Involved email correspondence between the project team and Council's Flood Engineer's between 17 November 2020 and 29 March 2021. The Flood Assessment Report (FAR at **Appendix 19**) was issued to Council for comments and has been subsequently updated to incorporate Council's feedback.
- Traffic and Transport Meeting on 2 December 2020. This project team provided an overview of site traffic and transport issues and Council discussed proposed works that are planned for the area.
- Transport Working Group Meetings (including both Council and TfNSW representatives) on:
 - 19 January 2021 – introduction and project overview;
 - 3 February 2021 – follow up meeting to discuss TAIA and road safety;
 - 17 March 2021 – Discussed footpaths; and
 - 14 April 2021 – Discussed construction traffic and proposed footpaths.

Council's requirements and feedback has been taken onboard through the design process and has been addressed in this EIS and supporting documents.

5.3.3 Transport for New South Wales (TfNSW)

Regular consultation with TfNSW has been undertaken via the joint Transport Working Group Meetings with Council as detailed above. These meetings provided an ongoing forum for the project team to present the civil engineering designs and refine them in response to feedback from TfNSW and other stakeholders. The Transport and Accessibility Impact Assessment was also presented and issues around road safety were discussed.

5 Consultation

Traffic and transport matters are discussed in more detail in **Section 6.3** of this EIS and in **Appendix 23**.

5.3.4 Other Public Authorities

Additional consultation undertaken with other Public Authorities and the key matters raised is summarised in **Table 7** below.

Table 7 Consultation undertaken to date		
Stakeholder	Feedback	Outcome
Aboriginal Heritage - Heritage NSW, DPIE & Registered Aboriginal Parties (RAPs)	Issued comments for inclusion in SEARs pertaining to heritage significance	All SEARs matters have been addressed in the EIS and its supporting documents. Greater detail is also provided in Section 5.3 below.
Sydney Water	Issued comments for inclusion in SEARs pertaining to stormwater and sustainable development	All SEARs matters have been addressed in the EIS and its supporting documents.
EPA NSW	Issued comments for inclusion in SEARs relating to noise and vibration, hazardous materials, waste and site suitability	All SEARs matters have been addressed in the EIS and its supporting documents.
EES Group	Issued comments for inclusion in SEARs relating to stormwater and site suitability	All SEARs matters have been addressed in the EIS and its supporting documents.
Endeavour Energy	Issued comments for inclusion in SEARs relating to engineering, bushfire and flooding	All SEARs matters have been addressed in the EIS and its supporting documents.
Local State Member	Member is generally supportive of proposal	N/A

5.4 Aboriginal Groups Engagement

Progress of consultation with Aboriginal groups is summarised in **Table 8** below.

Table 8 Consultation undertaken with Aboriginal representatives	
Stage	Status
Wrote to organisations seeking the names of any Aboriginal people or organisations who may hold cultural knowledge.	DPIE and City of Parramatta Council responded with potential stakeholders
Notification of the proposed project and invitation to be consulted issued via letters and newspaper advert.	Complete (June 2020)
Information letter was sent to all RAPs with project information and the proposed methodology for archaeological excavation of the site.	Complete (June 2020)
Information letter was sent to all RAPs with project information and the proposed methodology for archaeological excavation of the site	Complete (June 2020)
Notification of proposed assessment methodology sent to all RAPs	Complete (June 2020)
List of RAPs compiled and sent to DPIE and MLALC.	Complete (July 2020)
Draft ACHAR sent to RAPs for a 28-day review period.	Complete (July 2020)
Geotechnical monitoring and Aboriginal archaeological test excavations commenced. Grinding stone uncovered.	Complete (December 2020)
Draft testing report sent to all RAPs for review within a 28-day review period with a recommendation to conduct salvage excavation.	Complete (February 2021)

5 Consultation

Aboriginal Heritage Consultation including comments from RAPs have been addressed in the ACHAR as provided in **Appendix 10** and discussed in **Section 6.2.1**. The following sections provides a brief overview of the Registered Aboriginal Parties (RAPs) and how the project team engaged with them. The RAPs for the project are:

- Nathan Moran - Metropolitan Local Aboriginal Land Council
- Krystle Carroll Elliott - Ginninderra Aboriginal Corporation
- Caine Carroll - Goodradigbee Cultural & Heritage Aboriginal Corporation (GCAHAC)
- Paul Boyd & Lilly Carroll - Didge Ngunawal Clan
- Clive Freeman - Freeman & Marx Pty Ltd
- Robert Slater - Galamaay Cultural Consultants
- Carolyn Hickey - A1 Indigenous Services Pty Ltd
- Phil Khan - Kamilaroi Yankuntjatjara Working Group
- Steven Hickey – Widescope
- Corina Norman-Dadd - Dharug Ngurra Aboriginal Corporation
- Justine Coplin - Darug Custodian Aboriginal Corporation
- Stephen Fields - Dhinawan Culture and Heritage
- Information withheld

Responses from RAPS to consultation include:

- Four (4) RAPs responded in support of the ACHA methodology and one (1) of those RAPs also said that the site is highly significant;
- One (1) RAP responded in support of the draft ACHA report;
- One (1) RAP responded in support of the salvage excavation recommendation in the draft testing report.

6 Environmental Assessment

The following subsections provide a detailed assessment of the following key environmental issues:

- Built form and urban design;
- Environmental amenity;
- Aboriginal cultural heritage;
- European heritage significance;
- Traffic, transport and parking;
- Tree removal and biodiversity;
- Landscape;
- Noise and vibration;
- Contamination; and
- Ecologically sustainable development.

Other environmental issues are assessed in **Table 10** and the suitability of the site for development is assessed in **Table 11**.

6.1 Built Form and Urban Design

6.1.1 Site Planning – Concept Master Plan

The site planning has been informed by feedback from key stakeholders and the design principles outlined in the Architectural Design Report prepared by PA (**Appendix 7**). The building works have been sited towards the northern and eastern portions of the site in order to minimise impacts on the remnant Blue Gum High Forest Sydney blue gum trees on the central southern and western portions of the site.

Vegetation within the Mobbs Reserve to the west of the site has been identified as a potential bushfire threat. The presence of this vegetation required the provision of an asset protection zone for any buildings located on the western portion of the site.

Following design development of the preferred option, SINSW undertook further refinement of the design based on the following principles:

- Street frontage – Maximise street address of buildings to existing streets.
- Variety of open spaces – Protect the eastern play space from adjoining residences (and vice versa) and streets by placing it between buildings. Maintain the vegetated area on the western part of the site as an informal play space.
- Tree protection – Locate buildings and services in order to retain and protect Sydney blue gum trees.
- Green buffer - Existing street trees are retained through providing a large building setback. These trees as well as the additional distance between the residential and the school buildings provides the necessary visual privacy and buffer between uses.

The layout and positioning of the buildings was also informed by ESD principles:

- Protect from westerly winter winds - Provide appropriate planting, e.g. thick coverage at pedestrian level along western edge of site to protect from cold winter winds.
- Path for north/south summer winds - Allow air movement for natural ventilation and to increase thermal comfort.

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- Mitigate heat island effect – Use high solar reflectance index materials, e.g. roof materials, playing court and carpark surface; provide vegetation; provide shade with vegetation and external shading elements.

Consideration of Crime Prevention Through Environmental Design (CPTED) principles also informed the layout of buildings and spaces on the site. The way in which the four CPTED principles have been addressed through the design and positioning of the buildings on the site is detailed in the Architectural Design Statement prepared by PA (**Appendix 7**) and discussed further at **Table 10**.

The site design has been developed in collaboration with the consultant team. It considers the relationship of the site with its surrounding context, the existing trees on site, the indigenous history of the site, the topography of the site and movement of water across the site.

6.1.2 Stage 1 Development

Two (2) buildings are proposed Stage 1. Both buildings will address the street frontage on Grimes Lane and Chelmsford Avenue and have oriented to maximise solar access, cross ventilation, and view lines across the site. The buildings have been set back to allow a generous landscape setback to the street and adjoining development to the east.

Building A is a three (3) storey building and comprises the administration, staff and learning support units at ground floor; a library on two levels; and 25 homebases divided into 6 clusters. A COLA is located at the eastern end of the ground level of Building A.

The core facilities (administration, library, support facilities) have been sized appropriately to cater for the school at its maximum capacity, when all stages have been constructed.

In line with First Avenue, a double storey void is proposed in between the administration and library to provide a clearly identified entry to the school.

The setback of Building A has been designed to allow for existing trees to be retained and additional landscaping to be planted to provide a buffer between the residences on Grimes Lane and the building.

The façade of Building A will be articulated with sun shading devices to further breakdown the apparent scale of the building.

The hall and OOSH facilities will be located in a single storey building to the west of the main school building. The hall building opens on its southern part onto the COLA which will be located in the most central part of the school with a direct connection to the upper and lower parts of the outdoor play space. The hall building also benefits from a street address to the proposed extension of Grimes Lane.

The staff car park will be located to the west of the hall building. The carpark will be accessed from Second Avenue and has been designed in order to preserve a highly significant blue gum tree on site (Tree 145 as noted in the Tree Location Plan by Arboreport). The location of the car park also facilitates direct access to the hall.

To the west of the carpark a large open outdoor play space is proposed. This area will provide a variety of outdoor learning and play environments. Access to this play space will be by way of an elevated pathway (to minimise impacts on trees to be retained) and will be graded to provide an accessible path of travel.

Another play space will be located to the south of Building A and west of the hall and COLA. This will be a more formalised play space comprising vegetable garden areas, open lawns and a multi purposes games court.

Further to the above, the architects have outlined a number of considerations regarding site planning as detailed in the Design Report:

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The proposed site layout brings resolution and order to the end of First and Second Avenues with a new street address that sits perpendicular to these streets aligned to the modifications to Grimes Lane.

The buildings' three storey scale is intermediary between the single and two storey residential dwellings to the north and the 5 storey Epping Park Development to the south. It is setback from the road sufficiently to allow a landscape buffer to nurture the existing trees in the zone and allow for new proposed landscaping. This provides visual privacy between the residential dwellings and the school.

Stages 2 and 3 are two homebase buildings setback and scaled to avoid any overshadowing to the southern residential development. These two stages will be constructed at a later date. Site access during the construction of these two future stages is to be provided via the SELU driveway. Stage two is located the furthest of the two future stages from the SELU driveway to ensure access clearances for the DFMA modules to stage three. These two stages are to be designed and constructed in accordance with the design principles outlined in this report; Government Architect NSW feedback, State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017; Government Architect NSW Design Guide for Schools; and Government Architect Better Placed document.

Figure 33 is an extract of an indicative short-section through the site in a north-south direction. This diagram also includes existing development to the north and south of the site and demonstrates that the proposed development will provide a transition in scale between the existing 6 storey buildings associated with the Epping Park development to the north and the one and two storey scale development to the north.

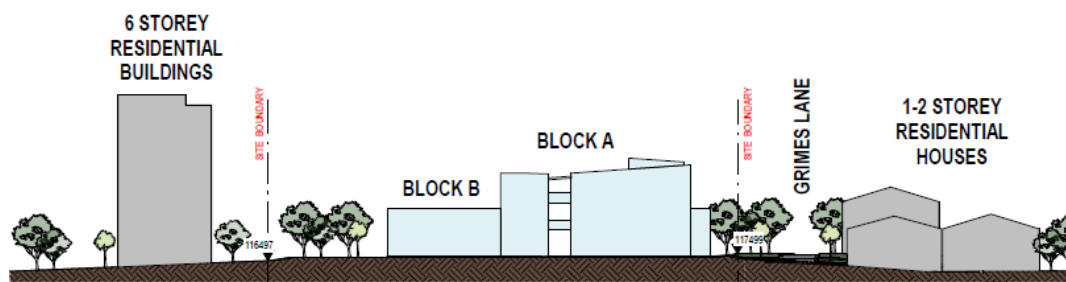


Figure 33 Short-section of site and surrounds (Source: PA Architectural Plans)

6.1.3 Materials and Finishes

The proposed material palette is inspired by the Sydney Blue Gum forest that dominates the site. Neutral light and dark grey tones are proposed to be used in conjunction with accented colours that are derived from the colours found on the bark of the Sydney blue gums. The cladding will be CFC cladding which is a versatile material.

