NSW Department of Education

Review of Environmental Factors

New High School for Leppington and Denham Court

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NSW GOVERNMENT

Acknowledgement of Country

The NSW Department of Education acknowledges the traditional custodians of the land on which a New High School for Leppington and Denham Court is proposed.

We pay our respects to their Elders past and present and celebrate the diversity of Aboriginal people and their ongoing cultures and connections to the lands and waters of Australia.

The NSW Department of Education is committed to honouring Aboriginal peoples' cultural and spiritual connections to the land, waters and seas and their rich contribution to society.

The NSW Department of Education recognises that by acknowledging our past, we are laying the groundwork for a future that embraces all Australians; a future based on mutual respect and shared responsibility.

Declaration

This Review of Environmental Factors (REF) has been prepared by Gyde Consulting on behalf of the NSW Department of Education (department) and assesses the potential environmental impacts which could arise from a new high school for Leppington and Denham Court at 128-134 Rickard Road, Leppington.

This REF has been prepared in accordance with the *Guidelines for Division 5.1 Assessments* and any relevant addendum (the Guidelines), and the relevant provisions of the *Environmental Planning and Assessment Act 1979* (EP&A Act), the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation) and *State Environmental Planning Policy (Transport and Infrastructure) 2021* (TI SEPP).

This REF provides a true and fair review of the activity in relation to its likely impact on the environment and the information it contains is neither false nor misleading. It addresses to the fullest extent possible all the factors listed in Section 3 of the Guidelines, the EP&A Regulation and the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act).

In preparing the REF I have declared any possible conflict of interests (real, potential or perceived) and I do not consider I have any personal interests that would affect my professional judgement.

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1	24/01/25	Draft	Gyde Consulting	Georgia Sedgmen, Director
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This REF has been prepared by Gyde Consulting with input from a number of other expert consultants. To the best of our knowledge, the information contained herein is neither false nor misleading and the contents are based on information and facts that were correct at the time of writing. Gyde Consulting accepts no responsibility or liability for any errors, omissions or resultant consequences including any loss or damage arising from reliance in information in this publication.

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Abbreviations

Abbreviation	Description
ACHAR	Aboriginal Cultural Heritage Assessment Report
ACM	Asbestos containing materials
AECG	Aboriginal Educational Consultative Group
AEI	Areas of Environmental Interest
AEP	Annual exceedance probability
AHD	Australian Height Datum
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
AIA	Arboricultural Impact Assessment
ALU	Additional learning unit
ANEC	Australian Noise Exposure Concept
ASS	Acid sulfate soils
BAM	Biodiversity Assessment Method
BaP	benzo(a)pyrene
BC Act	*Biodiversity Conservation Act 2016*
BC Regulation	*Biodiversity Conservation Regulation 2017*
BCA	Building Code of Australia
BDAR	Biodiversity Development Assessment Report
BPL	Bushfire prone land
Burra Charter	*The Australian International Council on Monuments and Sites, Charter for Places of Cultural Significance*

Abbreviation	Description
CA	Certifying Authority
CBD	Central Business District
CDWMP	Construction and Demolition Waste Management Plan
CEEC	Critically Endangered Environmental Community
CEMP	Construction Environmental Management Plan
CM Act	*Coastal Management Act 2016*
CNVMP	Construction noise and vibration management plan
Council	Camden Council
CPTED	Crime Prevention through Environmental Design
CSP	Community Strategic Plan
CWC	Connecting with Country
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DCP	Development Control Plan
DDA	*Disability Discrimination Act 1992*
Department	NSW Department of Education
Design Guide	*Design Guide for Schools* published by the Government Architect in May 2018
DPC	Department of Premier and Cabinet
DPE	Department of Planning and Environment
DPHI	Department of Planning, Housing and Infrastructure
DSI	Detailed Site Investigation
EFSG	Education Facilities Standards and Guidelines
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2021*
EPA	Environment Protection Authority
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EPI	Environmental Planning Instrument
EPL	Environment Protection License
ESD	Ecologically Sustainable Development
FERP	Flood Emergency Response Plan
FM Act	*Fisheries Management Act 1994*
FTE	Full time equivalent
GANSW	Government Architect NSW
GBCA	Green Building Council of Australia
Growth Centres SEPP	*State Environmental Planning Policy (Sydney Region Growth Centres) 2006* (repealed)
Gyde	Gyde Consulting

Abbreviation	Description
Ha	Hectares
HV	High voltage
ICNG	Interim Construction Noise Guideline
ICT	Information and Communication Technology
ILP	Indicative Layout Plan
LED	Light-emitting diode
LEP	Local Environmental Plan
LGA	Local Government Area
LPS	Leppington Public School
LRA	Land reserved for acquisition
LSPS	Local Strategic Planning Statement
MNES	Matters of National Environmental Significance
MUSIC	Model for Urban Stormwater Improvement Conceptualisation
NABERS	National Australian Built Environment Rating System
NATA	National Association of Testing Authorities
NBN	National Broadband Network
NCC	National Construction Code
NML	Noise management levels
NOR	Notice of Requirements
NorBE	Neutral or Beneficial Effect on Water Quality Assessment Guideline (2022)
NPI	Noise Policy for Industry
NPW Act	*National Parks and Wildlife Act 1974*
NPW Regulation	*National Parks and Wildlife Regulation 2009*
NPWS	National Parks and Wildlife Service (part of EES)
NSW RFS	NSW Rural Fire Service
NT Act (Cth)	*Commonwealth Native Title Act 1993*
NVIAR	Noise and Vibration Impact Assessment
OEH	(Former) Office of Environment and Heritage
OLS	Obstacle Limitation Surface
OSD	On-site detention
OWMP	Operational Waste Management Plan
PAD	Potential archaeological deposits
PANL	Project amenity noise levels
PBP	Planning for Bushfire Protection 2019
PCEMP	Preliminary Construction Environmental Management Plan
PHA	Polycyclic Aromatic Hydrocarbons
PINL	Project intrusiveness noise levels
Planning	*State Environmental Planning Policy (Planning Systems) 2021*

Abbreviation	Description
Systems SEPP	
PMF	Probable maximum flood
PNTL	Project noise trigger levels
POEO Act	*Protection of the Environment Operations Act 1997*
POEO Act	*Protection of the Environment Operations Act 1997*
PP	Planning Proposal
Precincts SEPP	State *Environmental Planning Policy (Precincts – Western Parkland City) 2021*
Proponent	NSW Department of Education
PTS	Permanent teaching space
RAP	Remedial Action Plan
RAPS	Registered Aboriginal parties
REF	Review of Environmental Factors
Region Plan	The Metropolis of Three Cities – The Greater Sydney Region Plan
Resilience and Hazards SEPP	*State Environmental Planning Policy (Resilience and Hazards) 2021*
RF Act	*Rural Fires Act 1997*
RFS	Rural Fire Services
RL	Relative Level
Roads Act	*Roads Act 1993*
RPL	Rating background level
SAQP	Sampling, analysis and quality plan
SARP	State-assessed Rezoning Proposal
SCPP DoE	*Stakeholder and community participation plan,* published by the NSW Department of Education October 2024
SCPP DPHI	*Stakeholder and community participation for new health services facilities and schools* published by the Department of Planning, Housing and Infrastructure October 2024
SDRP	School Design Review Panel
SEPP	State Environmental Planning Policy
SINSW	School Infrastructure NSW
SIS	Species Impact Statement
SMF	Synthetic Mineral Fibres
SOHI	Statement of Heritage Impact
SSD	State Significant Development
STS	Support teaching space
Sustainable Buildings SEPP	*State Environmental Planning Policy (Sustainable Buildings) 2022*
SWGA	South West Growth Area
SWMS	Safe working method statements
TfNSW	Transport for NSW

Abbreviation	Description
TI SEPP	*State Environmental Planning Policy (Transport and Infrastructure) 2021*
TIA	Transport Impact Assessment
TPZ	Tree protection zone
TRH	Total recoverable hydrocarbons
TSC Act	*Threatened Species Conservation Act 1995*
TZP	Travel zone projections
UEF	Unexpected Finds

Executive Summary

The Activity

The activity relates to the construction and operation of a new high school in Leppington and Denham Court. The site is located within the South West Growth Area (SWGA) of NSW, which is and will be experiencing significant population growth. The existing high schools in the SWGA, such as John Edmondson High School and Casula High School, do not have sufficient capacity to accommodate the forecasted demand for secondary education. The new high school would provide access to secondary education for the Leppington and Denham Court catchment areas. The new high school is located in the Leppington Town Centre Precinct and would be integrated with the existing Leppington Public School (LPS), adjoining the site to the north, to form an educational campus providing educational opportunities for students within the SWGA.

The proposed activity is located at 128-134 Rickard Road, Leppington (the site). The activity will involve constructing a new high school to accommodate up to 1,000 students across three new buildings that will comprise 48 permanent teaching spaces (PTS), 3 support teaching spaces (STS), 9 specialist labs/workshops/kitchens and a hall. Buildings A, B and C will be clustered along the southern site boundary and the hall (Building D) will be located in south-east corner of the site. The activity also includes the construction of a sports field in the centre of the site and three multipurpose courts along the northern site boundary.

The location of the new buildings responds to both the current development pattern and future vision of the Leppington Town Centre, including appropriate setback along Rickard Road to allow for future road widening and along the southern and eastern site boundaries to enable the future construction of roads by Camden Council (Council). The design of the new high school also acknowledges and integrates with the locally listed heritage buildings of the adjoining public school.

Vehicular access to the school will be provided by an internal access way, located along the southern boundary with a driveway access provided from Rickard Road. Car parking access, kiss and drop, waste and all delivery vehicles will utilise this internal access way. While the school will provide a capacity of 1,000 students, it is not anticipated that it will reach that capacity for several years.

The site is relatively unconstrained with no flooding impacts and no designation as Bushfire Prone Land (BPL). The site is also subject to biodiversity certification and is not identified as having any biodiversity values.

Planning Pathway

The activity involves the development of a new government school by the Department of Education (the department) (a public authority) on land that does not contain an existing or approved school and is in a prescribed zone. Accordingly, pursuant to Sections 3.37A of the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (TI SEPP), the proposed works are classified as development which may be carried out without consent.

Therefore, the proposal is considered an ‘activity’ for the purposes of Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and is subject to an environmental assessment. For the purposes of this activity, the department is the proponent and the determining authority and the required environmental assessment is in the form of a Review of Environmental Factors (REF).

The REF has been prepared in the accordance with the *Guidelines for Division 5.1 Assessments* (DPE, June 2022) and the *Guidelines for Division 5.1 assessments - consideration of environmental factors for hospital and school activities Addendum* (DPHI, October 2024).

Consultation

Consultation will be undertaken in accordance with statutory requirements under the TI SEPP and having regard to the *Stakeholder and community participation plan for new health services facilities and schools* (Department of Planning Housing and Infrastructure (DPHI), October 2024) (SCPP DPHI) and the Stakeholder and *Community participation plan For new schools and major school upgrade projects undertaken under Division 5.1 of the EP&A Act 1979* (Department of Education, October 2024) (SCPP DoE).

Comments received will be carefully considered and responded to.

In addition, non-statutory consultation has been undertaken with a range of community and government stakeholders throughout the design process, including Government Architect NSW (GANSW), Transport for NSW (TfNSW) and Council.

Environmental Impacts

A number of technical assessments were engaged to assess potential environmental impacts of the activity. The technical assessment recommended design solutions which guided the design of the school. Where design solutions could not be reasonably or feasibly implemented, mitigation measures were outlined which are to be implemented to ensure the activity would result in minimal environmental impacts. The technical assessments are appended to this REF and summarised in Chapter 6, and a consolidated list of mitigation measures are in **Appendix 1**.

The assessments determined the key impacts will be related to operational traffic, construction and operational noise and contamination.

The traffic assessment determined that even without the introduction of traffic associated with the high school, intersection performance in the locality begins to fail, due to the background growth anticipated with the development of Leppington Town Centre.

Ongoing engagement with Camden Council has confirmed that Council has undertaken design to upgrade Rickard Road to a four lane road, subject to funding. The Leppington Town Centre Precinct is expected to experience a significant increase in population density as it is located in a growth centre and an even greater increase as a result of the Leppington Town Centre Planning Proposal (PP) that was prepared and exhibited in December 2023, which will see the introduction of further high density residential land to the town centre. As part of the PP, the expansion of the existing road network has been identified as essential to supporting growth, including the widening of Rickard Road to allow duplication from two lanes to four lanes. The PP anticipates a future a Local Infrastructure Contribution Plan that will determine future funding for the facilitating infrastructure. Given the importance of this planned precinct, the PP was identified as a State assessed rezoning proposal in December 2024 and as such, Council is anticipating finalisation of the PP as a priority to help deliver essential infrastructure.

The traffic assessment has considered intersection performance with and without the school as well as with the anticipated student population in 2027 when the school opens, as well as the maximum capacity when the school reaches 1,000 students. As the timing of the Rickard Road duplication is unknown and the timing for delivery of the future road network, including the southern and eastern roads at the high school site are also unknown, the traffic modelling has

confirmed appropriate intersection performance is achieved in 2027 when the school commences operation. In addition, the kiss and drop has been developed with adequate length to accommodate the students at opening and at maximum capacity. The internal southern access way has been assessed as adequate to help alleviate congestion and queueing along Rickard Road by directing school traffic into the site during peak periods at pick up and drop off times.

The school travel plan has been prepared and will be updated annually to reflect changes to Leppington Town Centre, as the area grows to minimise future impact. A school travel plan is an action plan that outlines how a school intends to make travel to and from the site safer and more sustainable for students, staff and visitors. The plan includes strategies and measures to promote active travel and support positive environmental outcomes for the site and surrounds, reducing the reliance on private car usage. The plan is required to be updated annually to consider any feedback from the community, Council or student population and ensure the plan considers any changes to the precinct and includes current management methods.

The contamination assessment determined there are five areas of potential contamination concern on the site associated with existing buildings, fill of unknown origin, pesticides and herbicides, wastewater ponds and a septic tank. Additionally, asbestos containing material (ACM) was discovered in a number of areas and exceedances of ecological screening and investigation levels. The assessment concluded the site can be easily remediated to make it suitable for the proposed land use prior to the commencement of operation and a remediation action plan (RAP) has been prepared.

Justification and Conclusion

Based on the environmental assessment undertaken as part of this REF, it has been determined that the activity will not result in any significant or long-term detrimental impacts. The potential impacts identified can be reasonably mitigated and where necessary managed through the adoption of suitable site practices and adherence to accepted industry standards.

The environmental impacts of the activity are not likely to be significant. Therefore, it is not necessary for an Environmental Impact Statement (EIS) to be prepared and approval to be sought for the activity from the Minister for Planning and Public Spaces under Part 5.1 of the EP&A Act. The proposed development will not have any effect on Matters of National Environmental Significance (MNES) and approval of the Activity under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is not required.

On this basis, it is recommended that the department determine the proposed activity in accordance with Part 5 of the EP&A Act and subject to the adoption and implementation of mitigation measures identified within this report.

1. Introduction

The department proposes to construct a new high school for Leppington and Denham Court (the activity) located at 128-134 Rickard Road, Leppington (the site).

This REF has been prepared by Gyde Consulting (Gyde) on behalf of the department to determine the environmental impacts of the proposed new high school at the site. For the purposes of these works, the department is the proponent and the determining authority under Division 5.1 of the EP&A Act.

The purpose of this REF is to describe the activity, examine and take into account all matters affecting or likely to affect the environment and to detail mitigation measures to be implemented to manage impacts.

The potential environmental impacts have been assessed in the accordance with the *Guidelines for Division 5.1 Assessments* (DPE, June 2022), Guidelines for Division 5.1 assessments - consideration of environmental factors for hospital and school activities Addendum (DPHI, October 2024), EP&A Act, the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation), and the EPBC Act.

The assessment contained within the REF has been prepared having regard to:

- Whether the proposed activity is likely to have a significant impact on the environment and therefore the necessity for an EIS to be prepared and approval to be sought from the Minister for Planning and Public Spaces under Division 5.2 of the EP&A Act; and
- The potential for the activity to significantly impact MNES on Commonwealth land and the need to make a referral to the Australian Government Department of Environment and Energy for a decision by the Commonwealth Minister for the Environment on whether assessment and approval is required under the EPBC Act.

The REF addresses the requirements of Section 5.5 of the EP&A Act, which requires the department to examine, and consider to the fullest extent possible, all matters affecting, or likely to affect, the environment by reason of the proposed activity.

2. Proposed Activity

2.1 The Site

The site is known as 128-134 Rickard Road, Leppington, NSW, 2179 and is legally described as Lots A and B in Deposited Plan 411211. The site is located on the eastern side of Rickard Road and is approximately 4.1 hectares in area. The site boundaries are as follows:

- 152.4m along the western boundary (Rickard Road)
- 213.3m along the northern boundary
- 197.2m along the eastern boundary
- 237.1m along the southern boundary.

Figure 1 below shows the site boundary distances, adapted from the Survey Plan at **Appendix 2.**

Figure 1: Site boundaries (Source: Gyde Consulting, adapted from Survey Plan at Appendix 2 and NSW Planning Portal Spatial Viewer)

The majority of the site is currently used for agricultural purposes with the southern portion containing several greenhouses and a pond in the south eastern corner. The northern portion of the site is currently used for residential purposes with a single storey brick dwelling with a pitched roof.

The site is sparsely vegetated and comprises mostly remnant species trees and few exotic and introduced native trees. The trees with high ecological significance are generally located within the southern lot. However, the site, is included in an Order conferring biodiversity certification under the former *State Environmental Planning Policy (Sydney Region Growth Centres) 2006* (Growth Centres SEPP) from the Minister for the Environment pursuant to Section 126G of the *Threatened Species Conservation Act* (TSC Act).

The site is relatively flat with the highest point being in the centre of the northern portion of the site, at a relative level (RL) of 102.27m. To the northern boundary, the site falls by 3.65m to an RL of 98.62m. To the south-eastern corner, the site falls 8.55m to its lowest point (RL 93.72m). To the western boundary, along Rickard Road, the site falls gently to an RL of 91.85m in the south-western corner. A copy of the site survey can be founded at **Appendix 2**.

The department are the landowners of the site. Pursuant to Appendix 5 Camden Growth Centre under the State *Environmental Planning Policy (Precincts – Western Parkland City) 202*1 (Precincts SEPP), the site is zoned B7 Business Park and SP2 Infrastructure (refer to Section 4 of this REF for further information).

The site has a single frontage to Rickard Road to the west. Vehicular access is currently available from Rickard Road, via formal and informal vehicular crossovers.

A site plan is provided at **Figure 2** below.

Figure 2: Aerial image of the site (Source: Nearmap, taken 23 November 2024)

Figure 3 to **Figure 8** below show the existing site and surrounds.

Figure 3: Image of 134 Rickard Road looking east (Source: Google Streetview, May 2022)

Figure 4: Image of 128 Rickard Road looking east (Source: Google Streetview, May 2022)

Figure 5: Image of subject site, looking north-east (Source: Google Streetview, May 2022)

Figure 6: Image of Rickard Road, looking south towards subject site (Source, TSA Riley, January 2025)

Figure 7: Image of subject site, looking north-east (Source, TSA Riley, January 2025)

Figure 8: Image of Rickard Road and pedestrian footpath, looking north (Source: TSA Riley, January 2025)

2.2 Site Locality

The site is located approximately 26km from Parramatta Central Business District (CBD) and 40km from Sydney CBD (as the crow flies). The site is located in the Camden Local Government Area (LGA) is approximately 700m south of Leppington Train Station. A map showing the site location in its regional setting is provided in **Figure 9** below.

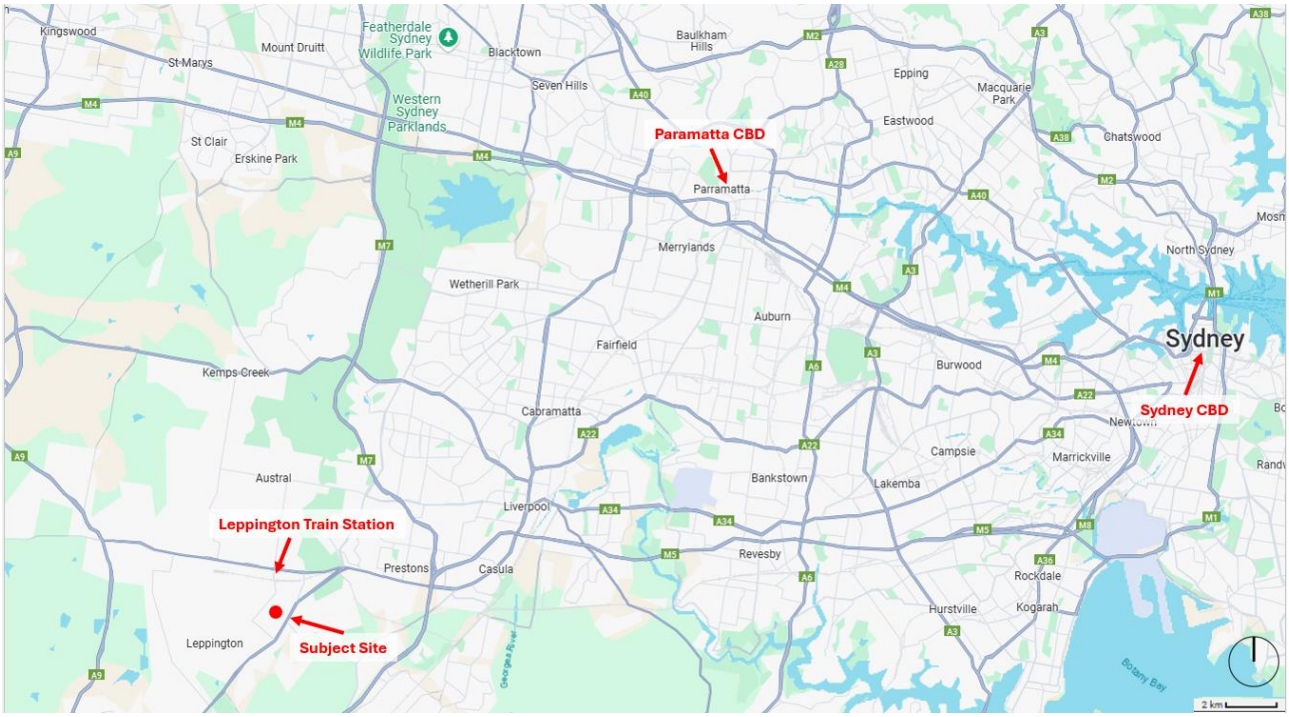


Figure 9: Locality plan showing the regional context of the site (Source: Gyde Consulting, adapted from Google Maps)

2.3 Surrounding Context

The site is located within the Leppington Major Centre, in the Austral and Leppington North Precinct, which is part of the South West Priority Land Release Area.

The existing surrounding locality comprises a mix of uses. Immediately to the north of the site is Leppington Public School. To the east and south of the site are rural residential dwellings consisting of dwelling houses, ranging one to two storeys. Land to the west of the site comprises large lot residential properties and some agricultural sheds for poultry purposes.

The future character of Leppington Major Centre as detailed in the Leppington Town Centre Planning Proposal (PP) is proposed to be a commercial and industrial precinct with pockets of medium-high residential development east of the site. The current Indicative Layout Plan (ILP), contained within the Growth Centres Development Control Plan (DCP), identifies the site forming part of the future commercial/business park (refer to **Figure 10** below).

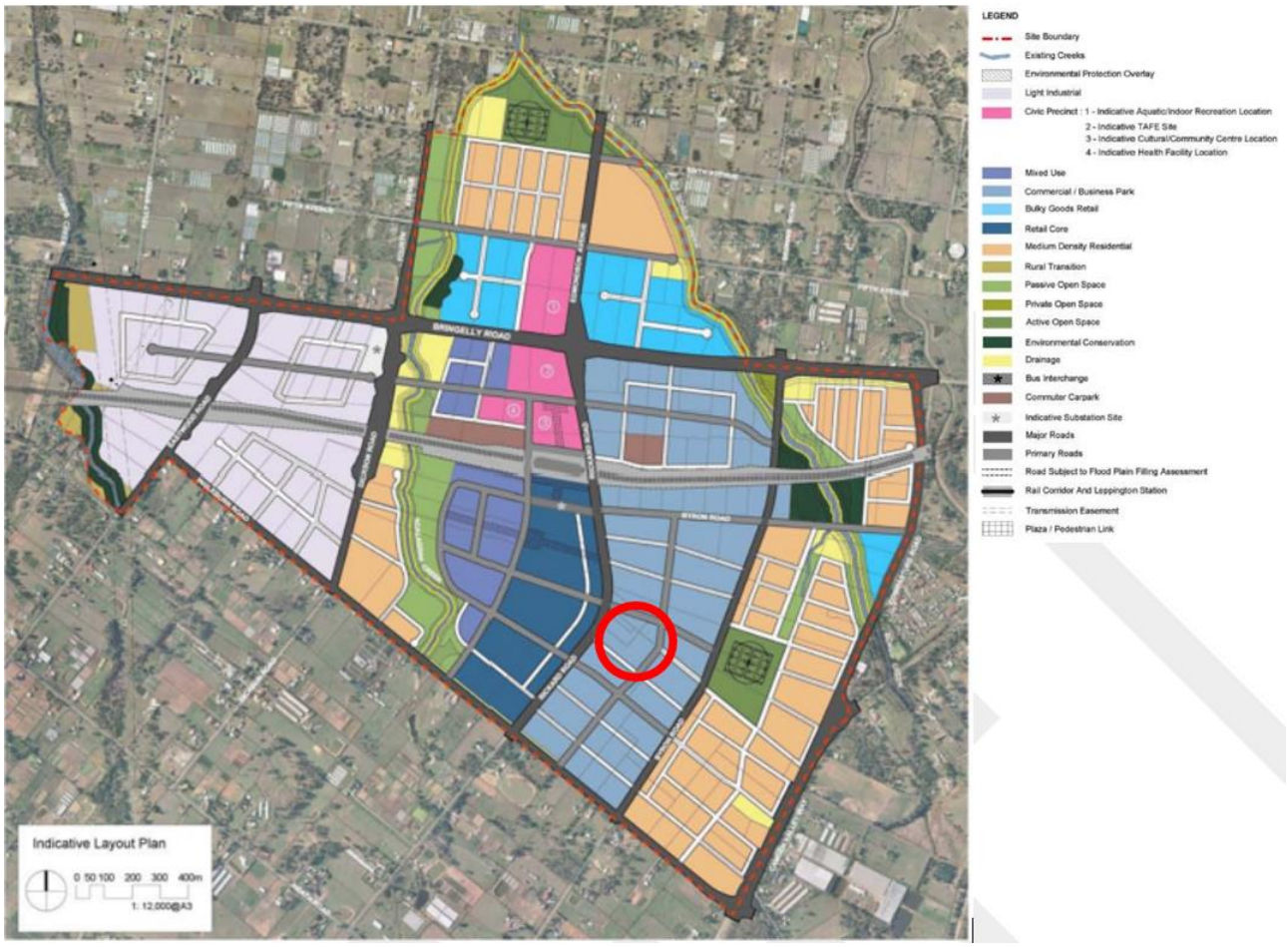


Figure 10: Leppington Town Centre Indicative Layout Plan in Schedule 2 of the Growth Centres DCP (Source: NSW DPHI)

2.3.1 Draft Leppington Town Centre Rezoning Proposal

Camden and Liverpool Councils, have prepared and publicly exhibited a PP for the Leppington Town Centre (PP-2023-284), which includes the site.

In December 2024, the PP was identified as a State-assessed Rezoning Proposal (SARP) in line with the DPHI State Significant Rezoning Policy and the PP is now being assessed and will be finalised by DPHI rather than Camden and Liverpool Councils.

The PP proposes alternative land uses and urban design response to the redevelopment of the Leppington Town Centre which will transform the existing area to a more integrated precinct that offers increased opportunities for commercial, industrial and residential development. The PP also acknowledges LPS and proposes that the site be zoned SP2 Infrastructure for the purposes of an education establishment so that both schools can form an educational precinct. The PP also proposes parklands and new roads surrounding the site. An excerpt of the draft ILP is provided below in **Figure 11.** The site is identified by red hatchings.

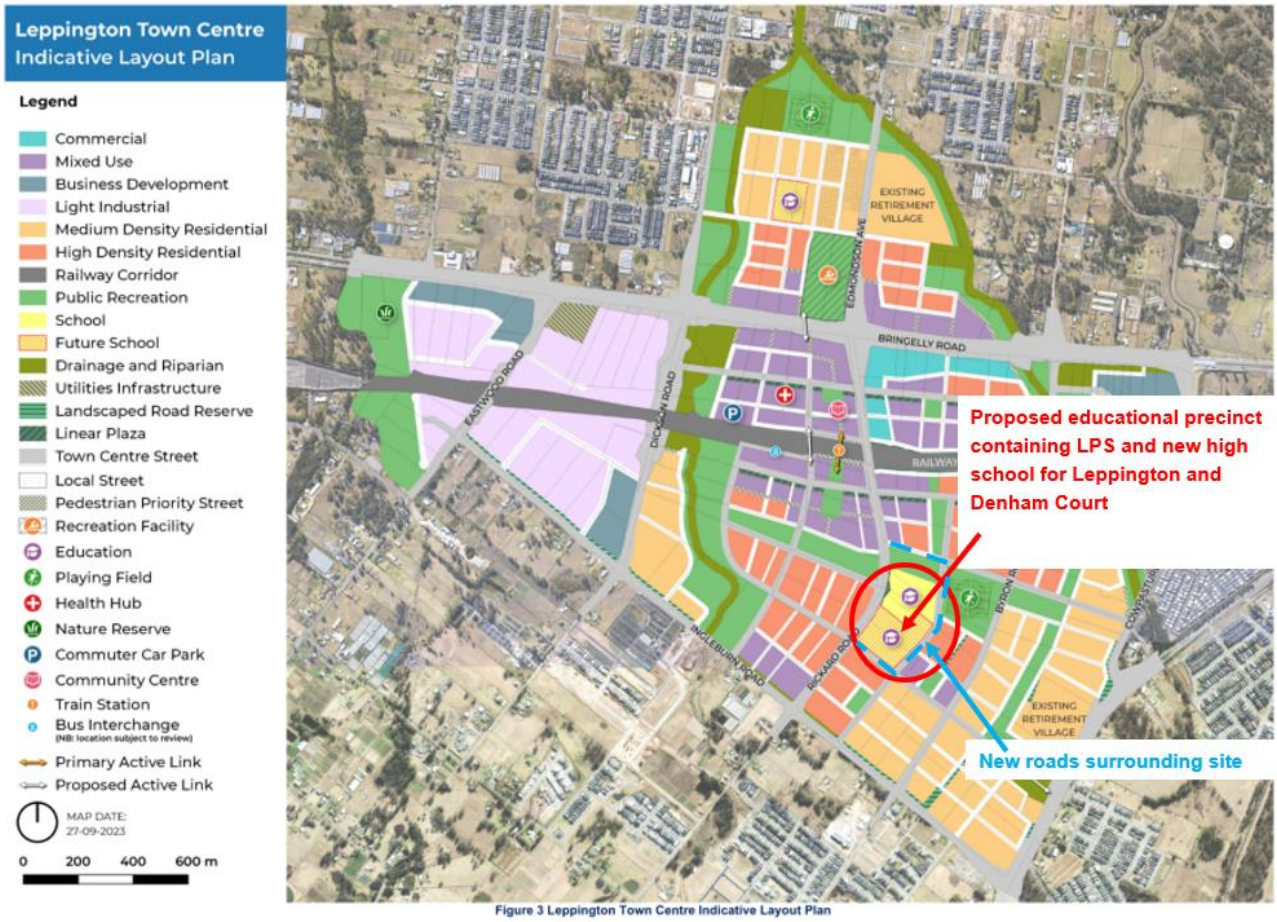


Figure 11: Draft Leppington Town Centre Indicative Layout Plan (Source: NSW DPHI)

2.3.2 Site Constraints and Opportunities

Consideration of site constraints has been undertaken through a review of the Section 10.7 (2 & 5) Planning Certificates dated 10 December 2024 (**Appendix 3**), mapping under relevant Environmental Planning Instruments (EPIs), and a review of specialist consultant reports and other desktop assessments.

A summary of the identified site constraints has been provided in **Table 1** below, with relevant map extracts at **Appendix 4**.

Table 1: Site Constraints

Consideration	Impacted	Source	Description
Hydrology Flooding	No	Flood Statement and Flood Emergency Response Plan (FERP) at **Appendix 5**	The site is not located within a Mainstream or Overland Flood Planning Area. The site is not affected by flooding for all design annual exceedance probability (AEP) events, up to and including the Probably Maximum Floor (PMF) event.
Drinking Water Catchment	No	Precincts SEPP	The site is not mapped as being within a drinking water catchment.
Topography	N/A	Survey Plans at	The elevation of the site ranges between RL 91.87-102.27m Australian height datum (AHD). The

Consideration	Impacted	Source	Description
		Appendix 2	ground surface is gently undulating with the highest point of the site being located within the north-eastern portion, with falls towards the west and south.
Easements	No	Survey Plans at **Appendix 2**	No easements were identified on the Survey Plans.
Aboriginal Cultural Heritage	No	Aboriginal Cultural Heritage Assessment Report (ACHAR) at **Appendix 6**	The site has no Aboriginal archaeological site records. There is no social or cultural significance that has been identified for the site.
Non-Aboriginal Heritage	No	Statement of Heritage Impact (SOHI) at **Appendix 7**	The site is not an identified as having a heritage item of State or local significance and is not situated within a heritage conservation area. LPS, adjoining the site to the north, is listed on the department's Section 170 Heritage and Conservation Register. The two southern allotments of LPS (Lots 38E and 39C in DP 8979) are also mapped as having local heritage significance under the Precincts SEPP.
Acid Sulfate Soils	No	Precincts SEPP Detailed Site Investigation (DSI) at **Appendix 8** Remedial Action Plan (RAP) at **Appendix 9**	The site is not mapped as being affected by Acid Sulfate Soils.
Salinity	No	DSI at **Appendix 8**	The site is not mapped as being prone to salinity.
Geotechnical Conditions	Yes	Geotechnical Investigation at **Appendix 10**	The site is mapped to be underlain by Bringelly Shale bedrock. Fill and residual silty clay was encountered to a depth of between 0.4m to 2.7m, with weathered bedrock being underneath.
Groundwater Conditions	No	Geotechnical Investigation at **Appendix 10**	Groundwater inflows were not observed at test pit or hand auger locations.
Bushfire	No	Bushfire Hazard Assessment at **Appendix 11**	The site is not mapped as bushfire prone land. The buildings are not subject to Planning for Bushfire Protection 2019 or Specification 43 of the NCC.
Site Contamination	Yes	DSI at **Appendix 8** RAP at **Appendix 9**	Asbestos, ACM, zinc and total recoverable hydrocarbons (TRH) were observed across the site in various locations. A Remediation Action Plan (RAP) has been prepared for the site to address existing contamination.
Asbestos and Hazardous Materials	Yes	Hazardous Building Materials Surveys at **Appendix 12**	Hazardous materials, including non-friable ACM and Synthetic Mineral Fibres (SMF) were identified on site. The ACM and SMF are addressed in the RAP.
Aviation	Yes	Precincts SEPP	The site is within an Obstacle Limitation Surface (OLS) area set for Western Sydney Airport of 225.5m. The proposed activity does not penetrate the OLS.

Consideration	Impacted	Source	Description
Vegetation	Yes	Ecological Assessment at **Appendix 13** Arboricultural Impact Assessment (AIA) Report at **Appendix 14**	The trees onsite are predominantly all remnant trees, with a few introduced trees consisting of a combination of exotic and introduced native trees. Majority of the trees form part of the vegetation assembly known as the Cumberland Plains Woodland which is classed as Critically Endangered Environmental Community (CEEC) and protected under the *Biosecurity Act 2015* and under the Commonwealth EPBC Act. Of the 135 trees identified on site, 55 have been identified as being high significance, 69 trees have been identified as being medium significance and 11 are low significance. 22 trees are nominated for removal based on the future road widening of Rickard Road, the design of which has been finalised and is currently awaiting funding (which is outside of the scope of the proposed development).
Biodiversity	Yes	Register of biodiversity certification orders Ecological Assessment at **Appendix 13**	The site is subject to Biodiversity Certification under the former Growth Centres SEPP (the provisions have been transferred to the Precinct SEPP). The Order was made under Section 126G(1) of the *Threatened Species Conservation Act 1995* by the Minister Assisting the Minister for Climate Change, Environment and Water (Environment), Verity Firth M.P., and took effect on the 11 December 2007. This certification allows development in certified areas to proceed without further biodiversity assessment, provided the agreed conservation outcomes are undertaken. Accordingly, the Biodiversity Offsets Scheme does not apply and there are no additional requirements for offsets for clearing and developing the land.
Infrastructure – Transport	Yes	Transport Impact Assessment (TIA) at **Appendix 15**	Existing pedestrian infrastructure surrounding the site is limited to a footpath located on the eastern side of Rickard Road. There are no pedestrian crossings on Rickard Road at the site frontage or dedicated cycling infrastructure connected to the site. The adjoining public school is serviced by four public bus services and two school bus services during the morning school period, and three public bus services and four school bus services during the afternoon school period. There is an existing school zone in place for the adjoining public school.
Infrastructure - Services	Yes	Hydraulic services and utility services report at **Appendix 16** Electrical and Telecommunications Utility Infrastructure Assessment at **Appendix 17**	There are no local Sydney Water utility sewer assets that front the site. The site has access to a 250mm diameter Sydney Water utility water main located in Rickard Road. The site is serviced by the NBN network.

2.4 Proposed Activity

The proposed activity is for a new high school for Leppington and Denham Court. The new high school will accommodate up to 1,000 students across three new buildings, Buildings A, B and C, that will comprise 48 PTS, three STS, 9 specialist labs/workshops/kitchens and a hall, Building D. The three storey buildings will be clustered along the southern boundary and the hall will be located in south-east corner of the site. The activity also includes a sports field in the centre of the site and 3 multipurpose courts along the northern boundary.

The proposed scope of works is illustrated in **Figure 12** below. The pedestrian entry points are demonstrated with red arrows in **Figure 12** below with two along Rickard Road, one in the north-west corner of the site near Building C and one between Building B and C. The main pedestrian and visitor entry point is along the internal road at the southern boundary, which is also where vehicles enter the site.

Figure 12: Proposed site plan (Source: DJRD)

Table 2 provides a summary of key aspects of the activity.

