PLANNING
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Environmental Impact Statement

New School Charmhaven

Prepared by Barr Planning

for St. Philip's Christian Education Foundation Ltd

August 2023

Barr Planning acknowledges the Traditional Custodians of country throughout Australia and their connections to land, sea, and community. We pay our respect to their Elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

Document Control

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Address: Lot 2 DP 809106 Arizona Road, Charmhaven NSW
Project No. 19NEW0124
Client: St. Philip's Christian Education Foundation Ltd

Document Issue:

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Draft 1	October 2022	Rebecca Boresch	Stephen Barr
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Glossary and Abbreviations

Terminology	Meaning
ABS	Australian Bureau of Statistics
ACARA	Australian Curriculum Assessment and Reporting Authority
ACHA	Aboriginal Cultural Heritage Assessment
AEP	Annual Exceedance Probability
AHD	Australian Height Datum
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
APZs	Asset Protection Zones
ARR	Aboriginal Archaeological Report
AS	Australian Standard
ASS	Acid Sulfate Soils
BC Act	Biodiversity Conservation Act 2016
BCA	Building Code of Australia
BC SEPP	State Environmental Planning Policy (Biodiversity and Conservation) 2021
BDAR	Biodiversity Development Assessment Report
CCA	Central Coast Airport
CIV	Capital Investment Value
CMP	Construction Management Plan
Codes SEPP	State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
Council	Central Coast Council
CCLEP	Central Coast Local Environmental Plan 2022
CMP	Construction Management Plan
CPTED	Crime Prevention Through Environmental Design
CTMP	Construction Traffic Management Plan
DAR	Disability Access Report
DCDID	Delivery Coordination Digital and Insights Division.
DCP	Development Control Plan
DP	Deposited Plan
DPE	NSW Department of Planning and Environment
DPSCA	Detailed Preliminary Site Contamination Assessment
DSI	Detailed Site Investigation
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EP&A Act	Environmental Planning and Assessment Act 1979

Terminology	Meaning
EP&A Regulation	Environmental Planning and Assessment Regulation 2021
EPA	NSW Environment Protection Authority
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
ESD	Ecologically Sustainable Development
FSC	Forest Stewardship Council
GANSW	NSW Government Architect's Office
GFA	Gross Floor Area
GLAs	General Learning Area
HIS	Heritage Impact Statement
HMS	Hazardous Materials Survey
HV	High Voltage
IE SEPP	State Environmental Planning Policy (Industry and Employment) 2021
Infrastructure Strategy	State Infrastructure Strategy 2018-2038
ISA	Independent Schools Australia
kVA	Kilo-Volt-Ampere
LGA	Local Government Area
LiDAR	Light Detection and Ranging
LSPS	Local Strategic Planning Statement
M	Metre
M^2	Square Metres
MGBs	Mobile Garbage Bin
NARClim	NSW and ACT Regional Climate Modelling
NASF	National Airports Safeguarding Framework
N/A	Not applicable
NBN	National Broadband Network
NCC	National Construction Code
NIA	Noise Impact Assessment
NSW	New South Wales
OEH	Office of Environment and Heritage
OOSH	Out of School Hours
PAA	Practical Activities Area
PBP	Planning for Bushfire Protection Guidelines 2019
PEFC	Programme for the Endorsement of Forest Certification
PFAS	Per and Polyfluoroalkyl Substances
Planning Proposal	Planning Proposal for Rezoning
PS SEPP	State Environmental Planning Policy (Planning Systems) 2021
PSI	Preliminary Site Investigation
RAPs	Registered Aboriginal Parties
RFS	Rural Fire Service

Terminology	Meaning
RFSCC	Rural Fire Service Control Centre
RH SEPP	State Environmental Planning Policy (Resilience and Hazards) 2021
RMS	Roads and Maritime Services
RSDCP	Regional Section 7.12 Development Contributions Plan 2019
SAL	Statistical Area Level
SATs	Spot Assessment Technique
SDRP	State Design Review Panel
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SHR	State Heritage Register
SIA	Social Impact Assessment
SINSW	Schools Infrastructure New South Wales
SIOP	Site Improvements Option Plan (Remedial Action Plan)
SPCC	St Philip's Christian College
SPCEF	St Philip's Christian Education Foundation Ltd
SSD	State Significant Development
SSDA	State Significant Development Application
STEM	Science Technology Engineering and Mathematics
SWMP	Stormwater Waste Management
TAS	Teaching Assistance Space
TIA	Transport Impact Assessment
TfNSW	Transport for New South Wales
TI SEPP	State Environmental Planning Policy (Transport and Infrastructure) 2021
The Minister	The Minister for Planning
The Project	The new St Phillips Christian College
TPZ	Tree Protection Zone
Transport Strategy	Future Transport Strategy 2056
VET	Vocational Education and Training
WM Act	Water Management Act 2000
WMP	Waste Management Plan
WSP	Waste Service Provider
WSUD	Water Sensitive Urban Design

Project Details

Project Details	
Project Name	St. Philip's Christian College, Charmhaven
Application Number	SSD-14082938
Address of the Land in respect of which the development application is made.	Arizona Road, Charmhaven NSW 2263 Lot 2, Deposited Plan 809106
Applicant Details	
Applicant Name	St Philip's Christian Education Foundation Ltd
Applicant Address	57 High Street Waratah NSW 2298
Details of person by whom the EIS was prepared by.	
Name	Rebecca Boresch
Qualifications	B.URP. RPIA
	Barr Planning
	92 Young Street, Carrington NSW 2294

Declaration

Declaration by Registered Planner	
Name:	Rebecca Johnston
Registration number	5503
Organisation registered with:	Planning Institute of Australia
Declaration:	The undersigned declare that this EIS: ▪ Has been prepared in accordance with Schedule 2 of the Environmental Planning and Assessment Regulation 2021. ▪ Contains all available information relevant to the environmental assessment of the development, activity, or infrastructure to which the EIS relates. ▪ Does not contain information that is false or misleading. ▪ Addresses the Planning Secretary's environmental assessment requirements (SEARs) for the project. ▪ Identifies and addresses the relevant statutory requirements for the project, including any relevant matters for consideration in environmental planning instruments. ▪ Has been prepared having regard to the Department's State Significant Development Guidelines - Preparing an Environmental Impact Statement. ▪ Contains a simple and easy to understand summary of the project, having regard to the economic, environmental, and social impacts of the project and the principles of ecologically sustainable development. ▪ Contains a consolidated description of the project in a single chapter of the EIS. ▪ Contains an accurate summary of the findings of any community engagement; and ▪ Contains an accurate summary of the detailed technical assessment of the impacts of the project. ▪ Contains all relevant documentation required for lodgement under Section 4.12 of the EP&A Act and Regulations.
Signature	
Name	Rebecca Johnston
Date	10 August 2023

Executive Summary

This Environmental Impact Statement (**EIS**) has been prepared on behalf of St Philip's Christian Education Foundation Ltd (**the Applicant**) and accompanies a State Significant Development Application (**SSDA**) for St Philip's Christian College, Charmhaven (**the Project**) at Arizona Road, Charmhaven (**the site**).

This EIS responds to the modified Secretary's Environmental Assessment Requirements (**SEARs**) issued on the 31 March 2022 and subsequent advice from the Department of Planning and Environment (**DPE**) received on the 27 April 2023 by email and provided in Appendix H. This EIS provides an assessment of the project against the matters of consideration under section 4.15 of the Environmental Planning and Assessment Act 1979 (**EP&A Act**) and is declared as a SSDA under Schedule 1, clause 15 of State Environmental Planning Policy (Planning Systems) 2021 (**PS SEPP**), as the project, being a school, has a Capital Investment Value (**CIV**) of $420,454,000.00. As this amount is over $20 million, the project is declared as being State significant.

The Project

The Project will include site preparation works (earthworks, the removal of vegetation, provision of services) and the construction of a new non-government K-12 school known as St Philip's Christian College and Narnia Early Learning Centre, Charmhaven to educate up to 554 students in Stage 1A-1D and 1,583 students and children by Stage 4. The new school will include a one into two lot subdivision to separate the development footprint of the school from the remainder of the site. Works include services (water, sewer, and electricity), a new intersection on the Pacific Highway, PFAS remediation work, administration buildings, new junior, middle and senior school facilities, sporting facilities, a performing arts centre, chapel, as well as a Dynamic Alternative Learning Environment (**DALE**). Other facilities include sporting fields, outdoor courts and indoor courts and facilities.

The objectives of the Project are to:

- Establish the school footprint on its own parcel of land.
- Establish a new educational establishment facility to meet the demand for quality education within the Greater Warnervale Growth Area.
- Create temporary and permanent job opportunities during the construction and operational phase of the development.
- Implement CPTED principles in the site's design to deter crime.
- Provide a safe and accessible educational establishment.
- Create a series of high quality and modern teaching spaces which are flexible and promote increased social interaction among students and teachers.
- Promote the principles of ecologically sustainable development through a design responsive to the site's unique environmental attributes and which is energy and water efficient.
- Provide a design that celebrates connection to country and the natural and historic attributes of the site.

- Minimise impacts relating to flooding, noise, visual amenity, traffic or any other such impacts on nearby properties.
- Provide areas within the new school for indoor and outdoor recreation to improve the health and wellbeing of students and the broader community, and
- Provide an additional parcel of land that is not required to accommodate The Project and support the effective and economic use of land along a recognised growth corridor.