Figure 34 is an extract of the photomontage from Grimes Lane which demonstrates the materials and finishes that will be used for the proposed buildings.

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Figure 34 Photomontage of northern façade from Grimes Lane

6.1.4 Environmental Amenity

Overshadowing

Shadow diagrams have been prepared as part of the architectural package (**Appendix 2**). These diagrams indicate that the proposed Stage 1 built form will not cast shadow outside the site boundaries until after 3pm on 21 June. Accordingly, the Stage 1 works will not result in unacceptable solar access impacts for adjacent development.

With regard to overshadowing of future masterplan works, the Design Analysis Report (**Appendix 7**) confirms that the Stages 2 and 3 have been setback and scaled to minimise any overshadowing to the southern residential development.

Solar Access

With regard to solar access to the proposed built form, the buildings are oriented east-west across the site, the northwest façade of the buildings will have good solar access throughout the day. The play space to the south of the built form will be partially shaded from 12pm in mid-winter, thereby providing both sunlight access and shade for respite.

The western play space will not be impacted by shading from buildings and will therefore experience a good level of solar access. Existing trees to be retained will provide areas of shade on this part of the site.

The proposed built form will provide acceptable solar amenity for staff and students.

Visual Privacy

With regard to visual privacy for neighbouring residences, sufficient built form setbacks to support boundary landscaping including significant trees will provide visual screening and enhance visual amenity for neighbours and the school community. In addition, privacy screens are proposed to all windows on the north-western elevation (facing Grimes Lane) (see **Figure 34** above), north-eastern and south-western facades and most windows on the south-eastern façade (facing internal play space and six storey residential development beyond the site).

The south-eastern façade is a significant distance from the nearest residential dwellings and future stages of the development will include new classroom buildings between the proposed Stage 1 built form and the nearest residential dwellings.

The proposed landscaping and built form treatments of the Stage 1 works are considered to be suitable for protecting the visual amenity of residential neighbours as well as students and

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staff within the site. Similar privacy treatments will be included for future Stages of built form on the site.

Visual Impact

The proposed three storey built form of Building A provides a height transition between low density residential dwellings to the north and the six storey residential development to the south of the site – refer **Figure 35**. The proposed building massing will not compromise district views for the surrounding residential development.

The material palette is discussed in **Section 6.1.3** above and the combination of the proposed landscaping works and the built form facades are considered to present as an educational establishment that is in harmony with the surrounding residential environment.



Figure 35 Visualisation of height transition

6.1.5 Earthworks

As previously discussed, some earthworks are required in order to facilitate the proposed built form, to provide for accessibility across the site, to manage overland flow and mitigate flood impacts.

The earthworks have been designed to avoid impacts on significant trees identified as trees to be retained. The earthworks have avoided level changes at the boundaries of the site which will ensure the relationship with adjoining properties is not compromised.

The extent of earthworks proposed is considered reasonable and will not result in unacceptable amenity impacts for adjoining residents or adverse environmental impacts particularly in relation to the biodiversity values of the site.

6.2 Heritage Significance

6.2.1 Aboriginal Cultural Heritage

An ACHAR (**Appendix 10**) has been prepared for the site by Comber Consultants. The ACHAR was prepared in accordance with the *Guide to Investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011); the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010); the requirements of the SEARs and relevant statutory controls.

Aboriginal community consultation was undertaken for the project following the *Aboriginal cultural heritage consultation requirements for proponents 2010* and resulted in the registration of thirteen (13) unique Registered Aboriginal Parties (RAPs) for the project. The RAPs were involved in consultation throughout the project and provided feedback on the ACHAR where relevant. The feedback received in response to the consultation undertaken during the preparation of the ACHAR is detailed in **Section 5.4** of this EIS.

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An AHIMS search revealed nine (9) registered Aboriginal sites within a 5km radius of the site, which are identified as follows:

- Six (6) sites are artefact sites;
- One (1) is an art (pigment or engraved) site;
- One (1) is a Potential Archaeological Deposit (PAD) site; and
- One (1) is listed as 'not a site'.

With regard to the relatively few Aboriginal sites being recorded, the ACHAR states:

A search of AHIMS for the broader Epping region indicate that only a small number of assessments have been undertaken within Epping resulting in only a few sites being recorded. It should be noted that the small number of sites register with AHIMS is a result of this lack of assessment, not a lack of potential Aboriginal archaeological sites.

The AHIMS registered PAD site is located adjacent to the southern and western boundaries of the Epping Park development site to the south and west of the school site – refer **Figure 36**.

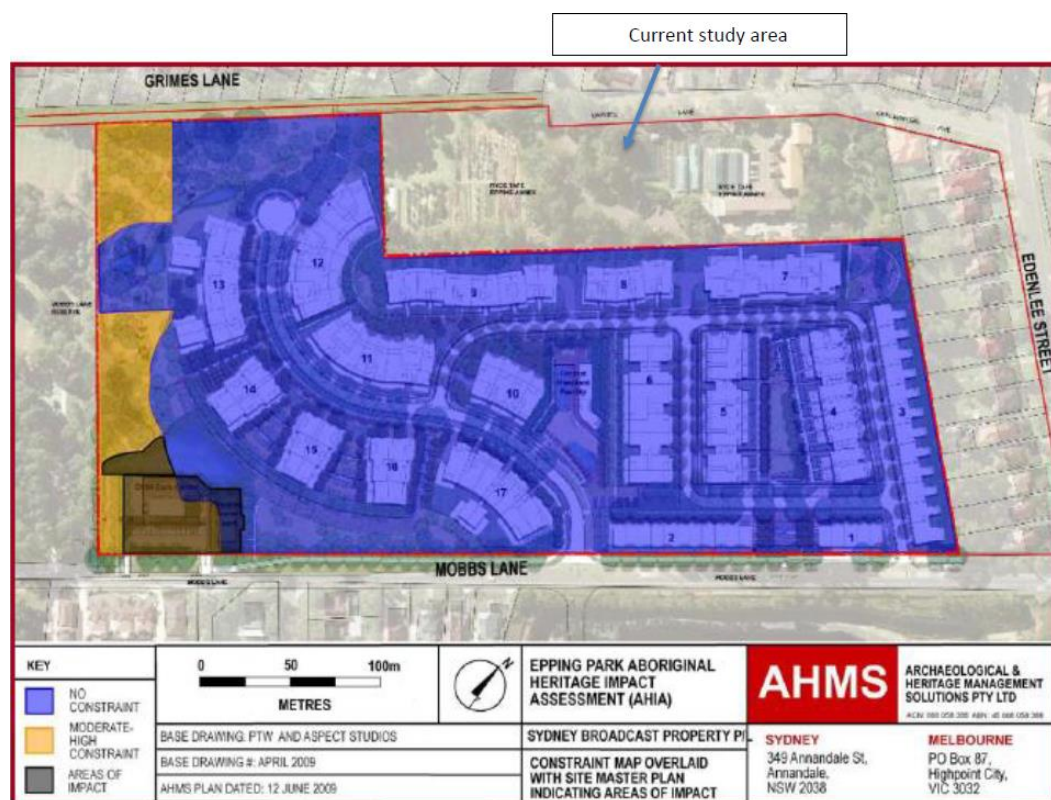


Figure 36 Extract from AHIMS for adjacent PAD site (Source: Comber Consulting ACHAR)

With regard to the proposed development site, a site survey was carried out on foot by the project archaeologist on 27 April 2020. The survey identified that due to development, land modification and overground vegetation, ground surface visibility was nil to low. The ACHAR indicates that if Aboriginal artefacts were present on the ground surface, they could not have been observed. However, based on the extents of relatively undisturbed land on the site and the soil type identified, the site has been designated a potential archaeological deposit (PAD).

Test trenches were excavated in association with geotechnical test pitting. No artefacts were recovered from the test trenches. However, a grinding stone was located on the ground near a stockpile of soil on the site (**Figure 37**). With regard to the importance of the discovery, the ACHAR states:

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Due to early 19th century collectors, grinding stones are an unusual artefact type to remain on a site. Therefore, this grinding stone is exceptionally important. It also indicates that it is highly likely that further subsurface Aboriginal objects will be located on the site, most likely within PAD 2. Therefore, further archaeological excavation will be required. In particular, prior to redevelopment, once the asphalt has been removed, archaeological salvage excavation should be undertaken.



Figure 37 Location of geotechnical test pits (pink), archaeological test pits (yellow), grinding stone (red star)
(Source: Comber Consulting)

The ACHAR provides seven (7) recommendations, as follows:

1. *Aboriginal community consultation should continue.*
2. *Aboriginal archaeological salvage excavations should be undertaken in consultation with the RAPs and should be undertaken prior to the redevelopment of the site.*
3. *Any artefacts uncovered should remain on country and be catalogued and stored onsite and protected by SINSW. The artefacts could be used in an interpretive display. To allow this to happen it will be necessary for a Care Agreement to be made between SINSW, Heritage NSW and the RAPs. To apply for a Care Agreement, an 'Application for the transfer of Aboriginal objects for safekeeping' must be signed by SINSW and the RAPs and submitted to Heritage NSW.*
4. *If it is not possible for the artefacts to remain on site, they should be lodged with the Australian Museum.*
5. *An interpretation strategy and plan should be developed which interprets the results of the archaeology and the Aboriginal history of the region. This should be in partnership with the RAPs. The artefacts recovered from the testing and salvage could be used in the interpretative display.*
6. *Should the proposed works as described in this report be altered the new proposal should be assessed and this report amended accordingly.*
7. *In the unlikely event that Aboriginal burials or skeletal material are unexpectedly uncovered, work should cease, the consultant should be contacted for further advice and the consultant should contact the Police and Heritage NSW.*

An Archaeological Assessment has also been prepared by Comber Consulting in accordance with the Department of Planning, Industry and Environment's (DPIE's) *Guide to Investigating, Assessment and Reporting on Aboriginal Cultural Heritage in NSW*, and is appended to the

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ACHAR (**Appendix 10**). The Archaeological Assessment makes the following four (4) recommendations:

1. *Aboriginal community consultation in accordance with DPIE's Aboriginal cultural heritage consultation requirements for proponents 2010, should be undertaken.*
2. *As subsurface Aboriginal objects are predicted to exist within the study area, and it is an offence to harm such objects, testing and salvage excavation should be undertaken in association with the Registered Aboriginal Parties. As this is an SSDA project, an AHIP will not be required.*
3. *An Interpretation plan detailing the Aboriginal history of the area and the site and the results of the archaeological investigation should be developed and implemented.*
4. *In the unlikely event that Aboriginal burials or skeletal material are unexpectedly uncovered, work would cease, the Police and a qualified archaeologist would be contacted. Heritage NSW would be consulted prior to works recommencing.*

Accordingly, subject to implementation of the recommendations of both the ACHAR and the Archaeological Assessment, it is considered that any impacts of the proposed works on Aboriginal cultural heritage significance can be mitigated. The recommendations of the ACHAR and the Archaeological Assessment have been incorporated into the mitigation measures which is included at **Appendix 3** to this EIS and are also discussed in **Table 12**.

6.2.2 Environmental Heritage Significance

A Heritage Impact Statement has prepared by GML Heritage (**Appendix 21**) in accordance with *The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance, 2013*, and the Heritage Office and Department of Urban Affairs and Planning publication *Statements of Heritage Impact, 2002*.

The site is not identified as an item of local heritage significance under Paramatta LEP, nor is it listed on the Department of Education's Section 170 Heritage and Conservation Register. However, the Heritage Impact Statement has identified areas of potential archaeological resources and significant trees as having some heritage significance. The report confirms that further investigations will be required throughout the works to mitigate any impacts to archaeological significance and makes the following recommendations:

- *A revised assessment of heritage impacts should be prepared for the detailed design and construction documentation prior to the commencement of works...*
- *Impacts to areas of locally significant historical archaeological remains are likely to require either monitoring, testing or salvage investigations prior to the commencement of works...*
- *Construction activities and enabling works should be planned to as to minimise the removal of significant trees or cultural plantings, and the associated adverse heritage impacts this may have.*
- *A tree removal/ retention plan should be prepared as the design is development further.*
- *Transplantation opportunities should be pursued for existing significant trees and shrubs that may be impacted by future development*
- *Remnant vegetation and trees assessed as having low-moderate significance should be retained onsite where possible.*
- *Species of removed significant trees, such as the remnant Sydney blue gums, should be replanted on site in new locations as part of the proposed development.*

The recommendations of the heritage impact statement have been incorporated into the mitigation measures which is included at **Appendix 3** to this EIS.