Table 2: Summary of the activity

Project Element	Description
Site Area	4.1 ha
Project Name	New High School for Leppington and Denham Court

Project Summary	The proposed activity involves the construction and operation of:
	• Three new, three storey buildings, comprising
	  ○ 48 PTS
	  ○ Three STS
	  ○ Nine specialist spaces (labs/workshops/kitchens)

Project Element	Description
	○ Additional learning unit (ALU) including science and VET kitchen • One new, single storey hall • Sports field and three multipurpose courts • Associated landscaping and tree planting • New driveway access from Rickard Road to kiss and drop and car parking • One 1000 kVA kiosk transformer.
Use	Educational establishment
Student and Staff Numbers	Students: 1,000 Staff: 75
Car Parking and Bicycle Spaces	Car Parking: 75 spaces Bicycle Spaces: 34 spaces
Height	Building A – Three storeys Building B – Three storeys Building C – Three storeys Building D – One storey
Play Space	10,578.30sqm (10.57sqm per student)
Canopy Cover	Year 1: 665sqm (2.43%) Year 5: 1,307.15sqm (4.78%) Maturity: 4,023sqm (14.74%)
Off Site Works	• Road signage and linemarking on Rickard Road • Proposed median strip within Rickard Road to prevent right hand turn • Stormwater drainage connection • Driveway connection (upgrade existing rural driveway crossing) • Bus bays provided on Rickard Road (relocate existing from PS and upgrade to accommodate HS) • High voltage (HV) electrical connection • Information and communication technology (ICT) connections • Water connections • Connection to sewer main at Ingleburn Road, including pipe installation on Rickard Road

The Plans are provided as follows: Architectural plans (**Appendix 18**), Architectural and Landscape Design Report (**Appendix 19**), landscape drawings (**Appendix 20**), Civil and public domain drawings (**Appendix 21**) and Hydraulic Services Plan (**Appendix 22**).

The key features of the proposed activity are shown in **Figure 13** to **Figure 18** below.

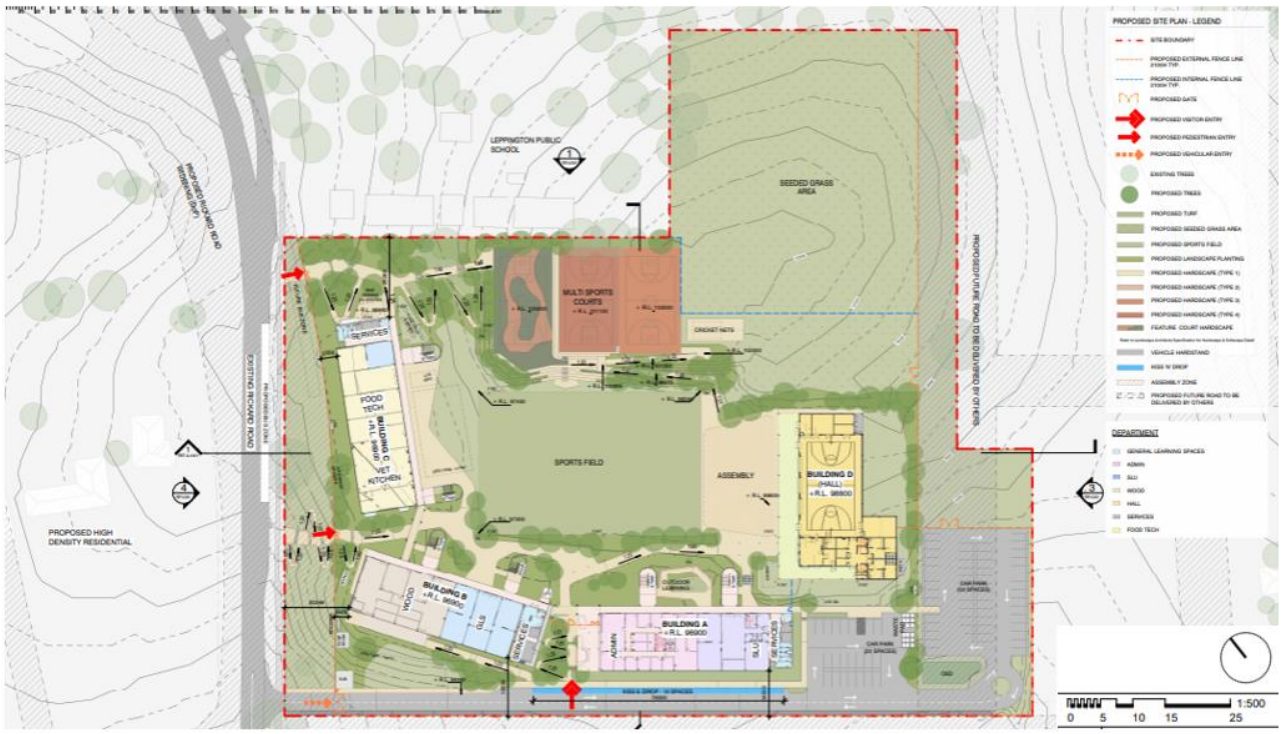


Figure 13: Proposed overall ground floor level (Source: DJRD)

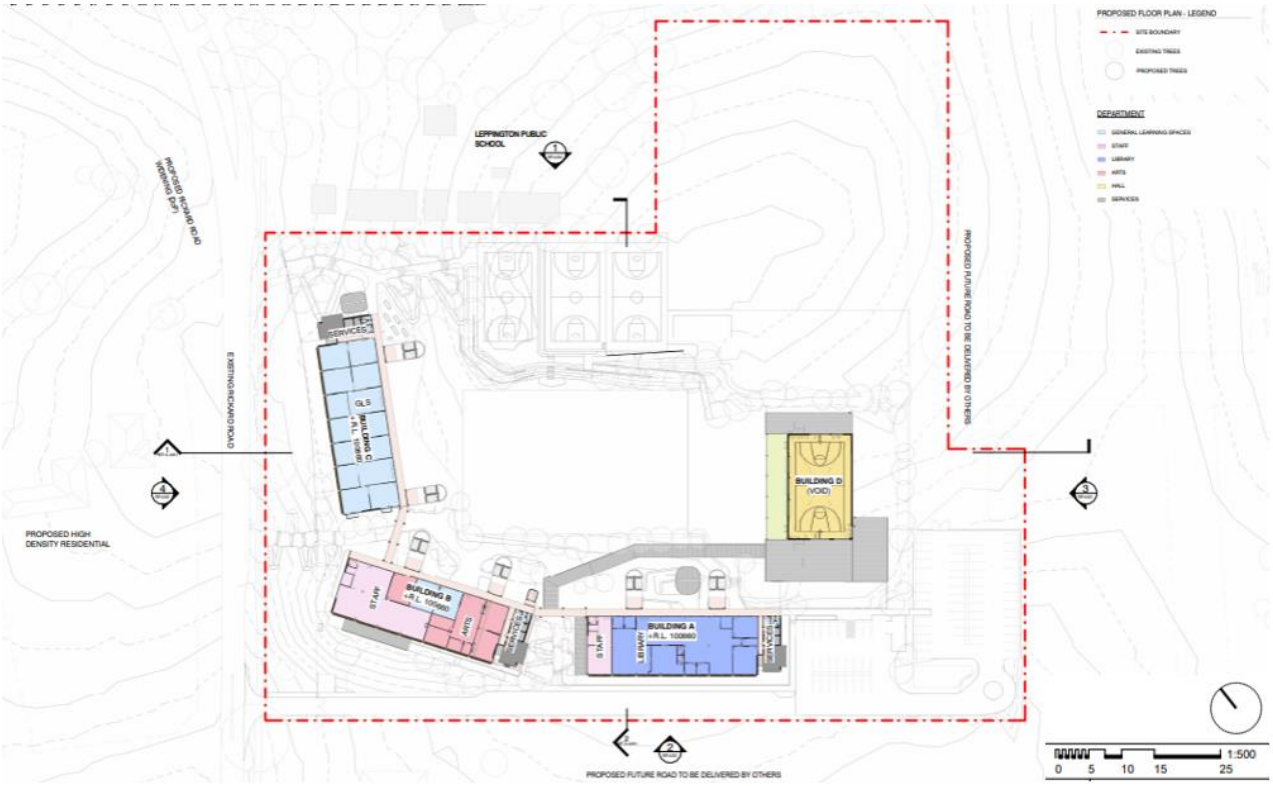


Figure 14: Proposed overall first floor level (Source: DJRD)

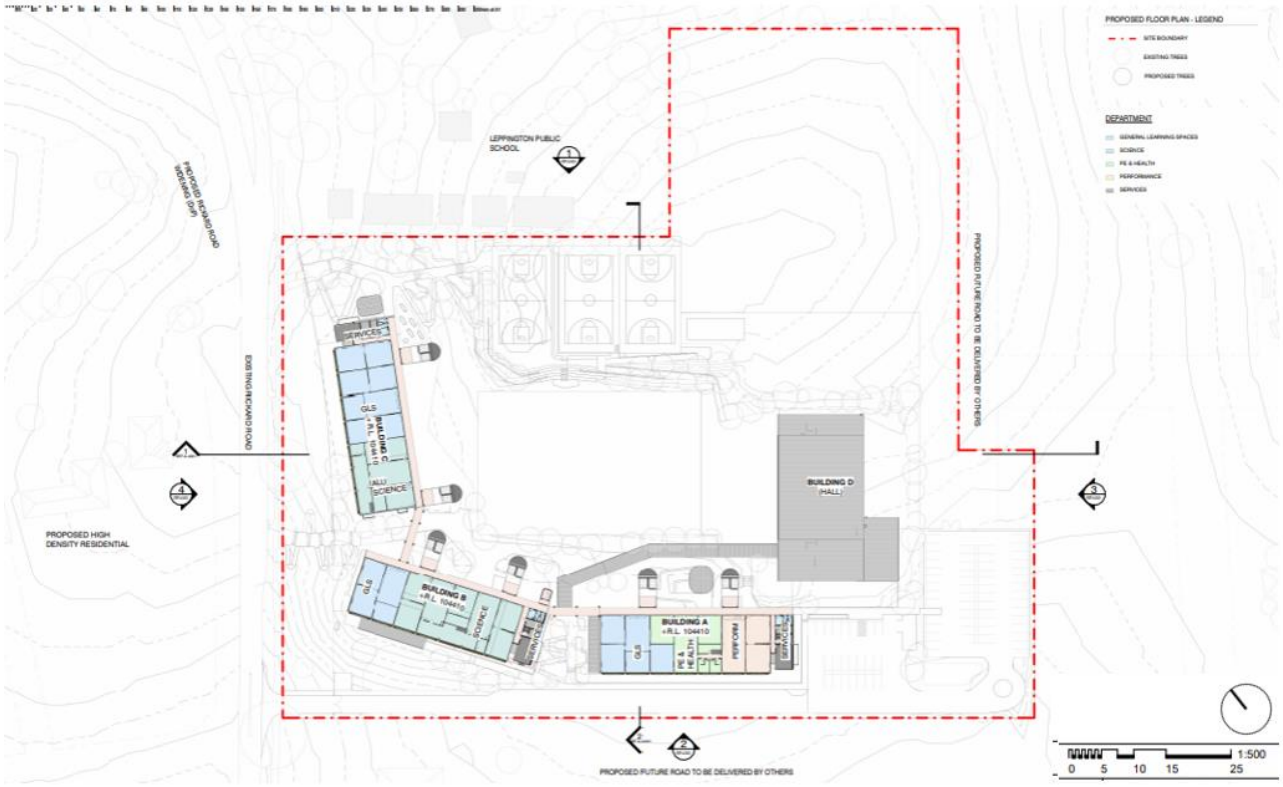


Figure 15: Proposed overall second floor level (Source: DJRD)

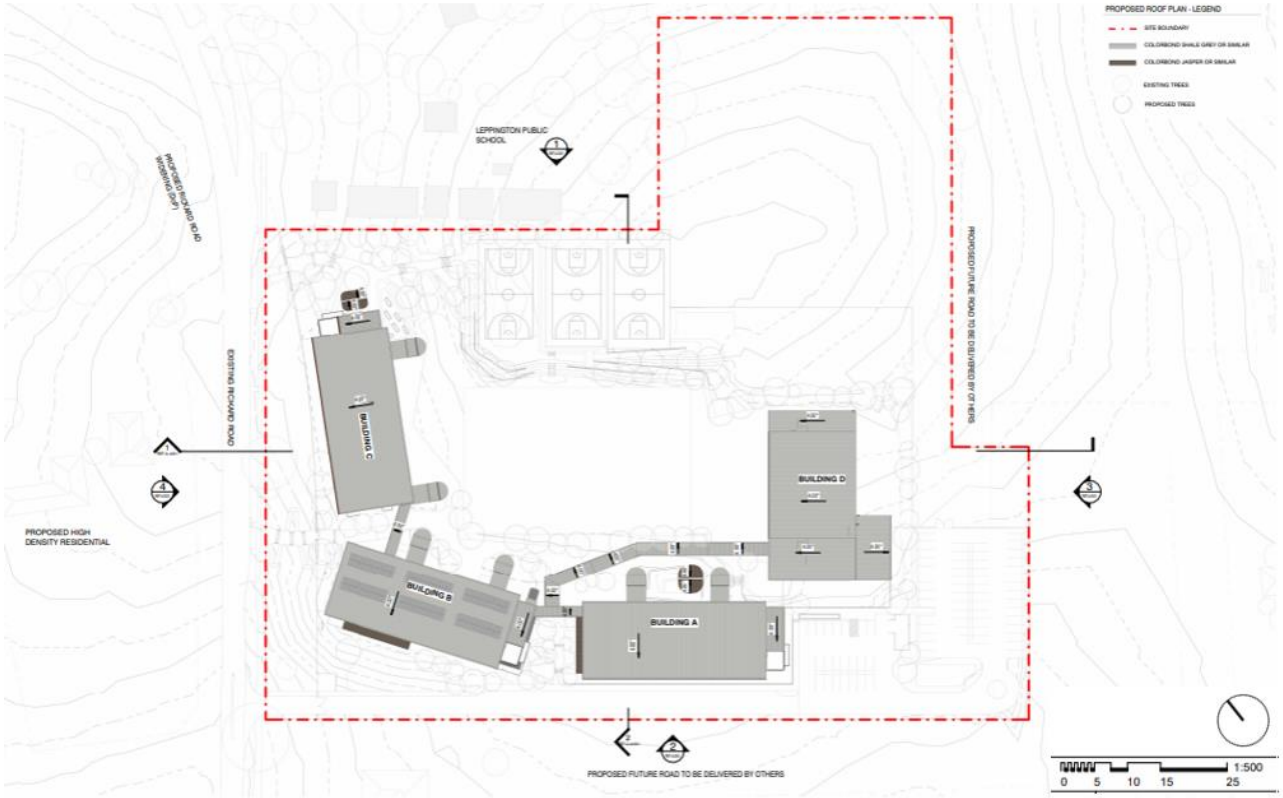


Figure 16: Proposed overall roof plan (Source: DJRD)

Figure 17: Proposed public domain – school entry (Source: DJRD)

Figure 18: Proposed assembly and play fields (Source: DJRD)

2.4.1 Design Development

The proposed built form and landscape design approach balances the site constraints, Education Facilities Standards and Guidelines (EFSG) requirements, opportunities to connect with Country, as well as feedback from key stakeholders such as the School Design Review Panel (SDRP), Aboriginal Educational Consultative Group (AECG) and First Nations representatives.

The proposed built form has been designed with consideration of the draft Leppington Town Centre PP, including the new roads to be delivered by Council that forms the eastern and southern boundaries of the site, and the widening of Rickard Road. Early consultation with Council found that the timing for delivery of this road infrastructure is known so buildings have been sited to avoid the indicative new road locations and include an internal access way. The proposed design allows the school to operate without having to rely on the delivery of the draft Leppington Town Centre PP infrastructure. When the surrounding road infrastructure is delivered by Council or other developers, the internal access way can be removed and converted into additional landscaped area, under a separate planning pathway. The new buildings are also sited to minimise visual impact on the locally listed heritage buildings at LPS.

The proposed three storey buildings have been stepped to maintain the natural topography of the site and respond to the future character of the surrounding area as intended in the draft Leppington Town Centre PP. This strategy also supports the functional requirements and accessibility throughout the school while minimising cut and fill.

The new buildings are articulated through careful materials and colour selection which acknowledge the site’s connection with Country. The proposed hall is a single storey building but with the additional height it reads as a two storey building in height, with a substantial void enabling flexibility of uses, including basketball courts.

The landscaping has been designed to provide transition between the built form and the streetscape and neighbouring sites, utilising native planting and trees to create a landscape buffer and reduce bulk and scale. Both soft and hard landscaping have been used throughout the site to reduce the heat island effect and improve outdoor thermal comfort. Themes of CWC have been incorporated into main welcoming plaza through use of materiality, design elements and planting endemic species.

Figure 19: Aerial of proposed built form (looking south) (Source: DJRD)

Design Guide and Design Quality Principles

The Architectural and Landscape Design Report (**Appendix 19**) evaluates how the activity responds to the Design Guide for Schools and the Design Quality Principles in the TI SEPP. A summary of this analysis is provided below.

Principle 1: Responsive to Context

The activity responds to the natural topography of the site and surrounding area in the siting of buildings and outdoor spaces. By retaining the existing topography, the amount of cut and fill required to create the new high school is reduced. It also recognises the significance of the geographic landform and natural high points of the site to Country.

Landscaped terracing reinforces the natural topography and provide opportunities for landscaping, seating and movement in the transitional areas between uses and buildings. The setbacks of the new buildings from the western (Rickard Road) and the southern (internal access way) boundaries creates opportunities for landscaping and the creation of the new internal access way, while minimising land shaping.

Principle 2: Sustainable, Efficient and Resilient

The activity has been designed to achieve 5-star Green Star Certification and is consistent with SINSW Sustainability Framework. The buildings will be easy to construct, durable, resilient and adaptable and will allow for flexibility for future needs of the school.

Indoor air quality, natural lighting, cross ventilation, thermal and acoustic comfort have all been considered through the design development process. Façade screening and shading, together with the minimisation of glare, reduction of heat load and solar gains have been included in the design of the buildings.

The activity will include the installation of photovoltaic cells on the roof of Building B. Furthermore, there are extensive areas available within the site for deep soil planting, rainwater harvesting and integrated stormwater management. We note that a large area of the site within the north eastern portion is only identified to be grassed and does not include tree planting. We note that this area has been set aside to allow for the future evolution of the Leppington Town Centre ILP. As indicated in the ILP there is a future town centre road located within the eastern portion of the site,

which will need to be provided at a point in time when the adjoining land to the east are ready to be developed. At such a time, the car park in the south eastern corner will need to be relocated to an area north of the hall and reconfiguration of some of the site will need to occur. While this is all subject to a separate planning approval, it is relevant in consideration of the landscape treatment proposed and confirms why tree planting cannot occur on large portions of the site.

Principle 3: Accessible and Inclusive

The new buildings and outdoor spaces have been designed to be inclusive for all teachers, students and the community. Walkways, ramps and stairs will be covered to ensure accessibility to, through and in all areas. Lift access will also be provided for the three storey buildings.

A school identity will be created through the use of colour, CWC, signage and specialised spaces that will result in a sense of place and belonging to the school and wider community.

Principle 4: Healthy and Safe

The health and wellbeing of the future students and staff will be managed through ensuring comfortable internal and external environments, including passive and mechanical temperature control, optimal daylighting internally and shade cover externally to windows and landscaped spaces.

Safety and security measures for the new buildings include higher balustrades and full height screening devices over staircases, designing external walkways on the internal facades of the buildings to avoid noise exposure from the adjoining roads, as well as external fencing, secure gates for entry and active and passive surveillance.

Principle 5: Functional and Comfortable

The new high school will be integrated with the existing LPS to its north and promote an educational precinct providing socially and environmentally responsive and pleasant spaces for the wider community.

The outdoor spaces are located internal to the site ensuring a pleasant and protected environment. The landscape design and planting selections will enhance local diversity and reflect Country.

The internal learning spaces will be able to access natural light and ventilation and will enjoy a pleasant outlook and privacy, as required by EFSG.

Principle 6: Flexible and Adaptable

The internal layout of the new buildings has been designed to adapt easily for future needs and requirements of the school. The buildings comprise classrooms and a central shared learning space that includes a multi-purpose space. Walls are fixed with sliding glass panels offering flexibility and visual connection.

Principle 7: Visual Appeal

There a number of opportunities for CWC in the design of the activity, including artworks, metal screening and façade elements, colours and patterns.

Generous landscaping and native planting will break up the built form and contribute to the overall aesthetic of the school and streetscape.

School Design Review Panel

The project has been considered by the School Design Review Panel (SDRP) at a meeting on 25 September 2024. The table below summarises the feedback from the Panel and illustrates how the design has responded to them. A more detailed response to the Panel's feedback is contained within the Architectural and Landscape Design Report in **Appendix 19**.

Table 3: SRDP Comments and Design Response

SDRP Comments	Design Response
Connecting with Country • Continue engagement with Yerrabingin to further develop the CWC strategy • Investigate the natural topography of the site to inform the masterplan and site layout • Identify outlooks and views and integrate these into the site layout • Retain significant vegetation wherever possible	Engagement with Yerrabingin has resulted in specific sustainability measures being included in the design. For example, re-using timber from felled trees on site and including locally source stone for the landscaping. Further, imagery and patterns have been integrated into the facades of the buildings and landscape will ensure acknowledgement of Country at the main entry of the school. The natural topography has been considered in the siting and location of built form and open spaces. Terracing and transition areas will function as seating and movement corridors. Where possible, significant vegetation has been retained. Proposed water management follows the natural topography, with the inclusion of permeable landscaping imitating riverbeds in the direction of water flow towards the south-eastern corner of the site. The placement of buildings within the lower parts of the site enables and encourages views out to the mountains in the west and creates a view corridor to the north from the upper level of Building C. The upper levels of Buildings B and C will enjoy views to the west, while Building A will have views to the south.
Site Strategy • Reduce setbacks along the southern road to increase play areas within the site	The new internal access way along the southern boundary will provide access into the school, until such time that the roads in the ILP are constructed by adjoining developers or Council. Once the road to the south is constructed, the area proposed for the driveway will be landscaped and converted to landscaped area. The new driveway will facilitate access to the kiss and drop facility, waste collection and deliveries and access to staff car parking.
Landscape • Explore opportunities to improve the layout and design of the site including creating a sense of inclusivity and openness • Consider the location of the substation with regard to amenity and legibility of arrival experience	Perimeter fencing is a department requirement to ensure access and security standards for the safety of students and protection of assets. Landscaping will be provided to create an improved sense of welcoming. The substation is proposed to be located away from the main entry of the school, which is between Buildings A and B. This allows for the creation of a welcome entry and landscaped zone incorporating CWC artwork, landscaping and transitional zones. Native planting and trees have been used as a visual barrier to soften bulk and scale from the streetscape. Trees have been strategically located to shade walkways and play areas.
Architecture • Consider sustainability targets, WSUD	This REF package reflects the comments and feedback from the SDRP through the design development of the proposed activity.

SDRP Comments	Design Response
strategies and tree retention in the design of the buildings and site layout	
Sustainability and Climate Change • Consider EFSG design elements to create more comfortable spaces that are energy efficient	Various sustainability measures have been included in the design of the new buildings including electrification of assets, utilisation of low carbon materials, minimise use of case and the inclusion of onsite renewable energy generation.

Design Response to Country

A CWC Design Report is included in the Architectural and Landscape Design Report in **Appendix 19**. The CWC Design Report was developed in partnership with the department, the project managers, architects, landscape architects and Aboriginal community members through the Walk on Country and Collaborative Workshops and meetings.

The design methodology that has been used to inform the Country-focused collaborative design approach includes several stages being:

- *Collect* – The gathering of ideas, inspiration, facts, desires, research and limitations to empathise with the project partners and with Country.
- *Plant* – After understanding the design challenge, collaborative design workshops generate diverse and innovate design solutions.
- *Nourish* – Collaborative outcomes are shared to develop design solutions and concepts based on feedback.
- *Tend* – Tending to the creation involves ensuring the partnerships and outcomes created are sustainable and have ongoing positive outcomes for Country and communities.

The design methodology above helped inform the architectural and landscape design into 3 key opportunities being:

Revealing Deep Country – The project should strive to reveal the stories of geology, ground water and layers of Deep County, and reflect those colours and movements above ground in the architecture and landscape elements.

Views to Sky Country and Horizon – The new high school can inspire learning spaces for contemplative reflection, connected to Sky Country and allow students to observe daily and seasonal changes in light and weather.

Country is our Teacher – The school can function as a place for learning, teaching in a passive way through its presence and connection to Country, and hold spaces for active teaching and learning.

CWC principles have been included in the design development, as illustrated in **Figure 20** below.

Figure 20: CWC opportunities overlayed on the proposed site plan (Source: DRJD)

Sustainability and Climate Change

The proposed measures in the Ecologically Sustainable Development (ESD) Report (**Appendix 23**) reflects a comprehensive approach to environmental responsibility, addressing key principles and aligning with regulatory standards.

The following key strategies are identified in the ESD report as being adopted within the proposed design, ensuring a sustainable outcome:

Impact on Biodiversity

- The landscape strategy includes integration of native plant species and incorporates water sensitive urban design features.

Resilience

- The design of the new buildings responds to potential risks arising from climate change, including extreme weather temperatures, rain events, fire and bushfire, drought and wind.
- Key climate change strategies considered in the design for the activity include:
    - Passive design optimisation – increasing thermal performance of the building.
    - Design for natural ventilation and good air flow in indoor and outdoor areas to ensure comfortable learning conditions.
    - Design aligned with acoustic performance requirements, as recommended in the Noise and Vibration Impact Assessment in **Appendix 24**.
    - Active design systems – increase in plant capacity to accommodate higher ambient temperatures.
    - Landscape strategy includes trees, plantings and covered walkways for shading and connecting outdoor spaces with buildings.
    - Using soft landscaping, hardscaping and roofing materials with high solar reflectance index to reduce heat island effect and improve outdoor thermal comfort.
    - Reducing stormwater runoff through rainwater harvesting from roofs and planting native species to ensure low irrigation demands.

Passive design

Passive design initiatives have been included in the design development of the new buildings:

- Placing glazing strategically to create more relaxed environmental conditions and to benefit from access to daylight, views and natural ventilation.
- Designing shade structures over windows to ensure appropriate shading, where required, or to control heat gains and glare.
- Achieving above NCC 2022 Section J Energy Efficiency minimum requirements by at least 10%.
- Ensuring airtightness to prevent unwanted heat transfer to the exterior.
- Including occupancy sensors to activate artificial lighting system only when a space is being occupied and remained off at other times.

Reduction in peak demand for electricity

Additional energy efficient design features are being considered to reduce peak demand for electricity:

- Air quality monitoring systems to adjust ventilation rates depending on air quality, minimising the demand for outdoor air and therefore saving energy.
- Maximise natural daylight availability.
- Electric lighting to comprise high efficiency light-emitting diode (LED) technology and include occupancy sensors.
- Install 99kW photovoltaic panels on the roof of Building B.

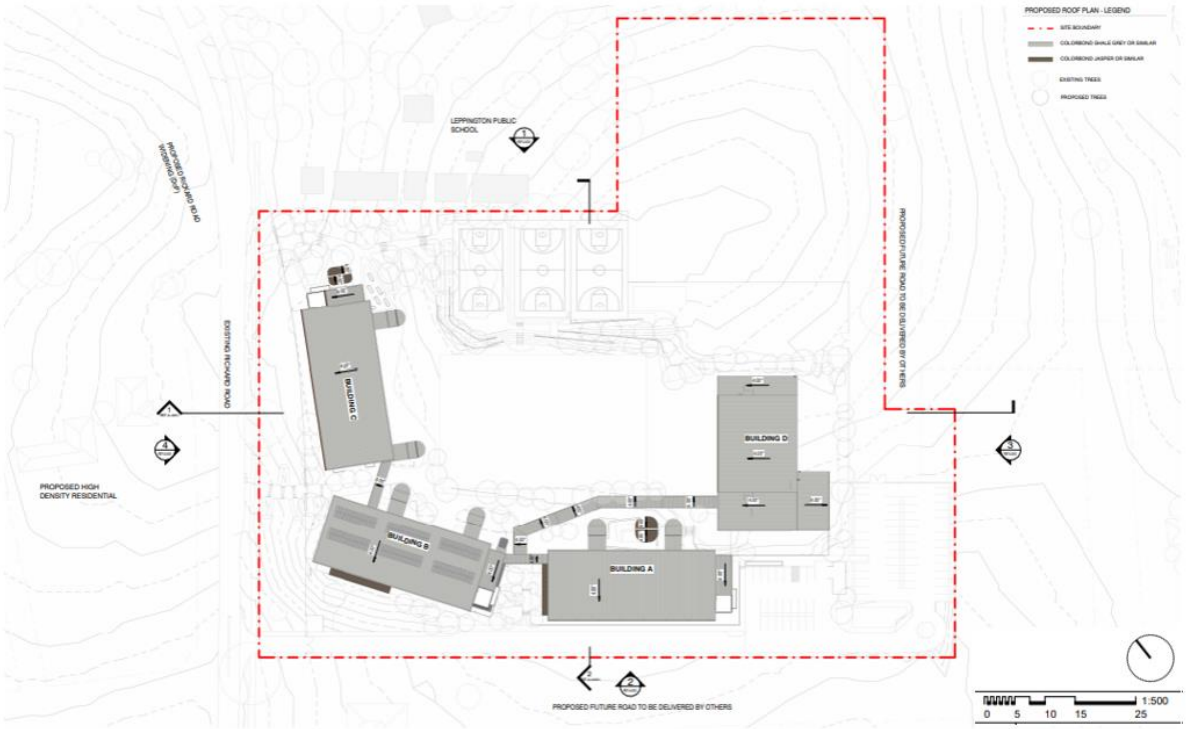


Figure 21: Proposed roof plan showing location of photovoltaic panels (Source: DJRD)

Energy efficiency

The NSW Government is committed to achieving net-zero emissions by 2050 and halving emissions by 2030. To help meet this commitment, the activity will:

- Install 99kW photovoltaic system on the roof of Building B. The design of the roofs for Buildings A and C will ensure that at least 20% of the roof space is available for installation of photovoltaic panels in the future.
- Design the main switchboard in accordance with NCC 2022 Section J requirements to allow for photovoltaic and future battery installation.

Metering and monitoring of energy consumption

The activity will:

- Include a building management system, as per NCC requirements.
- Monitor energy use to understand energy usage and distribution.

Minimise potable water consumption

The new buildings will:

- Be fitted with water efficient fixtures and fittings, for example taps, showerheads, toilets, that are certificated under the WELS rating scheme.
- Include rainwater harvesting for landscape irrigation.
- Ensure efficient water management through an automatic water meter monitoring system.

Minimisation of waste

As part of this REF package, demolition, construction and operational waste management plans are available in **Appendix 25** and **26** respectively. These plans will ensure waste generation and disposal practices from initial site works to occupation consider ESD principles.

Embodied emissions

The activity is required to ensure a reduction in embodied emissions is achieved. In response to the *State Environmental Planning Policy (Sustainable Buildings) 2022* (Sustainable Buildings SEPP), a National Australian Built Environment Rating System (NABERS) Embodied Emissions Material form is required to be prepared by a quantity surveyor. This will be prepared and submitted following determination of the application. This requirement is included in **Appendix 1** as a mitigation measure.

Green star certification

The activity seeks to achieve a 5-star rating under the Green Star Building v1.0 evaluation tool. To achieve this target rating, the project must achieve a total of 35 points, with at least 5 buffer points.

Initial calculations by the sustainability consultant indicate that the project currently meets the target rating.

Landscaping

A landscape strategy is contained within the Architectural and Landscape Design Report in **Appendix 19**, while the landscape plans are in **Appendix 20**. An excerpt of the landscape masterplan is provided below.

Figure 22: Landscape Masterplan (Source: Site Image Landscape Architects)

The landscape masterplan seeks to create key outdoor spaces for the activity, including a welcoming plaza at the main entrance to the south comprising integrated seating, shade trees and themes identified in the CWC Design Report (**Appendix 19**). The CWC workshops also identified opportunities to re-use timber from trees to be felled from the site within the landscape design.

The natural topography of the site has been retained, as best as possible, with a sports court being at the highest point of the site and the proposed buildings at the lowest points of the site. Landscaped terracing between the various outdoor spaces provides transition areas for informal and formal gathering and learning.

The landscape design creates a variety of outdoor learning spaces providing opportunities for students, teachers and staff to have contact with nature and Country, learn and gather while continuing their learning.

The planting strategy incorporates species from the Cumberland Shale Plains Woodland and the Cumberland Red Gym Riverflat Forest to reinforce the natural environment. Shrubs and ground cover planting identified in the Connecting with Country report have been integrated into the design, including the Native Indigo and Dwarf Lilly Pilly shrubs to support a Country-centric approach. All tree species selected are native species, ensuring the proposed activity is suitably integrated into its site and surrounding environment.

Canopy cover will be enhanced through the retention of existing trees where feasible and the strategic planting of shade trees. The design looks at achieving about 14.74% canopy cover at maturity to provide shade and reduce the heat island effect. Large feature trees, particularly

around the interconnected walkways and garden will provide natural shade, offering a welcoming and calming environment.

A total of 113 trees (84% of existing on site trees) will be removed due to their location within the development footprint and/or having major conflict with the proposed construction, particularly within their tree protection zones (TPZ). These individuals will be replaced with new plantings in accordance with the landscape plan.

New plantings will be provided along the northern boundary to provide screening and soften the interface to the adjacent heritage listed buildings at LPS. The new trees will be planted along the interconnected walkways within the site and around the eastern boundary. Trees will also be planted at the main entrance and along Rickard Road.

The proposed landscape design offers a vibrant and multifunctional environment that promotes active play, exploration and community connection while embracing the cultural and ecological significance of the site and its context. The multi sports courts are shaded by canopies along the northern boundary providing students with sun protection while supporting physical development. The central sports field and surrounding play space is naturally turfed, providing opportunities for collaborative games and sports, supporting social interaction and healthy competition. This large, unencumbered space also allows for physical health and education classes to be taught and informal and formal sports events to be held. A copy of the proposed landscape masterplan is provided at **Figure** 22 above.

Access and Parking

The activity involves the following access and parking elements:

Kiss and drop

The activity proposes to create an indented kiss and drop zone adjoining the internal access way along the southern part of the site. The zone will be approximately 79m, accommodating 13 car spaces.

Site driveway and vehicle access

An internal access way is proposed at the southern boundary to provide access to the kiss and drop zone, staff parking, servicing and loading zone (as shown in **Figure 23** below). Vehicles are proposed travel along the southbound lane of Rickard Road and then turn left to enter the internal access way. The vehicle would then travel along the internal road to:

- For a kiss and drop vehicle, use indented kiss and drop bay, then travel further east to the end of the internal road to use the onsite turning, continue west along internal road and exit onto Rickard Road by turning left
- For a service and loading vehicle, use western end of kiss and drop bay to delivery bulky goods, outside peak periods then turn using onsite turning and exit the site onto Rickard Road. We note that waste vehicles will service the site outside school hours and access via the driveway on Rickard Road, reverse into the waste area in the car park, load waste and exist in a forward direction from the car park into the access way and then onto Rickard Road.
- For a staff car parking, all access will be via a swipe card system as a sliding gate will prevent access to the internal access outside kiss and drop periods (with 30min window each side). Parking is then allocated for all 75 staff within the designated car park access at the eastern end of the site.

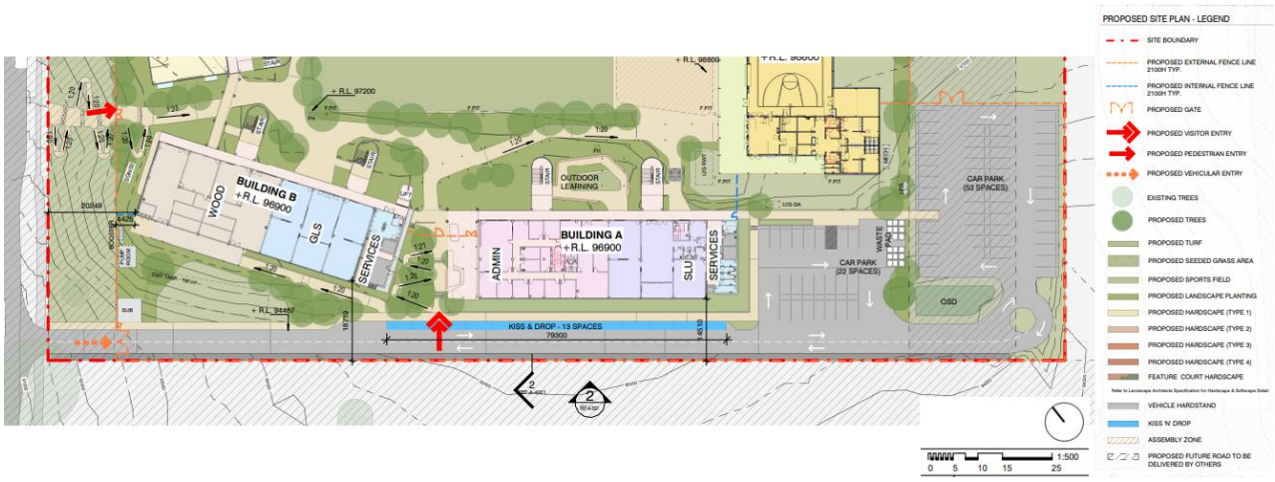


Figure 23: Exert showing internal access way (Source: DJRD)

A sliding gate will be erected along the Rickard Road boundary preventing unauthorised vehicles entering the site. The gate will be operated automatically, will open 30 minutes before the kiss and drop period and close 30 minutes after. Outside of the kiss and drop period, the sliding gate is proposed to be operated by swipe card by staff and authorised service vehicles.

A concrete median strip will be constructed within Rickard Road to ensure cars and trucks can only enter the school using the left-in and left-out configuration.

Pedestrian and cyclist access

Pedestrian and cyclist access to the new high school is as follows:

- The main pedestrian and cyclist entrance from Rickard Road, between Building B and C.
- A secondary pedestrian entrance at the northern end of the site, near to LPS, accessed from Rickard Road
- A secondary pedestrian entrance from the new internal access way, along the southern boundary. This access from the south will be the visitor entrance for those accessing the site in a private vehicle.

The existing footpath along Rickard Road will be the main pedestrian and cyclist thoroughfare to connect students to the new high school.