The proposed will be completed in the following 9 stages:

Stage 1A	One into two lot subdivision.
Stage 1B	Site preparation works, construction of services (sewer pump station, water, and electricity substation), stormwater, and one detention basin, the welcome centre, chapel, early learning centre, community stand, bus bay, two junior school classrooms, and village green.
Stage 1C	Construction of the road to and intersection on the Pacific Highway, site operations centre and the resource recovery and recycling education centre.
Stage 1D	PFAS remediation works. It is important to note that the PFAS remediation may be undertaken separately from any works associated with the school.
Stage 2A	Construction of three senior school buildings.
Stage 2B	Construction of senior school building and DALE.
Stage 3A	Construction of the two middle school buildings.
Stage 3B	Construction of bleachers stand and sports field.
Stage 4	Construction of the performing arts centre, sports centre, sports courts, warm-up field and environment centre.

The Site

The site is located within the Central Coast Local Government Area (LGA) within the suburb of Charmhaven. It is bound by Arizona Road on the west, the Pacific Highway on the east, and the existing Charmhaven industrial area to the south. The site is legally described as Lot 2 in Deposited Plan 809106 and extends to an area of approximately 39.929 hectares. A location plan is provided in Figure 2. The site is within the Warnervale Growth Area.

Planning Framework

The development is for the purpose of a new educational establishment which will operate as a K-12 school and subdivision of land. Pursuant to Schedule 1 Clause 15(1) of State Environmental Planning Policy (Planning Systems) 2021 (PS SEPP), development for a new school that has a Capital Investment Value of more than $20 million is state significant development.

Accordingly, the Project will be submitted to DPE for assessment and determination.

CIV and Job creation

The Project will generate approximately 225 direct and 275 indirect jobs during construction over the 10 plus year construction timeframe, together with 199 full time operational jobs for the school.

The Capital Investment Value is $420,454,000.00 calculated in accordance with Planning Circular PS 21-020 Calculation of Capital Investment Value and subsequent advice from the Delivery, Coordination, Digital and Insights Division (**DCDID**). Contingency and escalation to the construction midpoint of each stage within the project have been included for consistency with the construction forecast identified for The Project. Elements not relevant to The Project have been removed from the exclusions section of the CIV report to align with the interpretation of PS 21-020 provided by DCDID.

Assessment

The Project has been assessed against all items contained in the SEARs issued for the project. In summary:

The Project demonstrates a high level of consistency with state and local statutory and strategic planning policies:

- State Infrastructure Strategy 2022-2042 Staying Ahead.
- Future Transport 2056.
- Crime Prevention Through Environmental Design.
- Better Placed: An integrated design policy for the built environment of New South Wales.
- Healthy Urban Design Checklist.
- Draft Greener Places Design Guide.
- Central Coast Regional Plan 2041.
- Central Coast Local Strategic Planning Statement 2020.

The following matters having been considered.

- Traffic
- Biodiversity
- Social impact
- Aboriginal heritage
- Noise
- Contamination
- Flooding
- Geotechnical
- Visual impact
- Aviation impact
- Bushfire
- Servicing
- Waste

- ESD
- Economic Impacts

In considering these matters, most matters have been deemed to have a satisfactory impact, with the key issues for consideration being traffic, biodiversity, and social impact.

Traffic

The proposed development has the potential to generate significant traffic over the life of the project. This traffic will be made up of both car and public transport travel and will be supplemented with active transport with children and staff cycling and walking to school.

The current access to the frontage on Arizona Road for the School is via the existing roundabout on Chelmsford Road and the Pacific Highway. This intersection is expected to fail by 2027 regardless of whether the school is constructed or not. As a result, the intention is to construct a new intersection on the Pacific Highway to provide direct access to the school.

The new intersection, which will be managed by traffic lights, on the Pacific Highway will be located at the existing Jetty Road intersection. The intersection was recently amended to resolve the existing risks associated with turning right from that intersection on to the Pacific Highway for existing residents. These lights will resolve that issue. In addition, the lights will also provide safe access for students crossing he Highway to come to school while significantly reducing the burden on the existing roundabout at Chelmsford Road.

We also note that the eastern part of the site has been identified as future employment land in the Draft Warnervale Structure Plan. These new lights will create the opportunity to access this employment land in the future, which has the potential to deliver approximately 600 permanent jobs and create strong ties with the school.

Biodiversity

A significant study was completed across the site for the development, identifying two key areas for avoidance being on the northern boundary of the site and the water course that bisects the site.

The setting of the school is to create a bushland campus, due to the existing setting and the land available to the school on the site. The bushland setting provides the opportunity to maintain bushland on site and incorporating this into the landscaping of the site.

It is intended that the school will require offsets to address the biodiversity impacts of the remainder of the site.

The site is currently used for illegal dumping and antisocial behaviour, with evidence of significant rubbish dumping and use by recreation offroad vehicles. The development of the school will provide the opportunity to not only maintain the vegetation that is retained on the site in perpetuity, but to also eliminate the use of the site for antisocial behaviour and rubbish dumping.

Social Impacts

The proposed school will provide the opportunity for the following:

- The education of over 1,500 children on the site in an area with high demand for education servicing based on the demographics of the area.
- Create the opportunity through the "Smart Track" stream of students, where they partner with existing local business while studying to gain trade and work-related qualifications through the normal course of their education. This scheme aligns strongly with the Central Council's youth strategy.
- Deliver open space which will be extended for the use of the community, providing active spaces for playing sport.
- The potential to be a hub for the community, being the focal point for parents dropping off or picking up students and use of the facilities for community events or recreation. This location and use are identified within the Draft Warnervale Structure Plan as being suitable for a future school.

Accordingly, the school is expected to have a significant positive social impact on the local community.

Aboriginal Heritage

The Aboriginal Cultural Heritage values were assessed in accordance with the relevant guidelines, the code of practice and in consultation with Registered Aboriginal Parties. The surface investigation identified an artefact scatter and potential scarred tree. The scarring on the tree was confirmed by an Arborist as being a result of insect damage and not cultural practices.

Test excavations were completed at the location of the surface artefact scatter and in two creek crossing locations, recovering an additional three artefacts. The interpretation of the evidence deemed the site as having a low to moderate archaeological value on a local scale. The site was most likely used by Aboriginal people to travel from one site to another.

An Aboriginal Cultural Heritage Management Plan is to be developed for the project to enable the collection and management of the surface artefacts, with no further salvage excavations being required.

Noise

An assessment was completed to determine the noise and vibration impacts during construction and the operation of the school relative to the industrial and rural residential development surrounding the site. Monitoring of the current background and ambient noise levels was undertaken to determine the current noise levels within the locality.

The modelling indicated that the impacts during construction and operation overall were within the recommended noise level ranges. A minor exceedance was identified for residential receivers during the construction stages and in play times of students during the operation of the school.

Construction noise can be mitigated through a construction noise management plan, to be used throughout all stages of construction. The impacts identified within the operational phase can be mitigated through the location and angle of PA speakers and use of the PA system by trained operators only.

Contamination

Preliminary and detailed contamination investigations were conducted over the site to determine potential sources of contamination, the location and extent of the contamination and suitability of the site for use as a school.

A detailed investigation proved that the concentrations identified on the site were within the residential guidelines and suitable for the use as a school. Asbestos was identified within the illegally dumped stockpiles but not within the soil samples surrounding the stockpiles. The potential for Per and Polyfluoroalkyl Substances contamination from the adjoining Rural Fire Service Depot. The extent was identified and confirmed through testing completed by the Rural Fire Service near the western and southern boundaries of the site.

Mitigation works will be undertaken by the Rural Fire Service to remove and dispose of the Per and Polyfluoroalkyl Substances contaminated soil in line with their Site Improvements Options Plan and Environmental Protection Authority agreement. This involves removal from the site and disposed at an appropriately licenced premises.

Flooding

The area of the site surrounding the second order stream is identified as being flood affected. An assessment and modelling were completed to confirm the extent of flooding on the footprint of the school development.

Conditions under the 1% AEP and Probable Maximum Flood level were reviewed and indicated that the impacts within the school footprint were minimal. Impacts on the access road connecting to Depot Road and the proposed road connecting to the Pacific Highway intersection require engineering solutions to minimise potential loss of access and maintenance impacts for flooding.

Engineering solutions include the use of culverts designed to ensure flows within a storm event will not inundate the road crossings and do not increase flood impacts within the local catchment area.

Geotechnical

A geotechnical assessment was undertaken to review slope stability, soil sampling, mine subsidence and geotechnical conditions associated with the previous mine workings on and near the site. The soil conditions identified a site classification of M, within the Swansea North Entrance mine district.

The architectural plans were reviewed against Subsidence Advisory Guideline 2 and the outcomes from the preliminary investigation. The assessment determined that some ground subsidence is likely within ranges that can be mitigated through design and construction measures.

Mitigation measures include specific foundation types, reinforced concrete frames within the suspended slabs. Steel structures and articulation between cladding, wall framing and slabs to allow for subsidence values. Drainage services for buildings to provide a fall of 0.23%. All these measures are to be certified by a structural engineer.

Visual Impact

A Visual Impact Assessment reviewed the visual impacts of The Project on the locality. The assessment considered the existing landscape and viewer sensitivity, along with a qualitative assessment to determine the impacts.

Using photographs of the site and locality the existing character was assessed with four key viewpoints identified. The objective assessment determined the impacts being low to moderate. The qualitative assessment determined that vegetation, the built form, and topography, will limit the view impacts to and from the site, resulting in low to moderate impact.

The moderate impacts identified are to be mitigated by retaining existing canopy trees, use of construction materials that contrast and blend into the landscape and additional screen planting and rehabilitation of degraded areas on the site.

Aviation Impact

An aviation assessment was undertaken to determine impacts on the Central Coast Airport, adjoining Rural Fire Service Control Centre and other and the National Airports Safeguarding Framework guidelines. The assessment identified that the intrusion of structures within the obstacle limitation may impact flight paths to the north of the Rural Fire Service Control Centre depending on the ability of the operator of the aircraft. This include the Chapel Steeple which has a height of 25.8 m. Flightpaths in all other directions, other than north are unobstructed.