In addition to heritage advice, ecological and arborist advice has also been sought in relation to the impact of the development on significant trees. This is discussed further in **Section 6.4** of this EIS. It is considered that subject to the implementation of the recommendations in the

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Heritage Impact Statement, that the proposed works will not generate adverse environmental impacts on archaeological resources and significant trees.

6.3 Traffic, Transport and Parking

SCT Consulting has prepared a Transport and Accessibility Impact Assessment (TAIA) (**Appendix 23**), which provides details of transport and accessibility impacts relating to the proposed new primary school, as required by the SEARs.

PTC has prepared Civil Works Plans (**Appendix 22**), which include works in the roadway along Chelmsford Avenue and Grimes Lane, and connection of Grimes Lane with Second Avenue. These works have been identified by SCT as necessary in order to manage traffic movements associated with the school.

6.3.1 Civil Works

The proposed extension of Grimes Lane will complete the local road network and bring resolution and order to the end of First and Second Avenues by providing the final section of Grimes Lane. The works will include a one-way local road with a kiss and drop lane along a portion of the site frontage and have been designed to retain significant trees.

The proposed civil works will provide the school with appropriate street frontage to enable pedestrian and vehicular access to the site. The works have been designed by a civil engineer in accordance with relevant Australian Standards and Council's requirements. Accordingly, the design is considered to be acceptable.

6.3.2 Traffic

In order to assess the likely traffic generation associated with the school, SCT investigated other schools in similar circumstances, including Epping West Public School.

Following assessment of the trip generation rates of four schools, the following trip generation rate was applied:

- AM peak: 0.55 vehicles per student
- PM peak: 0.40 vehicles per student

In applying this rate, SCT made the following observations:

It is reasonable to consider a reduction to the typical traffic generation rate for primary schools based on the location of the new primary school. The new school is located within 1.9 km of a heavy rail and metro station and does not require crossing major roads. One of the key benefits of the proposal is the reduction in the size of the overall catchment with the introduction of the new school, which would mean the typical student would have to travel a shorter distance, likely encouraging further mode shift. School Infrastructure NSW will also invest in local walking infrastructure to assist in this.

Based on this, the following peak vehicle trips are anticipated in 2023 (at the completion of Stage 1) and in 2033 (at the completion of Stage 3):

- Stage 1 – 600 students:
 - AM peak vehicle trips – 300 vehicles
 - PM peak vehicle trips – 240 vehicles
- Stage 3 - 1,000 students:
 - AM peak vehicle trips – 550 vehicles
 - PM peak vehicle trips – 400 vehicles

In assessing impacts on the local road network, SCT also factored in trip distribution around the site.

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Assessment of the traffic impacts of the development at 2023 (up to 600 students for Stage 1) and 2033 (up to 1,000 students for Stage 3) on local intersection performance is provided in **Figure 38**.

Intersection	2023						2033					
	AM Peak			PM Peak			AM Peak			PM Peak		
	Delay	LoS	DoS	Delay	LoS	DoS	Delay	LoS	DoS	Delay	LoS	DoS
Midson Road / Dunlop Street	16.5s	B	0.37	13.7s	A	0.30	17.6s	B	0.38	13.8s	A	0.31
Midson Road / Chelmsford Avenue	27.0s	B	0.29	18.2s	B	0.23	28.3s	B	0.31	19.0s	B	0.24
Midson Road / Eastwood Avenue / Mobbs Lane	33.9s	C	0.97	29.2s	C	0.90	34.9s	C	0.98	29.4s	C	0.90
Chelmsford Avenue / Edenlee Street	8.5s	A	0.11	8.2s	A	0.07	8.9s	A	0.13	8.4s	A	0.08
Dunlop Street / Edenlee Street	5.3s	A	0.13	5.2s	A	0.10	5.5s	A	0.16	5.4s	A	0.13
Dunlop Street / Ryde Street	5.3s	A	0.12	5.1s	A	0.10	5.5s	A	0.15	5.3s	A	0.12
Dunlop Street / First Avenue	5.1s	A	0.11	5.0s	A	0.08	5.3s	A	0.14	5.1s	A	0.11
First Avenue / Chelmsford Avenue / Grimes Lane	5.0s	A	0.05	5.0s	A	0.03	5.1s	A	0.08	5.0s	A	0.06
Dunlop Street / Neil Street / Second Avenue	5.2s	A	0.08	5.1s	A	0.06	5.4s	A	0.13	5.2s	A	0.09
Willoughby Street / Orchard Street (separate from the network)	10.9s	A	0.12	10.3s	A	0.09	11.6s	A	0.13	10.7s	A	0.10

Figure 38 Intersection performance in 2023 and 2033 (Source: SCT Consulting)

The analysis indicates that the surrounding road network and intersections will operate at a satisfactory level of service in both the short and long term forecasts.

The development includes a Kiss and Drop zone (capable of accommodating up to 10 vehicles) along the school side of the Grimes Lane extension and another drop off/pick up area for 2 cars off the Chelmsford Avenue access for the SELU.

Based on the forecast mode share, and a average stop time of up to 3 minutes per car, a total of 20 kiss and drop spaces is required. The proposed kiss and drop will provide 65% of this demand. Extension of the kiss and drop along Grimes Road was considered, however, any extension would impact the root zone of trees with a high biodiversity value.

To further mitigate any impacts on the road network, the TAIA includes a Green Travel Plan to encourage staff and students to use active and public transport options for travel to and from school. The initiatives proposed under the Green Travel Plan are discussed in **Section 2.6** of this EIS.

The TAIA concludes:

Given the student numbers associated with the proposal, the transport impacts are considered negligible and at a level to be accommodated by planning infrastructure upgrades and initiatives.

Accordingly, it is considered that the proposed development will not have an unacceptable impact on the local road network.

Cumulative Impacts

It is anticipated that the proposed new public school in Epping will be delivered concurrently with the Epping West Public School (SSD-9250948), which would likely have overlapping operational benefits and construction impacts. A proportion of the students to the south of Carlingford Road will be located within the catchment for the new school in Epping and, as a consequence, the catchment area (and the student population of Epping West Public School) will reduce. As the schools have separate school catchments, it is expected there are no cumulative impacts between the two schools.

6.3.3 Parking

Stage 1 of the proposal will provide 32 staff car parking spaces, with area set aside to expand the car park to up to 54 spaces in future stages. Teaching staff for Stage 1 is forecast to be up to 28 FTE teachers.

The Parramatta DCP 2011 does not stipulate car parking rates for Educational Establishments. Council has requested one parking space per teacher be provided on site.

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With regard to bicycle parking, there is no numerical requirement for bicycle parking under Parramatta DCP.

The development is proposing 60 bicycle parking spaces on-site (by Stage 3). The location of bicycle parking is identified in blue circles in **Figure 39**.

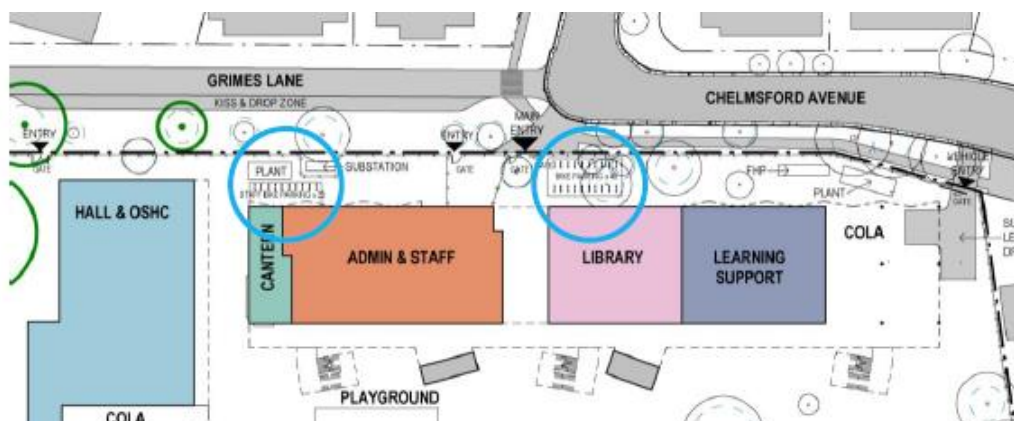


Figure 39 Location of bicycle parking (Source: Pedavoli Architects)

It is considered that the car parking and bicycle parking provided is appropriate for the proposed development and will encourage modes of transport for the purposes of accessing the school other than primarily relying on private vehicles.

6.4 Tree Removal and Biodiversity

6.4.1 Tree Removal

Tree and Landscape Consultants (TALC) inspected 174 trees within the site and adjacent to the site as part of the Arboricultural Impact Assessment (**Appendix 11**). The proposed works will require the removal of 65 trees as detailed in **Table 9** and **Figures 40** and **Figure 41**. Tree significance has been determined using the *IACA Significance of a Tree, Assessment Rating System (STARS)*.

Table 9 Trees Proposed for Removal	
Tree Significance	Tree No
1. High	2 trees (Tree Nos: 23 and 169)
2. Medium	15 trees (Tree Nos: 22, 28,30, 44-49, 142, 143, 146, 149-151)
3. Low	48 trees (Tree Nos: 1, 3-8, 11, 13, 18, 21, 24-27, 29, 31-37, 39, 40, 43, 52-54, 60, 61, 65, 109, 111, 112, 116, 126, 128-133, 140, 141, 144, 147, 152, 153)
Total Trees for Removal	65 trees

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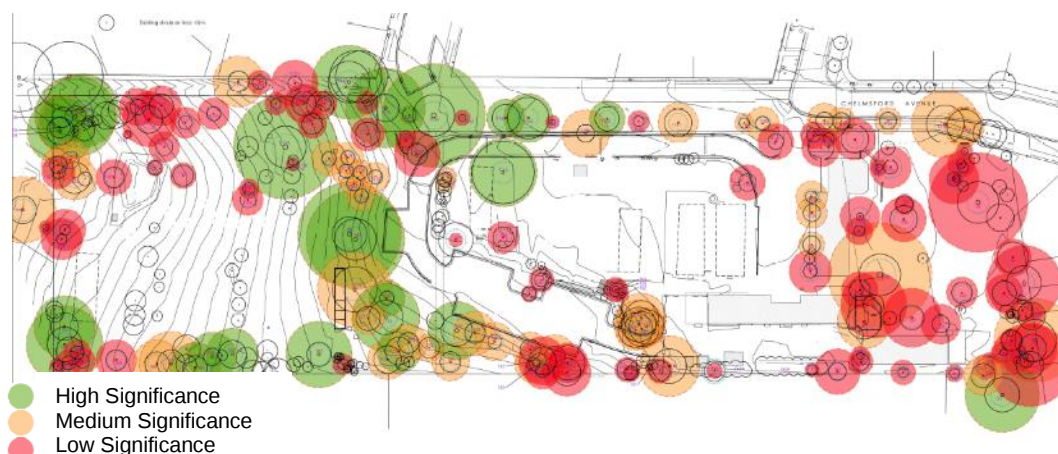


Figure 40 Tree Location Plan (Source: TALC)

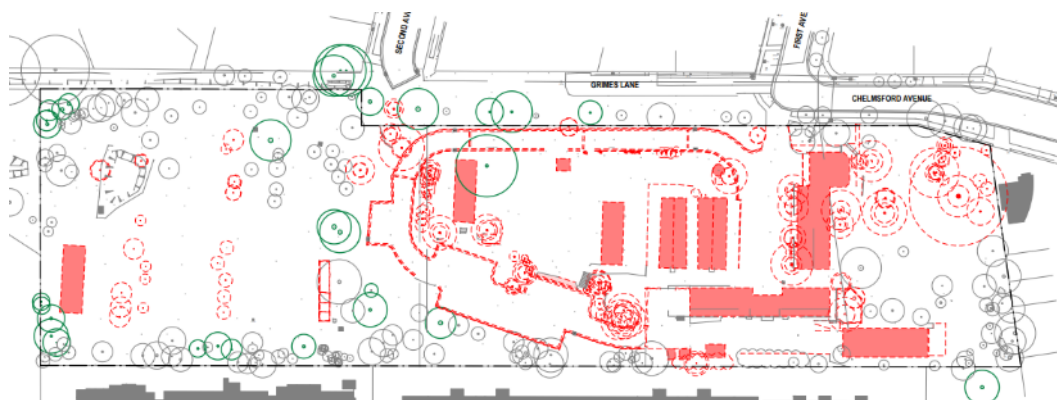


Figure 41 Tree Removal Plan (Source: Pedavoli Architects)

Tree Nos 144 and 169 are Blue Gum High Forest (Sydney Blue Gum) species³. Their removal is required to allow for the proposed driveway and carpark. The arborist report notes that:

Removal of tree 169 will also allow for greater clearance from adjoining trees 168 & 170, which are larger specimens of Sydney Blue Gum.