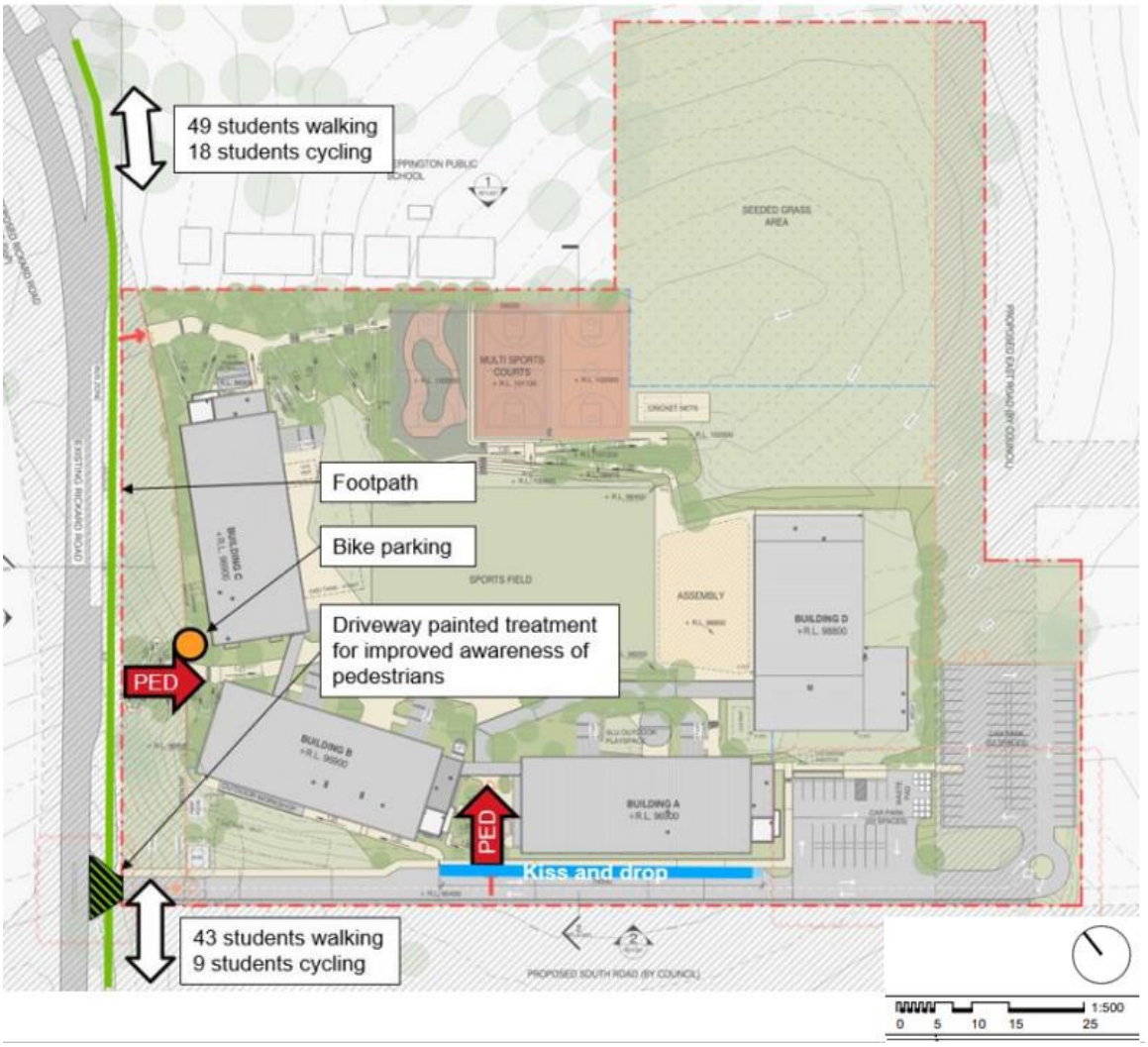


Figure 24: Proposed pedestrian and cyclist entrances (Source: Stantec)

Bicycle parking and end-of-trip facilities

The activity will provide 34 bicycle parking spaces to cater for the ultimate capacity of 1,000 students and 75 staff. The spaces will be located adjacent to the main entrance on Rickard Road.

One end of trip shower facility will be provided for staff within the Support Learning Unit in Building A.

Bus access

To cater for demand, a new bus bay on Rickard Road will be provided to accommodate three buses in total, to allow for ten buses total over a 20-minute period. The dimensions of the bus bay have been designed in accordance with the TfNSW Bus Infrastructure Guide, with a total length of 57m provided. The new bus bay will be located parallel to Building C.

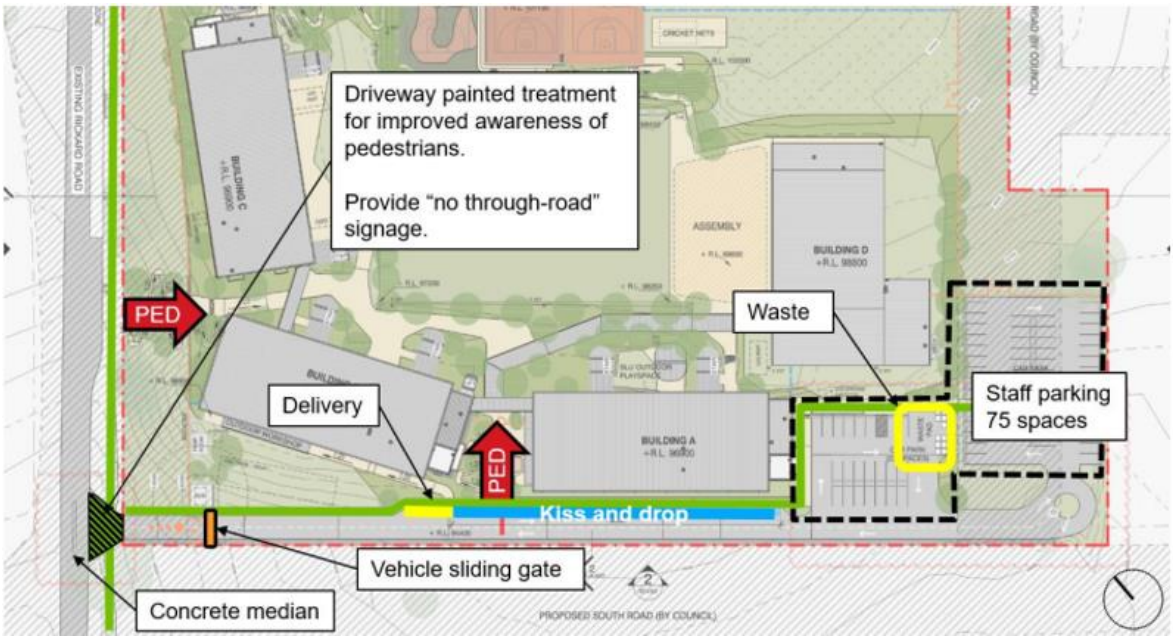


Figure 25: Proposed internal access and parking (Source: Stantec)

Delivery and waste vehicle access

Delivery and waste vehicles will be managed and accommodated via the new internal access way.

A dedicated waste collection area is within the car parking area that can accommodate a 10.5m waste vehicle, with rear-loading capability.

Sufficient turning is provided in the swept paths to demonstrate that delivery and waste vehicles can exit the site in a forward direction. The on site turning area can accommodate cars and small delivery vehicles, while large delivery and waste vehicles will undertake a turn by utilising the car park in the location of the waste area so they may exist the car park in a forward direction onto the internal access way. Swept paths are provided within the TIA depicting all vehicles movements.

Car parking

75 car parking spaces, including two accessible spaces, will be provided for staff. The staff car parking area is proposed to be accessed via the new internal access way and is located adjacent to the new hall (Building D).

Kerb-side signage

No stopping signage is proposed for the western and eastern sides of Rickard Road. The signage would not affect the bus bay.

A no through-road sign is proposed at the entrance to the internal access way to warn drivers that the road is to be used by kiss and drop and school associated vehicles only.

2.4.2 Construction

The following section has been informed by the Preliminary Construction Management Plan at **Appendix 27.** A total peak workforce of approximately 40 construction workers will be onsite at one time, and the works are targeted to be completed by Term 1 2027.

Construction activities include site establishment works, ground works and demolition.

The equipment likely to be employed includes:

- Mobile crane,
- Power hand tools,
- Semi rigid vehicle,
- Excavator,
- Hand held jack hammer,
- Dump truck,
- Concrete saw, and
- Power hand tools.

Site establishment works include the provision of site amenities within the boundaries of the site and include:

- An onsite office,
- Workers toilets,
- First aid kit(s),
- Lunch room,
- Secured storage, and
- Toilets.

Construction hours will be as follows:

- 7:00am to 6:00pm, Monday to Friday
- 8:00am to 1:00pm, Saturday
- No work without prior approval on Sundays and Public Holidays

2.4.3 Demolition

The activity involves the demolition of all existing structures on the site including the dwelling, agricultural greenhouses, stockpiles, post and wire fences and removal of trees. The existing pond will also be dewatered as part of the activity subject to a Dewatering Management Plan as per the mitigation measures.

The proposed demolition plan is shown in **Figure 26** below.

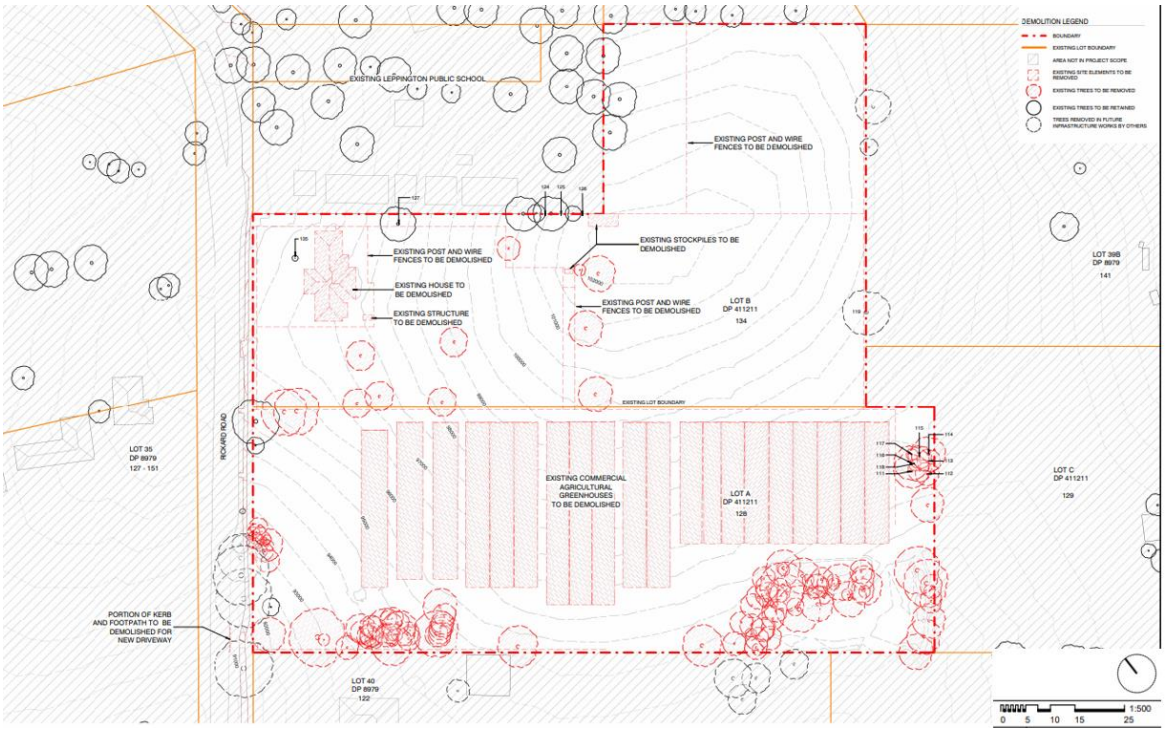


Figure 26: Demolition Plan (Source: DJRD)

2.4.4 Earthworks

The activity involves bulk earthworks, comprising fill and excavation and other site preparation works. To reduce the amount of excavation at the site, the civil engineers (**Appendix 28**) raised the level of the sports field, courts and hall (Building D) and adding fill beneath Buildings A, B and C. This reduces the amount of overall bulk earthworks to 7,200m^3 of cut.

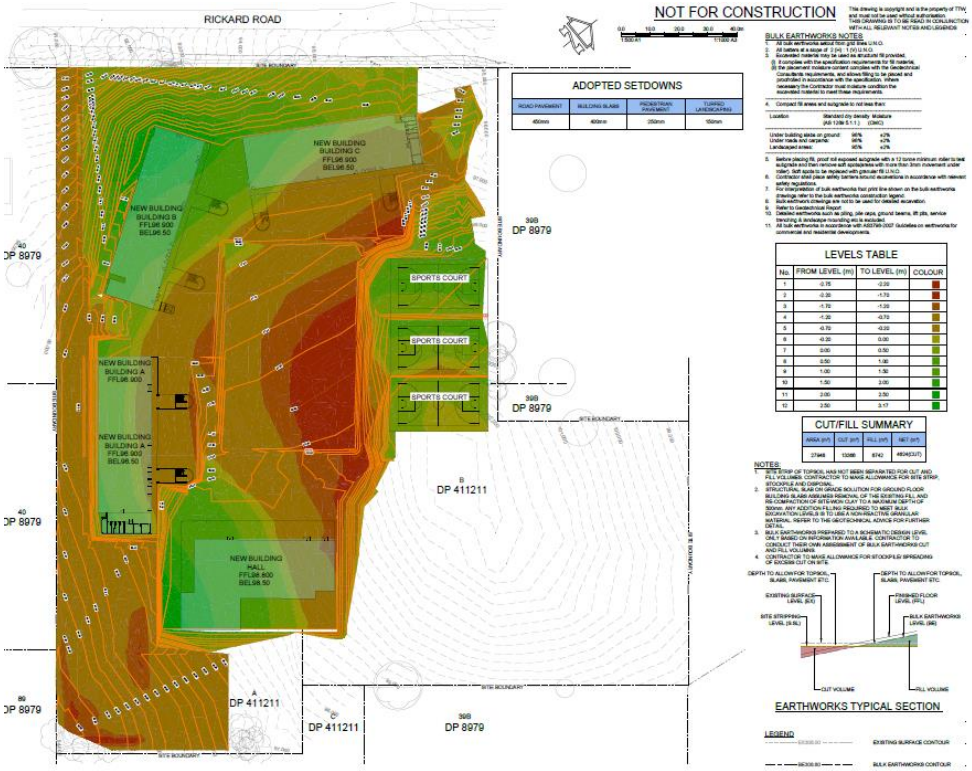


Figure 27: Earthworks - cut and fill volumes plan (Source: TTW)

2.4.5 Remediation

The DSI (**Appendix 8**) identified contamination requiring remediation. The sampling identified exceedances of adopted assessment criteria for asbestos for human health criteria and exceedances of zinc, benzo(a)pyrene (BaP) and TRH F3 fraction. Groundwater monitoring identified exceedances of 95% of copper, nickel and zinc, suspected to reflect the regional groundwater quality.

As such, a RAP has been prepared (**Appendix 9**). The preferred remediation option for the impacted soils at the site is outlined in the RAP and includes onsite encapsulation with offsite disposal as an alternative option for excess soils.

2.4.6 Tree and Vegetation Removal

As outlined in Section 0, the site has Biodiversity Certification under the former Growth Centres SEPP (the provisions have been transferred to the Precinct SEPP) (see **Figure 28**). There are no additional requirements for offsets for clearing and developing the land.

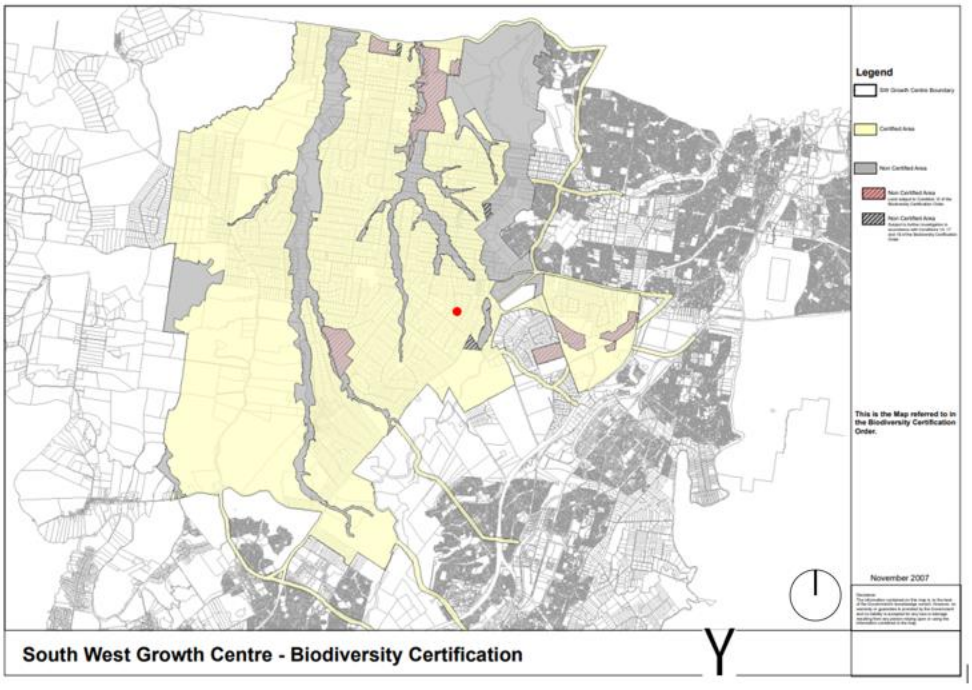


Figure 28: SWGA Biodiversity Certification Map with site identified with red dot (Source: Biodiversity Certification Order)

The activity will involve the removal of 113 trees and the retention of 22 trees, as illustrated in **Figure 26**. Of the trees proposed for removal (Trees 2,3,8-23,26-11,120-122,128-133 and 135), several conflict with the design and/or development footprint and the rest are subject to a major encroachment.

An AIA Report (**Appendix 14**) has been prepared for the activity, which provides protection measures for trees proposed to be retained (**Figure 29**).

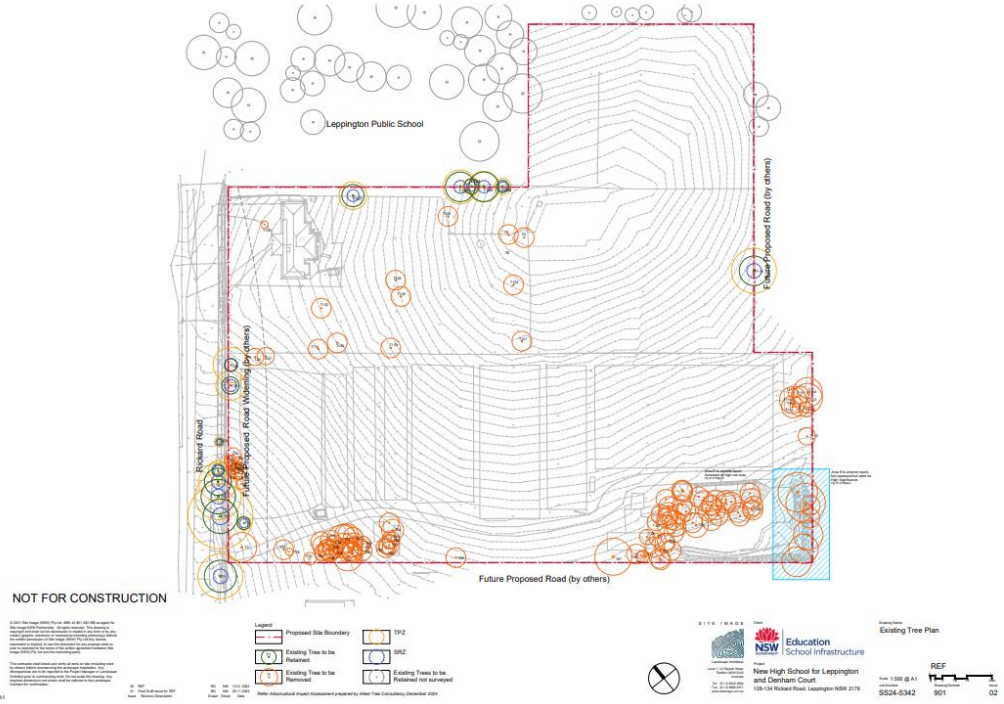


Figure 29: Existing Tree Plan (Source: Site Image Landscape Architects)

The proposed landscape design achieves 14.74% canopy cover at maturity to provide shade and reduce the impacts of the heat island effect. **Figure 30** shows the canopy cover for the site from year 1 to year 5 and at maturity.

Figure 30: Canopy Cover for subject site, (L to R) at Year 1, Year 5 and Maturity (Source: Site Image Landscape Architects)

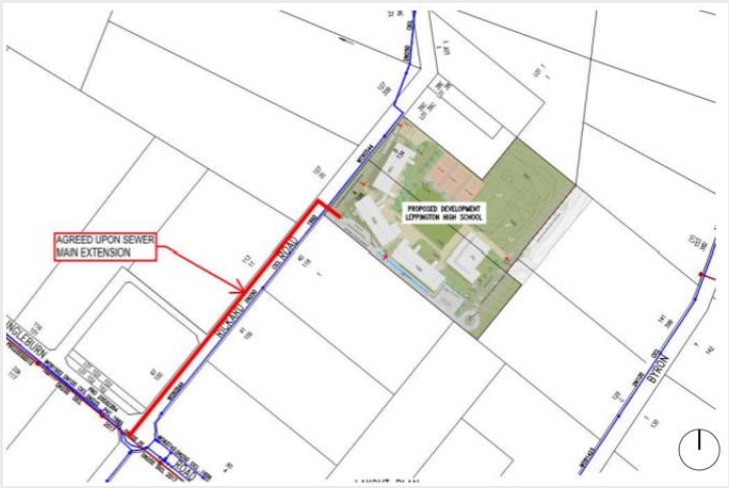
Details of the proposed landscaping and offset planting can be found in Section 0 of this REF.

2.4.7 Utilities and Services

The proposed building services requirements for the activity are summarised in the table below.

Table 4: Utilities and Services arrangements

Building Services	Proposed Arrangement
Electrical (**Appendix 17**)	One 1000 kVA kiosk transformer is proposed to satisfy the anticipated maximum demand for the activity. A Supply Offer has been provided by Endeavour Energy.
Telecommunications	New incoming telecommunications services will be connected to a new main

Building Services	Proposed Arrangement
(**Appendix 17**)	communications room and will then be distributed to the rest of the site.
Water (**Appendix 16**)	A new connection is proposed to the 250mm diameter utility water main in Rickard Road to supply the site with drinking water services and also firefighting water services. Section 73 Notice of Requirements (NoR) has currently not been provided by Sydney Water for this proposed activity.
Sewer (**Appendix 16**)	There are no local Sydney Water utility sewer assets that front the site. As such, the sewer main will need to be extended to connect with existing assets in Ingleburn Road (refer to image below which shows the proposed sewer option in red).  **Figure 31: Proposed sewer main extension (Source: WSCE)** A Section 73 NoR has currently not been provided for this proposed activity. A Feasibility Application has been lodged (Case No. 219026) which proposed to construct a sewer extension from the existing DN225 sewer main in Ingleburn Road.

2.4.8 Waste Management

Construction and Demolition Waste Management

The Construction and Demolition Waste Management Plan (CDWMP) (**Appendix 25**) details the waste management strategies and auditing requirements during the construction and demolition of the proposed activity.

Monitoring and Reporting

All construction and demolition waste volumes will be recorded and maintained, and daily inspections of waste storage areas will be undertaken by site personnel and recorded for reporting purposes. Waste audits will be carried out to ensure that waste segregation procedures and recycle/reuse initiatives are effective and efficient. All environmental incidents will be dealt with promptly to minimise potential impacts and an incident register will be maintained on site at all times.

All staff employed during the demolition and construction stages of the activity will undertake site-specific induction training regarding the waste management procedures.

Reuse and Recycling

Where practical, reuse and recycling will be used to reduce the volume of waste generated during demolition and construction. The site will facilitate a deconstruction method whereby various materials are carefully dismantled and sorted. Any unwanted reusable materials can be taken to a second-hand building centre, reducing waste disposal costs.

Where feasible, materials such as asphalt, bricks, concrete will be re-used on site for fill, leveling or crushed for pavement/road base and plastics will be reused as secondary materials for playgrounds, seating et cetera. Soil will be reused on site for fill and within landscaped areas.

Management of Hazardous Waste Materials

Hazardous waste, particularly asbestos waste and ACM, will be removed by licensed contractors and transported to appropriate facilities where applicable. In the event that any contaminated or hazardous materials are unexpectedly uncovered, work will stop immediately in that location and the relevant hazardous waste contractor will be contacted prior to any works recommencing.

Management of Demolition Waste

Waste generated by construction and demolition, if reuse is not possible, will be carefully sorted on site and stored for regular off-site collection by authorised contractors.

Figure 32: Bin storage area during demolition (Source: Elephants Foot Consulting)

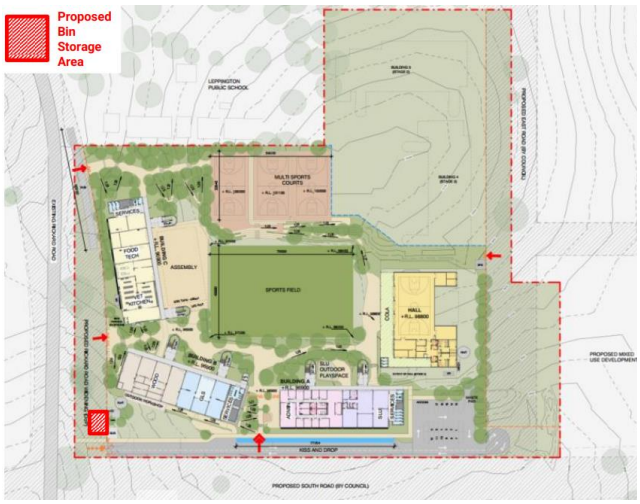


Figure 33: Bin storage area during construction (Source: Elephants Foot Consulting)

Operational Waste Management

The Operational Waste Management Plan (OWMP) (**Appendix 26**) details the waste management strategies during the operation of the site including general waste, recyclables, garden waste, sanitary waste, and electronic waste.

Based on the estimated waste and recycling volumes generated by the activity, the recommended number and type of bins are:

- General waste 10 x 1100L bins
- Recycling 7 x 1100L bins

General waste and recyclables will be managed through a system of labelled bins placed strategically across the school premises, including learning spaces, offices, restrooms, common

areas, and outdoor zones. Waste will be collected daily by cleaning contractors and transported to the waste storage area adjoining the staff carpark. Refer to **Figure 34** below.

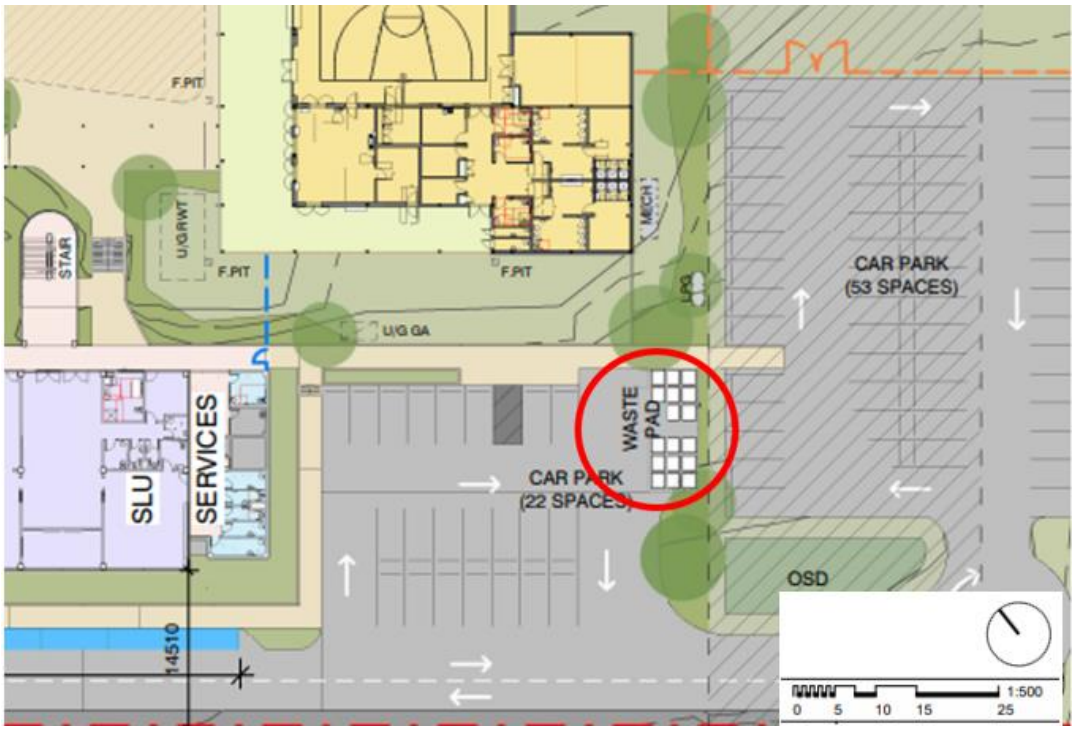


Figure 34: Location of waste bin storage and collection area circled in red (Source: DJRD)

A private waste contractor will be engaged to service the general waste and recycling bins per an agreed collection schedule of a minimum two times per week for both general waste and recycling.

2.4.9 BCA and DDA

BCA

The new high school will be compliant with the requirements of the NCC / Building Code of Australia (BCA), subject to the mitigation measures provided at **Appendix 1**.

DDA

Under the *Disability Discrimination Act 1992* (DDA), the relevant requirements relating to access for people with disabilities has been addressed in the design of the activity. The activity has been designed to ensure the appropriate accessibility requirements, subject to the mitigation measures provided at **Appendix 1**.

Both reports identify that the activity is capable of complying with the relevant requirements and standards, subject to detailed design and where appropriate, design solutions. Compliance with the mitigation measures in the reports has been included in the mitigation measures at **Appendix 1**, to be addressed in detailed design, prior to construction.

2.4.10 Staging

No staging of the activity is proposed.

2.4.11 Operation

The new high school is expected to service:

- 75 full time equivalent (FTE) staff
- 1,000 student enrolments

Given that surrounding residential development has not occurred within the proximity of the school, it is not anticipated that each cohort will reach capacity for several years, given students who have already commenced at Casula or John Edmondson High School are unlikely to relocate until housing is developed in closer proximity to the proposed new high school.

2.5 Ancillary Works

The proposed activity involves works to the public domain, including:

- Road signage and linemarking on Rickard Road
- Proposed median strip within Rickard Road to prevent right hand turn
- Stormwater drainage connection
- Driveway connection (upgrade existing rural driveway crossing)
- Bus bays provided on Rickard Road (relocate existing from PS and upgrade to accommodate HS)
- High voltage (HV) electrical connection
- Information and communication technology (ICT) connections
- Water connections
- Connection to sewer main at Ingleburn Road, including pipe installation on Rickard Road

This scope of works falls under the jurisdiction of Chapter 2 of the TI SEPP and is discussed in more detail in Chapter 0 of this REF report.

2.6 Related Activities

There are no other projects occurring concurrently at the site under other planning pathways.

3. Activity Need and Alternatives

3.1 Activity Need

The site is located in the SWGA which is currently experiencing significant residential growth in its central and western areas. John Edmondson High School and Casula High School currently service the SWGA but the significant residential growth has placed significant and unsustainable pressure on both existing high schools to accommodate increased demand with utilisation rates above 100%.

To respond to the significant residential growth and future demand in the Leppington Major Centre Precinct, a need for a new secondary high school has been identified. The site for the future high school was identified to the south of LPS due to the current rezoning proposal for Leppington Town Centre and previous due diligence work that has been undertaken.

3.2 Alternatives

The proposed activity has been developed following a consideration of options and alternatives to address the need identified above. A summary of the options considered is provided in **Table 5**.

Table 5: Assessment of Options and Alternatives

Option	Discussion	Preferred Option
Option 1: The Proposed Activity	The NSW Government and the department have committed to constructing a new high school in the Leppington Town Centre Precinct to cater for the ever-increasing demand for secondary education places. The new high school will cater for up to 1,000 students. There is space on site to enable future extension, if required.	Option 1 is **preferred** as it will deliver a new large high school which can offer better educational outcomes in a more efficient and cost-effective manner.
Option 2: Alternative Sites	The department has undertaken an extensive due diligence phase and has considered a number of possible alternative sites for a new high school in the area. The process of site selection resulted in the subject site being deemed the most suitable for the school development.	Option 2 is **not preferred** due to environmental constraints of alternative sites increasing required mitigation measures. Further, the future planning for the Leppington Town Centre in the current PP identifies the creation of an educational precinct, integrating the existing LPS with a future high school site.
Option 3: Alternative Designs	Alternative designs and options for the preferred site have been considered during the design development phase. With the consideration of several specialities and expertise of the project team, including traffic, topography, flooding, heritage, and ecological, the proposed design has been determined as most suitable to accommodate the facilities required and the site's constraints.	Option 3 is **not preferred** as an alternative siting and design of the buildings would result in additional costs and mitigation measures being required to cater for the future educational accommodation.

Option	Discussion	Preferred Option
	The design for the new high school also takes into consideration the redevelopment and expansion of the adjoining LPS.	
Option 4: Do Nothing	If the project was not to proceed, then there will be a significant shortfall of secondary school infrastructure within the locality required to support the enrolment needs of the growing population in the area. There is no ability for intake area adjustments due to existing misaligned geographical locations of existing schools, and projected growth in the SWGA. Further, the predicted population growth would far exceed the ability of existing high schools to accommodate projected demand.	Option 4 is **not preferred** as it will not respond to the growth in the Leppington Town Centre Precinct and result in overcrowding of other schools.

4. Statutory and Strategic Framework

4.1 Permissibility and Planning Approval Pathway

Section 4.1 of the EP&A Act states that if an EPI provides that development may be carried out without the need for development consent, a person may carry the development out, in accordance with the EPI, on land to which the provision applies. However, the environmental assessment of the development is required under Part 5 of the Act.

TI SEPP aims to facilitate the effective delivery of infrastructure and educational establishments across the state and provides that various developments for the purposes of a government school are permitted without consent. The proposed activity is development permitted without consent as outlined at **Table 6**.

Table 6: Description of Proposed Activities under the TI SEPP

Division and Section within TI SEPP	Description of Works
3.37A New government schools—development permitted without consent	
(1) Development for the purposes of a government school may be carried out by or on behalf of a public authority without consent on land— **(a) in a prescribed zone, and** **(b) on which there is no existing or approved school.**	(a) The site is zoned B7 Business Park and SP2 Infrastructure under the Precincts SEPP. Educational establishments are development "permitted with consent" in both zones. Both zones are listed as a prescribed zone under the TI SEPP which enables the proposed activity to be carried out as development permitted without consent under 3.37A of the TI SEPP. (b) There is no existing or approved school on the subject site. The proposed activity is for the purpose of a new government school and involves the construction of buildings that are up to three storeys in height which is less than the four storeys in the environmental planning instrument applying to the site. The Design Quality Principles set out in Schedule 8 of the TI SEPP and the Design Principles set out in the Design Guide for Schools have been considered as set out in Section 0.
(2) A building resulting from development carried out on land under this section must not have a height of more than the greater of— **(a) the maximum height permitted for a building under an environmental planning instrument applying to the land, and** **(b) 4 storeys.**	(a) The Precincts SEPP prescribes a maximum height of building of 12m for the northern lot and 24m for the southern lot. (b) The proposed activity does not exceed four storeys.
(3) Development must not be carried out under this section unless— **(1) the public authority is satisfied that appropriate consultation has been undertaken having regard to—** **(i) the SCPP—new health**	(a) Early stakeholder consultation has been undertaken in compliance with the SCPP (as described in Chapter 5.1 of this REF).

Division and Section within TI SEPP	Description of Works
services facilities and schools, and **(ii) the *stakeholder and community participation plan*, and** **(2) the public authority has considered—** **(i) the design quality of the development, evaluated in accordance with the design quality principles set out in Schedule 8, and** **(ii) the design principles set out in the design guide.**	(b) Consideration of the design quality of the proposed activity is detailed in the Architectural and Landscape Design Report, prepared by DJRD Architects in **Appendix 19**, accompanying this REF.
In this section— *Government school* includes a relevant preschool.	Not relevant. A preschool does not form part of the proposed activity.

As part of the broader scope of works associated with the activity, a number of works will be undertaken in the public domain. These works are ancillary to the scope of the REF and include works within the road reserve, such as line marking and signage, as well as utility connections. Some of the works which are identified in the road reserve within this REF would otherwise be able to be undertaken as exempt development, but are still captured and assessed in this REF. The relevant section of the TI SEPP and the proposed works are detailed following.

Table 7: Description of Ancillary Activities under the TI SEPP (Division 17 Roads and traffic, Part 2.3 Development controls, TI SEPP)

Section within TI SEPP	Description of Works
Section 2.113 Exempt development	• Road signage (Section 2.113(1)(a)(iii)) • Linemarking (Section 2.113(1)(a)(xi)) • Median strip within Rickard Road (Section 2.113(1)(a)(ii)) • Stormwater drainage connection (Section 2.113(1)(a)(xiii)) • Driveway connection (minor pavement and shoulder works including pavement marking) (Section 2.113(1)(a)(vi) and (xii)) • Bus bay extension (Section 2.113(2))

Activities permissible without consent require environmental impact assessment in accordance with Division 5.1 of the EP&A Act and are assessed and determined by a public authority, referred to as the determining authority. The department is the proponent and determining authority for the proposed works.

Additionally, Section 5.7 of the EP&A Act states that an activity that is likely to significantly affect the environment must be subject of an Environmental Impact Statement (EIS) rather than an REF. The effects of the activity on the environment are considered in Section 6 and have been assessed as a less than significant impact and can therefore proceed under an REF assessment.

Section 171(1) of the EP&A Regulation notes that when considering the likely impact of an activity on the environment, the determining authority must take into account the environmental factors specified in the guidelines that apply to the activity.

The *Guidelines for Division 5.1 Assessments* (DPE June 2022) and the *Guidelines for Division 5.1 assessments Consideration of environmental factors for health services facilities and schools Addendum* (DPHI, October 2024) provide a list of environmental factors that must be taken into account for an environmental assessment of the activity under Division 5.1 of the EP&A Act. These factors are considered in detail at Section 6.

In summary, the proposal is considered an 'activity' and 'development permitted without consent' for the purposes of Part 5 of the EP&A Act and is therefore subject to an environmental assessment through a REF.

4.2 Pre-conditions to Pathway

Under the TI SEPP, there are several requirements which must be complied with in order for development to be undertaken as development without consent. Compliance with the relevant sections and requirements of the TI SEPP are outlined below:

Table 8: Compliance with pre-conditions to the 'development without consent pathway'

Section of TI SEPP	Comment Section	Complies
3.8 Consultation with councils – development with impacts on council-related infrastructure or services	This section applies where there is likely to be a substantial impact on stormwater management, traffic capacity of the road system, the sewerage system, water supply system, more than inconsequential excavation in a road reserve or installation of a temporary structure on a public place. The activity does not trigger any of these threshold requirements for consultation under Section 3.8. However, notification to Camden Council will be made as part of the broader exhibition of this REF and accompanying documents.	Yes
3.9 Consultation with councils— development with impacts on local heritage	LPS, to the immediate north of the site, contains a locally heritage listed item. All building works have been sited away from the common boundary with LPS to ensure no resulting impacts on the integrity of the heritage listed buildings and its curtilage.	Yes
3.10 Notification of councils and State Emergency Service— development on flood liable land	Not applicable. The site is not flood liable land.	N/A
3.11 Consideration of Planning for Bush Fire Protection	Not applicable. The site is not bushfire prone land.	N/A
3.12 Consultation with public authorities other than councils	The activity will not involve: • Development adjacent to land reserved under the *National Parks and Wildlife Act 1974* (NPW Act). • Development on land immediately adjacent on a rail corridor that would have an effect on rail safety. • Development that would increase the amount of artificial light in the night sky. • Development on land within a mine	Yes

Section of TI SEPP	Comment Section	Complies
	subsidence district. • Development for the purpose of an existing school.	
3.38A Notification of carrying out of development under section 3.37A	As the activity involves development to which Section 3.37A(1)(a) applies, written notice of the intention to carry out the development to Council and TfNSW for 28 days is required. The requirement for notification of these stakeholders under Section 3.38A will be satisfied as part of the broader exhibition of this REF and accompanying documents.	Capable of complying subject to exhibition of this REF prior to determination and provision of written notification to Council and TfNSW.