These impacts are mitigated through the hours of operation of the sport fields to reduce wildlife attraction. The chapel steeple is to be lit, making it identifiable to helicopter operators, allowing them to avoid the structure.

Bushfire

An assessment to determine the bushfire threat and the proposed protection measures was undertaken. Schools are identified as Special Fire Protection Purposes, requiring acceptable solutions based on the hazards associated with the site. The assessment reviewed the vegetation classification, slope, and relevant bushfire protection measures required for the operation of a school.

The assessment confirmed the design of The Project satisfies the performance criteria for access and acceptable solutions for servicing to allow for the safe operation of the school. A minor non-compliance has been identified on the northern boundary. This building is able to maintain a BAL 12.5, consistent with the remainder of the development.

A Bushfire Management and Evacuation Plan detailing the management of the site and evacuation measures will be developed to mitigate the impacts and minimise the risks associated with the site.

Servicing

A servicing assessment was undertaken to confirm that water, sewer, stormwater, electricity, NBN and telephonic services can be provided to The Project. The assessment reviewed existing connections within the locality and identified additional connections or upgrades required to service The Project.

The assessment identified enabling works to provide electrical supply, NBN connectivity, water, and sewer connections to the site within the Arizona Road reserve and southwestern frontage along Arizona Road. A private wastewater pump station is required within the north-western section of the site fronting Arizona Road. Stormwater drainage and reuse can be achieved throughout the development. The site can be adequately serviced through upgrades to existing connection points within the locality.

Waste

A Waste Management Plan was developed to consider demolition, construction, and operational waste management throughout The Project. The assessment reviewed the Central Coast Council guideless and development controls along with the NSW EPA guidelines.

The Project occurs on a site that is undeveloped, not requiring the demolition of structures. The clearing of vegetation and excavated materials were identified as the likely waste streams to be generated. Waste anticipated during construction were identified noting that stockpiling and separation of materials will occur for reuse and recycling. Operational waste was assessed with volumes, bin requirements and collection schedules identified.

Demolition and construction waste will be managed within the Construction Environmental Management Plan during these phases of The Project. Operational waste minimisation and management can be achieved through the implementation of a waste management system which will effectively manage waste and mitigate risks to the environment.

ESD

The principals of ESD were assessed to address the requirements under the *Protection of the Environment Administration Act 1991*. The assessment considered the four principles being, the precautionary principle, inter-generational principle, conservation of biological diversity and ecological integrity and improved valuation, pricing, and incentive mechanisms.

The Project site has been selected to minimise the amount of greenfield and parkland for the use of a school. Impacts on the environment are minimised through resource efficiency measures, energy, water and waste reduction, stormwater reuse and the integration of indigenous and Aboriginal design features. The assessment determined that The Project has sufficiently considered these principles along with the GANSW Environmental Design in Schools best practice requirements.

Strategies have been developed to achieve the highest sustainability and environmental performance whilst remaining with budget.

Economic Impacts

An assessment of the economic impact of The Project was undertaken to review the impacts within the Central Coast region and immediate local area. The capital investment value of The Project has been calculated at $420,000,000.00. The assessment identified The Project will provide operational jobs and economic activity during the construction phases providing up to 1,800 jobs over the life of The Project.

Conclusion

Consultation with the neighbouring residential landowners was undertaken and concerns identified with potential visual impacts, traffic and the adjoining RFSCC have been addressed within the report. The Project will not have any unacceptable impacts on neighbouring residential development or the public domain.

The Project is highly suitable for the site, given the location and use of the site is consistent with the strategic growth plans for the region. An education establishment is permissible with consent under the current RU6 Transition zone under the State Environmental Planning Policy (Transport and Infrastructure) 2021.

The Project is in the public interest given that the development will contribute positively through economic and social benefits. The development provides new education offerings for existing and future families within a strategic growth area. It also provides infrastructure and facilities that can be utilised by the community outside of school hours. The value of the development and number of jobs during the construction and operational phases are significant within the local and regional economy.

The Project appropriately satisfies each item within the Secretary's Environmental Assessment Requirements.

This EIS represents a thorough assessment of the key matters for consideration in relation to the development of the proposed school and the proposed mitigation measures to address specific impacts.

1. Introduction

1.1 Applicants Details

Applicant Name	St Philip's Christian Education Foundation Ltd
Applicant Address	57 High Street Waratah NSW 2298
ABN	34 002 919 584

1.2 Project Summary

Table 1 Project Summary

Project Element	Summary of the Project			
Project Site Area	Total Site Area 39.929 ha			
	Site area for School: 28.57ha Residual lot: 11.36 ha			
Site Description	St. Philip's Christian College Charmhaven Lot 2 DP 809106 Arizona Road, Charmhaven			
Landowner	St. Philip's Christian Education Foundation Ltd.			
Site Works	Site works including removal of vegetation, earthworks, construction of roads and installation of services and utilities. The access road connecting to and including works on the Pacific Highway will be included in Stage 1C.			
Subdivision	One into two lot subdivision to be undertaken to separate the school campus from the residue land located on the eastern side of the waterway.			
Construction of Buildings	**Stage**	**Building Name**	**Height (Storeys)**	**Floor Space (m²)**
	Stage 1A	Two Lot Subdivision	-	-
	Stage 1B	Building A – Welcome Centre	14.6m (2)	1,428
		Building B – Chapel	25.8m (1)	466
		Building C – Narnia Early Learning Centre	8m (1)	789
		Building D – Community Stand	7.2m (1)	260
		Building E – Bus Bay	7.2 (1)	132
		Building F – Electricity Substation and Sewer Pump Station and inground services	-	290

Project Element	Summary of the Project			
		Building G – Junior School - Pavilion G	12m (2)	2,274
		Building H – Junior School - Pavilion H	12m (2)	2,282
		Building X – Village Green	-	-
	Stage 1C	Road to Pacific Highway	-	-
		Installation of new Intersection on the Pacific Highway	-	-
		Building W - Site and Operations Centre	8.05m (1)	484
		Building Y – Resource Recovery and Sorting Education Centre	7.55m (1)	482
	Stage 1D	PFAS Remediation Works	-	-
	Stage 2A	Building M – Senior School – Pavilion M	12m (2)	2,734
		Building N – Senior School – Pavilion N	12m (2)	3,089
	Stage 2B	Building O – Senior School – Pavilion O	12m (2)	2,759
		Building L – Senior School – Pavilion L	12m (2)	2,999
		Building K - Dynamic Alternative Learning Environment (DALE)	10.6m (2)	1,042
	Stage 3A	Building I – Middle School - Pavilion I	12m (2)	2,345
		Building J – Middle School - Pavilion J	12m (2)	2,345
	Stage 3B	Building Q – Bleachers Stand	7.2m (1)	160
		Building R – Sports Field	-	-
	Stage 4	Building P – Performing Arts	25.35m (2)	3,392
		Building S - Sports Centre	17.95m (2)	5,053
		Building T - Covered Sports Courts	9.2 (1)	
		Building U – Warm-Up Field	-	-

<table>
<tr><th>Project Element</th><th colspan="5">Summary of the Project</th></tr>
<tr><td></td><td></td><td colspan="2">Building V – Environment Centre</td><td>8.9 (1)</td><td>576</td></tr>
<tr><td>Maximum Height of all proposed buildings and structures</td><td colspan="5">Chapel Building
RL 36.76m, 25.8 metres
2 storeys.</td></tr>
<tr><td>Sporting or other facilities</td><td colspan="5">Village green
Sporting fields
Warm up fields
Indoor Sports Centre
Sports Courts</td></tr>
<tr><td>Total Student Numbers</td><td colspan="5"><table>
<tr><td>Junior School</td><td>492</td></tr>
<tr><td>Middle School</td><td>448</td></tr>
<tr><td>Senior School</td><td>480</td></tr>
<tr><td>DALE Special School</td><td>80</td></tr>
<tr><td>Sub-total</td><td>1,500</td></tr>
<tr><td>Prep</td><td>40</td></tr>
<tr><td>Narnia Early Learning Centre</td><td>43</td></tr>
<tr><td>Sub Total</td><td>83</td></tr>
<tr><td>Total</td><td>1,583</td></tr>
</table></td></tr>
<tr><td>Total Staff Numbers</td><td colspan="5"><table>
<tr><td>Administration</td><td>40</td></tr>
<tr><td>Junior School</td><td>49</td></tr>
<tr><td>Middle School</td><td>35</td></tr>
<tr><td>Senior School</td><td>40</td></tr>
<tr><td>DALE Special School</td><td>20</td></tr>
<tr><td>Narnia and Prep</td><td>15</td></tr>
<tr><td>Total</td><td>199</td></tr>
</table></td></tr>
<tr><td>Access</td><td colspan="5">Vehicle access via Arizona Road. Traffic travelling to the school from the north and south is expected to use the Pacific Highway and Chelmsford Road, traffic from the east would use Lake Haven Drive and Chelmsford Road, while traffic from the west is expected to use Hakone Road. Pedestrian access to be provided using connections to the existing Shared pathway network within.</td></tr>
<tr><td>Total parking spaces</td><td colspan="5"><table>
<tr><th>Stage 1</th><th>Stage 2</th><th>Stage 3</th><th>Stage 4</th></tr>
<tr><td>101</td><td>161</td><td>191</td><td>271</td></tr>
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</table>