The impacts of the removal of these two trees are considered in the BDAR prepared by Eco Logical Australia and discussed in **Section 6.4.2** of this EIS.

Appropriate measures that comply with AS 4970-2009 – *Protection of Trees on Development Sites* will be put in place to protect the remaining 108 trees on the site which have been assessed as trees able to be retained⁴.

Replacement planting will be undertaken as indicated in the landscaping plans at **Appendix 17** and discussed in **Section 6.5** of this EIS. While the development requires removal of 65 trees, replacement planting of 126 trees, will result in a net gain of 61 trees on the site.

6.4.2 Biodiversity

A BDAR has been prepared by Eco Logical Australia (**Appendix 32**) which meets the requirements of the Biodiversity Assessment Method 2016 (BAM) established under Clause 6.7 of the Biodiversity Conservation Act 2016 (BC Act). The report identifies the potential impacts on flora and fauna species as detailed in the following discussion.

³ These trees are significant as they are trees which form part of the Blue Gum High Forest community which is a critically endangered ecological community

⁴ This does not include all trees to be retained on the site. The tree protection measures for the 101 trees to be protected relate to those trees that are located within areas proximate to the areas within which the demolition and construction works will occur.

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Much of the site currently contains built form, cleared land and exotic vegetation. However, the remainder of the site contains remnant patches of native vegetation and planted native vegetation comprised of the following plant community types (PCT):

- PCT 1237 - Sydney Blue Gum – Blackbutt – Smooth barked Apple moist shrubby open forest on shale ridges of the Hornsby Plateau, Sydney Basin Bioregion; and
- PCT 1845 – Smooth-barked Apple – Red Bloodwood – Blackbutt tall open forest on shale sandstone transition soils in eastern Sydney

PCT 1237 conforms to Blue Gum High Forest, which is listed as part of the critically endangered ecological community (CEEC) under the BC Act and the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). Blue Gum High Forest is also listed as Serious and Irreversible Impact (SII) entity. However, the BDAR confirms that:

The patch in the development site does not meet the EPBC Act definition of a community.

The vegetation on site that is classed as PCT 1845 has been planted using native indigenous canopy species. While this vegetation does not clearly conform to any PCT, it has been identified using a 'best-fit' PCT as conforming to PCT 1845 in a planted condition with an exotic understorey. However, this planted patch of vegetation does not correspond to a threatened ecological community (TEC).

The PCT 1237 and PCT 1845 vegetation that will be impacted by the development has been assessed in the BDAR. This assessment concluded that the proposed development is unlikely to result in serious and irreversible impact on the PCT communities and that no ecosystem credits are required. An extract of the BDAR detailing this is provided at **Figure 42**.

PCT ID	PCT Scientific Name	Condition	Vegetation Zone	Area (ha)	Vegetation Integrity Score	Credits
Ecosystem Credits						
1237	Sydney Blue Gum - Blackbutt - Smooth-barked Apple moist shrubby open forest on shale ridges of the Hornsby Plateau, Sydney Basin Bioregion	Poor	1	0.01	11.9	0
1845	Smooth-barked Apple - Red Bloodwood - Blackbutt tall open forest on shale sandstone transition soils in eastern Sydney	Poor	2	0.26	15.3	0
Total				0.27	-	0

Figure 42 Extract from BDAR detailing Ecosystem Credit Assessment

It is important to note that the development was informed following extensive due diligence investigations, including ecological investigations. The development has been designed to minimise impacts on existing significant vegetation and thus minimise impacts on the biodiversity of the site.

The BDAR also conducted a habitat assessment for threatened flora and fauna species and their likelihood to occur in the development site. The only threatened fauna species previously recorded within the site is *Ninox connivens* (Barking Owl). However, a habitat assessment revealed no suitable Barking Owl roosting habitat within the site.

Based on the habitat features present, the BDAR identified one (1) Matter of National Environmental Significance (MNES), under the EPBC Act that is likely to occur, *Pteropus poliocephalus* (Grey-headed Flying-Fox). An Assessment of Significance was carried out in accordance with the requirements of the EPBC Act and it was concluded that the works do not

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include the removal of a significant amount of habitat and therefore sufficient foraging habitat will continue to be available for the Grey Headed Flying Fox.

Accordingly, the proposed works are not considered to have an unacceptable impact on MBES species or the site's biodiversity. The works do not require referral under the EPBC Act and the impacts on biodiversity are considered acceptable.

6.5 Landscape and Play Space

A landscape strategy has been developed by Taylor Brammer Landscape Architects (**Appendix 17**) in concert with the design development of the built form and having regard to the existing native vegetation. The landscape and play space areas have been designed with a connection to Country, to promote water harvesting, mitigate heat island effects in summer and to address crime prevention principles. The landscaping works will provide formal and natural play areas including open grasslands, playing courts, a nature play area including wetland type plantings and rock walk to provide a learning experience and creative play opportunity (**Figure 43**).



Figure 43 Landscape Masterplan (Source: Taylor Brammer Landscape Architects)

The western play space is separated from the developed part of the site. Given the steep slope and the large amount of vegetation to be retained north-south across centre of the site, CPTED will need to be managed with regard to the play space in the western portion of the site. In this regard, Taylor Brammer recommends that a school safety management plan be developed (as with all schools) and that this plan specifically detail the need for staff/teacher surveillance to be stationed in the western portion of the site to manage student safety. The school safety management plan will also identify when the western play space will be able to be accessed by students.

New planting of 126 trees is proposed, 66 trees of which are species of Blue Gum High Forest, allowing for mature heights of between 5m-30m. These trees, along with the existing vegetation on site and other proposed trees, will provide natural shading from the tree canopy. The replanting will ensure a net gain of 61 trees is provided on the site. Overall there will be a net gain a BGHF species on the site.

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With regard to the planting strategy, the landscape report provides the following:

The plant species have been carefully selected from the endangered ecological communities of the Shale/Sandstone Transition Forest and Blue Gum High Forest. Additional plants are selected from suitable species for the Parramatta Council.

Within the site there are pockets of remnant Shale/Sandstone Forest and Blue Gum High Forest that will be retained with local provenance seed to assist in the protection and regeneration of the community. The pockets of remnant vegetation will provide habitat for native animals and will provide educational value to the site.

In addition to this, consideration has been given for the use of deciduous trees in combating the urban heat island effect and to highlight places of entry or significance. Suitable tree species will be located to the perimeter of the site, which will integrate with the existing vegetation that surrounds the site.

Inspiration has derived from the local indigenous group of the Wallumedegal. A selection of suitable plants for bush food will promote education and understanding of the Wallumedegal people.

On balance, the landscape and play space provisions for the proposed development considered to be satisfactory and respond appropriately to the conditions of the site and objectives of the project.

6.6 Noise and Vibration

6.6.1 Operational Acoustic Assessment

RWDI has prepared a Noise Impact Assessment (NIA) (**Appendix 25**) in accordance with the relevant policies and guidelines identified in the SEARs, and notes that acceptable noise limits are derived from the EPA's *Noise Policy for Industry*.

The NIA considers the potential impacts of noise emission from school activities on nearby residential receivers and the level of noise intrusion from surrounding roads. The NIA provides recommendations (where relevant) to ensure that relevant criteria is complied with, throughout both the construction and operational phases of the development.

Figure 44 identifies the location of acoustic loggers, which were used within the site and at nearby sensitive receivers to determine the background acoustic environment. **Figure 45** identifies the noise catchment areas (NCAs) for assessment of noise impacts. With regard to the reliability of the data collected, the NIA confirms that:

All equipment carried appropriate and current NATA (or manufacturer) calibration certificates.

...Data measured during periods of adverse weather, established through consultation with historical weather reports provided by the Bureau of Meteorology (BOM), has been excluded.

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Figure 44 Location of acoustic loggers used to determine existing acoustic environment (Source: RWDI)



Figure 45 Noise Catchment Areas (Source: RWDI)

Operational noise from the proposed new school facilities may be generated by the following activities:

- Mechanical services plant
- Teaching and practical activities;
- School announcements and bells;
- Sporting activities and events in the halls; and
- Sports-related classes held in the outdoor play area.

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With respect to each of these activities, RWDI noted that:

- The noise emissions from mechanical plant associated with the new school development should be controlled so that the operation of such plant does not adversely impact upon surrounding residential properties.
- It is anticipated that the noise levels throughout the administration spaces and special and general learning areas will be relatively low and consistent with typical school usage.

The classrooms have operable glazing on the northern and southern facades. Generally, it is anticipated that the noise levels in the classrooms will be relatively low. However, for the purpose of assessment it is assumed that from time to time there could be activities during which the teacher or several pupils may be talking loudly.

In this regard, RWDI found the following:

Assuming a reverberant sound pressure level of 75dBA within a learning space with open windows, the predicted LAeq,15min noise level at the nearest potentially sensitive receivers to the northern boundary (Grimes Lane) is 43dBA. Accordingly, the predicted noise level complies with the relevant environmental criterion of 43dBA for noise emissions during the daytime period.

- Use of the School Hall for assemblies, concerts and other functions has the potential to impact surrounding noise sensitive receivers. Noise emissions from such events are typically related to use of amplified speech or music through the use of public address systems. RWDI recommends that the public address (PA) system should be designed to ensure noise emissions are minimised.

In order to assess the potential impacts of the use of the hall, RWDI has assumed a worst case scenario with amplified music playing within the hall. An internal reverberant level of 85LAeq,15min has been assumed. With doors open for a period of 15 minutes, the predicted noise emission to the closest residential receivers (Grimes Lane) is 45LAeq,15min.

If this occurs, the predicted level will marginally exceed the relevant environmental criterion of 43dBA during the daytime and evening period. Whilst the residual impact is negligible in terms of significance based upon NPfI procedures, RWDI recommends the following measures be implemented to minimise noise emissions:

- *The Hall PA system shall be designed to ensure speakers are oriented to direct sound inwards towards the audience.*
- *The LAmax noise level from the PA system operation should not exceed the ambient noise levels by more than 5dBA at the nearest residential receiver.*
- *It is recommended that management of noise be included in any site management plan.*
- With respect to the use of the car park, RWDI has assessed that the noise emissions associated with the carpark operation will comply with the relevant environmental criterion of 43dBLAeq,15min.
- RWDI note that the school PA system design has not yet been finalised. However, to ensure impacts on surrounding residents are minimised, the following measures are recommended:
 - *Speakers should be located and orientated to provide good coverage of the school areas whilst being directed away from residences. System coverage should be reviewed during the detailed design stage.*
 - *The volume of the system should be adjusted on site so that announcements and bells are clearly audible*

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on the school site without being excessive. The system should initially be set so that maximum noise levels at surrounding residences do not exceed the ambient noise levels by more than 5dBA.

- Once the appropriate level has been determined on site, the system should be limited to the acceptable level so that staff cannot increase noise levels.
- The system bell should be set so that it only occurs on school days.

Overall, the noise generated by students engaged in outdoor play and recreational activities at various times throughout the day is likely to be the most intrusive noise generated by activities on the site. The maximum duration and intensity of these periods is likely to occur during recess (typically 20 minutes) and lunch (typically up to 60 minutes).