4.3 Environmental Protection and Biodiversity Conservation Act 1999

Most of the remanent trees on site form part of the vegetation assembly known as the Cumberland Plain Woodland. This community is listed as a CEEC and are protected under the *Biosecurity Act 2015* and the Commonwealth EPBC Act.

The AIA (**Appendix 14**) confirms that the trees assessed on site and the immediate surrounds are not endangered species. Furthermore, the site and the broader SWGA received Biodiversity Certification under the former Growth Centres SEPP (the provisions have been transferred to the Precinct SEPP). This certification allows development in certified areas to proceed without further biodiversity assessment, provided the agreed conservation outcomes are undertaken. Please refer to Section 0 of this REF report.

As such, the provisions of the EPBC Act do not affect the activity as it is not development that takes place on or affects Commonwealth land or waters. Further, it is not development carried out by a Commonwealth agency or development on Commonwealth land, nor does the proposed development affect any matters of national significance. An assessment against the EPBC Act checklist is provided at **Table 9**.

Table 9: EPBC Act Checklist

Consideration	Yes/No
Will the activity have, or likely to have, a significant impact on a declared World Heritage Property?	No
Will the activity have, or likely to have, a significant impact on a National Heritage place?	No
Will the activity have, or likely to have, a significant impact on a declared Ramsar wetland?	No
Will the activity have, or likely to have, a significant impact on Commonwealth listed threatened species or endangered community?	No
Will the activity have, or likely to have, a significant impact on listed migratory species?	No
Will the activity involve any nuclear actions?	No
Will the activity have, or likely to have, a significant impact on Commonwealth marine areas?	No
Will the activity have any significant impact on Commonwealth land?	No

Consideration	Yes/No
Would the activity affect a water resource, with respect to a coal seam gas development or large coal mining development?	No

4.4 Other Approvals and Legislation

Table 10 identifies any additional approvals that may be required for the proposed activity.

Table 10: Consideration of other approvals and legislation

Legislation	Relevant?	Approval Required?	Applicability
State Legislation			
National Parks and Wildlife Act 1974	No	No	The Aboriginal Cultural Heritage Assessment Report (ACHAR) and accompanying Aboriginal Archaeological Technical Report (**Appendix 6**) have assessed the soils as having potential for objects of Aboriginal archaeological and cultural significance. It was concluded that, following test excavation no Aboriginal objects or features of cultural or archaeological significance were found at the site. The findings from the test excavation indicate the site to be of nil archaeological significance. The ACHAR concluded that the proposed activity at the site will not have a significant effect on the environment in relation to Aboriginal Heritage. The site is not near a NSW National Park and the proposed activity will not affect a NSW National Park.
Rural Fires Act 1997	No	No	The Bushfire Hazard Assessment (**Appendix 11**) confirms that the activity is not on designated Bushfire Prone Land (BFPL). Further, the new school buildings are not likely to be subject to bushfire attack (buildings are separated by 50m for grassland and 100m for woodland and forest). As such, the school buildings are not subject to Planning for Bushfire Protection 2019 or Specification 43 of the NCC.
Water Management Act 2000	No	No	The activity is not located within 40 meters of a watercourse or coastline.
Biodiversity Conservation Act 2016	Yes	No	The Ecological Assessment in **Appendix 13** conducted a search of the Department of Climate Change, Energy, the Environment and Water (DCCEEW) BioNet Atlas mapping and identified four endangered or threatened species within proximity to the site: • Swift Parrot (*Lathamus discolor*) which is listed as Endangered under the BC Act and EPBC Act • Grey-headed Flying Fox (*Pteropus poliocephalus*) which is listed Vulnerable under both the EPBC Act and BC Act

Legislation	Relevant?	Approval Required?	Applicability
			• Large Bent-winged Bat (*Miniopterus orianae oceanensis*) which is listed as Vulnerable under the BC Act • Cumberland Plain Land Snail (*Meridolum corneovirens*) which is listed as Endangered under the BC Act Given low number of previous sightings of these species in proximity to the subject site, the Ecologist has stated that these species' likelihood of occurrence is considered moderate to low. Under the Section 8.4 BC Act, the effect of biodiversity certification is that development carried out under Part 5 of the EP&A Act on certified land is exempt from requiring an impact assessment on biodiversity. As the activity falls under Part 5 of the EP&A Act and occurs on biodiversity certified land, it is deemed, for the purposes of Part 5 not to have a significant impact on any threatened pieces, ecological communities, or their habitats on that land. Accordingly, no further assessments regarding biodiversity impacts are required as certification process has already addressed these impacts.
Heritage Act 1977	Yes	No	The subject site is not affected by a State or local heritage listing. LPS to the north of the subject site is listed on the department's Section 170 Heritage and Conservation Register. The two southern allotments of LPS (Lots 38E and 39C in DP 8979) are also mapped as having local heritage significance under the Precincts SEPP. The activity will not interfere with or affect the heritage listing or its curtilage.
Fisheries Management Act 1994	No	No	The subject site is not in proximity to any waterways and will not obstruct any water tidal patterns or flows. There is an existing pond on the site which is required to be dewatered as part of the activity. A Dewatering Management Plan is required to be prepared as a mitigation measure to ensure no harm to fauna will occur from the dewatering process, as indicated in the Ecological Assessment in **Appendix 13**.
Protection of the Environment Operations Act 1997 (POEO Act)	Yes	No	The proposed activity will not result in significant air, noise, water or waste pollution and therefore an approval under the POEO Act is not required.
Roads Act 1993	Yes	Yes	The activity involves creating a new access driveway along the southern boundary of the site. A Section 138 application to Council is required to connect the new accessway to Rickard Road. A separate application will need to be prepared and lodged with Council as Rickard Road is a Council road.

Legislation	Relevant?	Approval Required?	Applicability
Local Government Act 1993	Yes	Yes	Separate consent will be required from Camden Council, under Section 68 of the *Local Government Act 1993* for water supply, sewerage and stormwater drainage work (Part B of Section 68).
Environmental Planning and Assessment Regulation 2021 (Section 171A)	Yes	No	The site is located within a regulated catchment being the Hawkesbury-Nepean Catchment. The site falls within the Upper South Creek Catchment. The proposed activity will include provision of water quality treatment measures as part of water-sensitive urban design. Section 171(A) of the EP&A Regulation has been addressed at Section 6.13 of the REF.
State Legislation – State Environmental Planning Policies			
State Environmental Planning Policy (Planning Systems) 2021	Yes	No	It is noted under Section 2.6 of the Planning Systems SEPP, that a development does not automatically require consent under Part 4 of the Act solely because it is declared State Significant Development (SSD) under this section. Where an EPI permits the development without consent, it may instead be assessed as an activity under Part 5 of the EP&A Act. Although the estimated development cost exceeds $20 million, under the provisions of Section 3.37A of the TI SEPP, the activity can be carried out as development without consent.
State Environmental Planning Policy (Biodiversity and Conservation) 2021	Yes	No	Chapter 2 Vegetation in non-rural areas applies to the activity. However, no additional approvals or permits are required as the site is part of the biodiversity certification for the SWGA. Chapter 6 Water catchments also applies to the site. However, as Section 3.37A of the TI SEPP enables the activity to occur as 'development permitted without consent', no further approvals are required.
State Environmental Planning Policy (Sustainable Buildings) 2022	Yes	N/A	Section 3.1(1)(a) of the *State Environmental Planning Policy (Sustainable Buildings) 2022* (Sustainable Buildings SEPP) applies to the erection of a new building, if the development has an estimated development cost of $5 million or more. Section 3.2 of the SEPP specifies sustainability outcomes for non-residential development that the consent authority must consider in deciding whether to grant development consent. Whilst the activity does not require development consent under Part 4 of the EP&A Act and can instead be assessed as an activity under Part 5, an ESD Report has been prepared (**Appendix 23**) to demonstrate how sustainability has been integrated into the design and operations of the activity. In doing so, the REF has considered the provisions outlined in Section 3.2 of this SEPP.
State Environmental Planning Policy	Yes	No	The DSI concludes that remediation of the site will be required. A RAP has been prepared (**Appendix**

Legislation	Relevant?	Approval Required?	Applicability
(Resilience and Hazards) 2021			**9**) which sets out the scope and approach to remediation works for the site.
State Environmental Planning Policy (Transport and Infrastructure) 2021	Yes	No	In accordance with Section 3.58 Traffic-generating development of the TI SEPP, the proposed activity is considered traffic generating pursuant to (1)(b)(ii) and therefore will be referred to TfNSW.
State Environmental Planning Policy (Precincts – Western Parkland City) 2021			
Chapter 4 Western Sydney Aerotropolis			
Cl 4.22 Airspace operations	Yes	No	The site is within an OLS area for the Western Sydney Airport. The applicable OLS is penetrated by structures higher than 225.5m. The proposed activity does not penetrate the OLS.
Appendix 5 Camden Growth Centres Precinct Plan			
Land Use Table - Zoning	Yes	No	The site is zoned B7 Business Park and SP2 Infrastructure. “Educational establishments” are permitted with consent in the B7 zone under the Precincts SEPP. Notwithstanding, approval is being sought pursuant to Section 3.37A of the TI SEPP which states that development for the purpose of a school may be carried out without development consent on land in a prescribed zone and on which there is no existing or approved school. A portion of the western part of the site is zoned SP2 and relates to the future road widening of Rickard Road. The acquisition authority is Camden Council.
Cl. 4.3 Height of buildings	Yes	No	The maximum height of building control that applies to the site under the Precinct SEPP is 24m in the southern part and 12m in the northern part of the site. Notwithstanding, Section 3.37A(2) of the TI SEPP prescribes a maximum height of buildings of 4 storeys for the site. The TI SEPP prevails over the Precincts SEPP. The proposed activity includes four new buildings each being a maximum of three storeys in height and a new hall which is one storey in height. All buildings thereby comply with the maximum height of buildings for the site.
Cl. 4.4 Floor space ratio	No	No	No floor space ratio applies to the site.
Cl 5.1 Relevant acquisition authority	Yes	No	A portion of the site is land reserved for acquisition (LRA) to facilitate the widening of Rickard Road. Only landscape treatments are proposed in this portion of the site until acquisition occurs.
Cl. 5.10 Heritage conservation	Yes	No	The site is not listed as a heritage item or falls within a heritage conservation area. However, LPS to the north is listed as is listed on the department’s Section 170 Heritage and Conservation Register. The two southern allotments of LPS (Lots 38E and 39C in DP 8979) are also mapped as having local heritage significance under the Precincts SEPP. The SOHI confirms that the proposed activity will

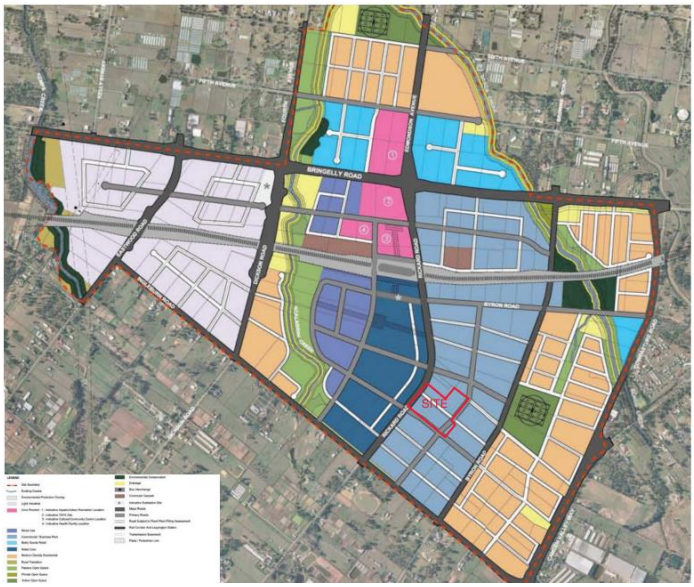
Legislation	Relevant?	Approval Required?	Applicability
			have a neutral heritage impact.
Cl 6.1 Public utility infrastructure	Yes	Yes	The consent authority must not grant development consent to development on land to which this Precinct Plan applies unless it is satisfied that any public utility infrastructure that is essential for the proposed development is available or that adequate arrangements have been made to make that infrastructure available when required. A Water Services Coordinator has been liaising with Sydney Water to carry out the Section 73 application requirements for the site. The Nor has not been lodged as we are awaiting the outcome of the Feasibility Application that has been lodged (Case Number 219026).

4.5 Camden Growth Centre Precinct Development Control Plan – Schedule 1 Austral and Leppington North Precincts

The DCP that currently applies to the Austral and Leppington North Precinct, as part of the SWGA, is the Camden Growth Centre Precincts DCP (latest update December 2024) and the accompanying, Schedule 1 Austral and Leppington North Precincts. However, we also note that a draft DCP was publicly notified at the end of 2023, beginning of 2024 as part of the Leppington Town Centre Planning Proposal (PP). In December 2024, the PP was announced as a state-assessed planning proposal and is now with DPHI for assessment and finalisation.

This REF considers the DCP currently in force, however the design development has also considered the draft DCP as it will alter the current ILP. The following table lists the relevant development controls that are applicable to the proposed activity.

Table 11: Relevant Development Controls of the Camden Growth Centres Precinct DCP

DCP Provision	Comment
Chapter 2 Precinct Planning Outcomes	**Indicative Layout Plan**  **Figure 35: Indicative Layout Plan, site outlined in red (Source: DPHI)**

DCP Provision	Comment
	The Indicative Layout Plan envisages the site forming part of a commercial/business precinct. Whilst the proposed activity is not consistent with the current vision of the ILP, the use of the site as an educational establishment is permissible as the B7 Business Park is a prescribed zone under the TI SEPP. Further, the draft ILP associated with the PP identifies the site as a future school under the SP2 Infrastructure (Education Establishment) zoning. The Precinct Planning Outcomes consider a sites heritage, vegetation, flooding, ecology, contamination and noise impacts to determine if the site is suitable for development. The site adjoins a heritage item to the north, LPS, but will have a neutral impact on heritage as the design and layout of the site has taken into consideration the item and its significance. The landscaping incorporates native vegetation and trees to contribute positively to the character and amenity. Principles of Crime Prevention through Environmental Design (CPTED) have been incorporated into the design to decrease opportunities for crime. Overall, the activity has considered the Precinct Planning Outcomes and has ensured the key principles have been incorporated into the activity, at all stages.
4 Development in Residential Areas	**Parking** The car parking requirements under the DCP for a school is: • One space per staff member Plus • One space per 100 students Plus • One space per five students in Yr 12 (based on estimated capacity for year 12 students to be specified in the Development Application) • A pick up / drop off facility of sufficient size to accommodate the forecast demand identified through a traffic and parking report. The resultant layout of the facility to be to the satisfaction of Council. The proposed car parking is 75 car parking spaces provided in the south-east of the site. Of these spaces, two will be accessible spaces. The TIA (**Appendix 15**) confirms that the 75 car parking spaces are sufficient to cater for staff requirements. However, the activity is not compliant with the parking requirement for students as it is the departments policy not to provide on site parking for students as they are encouraged to use sustainable methods of transport to and from school. As such a School Transport Plan has been included to reduce reliance on private vehicles, support sustainable travel moves and improve safety during construction. This is at Appendix C in the TIA (**Appendix 15**).
Chapter 5 Centres Development Controls	The development principles and controls of this chapter of the DCP have been carefully considered in the Architectural and Landscape Design Report (**Appendix 19**), detailing the site context, design concept including urban and built form, open space, traffic and access, security and CPTED.
Chapter 6 Site specific controls	The DCP Site specific controls include landscape design, built form and streetscape, ESD and waste management. The activity has considered these controls through the inclusion of the CWC Framework and Design quality principles in schools, designing a built form that is at an appropriate scale for the site and surrounds and landscaping that includes native planting to help create a buffer and contribute to the overall streetscape. The design of the built form has considered ESD principles and incorporated these to ensue a sustainable outcome for the site. Overall, the activity has considered the site specific controls and has ensured the objectives of each have been

DCP Provision	Comment
	addressed in the activity, at all stages.
Schedule 2 Leppington Major Centre	
Chapter 2 Development planning and design	The site forms part of the Leppington Major Centre which was rezoned on 15 March 2013 and identifies the site and surrounds as a commercial/industrial precinct. The new high school will integrate with the existing LPS and will be supported by the provision of shared bike and pedestrian paths, connecting the site to public recreation facilities and create opportunities for residents to enjoy access to facilities in a high quality urban environment.

4.6 Strategic Plans

Table 12 considers strategic plans that are relevant to the proposed activity.

Table 12: Consideration of applicable Strategic Plans

Strategic Plan	Assessment
A Metropolis of Three Cities – The Greater Sydney Region Plan	The *Metropolis of Three Cities – The Greater Sydney Region Plan* (Region Plan) sets a 20-year strategic plan to manage the growth in the context of economic, social and environmental matters to achieve the 40-year vision for Greater Sydney. The Region Plan envisions Greater Sydney as three cities where most residents live within 30 minutes of their jobs, education and health facilities, services and great places. These three cities are: • the Western Parkland City • the Central River City • the Eastern Harbour City The Region Plan has 10 directions for the metropolis of three cities, a liveability, productivity and sustainability framework. Of relevance to this proposed is: *Objective 1: Infrastructure supports the three cities* • The proposed activity for a new high school will provide essential infrastructure to support the growing population of the Western Parkland City. *Objective 2: Infrastructure aligns with forecast growth – growth infrastructure compact* • The new high school site has been chosen to respond to the anticipated growth in the Leppington Major Centre and more broadly, support the housing and employment needs of the growing population in the SWGA. *Objective 6: Services and infrastructure meet communities' changing needs* • The proposed activity will deliver essential infrastructure that utilises land efficiently, through careful landscaping and bult form layout while creating a range of flexible learning spaces to respond to changing needs.
Western City District Plan	The Western City District Plan is a 20 year plan to manage the growth in the context of economic, social and environmental matters to achieve the 40 year vision of Greater Sydney set out in

Strategic Plan	Assessment
	the *Metropolis of Three Cities – The Greater Sydney Region Plan*. The District Plan has 10 directions, of which planning priorities are set out for each direction to ensure delivery of the plan. Of relevance to this activity is: *Planning Priority W1: Planning for a city supported by infrastructure* • This planning priority is to fairly balance population growth with infrastructure investment. Planning decisions must equitably balance local opportunities, inclusion and connection to services. • The location of the proposed new high school within the Western City has considered all activity needs and alternatives and determines the most equitable and appropriate decision to balance local opportunities, inclusion and connection to services. *Planning Priority W3: Providing services and social infrastructure to meet people's changing needs* • This planning priority is to ensure that places, services and social infrastructure meet people's changing needs. • The significant residential growth in the surrounding area has resulted in an unsustained pressure on existing high schools in the area. To address the current and future demand in the Leppington Town Centre Precinct it is necessary to provide a new high school to meet the changing needs of the community.
Camden Local Strategic Planning Statement 2020	Local Strategic Planning Statements (LSPS) are instrumental tools in New South Wales for guiding local strategic planning efforts. They inform local statutory plans and development controls while translating regional and district plans into actionable measures. These statements act as unifying documents, summarising planning priorities from various levels of strategic work. In practice, Local Strategic Planning Statements shape the evolution of LEP and DCP over time, reflecting and adapting to the specific needs and priorities of the local community. The Camden LSPS is a 20-year vision for land use, transport and sustainability that outlines the strategy to implement the vision of the District Plan at a local level. The Camden LSPS identifies themes for the area based on the regional plan, including: • Infrastructure and Collaboration • Liveability • Productivity • Sustainability • Transport The proposed activity satisfies the themes for the following reasons: • supports liveability of the local area by providing the community with an educational facility in an area that is well-located, close to public transport infrastructure. • contributes towards livability by providing a social infrastructure for future community needs. fosters productivity by providing more dedicated space for education purposes in areas of anticipated population growth creating a diverse major centre for residentials, workers and visitors • includes sustainable design including, efficient energy, water and waste use and protects biodiversity values through tree and habitat retention.

Strategic Plan	Assessment
	Transport The proposed activity aligns with Local Priority 12 of the LSPS by supporting an integrated transport network, by considering and including the future duplication of Rickard Road in the development of the site layout and function. The TIA (**Appendix 15**) confirms that given the increasing population, the update will be important in the future of the precinct. Engagement with Council and TfNSW recognises the priority of delivering road upgrades in the area, A School Transport Plan (Appendix C in the TIA (**Appendix 15**)) outlines strategies to encourage active and public transport options for both staff and students.
Connecting Camden – Community Strategic Plan 2036	The Community Strategic Plan sets the community's vision and aspirations for a minimum of ten years. Developed through robust community engagement, it functions as a forward-looking roadmap, with the council holding a custodial role in its refinement. Guided by social justice principles, it aligns with the State Plan and other pertinent strategies. Addressing fundamental questions, the plan outlines priorities, aspirations, and implementation strategies over the next three decades. Regular updates every four years ensure adaptability to changing circumstances and evolving community aspirations, adhering to government requirements. The Camden Community Strategic Plan (CSP) sets the over-arching 10-year plan for the LGA, identifying the main priorities and strategies for achieving the community's desired future. The CSP identifies 5 key directions: • Welcoming • Liveable • Prosperous • Balanced • Leading The proposed activity aligns with the CSP and identified opportunities for Camden to cluster facilities together such as education to create opportunities for residents and establish Camden's role in the Western Parkland City. Alongside the adjoining public school, the site will form part of the Leppington education precinct and help support the growing population through essential infrastructure.
Camden Council Delivery Program 2022/26 and 2024/25 Operations Plan (Budget)	The off-site works included in the proposed activity, as detailed within the TIA (**Appendix 15**) include: • Road signage and linemarking on Rickard Road • Proposed median strip within Rickard Road to prevent right hand turn • Stormwater drainage connection • Driveway connection (upgrade existing rural driveway crossing) • Bus bays provided on Rickard Road (relocate existing from PS and upgrade to accommodate HS) • High voltage (HV) electrical connection • Information and communication technology (ICT) connections • Water connections Connection to sewer main at Ingleburn Road, including pipe installation on Rickard Road. Any transport or road works in the

Strategic Plan	Assessment
	broader locality are under consideration as part of the Leppington Town Centre PP which is anticipated to significantly increase density in the locality.

5. Consultation

5.1 Early Stakeholder Engagement

Table 13 provides a summary of early stakeholder (non-statutory) consultation undertaken to inform project development and preparation of the REF. A more detailed description of consultation and any resulting recommendations are contained in the Agency Consultation Report in **Appendix 29**.

Table 13: Summary of Early Stakeholder Engagement

Stakeholder	Date of Engagement	Issue Raised	Project Resolution
Aboriginal stakeholders	23 September 2024 4 October 2024	Representatives from the First Nations community, together with members of the project team, visited the site to explore the needs of Country and build strong relationships with one another. Feedback from this engagement is included in the Architecture and Landscape Design Report in **Appendix 19**.	Collaborative design workshops led by Yerrabingin identified recycling of material of Country as a site specific sustainability measure: the re-use of the timbers from felled trees on site and the inclusion of locally sourced stone in the landscaping, particularly in the terracing between the sports courts and the field, and the winding access path up from the secondary entry on Rickard Road to the sports courts. The importance of the geology of the landscape is also carried through into the colour sections and layering of colour in the facades. Native species planting throughout the site will also contribute significantly to healing Country which had previously been cleared for agricultural purposes.
Camden Council	25 October 2024	Flooding • Council noted potential site impact issues if flooding in the precinct occurred.	Flooding The Flood Statement and Flood Emergency Response Plan (FERP) (in **Appendix 5**) have been prepared to assess the flooding impacts of the site.
	19 & 25 October 2024	Car Parking/ Traffic • Concern with number of carparking spaces proposed • Surrounding future road development • Need for larger kiss and drop with left in left out only	Car Parking / Traffic • The number of car parking spaces have been increased to address the number of teachers and staff • The assessment of the activity has been undertaken using current DCP controls and do not rely on the construction of new roads, as identified in the ILP and draft ILP • The length of the kiss and drop zone has been

Stakeholder	Date of Engagement	Issue Raised	Project Resolution
			increased to accommodate more cars from the high school only (not integrated with LPS to the north) • Left in left out only provided The Architectural Drawings (**Appendix 18**) and Landscape Drawings (**Appendix 20**) refer to offsite works
	25 October 2024	Urban Planning • Potential gazettal of Leppington Town Centre PP in 2025 • Links between HS and PS	Urban Planning • Confirmation that the HS can accommodate future ILP roads when required • Confirmation that no physical integration between the existing LPS to the north and the activity proposed at this stage.
	25 October 2024	Stormwater / Sewer Connection • Council indicated a preference to develop a new sewer connection which runs south within the Rickard Road reserve to Ingleburn Road.	Stormwater/ Sewer Connection This design measure is included in the REF package
Government Architect NSW (GANSW)	25 September 2024	Presentation to the State Design Review Panel (SDRP). • GANSW issued recommendations relating to Connecting with Country, Site Strategy and Landscape, Architecture and Sustainability and Climate Change. • A summary of the response to these recommendations is in Section 0 of this REF report. A detailed response to these recommendations is in the Architecture and Landscape Design Report in **Appendix 19**.	• SRDP informed the design of the school with regard to water sensitive urban design approach, tree canopy targets, shade, eaves etc. • Detail is provided within the Architectural Design Report.
Transport for NSW (TfNSW)	11 September 2024	• Need for swept path assessment for buses, splays at intersections. • Drop off and pick up arrangements on western side of Rickard Road.	• Swept path analysis is included in the TIA (**Appendix 15**) • Public domains works include the installation of ‘no stopping’ signs
NSW Rural Fire Service (RFS)	29 October 2024	• RFS confirmed the site is not located in a bushfire prone area. As such, the activity is low risk and will be treated accordingly. There would be no requirement to comply with Planning for Bushfire	• No project resolution required.

Stakeholder	Date of Engagement	Issue Raised	Project Resolution
		Protection 2019.	
NSW State Emergency Service (SES)	31 October 2024	• The need for a FERP despite the site not being flood prone as surrounding roads are subject to inundation.	• A FERP (in **Appendix 5**) has been prepared to accompany this REF.
Sydney Water	27 November 2024	• Discussions with regard to the anticipated demands of the activity and presentation of sewer options.	• A feasibility application has been lodged with Sydney Water.

5.2 Statutory Consultation

Consultation will be undertaken in accordance with statutory requirements under the TI SEPP and having regard to the SCPP DPHI and the SCPP DoE. This includes:

- sending notices to affected neighbours, owners and occupiers inviting comments within 28 days
- sending notices to the local council and relevant state and commonwealth government agencies and service providers inviting comments within 28 days
- placing an advertisement in the local newspaper
- making the REF publicly available on the Planning Portal throughout the consultation period.

Comments received will be carefully considered and responded to.

6. Environmental Impact Assessment

6.1 Traffic, Access and Parking

This chapter summarises the TIA report, which is provided at **Appendix 15**. The TIA reviews the school's future travel demand, establishes transport modes, identifies transport infrastructure and operations, describes potential impacts and provides mitigation measures where impacts are unavoidable.

6.1.1 Assessment guidelines

Traffic impacts have been assessed in accordance with the following guidelines:

- NSW Department of Education Transport Assessment and School Transport Plan Report Guidelines.
- NSW Department of Education Transport Planning Advisory Note.
- Transport for NSW Bus Infrastructure Guide.
- Traffic Modelling Guidelines (Roads and Maritime Services, 2013).

6.1.2 Existing access

Existing vehicular access to the site is via Rickard Road which is a local road that provides wider access to the site from Bringelly Road, further north, and Heath Road, further south. Rickard Road currently provides a single lane of traffic in each direction with a speed limit of 60 kilometers per hour (kph). During the Leppington Public School peak times the speed limit for part of Rickard Road is 40 kph between 8am and 9:30am and 2:30pm and 4pm.

Existing pedestrian access to the site is via a footpath on eastern side of Rickard Road from Leppington station and commuter car park to the north to the intersection of Rickard Road and Neptune Road in the south, providing access to Leppington Village and a series of new residential developments (approx. 1km). There are no shared paths within the vicinity of the site.

The site is around 500m south of Leppington Train Station. The T2 Leppington and Inner West Line and T5 Cumberland Line trains stop at Leppington Train Station.

A bus stop (Stop ID 2171166) is located 20m from the site to the north and services both public and Leppington Public School buses. **Table 14** summarises the existing bus routes and schedules at this bus stop.

Table 14: Existing bus routes and schedules

Public Bus		
Number	**Route**	**Arrival/ Departure time**
1020	Catherine Field to Carnes Hill Marketplace	8.50am
1025	Leppington (South) to Leppington Public School and Carnes Hill	8.45am
841	Narellan to Leppington via Gregory Hills	8.49am 3.06pm

Public Bus		
		3.25pm
856	Bringelly to Liverpool	7.22am
858	Oran Park to Town Centre to Leppington	8.43am 3.30pm
861	Denham Court to Carnes Hill via Austral	8.28am
2028	John Edmondson High School to Leppington	3.20pm
2032	Good Shepherd Public School to Bringelly and Kelvin Park	3.26pm
2044	Leppington Public School to Ridge Square and Narellan	3.22pm
2051	John Edmondson High School to Rossmore and Leppington	3.10pm 3.18pm
School bus		
Leppington Public School bus services include the 1025 and 1020 in the AM period and the 2028, 2032, 2044 and 2051 in the PM period.		
1025	Dwyer & Camden Valley to Leppington PS and Carnes Hill	8:05am
1020	Catherine Field and Camden Valley to Carnes Hill Marketplace	8:29am
2028	John Edmondson HS to Leppington	3:20pm
2044	Leppington PS to Ridge Square and Narellan	3:22pm
2032	Good Shepherd PS to Bringelly and Kelvin Park	Departure from Good Shepherd PS at 14:45pm
2051	John Edmondson HS to Rossmore and Leppington	Departure from John Edmondson HS at 14:45pm

6.1.3 Proposed access

The proposed vehicular access has been designed with regard to the draft Leppington Town Centre PP, including future upgrade to Rickard Road and future new roads (Section 4.5) and in consultation with Council. As detailed in Section 2.4.1, an internal access way is proposed at the southern boundary to provide access to the vehicles travelling from Rickard Road to the kiss and drop zone, staff parking, servicing and loading zone. Vehicles are proposed travel along the southbound lane of Rickard Road and then turn left to enter the internal access way and also turn left to exit the internal access way back onto Rickard Road. Two cars are able to enter and exit the access way without having to give way to each other. The following measures have been included in the proposed activity to manage the internal access way:

- a “No through-road” sign will be provided at the entrance to the driveway, within the site boundary.
- a sliding gate is to be provided across the access way to prevent unauthorised vehicles from entering. The gate will be operated automatically, opening 30min before and after kiss and drop period. The staff and other authorised vehicles will access with a swipe card.
- a concrete median is proposed on Rickard Road to provide a physical barrier for enforcing the left in left out arrangement of the onsite access way.

- painted line markings at the driveway and Rickard Road interface to provide additional warning to drivers of potential pedestrians of cyclists.

Bicycle parking will be provided for 34 bikes near to the main school entrance off Rickard Road. One end of trip shower facility is provided for use by staff who cycle to work.

6.1.4 Impact assessment

Traffic

The TIA found that the below intersection are key to accessing the site:

- Rickard Road/ Byron Road
- Rickard Road/ Ingleburn Road
- Ingleburn Road/ Byron Road

The TIA modelled the existing traffic volumes for 2024 based on intersection count surveys conducted in November 2024. The TIA also modelled the future performance of the above intersections, with a background traffic growth was assumed to be 1.5% per annum, for the following two scenarios:

- Upon opening in 2027 the school is expected to operate with a reduced capacity of approximately 270 students, including
  - a moderate mode share target with 61% being dropped-off or picked-up from the school
  - 1.3 students per vehicle
  - a total of generation of 120 kiss and drop associated vehicles
- Full capacity of 1,000 students, including
  - a moderate mode share target with 61% being dropped-off or picked-up from the school
  - 1.3 students per vehicle
  - a total generation of 480 kiss and drop associated vehicles

The TIA also considered that teachers are not expected to arrive or leave the school during the peak drop-off and pick-up period and so their impact on the peak flows is therefore considered negligible.

It should be noted that the TIA modelled future intersection performance based on the existing road infrastructure. That is, the modelling did not include the future road upgrades and new roads to be construction by Council or developers in the draft Leppington Town Centre PP, which includes:

- Upgrades to Rickard Road, which will provide a 37.6m wide transit boulevard, with two travel lanes in each direction
- A new road adjoining the southern boundary of the site (Southern Road - identified in the Draft ILP as a “Town Centre Street”)
- A new road adjoining the eastern boundary of the site (identified in the Draft ILP as a “Town Centre Street”)
- Signalisation of the intersection of:
  - Rickard Road and the proposed Southern Road
  - Rickard Road and Ingleburn Road.

The Draft DCP identifies a Town Centre Street as follows:

*"**Town Centre Streets** are active and pedestrian friendly, with capacity for buses to circulate on bus capable streets. Town Centre Streets have active ground floor frontages."*

The modelling undertaken has not included the upgrades to Rickard Road or the future roads to the south and east of the site, as the timing for delivery of these roads is currently unknown and cannot be committed prior to 2027 when the school will commence operation. As the Rickard Road upgrade requires funding and the southern and eastern roads will only be delivered at the time these adjoining sites are developed, the modelling has been prepared, based on the current road network.

The performance of the key intersections is summarised in **Table 15**.

The intersection performance for 2027 without development of the school and only considering background growth for AM and PM peak periods is concluded as follows:

- All three intersections operate at LOS C or better with acceptable delays and spare capacity in both AM and PM peaks.
- Traffic Modelling Guidelines (Roads and Maritime Services, 2013) outlines that a roundabout has a maximum practical degree of saturation of 0.85. In both AM and PM peaks, the degree of saturation of intersection at the Rickard Road / Ingleburn Road exceeds the practical value of 0.85 for roundabouts. This suggests that the intersection is nearing capacity and after 2027, the need to duplicate Rickard Road is exacerbated.

Table 15: Performance of key intersections

Intersection	Existing	Without school 2027	2027 school opening LoS	Full capacity LoS
Rickard Road/ Byron Road	A	A	A	F
Rickard Road/ Ingleburn Road	B	C	F	F
Ingleburn Road/ Byron Road	B	B	B	F

This modelling confirms that the Rickard Road duplication is required to manage the background growth, even without the provision of the new high school. Camden Council has confirmed this and advised that this is why design of the Rickard Road duplication has been completed as it is essential for the growth of the area, particularly in consideration of the Leppington Town Centre PP which will significantly increase population density with the inclusion of more medium and high density land in this location.

The full capacity scenario relies upon the existing road network and an assumed student population of 1,000 in 2027, which will not occur as the student population will require several years to reach this capacity, but demonstrates the maximum possible scenario, prior to the duplication of Rickard Road and provision of the surrounding road network.

The full capacity scenario of 1,000 students provides for a left in left out arrangement for the school driveway and a moderate mode share target with school traffic of 480 vehicles to show the performance results for Rickard Road/ Ingleburn Road and Rickard Road/ School driveway intersections at AM and PM peak periods. The key findings conclude:

- The roundabout at Rickard Road/ Ingleburn Road exceeds capacity and operates at LOS F in both AM and PM peaks. A significant delay of 185 seconds total and 485 seconds total is observed at the north approach of this intersection in the AM and PM peaks respectively. The degree of saturation exceeds the practical value of 0.85 for roundabouts. The queue length at this intersection exceeds 40 vehicles in both peaks.
- The Rickard Road/ School Driveway intersection performs at LOS A with spare capacity and acceptable delays.

Due to the high degree of saturation, average delay and extensive queues, the future performance of the roundabout at Rickard Road / Ingleburn Road with 1,000 students enrolled in 2027 is considered poor. However, the school will only reach this capacity after several years of operation.

While the school population is expected to increase each year, the development of the high school is not the core reason for the poor performance of the intersections. Rather, the background traffic and predicted growth of Leppington Town Centre are the main contributor to the volumes that govern the poor performance, as can be seen by the Degree of Saturation of 0.88 and greater at the intersection of Rickard Road and Ingleburn Road without the development traffic added.

Leppington is currently evolving due to the location within a growth centre and previous rezoning of the locality. In addition, the Leppington Town Centre Planning Proposal has been recently identified as a State Assessed Rezoning, given the significance of the rezoning which is proposed in this location. The proposed Town Centre rezoning will further increase the population of the immediate location and increase the need to proceed with the duplication of Rickard Road. The implementation of the ILP and high density zoning proposed surrounding the school site is also likely to see development proceed which will include the provision of southern and eastern roads surrounding the school site.

From engagement outcomes with Camden Council, it is understood that the Rickard Road duplication has been planned for several years, and Council has completed the 100% design of the proposed road and is eager to proceed, subject to funding. Along with the proposed local roads which comprise the Leppington Town Centre masterplan, there is a clear understanding from Council and Transport for NSW that road upgrades are a necessary priority in this location.

It is anticipated the State Assessed Rezoning will allow the upgrade of Rickard Road to become a priority and anticipate the works will be undertaken following the opening of the high school in 2027, but prior to reaching a student capacity of 1,000.

- A further scenario, in addition to those scenarios listed in the table above, has been developed which provides for redistribution of background traffic, which is likely to reroute to avoid the congestion. Based on the investigation of the area as well as information provided by Council, it is understood that much of the traffic providing the background congestion is utilising the Ingleburn Road/ Rickard Road intersection as a “rat run” to avoid other traffic in the broader locality. Consequently, some assumptions have been made that this background traffic will reroute away from the Ingleburn Road/ Rickard Road intersection to avoid congestion as follows: Northbound and southbound traffic on Rickard Road may use Dickson Road, Eastwood Road and Heath Road as alternative routes.
- eastbound and westbound traffic on Ingleburn Road may reroute to Heath Road

To account for this predicted rerouting of traffic patterns, a background traffic redistribution was applied for the SIDRA assessment with the following changes:

- Westbound and eastbound background traffic at the roundabout is reduced by 20%, assuming these vehicles would reroute without using Ingleburn Road.
- Northbound and southbound background traffic at the roundabout is reduced by 10%, assuming these vehicles would reroute without using Rickard Road.

This rerouted scenario provides the following key findings with regard to the performance results for Rickard Road/ Ingleburn Road and Rickard Road/ School driveway intersections at AM and PM peaks:

- The roundabout performs at LOS B and LOS C with spare capacity and acceptable delays in the AM and PM peaks respectively.
- The Rickard Road/ School Driveway intersection performs at LOS A with spare capacity and acceptable delays.

LPS located to the north and its anticipated growth in student population has also been incorporated in the assessments with an assumed offset of 30 minutes between bell times for the two schools to reduce congestion at drop off and pick up times.