Project Element	Summary of the Project			
Signage	Type A - Business identification sign to be located at the entry point on Arizona Road. The 3 m wide and 3.6 m high sign will be centres on a triangular, 400 mm high plinth. Type B – Information Panels – Directional Signage, 2.6 m in height. Type C - Large Bollard – Directional Signage, 2.6 m in height. Type D1 – Interior Directional, 2.4 m in height Type D2 – Interior Directional Small, 1.6 m in height. Type E – Small Bollard Sign, 1 m in height.			
Construction Hours	7am to 5pm (Monday to Saturday)			
	8am to 3pm (Saturday)			
	No work on Sundays and Public Holidays			
Hours of Operation				
Facility	**Days**	**School Hours**	**Community Hours**	**Total Hours**
General Hours of Operation[1]	Monday - Friday	07:00 – 22:00		07:00 – 22:00
Prep School (4-5 years)	Monday - Friday	07:00 – 18:00	Nil	07:00 – 18:00
OOSH	Monday - Friday	07:00 – 18:00	Nil	07:00 – 18:00
Junior School Middle School Senior School DALE Special School	Monday - Friday	08:00 – 15:00	Nil	08:00 – 15:00
Administration / Office	Monday - Friday	07:00 – 21:00	Nil	07:00 – 21:00
Narnia Early Learning Centre	Monday - Friday	07:00 – 18:00	Nil	07:00 – 18:00
Gymnasium	Monday - Friday	07:00 – 15:30	15:30 – 20:00	07:00 – 20:00
	Saturday	Nil	07:00 – 18:00	07:00 – 18:00
	Sunday/Public Holiday	Nil	08:00 – 17:00	08:00 – 17:00
Performing Arts Centre	Monday - Friday	08:00 – 15:30	15:30 – 22:00	08:00 – 22:00
	Saturday	Nil	08:00 – 22:00	08:00 – 22:00

[1] These hours include incidental operations such as parent teacher, staff meetings, information evenings, and excluding gymnasium and performing arts as identified within the table.

Project Element	Summary of the Project			
	Sunday/Public Holiday	Nil	08:00 – 18:00	08:00 – 18:00
Sports Fields	Monday - Friday	08:00 – 15:30	15:30 – 20:00	08:00 – 20:00
	Saturday	Nil	07:00 – 18:00	07:00 – 18:00
	Sunday/Public Holiday	Nil	08:00 – 17:00	08:00 – 17:00
Chapel	Monday-Friday	08:00 – 21:00	Nil	08:00 – 21:00
	Saturday	08:00 – 18:00	08:00 – 18:00	08:00 – 18:00
	Sunday/Public Holiday	08:00 – 18:00	08:00 – 18:00	08:00 – 18:00
*Ancillary activities such as cleaning, deliveries, waste collection may also occur outside of these hours				
Capital Investment Value	$420,454,000			

1.3 Project Overview

The project relates to the establishment of a new non-government school within the locality of Charmhaven. The development will provide a high quality, low fee independent educational establishment to the rapidly growing northern area of the Central Coast. The development provides positive social and economic outcomes within the environmental constraints of the site.

The Project will provide for the following development and works:

- Establish environmental and Aboriginal Heritage conservation areas within the site.
- Total school population of 1,500 students and 83 early learning places.
- Site works including removal of vegetation, earthworks, construction of roads and installation of services and utilities. The access road connecting to and including works on the Pacific Highway will be included in Stage 1C.
- Welcome Centre.
- Chapel.
- Narnia Early Leaning Centre.
- Dynamic Alternative Learning Environment (DALE).
- Two Junior School Buildings.
- Two Middle School Buildings.
- Four Senior School Buildings.
- Performing Arts Centre.
- Sports Centre.
- Covered Sports Courts

- Sports Fields, Warm Up Field, and Village Green.
- Environment Centre.
- Site and Operations Centre.
- Resource Recovery and Sorting Education Centre.
- Ancillary structures such as, signage, community stand, bus bay, bleachers stand and landscaping.
- Pump station and substation.
- Access from Arizona Road, internal roads, car parking and intersection upgrade along Pacific Highway and Jetty Avenue.
- Subdivision of land to form two lots.

1.4 Project Objectives

The objective of the project is to provide an educational facility to:

- Establish a new educational establishment facility to meet the demand for quality education within the Greater Warnervale Growth Area.
- Create temporary and permanent job opportunities during the construction and operational phase of the development.
- Implement CPTED principles in the site's design to deter crime.
- Provide a safe and accessible educational establishment.
- Create a series of high quality and modern teaching spaces which are flexible and promote increased social interaction among students and teachers.
- Promote the principles of ecologically sustainable development through a design responsive to the site's unique environmental attributes and which is energy and water efficient.
- Provide a design that celebrates connection to country and the natural and historic attributes of the site.
- Minimise impacts relating to flooding, noise, visual amenity, traffic or any other such impacts on nearby properties; and
- Provide areas within the new school for indoor and outdoor recreation to improve the health and wellbeing of students and the broader community.
- Provide an additional parcel of land that is not required to accommodate The Project and support the effective and economic use of land along a recognised growth corridor.

1.5 Project History

St Philip's Christian College (SPCC) was founded in the Newcastle suburb of Waratah in 1982 and now has multiple schools across Newcastle, Port Stephens, Cessnock, and Gosford. SPCC has been owned and operated by St Philip's Christian Education Foundation Limited (SPCEF), a not-for-profit company, since 1985.

SPCEF has identified a need for additional educational facilities in the Northern Central Coast Area and in 2020 purchased the subject site at Lot 2 DP 809106, Arizona Road Charmhaven with a view to developing a new school. This site is RU 6 Transitional land located within an identified growth area being an ideal location for a new school to be established.

Accordingly, a request was made to the Minister for Planning for SEARs, pursuant to Clause 3, Schedule 2 of the EP&A Regulation with the SEARs being issued on 7 December 2020. Modified SEARs were subsequently issued on the 31 March 2022 to address amendments proposed to the site layout and inclusion of a new intersection on the Pacific Highway near Jetty Avenue. The modified SEARs are addressed within this EIS and included in full at Appendix A.

A planning proposal to rezone the land will be carried out concurrently to this SSDA to establish the school footprint on the western side of the watercourse for use as an educational establishment.

1.6 Report Structure

This EIS provides the following:

Table 2 EIS Structure

Chapter 1	Content
1. Introduction	▪ Applicants' details and project objectives. ▪ Site map. ▪ Project background and history.
2. Strategic context	▪ Key strategic issues and relevance and support to Government strategies, policies, and plans. ▪ Key features of the site and regional surrounds, environment, and landscapes. ▪ Assessment of potential cumulative impacts. ▪ Project justification and analysis of alternatives.
3. The Project	▪ Comprehensive project description, objectives, and area. ▪ Summary of development including works, use of land and description of project details. ▪ Staging and sequencing details.
4. Statutory context	▪ Assessment of project against relevant legislation and environmental planning instruments.
5. Engagement	▪ Summary of consultation processes and activities with community, Government agencies and Aboriginal stakeholders. ▪ Details of proposed ongoing consultation.
6. Environmental Impact Assessment	▪ Condition of the existing environment. ▪ Assessment of impact of the project on environment. ▪ Identification of mitigation measures.
7. Project Justification	▪ Provides justification for project as a whole, having regard to the economic, environmental and social impacts of the project and the principles of ecologically sustainable development.
8. References	
9. Appendices	
Appendix A	SEARs Compliance Table.
Appendix B	Details Maps and Plans.
Appendix C	Statutory Compliance Table.
Appendix D	Stakeholder Engagement Table.
Appendix E	Mitigation Measures.
Appendix F	Planning Certificates.
Appendix G	Technical Reports.

1.7 Supporting Technical Reports

This EIS is supported by the following documentation including technical reports and plans which have been prepared by the following specialised consultants, as outlined below.

Table 3 Consultant Team

Document	Consultant	Appendix.
Survey Plan	De Witt Consulting	G1
Architectural Plans Drawing Portfolio	SHAC	G2
Arizona Road Signage	SHAC	G3
Landscape Strategy and Design Report	Moir Landscape Architecture	G4
Infrastructure Servicing Report	ADW Johnson	G5
Electrical Services Masterplan	Electrical Projects Australia	G6
Concept Design Report	SHAC	G7
Functional Design Brief	SHAC	G8
Site Masterplan Capital Investment Value Estimate	Muller Partnership	G9
Preliminary Arboricultural Assessment	Assurance Trees	G10
Detailed Landscape Design	Studio 151	G11
Disability Access Report	Lindsay Perry Access	G12
Visual Impact Assessment	Moir Landscape Architecture	G13
Biodiversity Development Assessment Report	MJD Environmental	G14
Aboriginal Cultural Heritage Assessment Report	Heritage Now	G15
Aboriginal Archaeological Report	Heritage Now	G16
Statement of Heritage Impact	Heritage Now	G17
Acoustic Assessment	RAPT Consulting	G18
Detailed Preliminary Site (Contamination) Assessment	RCA Australia	G19
Site Improvement Options Plan	Hardwood Environmental Consultants	G20
Bushfire Assessment Report	MJD Environmental	G21
Flood Impact Assessment	ADW Johnson	G22
Stormwater Management Plan	ADW Johnson	G23
Preliminary Engineering Design	ADW Johnson	G24
Transport Impact Assessment	Stantec	G25
Waste Management Plan	MRA Consulting Group	G26
Preliminary Geotechnical Assessment	RCA Australia	G27
Earthworks Commentary	ADW Johnson	G28
Mine Subsidence and Geotechnical Conditions Review	Northrop	G29
Aviation Assessment	Rehbein Airport Consulting	G30

Document	Consultant	Appendix.
Social Impact Assessment	AIGIS Consulting	G31
Sustainable Design	Steensen Varming	G32

2 Strategic Context

This Chapter provides an overview of the importance of the project within the strategic planning context. It identifies the relevant policies or plans which demonstrate the strategic planning context and need for the project and provides a description of how the project complies with the relevant policies and plans.