In the absence of any quantitative criterion for assessment of noise emissions from outdoor play, RWDI has applied the “background + 10dBA” criterion as a ‘yardstick’ for determining the acceptability of noise emissions from the outdoor sporting fields and recreational spaces,

Based on noise loggers assessing existing ambient noise conditions, **Figure 46** identifies the acceptable and predicted noise levels for outdoor play for the proposed development.

Receiver Location	Project Noise Trigger Levels		Predicted Noise Levels	
	Intrusiveness L _{Aeq,15min}	Amenity ¹ L _{Aeq,15min}	Maximum L _{Aeq,15min}	Typical L _{Aeq,15min}
NCA01	48	58	43	49
NCA02	48		57	47
NCA03	47		57	36
NCA04	47		53	43

Figure 46 Acceptable outdoor play noise levels (Source: RWDI)

Accordingly, it is considered that even at maximum predicted noise levels, outdoor play will not have an unacceptable impact on residential acoustic amenity.

With regard to noise emission from the new multipurpose hall, the impacts for normal school use and out-of-school-hours use have been considered. At a worst-case scenario including amplified music playing with the hall doors open, the impact on the closest residential receivers is predicted to be up to 2dBA above the environmental criterion, which is considered negligible. Mitigation measures are detailed in the NIA at **Appendix 25** and a summary is provided at **Appendix 3**. These are also discussed in **Table 12**.

With regard to noise intrusion, the NIA confirms that the site is not exposed to any noise sources of potential significance. Accordingly, no acoustic mitigation measures are required to the built form to ensure internal acoustic amenity.

6.6.2 Construction Noise and Vibration

A practical consideration of forecast construction noise and vibration has been undertaken in accordance with the *NSW EPA Interim Construction Noise Guideline July 2009*. This policy has been used to establish a ‘noise affected level’ for each residential receiver, which may generate community reaction to noise and the ‘highly noise affected’ level of 75dBA, which may generate strong community reaction to noise.

Predicted construction noise levels are identified in **Figure 47**.

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NCA	Scenario	Activities	Total L _w dBA	Maximum Noise Level		Exceedances NML	
				Closest	Typical	Closest	Typical
NCA01	1	Demolition, Bulk Excavation & Earthworks	118	75	66	27	18
	2	Piling, Drainage works, Slabs	112	72	60	24	12
	3	General Building Works Facade / Fitout	109	69	58	21	10
NCA02	1	Demolition, Bulk Excavation & Earthworks	118	72	58	24	10
	2	Piling, Drainage works, Slabs	112	71	62	23	14
	3	General Building Works Facade / Fitout	109	63	56	15	8
NCA03	1	Demolition, Bulk Excavation & Earthworks	118	74	65	27	18
	2	Piling, Drainage works, Slabs	112	72	65	25	18
	3	General Building Works Facade / Fitout	109	62	67	16	9
NCA04	1	Demolition, Bulk Excavation & Earthworks	118	66	59	19	12
	2	Piling, Drainage works, Slabs	112	65	56	18	9
	3	General Building Works Facade / Fitout	109	67	56	20	9

Figure 47 Predicted construction noise levels (Source: RWDI)

These levels indicate that noise exceedances of up to 27dBA L_{Aeq,15min} in NCA01 and NCA03. The NIA confirms that no residential receivers will be in the 'Highly Noise Affected' noise category.

Notwithstanding, the NIA proposes mitigation measures, which include physical measures such as localised treatment including barriers and shrouds and use of ripping where rock removal is required; and management measures including selection of quietest equipment, periods of acoustic respite and a management plan. These measures are summarised in **Appendix 3** and are also discussed in **Table 12**.

The NIA concludes that construction activities with Stage 1 works could generate noise levels that exceed established construction noise management levels, during standard hours. Planning and management of construction activities will be required to be undertaken to minimise noise impact at surrounding receivers. The control of construction noise and vibration will be required to be addressed in a detailed Construction Noise and Vibration Management Plan to be developed when the successful contractor has been appointed. This recommendation is reflected in the mitigation measures of the project (**Appendix 3**). Subject to the implementation of appropriate acoustic mitigation measures and consultation with neighbours, the acoustic impact of the construction works can be managed.

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6.7 Ecologically Sustainable Development (ESD)

An ESD Report has been prepared by Northrop (**Appendix 30**) that identifies sustainability targets for the development, which will be achieved by an integrated approach to the building design through minimising energy consumption (passive measures), consumption optimisation, energy efficiency and use of renewable resources. Specific measures include:

- Natural ventilation of circulation spaces;
- Improved building fabric and glazing performance;
- Water efficient fixtures and fittings;
- Minimum use of water-cooled air conditioning systems;
- Endemic native species for landscaping; and
- Installation of an 99kW photo voltaic (PV) system (final design, size and configuration to be completed during for construction design stage).

The development has been assessed as being capable of meeting or outperforming the:

- Educational Facilities Standards and Guidelines (EFSG);
- National Construction Code (NCC) Section J (Energy Efficiency); and
- Standard SEARs ESD requirements.

The development has been benchmarked against Green Star in accordance with the SEARs to ensure that the project is designed to address future climate related events.

Consideration of the development with regard to the principles of ESD (as set out under Clause 7(4) of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*), are set out below:

- **The Precautionary Principle:** The proposal does not present any threat of serious or irreversible environmental damage, as detailed within this assessment. In this regard, the precautionary principle does not need to be exercised.
- **Inter-Generational Equity:** The works proposed as part of this DA will ensure that the health, diversity and productivity of the environment are maintained and enhanced to the benefit of future generations, having regard to the ESD initiatives discussed above and environmental outcomes achieved through the inclusion of zero ozone depleting materials, sustainably sourced timber, low impact steel and concrete in addition to a focus on native vegetation and water sensitive urban design.
- **Conservation of Biological Diversity and Ecological Integrity:** A BDAR has been prepared for the site, which concludes that the proposed development will have not have serious or irreversible impacts on biodiversity. Through the planting of endemic native vegetation, improvement of stormwater runoff from the site and use of landscaping that blends with the surrounding parklands, the project will improve, conserve and support the local biological diversity.
- **Improved Valuation, Pricing and Incentive Mechanisms:** As discussed above the proposal will adopt a number of ESD initiatives. All up front and ongoing costs associated with the environmental performance of the proposed development have been considered in the design of the proposal and are considered reasonable and acceptable.

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6.8 Stormwater Management

A Stormwater Management Plan (SMP) has been prepared by PTC (**Appendix 18**), which has been prepared in accordance with the requirements of Parramatta LEP and DCP, Landcom Managing Urban Stormwater – Soils and Construction 2004, Australian Rainfall and Runoff – A guide to Flood Estimation 2016, Sydney Water On-site stormwater detention policy 2020, and other relevant policies, standards and requirements.

In preparing the SMP, PTC has considered existing site constraints including the fact that the site is not impacted by mainstream flooding but is impacted by overland flow. There is an existing swale/overland flow path running along the northern boundary of the site.

The water quality strategy for the site includes a rainwater tank, OceanGuard (Enviropod 200) pit baskets, buffer, swale, Bioretention and StormFilter cartridges. The site has been divided into six catchment areas and MUSIC modelling confirms that the proposed water quality strategy will achieve the pollutant reduction targets at both Stage 1 (**Figure 48**) and at the completion of Stage 3 (**Figure 49**).

	Sources	Residual Load	% Reduction
Flow (ML/yr)	10.7	8.77	18.1
Total Suspended Solids (kg/yr)	2550	287	88.8
Total Phosphorus (kg/yr)	4.73	1.59	66.4
Total Nitrogen (kg/yr)	25.1	11.6	53.8
Gross Pollutants (kg/yr)	247	0	100

Figure 48 Stage 1 MUSIC modelling results (Source: PTC)

	Sources	Residual Load	% Reduction
Flow (ML/yr)	12.1	10	17
Total Suspended Solids (kg/yr)	2670	333	87.5
Total Phosphorus (kg/yr)	5.03	1.77	64.9
Total Nitrogen (kg/yr)	27.5	13.4	51.3
Gross Pollutants (kg/yr)	271	0	100

Figure 49 Stage 3 MUSIC modelling results (Source: PTC)

The proposed stormwater management system includes an in-ground piped drainage system to convey the 1 in 100-year ARI storm to an underground OSD tank with a capacity of 360m³. A separate system is proposed for roof runoff to the underground rainwater tank with an overflow direct to a treatment chamber within the OSD tank.

The capacity for the OSD tank has been calculated using the *CoP Development Engineer Guidelines 2018*, the Site Storage Requirements and Permissible Site Discharge parameters for the Terry's Creek Catchment area. Allowance for a 50kL underground rainwater tank is included but further modelling during design development will confirm the rainwater tank size and re-use applications.

Civil works plans have been prepared by PTC (**Appendix 22**). The following figures depict the stormwater plans across the western (**Figure 50**) and eastern (**Figure 51**) portions of the site.

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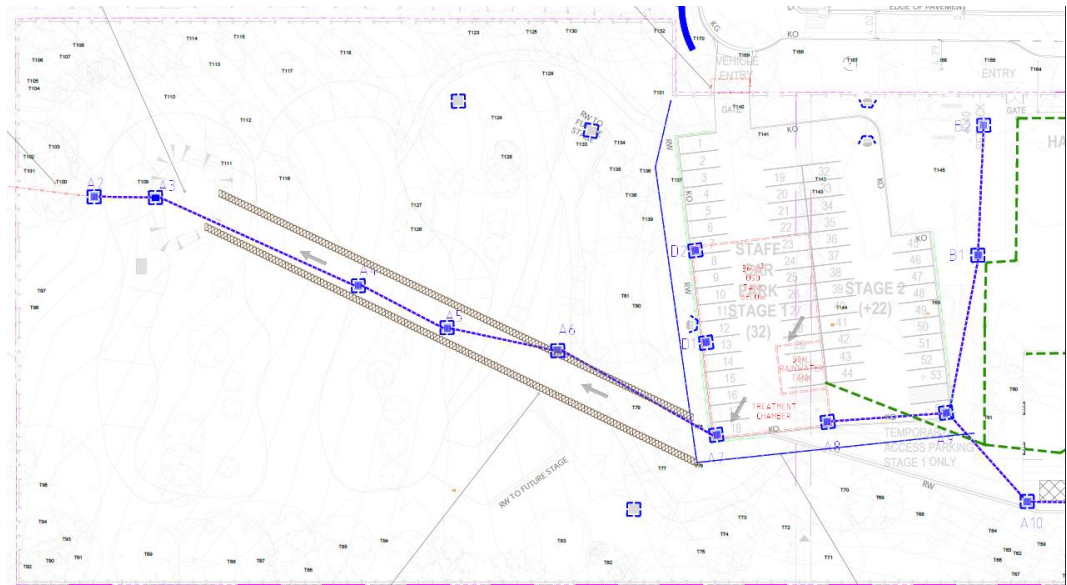


Figure 50 Civil Works - western portion of site (Source: PTC)

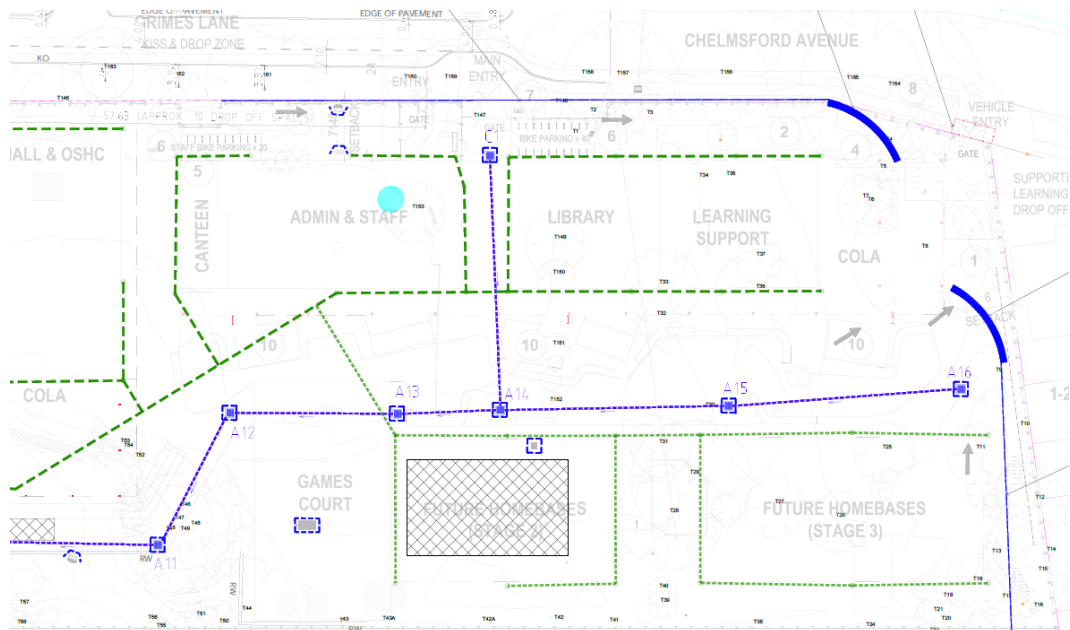


Figure 51 Civil works – eastern portion of site (Source: PTC)

The proposed stormwater management plan is consistent with the water quality and water quantity requirements for the site and will not result in unacceptable impacts to the catchment or neighbouring development.