Kiss and Drop

In order to design the kiss and drop, the TIA has considered mode share targets, which refers to the proportion of trips made by different modes of transport, such as walking, cycling, public transport and private vehicles. These targets are categorised into baseline, moderate and reach targets to set progressive goals for improving sustainable transport options. The mode share targets were developed in consultation with the Transport Working Group for the Leppington Education Campus.

The baseline mode share target for Leppington HS reflects the travel patterns of students during 2027 without any proposed interventions and considers that only existing school buses would operate without any new services, as well as assuming most students will live outside the active transport catchment. Therefore, the students are expected to rely heavily on private vehicles as the preferred mode of transport.

The moderate mode share target assumes the introduction of additional school bus services with the same amount of active transport and reduced private vehicle trips.

The reach mode share target will see a further increase in school bus services with walking and cycling access maximised through behaviour change programs. It is considered that this culture of active transport can be set from day one as it is a new school. This scenario would also minimise dependence on the kiss and drop zone and reduce overall road network congestion during pick-up and drop-off periods.

The length of the onsite kiss and drop zone has been designed based on:

- the school capacity of 1,000
- mode share target of 31% for private vehicle use (reach target)
- average dwell time of 1.6 minutes (the time it takes on average for the high school student to locate their vehicle and enter). This is considered appropriate with high school students usually able to identify their vehicle quickly, where 2 minutes is generally observed as a conservative estimate by the traffic consultant at other schools through their travel coordinator role and for younger students who may take a little longer to identify their car.

- an average of 1.3 student per vehicle. This average is considered achievable by the traffic consultant, given a strong car pooling system that is championed by the school principal and staff.

Based on these assumptions, a kiss and drop length of 79m is proposed adjoining the administration building, which provides for 13 spaces at any time and has also assessed that there is appropriate space for queueing onsite and away from Rickard Road, as detailed within the TIA.

The kiss and drop is located off the internal access way which provides access from Rickard Road via a left-in left-out arrangement. Kiss and drop vehicles will be able to exist the site using the turn around area on the eastern side of the site. “No-through-road” signage is to be provided at the entrance to the driveway to warn drivers that the road is to used by kiss and drop vehicles only. A sliding gate is to be provided along the site fence line to prevent unauthorised vehicles from entering. The gate will automatically open 30 minutes before and after the kiss and drop periods, while staff will be provided a swipe card function for outside this period.

A concrete median is proposed to provide a physical barrier for enforcing the left-in left-out arrangement and painted line markings at the driveway and Rickard Road interface will provide additional warning to drivers of potential pedestrians or

LPS located to the north and its anticipated growth in student population has also been incorporated in the assessments with an assumed offset of 30 minutes between bell times for the two schools to reduce congestion at drop off and pick up times.

No stopping signage is proposed on the western side of Rickard Road in order to disallow and discourage vehicles from dropping off or picking up students on the western side of the road where there is no safe crossing location and to establish behaviours before the duplication of Rickard Road occurs. No stopping signage is also proposed on the eastern side of Rickard Road outside the proposed bus zone to encourage all vehicle to use the kiss and drop zone. Kerbside signage is depicted in the following figure.

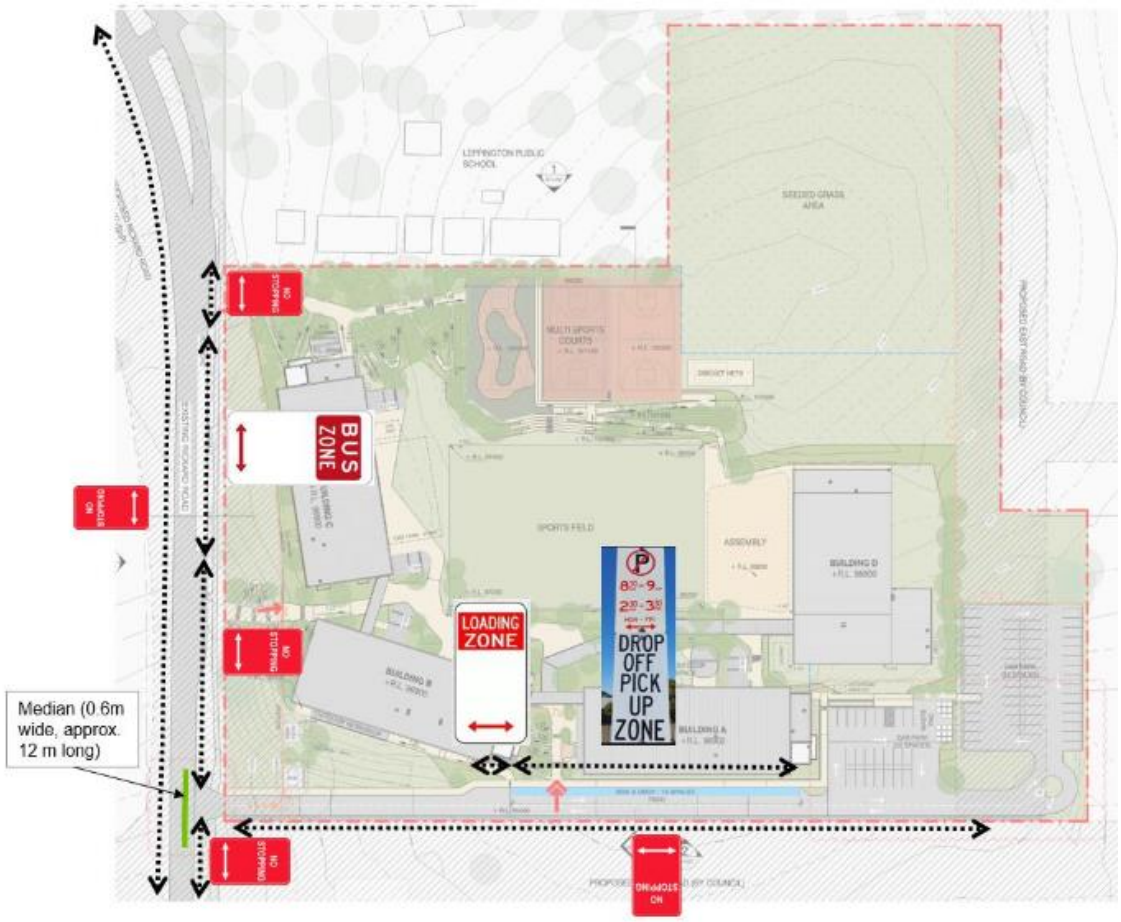


Figure 36: Kerbside signage plan (Source: Stantec)

Bus stop

The TIA used the travel zone projections provided by TfNSW which show that approximately 554 of the 1,000 students are expected to live within a distance from the school site that can be services by buses. Out of those 554 students that can travel to school by bus, 451 students are from the north and 103 are from the south. Based on this projection, the TIA found that a total of 10 school buses are required to service the school, including eight traveling to the site from the north and two from the south.

The activity includes construction of a 57m long bus bay on Rickard Road with dimensions that comply with the Transport for NSW Bus Infrastructure Guide. The proposed bus bay can accommodate up to three buses at one time, or a total of ten over a 20 minute period. The bus bay is identified as a “bus box” and sits within the lane.

The bus stop is currently located just north of the site, adjoining the public school but will be relocated to the proposed location in front of the high school and extended to accommodate the existing public school buses and proposed high school buses. The bus stop will remain as a public bus zone and will be operational at all times as currently occurs, albeit approximately 20m south of the current location.

High school students may choose to catch public buses, however TfNSW has indicated that there is no plan for increased frequency or coverage for public services before the development of the Leppington Town Centre and increase density in the area. Therefore, usage of the existing public

services would likely be low. Dedicated school buses have been discussed with TfNSW at the TWG and a mitigation measure is proposed to continue discussion to increase school buses.

The following routes are proposed for the school buses (noting that bus route planning is the responsibility of TfNSW. Through engagement with the TfNSW bus planning team within the TWG for the Leppington Education Campus, the traffic consultant has communicated to the team the locations suitable for planning the routes. These areas are shown in the TIA. The TfNSW team were receptive to the information and have said that they will investigate. A mitigation measure is proposed to continue advocating with TfNSW).

- from the south - Dickson Road and Bringelly Road, or, Camden Valley Way, then Cowpasture Road and Bringelly Road the proposed bus zone on Rickard Road
- from the north - Ingleburn Road, Dickson Road and Bringelly Road, or, Ingleburn Road, then Camden Valley Way and Cowpasture Road

Camden Valley Way, Bringelly Road and Ingleburn Road are already functioning bus routes and no upgrades to existing intersections are required to accommodate proposed bus routes.

The Transport for NSW Bus Planning team is responsible for service route planning and are currently being engaged with during the Transport Working Group process. The TWG were made aware of the plans for the bus zone on Rickard Road, outside the high school, during the 19 December 2024 meeting. A mitigation measure is provided to continue advocating with TfNSW to ensure additional school bus services are implemented for the high school.

Car parking

Car parking is provided in accordance with the rates provided in the Camden Growth Centres DCP for staff with 1 space provided per full time employee, which is a total of 75 spaces. This includes two accessible spaces. As there are a maximum of 75 staff when the school reaches capacity and 75 car parking spaces available for staff, there will be no need for staff to park off site.

When the Leppington Town Centre PP is finalised and the Draft DCP and Draft ILP are implemented, there is a future road proposed within the boundary of the school site in along the eastern edge of the site. When the adjoining sites to the east are developed, the school will need to accommodation a full width of the road within the southern portion of the site and a half width road within the northern portion of the site. At such a time, there will be a separate planning pathway to relocate the eastern most area of the car park to the unused northern grassed area of the site.

The DCP provides for one space per 100 students and one space per five students in year 12 where appropriate however, DoE does not provide on site parking for students as they are encouraged to use sustainable methods of transportation. While sustainability in travelling to and from school is the main driver of this policy position, safety is also a concern and the department discourages inexperienced drivers entering school grounds or carpooling with friends.

Delivery and waste vehicles

Delivery vehicles will be directed to park immediately west of the kiss and drop zone with swept paths shown to depict how 8.8m vehicles will enter and exit in a forward direction.

Waste collection will occur from the waste collection area located in the car park. Swept path assessment for a 10.5m waste vehicle with rear loading capability is provided which depict that the vehicle is able to enter and exit the site in a forward direction.

The location of the waste and delivery areas has been sited to provide onsite servicing and remove the potential for any waste pick up or delivery to occur on Rickard Road.

The delivery area is provided within the kiss and drop zone but limited to hours outside peak drop-off and pick-up times to ensure no conflict with kiss and drop operation. The delivery vehicles will then have access to the wood, art and science classrooms in Building B for material delivery as well as the canteen for food delivery and access to the school at the Admin building in Building A to check in as a visitor to the site. Waste will be collected from the waste area adjoining the car park outside school hours to ensure there is no conflict with waste vehicles, staff parking of kiss and drop.

6.1.5 Mitigation Measures

The following mitigation measures will be implemented during design, construction and operation of the project.

Table 16: Mitigation Measures for Traffic, Access and Parking

Mitigation Number/Name	Aspect/Section	Mitigation Measure	Reason for Mitigation Measure
1	Cycling	Provide bicycle parking (34 spaces)	To support students who cycle to Leppington HS. Additional space for increasing the amount of bike parking as students shift to be living within the cycling catchment as the Leppington Town Centre is developed has been accounted for.
2	Cycling	Provide 1x end-of-trip facility for staff	To support staff who ride to work as the Leppington Town Centre begins to develop and workers are living closer to the site.
3	Vehicle access	Provide internal site driveway and turn-around area to support kiss and drop, staff parking and service vehicle access	To provide safe access for kiss and drop, parking and service vehicles prior to the duplication of Rickard Road and the provision of the new South Road.
4	Public transport	Provide bus bay (57m) on Rickard Road	To support target mode share for public transport and reduce reliance on private vehicles.
5	Public transport	School bus optimisation and route planning to suit the needs of Leppington HS students through ongoing engagement with TfNSW and the TWG relating to the Lepping Education Precinct.	To reduce reliance on private vehicles.
6	Road safety	Provide “No Stopping” signage on the western and eastern side of Rickard Road	To discourage any pick-up or drop-off activities occurring on the western side of Rickard Road
7	Road safety	Provide concrete median in the middle of Rickard Road, in alignment with the site’s	To prevent any right hand turns into the internal site driveway, reducing vehicle conflicts and improving road

Mitigation Number/Name	Aspect/Section	Mitigation Measure	Reason for Mitigation Measure
		internal driveway entrance	safety
8	Road safety	Provide painted line markings at internal site driveway	To provide additional warning for drivers to look out for pedestrians at the driveway
9	Parking	Provide 75 on site parking spaces for staff.	To prevent any staff relying on parking on local streets
10	Private vehicles	Off-set school bell times with the Leppington Public School by at least 30 minutes	To reduce congestion in the road network during pick-up and drop-off times.
11	Vehicle access	Limit the size of the vehicles entering the site to 10.5m waste truck and 8.8m delivery truck	To enable turnaround of vehicles and forward exit of vehicles from the site
12	Private vehicle	Implement School Transport Plan measures, messages, initiatives and programs outlines in Appendix C of TIA. This includes adopting a carpooling scheme for students. The STP must be reviewed every 12 months and updated as required.	To reduce reliance on private vehicles, support sustainable travel modes and support students' safety
13	Construction	Implement Preliminary Construction Traffic Management Plan mitigation measures as outlined in Appendix B.	To reduce the impact of construction related vehicles on the road network and improve safety during construction
14	Private vehicles	Provide gate at internal road driveway which will automatically open and close 30min before and after the kiss and drop period. Swipe access cards to be provided to staff for use outside these times.	To prevent unauthorised vehicles from entering the site
15	Private vehicles	"No through-road" signage is to be provided at the entrance to the driveway.	To warn drivers that the road is to be used by kiss and drop and vehicles associated with the school only

6.2 Noise and Vibration

6.2.1 Introduction

This chapter summarises the Noise and Vibration Impact Assessment (NVIAR), which is in **Appendix 24**. The NVIAR describes the existing environment, noise assessment criteria which apply to the project, potential construction and operation noise sources, modelling method and results, potential impacts and mitigation measures where impacts are unavoidable.

6.2.2 Assessment guidelines

Noise impacts from operations and road traffic at relevant receivers have been assessed in accordance with the following guidelines:

- NSW Environment Protection Authority (2017) Noise Policy for Industry (NPI).
- NSW Department of Environment, Climate Change and Water (2011) Road Noise Policy (RNP).
- NSW Department of Environment and Conservation (2006) Assessing Vibration: a technical guideline.
- Australian Standard AS2021:2015 'Acoustics – Aircraft Noise Intrusion – Building Sitting and Construction'.

6.2.3 Existing environment

The nearest sensitive receivers are:

- Residential buildings located along eastern, southern and western property boundaries.
- Educational buildings (Leppington Public School) on the northern property boundary.

Table 17: Current sensitive receivers surrounding the site

Receiver ID	Sensitive Receiver	Receiver Status	Receiver Type	Approx. Distance, m
1	144 Rickard Road	Existing	Educational (Business Park – B7)	<5
2	129, 141, 153 Byron Road	Existing	Residential (Business Park – B7)	<5
3	118 Rickard Road 74 Ingleburn Road	Existing	Residential (Business Park – B7)	<5
4	151 Rickard Road	Existing	Residential (Commercial Core – B3)	15

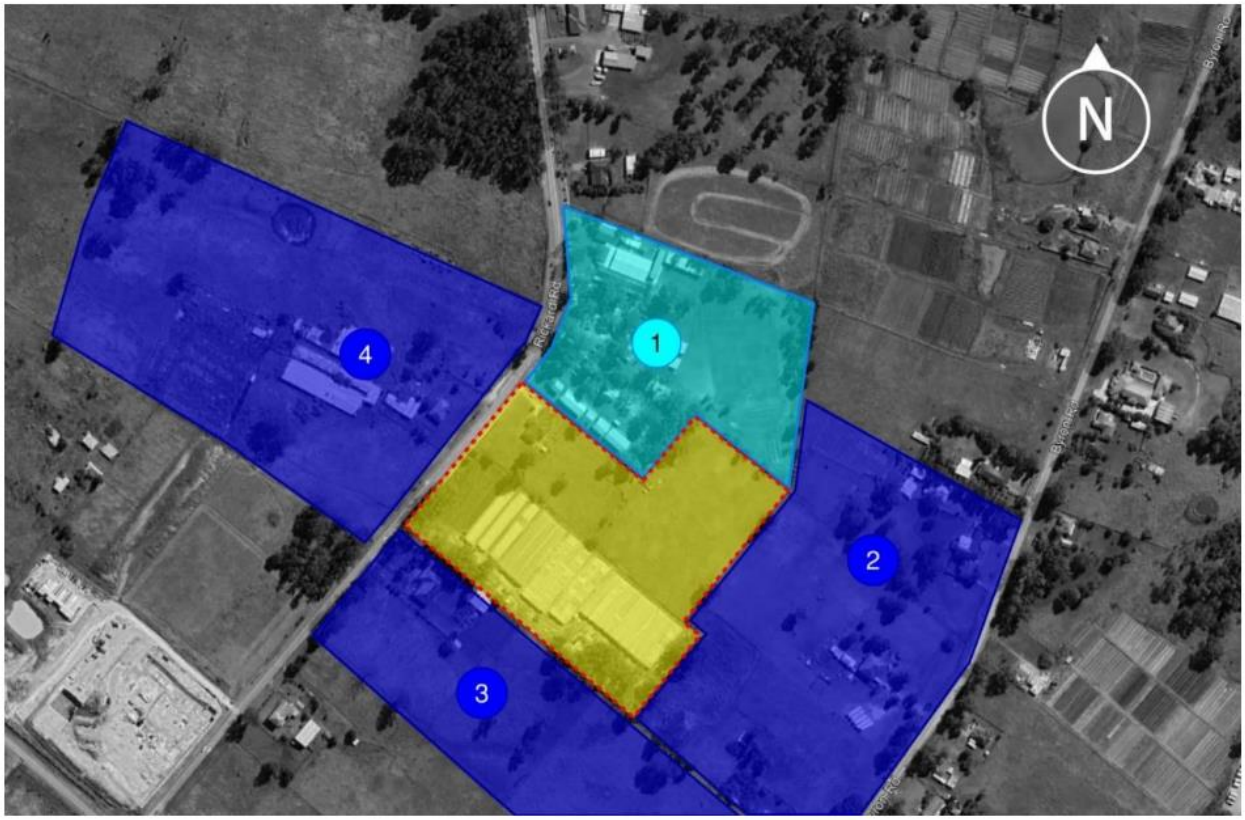


Figure 37: Current sensitive receivers surrounding the site (Source: JHA)

Noise was monitored around the site (unattended) from 6 to 18 December 2023 to characterise existing ambient noise levels (**Table 18**). Noise was also monitored using a hand-held monitor on the first day of unattended monitoring (**Table 19**).

The monitoring was used to determine the rating background level (RBL) (the noise level exceeded for 90% of the measurement time) and the ambient noise level (the all-encompassing noise in the environment).

Table 18: Summary of unattended background noise monitoring

Location	Rating background level dB(A)			Ambient level, dBA(A) L_{Aeq}		
	Day	Evening	Night	Day	Evening	Night
L1 & L2	37	40	32	45	49	42

Note: day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Table 19: Summary of attended background noise monitoring

Location	6/12/2023 – 10:26-10:41			6/12/2023 – 10:26-10:41		
	$L_{90,15min}$	$L_{eq,15min}$	$L_{10,15min}$	$L_{90,15min}$	$L_{eq,15min}$	$L_{10,15min}$
S1 & S2	41	47	47	42	65	69

Figure 38: Attended and unattended noise logger locations (Source: JHA)

6.2.4 Impact assessment

Operational noise – impacts on receivers

The NVIAR considered the following as noise generating source associated with the operation of the school with potential impact on the surrounding sensitive receivers and are summarised in below:

- Public address and bell system
  - the EPA notes numerous reports of community concern arising from inadequate design and installation as well as inappropriate use of school public address and bell systems. The mitigation measures will be implemented to reduce impacts on sensitive receivers.
- Activities and events in the hall
  - the hall's noise emissions must meet the SEPP noise limits in **Table 20**. It was assumed the majority of use will be during the day and there will be occasional events during the evening (6-10pm) (Scenario 2) and that doors and windows will be open at times (Scenario 1 – doors and windows open, Scenario 2 – doors and windows closed).
- Playgrounds
  - the school will have a combination of multisport courts, a sports field, assembly area and landscaped areas in the centre of the site which will moistly only be used during school hours.
- Carpark
  - there will be two carparks which are assumed to occasionally be used during evenings (6-10pm).

Table 20: Noise impact assessment results for nearest receiver

Item	Criterion dB(A) L_{Aeq}	Results dB(A)	Compliant
Hall	42	Scenario 1 – 35	Yes
		Scenario 2 – 11	Yes
Play areas	42	30	Yes
Carpark	42	36	Yes

Each of the noise sources have been considered in terms of the following:

- Continuous noise over the assessment time period to provide the worst-case scenario.
- Distance attenuation, building reflections and directivity.
- Lowest background noise levels measured.

The NVIAR, against the project noise trigger levels (PNTL) determined in accordance with the NPI and stated that the predicted noise levels of the above operational sources at the boundary of the nearest receiver will comply with the relevant criteria for each. The NVIAR also noted that the TI SEPP provides the noise criteria for the use of the school in Schedule 6, Chapter 3. The policy states:

A new building or (if the development is an alteration or addition to an existing building for the purpose of changing its use) an existing building that is to be used for the purpose of a school or school-based childcare must be designed so as not to emit noise exceeding an LAeq of 5dB(A) above background noise when measured at any lot boundary.

The NVIAR assumed that the school will operate during typical school hours with occasional evening use. Based on the long-term unattended noise results of background noise levels, the school's operational noise level criterion for the daytime and evening time periods are shown in **Table 21**.

Table 21: TI SEPP noise level criteria

Noise amenity area	Period	Criteria, L_{Aeq} dB(A)
Rural residential	Day (7am-6pm)	42
	Evening (6pm-10pm)	45

Mitigation measures have been provided in the NVIAR requiring the mechanical plant and public address/school bell systems to go through acoustic assessments during the detailed design phase of the project to confirm any noise control measures required to achieve the relevant noise criteria at the nearest noise sensitive receiver. Notwithstanding, preliminary assessments of each has been based on location, distance to noise sensitive receivers and the most restrictive criteria, demonstrating that compliance can be achieved. The noise emission from the hall has demonstrated compliance with the relevant criteria at the nearest noise sensitive receiver with the windows and doors open. Other mitigation measures include time restrictions on deliveries and waste collection and provide sound insulation

Proposed mechanical services have not been designed in detail and associated noise has not been comprehensively assessed. The NVIAR acknowledged that noise must not exceed the maximum permissible cumulative noise levels for the external plant areas in **Table 22** to meet the PNTL for the nearest receiver. Therefore, a conservative approach has been used by applying the maximum permissible noise level, assuming compliance with relevant criteria at the sensitive receivers and attenuation of noise over the distance between the indicative plant locations (**Figure 39** of the NVIAR) and receivers (**Table 22**). The external plant areas are shown on **Figure 39**.

Mitigation measures have been provided for consideration during selection, installation and operation of external mechanical plant.

Table 22: Maximum permissible noise limits for external plant

Plant area	Receiver	Criteria, dB(A)	Maximum permissible noise level at source, dB(A) @ 1 m
1	Residential/education	42/45	73
2	Residential	42	75
3	Residential	42	74
4	Residential	42	74
5	Residential	42	73
6	Residential	42	60

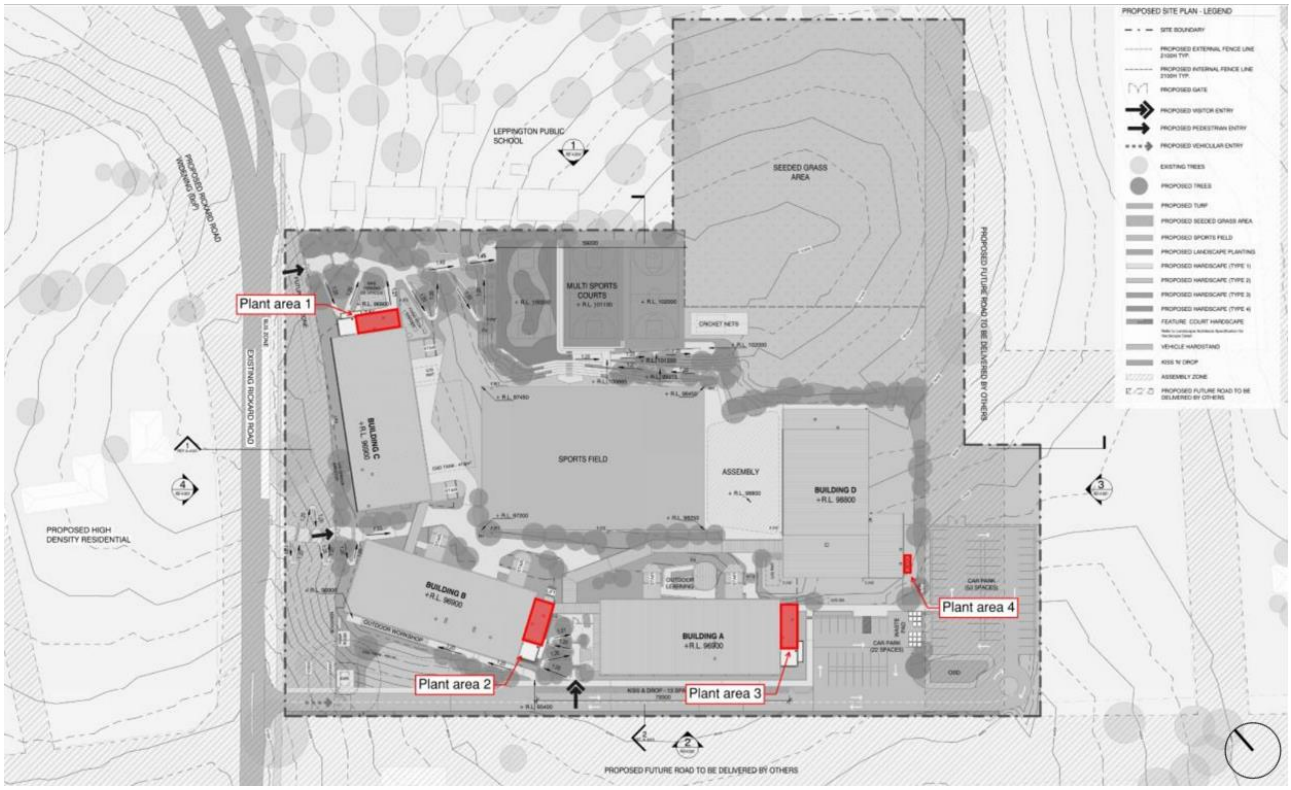


Figure 39: External mechanical plant locations (Source: JHA)

The NVIAR prepared by the acoustic consultant confirms the various components associated with the operational aspects of the development comply with the relevant noise criteria. The school has been designed to locate buildings along the east, south and west areas of the site with the sports fields and multi sports courts located centrally and adjoining the existing public school to the north. This is to minimise impacts as much as possible. On this basis, the public address and bell system, activities and events in the hall, playgrounds and carpark have demonstrated compliance with the relevant noise criteria.

<u>Assessment of school traffic noise on sensitive receivers' assessment and design / mitigation measures</u>

The NVIAR measured traffic noise on Rickard Road for an adjacent project between 16 to 27 February 2023 (**Table 23**).

Table 23: Traffic noise on Rickard Road, February 2023

Location	Measured traffic noise levels, dB(A)			
	Day (7am-10pm)		Night (10pm-7am)	
L2	$L_{Aeq,15hour}$ 59	Noisiest $L_{Aeq,\ 1hour}$ 62	$L_{Aeq,9hour}$ 60	Noisiest $L_{Aeq,\ 1hour}$ 62

Any increase in the total traffic noise level should be limited up to 2 dB above the existing noise levels for existing residences and other sensitive land uses affected by additional traffic on existing roads. This is based on the RNP considering an increase of up to 2 dB representing a minor impact and barely perceptible to the average person. In cases where existing traffic noise levels are above the noise assessment criteria, the primary objective is to reduce these through feasible and reasonable measures to meet the assessment criteria. The NVIAR confirms that the likely generated vehicle movements of the proposed activity are anticipated to be insignificant and the noise levels at sensitive receivers are not expected to increase by more than 2 dB.

Based on the activities compliance with the traffic noise criteria, there are no design or mitigation measures required for sensitive receivers.

Assessment of road noise impact (Rickard Road, etc) on the school and design / mitigation measures

The NVIAR noted that project related traffic noise must comply with the RNP. Traffic noise from Rickard Road could impact facades of the project. Based on measurements of road noise carried out by the acoustic consultant, the noise level at the façade of Building C is predicted to be 67 dB(A).

It is understood that Rickard Road is subject to future road widening. However, the details of this are yet to be confirmed but it is assumed that traffic on Rickard Road will double, which will result in an increase of 3 dB(A) at the façade (to 70 dB(A)) and a reduced distance to the edge of the road.

Based on the predicted noise levels outside the western façades of the school buildings due to traffic on Rickard Road; to achieve the internal noise level criteria, it is recommended in install glazing with a sound reduction index of RW + Ctr 33 for educational spaces facing Rickard Road within Building C. A minimum sound reduction index of RW32 is to be provided for all other glazing. The acoustic performance of the glazing and building façade shall be reviewed during the design phases of the project, once glazing and façade areas will be finalised and more detail regarding the road widening will be known.

Assessment of Noise impact of the onsite access way/carpark on the school and design / mitigation measures

The proposed new school includes construction of two new carparks and an access way to the south of the site. A carpark noise assessment has been conducted and noise emissions to the nearest noise-sensitive sensitive receiver boundary have assumed future sensitive receivers to be approximately 40m east of the site.

Impacts from the carpark are considered to be:

- Use of the carpark during school hours (7am to 6pm) and occasionally during evening time (6pm to 10pm)
- Assuming two cars entering or leaving each carpark every 15 minutes (4 total) with each car taking approximately 30-60 seconds to park
- Typical sound power level of a one car movement being 85dB(A).

The assessment found that the noise level criterion for the day time complies at the sensitive receiver boundary and the predicted noise level will also comply with noise level criteria during evening time as the noise level criteria during the day time period is more stringent than evening time.

Operation noise - aviation

The school will be outside the Australian Noise Exposure Concept (ANEC) shown in the Western Sydney Airport EIS. Therefore, as per AS 2021:2015 'Acoustics – Aircraft Noise Intrusion – Building Sitting and Construction', the school site is acceptable and there is no requirement to assess aircraft noise.

Operational noise - cumulative impacts

The site is in the SWGA, which is experiencing substantial growth and densification. Leppington is changing significantly and transitioning following recent rezoning by the NSW Government. Further transformation is anticipated with the future rezoning of the Leppington Town Centre. This town centre is the focus of an active PP which, if approved, will greatly impact the character and context of the surrounding area.

The cumulative impacts of the new high school with the adjacent primary school have been considered with the application of the NSW NPI.

The NSW NPI specifies amenity noise level objectives for the total noise levels at receivers in different noise amenity areas. To ensure that cumulative noise levels remain within the recommended amenity objectives, the project amenity noise level is set at 5dB(A) lower than the amenity noise level.

Each neighbouring development is expected is apply the same strategy from the NPI in order to maintain the acoustic amenity of the area.

Construction noise and vibration

The NVIAR considered the temporary noise and vibration during construction. The NVIAR stated that the ICNG recommends noise management levels (NMLs) to reduce the likelihood of noise impacts from construction. The NML is determined by adding 10 dB (standard hours) or 5 dB (out of hours) to the RBL for each assessment period (**Table 24**).

The recommended ICNG standard construction hours are:

- 7am to 6pm Monday to Friday;
- 8am to 1pm Saturday; and
- No work on Sunday or public holidays.

Table 24: ICNG criteria for airborne construction noise

Receiver		Airborne construction noise criteria, L_{Aeq} dB(A)	
		Standard hours	Outside standard hours
Residential	Noise affected/external	RBL + 10	RBL + 5

Receiver		Airborne construction noise criteria, L_{Aeq} dB(A)	
		Standard hours	Outside standard hours
	Highly noise affected/external	75	N/A
Active recreation	External (when in use)	65	N/A
Classrooms	External (when in use)	45	N/A

The ICNG recommends internal ground-borne noise maximum levels at residences affected by nearby construction activities. Ground-borne noise is noise generated by vibration transmitted through the ground into a structure and can be more noticeable than airborne noise for some sensitive receivers.

The below ground-borne noise levels are for sensitive receivers during evening and night-time only, as the objective is to protect the amenity and sleep of people when they are at home.

- Evening: $L_{Aeq,15min}$ 40 dB(A) – internal.
- Night: $L_{Aeq,15min}$ 35 dB(A) – internal.

The internal noise levels are assessed at the centre of the most affected habitable room of a sensitive receiver.

A detailed construction program has not been prepared, therefore, general construction noise and vibration planning mitigation measures have been provided. The preliminary advice in relation to construction noise and vibration management shall form the basis for the contractor's construction noise and vibration management plan (CNVMP), which shall identify any noise criteria exceedance once construction methods and stages are known.

The noise assessment will be reviewed if the design is modified, including and not restricted to selection of mechanical plant, modifications to the building and introduction of any additional noise sources.

6.2.5 Mitigation Measures

The following measures will be implemented during design and construction of the project.

A CNVMP will be prepared prior to construction. The CNVMP will contain the relevant mitigation measures in **Table 25**.

Table 25: Noise and vibration mitigation measures

Mitigation Number/Name	Aspect/Section	Mitigation Measure	Reason for Mitigation Measure
Working hours	Construction	The project will be constructed during the following hours: Monday to Friday: 7am to 6pm. Saturday: 8am to 1pm. Sundays and Public Holidays: No excavation or construction works.	To minimise noise impacts during construction on surrounding properties.
	Construction	High noise level works such as piling and excavation will not be undertaken during shoulder periods (7-8am and 5-6pm).	To minimise noise impacts during construction on surrounding properties.

Mitigation Number/Name	Aspect/Section	Mitigation Measure	Reason for Mitigation Measure
Plant and equipment	Construction	Use quieter techniques for all high noise activities such as rock breaking, concrete sawing, and using power and pneumatic tools.	To prevent excessive noise levels.
	Construction	Use quieter plant and equipment based on the optimal power and size to most efficiently perform the required tasks.	To prevent excessive noise levels.
	Construction	Select plant and equipment with low vibration generation characteristics.	To prevent excessive noise levels.
	Construction	Operate plant in a quietest and most effective manner.	To minimise noise impacts during construction on surrounding properties.
	Construction	Limit the operating noise of equipment.	To minimise noise impacts during construction on surrounding properties.
	Construction	Regularly inspect and maintain plant and equipment to minimise noise and vibration levels to ensure that all noise and vibration reduction devices are operating effectively.	To minimise noise impacts during construction on surrounding properties.
	Pre-Construction, Construction	Strategically locate and select mechanical plant to ensure the cumulative noise levels at the receiver boundaries are met.	To control plant noise to the boundary noise criteria.
	Pre-Construction, Construction	Acoustic noise control measures to be put in place to minimise noise impacts such as: • In-duct attenuation. • Noise enclosures as required. • Sound absorptive panels. • Acoustic louvres as required. • Noise barriers as required.	To minimise noise impacts through acoustic noise control.
	Detailed Design	Acoustic assessment of mechanical plant shall continue during the detailed design phase of the project to confirm any noise control measures to achieve the relevant noise criteria at the nearest noise sensitive receivers.	To ensure mechanical plant minimise noise impacts during detailed design phase.
On site	Construction	Maximise the distance between noisy activities and noise sensitive receivers. Strategically locate equipment and plant.	To minimise noise impacts on nearby residences.
	Construction	Undertake noisy fabrication work off-site where possible.	To minimise noise impacts on nearby residences.
	Construction	Avoid the use of reversing	To minimise noise impacts

Mitigation Number/Name	Aspect/Section	Mitigation Measure	Reason for Mitigation Measure
		beeping alarms or provide for alternative systems, such as broadband reversing alarms.	on nearby residences.
	Construction	Maintain any pre-existing barriers or walls on a demolition or excavation site as long as possible to provide optimum noise control.	To minimise noise impacts on nearby residences.
	Pre-Construction	Construct barriers that are part of the project design early in the project to mitigate site noise.	To minimise noise impacts during construction on surrounding properties.
	Construction	Use temporary site building and material stockpiles as noise barriers.	To minimise noise impacts during construction on surrounding properties.
	Construction	Install purpose-built noise barriers, acoustic sheds and enclosures.	To minimise noise impacts during construction on surrounding properties.
Work scheduling	Pre-Construction, Construction	Provide respite periods, including restricting very noisy activities to daytime (7am to 6pm), restricting the number of nights that after-hours work is conducted near residences, or by determining any specific requirements, particularly those needed for noise sensitive receivers.	To avoid disturbances during sensitive hours.
	Pre-Construction	Schedule activities to minimise impacts by undertaking all possible work during hours that will least adversely affect sensitive receivers and by avoiding conflicts with other scheduled events.	To avoid disturbances during sensitive hours.
	Pre-Construction	Schedule work to coincide with non-sensitive periods, to reduce impact on sensitive periods including school examinations.	To avoid disturbances during sensitive hours.
	Pre-Construction	Schedule noisy activities to coincide with high levels of neighbourhood noise (including any surrounding construction noise) so that noise from the activities is partially masked and not as intrusive.	To avoid disturbances during sensitive hours.
	Pre-Construction	Plan deliveries and access to the site to occur quietly and efficiently and organise parking only within designated areas located away from sensitive receivers.	To minimise noise impacts during construction on surrounding properties.
	Pre-Construction	Optimise the number of deliveries to the site by amalgamating loads where possible and scheduling arrivals within designated hours.	To minimise noise impacts.

Mitigation Number/Name	Aspect/Section	Mitigation Measure	Reason for Mitigation Measure
	Pre-Construction	Designate, design and maintain access routes to the site to minimise impacts.	To minimise noise impacts on surrounding properties.
	Pre-Construction	Include contract conditions that include penalties for non-compliance with reasonable instructions by the principal to minimise noise or arrange suitable scheduling.	To ensure compliance with relevant standards and requirements.
Consultation, notification and complaints	Pre-Construction, Construction	Provide information to neighbours before and during construction.	To provide appropriate notification to neighbours on intended work.
	All stages	Maintain good communication between the community and Project staff.	To ensure transparency through the project lifecycle with surrounding residences.
	All stages	Have a documented complaints process and keep register of any complaints.	To provide surrounding properties with appropriate methods to provide complaints.
	All stages	Give complaints a fair hearing and provide for a quick response.	To provide surrounding properties with suitable management of complaints.
	All stages	Implement all feasible and reasonable measures to address the source of complaint.	To meet legal requirements and avoid any recurrence.
	All stages	Implementation of all reasonable and feasible mitigation measures for all works will ensure that any adverse noise impacts to surrounding receivers are minimised when noise goals cannot be met due to safety or space constraints.	To minimise adverse noise impacts when noise goals cannot be met.
Exceedances	Pre-Construction	Implement equipment-specific screening or other noise control measures recommended in Appendix C of AS 2436:2010.	To reduce equipment noise impacts in line with the relevant Australian Standards.
	Construction	Limit the number of trucks on site at the commencement of site activities to the minimum required by the loading facilities on site.	To reduce noise and congestion during site commencement.
	Construction	When loading trucks, adopt best practice noise management strategies to avoid materials being dropped from height into dump trucks.	To avoid any unnecessary noise impacts.
	Construction	Avoid unnecessary idling of trucks and equipment.	To avoid any unnecessary noise impacts.
	Construction	Ensure that any miscellaneous equipment (extraction fans, hand	To minimise noise impacts to surrounding properties.