2.1 New South Wales State Strategies

2.1.1 NSW State Priorities

In June 2019, the NSW State Government unveiled 14 Premier's Priorities which represent the NSW Government's commitment to making a significant difference to enhance the quality of life of the people of NSW. These priorities represent this commitment to making a significant difference to enhance the quality of life of the people of NSW, with the purpose of delivering on the government's key policy priorities, being:

- a strong economy,
- highest quality education,
- well-connected communities with quality local environments,
- putting the customer at the centre of everything we do, and
- breaking the cycle of disadvantage.

The lifting of education standards priority includes raising educational results for children and increasing the number of Aboriginal young people reaching their learning potential.

The Charmhaven – Gorokan – Kanwal statistical area (which the proposed school will draw from) has nearly double the proportion of Aboriginal and/or Torres Strait Islander people compared to NSW. St Philip's encourages enrolments from Aboriginal students and supports extra-curricular groups which celebrate indigenous culture through art, dance, and connecting with other indigenous members of the community.

The school has a strong focus on offering individualised student learning frameworks, innovative and engaging learning environments, and opportunities for students to excel in the whole of their life by opening pathways in the areas of academic excellence, information technology, iSTEM, music, creative and performing arts, sport, and vocational education.

The DALE school, which forms part of the broader school is a Dynamic Alternative Learning Environment for students in Years 3 – 12 who have a diagnosis of anxiety, depression, PTSD or Autism. The expanded facility proposed as part of the project will provide for a total enrolment of 80 students.

2.1.2 State Infrastructure Strategy 2022 – 2042 Staying Ahead

The *State Infrastructure Strategy* - 2022 – 2042 Staying Ahead (SIS) is a 20-year infrastructure investment plan for the NSW Government that places strategic fit and economic merit at the centre of investment decisions. The SIS assesses infrastructure problems and solutions, and provides recommendations to best grow the State's economy, enhance productivity, and improve living standards for our NSW community. It is updated every five years.

The Strategy sets nine strategic objectives which are as follows:

- Achieve an orderly and efficient transition to Net Zero.
- Enhance long-term water security.
- Protect our natural endowments.
- Harness the power of data and digital technology.
- Integrate infrastructure, land use, and service planning.
- Design the investment program to endure.

From these objectives fifty-seven recommendations were made detailing key focus points, their implementation, and the relevant lead agencies to facilitate their delivery. The following recommendation is identified as applying to the Central Coast, in respect to the Project.

Number 54 - Utilise all viable commercial models and approaches to enable additional opportunities for private sector investment in infrastructure, including:

b) *Complementary development of assets that deliver additional services and benefit to offset the public infrastructure costs.*

This recommendation is identified across the State in multiple sectors as an immediate priority. The project provides the construction of a new intersection along the Pacific Highway to Jetty Avenue as well as sporting and performing arts facilities available for wider community use. Consideration from Infrastructure NSW and Treasury should be made in relation to the public benefits provided through the construction of the school.

2.1.3 Future Transport 2056

Future Transport 2056 is a suite of strategies and plans that set the 40-year vision, directions, and principles for customer mobility in NSW, guiding transport investment over the longer term. It presents a glimpse of the large economic and societal shifts we will see in the future and places the customer at the centre of everything we do, to ensure we respond to rapid changes in technology and innovation to create and maintain a world-class, safe, efficient, and reliable transport system.

The guiding principles of the Future Transport Strategy 2056 are as follows:

- Customer focused.
- Successful places.

- A strong economy.
- Safety and performance.
- Accessible services.
- Sustainability.

The site is located within an area with existing school and public bus services and is within 400 metres of the Busways Wyong depot.

A Preliminary School Travel Plan has been prepared by Stantec to support the EIS as part of the Transport Impact Assessment and is included at Appendix G25 of this EIS. The Green Travel Plan seeks to:

- Advise staff, parents/ carers, and students on the wider travel choices available to them and encourage use of sustainable travel modes.
- Aim to reduce congestion on the surrounding road network by causing mode shift from private vehicles, or at the very least encourage higher vehicle occupancy to reduce private vehicle trips.

A Green Travel Plan will put in place measures to raise awareness and further influence the travel patterns of people living, working, or visiting the site with a view to encouraging modal shift away from cars.

The sites' location within ensures there are opportunities for active and sustainable transport connectivity within the local context. The measures suggested in Preliminary School Travel Plan will further support alignment with the guiding principles of the Future Transport Strategy 2056.

2.1.4 Crime Prevention through Environmental Design (CPTED) Principles

Crime Prevention through Environmental Design (CPTED) principles focus on the planning, design and structure of cities and neighbourhoods. It reduces opportunities for crime by using design and place management principles.

There are four main principles of CPTED – natural surveillance, access control, territorial reinforcement, and space management. The design response to CPTED principals is detailed in the Section 6.20 of this report.

2.1.5 Better Placed: An integrated design policy for the built environment of New South Wales 2017

The *Better Placed: an integrated design policy for the built environment of NSW 2017* seeks to capture collective aspirations and expectations for the places where we work, live and play. It creates a clear approach to ensure we get good design that will deliver the architecture, public places, and environments we want to inhabit now and those we make for the future.

The Government Architect of NSW (GANSW) defines a well – designed built environment as healthy, responsive, integrated, equitable and resilient. In addition to addressing the objectives of the policy, the project has engaged with the Government Architect NSW through the NSW State Design Review Panel (SDRP) process.

Two consultation sessions with the SRDP were held on the 29 September 2021 and 13 April 2022 in which advice and recommendations were provided and incorporated into the Design. The design responses are provided within Section 7.37 of Appendix G7 and summarised below.

Connecting with Country and Landscape

The SRDP noted that the strong relationship between landscape and Country is clear as a key driver of the design response and should be maintained as the project develops.

Connecting.

In response to the SRDP's specific comments the following opportunities were identified and progressed:

- A view analysis completed by Moir Landscaping and the perspectives completed by SHAC demonstrate an integrated response between the development and landscape.
  Collaborative workshops were undertaken with the landscape and architecture design teams to discuss the conceptual approach to the buildings, courtyard spaces, play spaces and external circulation pathways, roadways, shading, carparking and visual impact.
- Asset Protection Zones of up to 80m from the nearest vegetation towards the development area have been identified. These zones will be managed to minimise hazards through control of undergrowth and extent of tree canopies to comply with the Planning for Bushfire Protection Guidelines 2019.
- Trees across the site are retained, protected, and enhanced where possible to incorporate ecological tree communities identified within the landscape and play spaces providing a strong native based to guide the design.
- Elements such as strong natural forms, materiel organic pathways, native plantings and vegetation are highlighted with the landscape design.

Transport and Connectivity

At the first SDRP, the project team presented the vision for the school as a bush campus and the importance of the landscape as part of its identity. The journey and approach to the various entries into the campus are crucial in conveying the school's unique bush campus character and providing a welcoming, civic address to the community. The treatment along the Pacific Highway Road entry and circulation will play a key role in connecting the Campus with active transport and wider networks.

Built Form

The SRDP requested that 3D visualisations that carparks and the entry from Arizona Road will not dominate the school, landscape, or circulation spine along the ridge. The landscape design was undertaken in collaboration with the architectural design to ensure that the bushland campus setting was maintained and that the built form including car parks did not dominate the design.

The SDRP recommended that further review of this project during the Response to Submissions stage.

2.1.6 Healthy Urban Development Checklist

The *Healthy Built Environment Checklist (NSW Health, 2009)* is a practical tool to help deliver the quality local environments needed for well-connected and liveable communities in NSW, through engagement with planning and development processes.

The checklist offers a standardised way to evaluate built environment factors that affect health and suggests ways to improve health outcomes. The Project satisfies a range of items contained to the checklist, including:

- Promote access to healthy food.
- Preserve food-growing (agricultural) areas.
- Provide support for local food production.
- Encourage physical activity.
- Promote opportunities for walking and cycling.
- Promote access to quality open spaces, including green space and recreational activities.
- Improve public transport services.
- Increase access to appropriate job training.
- Consider crime prevention and a sense of security.
- Provide access to green and blue open spaces and natural areas.
- Provide access to a range of facilities to attract and support a diverse population.
- Respond to existing and projected community needs and current gaps in facilities and/or services.
- Maximise efficiencies in social infrastructure planning and provision.
- Provide environments that will encourage social interaction and connection.
- Consider and mitigate the potential for natural and manmade hazards.

The Project aids in promoting a healthy and sustainable built environment through the construction of a new school that incorporates active recreational facilities to benefit both students and the broader community.

2.1.7 Draft Greener Places Design Guide

The *Draft Greener Places Design Guide (GANSW)* provides information on how to design, plan and implement green infrastructure in urban areas throughout NSW. The draft guide provides strategies,

performance criteria and recommendations to assist planning authorities, and design and development communities to deliver green infrastructure.

The site is set on the urban fringe, adjoining light industrial development to the south, rural residential development to the west and undeveloped bushland to the north and east. As such, the school will form a transition between urban and natural landscapes and has been designed to bring the natural landscape and functions into the central learning spaces.

2.1.8 Central Coast Regional Plan 2041

The Central Coast Regional Plan 2041 (the Plan) has identified nine key objectives it aims to achieve by 2041, including new pathways, sequencing of planning for new land uses and infrastructure, net zero emissions, 15-minute mixed-use neighbourhoods and an emphasis on infill approaches for growth. A renewed focus of green infrastructure, public spaces, and nature, prioritising walking, cycling and public transport options and reinforce the importance of equity and choice. It identifies key strategies to be included within the Local Strategic Planning Statement for Central Coast within its next revision.