6.8.1 Erosion and Sediment Control

The Stormwater Management Report prepared by PTC includes an Erosion and Sediment Control Plan (**Appendix 18**), which details the management strategies to be implemented during construction to minimise the impacts of sedimentation and erosion across the site. The proposed strategies satisfy the Landcom design guide “*Managing Urban Stormwater – Soils and Construction*” (the Blue Book).

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6.9 Social Impacts

Access to elementary education is a fundamental human right. The proposal will provide SINSW with greater capacity to provide quality public education to the local community.

The proposed works will provide flexible learning spaces that utilise state-of-the-art technology to enhance the learning experience for the next generation of students. The contemporary and sustainable facilities provide an outstanding working environment for school staff. Flexible learning spaces to accommodate small or large groups and facilitate students to work independently and collaboratively are also provided.

The new buildings have been designed and located to minimise amenity impacts to neighbouring properties and existing mature trees on the site. The works will be undertaken in accordance with the recommendations of specialist reports so as to ensure appropriate geotechnical, contamination, traffic, heritage and acoustic outcomes are achieved. The proposed works have been designed to, and will be carried out in, the interests of the public and will provide safe and efficient access for children, teachers, visitors and service personnel.

A Social Impact Assessment prepared by DFP Planning (**Appendix 34**) finds that the social impacts of the proposal are generally positive for school students, staff and the wider community. It finds that almost all negative social impacts are likely to be short term, generally limited to the construction stage of development, and can be managed through appropriate mitigation measures.

It is considered that the project will have an overall significant public benefit to the local community.

6.10 Other Environmental Issues

An assessment of other environmental issues associated with the proposed development is provided in **Table 10**.

Table 10 Assessment of Other Environmental Issues	
Issue	Assessment Findings
Accessibility	Blackett Maguire Goldsmith has prepared an assessment (Appendix 29) of the proposed development against the <i>Disability Discrimination Act</i>, <i>Disability (Access to Premises – Buildings) Standards 2010</i> and BCA Section D3, clauses E3.6 and F2.4, including AS 1428.1-2009. BM+G conclude that: <i>The development satisfies the accessibility provisions of the BCA and the Access to Premises Standards 2010. Noting that the design will be subject to refinement in preparation of the construction documentation to capture detailed compliance matters.</i> Accordingly, it is considered that the development is capable of compliance with the relevant accessibility requirements.
Crime Prevention Through Environmental Design	The Design Analysis Report (Appendix 7) provides discussion on how the design is consistent with the CPTED principles. • Territorial Re-enforcement – The built form and signage will clearly present the site as an educational establishment. Fencing will create a clear boundary and entry points are clearly defined. • Surveillance – The site has frontage to four roads (Grimes Lane, Chelmsford, First and Second Avenue), which will provide natural surveillance along the areas visible from the public domain. The proposed circulation paths promote strong natural surveillance of both the public domain and interior of the site. External lighting will help to deter night-time crime. • Access Control – Visually permeable fencing along all site boundaries will govern access control to the main pedestrian and vehicle access points. • Space/Activity Management – The buildings are oriented to the exterior of the site, which protects and separates interior open spaces from the public domain.

6 Environmental Assessment

Table 10 Assessment of Other Environmental Issues

Issue	Assessment Findings
	Landscaping will screen teaching and play spaces from the adjoining medium density residential development. The western playspace is separated from the developed part of the site, in this regard the Design Report states. <i>Given the steep slope and the large amount of vegetation to be retained north-south across the centre of the site, CPTED will need to be managed closely with regard to the playspace in the western portion of the site. A school safety management plan will be developed (as with all schools) and this plan will specifically detail the need for staff/teacher surveillance to be stationed in the western portion of the site to manage student safety. The school safety management plan will also identify when the western playspace will be able to be accessed by students.</i> Subject to the implementation of School Safety Plan, with particular focus on management of the western playspace, it is considered that the design is consistent with CPTED principles.
Structural Adequacy	A Structural Report has been prepared by Northrop (Appendix 24). The report has considered the results of geotechnical investigations by Douglas Partners (Appendix 37) and recommended that footings be designed on either residual clay, bedrock or engineered fill. The report details the structural systems proposed for the built form and confirms that the design life is a minimum of 50 years and that all buildings and structures will be designed with the loads determined from Australian Standards, NCC:2019 and the requirements of the EFSG.
Waste	Demolition and Construction waste management plan is provided in the Preliminary Construction Management Plan (PCMP) prepared by Hansen Yuncken (Appendix 35). The plan provides expected waste volumes and appropriate recycling and disposal plans. In addition the handling and disposal of hazardous waste is discussed in both the PCMP (Appendix 35) and the Hazardous Materials Survey (Appendix 38).
Wind Impacts	A qualitative Wind Environment Desktop Assessment has been prepared by RWDI (Appendix 26), which has assessed the proposed works against long-term meteorological data, comparative wind-tunnel tests, and 3D software to estimate potential wind conditions around generalised building forms. The assessment has considered pedestrian safety and comfort and concludes that: <i>Wind safety criterion will be met at all outdoor locations on and around the campus. Suitable wind comfort conditions are also expected in outdoor areas such as walkways, staircases, car parking, playground and some COLAs.</i> Accordingly, the proposed built form has been assessed responding appropriately to the prevailing wind environment for all stages of work.
Building Code of Australia	Blackett Maguire Goldsmith has prepared an assessment (Appendix 29) of the proposed development against the Deemed-to-Satisfy provisions and Performance Requirements of the <i>National Construction Code Series (Volume 1)</i> BCA 2019 Amendment 1 and Section 6.28 of the <i>Environmental Planning & Assessment Regulation 2000</i>. The assessment concludes that subject to measures set out under the 'key issues' heading in their assessment being appropriately addressed by the project design team, compliance with the provisions of the BCA is readily achievable.

6.11 Contributions

Pursuant to Section 4.33 of the EPA Act, a consent authority cannot issue a condition that has not been agreed to by a Crown Authority.

Therefore, despite the fact that the *Parramatta S94A Development Contributions Plan* applies to the site, the development is exempt from the payment of a contribution.

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6.12 Suitability of the Site for Development

An assessment of the suitability of the site for the proposed development is carried out in **Table 11**.

Table 11 Assessment of Suitability of the Site for Development

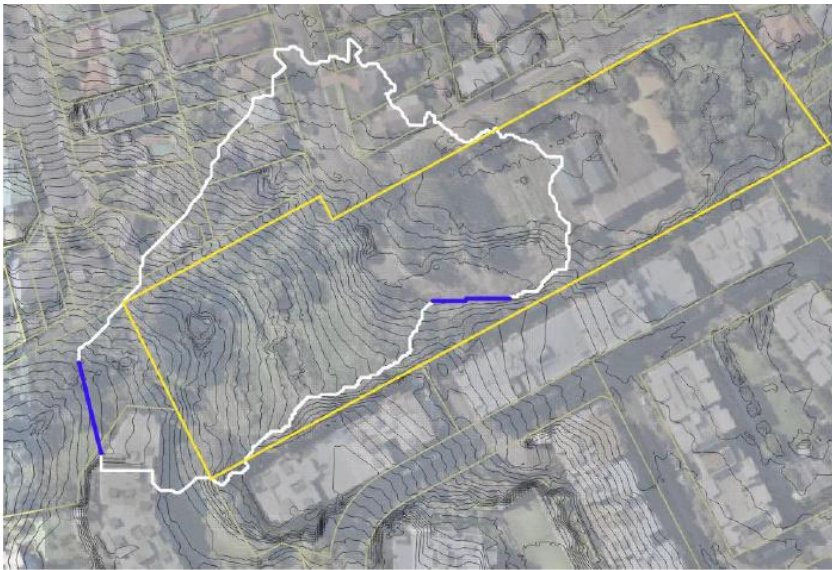
Issue	Assessment Findings
Contamination	The Detailed Site Investigation (DSI) prepared by Douglas Partners (DP) (Appendix 14) did not find any significant contamination on the site. Whilst no contamination requiring remediation has been identified by DP, DP has identified some gaps in the data, specifically on those parts of the site on which existing buildings are located. Therefore, DP has recommended that additional testing be undertaken following demolition of these buildings to ensure the site is suitable or can be made suitable for the proposed development. For abundant caution, a remedial action plan (RAP) has been prepared by DP to address the possibility of the land beneath the existing building being contaminated and in need of remediation. A copy of the RAP is included at Appendix 15. Both the DSI and the RAP have been reviewed by an independent auditor who has confirmed that the methodology and testing that has been carried out (under the DSI) is appropriate and the RAP methodology is acceptable.
Flooding	A Flood Analysis Report has been prepared by Site Plus (Appendix 19) has been prepared in response to the requirements of the <i>NSW Floodplain Development Manual 2005</i> and <i>Parramatta DCP</i>. The Report identifies that while the site is not mapped as flood prone land, it is identified on the Section 10.7 Certificate as being impacted by overland flow. The Flood Analysis Report has adopted a 2D hydrodynamic numerical model to predict flood behaviour (Figure 52). Flood behaviour on the site is highly dependent on topography, the pre-existing dam in the lower reaches of the catchment and adjacent to the western boundary governs flood affectation for the lot and downstream adjoining land.  Legend - Subject Site - Downstream Boundary Condition - Catchment - Cadastral Boundaries - ALS Terrain Contours

Figure 52 Extract of 2D flood model (Source: Site Plus)

Peak flows within the channel are estimated to reach 2.64m³/s in the PMF event. Peak velocity is estimated at approximately 2.6m/s surcharging from the same dam. Accordingly, only a small portion of the lot (immediately upstream and downstream from the dam) is considered to contain an unsafe hydraulic hazard. The Flood Analysis Report concludes that the proposed works can be supported in terms of flood risk for the following reasons:

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Table 11 Assessment of Suitability of the Site for Development

Issue	Assessment Findings
	- The western portion of the subject site is affected by an overland flow path. - PMF flood affectation is limited to the existing dam and directly surrounding land. - Proposed removal of the dam will mitigate flood risk. - No part of the development encroaches within High, Medium or Low Flood Risk Precincts and is therefore permissible under the City of Parramatta DCP 2011. - There will be no impacts of the development including any changes to flood risk on-site or off-site. - Climate change is unlikely to significantly worsen affectation since flooding is characterised by overland flow only, generated by a minor upstream catchment. Accordingly, subject to the proposed removal of the existing dam, it is considered that the site can be made suitable for the proposed development with regard to flood risk.
Bushfire	Despite the site not being mapped as bushfire prone land, due to the remnant vegetation adjacent to the site, a Bushfire Protection Assessment has been prepared by Eco Logical Australia (Appendix 33). The assessment confirms that there is no bushfire prone vegetation within 140 metres of the proposed works and the development is BAL-LOW. However, the vegetation proposed for retention on site should be managed as an Asset Protection Zone (APZ) to Inner Protection Area (IPA) standards under <i>Planning for Bushfire Protection 2019</i> .
Geotechnical	Geotechnical investigations have been carried out by Douglas Partners (Appendix 37) which have informed the design and construction methodology. Requirements for site preparation will be carried out in accordance with the findings and recommendations of the geotechnical investigations.
Groundwater	Natural groundwater is estimated to be at an approximate depth of 5.2m and accordingly should have no implications for the development.
Salinity	Advice on Salinity and Acid Sulfate Soils (ASS) has been prepared by Douglas Partners (Appendix 16). The site is mapped as Class 5 ASS and the results of the geotechnical soil samples (Appendix 13) indicate that the soils are generally non-saline to slightly saline. Accordingly, the ASS and salinity are not matters of concern for the proposed works.
Utilities	An Infrastructure Management Plan has been prepared by Northrop (Appendix 20) which provides details of all utilities for the site, including electrical supply, communications, sewer infrastructure, water infrastructure and civil engineering requirements.