Mitigation Number/Name	Aspect/Section	Mitigation Measure	Reason for Mitigation Measure
		tools, etc) incorporates silencing/shielding equipment as required to meet the noise criteria.	
Public address and bell system	Operation	Low-powered horn-type speakers shall be located and orientated to provide a good coverage of the school areas whilst being directly away from residences and near sensitive receivers. System coverage shall be reviewed during the detailed design phase.	To minimise noise impacts on nearby residences.
	Operation	Speakers shall be mounted with a downward angle and as close to the floor as possible.	To minimise noise impacts on nearby residences.
	Operation	The noise level of the systems shall be adjusted on site so they will be clearly audible on the school site without being excessive. The systems shall initially be set so that the noise at nearby residences and sensitive receivers do not exceed noise level criteria.	To minimise noise impacts on nearby residents.
	Operation	Once the appropriate noise level has been determined on site, the systems shall be limited to these noise levels so that staff cannot increase the noise levels.	To maintain minimal noise impacts on nearby residents.
	Operation	The systems shall be set so that it only occurs on school days.	To avoid disturbances outside of school hours.

6.3 Contamination and Hazardous Materials

6.3.1 Introduction

This chapter summarises the Detailed Site Investigation (DSI) report, which is in **Appendix 8**. It describes the existing environment, assessment method and results, potential impacts and mitigation measures where impacts are unavoidable.

6.3.2 Assessment guidelines

Preparation of the DSI report was done with reference to relevant sections of the following guidelines:

- National Environment (Assessment of Site Contamination) Protection Measure (NEPM, 2013).
- NSW EPA (2022) Sampling Design Guidelines: Part 1 – Application and Part 2 – Interpretation.
- NSW EPA (2020), Contaminated land guidelines: Consultants reporting on contaminated land.
- State Environmental Planning Policy (Resilience and Hazards) 2021.

- NSW EPA (2017) Contaminated Land Management, Guidelines for the NSW Site Auditor Scheme (3rd Edition), NSW Environment Protection Authority, October 2017.
- NSW EPA (2005), Contaminated Sites, Guidelines for Assessing Former Orchards and Market Gardens, Environmental Protection Authority, June 2005.
- NSW EPA (2022), Contaminated Land Guidelines - Sampling Design part 1 – application.
- NSW EPA (2014), Waste Classification Guidelines - Part 1: Classification of waste, dated November 2014.
- NSW EPA (2016), Addendum to the Waste Classification Guidelines – Part 1: classifying waste, October 2016.
- CRC CARE. (2017). Technical Report No. 39 - Risk-based management and remediation guidance for benzo(a)pyrene.
- Standards Australia (2005) Australian Standard AS 4482.1-2005 – Guide to the investigation and sampling of sites with potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds. Standards Australia, Homebush, NSW (withdrawn).
- Standards Australia (1999) Australian Standard AS 4482.2-1999 - Guide to the sampling and investigation of potentially contaminated soil. Part 2: Volatile substances. Standards Australia, Homebush, NSW (now Withdrawn).
- PFAS National Environmental Management Plan (NEMP, 2020).

6.3.3 Impact assessment

The objective of the DSI was to provide the department with additional advice on the contamination status of the site and its suitability for the proposed activity. Specifically, the objectives of the DSI were to:

- Assess the potential for contamination to be present at the site.
- Provide recommendations on the suitability of the site for its intended future land use.
- Provide recommendations on the need for further investigations and/or management based on the findings.

The DSI carried out a site walkover and reviewed the available site background information and identified the following:

- The site has historically been used for agricultural (paddock) and crop growing including the construction and demolition of some structures.
- Fill containing anthropogenic inclusions such concrete, brick, terracotta and asphalt was present to depths between approximately 0.1 m to 0.5 m bgl.
- Fragments of ACM were present onsite. Some elevated concentrations of Polycyclic Aromatic Hydrocarbons (PAHs), zinc and TRH were present in soils.

The five potential areas of environmental interest identified in the DSI are the existing:

- Areas near former/existing buildings from weathering and/or ineffective demolition of hazardous building materials.
- Areas of possible filling of unknown origin and/or quality.
- Whole site from potential spraying of pesticides and herbicides related to crop growing activities.
- Farm dam/wastewater ponds (Dam A and B).
- Septic tank

The DSI also carried out testing, including the excavation of 44 test pits, collection of two surface water and sediment samples from the existing dam and wastewater pond and groundwater samples.

The results sampling found:

- Concentrations of Contaminant of Potential Concern (CoPC) in soil were generally less than the adopted assessment criteria
- Asbestos in the existing stockpile, access roads and in subsurface fill in the northern portal of Lot B
- Some exceedances in Benzo(a)pyrene, lead and nickel above the acceptable human health criteria
- That soil materials are non-saline
- That Acid sulfate soils were not present
- There may also be opportunity to apply the Excavated Natural Material (ENM) Order to some of the natural material, in portions of the site.

The areas of environmental interest were of concern as the potential contaminants could migrate offsite to impact other human or ecological receptors or could affect the users of the site.

It was concluded the site can be made suitable from a contamination perspective for a future land use as a high school, subject to the management of identified contamination and implementation of the following recommendations.

- Prepare and implement a remedial action plan (RAP) to manage the identified contamination. This may include segregation and stripping of shallow soils impacted by metals (copper and zinc), benzo(a)pyrene and asbestos, with waste classification and disposal offsite at a licensed facility or onsite encapsulation.
- Supervision of material segregation works as part of remediation works, by an experienced environmental engineer/scientist or occupational hygienist.
- Preparation of a construction environmental management plan (CEMP) outlining unexpected finds, including for areas underneath building footprints post demolition.
- Undertaking a hazardous building material (HBM) assessment for Lot B.

It is noted a RAP has been prepared and is in **Appendix 9**. The RAP recommends onsite encapsulation of contaminated material, with offsite disposal as an alternative option for excess soils (**Table 26**). An Interim Advice Endorsement Letter of the Remediation Strategy can be found in **Appendix 30.**

Table 26: Remediation Works

Remediation works	Remediation option	
	Onsite encapsulation	Offsite disposal
Establishment of Encapsulation Area.	Suitable non-leaching material will be placed in an appropriately located and designed Encapsulation Area. The proposed location of the Encapsulation Area is beneath the ‘Island’ area or the proposed carpark in the southern part of the Site (presented on Figure 5, Appendix A). Soil material generated as part of	–

Remediation works	Remediation option	
	Onsite encapsulation	Offsite disposal
	remediation (i.e. impacted material) and construction works (i.e. in excess of Site levels) is to be placed within Encapsulation Area in order of 'most' to 'least' contaminated, with surplus soils disposed of offsite. Once filled, the Encapsulation Area is to be capped.	
Demolition of existing structures/infrastructure as required, following relevant codes and guidelines including removal of surface waste/rubbish.	–	Waste classification and offsite disposal.
Excavation of soil material above adopted assessment criteria (including soil stockpiles)	Placement within the Encapsulation Area in order of 'most' to 'least' contaminated.	Waste classification and offsite disposal.
Excavation of soil material as part of construction works (i.e. in excess of Site levels)	Classification and re-use on/offsite. Placement within the Encapsulation Area in order of 'most' to 'least' contaminated	Waste classification and offsite disposal.
Long Term Environmental Management Plan (LTEMP)	At the completion of remediation, preparation of an LTEMP to be implemented in areas where contaminated materials are retained onsite. This is to provide administrative controls/ restrictions, ongoing monitoring and to manage potential future exposure beneath capped areas.	–

The RAP describes the following remediation strategy, which will likely occur during the bulk earthworks phase of construction:

1. Obtain approvals, licences and undertake notifications.
2. Establish and implement Unexpected Finds (UEF) protocols (during earthworks).
3. Set up Site controls.
4. Draining of Dam B (re-use onsite e.g. for irrigation, or disposal).
5. Survey remediation area extents.
6. Demolition and removal of structures / utilities.
7. Conduct surface asbestos pick and asbestos clearance.
8. Preparation of Encapsulation Area (i.e. the 'Island' area or the proposed carpark in the south-west corner of the Site, as a "borrow pit" including the removal of existing soils beneath the Site to ensure sufficient volume for contaminated soils to be placed).

9. Excavation of impacted fill material (i.e. material exceeding adopted assessment criteria) and either placement within the Encapsulation Area or waste classification and disposal offsite.
10. Validation sampling and survey to confirm impacted fill material areas have been removed from the Remediation Areas.
11. Earthworks involving management of excavated materials.
12. Validation sampling to confirm suitability of capping layer (this may be either site won material or imported fill).
13. Installation of the capping layer where required.
14. Preparation of a validation report.
15. Preparation of a LTEMP for the ongoing management of the Encapsulation Area.

6.3.4 Mitigation measures

The mitigation measures in **Table 27** will be implemented to ensure the site is suitable for the proposed land use as an educational establishment.

Table 27: Contamination mitigation measures

Mitigation number/ name	Aspect/ section	Mitigation measure	Reason for mitigation measure
1. Manage known and potential soil contamination	Prior to commencement of any construction work and during construction	Prepare and implement a RAP to remediate known areas of contamination. This would include: • Obtain approvals, set up site controls, site management as per the RAP and implement unexpected finds protocols • Demolish structures/utilities – including removal of all hazardous building materials from structures that require demolition in accordance with relevant regulations and codes along with adequate assessment and clearance prior to demolition • Excavate and manage contaminated material, including soil management, material tracking and validation sampling. • Validate imported soil suitability • Prepare validation report	Manage contamination risks to human health and the environment, to render the site suitable for its proposed activity.

Mitigation number/ name	Aspect/ section	Mitigation measure	Reason for mitigation measure
		• Develop and apply a Long Term Environmental Management Plan if any soils are encapsulated on site.	

6.4 Historic heritage

6.4.1 Introduction

This chapter summarises the SOHI, which is in **Appendix 7**. It describes the existing environment, assessment method and results, potential impacts and mitigation measures where impacts are unavoidable.

6.4.2 Assessment guidelines

Heritage impacts have been assessed in accordance with the following guidelines:

- *The Australian International Council on Monuments and Sites, Charter for Places of Cultural Significance* (also known as the Burra Charter, Australia ICOMOS 2013).
- NSW Heritage Manual (Heritage Office 1996, with regular additions).
- Assessing Significance for Historical Archaeological Sites and 'Relics' (NSW Heritage Branch 2009).

6.4.3 Impact assessment

Historical heritage

The site is not listed as having a heritage item. City Plan Heritage (City Plan 2023) prepared a summary report of initial site investigations that identified that the subject site may possess some archaeological and historical significance tied to the current and former outbuildings on Lot B DP411211.

LPS is adjacent to the site along the north boundary. This site is listed on the Department of Education's S.170 Heritage and Conservation Register. The buildings designated as having significant heritage significance, as officially listed on the Department of Education S170 Register and the 2021 SEPP for the Western Parkland City Precinct, include B00H, B00I, B00J, B00K, B00L, and B00M. Lot 38E in DP 8979 and Lot 39C in DP 8979, comprising the two southern lots of the public school site are identified as items of Local Heritage significance pursuant to the provisions of Appendix 5 'Camden Growth Centre Precinct Plan' of the Precincts SEPP.

The SOHI was assessed the site against the against the NSW Heritage Manual and found:

- While 128-134 Rickard Road was initially part of the 3000-acre grant awarded to Alexander Riley in 1810—reflecting the agricultural focus of the area's early settlement—the site itself does not have any direct associations with significant historical events or developments.

- Although owned by a range of people, there are no strong or special historical associations identified with 128-134 Rickard Road, Leppington.
- The outbuildings contained on Lot B DP411211 were constructed post 1960 and are in very poor condition. These outbuildings are constructed of corrugated sheet metal on a simple timber frame with sections missing and portions fallen down. They do not have any unique or special qualities.
- 128-134 Rickard Road does not possess any uncommon, rare or endangered aspects of NSW or the local areas cultural or natural history

The potential impacts of ground disturbance on historic heritage were also assessed in the SOHI. The potential impacts on the heritage values were assessed using criteria development from the *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties*. Impacts are summarised in **Table 28**, which shows the project will have an overall neutral impact on historic heritage.

Table 28: Historic heritage impact assessment

Matter for consideration	Summary	Impact
Fabric and spatial arrangements	The 1960 outbuildings on Lot B DP411211 are in poor condition and do not possess heritage significance, aesthetically or yield research potential.	Neutral
Setting, views and vistas	The site landscape has comprised small-scale rural agricultural gardens since 1929, which will be transformed into a high school setting. However, LPS is adjacent to the site, which has been in operation since 1922. Transformation of the area into a high school further fits the educational theme of the area. The proposed activity will further compliment and strengthen this educational landscape. LPS contains numerous buildings with moderate to high level of significance. The setting, views and vistas would be changed by the proposed activity with the construction of sporting fields, planting of trees and several general classroom buildings. The views from Rickard Road to the classroom buildings would not be obscured by the proposed activity. The views from the back of the classrooms are not of heritage significance and therefore not considered impacted by the proposed activities.	Neutral
Landscape	The site landscape will be transformed from a small-scale agricultural rural landscape to an urbanised landscape. Most of the site vegetation will be removed and replaced with trees to provide shade to site occupants. The site does not have any significant landscape elements or aesthetic qualities that would be impacted by the proposed activity and the trees proposed for removal are not of heritage significance. LPS would be altered by the proposed activities with the proposed planting of trees along the northern boundary of the site. The landscape of the adjoining block (the site) does not contribute to the heritage significance of the area. It is in an area of lower value, with buildings positioned against a fence on the edge of the school, and therefore does not form a key part of the school's landscape.	Neutral
Use	The site has been used for small scale agriculture since the 1930s and the proposed activity would change this use to educational. The use of the site does not contribute to the heritage significance of the area or the landscape.	Neutral
Demolition	The proposed activity would demolish the existing buildings across Lot A and Lot B DP411211, which have been assessed as not	Neutral

Matter for consideration	Summary	Impact
	holding heritage significance.	
Curtilage	As the site does not possess identified heritage significance, no heritage curtilage is applicable.	Neutral
Moveable heritage	The site does not have any identified items of moveable heritage.	Neutral
Aboriginal cultural heritage	A test excavation was conducted by the Aboriginal consultant which did not identify any Aboriginal objects and/or features of cultural and archaeological value.	Neutral
Historical heritage	Through documentary research and a site visit, it has been determined that the site has a low potential for archaeological resources. Any resources present are likely to have been highly disturbed and it is unlikely these resources would meet the threshold for local significance as relics under the Heritage Act 1977.	Neutral
Natural heritage	Site trees have been assessed by an arborist and have high retention value. However, these trees do not have heritage significance related to their natural heritage.	Neutral
Conservation areas	The site is not in a conservation area.	Neutral
Cumulative impacts	The activity will transform the site from a traditionally open, agricultural landscape to a more urbanised environment with the introduction of the new high school. This change reflects broader planning decisions made at the state level to accommodate urban growth in Leppington. While this transformation will alter the character of the local area, the site itself does not hold any heritage value. The new high school aligns with the educational theme of the area and complements the existing LPS, which is listed on the Department of Education's Section 170 Heritage and Conservation Register under the Heritage Act 1977.	Neutral
Conservation management plan	No conservation management plan applies to the site.	Neutral
Other local heritage items	LPS adjoins the northern site boundary and is listed on the Department of Education's S.170 Heritage and Conservation Register and the Local heritage listing under the Precincts SEPP. LPS was established in 1920, and some of the original weatherboard buildings from the early phase of the school are still present. The proposed activities will have some indirect visual impacts on these buildings, viewing from the southeast. These impacts have been addressed under 'setting' and 'landscape'. Leppington Progress Hall (I19) listed on the Western Parkland City SEPP 2021 is 420 m south-west of the site. There are no view lines between the site and this item and as such there are no direct or indirect impacts.	Neutral
Commonwealth/national heritage significance	There are no items of Commonwealth/National heritage significance in or near the site.	Neutral
World heritage significance	There are no items of World Heritage significance in or near the site.	Neutral

In summary, the SOHI found that 128-134 Rickard Road does not meet the threshold for heritage significance under the NSW heritage assessment criteria. The site lacks strong associative connections with significant individuals or communities, does not exhibit noteworthy aesthetic, technical, or architectural attributes, and holds limited potential for further research or

archaeological insight. Furthermore, it does not represent rare or unique qualities or characteristics that would distinguish it within NSW's cultural heritage framework.

The high school design considered the potential for impact on the adjoining heritage item at the public school and responded by ensuring no built form in close proximity to the northern boundary of the high school site. Building C, which is the closest building to this boundary has provided a generous setback to provide adequate landscape provision and screening to protect the curtilage of the item. The balance of the northern boundary contains no buildings and instead provides for sports courts and landscaping treatment to further protect locally listed item.

Archaeological heritage

The SOHI summarised the site history and potential for archaeological heritage as follows:

- From 1810, the site was used for grazing and mixed farming. Shepards huts or other farm outbuildings may have existed on the site, but no documented evidence exists of this being the case. The archaeological resources, if present, would have been disturbed by later development and agricultural activities. Therefore, the potential for relics relating to this phase is low to nil.
- Mary Ann Wright purchased the property in 1929 and from the 1947 aerial it can be seen there was at least three buildings established on the Lot B DP411211 portion of the site. These buildings were demolished and impacted by later development. There may be footings, fence posts, cess pits and traces of artefact deposits related to everyday life related to this phase of occupation. The potential for relics related to this phase is predicted to be low to nil.

Table 29: Historic heritage impact assessment

Matter for consideration	Summary	Impact
Fabric and spatial arrangements	The 1960 outbuildings on Lot B DP411211 are in poor condition and do not posses heritage significance, aesthetically or yield research potential.	Neutral
Setting, views and vistas	The site landscape has comprised small-scale rural agricultural gardens since 1929, which will be transformed into a high school setting. However, LPS is adjacent to the site, which has been in operation since 1922. Transformation of the area into a high school further fits the educational theme of the area. The proposed activity will further compliment and strengthen this educational landscape. LPS contains numerous buildings with moderate to high level of significance. The setting, views and vistas would be changed by the proposed activity with the construction of sporting fields, planting of trees and several general classroom buildings. The views from Rickard Road to the classroom buildings would not be obscured by the proposed activity. The views from the back of the classrooms are not of heritage significance and therefore not considered impacted by the proposed activities.	Neutral
Landscape	The site landscape will be transformed from a small-scale agricultural rural landscape to an urbanised landscape. Most of the site vegetation will be removed and replaced with trees to provide shade to site occupants. The site does not have any significant landscape elements or aesthetic qualities that would be impacted by the proposed activity and the trees proposed for removal are not of heritage significance. LPS would be altered by the proposed activities with the proposed planting of trees along the northern boundary of the site. The landscape of the adjoining block (the site) does not contribute to the heritage significance of the area. It is in an area of lower value, with buildings positioned against a fence on the edge of the school, and therefore does not form a key part of the school's landscape.	Neutral
Use	The site has been used for small scale agriculture since the 1930s and the proposed activity would change this use to educational. The use of the site does not contribute to the heritage significance of the area or the landscape.	Neutral
Demolition	The proposed activity would demolish the existing buildings across Lot A and Lot B DP411211, which have been assessed as not holding heritage significance.	Neutral
Curtilage	As the site does not possess identified heritage significance, no heritage curtilage is applicable.	Neutral
Moveable heritage	The site does not have any identified items of moveable heritage.	Neutral
Aboriginal cultural heritage	A test excavation was conducted by the Aboriginal consultant which did not identify any Aboriginal objects and/or features of cultural and archaeological value	Neutral
Historical heritage	Through documentary research and a site visit, it has been determined that the site has a low potential for archaeological resources. Any resources present are likely to have been highly disturbed and it is unlikely these resources would meet the threshold for local significance as relics under the Heritage Act 1977.	Neutral

Matter for consideration	Summary	Impact
Natural heritage	Site trees have been assessed by an arborist and have high retention value. However, these trees do not have heritage significance related to their natural heritage.	Neutral
Conservation areas	The site is not in a conservation area.	Neutral
Cumulative impacts	The activity will transform the site from a traditionally open, agricultural landscape to a more urbanised environment with the introduction of the new high school. This change reflects broader planning decisions made at the state level to accommodate urban growth in Leppington. While this transformation will alter the character of the local area, the site itself does not hold any heritage value. The new high school aligns with the educational theme of the area and complements the existing LPS, which is listed on the Department of Education's Section 170 Heritage and Conservation Register under the Heritage Act 1977.	Neutral
Conservation management plan	No conservation management plan applies to the site.	Neutral
Other local heritage items	LPS adjoins the northern site boundary and is listed on the Department of Education's S.170 Heritage and Conservation Register. LPS was established in 1920, and some of the original weatherboard buildings from the early phase of the school are still present. The proposed activities will have some indirect visual impacts on these buildings, viewing from the southeast. These impacts have been addressed under 'setting' and 'landscape'. Leppington Progress Hall (I19) listed on the Western Parkland City SEPP 2021 is 420 m south-west of the site. There are no view lines between the site and this item and as such there are no direct or indirect impacts.	Neutral
Commonwealth/national heritage significance	There are no items of Commonwealth/National heritage significance in or near the site.	Neutral
World heritage significance	There are no items of World Heritage significance in or near the site.	Neutral

6.4.4 Mitigation measures

Even though the overall impact on heritage will be neutral, the mitigation measures in **Table 30** will be implemented to ensure potential unexpected finds during construction and future changes to the activity are managed appropriately.

Table 30: Historic heritage mitigation measures

Mitigation Number/Name	Aspect/Section	Mitigation measure	Reason for Mitigation measure
Unexpected finds procedure	Prior to commencement and during any construction work	An unexpected finds procedure to be developed for the project if relics are uncovered. This document should be prepared by a qualified archaeologist. Should any human remains be located during the proposed activity: • All excavation in the immediate vicinity shall cease immediately. • The NSW police be informed as soon as possible.	Protection of archaeology.
Development near Leppington Public School	All stages	If future development plans change and involve constructing structures along the northern boundary of the site, potential indirect impacts on LPS should be reassessed. While Clause 5.7 of the Camden Growth Centre Precincts DCP – Schedule 2 Leppington Major Centre Precinct 2017 is not relevant to the project it should be used as a guiding principle for development activities adjacent to classroom buildings. These weatherboard buildings are of moderate heritage significance and the rural setting in which the buildings are currently in is linked to their significance as cultural landmarks in the area.	Protection of archaeology and items of heritage significance.

6.5 Aboriginal Heritage

6.5.1 Introduction

This chapter summarises the ACHAR, which is in **Appendix 6**. It describes the existing environment, assessment method and results, potential impacts and mitigation measures where impacts are unavoidable.

6.5.2 Assessment guidelines

Potential impacts on Aboriginal heritage have been assessed in accordance with the following guidelines:

- Aboriginal Archaeological Survey, Guidelines for Archaeological Survey Reporting (NSW NPWS 1998);
- Aboriginal Cultural Heritage Standards and Guidelines Kit (NPWS 1998);
- Australia ICOMOS 'Burra' Charter for the conservation of culturally significant places (Australia ICOMOS 1999, revised 2013);
- Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, Part 6 National Parks and Wildlife Act 1974, (DECCW 2010b);
- Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales, Part 6 National Parks and Wildlife Act 1974, (DECCW 2010a);
- Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW, Part 6 National Parks and Wildlife Act 1974 (OEH 2011)
- Part 6; National Parks and Wildlife Act Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010c);
- Protecting Local Heritage Places: A Guide for Communities (Australian Heritage Commission 1999).

Aboriginal consultation

Aboriginal parties were thoroughly consulted as described in the ACHAR at Appendix 6. Eighteen Aboriginal groups registered (RAPS) their interest in the project and contributed cultural knowledge and archaeological expertise to the assessment process.

The RAPS were issued a draft of the ACHA report and asked the following questions regarding the cultural significance of the site:

Intangible significance:

- Does the study area hold any social, spiritual or cultural values? If so, what are these values and are they confined to particular parts of the study area?
- Are unrecorded places or resources of cultural, natural or archaeologically significance present within the study area? If so, where are they located?
- Are there any traditional stories or legends associated with the study area?
- Are there any gender specific cultural values associated with the study area which cannot be raised in general meeting? If so, how would the Aboriginal stakeholders like these managed?

Tangible remains and significance:

- Are there any recollections of Aboriginal people living within the study area?
- Is there any information to suggest the presence of burials within the study area?

No specific responses to the RAP questions were received from registered stakeholders who provided a response to the draft ACHA report.

6.5.3 Impact assessment

The ACHA carried out an AHIMs search which returned nineteen registered sites within 1,000 m of the site and no sites have been registered in or adjacent to the site (**Figure 40**).

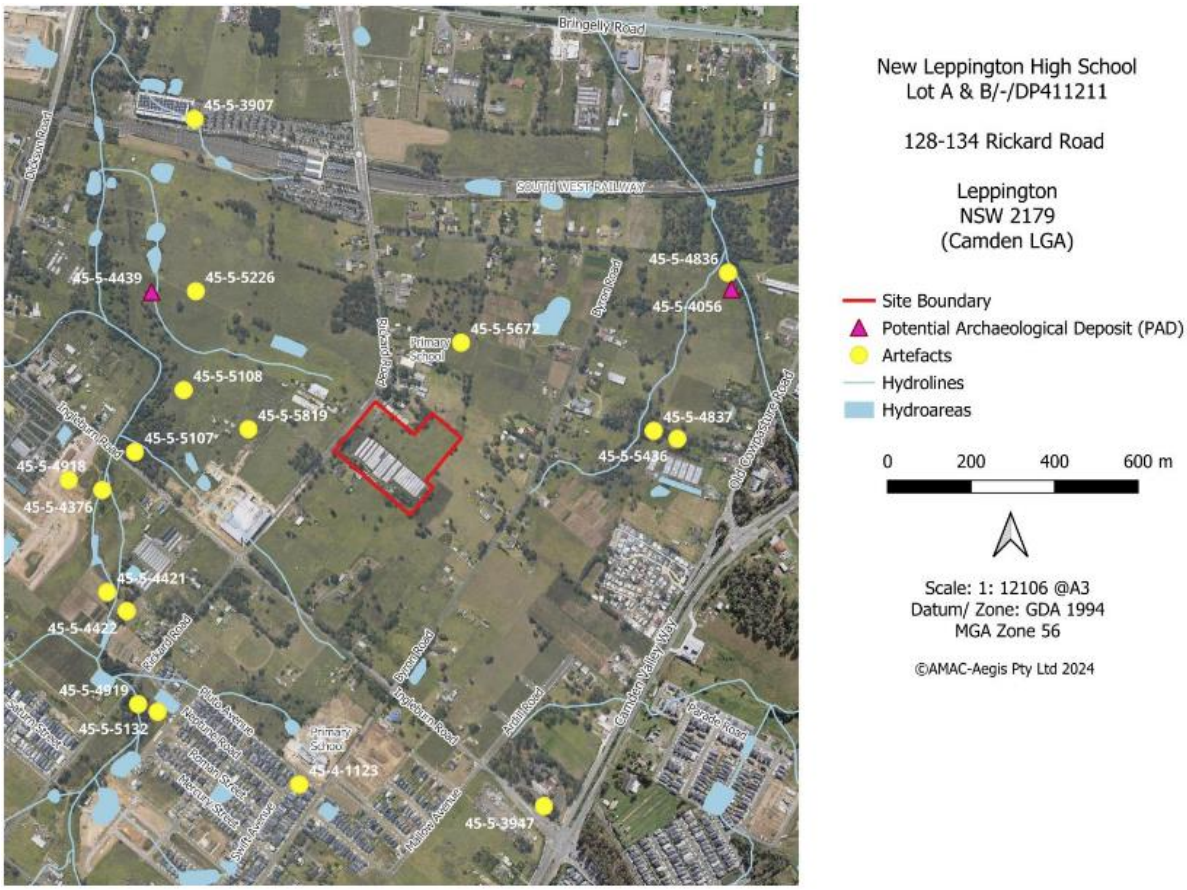


Figure 40: AHIMS search results (Source: AMAC)

The most common site type was artefacts, which comprised almost 90% of sites. Of these artefacts, five have been completely destroyed and five partially destroyed. Two potential archaeological deposits (PADs) were also identified.

Notably most were close to mapped watercourses, regardless of site type. Additionally, most sites were on very low slopes and were more frequently identified when exposure was higher.

The site is in a zone which had resources that may have been exploited on either a regular or repeated basis. Reliable access to fresh water may have been present near the site.

Sites containing fresh water and sedentary food sources, coupled with the presence of other resources which may have been exploited or available on a seasonal basis, would suggest that Aboriginal land use of the region was regular and repeated.

The site is within 200 m of an ephemeral water source and, therefore, has archaeological potential as an area people may have traversed. In the past the accessibility of permanent water and resources along creek banks would have channelled Aboriginal movement and land use to this location and would have been a major resource of food and water There are several artificial dams near the site as a result of European occupation and past land use.

The ACHA also included a site inspection on 13 February 2024, by archaeologist and Registered Aboriginal Parties (RAPS), which found that the site has been modified for agricultural use, with most of the site comprising introduced vegetation, structures and accessways. While mature trees were identified on the site, there was no evidence of modification. The site has been moderately and highly disturbed, however, there were possible intact soils in some areas which could have deep profiles containing evidence of previous Aboriginal occupation. No surface evidence of previous Aboriginal occupation was observed during the site inspection.

Given the proximity of the site to water and the possibility of areas of deep soil profiles, it was determined areas of the site were likely to contain Aboriginal artefacts. The ACHA then carried out test excavations spread evenly across the proposed activity footprint to systematically determine a distribution and/or density pattern within the site. However, test excavation revealed no subsurface Aboriginal objects and/or features.

As described above, no evidence of previous Aboriginal occupation of the site was discovered during the site inspection and test excavations. Therefore, the activity is unlikely to directly impact any items Aboriginal cultural significance.

The assessment of Aboriginal archaeological and cultural significance of the site against the Burra Charter has been summarised in **Table 31**. No significance has been determined against the Burra Charter criteria (social, historic, scientific and aesthetic significance).

Table 31: Archaeological and cultural significance

Criteria	Assessment
Social significance The social value embraces the qualities for which a place, object, or site has become a focus of spiritual, political, national, or other cultural sentiment to a majority or minority group. According to the Guide to investigating, assessing, and reporting on Aboriginal cultural heritage in NSW, "social or cultural value can only be identified though consultation with Aboriginal people".	No specific social significance has, of yet, been assigned to the study area by Stakeholders. Previous assessments of the area have received statements that the entire area is culturally significant, including the flora, fauna, landforms and associated histories.
Historic significance A place may have historic value because it has influenced, or has been influenced by, an historic figure, event, phase, or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment.	Historical research did not locate any specific historical significance of identified Aboriginal archaeological sites in the study area nor has any specific historical significance been assigned to the study area by any of the RAPS, as yet.
Scientific significance The scientific value of any given location will depend on the importance of the data that can be obtained from any archaeological material located on its rarity, quality, and on the degree to which this may contribute further substantial information to a scientific research process.	One piece of raw silcrete material was identified in the site. This material is widely identified in the Cumberland Lowlands, with evidence of heat treatment, retouch and reuse apparent in multiple assemblages. Contrastingly, no modification was apparent on this piece. As this is a common material, without evidence of treatment or processing, a nil scientific significance has been assigned.
Aesthetic significance Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture, and material of the fabric; the smells and sounds associated with the place and its use.	No specific aesthetic values have, as yet been assigned to the study area by any of the RAPS.

6.5.4 Mitigation measures

The unexpected finds protocol in **Table 32** will be implemented should suspected Aboriginal items and/or remains be discovered during construction of the project.

Table 32: Aboriginal heritage mitigation measures

Mitigation umber/Name	Aspect/Section	Mitigation measure	Reason for Mitigation measure
Unexpected finds procedure	Prior to commencement and during any construction work	Before any there is any ground disturbance all workers and contractors will be briefed of their responsibilities regarding any Indigenous archaeological deposits and/or objects that may be located during construction. Should any Aboriginal archaeological deposits/objects be located during construction: • All excavation in the vicinity of any objects and/or deposits shall cease immediately and the area secured. • Department of Education's Heritage Team is to be notified of the deposits or objects. • A suitably qualified archaeologist should be notified so the significance of the deposits or objects can be evaluated and presented in a report and the study area recorded as an archaeological site. • Heritage NSW should be notified if the objects and or deposits are determined to be of Aboriginal significance. • The archaeological deposits or objects shall be subject to fulfilment of the relevant legislative requirements particularly section 90 of the NPW Act 1974 (as amended). Should any human remains be located during the proposed activity: • All excavation in the immediate vicinity of any objects of deposits shall cease immediately. • The NSW police and Heritage NSW Enviroline be informed as soon as possible. • If it has been established that the human remains are Aboriginal ancestral remains, Heritage NSW and the relevant Registered Aboriginal Parties will identify the appropriate course of action.	Protection of archaeology.
Project lifecycle	All stages.	Consultation with the registered Aboriginal stakeholders is to continue throughout the duration of the planning, construction and operation of activities at the site. Registered Aboriginal Parties will be emailed every 6	To recognise the Aboriginal cultural values of the study area and wider landscape.

Mitigation umber/Name	Aspect/Section	Mitigation measure	Reason for Mitigation measure
		months about the works to maintain this process.	

6.6 Hydrology, Flooding and Water Quality

6.6.1 Introduction

This chapter summarises the surface water sections of the Civil Engineering Design Report (**Appendix 28**), Flood Statement and Flood Emergency Response Plan (**Appendix 5**). It describes the existing environment, assessment method and results, potential impacts and mitigation measures where impacts are unavoidable.

6.6.2 Assessment guidelines

Flood impacts have been assessed in accordance with the following guidelines:

- Australian Institute of Disaster Resilience (AIDR) Guideline 7-3: Flood Hazard (2017).
- Camden Growth Centre Precincts Development Control Plan (CGCPDCP), 2023.
- Leppington Town Centre Development Control Plan, 2023 (draft version).
- Camden Development Control Plan (DCP), 2019.
- Camden Council Flood Risk Management Policy, 2023.
- Camden Council Engineering Design Specification, 2020 (draft version).
- Camden Council Review of Upper South Creek Flood Study in the Context of Ongoing Development Report, 2022 (prepared by WMAwater 2022).
- Camden Local Environmental Plan (LEP) 2010.
- NSW Department of Environment and Heritage – Flood Risk Management Guideline LU01, June 2023.
- NSW Department of Planning and Environment – Flood Risk Management Manual, 2023.
- NSW Department of Planning, Housing and Infrastructure – Planning Circular PS 24-001, Update on addressing flood risk in planning decisions, 1st March 2024.
- NSW Floodplain Development Manual, June 2023.
- School Infrastructure New South Wales (SINSW) Guidelines for School Site Selection and Master Planning, 2023.
- Office of Environment and Heritage Flood Emergency Response Planning Classification of Communities (2007).

6.6.3 Impact assessment

Stormwater

There is a crest in the north-east of the site, with the majority of downward slope (and surface water flow) to the south, south-west and west. There is no existing under or above ground stormwater infrastructure on or adjacent to the site, other than a swale on Rickard Road. Stormwater leaves the site as sheet flows onto Rickard Road and adjacent private property.

The proposed stormwater treatment train will comprise the following devices:

- 39 x Ocean Protect Oceanguard pit filter baskets.
- 20 x Ocean Protect 690 mm Psorb Stormfilter cartridges.
- Total of 40 kL rainwater tank for landscape irrigation reuse.
- 135 m^2 of Bioretention area.

Stormwater quality treatment is required to comply with the requirements outlined in Section 2.3.2 of Council's Growth Centre Precinct DCP, shown in **Figure 41**.

	WATER QUALITY % reduction in pollutant loads				ENVIRONMENTAL FLOWS Stream erosion control ratio[1]
	Gross Pollutants (>5mm)	Total suspended solids	Total phosphorous	Total nitrogen	
Stormwater management Objective	90	85	65	45	3.5-5.0: 1
'Ideal' stormwater outcome	100	95	95	85	1:1

[1] *This ratio should be minimised to limit stream erosion to the minimum practicable. Development proposals should be designed to achieve a value as close to one as practicable, and values within the nominated range should not be exceeded. A specific target cannot be defined at this time.*

Figure 41: Water quality and environmental flow targets (Source: DPE)

Compliance with DCP pollutant reduction targets is demonstrated in **Table 33**.

Table 33: MUSIC model results

Pollutant	Min. required reduction (%)	Modelled reduction (%)	Compliant?
Gross pollutants	90	100	Yes
Total suspended solids	85	87	Yes
Total phosphorus	65	66	Yes
Total nitrogen	45	50	Yes

Two OSD tanks are proposed to detain runoff. Most of the works, consisting of the sports field, multisport courts, Building C and Building D drains to OSD Tank 1. Building A and Building B drain to OSD Tank 2. A combined effective OSD volume of 1,525 m^3 is required to comply with Council requirements. Compliance is demonstrated in **Table 34**. In addition, the SSR and PSD requirements for the activity area for the minor and major storm events have also been provided in **Table 34**.

Table 34: SSR and PSD compliance

Storm	SSR	Site storage provided	PSD (L/s)	Peak flow (L/s)	Compliant?
2yr ARI	750	1,525	75	74	Yes
100yr ARI	1,480	1,525	425	220	Yes

Section 6.5: Ecologically Sustainable Development of Council's Growth Centre Precinct DCP stipulates that post-works peak flows up to and including the 1% AEP storm event must be reduced to pre-works levels by the implementation of stormwater detention. Separately, the DCP requires works to meet a site storage requirement (SSR), and permissible site discharge (PSD) based on the site activity area.

Compliance with post-work peak flow requirements is demonstrated in **Table 35**.

Table 35: Pre-works peak flows vs post-work peak flows

Storm	Pre-works peak flow (L/s)	Post-works peak flow (L/s)	Compliant?
1 EY	152	67	Yes
50% AEP	171	74	Yes
20% AEP	365	104	Yes
5% AEP	566	167	Yes
1% AEP	939	221	Yes

A combined detention and bioretention basin system has been proposed to reduce peak flows discharging through the carpark at the southeast of the site. Compliance is demonstrated in **Table 36**.

Table 36: Pre-works peak flows vs post-work peak flows with carpark

Storm	Pre-works peak flow (L/s)	Post-works peak flow (L/s)	Compliant?
1 EY	49	47	Yes
50% AEP	56	48	Yes
20% AEP	132	88	Yes
5% AEP	205	190	Yes
1% AEP	329	291	Yes

Flood

Mapping in WMAWater (2022) (**Figure 42** below) shows the site is in the Upper South Creek Catchment and is outside the mainstream and overland flood planning area zones. It is not affected by any design annual exceedance probability (AEP) flood up to and including the probable maximum flood (PMF). Therefore, the site is not in any flood risk precincts.