The site is identified on mapping in the plan with the following references:

- Regionally significant growth area (page 94).
- Strategically located but constrained land (pages 94 and 97).
- Retrofitting suburban areas to enhance quality of life (page 94).
- Key transit corridor (page 94).
- Biodiversity corridor (page 94) to the northwest.
- Mixed use investigation corridor (page 97).
- Green corridor network (page 107) along the northern edge and along the watercourse.

The site is located within the Central Lakes Growth Area being the major urban growth area for the region within the Greater Warnervale Structure Plan. This area is identified as being a key employment area for the economic development on the Central Coast. The Warnervale Town Centre will be the centralised urban core with suburban and employment lands within its surrounds. There are 5 key priorities for this growth area:

- Accelerate housing and employment – coordination of infrastructure to support timely and efficient release of land for development.
- Plan for alternative land uses for former power stations and mining sites – recreation, conservation, freight, logistics, and industrial uses.
- Retrofit suburban areas to enhance quality of life – diverse and mixed-use neighbourhoods to achieve the 15-minute neighbourhood objectives.
- Enhance the blue and green grid – stormwater catchments and re-use, expand coastal open space to enhance biodiversity corridors, regional shared pathway network for greater connection.
- Promote the sustainable use of mineral and energy resources – protection and management of existing extractive industries and mining sites and potential expansion.

- Planning for the Morisset and Warnervale regionally significant growth areas.

A summary of how the Project aligns with respect to the strategic goals of the plan is provided in Table 4.

Table 4 Objectives of Central Coast Regional Plan 2041

Objectives of the Plan	How the Project Aligns
A prosperous Central Coast with more jobs close to home.	▪ Provides an opportunity to connect the Warnervale Town Centre to the Pacific Highway. ▪ Provides an educational establishment close to recognised employment and residential growth areas and transport connections. ▪ Opportunity to facilitate and contribute to renewable energy infrastructure connections. ▪ Contribute to the circular economy through the provision of adaptable housing and awareness of the lifecycle of construction materials throughout the development. ▪ Encouraging the use of remanufactured or recycled materials and identifying reuse of these materials at the end of their lifespan. ▪ The recycling of wastewater within the subdivision.
Support the right of Aboriginal residents to economic self-determination.	Provides the opportunity to work with the Darkinjung people in respect to: ▪ Connection with the country and conservation management. Working to manage the stewardship sites through employment and education. ▪ Identify Darkinjung land that could be used for biodiversity offsets providing economic benefits to the community. ▪ Providing opportunities for Aboriginal businesses to participate within the development of the land.
Create 15-minute neighbourhoods to support mixed, multi-modal, inclusive, and vibrant communities.	▪ The site can provide an urban settlement pattern that encourages increased active transport and public transport connection, reducing car dependency and reduced travel demand. ▪ The proposed school supports the expected future growth of the population in the northern part of the Central Coast, specifically within the Warnervale Growth Area, which is expected to house approximately one third of the new Central Coast Residents. It is important to note that local

Objectives of the Plan	How the Project Aligns
	schools are identified as key components of delivering on the 15-minute city. ▪ Prioritising walking, cycling and public transport within this locality is achievable. Existing public transport options are available within the area with numerous bus routes with two different providers can be reached within a 15-minute walk and extended to service the development as it occurs and link up to the Warnervale, Wyong, and Wyee Train Stations. The relevant routes are Bus ways (78, 79, 80, 81, 82, 90, 91, 95, 95X, 97, 99) and Coast Liner (11, 78, 80, 91, 98). ▪ The Project provides a connection from Arizona Road to the Pacific Highway allowing students to ride and walk to school. The strategy outlines the goal of connecting the Warnervale Town Centre via a regional shared path network to Lake Haven, Wyong Employment Zone, and Wadalba all within a 15-minute cycle ride. The location of the school could capitalise on this providing access to the population within the 15-minute catchment and including a further destination within the network. (Page 89 of the Draft Strategy). ▪ In relation to Strategy 3.1, the provision of educational facilities within a 15-minute walking distance of houses can be realised and based on the forecast growth and development identified within the Warnervale-Waldalba and Charmhaven area. This location is ideal providing connection between potential residential development to the east, west and eventually to the north of the site. ▪ Strategy 3.3 identifies that the location, size, and management of educational assets is important to achieving local access for most everyday needs of communities. This development is ideally located providing an early learning centre, junior and middle school within a 15-minute catchment, as well as secondary education facilities within a 30-minute catchment area. The development also adds value with additional sporting, arts and religious facilities that can be made available for community use outside of school hours. ▪ The development provides greater local access to quality childcare, and education close to residential and employment enabling parents go back to work. The project will encourage healthy lifestyle choices enabling students to

Objectives of the Plan	How the Project Aligns
	walk, cycle and use public transport to attend school supporting residential, employment and recreation within an identified growth area. ▪ Community and local identity, social and economic benefits will be created through well connected active transport infrastructure and public activation of community spaces.
An interconnected Central Coast without car-dependent communities.	▪ A major road connection from Warnervale to the Pacific Highway can be created for local transport and traffic, to create capacity along the major freight routes. ▪ Northlakes, Charmhaven, and Lake Haven Local Shopping Centres are all within 15-minute active transport radius of the Project area. ▪ Strategic centres such as Wyong, Tuggerah, and Gosford, are located within 30 minutes of the Project along with key growth areas within the region such as Warnervale, Lake Munmorah, and Morisset in Lake Macquarie. ▪ Assist in providing additional density and urban structure to support feasible and efficient use of public transport.
Plan for 'nimble neighbourhoods', diverse housing and sequenced development.	▪ Servicing efficiencies will be achieved as infrastructure provided by the Project enables services to be extended to other areas within Warnervale-Wadalba to facilitate further development. ▪ Located within 15 minutes of three local centres a school is a relevant service provider for existing and future residents within the area. It is considered that appropriate access to infrastructure, employment, good and services is achieved by the Project. ▪ The site does not currently contain or intend to facilitate any agricultural or industrial land uses or environmental resources. The development will not create any land use conflicts and as such protects the viability of these lands within the region. ▪ The development will modify the landscape within the area to enable the development. It will maintain a bushland setting and natural vegetation in and around the waterways and landscapes within the conservation management lands, retaining the scenic values and elements within the area.
Conserve heritage, landscapes, environmentally sensitive areas,	▪ The land to be zoned C2 conservation management, contains the links to and areas of high environmental value

Objectives of the Plan	How the Project Aligns
waterways and drinking water catchments.	attributed to the site. This land is to be managed as a stewardship site to protect the threatened plant communities and vegetation linkages and ecosystems along the watercourses and wetlands. ▪ It is intended to improve and enhance the biodiversity value and viability of the conservation land and provide further connections within the additional green spaces and outdoor recreation within the development. ▪ The conservation land identified provides sustainability of the local and regional biodiversity network alongside social, cultural, and economic benefits within the community through education, employment, and recreational opportunities. ▪ Consultation with Darkinjung and Guringai communities regarding design, areas of Aboriginal significance and management of native species will be valuable and inform the development. ▪ The location of the site will see an opportunity to reuse stormwater throughout the site and provide additional filtration processes to occur before being released into the water supply system. ▪ Stormwater and drainage systems are designed to further to protect the quality of water released into the Wallarah Creek tributary and wetlands.
Reach net zero and increase resilience and sustainable infrastructure.	▪ Consideration for resilience measures will be considered in respect to bushfire (load and canopy management), heatwaves (greenspace and green infrastructure), drought (wastewater reuse to reduce potable water use, measures, onsite water detention) and localised flood impacts (limited to the wetland area to the wetland are to the note and within conservation land) as part of the design process and on-going management of the conservation lands. ▪ The design of the school enables a variety of ancillary uses within the development to provide flexibility and adaptability of land uses as required to service the community. ▪ Exposure to high-risk natural hazards is avoided. ▪ The development achieves the objectives for net zero emissions based on the design and sustainability objectives identified within the Sustainable Design (Appendix G32.

Objectives of the Plan	How the Project Aligns
Plan for business and services at the heart of healthy, prosperous, and innovative communities.	▪ The proximity of the development to existing centres and connections to public transport, places people near employments centres and existing services.
Sustain and balance productive rural landscapes	Not applicable. The site is not located within an area required for agriculture or a productive resources base and is unlikely to impact the protection of or productivity of these areas.

2.2 Local Strategic Planning Statement

2.2.1 Central Coast Local Strategic Planning Statement 2020

The *Central Coast Local Strategic Planning Statement (LSPS 2020)* sets a vision for land use planning across the Central Coast Local Government Area (LGA) for the next 20 years. The plan is closely aligned with the CCRP 2036. The site is within an area designated in the LSPS as the Greater Warnervale Growth Area. According to the LSPS, the suburbs which make up this growth area (including Hamlyn Terrace, Wadalba, Woongarrah and Warnervale) are expected to predominantly attract a young and mature family housing market – which will generate demand for additional educational facilities.

The LSPS also recognises that "*Coordinated investment in growth areas of the Central Coast across transport, health, education and water will ensure that we support the creation of quality places and neighbourhoods*".

In addition, the LSPS acknowledges that social and cultural infrastructure, including schools, is key to providing a sense of well-being and belonging, building community capacity, and in delivering positive outcomes for the Central Coast community[2].

2.3 Key Features of the Site

The key features of the site and surrounds that could affect, or be affected by, the project have been identified in the following section. A Locality Plan of the site showing the location of the proposed school and its immediate surrounds is provided at in **Error! Reference source not found.**. The site is under the ownership of SPCEF for the purpose of a new school.