The above assessment finds that the site is suitable for development, having regard to subsurface conditions, contamination and utility servicing.

6.13 Public Interest

In accordance with Section 4.15(1)(e) of the EP&A Act, the proposed development is in the public interest as it:

- Will meet the current and future education demands for residents of Epping and the surrounding catchment area;
- Will provide high quality learning and teaching spaces with flexible layout arrangements and durable finishes ensuring the proposal operates as a long-life, high utility and low maintenance educational establishment;
- Has been designed in accordance with the visions, objectives and expectations of the community, the Department of Education and design experts;
- Incorporates appropriate design and urban design analysis to ensure the best design outcome is achieved for the site, students and surrounds in the interests of all stakeholders;

6 Environmental Assessment

- Is permissible in the land use zones and is generally consistent with relevant planning controls and legislation;
- Will retain a stand of significant Sydney Blue Gum trees on the site and provide replanting of 126 trees of which 66 trees are species of Blue Gum High Forest, which will result in a net increase of 61 trees on the site;
- Will minimise the potential for environmental amenity impacts through both the construction and operational phases;
- Achieves appropriate environmental performance outcomes in relation to acoustic amenity, traffic movements, stormwater drainage and waste management;
- Will be provided with adequate connection to necessary infrastructure and servicing to ensure the development operates smoothly at full capacity; and
- Is capable of meeting the deemed to satisfy provisions of the BCA and the spirit and intent of the DDA.

7 Environmental Risk Assessment

In accordance with the SEARs, this section identifies the potential environmental impacts associated with the development:

- A description of the existing environment, using sufficient baseline data and methodology to establish baseline conditions
- An assessment of the potential impacts of all stages of the development on all potentially impacted environments, sensitive receivers, stakeholders and future developments. The assessment must consider any relevant legislation, policies and guidelines.
- Consideration of the cumulative impacts due to all other developments in the vicinity (completed, underway or proposed).
- Identification of all proposed monitoring or required changes to existing monitoring programs.
- Measures to avoid, minimise and if necessary, offset predicted impacts, including detailed contingency plans for managing any significant risks to the environment and triggers for each action.
- Details of alternative measures considered.

Table 12 sets out the anticipated impacts, the level of respective impact in terms of assessed severity (low, moderate, high), identifies mitigation measures, and also considers what the residual impacts might be once these measures are applied.

The environmental risk assessment has considered both the Stage 1 development as well as the full development of the site as represented on the concept masterplan.

In undertaking the environmental risk assessment, environmental risks such as traffic and other potential impacts on the built and natural environments have been considered. In addition, a broader approach to risk has been undertaken to consider amenity impacts that the community might regard as a risk.

7 Environmental Risk Assessment

Table 12 Environmental Risk Assessment

Impact Theme	Impact Detail	Level of Impact	Mitigation Measures	Residual Risk
Traffic – Demolition and Construction				
Construction Duration and Construction Activities	Disturbance to residents and road network associated with time and construction activities.	Moderate	It is proposed to use a Design for Manufacture Assembly (DfMA) construction technique to deliver the new school. This will involve sections of buildings being transported to the site, typically using oversize vehicles, and lifted via crane into position, after which they are assembled. The DfMA is an efficient and sustainable design and construction process that combines the manufacture of building components off-site with on-site construction assembly. This approach will have significant benefits in terms of reduced construction times, when compared to traditional construction methodologies. The DfMA approach will also result in less construction related traffic which will have a reduced impact on the road network.	Low
Crane Placement	Impacts associated with a crane if it cannot be positioned within the site.	Moderate	Ideally, the crane will be positioned within the site however if this is not possible, its position will be determined following consultation with Council, Transport for NSW and the local community. Authorised traffic controllers will be present throughout the demolition and construction stages of the project to manage pedestrian movements around the site and traffic movements on local streets. Residents likely to be impacted as a result of crane placement will be consulted prior to crane placement, particularly if the crane placement will be located off site.	Moderate but of short duration

7 Environmental Risk Assessment

Table 12 Environmental Risk Assessment

Impact Theme	Impact Detail	Level of Impact	Mitigation Measures	Residual Risk
Truck Movements	Increase in traffic on the local road network during construction and demolition phases of the development. It is estimated that up to 20 heavy vehicle truck movements could occur on a typical day.	Moderate	If full/partial road closures are required, these are expected to be of short duration. Access to the site can be managed through the implementation of temporary, partial road closures. If this occurs, supervised traffic control will be required where two-way flow is restricted over any length of the roadway. Where possible any closures will be managed so that they occur outside of peak hour vehicle and pedestrian activity. A detailed construction traffic management plan (CTMP) will be prepared prior to the commencement of works. The CTMP will include Temporary Traffic Management Plans (TTMPs) and a Driver's Code of Conduct. Diversion of footpaths where required during road closures.	Moderate but of short duration
Road Closures	Although the DfMA methodology results in less construction associated traffic and a shorter construction timeframe (compared to traditional construction methods), due to the size of the vehicles used to transport the sections significant traffic management such as footpath and road closures will be required. Impacts on the local road network and footpath closures due to the size of vehicles used to transport building components.	High	The following mitigation measures will be addressed in the CTMP: • Truck loads will be covered during transportation off-site • Neighbouring properties will be notified of construction works and timing. Any comments would be recorded and taken into consideration when planning construction activities • All activities, including the delivery of materials, will not impede traffic flow along local roads. Where this is not possible, consultation with Council and the local community will occur before any restrictions/work zones are implemented. • Delivery of oversize loads will occur out of peak times. • Avoidance of idling trucks alongside sensitive receivers • Deliveries will be managed to ensure a consistent and minimal number of trucks arriving at the site at any one time.	Moderate but of short duration

7 Environmental Risk Assessment

Table 12 Environmental Risk Assessment

Impact Theme	Impact Detail	Level of Impact	Mitigation Measures	Residual Risk
Road Works	The development includes works external to the site in Chelmsford Avenue, Second Avenue and Grimes Lane, specifically the linking of Grimes Lane to Second Avenue. This will result in footpath closures on parts of these streets as well as disruption of vehicular access to residents using Grimes Lane.	High	Residents likely to be affected by the road works will be consulted prior to commencement of works. Where and when required, temporary diversions to footpaths to provide safe crossing facilities, clear sightlines for vehicles and pedestrians will be implement. Where this is not achievable in the same corridor, diversions will be proposed in the construction traffic management plan. These diversions will be determined following consultation with Council and the community. Authorised traffic controllers to be present throughout the demolition and construction stages of the project to manage pedestrian movements around the site and traffic movements on local streets.	Moderate but of short duration
Construction Traffic – Site Movements	Impact on local traffic and pedestrians	Moderate	The site planning has been designed to allow for construction vehicles to be accommodated on the site and to enter and leave the site in a forward direction. An authorised traffic controller will be required for the movements of vehicles that cross a footpath.	Low
Construction Worker Traffic and Parking	Increased demand for on street car parking.	Moderate	Construction workers will utilise on-street parking in the local area however they will be encouraged to carpool, further reducing the impact on the road network and local parking demands. Road network impacts by workers travelling to the site will be mitigated by the construction workers generally starting earlier and finishing earlier than the commuter peak periods and would likely not coincide with the road network peak periods. Site induction will address permitted access routes to and from the construction site for all vehicles, as well as standard environmental, work, health and safety (WHS), driver protocols and emergency procedures.	Low

7 Environmental Risk Assessment

Table 12 Environmental Risk Assessment

Impact Theme	Impact Detail	Level of Impact	Mitigation Measures	Residual Risk
Haulage Routes	All construction and transport vehicles will need to use that part of the Chelmsford Avenue west of Midson Road to access the site.	Moderate	Transport and construction vehicles will use major roads to minimise impacts on local streets however the only vehicular access to the site is via the local roads immediately surrounding the site. As all construction and transport vehicles will need to use that part of the Chelmsford Avenue west of Midson Road to access the site, it might be necessary to implement temporary parking restrictions and/or work zones along this street (as well as parts of Midson Road and Grimes Lane) in order to provide a clear path of travel for oversize vehicles and unloading. Prior to implementing these restrictions/work zones, the building contractor will liaise with Council and the local community.	Moderate but of short duration
Deliveries	Delivery vehicles accessing the site will need to use that part of the Chelmsford Avenue west of Midson Road or Dunlop Street and First Avenue.	High	As the vehicles delivering the DfMA building components to the site are expected to be oversize, delivery might need to occur outside peak periods. Deliveries will be programmed to avoid commuter peak periods to minimise risks to vehicles and congestion. In terms of driver conduct, the following measures will be implemented via the CTMP: • All truck movements will be scheduled • Vehicles will be required to enter and exit the site in a forward direction along the travel path shown on delivery maps • Drivers are to always give way to pedestrians.	Moderate but of short duration
Traffic - Operational				
Cumulative Impacts	The proposal for New Public School in Epping will be delivered concurrently with the alterations and additions to Epping West Public School (SSD-9250948). This will likely have overlapping operational benefits and construction impacts.	Moderate	A proportion of the students to the south of Carlingford Road (who currently attend or would have ordinarily attended Epping West PS) will go to the new Public School in Epping once it is constructed. This will result in a reduction in the catchment area and population of Epping West Public School. As the schools will have separate school	Low

7 Environmental Risk Assessment

Table 12 Environmental Risk Assessment

Impact Theme	Impact Detail	Level of Impact	Mitigation Measures	Residual Risk
			catchments, there will be no cumulative impacts as a result of traffic generation associated with the two schools. Due to multiple drop off/ pick up routing options, the network is anticipated to operate at satisfactory levels in all modelled periods with no intersection upgrades required.	
Traffic Management	Lack of connectivity of local streets surrounding the school. Potential for local streets to be used for pick up/drop off students	Moderate	Grimes Lane will be connected to Second Avenue to provide a one-way road for vehicles travelling in the westbound direction. A Kiss and Drop zone for 10 vehicles will be provided along the southern (school) side of the Grimes Lane extension. A separate drop off/pick up zone for 3 vehicles will be provided at the eastern end of the site. This will be available for use by students attending the special education learning unit. Service vehicles will be able to enter and leave the site in a forward direction. Access to the staff car parking area is separated from the main pedestrian access and the kiss and drop zone. This will avoid conflicts and congestion.	Low

7 Environmental Risk Assessment

Table 12 Environmental Risk Assessment

Impact Theme	Impact Detail	Level of Impact	Mitigation Measures	Residual Risk
Active transport options	Inadequate footpath and cycleway infrastructure on local roads surrounding the school site	Moderate	A green travel plan to encourage alternative means of accessing the school, other than by private vehicle, will be implemented. SINSW will provide funding to Council for the delivery of the following footpaths: - Chelmsford Avenue between First Avenue and Edenlee Street (north side) - First Avenue between Chelmsford Avenue and Dunlop Street (east side) Additional funding is being considered for the following routes: - Edenlee St, Chelmsford Ave to Dunlop St - Edenlee St, Mobbs Lane to Chelmsford Ave - Dunlop St, Ryde St to Park St - Dunlop St, Hermington St to Orchard St Options for a pedestrian connection to and through the Epping Park development to the south of the school site can be explored. This investment in new footpaths will assist in providing safe access for students and supporting sustainable travel choices. 60 bicycle parking space will be provided on site. An area for a bus stop will be provided on Chelmsford Avenue.	Low
Noise and Vibration – Demolition and Construction				
Noise Levels	Demolition and construction activities are expected to generate noise levels that could exceed established construction noise management levels, during standard hours. No noise sensitive receivers are considered to be within the Highly Noise Affected noise category	High	Planning and management of construction activities will be undertaken to minimise noise impact at surrounding receivers. A detailed Construction Noise and Vibration Management Plan (CNVMP) will be prepared by the building contractor	Moderate