Even though the site is not affected by flooding, access to the site will be cutoff during severe floods. Rickard Road to the south (near the intersection with Ingleburn Road), Bringelly Road (approximately 500 m and 600 m to the west and east of Rickard Road respectively) and Edmondson Avenue (approximately 700 m north of intersection between Rickard Road and Bringelly Avenue in Liverpool LGA) will be inundated by floodwater and not safe for traffic during severe floods.

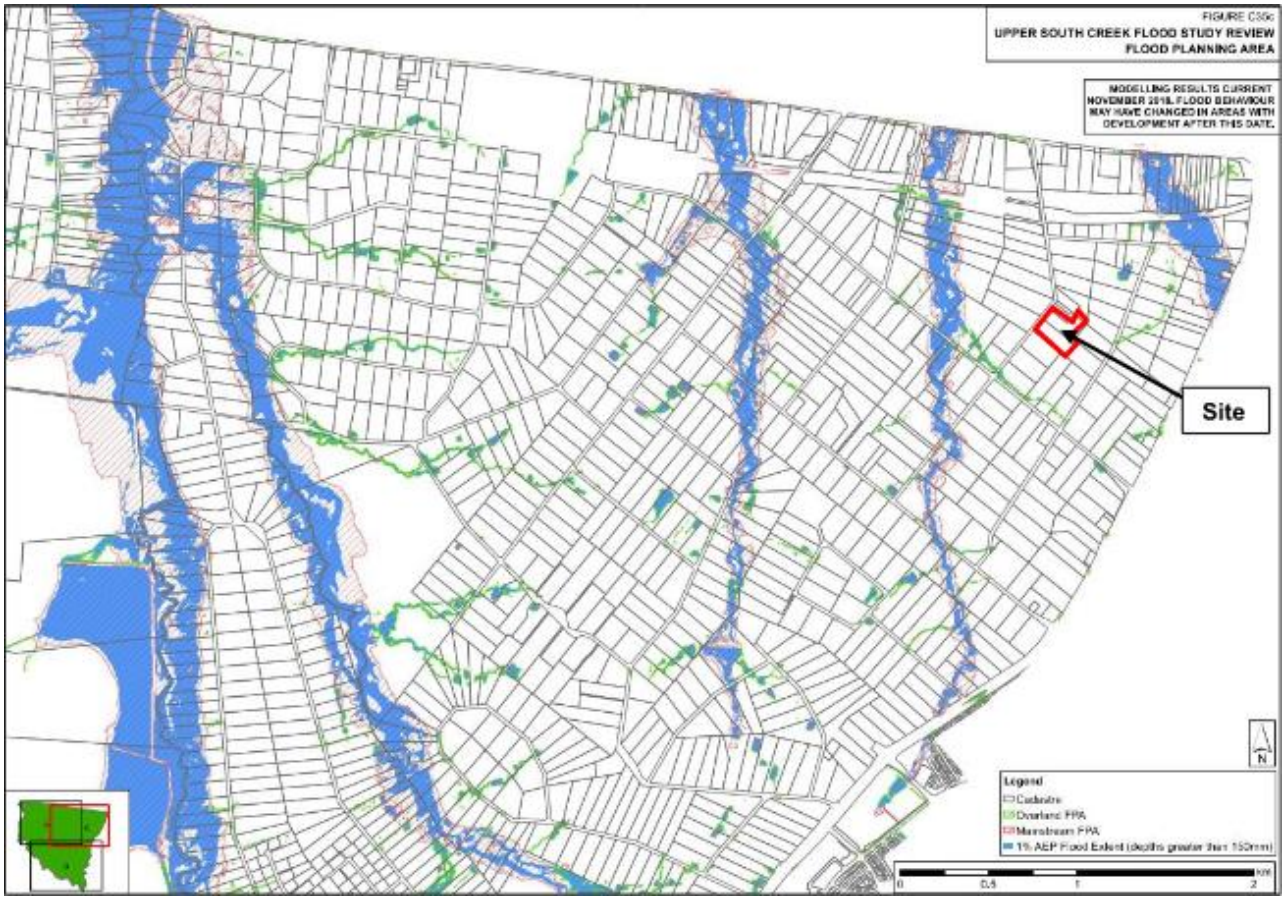


Figure 42: Upper South Creek Flood Study Review – flood planning area (WMAWater, 2022)

The Flood Risk Report found that the site is outside the PMF extent, the proposed activity will not result in any cumulative flood impacts to the surrounding properties, provided that the site stormwater runoff is being maintained to the pre-development levels.

The FERP found that there is a flood-free access route from the site to the north of Rickard Road onto Bringelly Road and then onto Camden Valley Way to the east, in all events, up to, and including the 1% AEP event. However, the route will likely be cutoff on Camden Valley Way at the Cabramatta Creek crossing as Liverpool City Council's flood mapping shows that this crossing is impacted by floodwater in events more frequent than the 1% AEP. Though not flood free, there is a trafficable route from Rickard Road to the south onto Ingleburn Road, then to the east onto Camden Valley Way, and commencing south on this road, in the 1% AEP event.

Flood onset time and time of inundation over some affected roads for the adopted critical storm durations can be derived from WMAWater (2022) as follows:

- Bringelly Road (at South Creek) – the time it takes in the PMF event for the road to first inundated is less than 90 minutes and the road is estimated to be inundated for approximately 5.8 hours before the road is flood free. The inundation time for the critical durations of the 0.2% AEP and 0.5% AEP events are estimated to be less than four hours and two hours, respectively.
- Cowpasture Road (at Bonds Creek) – the time it takes in the PMF event for the road to first inundated is less than 30 minutes and the road is estimated to be inundated for approximately 3.5 hours before the road is flood free. The inundation time for the critical durations of the 0.2%-2% AEP events are estimated to be less than 2.5 hours.

Further, the onset time and time of inundation of the flood affected roads along the evacuation route to the south are expected to be short as these road crossings are mainly subjected to overland flooding and are at the upper end of minor catchment areas.

In contrast, the onset time and time of inundation of Bringelly Road and the connecting Camden Valley Way to the north of the site are expected to be longer than the evacuation route to the south as the catchment areas that contribute to these crossings are considerably larger. This can be confirmed during the detailed design phase of the activity and prior to the operation of the school.

Construction

The impact of construction related erosion and sediment flow is reduced with the implementation of the erosion and sediment control plans in the civil drawings. The plans comprise:

- Silt fences to prevent silt and waste being washed into neighbouring sites and streets and may be integrated with safety fencing.
- Catch drains with hay bales to carry and treat site runoff
- Sedimentation basin(s) to be installed at the low point of site excavation.
- Shaker grids at the construction site entrance(s) to ensure that vehicles and machinery leave the site with clean wheels.
- Pits will have silt protection installed to prevent silt from entering the stormwater system during construction.

Overall, the site was considered in terms of its accessibility, topography and stormwater flows to understand local factors that could contribute to stormwater management, flood and evacuation risks and opportunities. The location, built form and accessibility of the activity was then considered in the context of applicable DCPs, LEPs and flood policies to determine flood related design requirements and constraints. Management measures were determined, including a FERP.

6.6.4 Mitigation measures

The mitigation measures in **Table 37** reflect the requirements of applicable SEPPs, DCPs, LEPs and water management and flood policies.

Table 37: Hydrology, flooding and water quality mitigation measures

Mitigation Number/Name	Aspect/Section	Mitigation measure	Reason for Mitigation measure
Erosion and sediment control	Prior to commencement	Implement measures as documented generally in	To ensure protection of downstream

Mitigation Number/Name	Aspect/Section	Mitigation measure	Reason for Mitigation measure
	and during any construction work	accordance with NSW Department of Planning, Housing and Infrastructure's Managing Urban Stormwater and the Sediment and Erosion Control Plan submitted with this REF.	drainage lines, assets, ecosystems or existing hydrological systems from silt, waste and sediment from the site.
Drainage design	Pre-Construction, Detailed Design	Ensure drainage provisions for the site are designed in accordance with consultant plans and reports.	To ensure stormwater flows for all storm events up to an including the 1% AEP from the activity site will have no adverse impact upon the downstream properties and existing waterbodies.
Water sensitive urban design	Following the removal of temporary water quality (erosion and sediment control) measures.	Provide permanent water quality treatment measures as part of water-sensitive urban design, as documented in the Civil Engineering Design Report and Civil Engineering Drawings.	To ensure the proposed activity meets Council's requirements for pollutant reduction
Flood emergency response	Pre-Construction, Detailed Design	A final site specific FERP is to be prepared to incorporate the final design details of the activity and is to be generally in accordance with the Draft FERP.	To ensure the safe and efficient emergency response planning suitable to the final design.
	Pre-Construction, Detailed Design	Update the FERP following the detailed design stage and prior to the site becoming operational to include confirmation of estimated flood depths, onset time and time of flood inundation time over the surrounding roads for evacuation (i.e. based on Council's flood model from the 2022 Review Study).	To mitigate risk to students and staff during a severe flooding.
	Operation	Implement the requirements of the FERP	To ensure the safe and efficient emergency response to a flood event during operation of the school.
	Operation	Delegate staff responsibilities so all staff are aware of their specific roles and associated flood response actions.	To ensure all responsibilities are delegated in case of emergency.
	Operation	All staff and students will be made aware and advised of the flood risks present on site and the flood protocols & procedures during inductions	To improve knowledge and safety on flooding, flood protocols and procedures.

Mitigation Number/Name	Aspect/Section	Mitigation measure	Reason for Mitigation measure
		during onboarding and annually at the start of each calendar year.	
	Operation	A flood drill must be held by staff annually to ensure all staff workers and students are familiar with the sound of the alert and their subsequent flood response actions.	To maintain awareness on correct flood protocols and procedures.
	Operation	A flood emergency kit must be prepared prior to a flood event taking place and regularly checked to ensure that supplies within the kit are sufficient and in working condition.	To prepare for a flood emergency.
	Operation	Flood warning sign and depth marker can be implemented (by Council in consultation with Council) on Rickard Road near the intersection with Ingleburn Road.	To improve flood awareness and safety.
	Operation	Staff and parents must be notified (i.e. via SMS or equivalent communication tool) at the earliest opportunity upon BOM issuing severe weather warning for the area to inform the closure of the school.	To communicate to all relevant stakeholders prior to severe weather.
	Operation	Staff, students and people present at the school during a flood event must be notified and guided to the appropriate building areas identified in the FERP within the school to shelter-in-place. The site manager is to ensure that no one is present outdoors within the boundary of the school.	To enhance safety during a flood event.
	Operation	Implement the Flood Response Actions in Section 7 of the Draft FERP.	The ensure all people on site during a flood are protected.

6.7 Ecology and Arboriculture

6.7.1 Existing ecology and tree planting

As the site is within the Western Sydney Parklands growth area and it is biodiversity certified, all biodiversity values have been accounted for and no further biodiversity assessments are required. The only requirements are that when vegetation that may provide habitat for native fauna is removed, then fauna must be rescued/relocated.

A search of the Biodiversity Values Map did not identify any areas of biodiversity value. Notwithstanding, the site is biodiversity certified and all values have already been offset.

A search of the SEED Portal determined PCT 3320 Cumberland Shale Plains Woodland occurs in the area, which is a part fit to the critically endangered Cumberland Plain Woodland in the Sydney Bioregion. Historical imagery indicates the site has been cleared of endemic vegetation and any vegetation now present is either regrowth or planted. The earliest historical imagery is from 1965 and pre-dates the residential properties on the site. It shows many of the currently vegetated areas were clear patches in 1965.

A search of the BioNet Atlas determined the following species have been recorded near the site:

- Swift Parrot.
- Grey-headed Flying-fox.
- Large Bent-winged Bat.
- Cumberland Plain Land Snail.

Previous recordings near the site have been low and there is only a low to moderate likelihood of occurrence on the site, with the Grey-headed Flying-fox most likely to forage at the site.

There is no key fish habitat or waterfront land mapped on or adjacent to the site.

An ecologist inspected the site on 4 December 2023 and 10 April 2024, comprising a walk-through of all accessible vegetated areas. The ecologist searched for habitat for the following species, which have been previously recorded in the area:

- Swift Parrot (*Lathamus discolor*) – endangered.
- Grey-headed Flying-fox (*Pteropus poliocephalus*) – vulnerable.
- Large Bent-winged Bat (*Miniopterus orianae oceanensis*) – vulnerable.
- Cumberland Plain Land Snail (*Meridolum corneovirens*) – endangered.

The site has 135 mapped trees on and adjacent to the site, 27 are in the road corridor and 108 are on the site. Trees in Area E shown on Figure 5.5 of the arborist report were not assessed, nor was management of trees for bushfire protection.

6.7.2 Assessment guidelines

Potential impacts on trees have been assessed in accordance with the following guidelines:

- Australian Standard AS4373 *Pruning of amenity trees.*
- Safe Work Australia (2016) *Guide to managing risks of tree trimming and removal work.*

6.7.3 Impact assessment

Ecology

The ecological values of the site were assessed to determine if there is suitable habitat for fauna. This chapter summarises the ecological assessment report, which is in **Appendix 13**. It describes the existing environment, assessment method and results, potential impacts and mitigation measures where impacts are unavoidable.

Due to the cryptic and nocturnal nature of many species, the fauna assessment primarily evaluated the site's potential as habitat. The precautionary principle was adopted, assuming the presence of threatened species if suitable habitat exists.

The inspection on 4 December 2023 observed native vegetation to be sparse with a large canopy in the south and western corners, which were representative of PCT 3320. There is a water hole in the southern corner with fringing vegetation comprising Forest Red Gum (*E. tereticornis*) and Ribbon Gum (*E. viminalis*). The water hole is proposed to be removed as part of the activity. A number of weeds of national significance were observed on the site.

Small sections of suitable habitat for the above threatened species were observed. There is also suitable habitat for a range of other native birds, bats, reptiles, amphibians and fish.

A masterplan survey overlay became available, so the site was inspected again on 10 April 2024, which confirmed the observations of the first inspection.

The ecological assessment report noted that:

- that noise, light and increased human activity during construction may disrupt the foraging behaviour of the Grey-headed Flying-fox and deter them from using the site
- any removal of flowering native trees and planted citrus trees could reduce the availability of food resources
- tree removal will remove hollows and nests and construction activities could introduce plant pathogens such as *Phytophthora cinnamomi*, the fungus myrtle rust *Uredo rangelli* and amphibian chytrid fungus.

Through the implementation of the mitigation measures, the impacts associated with the activity can be appropriately mitigated to comply with the relevant requirements.

Trees

The masterplan was designed to retain existing trees where possible. Up to 113 native trees will be removed as they occur within the design footprint. The offsets for this tree removal have already been covered by the biodiversity certification for the land.

Some trees may require removal inside the constraints area shown on the constraints map in Appendix C of the ecological report. The ecological report notes that if possible, the red areas should be avoided, and are designated as 'no go' zones. It is important to note that activities are scheduled to take place in the 'no go' constraints area and tree protection zones (TPZs) of the trees designated for retention. Protection of vegetation in the 'no go' constraints area been prioritised through the design with all areas on Site B and the northern portion of Site A being retained, however some vegetation shaded red along the southwestern boundary of Site A is proposed for removal as a result of the accessway and car park location. All other native trees to be retained should be protected to avoid them being damaged.

Trees 7, 24, 25, 113, 115-119, 124, 126, 127, and 134 can be retained assuming an acceptable encroachment based on the nominated zones of protection (TPZ and structural root zone (SRZ)) and the requirements of the protection specification in the arborist report.

Trees 2, 3, 8-23, 26-110, 120-122, 128-133 and 135 will be directly impacted and are unable to be retained. Trees 2, 3, and 8-27 are in the road reserve and are likely to be removed for future road widening. However, the impact can be negligible and can allow for tree retention. Allowing for the high significance rating, any opportunity to retain these trees should be considered. These trees will require consent from Camden Council for removal.

Trees 1, 4-6, 111, 112, 114, 123, and 125 will be subject to major encroachment but design and work methods can accommodate the trees and allow for retention. Trees 1 and 4-6 are public assets and their retention during future road works will be based on feedback from Camden Council.

Through the implementation of the mitigation measures outlined in the ecological assessment report and this REF, trees identified for retention will be appropriately protected and retained.

6.7.4 Mitigation measures

Table 38 below outlines the mitigation measures for biodiversity and tree management.

Table 38: Pre-construction and construction biodiversity and tree mitigation measures

Mitigation number/ name	Aspect/Section	Mitigation measure	Reason for Mitigation measure
PI1	Pre-construction	Inspect all trees for hollows and nests and have an ecologist present during tree removal works. If fauna is discovered an ecologist may be required to remove and relocate any fauna if the tree or vegetation is to be removed.	To protect fauna in trees to be removed
PI2		If a threatened species is recorded on the site all works should be put on hold until further instruction from the Project Manager as advised by an ecologist.	To protect fauna
PI3		Construction activities should be scheduled outside of the Grey-headed Flying Fox's breeding season (January through to end of April) if the species is recorded on the site	To ensure the species survival
P4		Plan the works so that night works and works around dusk and dawn can be avoided during the breeding season of the Grey-headed Flying-fox (January-April).	To ensure the species survival
PI5		Preserve key habitat features for Grey-headed Flying-fox such as flowering native trees and planted citrus trees to maintain essential feeding resources.	To protect the species habitat
PI6		Establish buffer zones around known foraging areas for Grey-headed Flying-fox to reduce disturbance.	To protect fauna and their habitat
PI7		Regular monitoring of the site should be conducted to ensure that mitigation measures to protect Grey-headed Flying-fox are effective and to adjust them as necessary.	To ensure the species is protected at all stages of the activity
PI8		A Tree Management Plan (TMP) must be developed and implemented. This plan should be prepared by a Consulting Arborist with a minimum qualification of AQF Level 5.	To ensure the managing of trees on site
PI9		Outline protocols for any necessary pruning or removal of trees. All tree works	To ensure safe pruning of retained trees

Mitigation number/ name	Aspect/Section	Mitigation measure	Reason for Mitigation measure
		must be performed by qualified tree workers (minimum AQF Level 2) under the supervision of the Consulting Arborist, adhering to the NSW Workcover Code of Practice for the Amenity Tree Industry (1998).	
PI10		Tree protection must be approved by a Consulting Arborist AQF Level 5 within a Tree Protection Plan (TPP). No materials, mixing, parking, disposal, repairs, refuelling, fires, stockpiling, or backfilling is allowed near remaining trees. Removal or lopping of trees needs written permission from the Superintendent.	To ensure trees are correctly identified and protection measures implemented
PI11		All trees to be protected shall be clearly identified and all TPZs and SPZ surveyed.	To ensure protection and survival of retained trees
PI12		Protective fencing around existing trees and within TPZs must be installed before any site work begins. The fence must be 1800mm high chain wire mesh fixed to Galvanised steel posts, enclosing an area to prevent damage as defined in the Tree Protection Plan. No storage inside fenced area.	To ensure protection and survival of retained trees
PI13		Use AS 4454 leaf mulch with 90% recycled content for tree protection fencing. Chip trees marked for removal and use mulch 100mm deep. Avoid soil, weeds, sticks, and stones. Comply with AS 4454 (1999) and AS 4419 (1998).	To ensure correct mulching of retained trees and chipping of removed trees
PI14		Tree protection signage must be attached to tree protection zones before works begin. Signs should be displayed prominently and repeated at 10m intervals or closer when the fence changes direction. Signs must include information about the tree protection zone, access restrictions, developer's contact details, and Site Arborist information.	To ensure protection and survival of retained trees
PI15		Induction of all contractors and staff outlining the ecological sensitivity of the site, no-go areas, the need to minimise ecological impact, and all other required mitigation measures is to be undertaken.	To ensure biodiversity measures are implemented
PI16		The Consulting Arborist will conduct regular site inspections to monitor the health and stability of retained trees, ensuring compliance with the TMP. Any signs of stress or damage will be promptly addressed with appropriate remedial actions.	To ensure survival of retained trees
PI17		Water testing is to be undertaken prior to dewatering the dam. If harmful levels of contamination or other are detected,	To prevent water pollution

Mitigation number/ name	Aspect/Section	Mitigation measure	Reason for Mitigation measure
		thewater should be suitably treated prior to release.	
PI18		The water should be released in a manner that does not cause erosion or other negative environmental impacts, e.g. by using holding ponds or otherwise slowing down the flow of the released water.	To prevent erosion
PI19		No harm to flora or fauna should occur from the dewatering process.	To protect aquatic fauna
PI20		A Dewatering Management Plan should be prepared and a dewatering permit obtained prior to undertaking the dewatering.	To prevent impacts from dam dewatering
PI21		A project arborist (conforms to the AS 4970) is required to be nominated before works start, and they are to be provided with all related site documents.	To ensure trees are correctly identified and protection measures implemented
PI22		All trees recommended for retention must have removed all dead, diseased, and crossing limbs and branch stubs to be pruned to the branch collar.	To ensure survival of retained trees
PI23		Tree retention/removal Trees No. 3, and 8-27 – Consideration in association with the tree owner for retention of these trees based on high significance. Consent from tree owner.	To consult owners prior to tree impacts
PI24		Tree retention/removal Trees No. 2, 3, and 8-27 – These trees will require confirmation and consent from Camden Council for removal.	To consult owners prior to tree impacts
PI25		Retention of trees No. 1, and 4-6 – Pending feedback from Camden Council regarding the future viability of these trees. Based on the outcome, mitigation at the time of work is required. This requires feedback from the project arborist.	To consult owners prior to tree impacts
PI26		Retain trees No. 111, 112, 114, 123, and 125	To ensure survival of retained trees
PI27		Retention/removal of trees; Area E – Area E requires access to assess trees and determine the viability of retention during site works. This requires feedback from the project arborist.	To ensure trees in Area E are surveyed
PI28	Construction	Tree Protection Zones (TPZs) will be maintained around vegetation to be retained. TPZs will be maintained in accordance with Australian Standard 4970 (2009) Protection of Trees on Development Sites (AS-4970). No activities are to take place within the Structural Root Zones (SRZs) of mature trees. No works, stockpiling of materials,	To ensure trees are correctly identified and protection measures implemented

Mitigation number/ name	Aspect/Section	Mitigation measure	Reason for Mitigation measure
		excavation, parking or any other potentially harmful activities will be undertaken within TPZs unless a Level 5 Arborist has provided confirmation that the works will not impact the tree.	
PI29		No pedestrian or plant access is permissible to the TPZ.	To ensure protection and survival of retained trees
PI30		Avoid storing bulk or harmful materials near trees. Keep spoil from excavations away from TPZs. Ensure wind-blown materials like cement don't harm trees. Contaminants stored properly with spill measures.	To ensure protection and survival of retained trees
PI31		Protect the tree from harm. Avoid tying ropes, cables, or similar items to trees. No staff members, plant, machinery, or materials can enter the tree protection fencing.	To ensure protection and survival of retained trees
PI32		Do not fill or compact soil above tree roots enclosed by protection fencing during construction near trees. Guidelines must be followed to prevent soil compaction in these areas. Protection includes using elevated planks attached to scaffolding to prevent ground compression.	To ensure protection and survival of retained trees
PI33		Trenching is not allowed in TPZs or tree protection fencing. Approval needed for trenching must be done by hand with arborist supervision.	To ensure protection and survival of retained trees
PI34		Contractors are to ensure plants are watered. Apply water at an appropriate rate suitable for the plant species during periods of little or no rainfall.	To ensure survival of planted vegetation
PI35		All site facilities must be located outside of TPZ. Chemicals and contaminants must be stored properly in an enclosed area with a spill bund to prevent runoff in case of accidents.	To ensure protection and survival of retained trees
PI36		Basic hygiene protocols must be implemented for construction personnel and machinery on site to reduce the potential for invasion by plant pathogens including Phytophthora cinnamomi, the fungus myrtle rust Uredo rangelli and amphibian chytrid fungus.	To ensure protection and survival of retained trees
PI37		The Consulting Arborist will conduct regular site inspections on a monthly basis (or at the start and end if the duration is shorter than a month) to monitor the health and stability of retained trees, ensuring compliance with the TMP. Any signs of stress or damage will be promptly addressed with appropriate	To ensure protection and survival of retained trees

Mitigation number/ name	Aspect/Section	Mitigation measure	Reason for Mitigation measure
		remedial actions.	
PI38		Upon completion of the construction activities, a final health assessment of all retained trees is to be conducted to document any changes in condition. The Consulting Arborist is to provide a detailed report with recommendations for any ongoing care or additional mitigation measures needed to support the long-term health of the trees.	To ensure protection and survival of retained trees
PI39		Work-related to demolition/construction, (e.g. stockpiling, site sheds, and scaffolding) shall avoid the TPZs. Any activity within a TPZ must be authorised and conditioned by the project arborist.	To ensure protection and survival of retained trees
PI40		Plant advanced specimens of the same species in groups.	To ensure success of vegetation plantings
PI41		Plant advanced specimens of the same species in areas that offer visual/noise screening.	To screen visual and noise impacts

6.8 Waste Management

6.8.1 Introduction

This chapter summarises the CDWMP and Operational Waste Management Plan (OWMP), which are in **Appendix 25 and 26** respectively. It describes the assessment method and results, potential impacts and mitigation measures where impacts are unavoidable.

6.8.2 Assessment guidelines

Potential waste impacts have been assessed in accordance with the following policies and guidelines:

- Camden City Council Growth Centre Precincts Development Control Plan 2016.
- Australian Government, Department of Sustainability, Environment, Water, Population and Communities. Construction and Demolition Waste Guide – Recycling and Re-use Across the Supply Chain. (2014, November).
- NSW Waste Avoidance and Resource Recovery (WARR) Strategy 2014-2021.
- NSW Waste Classification Guidelines 2014.
- Australia's National Waste Policy 2018.
- Camden Council Waste Management Guideline 2019
- NSW Better Practice Guide For Resource Recovery In Residential Developments 2019.
- NSW Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012.

6.8.3 Impact assessment

The objective of the waste assessments was to determine potential waste generation during construction and operation of the activity and provide measures to enable it to meet the NSW WARR Strategy 2014-2021 targets, comprising:

- Increasing construction and demolition recycling rates to 80%.
- Increasing waste diverted from landfill to 75%.
- Reducing litter by 40%.
- Reduce illegal dumping incidents by 30%.

Demolition and construction

Most waste will be generated during the demolition phase, which includes excavation. Demolition and construction waste volumes and diversion rates have been summarised as follows:

- Demolition
  - The estimated demolition and excavation waste is 3,101m^3 or 1,997 tonnes with high recovery rates for excavated material (99.8%), bricks, tiles, concrete and metals (100%) and lower recovery rates (below 50%) for timber, plasterboard and other waste, including asbestos.
  - 97.4% (or 1.945 tonnes) of demolition waste will be diverted from landfill through reuse and recycling, with high diversion rates for excavated materials (1,56 tonnes), green waste (150 tonnes), concrete (120 tonnes), bricks (42 tonnes) and tiles (22 tonnes). Timber, plasterboard, metals and other waste have lower diversion rates and asbestos is not diverted.
- Construction
  - The estimated construction waste volumes are 553 m^3 or 599 tonnes with high recovery rates for bricks, tiles, concrete, and metals (100%) and lower recovery rates for timber (33%), plasterboard (50%), and other waste (50%).

97% (or 580 tonnes) of construction waste will be diverted from landfill through reuse and recycling, with high diversion rates for concrete (525 tonnes) and bricks (32 tonnes). Tiles, timber, plasterboard, metals and other waste have lower diversion rates. Reuse and recycling opportunities for demolition and construction waste are summarised in **Table 39**.

Table 39: Reuse and recycling opportunities for demolition and construction waste

Material	Reuse/recycling opportunities
Asphalt	Hot in-place recycling or reprocessed into Reclaimed Asphalt Pavement.
Bricks	Cleaned and/or rendered for reuse, crushed for fill, sold or provided to a recycled materials yard.
Cardboard packaging	Recycled at a paper/cardboard recycling facility.
Carpet	Cleaned and reused for the same purpose, reused in landscaping or garages/sheds, recycled at an appropriate processing facility.
Concrete, masonry, spoil	Reused on site as fill, levelling or crushed for road base.
Doors, windows, fittings	Reused in new or existing buildings or sent to second-hand supplier.
Glass	Recycled at a glass recycling facility, aggregate for concrete production, crushed

Material	Reuse/recycling opportunities
	for termite barrier, reused as glazing.
Green waste	Mulched, composted for reuse, trees chipped for use in landscaping or removed carefully and reused on site or sold.
Hardwood beams	Reused as floorboards, fencing, furniture or sent to second-hand timber supplier.
Insulation material	Reprocessed to remove impurities and reused for the same purpose or as off-cuts, compressed for ceiling tile manufacture.
Metal, steel/copper pipe	Recycled at a metal recycling facility, melted into secondary materials for structural steel, roofing, piping etc. copper sold for re-use.
Other timber	Reused in formwork, ground into mulch for garden or sent to second-hand timber supplier.
Plasterboard	Crushed for reuse in manufacture of new plasterboard, returned to supplier or used in landscaping.
Plastics	Reused as secondary materials for playgrounds, park benches etc.
Roof tiles	Cleaned and reused, crushed for reuse for landscaping and driveways or sold or provided to a recycled materials yard.
Soil	Stockpiled on site for reuse as fill.
Synthetic & recycled rubber	Reused for the same purpose or reprocessed for use in manufacture/construction of safety barriers, speed humps.
Topsoil	Stockpiled on site for reuse in landscaped areas.

The impacts of demolition and construction waste can be appropriately managed through the mitigation measures provided in Section 6.8.4.

Operations

Operational waste generation rates have been estimated for a 1,000-student capacity school, which are shown in **Table 40** below, including the types and numbers of bins required to manage the predicted waste volumes.

Table 40: Estimated operational general waste and recycling

Waste generation type	# students	General waste generation rate (L/ student/ week)	Generated general waste (L/week)	Recycling generation rate (L/ student/ week)	Generated recycling (L/week)
School: secondary	1,000	20	20,000	15	15,000
Total			20,000		15,000
Bins and collections		General waste bin size (L)	1,100	Recycling bin size (L)	1,100
		General waste bins per day	2.6	Recycling bins per day	1.9
		General waste bins per week	18.2	Recycling bins per week	13.6
		General waste collections per week	2	Recycling collections per week	2
		Total general waste bins required for	10	Total recycling bins required for collection	7

Waste generation type	# students	General waste generation rate (L/ student/ week)	Generated general waste (L/week)	Recycling generation rate (L/ student/ week)	Generated recycling (L/week)
		collection			

The estimated operational general waste and recycling volumes have been calculated based on the NSW EPA's Better Practice Guide's, listed above in **Section 6.8.2**. Taking into consideration the below waste rates, waste equipment required and collection times, the waste consultant has determined the bin storage area needs to be a minimum of 50m^2. The waste pad satisfies the estimated waste quantities.

The impacts of operational waste can be appropriately managed through the mitigation measures provided in Section 6.8.4

6.8.4 Mitigation measures

The waste mitigation measures in **Table 41: Construction waste mitigation measures** will be implemented during construction and operation of the activity.

Table 41: Construction waste mitigation measures

Mitigation name	Aspect/Section	Mitigation measure	Reason for mitigation measure
Waste reduction, recycling and reuse	All stages	Reuse and recycle opportunities are to be utilised wherever possible	Reducing waste at the source
	Construction	Encourage practices that reduce waste generation at the source, such as using fewer materials or opting for less packaging. This also includes reuse and recycling opportunities as outlined in Table 2 of the CDWMP.	Reducing waste at the source minimizes the volume of waste generated.
	Construction and Operation	Implement recycling programs to recover valuable materials from waste.	Recycling conserves natural resources, reduces energy consumption, and lowers greenhouse gas emissions, helping to create a circular economy.
	Construction	Ensure proper management and disposal of all waste streams in accordance with the CDWMP dated 31/01/25.	Effective waste management minimises environmental contamination.
Waste containment and disposal	Construction	Construction waste must be contained and secured wholly on site. At the completion of the works, the work site is left clear of waste and debris.	Waste should not be able to spread off-site and contaminate other areas.
	Construction	Waste disposal records – monthly reports Information in relation to the storage, treatment, and disposal of waste will be recorded in accordance with EPA requirements (Amount and type of waste,	Keeping records provides evidence of actions taken and are useful for ensuring compliance.

Mitigation name	Aspect/Section	Mitigation measure	Reason for mitigation measure
		Name and licence plate number of the transporter, Date of transportation, Name and location of the receiving waste facility, the approved waste facility, Transport Certificates as required) The EPA will be informed of any suspected breaches in the POEO Act with respect to transportation of waste.	
Construction requirements	Operations	Design should comply with to section 12 “Construction Requirements” of the OMP dated 20/01/25 (Rev F).	Paths for bin movement should ensure that workers can move bins in an efficient and safe manner.
Waste vehicles and collection	Construction	Provide adequate space between the waste area and the works area during construction to allow waste vehicles to entire the site in a safe, forward-facing manner. All vehicles entering or leaving the site must have their loads covered. All vehicles, before leaving the site must be cleaned of dirt, sand and other materials, to avoid tracking these materials onto public roads.	Waste vehicles carrying construction waste should not negatively impact other road users.
	Operations	Schools must use “NSW Contract 9698 agreement” for waste collection services. This contract is mandatory and covers waste management services (bins, collection, transport, processing, treatment and disposal). Waste streams include general waste, organic, grease trap, recycling, secure destruction and clinical.	Comply with regulations.
	Operations	Waste vehicle access to be in accordance with the Traffic Impact Assessment dated 23/01/25 (Rev G) and the OWMP dated 20/01/25 (Rev F). Loading bay design is approved by a Traffic Consultant.	Ensuring that the waste truck can access the waste pad is essential to the waste strategy
Handling asbestos and hazardous materials	Construction	Consult with SafeWork NSW concerning the handling of any asbestos waste that may be encountered during construction. The requirements of the Protection of the Environment Operations (Waste) Regulation 2014 with particular reference to Part 7 – ‘Transportation and management of asbestos waste’ must also be complied with. Ensure that the removal of hazardous materials, particularly the method of containment and control of emission of fibres to the air, and disposal at an approved waste disposal facility is in accordance with the requirements of the relevant legislation, codes, standards and guidelines.	Hazardous materials can be dangerous to human health, flora and fauna and thus need to be handled with precautionary steps in place.

Mitigation name	Aspect/Section	Mitigation measure	Reason for mitigation measure
Noise management	Construction	To manage noise levels, collection of waste from the construction site will only occur during hours approved for construction work.	Noise should be kept at a minimum to avoid disrupting neighbouring properties.
Protecting flora and fauna	Construction	Ensure that concrete waste and rinse water are not disposed of on the site and are prevented from entering any natural or artificial watercourse. Enforce 'carry-in, carry-out' policy regarding rubbish and waste materials generated on site during construction to avoid waste materials entering adjacent vegetation. Restriction of public access and associated impacts from domestic pets, waste dumping and damage to adjoining vegetation must be enforced pre, during and post construction.	Construction waste can be toxic and damaging to the environment, thus precautions should be taken.
Safe disposal methods	Operations	Ensure proper management and disposal of all waste streams. Ensure that OH&S requirements for waste contractors are met.	Effective waste management minimizes environmental contamination.
Waste containment	Construction	Design must comply with section 10 "Bin Moving Paths" of the OMP dated 20/01/25 (Rev F).	Compliance with regulations.
Pollution prevention	Operations	School management to comply with Section 8 "Pollution Prevention" and section 9 "Bin Washing" of the OMP dated 20/01/25 (Rev F).	To minimise dispersion of site litter and prevent stormwater pollution to avoid impact to the environment and local amenity.
Work cover	Operations	Ensure access to waste storage pad is convenient to all users and complies with WorkCover NSW.	The waste pad should be appropriately designed for ease of access for all users.
Operational specifics	Operations	Ban single use plastic items from school canteen (e.g. straws, cups, plastic cutlery to be replaced with wooden forks/spoons). Install hand driers instead of paper towels holders.	Reducing waste to lessen the impact on the environment.
Education	Construction and Operation	Conduct campaigns to inform the school community about proper waste disposal and the benefits of reducing waste.	Increasing public awareness leads to better waste sorting, reduces contamination in recycling streams.
Policy and regulation compliance, monitoring and reporting	Construction	Implement data collection and reporting systems for waste management activities.	Monitoring provides insights into waste generation patterns, helping identify areas for improvement and ensuring compliance with regulations.

Mitigation name	Aspect/Section	Mitigation measure	Reason for mitigation measure
	Construction	Regularly review and update waste management plans on an annual basis to comply with environmental regulations.	Compliance with regulations ensures that waste management practices are environmentally responsible.

6.9 Ecologically Sustainable Development

6.9.1 Introduction

This chapter summarises the ESD report, which is in **Appendix 23.** It describes the assessment method, results and mitigation measures to ensure ESD is a key consideration in project design, construction and operation.

6.9.2 Assessment guidelines

The ESD design strategies for this activity have been developed in accordance with the following guidelines and standards:

- Government Resource Efficiency Policy (GREP).
- Sustainable Building State Environmental Planning Policy (SB SEPP).
- SINSW Educational Facilities Standards & Guidelines.
- *Environmental Planning and Assessment Act 1979*.
- National Construction Code of Australia (NCC) 2022.
- Green Star Buildings V1.

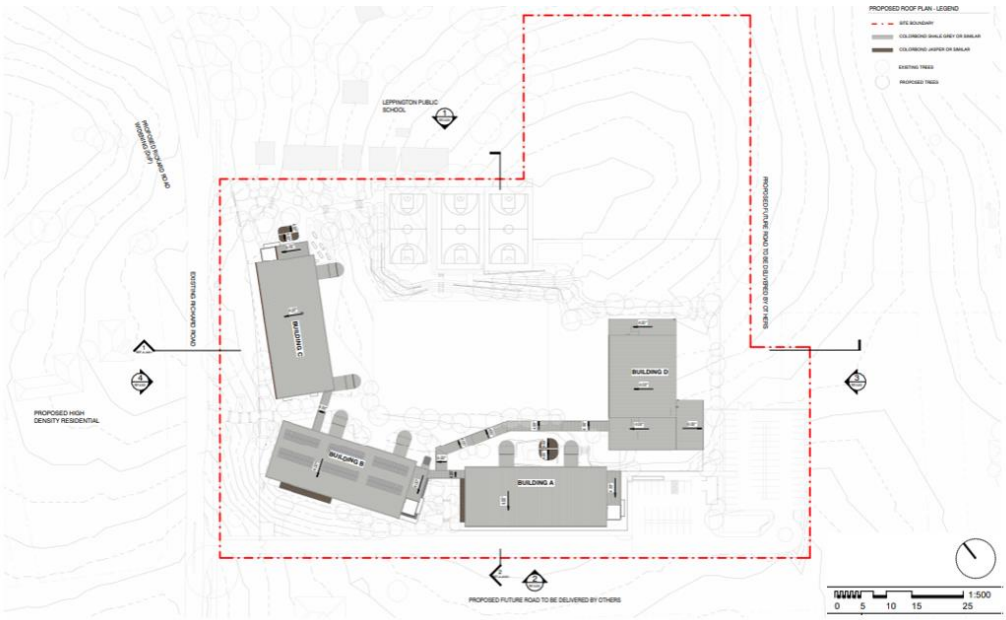
6.9.3 Impact assessment

Table 42 shows how the activity has been designed to consider ecologically sustainable development in accordance with the Educational Facilities Standards & Guidelines (EFSG).