The subject site has an area of 39.929 ha and is identified as Lot 2 in Deposited Plan 809196, and commonly referred to as Lot 2 DP 809106 Arizona Road. The site and land adjoining the site to the north is largely covered in remnant native vegetation, providing an attractive bushland setting for the proposed school. The site is disturbed, located adjacent to industrial and infrastructure zoned land with pockets of remnant vegetation.

[2] Central Coast Local Strategic Planning Statement, Interim Statement August 2020, Page 101

An unnamed creek flows through the project site in a northerly direction, dividing the site into a (larger) western section and (smaller) eastern section. The school is proposed to be contained in the western section of the site, leaving the eastern part of the undeveloped apart from an access road providing a linkage to the Pacific Highway.

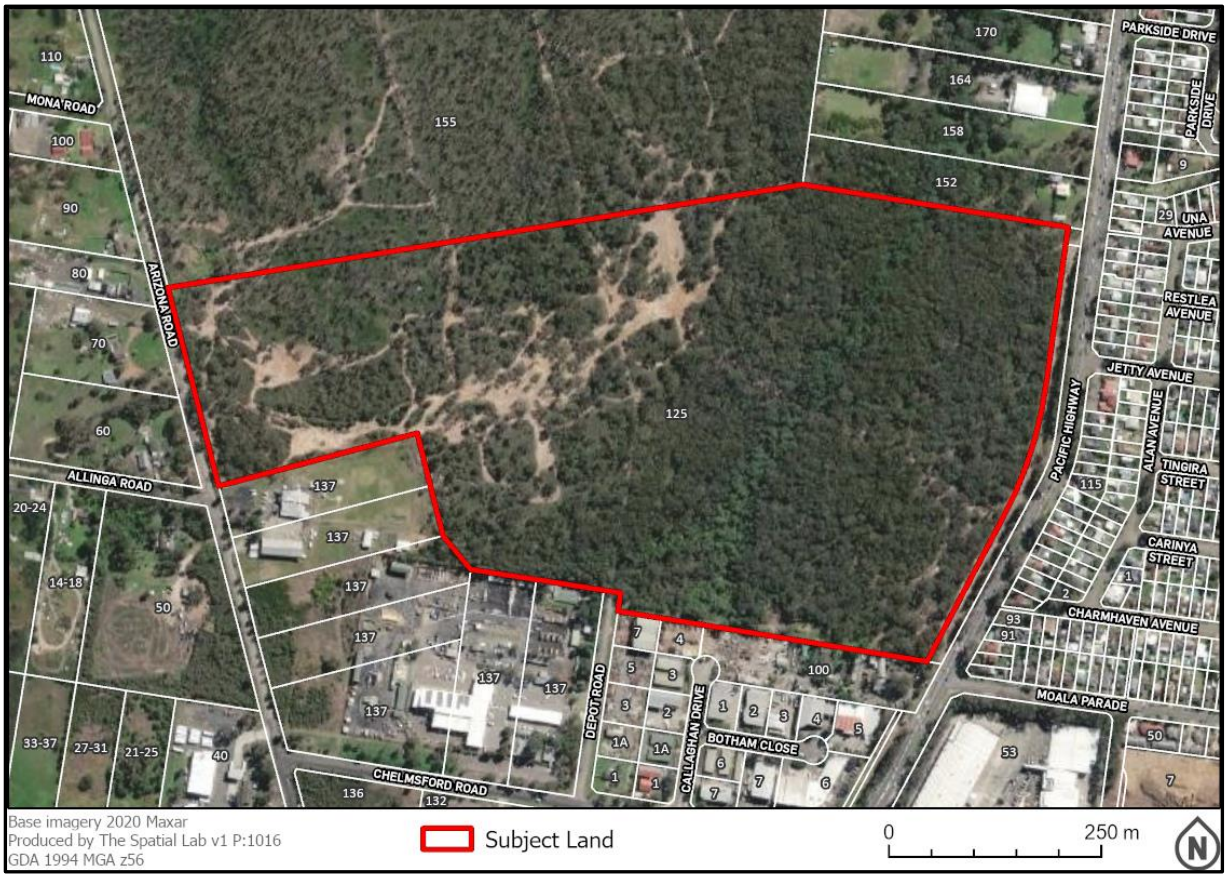

Figure 1 Locality Plan (Source: Spatial Lab)

2.3.1 Regional Context

The proposed new school is in the Central Coast suburb of Charmhaven, located in the north of the LGA on the western shore of Budgewoi extending west to the Main Northern Railway. The suburb contains three distinct precincts, including a residential precinct between Budgewoi Lake and the Pacific Highway, a light industrial precinct centred on Chelmsford Road and the southern part of Arizona Road, and a largely undeveloped precinct located west of the Pacific Highway and north of the industrial precinct which can be identified within the Regional Context Plan in Figure 2 and regional land use context in Figure 3.

Figure 2 Regional Context (Source: Spatial Lab)

The site of the proposed St Philip's Charmhaven School is located at the intersection of these three precincts. The proposed school's initial and main entrance will be located on Arizona Road, with a second access to be provided from the Pacific Highway. Service access to the site is also proposed from Depot Road, which terminates at the site's southern boundary. The site is less than 1 km from Lake Haven shopping centre which is co-located with various government services and recreational facilities, and the basis of an "Emerging Strategic Centre" as identified in the Central Coast LSPS.

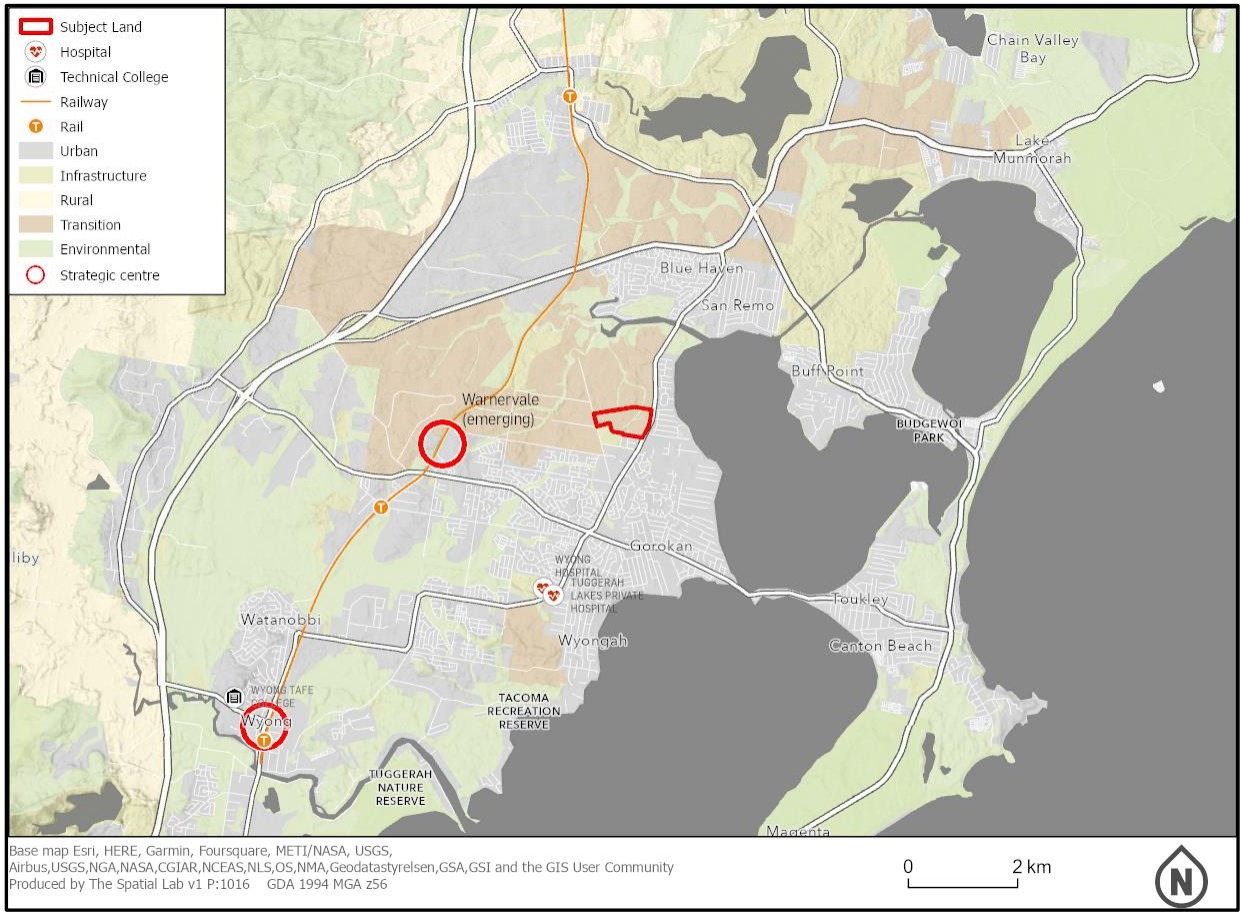

Figure 3 Land Use Context (Source Spatial Lab)

2.3.2 Existing Transport and Roads

Access to the school will be via Arizona Road. Traffic travelling to the school from the north and south is expected to use the Pacific Highway and Chelmsford Road, traffic from the east would use Lake Haven Drive and Chelmsford Road, while traffic from the west is expected to use Hakone Road.