7 Environmental Risk Assessment

Table 12 Environmental Risk Assessment

Impact Theme	Impact Detail	Level of Impact	Mitigation Measures	Residual Risk
			prior to commencement of works. The following will be addressed in the CNVMP: • Plant noise audit • Operator induction and instruction • Equipment selection • Site noise planning The following project-specific mitigation measures will be adopted where practicable as part of the CNVMP: • Selection of quietest feasible construction equipment; • Use of ripping where rock removal is required; • Localised treatment, such as barriers, shrouds and the like around fixed plant, such as pumps and generators; and • Provision of respite periods, particularly on Saturdays. Alternative ways to undertake works likely to exceed established construction noise management levels will be explored. If no quieter work method is feasible and reasonable, and the works proceed, the contractor will consult with impacted residents in relation to the nature of the works, the duration and noise level of the works, and any respite periods that will be provided.	
Hours of work	Some works outside of standard hours of work may be required.	High	Construction hours are to be confirmed; however, it has been assumed that construction will be undertaken during standard hours as follows: • Monday to Friday - 7.00am to 6.00pm • Saturdays - 8.00am to 1.00pm • Sundays and Public Holidays - No work Justification will be required if any noise generating works outside of standard hours of work are proposed. In these events, the contractors will undertake all feasible and reasonable work practices to meet the relevant noise levels.	Moderate

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Table 12 Environmental Risk Assessment

Impact Theme	Impact Detail	Level of Impact	Mitigation Measures	Residual Risk
Traffic Noise	During the demolition and construction phases of the development, up to 20 heavy vehicle movements per day on local roads is anticipated.	Moderate	The following measures will be adopted during the construction phase to ensure traffic movements have minimal impact on surrounding land uses and the community in general: • Neighbouring properties to be kept informed of construction works and timing. • Avoidance of idling trucks alongside sensitive receivers. • Deliveries to be planned to minimise number of trucks arriving at the site at any one time. Vehicles are to enter and exit the site in a forward direction.	Low
Vibration	Vibration impacts on nearby and adjoining residents and buildings	Low	Given the proposed construction methodology and the distance between works and the closest surrounding residential and associated structures, ground vibration is not considered to be a potential issue. If impacts on adjoining buildings are anticipated, dilapidation assessments will be undertaken prior to commencement of works.	Low
Noise and Vibration - Operational				
Mechanical Plant	Impact of noise from mechanical plant on adjoining residents.	Moderate	Locate mechanical plant away from property boundaries. Where this is not possible or practical, ensure plant is appropriately screened (acoustically and visually) to ensure it meets relevant standards in terms of noise output.	Low - Moderate
Teaching and Indoor Activities	Impact of noise from teaching and	Low	Operable windows are oriented to the north and south where adjoining residents are located furthest from the buildings.	Low
Announcements and Bells	Impacts from use of the PA system for announcements and school bell	Moderate	• Orient speakers so that noise is directed away from residences. • Adjust the volume of the system so that announcements are not excessive. • Set the bell operating system so that it only occurs on school days.	Low

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Table 12 Environmental Risk Assessment

Impact Theme	Impact Detail	Level of Impact	Mitigation Measures	Residual Risk
Use of Hall	Impacts associated with the hall for assemblies, concerts and other functions	Moderate	- The hall PA system is to be designed to ensure speakers are oriented to direct sound inwards towards the audience. - The L_Amax noise level from the PA system operation should not exceed the ambient noise levels by more than 5dBA at the nearest residential receiver. - Management of noise be included as part of the operational management plan.	Moderate
Outdoor activities	Impacts of noise generated by students engaged in outdoor play and recreational activities	Moderate	- The areas of likely maximum noise generating activities will be the multi purpose court, the playground area between the buildings and the COLA attached to the hall building. The development has been designed so that the buildings surrounding these areas will provide a level of acoustic screening. - The area at the western end of the site has not been designed to facilitate active play such as ball games. - Use of the outdoor spaces by all students is limited to recess and lunchtimes. At other times the areas might be used by classes and year groups (i.e. smaller student numbers) on an ad hoc basis. - An operational management plan will be developed. This will include measures to be implemented to address noise generated as a result of activities associated with the school, including use of the outdoor areas.	Moderate but generally of short duration
Deliveries and servicing	Impacts of servicing of the school including waste collection	Low	- Deliveries are to be arranged so that they occur during school hours. - Waste servicing will be arranged to occur during school hours if possible but outside of drop-off/pick-up times to minimise conflicts with students pick up / drop off.	
Built Form – Site Planning and Construction				
Staging of construction	Impacts on operation of the school during construction of Stages 2 and 3	Moderate	The development has been designed so that construction of Stages 2 and 3 can occur without impacting the operation of the school. The DfMA is an efficient and sustainable design and construction process that combines the manufacture of	Low

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Table 12 Environmental Risk Assessment

Impact Theme	Impact Detail	Level of Impact	Mitigation Measures	Residual Risk
			building components off-site with on-site construction assembly which will reduce construction impacts to the school in comparison to conventional construction methods.	
Overshadowing and Privacy	Potential overshadowing and privacy impacts on existing development to the east and south	Moderate	Stages 2 and 3 have been positioned to minimise overshadowing impacts on the adjoining development to the south. There will be no overshadowing of residential development to the east of the site between 9am and 3pm in mid-winter.	Low
Built form	Impacts of three storey buildings in the area	Moderate	The development has been designed to respond to its surrounding context and provides a transition in scale have regard to adjoining development.	Low
Impacts on trees	Impacts on vegetation, including blue gum high forest trees	High	The buildings have been sited to avoid impacts on significant vegetation.	Low
Built Form - Operational				
Sustainability	Impacts of the development on environmental sustainability	Moderate	The school has been designed with regard to the principles of environmentally sustainable development. The buildings' location, orientation, sun shading and passive thermal design elements have informed the design and positioning of the buildings on the site.	Low
Building Maintenance	Potential costs associated with building maintenance and visual impacts of buildings in poor repair	Moderate	Materials to be used in the buildings are durable and require minimal maintenance. Long lasting, low maintenance materials will ensure that its use stands up to the impacts associated with school buildings.	Low
Use of Space	Impacts associated with alterations to ensure buildings and spaces are fit for purpose	Moderate	The framed construction allows the internal walls to be reconfigured in the future to adapt to future learning requirements. In this way the development has been designed to be flexible and adaptable.	Low
Historical Archaeology – Construction				
Disturbance of relics	Notwithstanding that no heritage items were found on the site, there is the potential for archaeological heritage items to be unearthed during the demolition and construction phases of work	Low	The site is not identified as an item of local heritage significance under Paramatta LEP, nor is it listed on the Department of Education's Section 170 Heritage and Conservation Register.	

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Table 12 Environmental Risk Assessment

Impact Theme	Impact Detail	Level of Impact	Mitigation Measures	Residual Risk
			- A revised assessment of heritage impacts should be prepared for the detailed design and construction documentation prior to the commencement of works. - If any works are likely to impact on areas of locally significant historical archaeological, monitoring, testing or salvage investigations prior to the commencement of works will be required.	
Impacts on significant trees	Potential for works to impacts on trees identified as having some heritage significance	Moderate	- Construction activities and enabling works have been planned to minimise the removal of significant trees and cultural plantings. - A tree removal/ retention plan has been prepared. - Remnant vegetation and trees have been retained where possible. The landscape plans identify replacement planting of species associated with the BGHF community	Low
Historical Archaeology – Operational				
Disturbance of relics	Potential for unexpected finds	Low	Should any items of archaeological heritage be unearthed following completion of works, relevant statutory authorities will be contacted.	Low

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Table 12 Environmental Risk Assessment

Impact Theme	Impact Detail	Level of Impact	Mitigation Measures	Residual Risk
Aboriginal Heritage				
Disturbance of Aboriginal artefacts	Notwithstanding that no artefacts were recovered from the test trenches, there is the potential for Aboriginal archaeological heritage items to be unearthed during the demolition and construction phases of work	Low – Moderate	- Consultation with the Aboriginal community in accordance with DPIE's Aboriginal cultural heritage consultation requirements for proponents 2010, will continue. - Should any subsurface Aboriginal objects be found during works any testing and salvage excavation will be undertaken in association with the Registered Aboriginal Parties. - An Interpretation Plan detailing the Aboriginal history of the area and the site and the results of the archaeological investigation should be developed and implemented. In the unlikely event that Aboriginal burials or skeletal material are uncovered, work will be required to cease, the Police and a qualified archaeologist will be contacted. Heritage NSW will be consulted prior to works recommencing.	Low
Impacts on trees	Potential for works to impacts on Blue Gum High Forest which is a critically endangered ecological community. Trampling of threatened flora species	High	- The development has been designed to avoid impacts on significant stands of vegetation. - The tree protection measures detailed in the arborist report will be required to be implemented prior to commencement of works. - Vehicles and machinery are to be cleaned of soil and debris before entering/leaving the site to prevent the spread of weeds and fungal pathogens. - Areas of vegetation to be retained and protected are to be fenced in accordance with the recommendations of the arborist report. - The landscaping has been designed to define areas for circulation, access and use.	Low
Water Quality	Sedimentation and contaminated and/or nutrient rich run-off could impact on retained vegetation on site and vegetation on the adjoining reserve	High	Erosion and sediment control measures are to be installed prior to commencement of works and maintained throughout the demolition and construction phases and until the disturbed land is stabilised.	Low

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Table 12 Environmental Risk Assessment

Impact Theme	Impact Detail	Level of Impact	Mitigation Measures	Residual Risk
Rubbish	Littering of the school grounds	Moderate	All rubbish is to be placed in bins	Low
Water Quality and Reuse - Construction				
Construction	Sedimentation and contaminated and/or nutrient rich run-off could impact on water courses off site.	Moderate	Erosion and sediment control measures are to be installed prior to commencement of works and maintained throughout the demolition and construction phases and until the disturbed land is stabilised. The existing dam on site will function as temporary sediment control basin during the construction phase.	Low
Water Quality and Reuse - Operation				
Stormwater Management	Control of stormwater drainage beyond the site. The quality of water leaving the site.	Moderate	- An underground OSD tank with a capacity of 360m³ will be installed. - An underground rainwater tank with an overflow direct to treatment chamber with an OSD tank will be provided on site. Opportunities for rainwater reuse will be investigated The water quality strategy for the site includes a rainwater tank, OceanGuard (Enviropod 200) pit baskets, buffer, swale, Bioretention and StormFilter cartridges.	Low

8 Evaluation and Conclusions

The proposed new Public School in Epping has been assessed in accordance with the SEARs issued by DPIE and consultation carried out with the public and relevant public agencies.

The proposal is consistent with the objects of the EP&A Act, including ecologically sustainable development, and is consistent with the State's strategic planning objectives for the site as set out in the Greater Sydney Regional Plan and the North District Plan as it will create jobs and will provide permanent, modern educational facilities to meet the future educational needs of the community.

The proposed works have been assessed as providing significant public benefit to the immediate local and surrounding district through the provision of new enrolment capacity for primary school aged students within new educational facilities.

The project team has carried out consultation with a wide range of stakeholders, including State government departments, local government, community and experts in the design of schools. The advice received throughout the consultation process has informed the consideration of ecological significance, overland flow, built form impacts and traffic management, and has been incorporated into the current proposal where possible, reflecting a commitment to provide a quality and objective-driven outcome.

The public interest is served by the proposed development through the provision of:

- New supply of classrooms and facilities at the New Public School in Epping within new modern and permanent education facilities to cater for increased local enrolment pressures and projected student growth within the Epping locality;
- Works with a significant capital investment value that will provide new and improved educational infrastructure to support the local community;
- 96 FTE new construction jobs and to 38 full-time equivalent operational jobs in Stage 1.

Environmental impacts of the proposal have been assessed and are capable of being mitigated to achieve acceptable levels of impact subject to a number of measures being adopted, as set out in **Table 12** and in the assessment reports supporting this EIS. Mitigation measures proposed under this project are summarised in **Table 12** and **Appendix 3**.

Accordingly, it is recommended that the Minister for Planning and Public Spaces approves the proposed SSDA.