Table 42: Educational facilities standards and guidelines for ecologically sustainable development

Educational Facilities Standards & Guidelines		
Requirement	**Requirement summary**	**Activity**
Resilience.	Utilise environmentally preferable materials, such as low carbon concrete and steel, selection of sustainable materials with low volatile organic compounds and formaldehyde content and have their Environmental Product Declaration certificates.	The design of the new buildings is guided by green star credits 16 (climate change resilience), 17 (operations resilience) and 18 (community resilience) and responds to potential risks arising from climate change, including extreme weather temperatures, rain events, fire and bushfire, drought and wind.
Passive design.	Design high quality spaces to promote	Passive design initiatives have

Educational Facilities Standards & Guidelines		
	comfortable and productive learning environments, while supporting the functional demand of the building, i.e., a learning / teaching environment. Key design emphasis is on providing optimised Indoor Environmental Quality (IEQ) and occupant comfort, including optimised indoor air quality, thermal, acoustic, and visual comfort.	been included in the design development of the new buildings: Placing glazing strategically to create more relaxed environmental conditions and to benefit from access to daylight, views and natural ventilation. Designing shade structures over windows to ensure appropriate shading, where required, or to control heat gains and glare. Achieving above NCC 2022 Section J Energy Efficiency minimum requirements by at least 10%. Ensuring airtightness to prevent unwanted heat transfer to the exterior. Including occupancy sensors to activate artificial lighting system only when a space is being occupied and remained off at other times
Reduction in peak demand for electricity.	Incorporate energy efficient design features to ensure a reduction in peak demand for electricity, i.e., monitoring air quality to adjust ventilation rates accordingly, maximise daylight availability through design, chose high efficiency electricity technology and install renewable energy sources wherever possible.	Additional energy efficient design features are being considered to reduce peak demand for electricity: Air quality monitoring systems to adjust ventilation rates depending on air quality, minimising the demand for outdoor air and therefore saving energy. Maximise natural daylight availability. Electric lighting to comprise high efficiency LED technology and include occupancy sensors. Install 99kW photovoltaic panels on the roof of Building B (**Figure 43** below).

Educational Facilities Standards & Guidelines		
 **Figure 43: Proposed roof plan showing location of photovoltaic panels (Source: DJRD)**		
Energy efficiency.	Incorporate a high-performance building envelope, to ensure energy efficiency as well as occupant comfort (including thermal, visual, and acoustic comfort).	The activity will: Install 99kW photovoltaic system on the roof of Building B. The design of the roofs for Buildings A and C will ensure that at least 20% of the roof space is available for installation of photovoltaic panels in the future. Design the main switchboard in accordance with NCC 2022 Section J requirements to allow for photovoltaic and future battery installation
Metering and monitoring of energy consumption.	Incorporate appropriate passive design strategies, such as improved fabric thermal performance and active design strategies that include low energy active systems (mechanical and lighting systems) to ensure a low-energy and low-maintenance design outcome	The activity will: Include a building management system, as per NCC requirements. Monitor energy use to understand energy usage and distribution.
Minimum potable water consumption.	Adopt Water Sensitive Urban Design (WSUD) principles that include rainwater reuse for landscape irrigation, planting of low water species and stormwater management	The new buildings will: Be fitted with water efficient fixtures and fittings, for example taps, showerheads, toilets, etc, that are certificated under the WELS rating scheme. Include rainwater harvesting for landscape irrigation. Ensure efficient water management through an automatic water meter monitoring system
Minimisation of waste	Adopt practices to minimise construction and operational waste including recycling of construction and operational	As part of this REF package, demolition, construction and ongoing occupation waste

Educational Facilities Standards & Guidelines		
	waste	management plans are available in **Appendix 25 and 26** respectively. These plans will ensure waste generation and disposal practices from initial site works to occupation consider ESD principles, address green star credit 2 and waste mitigation measures in Section 6.8.
Impact on biodiversity	Adopt a landscape strategy that aligns with the relevant sustainability requirements to reduce the impact on biodiversity, including integrating endemic species and WSUD design features in the activity.	The landscape strategy has been guided by green star credit 35 (impact to nature) and includes integration of native plant species and incorporates water sensitive urban design features

The activity has also been designed to reduce embodied emissions. In response to the Sustainable Buildings SEPP, a NABERS Embodied Emissions Material form is required to be prepared by a quantity surveyor. This will be prepared and submitted following determination of the application. This requirement is included in **Table 43** and **Appendix 1** as a mitigation measure.

Further, the activity considers the Green star rating and initial calculations by the ESD consultant indicate the activity will meet the target 35 green star points with a five point buffer.

6.9.4 Mitigation measures

Table 43: ESD Mitigation Measures

Mitigation number/name	Aspect/Section	Mitigation measure	Reason for mitigation measure
Formal Green Star Certification / Green Star Buildings v1 / 5 Star	Pre-construction	Prior to construction, a comprehensive sustainability strategy must be implemented and address the requirements of the Green Star Buildings framework.	To ensure the environmental performance and Indoor Environmental Quality of the building performs beyond the minimum regulatory compliance standard and achieves a high-performance outcome.
Passive design	Pre-construction	The final building design must achieve high levels of daylight and natural ventilation in accordance with the requirements of the Green Star Buildings framework.	To reduce operational energy consumption, and also contribute towards reduction of Greenhouse Gas Emissions.
Reduction in energy demand	Pre-construction	The following strategies must be incorporated: • Air Conditioning systems must utilise push-buttons with a run-on timer for activation and de-activation of the air-conditioning in all spaces. • LED lighting fixtures must be provided with Passive Infrared Occupancy sensors. • Sub-meters must be provided for	To reduce the energy demand and move towards the Department of Education's Net-Zero Energy target.

Mitigation number/name	Aspect/Section	Mitigation measure	Reason for mitigation measure
		monitoring and preparing targeted approach for future optimisation.	
Minimise potable water consumption	Construction	Certified WELS rated water fixtures to reduce wastage of water must be utilised. Rainwater tanks (2x20kL each) must be installed for enabling rainwater harvesting, to reduce the load on potable water demand.	To reduce the stress on natural resources and water demand.
Embodied Reporting	Construction	Must implement environmentally friendly materials and responsible procurement to reduce the stress on virgin materials. Must divert a minimum of 90% of the construction waste from landfill.	To align with Sustainable Buildings SEPP and Green Star guidelines to drive a sustainable design and operational building.
	Operation	Potential waste streams that would occur during the operational stage must be identified, and a 'reduce-reuse-recycle' strategy must be implemented.	To align with Sustainable Buildings SEPP and Green Star guidelines to drive sustainable operation of the building.
On site renewable energy generation	Operation	A 99kW Photovoltaic system must be incorporated in the design.	To enable the project to contribute towards the Department of Education's Net-Zero Energy target.
Formal Green Star Certification / Green Star Buildings v1 / 5 Star	Operation	For operations, meter, measure and monitor the building performance to address the requirements from Green Star Buildings framework, which is representative of an Industry Best-practice outcome.	Energy consumption data collection and analysis to reflect on the design initiatives and energy savings achieved because of them. Conduct post-occupancy audits as part of facilities management to monitor building performance. Help to aid with target-based approach for future improvement strategies.

6.10 Social Impact

Table 44 provides consideration of social impacts generated by the proposed activity.

Table 44: Social Impact

Type of Impact	Describe the impacts on the community and how they might be experienced, either positively or negatively	Discussion
Impacts on access – will there be an improvement to the quality of provision and a response to emerging and changing needs?	The proposed HS will improve access to secondary education in a consolidated education precinct, adjoining the existing PS and provide a positive impact for access to education in the community. The vehicular access to the HS has been separated from the existing PS access to allow for an internal access way within the school site at the southern boundary which will include a kiss and drop away from Rickard Road.	The development of Leppington Town Centre will see a significant increase in the local population, with access to secondary education currently available 10km away at Casula High School. The creation of an education precinct through the co-location of the HS and PS will significantly improve access to secondary education for the students of the area, who will be able to progress next door into the HS following completion of primary, rather than travelling 10km to attend school. As the local population is anticipated to grow significantly over the next 10 years through the implementation of the Leppington Town Centre Masterplan, the need for educational establishments is going to increase proportionally and this HS goes some way to addressing that demand.
Impacts on privacy, overshadowing, peace and quiet, and visual amenity (views / vistas) - will there be significant change for neighbours and the local area during both construction and operation?	Impact on amenity for existing neighbouring properties could be negative in the short term during construction but need to be considered in the context of the site being located within a growth centre. The long term impact will be positive as the design has considered the future road layout as detailed within the ILP and draft ILP and the buildings have been sited to align with the two road frontages of Rickard Road and the future southern road.	Short term negative impacts from neighbouring properties could relate to privacy, peace and quiet and visual amenity as the existing environmental is a low scale rural residential and agricultural environment. The land is currently zoned B7 business park and provides a maximum height of buildings control of 24m so it is likely that adjoining land owners have been prepared for the change in the local environment for several years, since the implementation of the current zoning. The design and siting of buildings has provided for a maximum of three storeys in a perimeter style block which places buildings close the western and southern street frontages and provides for large centrally located open space and view corridors through the proposed built form.

Type of Impact	Describe the impacts on the community and how they might be experienced, either positively or negatively	Discussion
		Visual impacts and privacy considerations informed the design, with generous setbacks provided to buildings and placement of building form towards the existing street frontage or proposed future road. Greater separation distances are proposed to the northern and eastern boundaries which will provide for generous soft landscaping treatments.
Impacts on sense of place - will there be effects on community cohesion or how people feel connected to the place and its character?	The impact is considered positive for a developing community, which is anticipated to grow significantly over the next 10 years.	Schools provide a great heart to the community, particularly in new and developing communities, which has been seen across the growth areas of the north west and south west. Schools can act as a meeting place, provide a sense of community and belonging for new community members and families in newly developed areas.
Impacts on the way people get around – will there be changes associated with traffic or parking in the area?	Any short term negative traffic impacts that may result from the activity as a result of the new HS have been ameliorated through the design of the activity. The community may be negatively impacted through some additional traffic in this locality. However, the TIA has undertaken extensive modelling to understand the likely impacts on the local road network and relevant intersections of Rickard Road and the school driveway as well as Rickard Road and Ingleburn Road. The TIA and SIDRA models have considered the likely impacts of reduced capacity on opening (assumed to be about 270 students) in 2027 as well as 1,000 students when the school reaches capacity. The SIDRA model confirmed that even without the activity, the intersections start to become overwhelmed by 2027 based on the background grown of the locality. As this site is located within a grown area and subject to a PP for	Construction traffic impacts are considered short term negative impacts that can be managed so that the impact is minimal. Construction worker traffic will be addressed through a management plan that will be implemented and encourages green travel. The STP will be updated annually to consider any community complaints, if received during the 12 month period. Operational traffic impacts are long term negative impacts but are mitigated / have been addressed via design so that the impact is minimal. Infrastructure upgrades proposed, include a median strip in Rickard Road and on site kiss and drop.

Type of Impact	Describe the impacts on the community and how they might be experienced, either positively or negatively	Discussion
	Leppington Town Centre, which seeks to increase the density of the locality, Council has undertaken a design for the duplication of Rickard Road, which is necessary for the locality whether a new HS is developed or not. Parking will not be impacted as a result of the activity as 75 spaces are provided on site for all staff and students are not encouraged to drive to school. The kiss and drop is located on site with access from Rickard Road and is adequate in length for the school once it reaches capacity at 1,000 students. Bus services are expected to increase with the opening of the HS and engagement with TfNSW has been undertaken in relation to the activity.	
Impacts on wellbeing - will there be benefits for students and the community associated with better school facilities, sporting facilities and grounds, and active transport options?	A long term positive impact is anticipated with regard to wellbeing through local access to a HS which will provide a consolidated education precinct with the HS and PS co-located on Rickard Road which will allow a seamless transition for students between primary and high school.	The proposed HS is being provided to service the growing Leppington Town Centre locality and provide direct access for the new residents and families locating in the south west growth area. At present, students are travelling long distances to attend HS and this will be improved through the activity which provides for a HS within the future Leppington Town Centre with a capacity of 1,000 students to service the need of the developing community. The PP currently being considered as a SARP provides for integration of the PS and HS to provide an education precinct, which is located directly south of a large area proposed to provide public recreation and playing fields.

6.11 Other issues

In addition to those considerations detailed earlier in this section of the document, the following table provides a summary of other issues that require consideration.

Table 45: Other issues

Issue	Consideration
Visual Amenity and Privacy	The activity has been thoughtfully considered to ensure there are no adverse visual impacts on adjoining properties. The governing design principle for siting buildings was to address the streetscape and keep minimal impact towards neighbouring properties. This is particularly addressed on the northern portion of the site towards LPS due to the local heritage significance where a generous setback has been provided. The massing of buildings are separated into three individual teaching buildings and the hall is standalone, all surrounding a central courtyard, entry forecourt and landscaped spaces between. Generous landscape design and tree planting will reduce the impact of the scale of buildings on the surrounding properties. The height of buildings ranges from one storey to three storeys and as the land is currently zoned B7 business park with a height of buildings development standard of 12m on the northern lot and 24m on the southern lot, the proposed height is considered entirely appropriate. Surrounding properties currently comprise rural or rural residential lots, with the exception of LPS to the north. As a result of the rural nature of the surrounding properties, there is very little opportunity for overlooking. However, the design has also considered the future development anticipated within the locality. As identified the land is within a release area and future development is proposed. The land is also subject to a PP which proposes to increase the densities currently applying to the locality and introduce more medium and high density residential development surrounding the site. The activity has sited buildings towards the western and southern boundaries which will provide street addresses to Rickard Road in the west and the future proposed southern road to the south. At only three storeys in height and located towards the existing and future road frontages, the potential for visual impact has been ameliorated through siting in appropriate locations and landscaping.
Overshadowing	The proposed design has sited buildings to the southern and western extents of the site and as a consequence the shadow diagrams confirm that there is minimal impacts on neighbouring sites. The shadow diagrams confirm that any impact is limited to less than one hour during mid winter and only impacting land adjoining to the south, which has been identified as a future road. Central play areas including assembly will benefit from solar access, except early in the morning and late in the afternoon. Each learning space has access to natural light and ventilation, outlook and privacy as required within the EFSG.
Bushfire	The activity is not located on land that has been designated as BFPL, while buildings are separated by 50m for grassland and 100m for woodland and forest. As such Specification 43 is not applicable to the school buildings or within the site. Despite the land not being designated as BFPL, a Bushfire Hazard Assessment has been prepared to evaluate potential fire hazards and ensure proposed activities align with fire safety standards and mitigation strategies. At a meeting with RFS on 29 October 2024, the RFS confirmed the site is low risk and will be treated accordingly with no requirement for compliance with PBP 2019, the NCC for Specification 43 of the Australian Standard for Construction of Buildings in Bushfire Prone Areas 2018 (AS3959). The activity is categorised as a Special Fire Protection Purpose (SFPP) development in accordance with Section 100B of the *Rural Fires Act 1997* however as the site is not affected or designated BFPL, no Bushfire Safety Authority is required from the RFS. For the purpose of the Bushfire Hazard Assessment, the BFPL map has been used

Issue	Consideration
	as a base and a vegetation assessment has been completed independent of the map. A bushfire landscape assessment considers the likelihood of a bushfire, its potential severity and intensity and the potential impact on life and property in the context of the broader surrounding landscape. This site has direct access to existing developed areas to the west, north, east and south with areas for refuge potential and multiple access and emergency egress routes. The assessment has found that there is no potential for landscape scale fire to affect the site and that the overall landscape scale threat is assessed as Low Risk. Considering the site's low bushfire risk, no bushfire construction is required however, BAL 19 will be provided to all buildings to enhance resilience, and services will be provided to comply with PBP 2019. The following mitigation measures are proposed: • The site is to be managed to Inner Protection Area Standards to the specifications detailed in Appendix 4 of PBP. • Buildings built to BAL 19. • Landscaping is to be designed and managed in accordance with Appendix 4 of PBP. • The proposed internal access road is to comply with the Acceptable Solutions listed within Table 6.4b of PBP. • The fire hydrants will be designed and installed in accordance with AS2419:2021 requirements. • Electricity supply is to be located underground. • Gas services are installed and maintained in accordance with AS/NZS 1596:2014. • Prior to occupation, a Bushfire Emergency Management and Evacuation Plan is to be prepared in accordance with the NSW Rural Fire Service document "A Guide to Developing a Bushfire Emergency Management and Evacuation Plan (RFS 2014). These mitigation measures are included at Appendix 1. With regard to the consideration of cumulative impact, the assessment provides that the planned growth in Leppington Town Centre serves to further reduce bushfire risk and enhance infrastructure, so the activity is not considered to negatively impact the surrounding area from a bushfire perspective. The report has found that the activity is able to meet the requirements of PBP 2019 through the implementation of mitigation measures.
Soils and Geology	The site is not in areas mapped as containing acid sulphate soils or salinity (as confirmed during intrusive geotechnical testing) and corresponding management plans are not required. A geotechnical report was prepared and is in **Appendix 10**. The geotechnical specialist considers the site is suitable for the proposed activity based on the following conditions: • Earthworks must be undertaken with adequate care and control if structures and pavements are to be supported on the fill. • There is a dam and a small pond in the southern and western portions of the site in No. 128 Rickard Road. A road is proposed above the dam and the small pond may be below the footprint of Building 2. Prior to placement of any new fill in these areas, all water-softened material will need to be removed prior to backfilling and the backfill placed in accordance with the earthworks specification. • The residual silty clays are generally of high plasticity and care will be required during any earthworks where clay fill is used. Clay fill will need to be compacted at close to its optimum moisture content and must not be over compacted, as

<table>
<tr><th>Issue</th><th>Consideration</th></tr>
<tr><td></td><td>this will increase the risk of swelling of the clays. Adequate drainage will be required during earthworks so the exposed clays do not become moisture affected.
• Extremely weathered claystone may also be used for filling but will tend to break down to a residual clay during compaction. The extremely weathered claystone will be reactive to variations in moisture content and should be treated in a similar manner to residual clay.
• Low California bearing ratio (CBR) values were measured for the residual silty clay. This will require the adoption of relatively thick pavements, some form of subgrade treatment to improve the subgrade quality or bound subbases for concrete pavements. High swells were also measured during testing indicating the subgrade is highly sensitive to moisture variations and therefore it will be important to install subsoil drainage to reduce infiltration of moisture.
• Bedrock encountered within the cored boreholes generally improves in quality and strength with depth. However, BH113 to BH115 in the eastern portion of the site had bands of siltstone rock classification Class V material encountered within Class III or better bedrock at depth. Design of foundations must consider the potential for bands of weaker material to be present at depth.
• Class II or better bedrock is present below the footprints of the three main buildings (Buildings a to C). Based on the detailed geotechnical investigations there is sufficient information to adopt this stratum for the design of foundations for these three buildings. Adopting these parameters will require inspection during drilling of all piles. In-situ testing of piles designed to found in Class II or better bedrock could also be completed during construction to allow the adoption of a higher geotechnical reduction factor where ultimate limit state values are adopted.
• Cut and fill requirements are shown on the Earthworks cut and fill volumes plan in Appendix D of the Civil Engineering Design Report in Appendix 28. There will be a cut balance of approximately 4,624 m^3, which will be removed for offsite recycling and landfilling via truck. Some soil will be temporarily stockpiled on site, which will be managed in accordance with the erosion and sediment control plan.</td></tr>
<tr><td>Air Quality</td><td>Generation of dust during construction will be the main potential air pollutant of concern. Construction and operation of the activity will not involve odour or significant other potential air pollutant generating activities.
Dust and other minor pollutants could be generated during earthworks and on site vehicle/equipment use. However, ground disturbance/construction will be limited in extent and duration and can be managed by implementing the following mitigation measures.
<table>
<tr><th>Mitigation number/ name</th><th>Aspect/Section</th><th>Mitigation measure</th><th>Reason for mitigation measure</th></tr>
<tr><td>General</td><td>Construction</td><td>Activities to be assessed during adverse weather conditions and modified as required (e.g. cease activity where reasonable levels of dust cannot be maintained using the available means).</td><td>To prevent windblown dust</td></tr>
<tr><td></td><td></td><td>Weather forecast to be checked prior to material handling and excavation.</td><td>To prevent windblown dust</td></tr>
<tr><td></td><td></td><td>Engines of on site vehicles and plant to be switched off when not in use.</td><td>To reduce engine emissions</td></tr>
</table></td></tr>
</table>

Issue	Consideration			
			Vehicles and plant are to be fitted with pollution reduction devices where practicable.	To reduce engine emissions
			Vehicles are to be maintained and serviced according to manufacturer's specifications.	To reduce engine emissions
			Visual monitoring of activities is to be undertaken to identify dust generation.	To prevent dust generation
	Exposed areas/ stockpiles		The extent of exposed surfaces and stockpiles is to be kept to a minimum.	To prevent dust generation
			Exposed areas and stockpiles are either to be covered or are to be dampened with water as far as is practicable if dust emissions are visible, or there is potential for dust emissions outside operating hours.	To prevent dust generation
	Material handling		Reduce drop heights from loading and handling equipment where practical.	To prevent dust generation
			Dampen material when excessively dusty during handling.	To prevent dust generation
	Hauling		Spills on trafficked areas to be cleaned immediately.	To prevent dust generation
			Vehicle traffic is to be restricted to designated routes.	To prevent dust generation
			Co-ordinate the delivery schedule to avoid a queue of incoming or outgoing trucks that will be idling for extended periods of time.	To reduce engine emissions
			Vehicle loads are to be covered when travelling off-site.	To prevent dust generation
			Public roads near the site to be inspected for sediment weekly and cleaned as required.	To prevent dust generation
Wind	The activity provides for buildings between one and four storeys and are not anticipated to impact the wind environment.			
Land Use	The site is currently zoned B7 Business Park and forms part of the Leppington North precinct within the SWGA. There is a PP applying to the land which is identified as Leppington Town Centre PP and this package was publicly notified at the end of 2023/ beginning 2024. The PP was identified as a State Assessed PP in December 2024 and is expected to be assessed and finalised as a priority. The PP identified the site within a broader education precinct, also including LPS to the north and proposes to zone the two sites SP2 for education purposes.			

Issue	Consideration
	The surrounding land uses are proposed to intensify with the inclusion of more medium and high density development surrounding the site, as well as more mixed use development in the precinct and the broader town centre.
Coastal Risks	The land is not located in a Coastal Management Area or otherwise in close proximity to coastal lands and as a consequence there is no potential to impact coastal lands or to consider any coastal hazard provisions.
Aviation	The site is located within the outer horizontal surface of the Western Sydney Airport, as depicted in the Obstacle Limitation Surface Chart. The outer horizontal surface has a radius of 15,000m and is identified at a height of 150m above level datum being RL 230.5 AHD. The existing site ground levels range from RL 91.85 to RL 102.27 with building heights of only three storeys maximum. There will be no impact on the OLS as a result of the proposed activity.
Accessibility and BCA	Reports have been prepared for the activity to address BCA compliance (**Appendix 31**) and accessibility requirements (**Appendix 32**). Both reports identify that the proposed activity is capable of complying with the relevant requirements and standards subject to detailed design, and where appropriate, performance solutions. Compliance with the recommendations in the reports has been included in the mitigation measures at Appendix 1, to be addressed in detailed design, prior to construction.

6.12 Cumulative Impact

Potential cumulative impacts associated with the activity are outlined in the following sections.

6.12.1 Leppington Town Centre Planning Proposal

As the site forms part of the SWGA and is located within the Leppington Town Centre, cumulative impacts are predominantly related to the precinct in its entirety. This is an area which is undergoing significant change in development from primarily rural residential land to a mixed use and high density residential locality. Given the anticipated population growth and increased demand for infrastructure, the current Leppington Town Centre PP was announced by DPHI as a SARP in December 2024. The PP was nominated as a state-led rezoning proposal to streamline the assessment process ensuring the delivery of a strategically important rezoning, addressing the housing and employment needs of a growing population in the SWGA.

Leppington Town Centre is currently undergoing transformation, with significant changes to occur over the next few years. The PP helps support a more integrated precinct, offering increased opportunities for commercial, industrial and residential development. The new high school will provide necessary relief to nearby John Edmondson High School and Casula High School, which are currently accommodating the residential population.

6.12.2 Traffic, Access and Parking

Leppington HS and the existing LPS will form the future Leppington education precinct, as identified with the PP, Draft DCP and Draft ILP. The construction of the HS must carefully be

managed to reduce safety concerns and maintain current and proposed operations at Leppington Public School during construction. The contractor is therefore required to consider the safety of students attending LPS during any construction activities and not interrupt established processes such as the kiss and drop activities occurring on Rickard Road. Mitigation measures have been provided to address the various changes in traffic, access and parking in this regard.

The design of the kiss and drop activities for the high school have been intentionally located to the south of the site within the internal access way to provide adequate separation between the existing PS kiss and drop on Rickard Road and the HS kiss and drop to ensure there is adequate queuing distance available in the internal access way and prevent any queuing within Rickard Road. The proposed bus bays have been located along Rickard Road, adjoining the existing bus bays at the primary school to ensure clear access to public and school buses for LPS students, LHS students and the public. The TIA is detailed within Section 6.1 and includes a full assessment of traffic impacts associated with the proposed school at opening in 2027 with a likely reduced capacity as well as when the school reaches a capacity of 1,000 students.

The TIA finds that the Rickard Road and Ingleburn Road intersection reaches a LoS F at opening in 2027, while Rickard Road and Byron Road continues to function at LoS A and Ingelburn Road and Byron Road maintains LoS B. Once the school reaches full capacity, all three intersections reach a LoS F, without the upgrades proposed as part of the PP.

The TIA addressed the intersection performance at Rickard Road and Ingleburn Road to fully interrogate the failing performance of surrounding intersections in coming years. The school is not found to be the main contributor to traffic growth, instead being attributed to background growth within the locality. Even without the increase in density proposed as part of the Leppington Town Centre PP, Rickard Road and Ingleburn Road is moving towards an unsustainable level. Engagement with Camden Council and TfNSW through the TWG has confirmed that the congestion on Rickard Road is well known and as a consequence Council have undertaken a design to duplicate Rickard Road and provide two lanes of traffic in each direction. This design is complete and awaiting funding to proceed. The Council anticipates that finalisation of the Leppington Town Centre PP will enable progress of the Rickard Road upgrades to occur before the opening of the high school.

6.12.3 Noise and Vibration

Given the changing nature of the Precinct, noise generated from the new high school could combine with noise from the adjoining primary school and/or surrounding projects, during both construction and operation, resulting in cumulative impacts.

The NPI noise assessments inherently consider cumulative impacts as the noise trigger levels are derived from either the project intrusiveness or amenity noise level, whichever is lowest. To ensure that cumulative noise levels remain consistent with the recommended amenity objectives under the NPI strategy, the activity has set an amenity noise level at 5dB(A) lower that the amenity noise level.

It is anticipated that each neighbouring activity, when development occurs, will apply the same strategy from the NPI in order to maintain the acoustic amenity of the area, being 5dB(A) lower than the noise trigger levels.

6.12.4 Contamination

There are five areas of environmental concern on the site which are contaminated with potential to be exposed to receptors. However, once remediated the site will not contribute to cumulative regional contamination issues.

6.12.5 Historic and Aboriginal heritage

No evidence of previous Aboriginal occupation of the site was discovered during the site inspection and test excavations. Therefore, the activity is unlikely to directly impact any items of Aboriginal cultural significance and will not contribute to cumulative impacts across the Leppington Town Centre.

The SOHI (**Appendix 7**) confirms that the site does not hold any heritage value. The site and surrounding precinct transformation will transition the area from predominantly open, agricultural landscape to a more urban environment. The new high school will positively contribute to the cumulative impact of the precinct, transforming the underutilised site whilst complementing the heritage value of the adjoining public school, enhancing the aesthetic appeal of the site and its immediate surrounds.

6.12.6 Hydrology, Flooding and Water Quality

As detailed in Section 6.6, the activity has been assessed against the relevant hydrological, flooding, access and evacuation routes and surface water under the required DCP and state guidelines. The adopted 1% AEP event, PMF event and other relevant assessment criteria have been considered in the Flood Statement (**Appendix 5**).

The activity will have no impact on the existing flood behaviour, flood levels and velocity for floods up to and including the PMF within the site or the surrounding area, provided that the site stormwater runoff is being maintained to the pre-development levels. The site is at a crest (near the north-east corner), has no external upstream catchment that will contribute stormwater runoff to the site and is outside of the PMF flood extent. Flood evacuation has been considered with the activity during operation and evacuation procedures are acceptable. There are no flow on impacts for evacuation on the surrounding area in the event of a flood as confirmed in the flood assessment submitted.

6.12.7 Ecological and Arboriculture

The activity will not have a cumulative impact on biodiversity, given that the site and surrounds received biodiversity certification in 2006 as outlined in Section 2.4.6. A biodiversity assessment was made at the time when land was rezoned, considering the future SWGA transformation and has allowed development to proceed without further assessment in certified areas.

6.12.8 Social Impact

As summarised in Section 6.10, the social impacts of the activity, over the long term are generally considered positive. The creation of a new high school will support the developing community and

improve wellbeing with local access to a HS. There could be short term negative impacts relating to privacy, noise and visual amenity during construction but given the changing nature of the area, this is considered minor.

6.12.9 Utilities and Services

As assessed in the Hydraulic Services and Utility Services Report (**Appendix 16**), the only impacts on utilities and services will be during construction and are generally considered minor. Discussions with Sydney Water are ongoing with regard to sewer connections, however various options are available to the site and these will be progressed further subject to feasibility. During plumbing, access to the necessary activities may cause traffic congestion and noise and vibration during pipe installation and trenching. Mitigation measures have been included to reduce disturbances, particularly near schools and residential areas.

6.12.10 Bushfire

As detailed in the Bushfire Hazard Assessment (**Appendix 11**), as the Leppington Major Centre grows and densifies, bushfire hazards will be removed as urban areas expand and natural fuel loads are replaced with built infrastructures and managed areas. The cumulative impact of the planned growth and development for the area will be positive, mitigating the threat of bushfire to future and existing communities, including the high school. The upgraded road network will also improve connection and emergency response times.

6.13 Consideration of Environmental Factors

Section 171(1) of the EP&A Regulation notes that when considering the likely impact of an activity on the environment, the determining authority must take into account the environmental factors specified in the guidelines that apply to the activity.

Section 171A of the EP&A Regulation sets out additional matters to take into account when considering the likely impact of an activity on the environment in a regulated catchment.

In considering the likely impact of the activity on water quality and quantity, aquatic ecology, flooding, recreation and public access, the impact has been adequately considered within the Environmental Impact Assessment of this REF.

The activity is shown to have a neutral or beneficial effect on water quality through compliance with Council's requirements for pollutant reduction and provision of water quality treatment measures as part of the water-sensitive urban design.

The assessment provided in the sections above has been prepared to provide a detailed consideration of the factors that must be taken into account for an assessment under Division 5.1 of the EP&A Act. These factors are summarised at **Table 46** and where mitigation measures have been proposed in response to the factor, these have been identified.

Table 46: Environmental Factors considered

Environmental Factor	Consideration	Mitigation Measure Reference
Any environmental impact on a community?	Short term impacts may arise during the demolition and construction process including traffic, noise, access and dust. However, suitable mitigation measures have been included to ensure potential impacts are minimised during the demolition and construction process. Environmental impacts have been assessed as part of this REF and subject to the implementation of the proposed mitigation measures, the activity will not result in unacceptable environmental impacts. The proposed activity has been designed in accordance with the recommendations of the consultant team and with consideration of the feedback provided by Council and State government agencies. Long-term, the proposed activity will have a beneficial impact for the community by providing secondary educational infrastructure with modern and fit-for-purpose school facilities within proximity of the primary school, train station and emerging town centre.	G8, G10, NV30, WAS19,
Any transformation of a locality?	The proposed new high school contributes positively to the already changing nature of the locality. The Leppington Major Centre forms part of the SWGA, a strategically planned growth area that is undergoing transformation into an integrated precinct for housing and employment. The activity will contribute essential infrastructure to the existing and future community, providing an integrated educational precinct with the adjoining primary school to provide local access to education amenities. The school has been designed to situate buildings at an appropriate distance towards neighbouring properties and the streetscape. Due to the heritage significance of the adjoining PS, generous side setbacks apply. Massing has been separated into 3 buildings and the hall, with an entry forecourt, central courtyard and landscaped spaces in between. Landscape and tree planting will also help reduce the visual impact and protect views.	HH2, TT4, TT11, ECO3, ECO7
Any environmental impact on the ecosystems of the locality?	The proposed activity will not result in significant impacts on the ecosystems of the locality. The land is biodiversity certified as part	ECO1- ECO10,

Environmental Factor	Consideration	Mitigation Measure Reference
	of the SWGA.	
Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality?	There will be short-term impacts on the aesthetic qualities of the site during construction. Mitigation measures have been included to address construction noise, vibration, visual privacy and traffic impacts. In addition, measures are in place to mitigate environmental impacts of the school's operations. Accordingly, the proposed activity will not reduce aesthetic, recreational, scientific or other qualities of the locality.	G15, G18, NV1-NV44.
Any effect on locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations?	The SOHI (**Appendix 7**) confirms that the activity will have a neutral impact on the adjoining heritage item, Leppington Public School. There will be no impact on Aboriginal heritage items (including cultural significance and archaeology) noting that the site does not comprise any and is not in proximity to any other such items. The CWC Report (**Appendix 19**) supports this activity, integrating the CWC Framework into the design of the new high school. Further opportunities have been identified to enable Country to be incorporated into the design, in consultation with the local Aboriginal community, with respect to educational opportunities, the development of signage and selection of landscaping for the site.	HH1, HH2, ABH1, ABH2
Any impact on the habitat of protected animals, within the meaning of the *Biodiversity Conservation Act 2016*?	The works do not impact on the habitat of any protected animals, within the meaning of the BC Act. Mitigation measures have been identified in Section 6.7 to mitigate any impacts.	ECO38
Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air?	The proposed activity will not result in the endangering of any species of animal, plant or other form of life. Mitigation measures have been identified in Section 6.7 to mitigate any impacts.	ECO38
Any long-term effects on the environment?	The proposed activity has been designed to ensure there will be no unacceptable long-term impacts on the environment. The activity will help contribute to reduced bushfire risk in the area as the precinct transforms into a more urbanised environment. ESD initiatives have been included in the activity to reduce the environmental impacts and ensue a sustainable outcome as detailed at **Appendix 23**.	ECO34, BF8, ESD1, ESD5

Environmental Factor	Consideration	Mitigation Measure Reference
	Long term social and economic effects will be positive, providing essential infrastructure in a growth area, supporting existing and future community members with educational and job opportunities.	
Any degradation of the quality of the environment?	Appropriate mitigation measures have been included to ensure that the activity will not reduce the quality of the natural environment, including ecology, landscape, stormwater management, noise and waste management.	G7, WA1, ESD5, CON1, ECO15, ECO16, WAS13
Any risk to the safety of the environment?	The proposed activity has been designed in accordance with the environmental constraints of the site, with particular focus on contamination leak risks. Following the DSI (**Appendix 8**), a RAP (**Appendix 9**) has been developed for the site and the activity, having regard to the risk profile of the site and surrounds.	G21, CON1
Any reduction in the range of beneficial uses of the environment?	The proposed activity will not result in a reduction in the range of beneficial uses of the environment.	N/A
Any pollution of the environment?	The activity will not result in pollution of the environment. Stormwater and sewage management has been considered in the assessment of potential polluting impacts of the activity and appropriate mitigation measures have been provided to protect the environment.	WAS16, AQ4
Any environmental problems associated with the disposal of waste?	A CDWMP (**Appendix 25**) and an Operational Waste Management Plan (**Appendix 26**) have been prepared of the activity which set out all management practices required to reduce, minimise or avoid adverse impacts arising from the disposal of waste. All outcomes and recommendations of these reports have been captured in the mitigation measures for the activity.	G14, G16, WAS1-WS21
Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply?	The activity is unlikely to result in increased demands on resources that are, or are likely to become, in short supply. Measures to reduce the consumption of materials, energy and water over the lifetime of the building have been incorporated into the building's design and so will be implemented through the terms of the activity, once approved.	G16, WAS2, WAS3, ESD4
Any cumulative environmental effects with other existing or likely future activities?	As outlined in Section 6.12 of this REF, cumulative impacts from the activity predominantly relate to the broader Leppington Town Centre PP and its implementation, with the primary consideration relating to	N/A

Environmental Factor	Consideration	Mitigation Measure Reference
	traffic congestion on Rickard Road, which will be addressed by Council's finalised design to duplicate Rickard Road and provide two lanes in each direction.	
Any impact on coastal processes and coastal hazards, including those under projected climate change conditions?	The site is not in a coastal location. Therefore, further consideration of this factor is not required.	N/A
Applicable local strategic planning statement, regional strategic plan or district strategic plan made under Division 3.1 of the Act?	The proposed activity is consistent with the aims, objectives, planning priorities of the relevant strategic plans, as set out in Section 0 of this REF.	N/A
Any other relevant environmental factors?	There are no further environmental factors that need to be considered in the assessment of the activity.	N/A

7. Justification and Conclusion

The proposed new high school for Leppington and Denham Court at 128-134 Rickard Road, Leppington is subject to assessment under Division 5.1 of the EP&A Act. The REF has examined and taken into account to the fullest extent possible all matters affecting, or likely to affect, the environment by reason of the proposed activity.

As outlined in this REF, the proposed activity can be justified on the following grounds:

- It responds to an existing need within the community;
- It generally complies with, or is consistent with all relevant legislation, plans and policies;
- It has minimal environmental impacts; and
- Adequate mitigation measures have been proposed to address these impacts.

The activity is not likely to significantly affect threatened species, populations, ecological communities or their habitats, and therefore it is not necessary for a Species Impact Statement and/or a BDAR to be prepared. The land is located in the SWGA which received Biodiversity Certification under the former *State Environmental Planning Policy (Sydney Region Growth Centres) 2006* (the provisions have been transferred to the Precinct SEPP). The Order was made under Section 126G(1) of the *Threatened Species Conservation Act 1995* by the Minister Assisting the Minister for Climate Change, Environment and Water (Environment), Verity Firth M.P., and took effect on the 11 December 2007. This certification allows development in certified areas to proceed without further biodiversity assessment, provided the agreed conservation outcomes are undertaken. Further, as the site is certified, the Biodiversity Offsets Scheme does not apply. As such, there are no additional requirements for offsets for clearing and developing the land.

The environmental impacts of the activity are not likely to be significant. Therefore, it is not necessary for an EIS to be prepared and approval to be sought for the activity from the Minister for Planning and Public Spaces under Division 5.2 of the EP&A Act. On this basis, it is recommended that the department determine the proposed activity in accordance with Division 5.1 of the EP&A Act subject to the implementation of mitigation measures identified within this report.