2.3.3 Biodiversity

Vegetation within part of the site has been heavily disturbed by years of unauthorised vehicle access. Nonetheless, the site supports a range of biodiversity values. A Biodiversity Development Assessment Report (BDAR) was prepared by MJD Environmental based on field survey investigations undertaken between July 2020 and March 2022. The assessment identified the following four Plant Community Types (PCTs) within the site:

1. PCT 1590: *Spotted Gum - Broad-leaved Mahogany - Red Ironbark shrubby open forest –*
2. PCT 1619: *Smooth-barked Apple - Red Bloodwood - Brown Stringybark - Hairpin Banksia heathy open forest of coastal lowlands*
3. PCT 1636: *Scribbly Gum - Red Bloodwood - Angophora inopina heathy woodland on lowlands of the Central Coast*

4. PCT 1718: *Swamp Mahogany - Flax-leaved Paperbark swamp forest on coastal lowlands of the Central Coast*

The northern part of the site contains individual stands *of Angopohora Inopina* (Charmhaven Apple), listed as vulnerable in both the BC Act 2016 and Environmental Protection and Biodiversity Conservation Act (EPBC) 1999 (Commonwealth). The site is mapped on the Important Areas Map as habitat for *Lathamus discolor* (Swift Parrot) listed as Endangered under the BC Act 2016 and Critically Endangered under the EPBC Act 1999. Figure 4 highlights the environmental site constraints of the site based on the DPE data available.

Figure 4 Environmental Site Constraints (Source: Spatial Lab)

2.3.4 Flooding and Topography

The unnamed creek that traverses the site is subject to minor flooding during the 1 in 100-year rainfall event. This flooding may temporarily restrict access to the site from Depot Road, however, would not impact on proposed buildings or access to the site from the main entry on Arizona Road.

2.3.5 Heritage and Archaeology

The heritage, archaeology and history of sites provide valuable information about its past occupation, the use of the environment and its specific resources it provided including diet, raw materials, transportation, stone tool manufacture, and the movement of groups throughout the landscape. An Aboriginal Cultural Heritage Assessment was carried out to inform the project and resulted in the identification of an artefact scatter associated with a small area of Potential Archaeological Deposit. The artefact scatter, consisting of two mudstone flakes and a mudstone core, was assessed as having low to moderate archaeological value at a local level. Archaeological test excavations were undertaken under the Code of Practice and in accordance with the SEARs. Three artefacts were recovered confirming evidence of the site for transitionary occupation, having a low to moderate local value.

2.4 Cumulative Impacts

To determine whether the project is likely to generate cumulative impacts with other development in the area, a review of approved and proposed developments on adjoining and nearby properties was undertaken, utilising the ePlanning Portal on the 25 July 2022.

There were complying development applications identified to the south in the existing industrial area for a one into two lot subdivision of industrial land along with alterations and additions to an industrial building within the locality. Across the Pacific Highway in Lake Haven and Charmhaven there were applications for the alterations and additions to commercial premises, demolition of a dwelling and applications for the installation of swimming pools.

There are no recent major projects or infrastructure approvals identified. The application for the school is unlikely to result in cumulative impacts on existing or proposed development within the immediate locality or adjoining suburbs.

2.5 Relevant Planning Agreements and Contributions

The applicant has not entered into any agreements with other parties to mitigate or offset the impacts of the project.

A Voluntary Planning Agreement has not been entered into in relation to the site.

2.5.1 Contributions Plan

The Regional Section 7.12 Contributions Plan 2019 (RSDCP) applies to the proposed school as it is not listed as a category under Section 7.11. The RSDCP has been developed in accordance with Section 7.12 of the EP&A Act and its regulations to ascertain an appropriate contribution rate for various public works and infrastructure required to meet the demands of the forecast growth within the region. The levy is to be paid prior to the issue of a construction certificate, subdivision certificate of complying development certificate. As the school will be constructed in stages, it is considered

appropriate to impose the levy prior to the issue of the construction certificate required at each stage, enabling the school to divide the payment as the school develops.

The rate is calculated at 1% of the CIV relating to the development. Muller Partnership calculated the Value of the development in Appendix G9 as$420,454,000.00. Based on this amount the relevant contribution is$4,204,540.00.

Consideration under Section 4.8[3] of the plan is requested for the development to reduce the contributions to be paid. Works within the development application include the installation of a four-leg intersection on the Pacific Highway, and Jetty Avenue to access the site. The provision of community use of the associated school buildings such as the chapel, indoor and outdoor sporting facilities and performing arts buildings has the potential to provide a material public benefit which in turn could reduce the overall contribution fees required to be paid by the school.

2.6 Analysis of Project Alternatives

2.6.1 Objectives of the Project

The objectives of the Project are to:

- Establish a new educational establishment facility to meet the demand for quality education within the Greater Warnervale Growth Area.
- Create temporary and permanent job opportunities during the construction and operational phase of the development.
- Implement CPTED principles in the site's design to deter crime.
- Provide a safe and accessible educational establishment.
- Create a series of high quality and modern teaching spaces which are flexible and promote increased social interaction among students and teachers.
- Promote the principles of ecologically sustainable development through a design responsive to the site's unique environmental attributes and which is energy and water efficient.
- Provide a design that celebrates connection to country and the natural and historic attributes of the site.
- Minimise impacts relating to flooding, noise, visual amenity, traffic or any other such impacts on nearby properties; and
- Provide areas within the new school for indoor and outdoor recreation to improve the health and wellbeing of students and the broader community.
- Provide an additional parcel of land that is not required to accommodate The Project and support the effective and economic use of land along a recognised growth corridor.

[3] Attachment A – Warnervale District CP August 2021 - Section 4.8 Contributions by land dedication or undertaking works (pages 36-38).

2.6.2 Options Considered.

Do nothing option.

A 'do nothing' approach would mean not investing in a new school within the Northern Central Coast area, potentially diverting resources to the development of new SPCC schools in other locations within the Hunter or Central Coast region. This would result in not responding to the significant ongoing demand for quality independent schooling in the Central Coast LGA associated with the forecast population growth.

Further, without independent schools being constructed, the burden of offering school places would fall to the NSW Government to expand their existing schools to accommodate the expected school population.

According to the DPE, this area of the Central Coast is expected to take approximately one third of the expected population growth of the Central Coast over the next 20 years.

A reduced scope of works.

A previously considered option involved seeking multiple approvals for smaller scopes of work over the next ten to twenty-year horizon. Development Applications for local development would likely provide for more modest and incremental increases in student numbers that would not necessarily cater for the increase in growth as it is needed. This option was discounted, as it did not allow for the long-term planning and staging of access requirements needs to support the ultimate student and staff numbers. This approach would also provide less flexibility to respond to the strong ongoing local demand for independent schooling, as required. This is particularly relevant when planning student enrolments year on year.

The consent needs to grant the full number of students for the complete school to allow the school to grow each year towards its total population. Incremental increases provide no certainty for the school to grow and providing uncertainty for the community where they are not aware of the total development expected into the future.

The same scope of works in a different configuration across the site.

The large scale of the site and the division of the school into three sub-schools and functional land uses, being the Junior, Middle and Senior Schools, Narnia Early Learning Centre and DALE special school provides the opportunity to consider a variety of layout options. Consideration was given to locating the school on the eastern part of the site fronting the Pacific Highway to maximise exposure, however this was discounted for the following reasons:

- The presence of a second-order watercourse traversing the site limits the development footprint in the eastern part of the site – particularly with respect to the need for a large flat area for playing fields. '
- Native vegetation in the western part of the site is already highly disturbed, making the land more suitable for development.

- Arizona Road was seen to be more appropriate than the Pacific Highway as the location for the school's primary vehicular access.

Options involving a more spread-out school layout were discounted in favour of clustering buildings and facilities in the western part of the site. This design response was largely driven by site constraints, particularly Biodiversity, flooding, and Aboriginal heritage, but also to ensure shared school facilities, such as the Sports Hall and proposed Performing Arts Centre, would be easily accessible for all students and where appropriate the public.

2.6.3 Preferred Option

The preferred option involves staged construction of a new school as outlined in this SSD application. This option provides for growth within the school and its facilities as required to meet staff and student numbers. Approval will provide certainty regarding the future capacity of the site and help ensure the school can deliver stages of development in a timely manner once funding becomes available and/or as demand dictates.

Taking a long-term view of the school's growth has allowed a holistic approach to design and provided for site master-planning and landscape master-planning, having regard to the principles of ecologically sustainable development. The benefits of this comprehensive approach would not be realised had the school decided to expand in a more piecemeal fashion. In respect to the eastern portion of the site, the environmental constraint of the waterway prohibits the connectivity and functionality required for an educational establishment. The subdivision will enable the future development of this land, not required to accommodate the school. The economic and social benefits of the subdivision outweigh the cost by the sterilisation of the land if retained within The Project.

3 The Project

This section of the report provides a complete and detailed description of the project elements, including all activities to be considered for development under this SSDA.

3.1 Project Summary

The development comprises of a new school with twenty-five new buildings within nine distinct areas within the school comprising of:

- Site works including removal of vegetation, earthworks, construction of roads and installation of services and utilities will be included in each stage. The access road connecting to and including works on the Pacific Highway will be included in Stage 1C.
- Administration Centre.
- Chapel.
- Narnia Early Learning.
- 2 Prep learning space.
- 1 OOSH.
- Junior School.
  - 28 learning spaces, including Even Start, Inclusive Education.
  - 1 library (Discovery Centre).
- Middle School.
  - 27 learning spaces, including Inclusive Education.
  - 1 library (Mastery Centre).
- Senior School.
  - 54 learning spaces, including specialist labs, workshops.
  - 1 Senior Study.
- 1 library (Excellence Centre).
- Dynamic Alternative Learning Environment (DALE).
  - 7 learning spaces.
  - 1 learning stair.
- Sports & Fitness Centre.
  - 9 learning spaces.
  - 1 double height climbing pod (rock climbing).
- Performing Arts Centre.
  - 700 seat theatre.
  - double height learning spaces.
  - 1 Blackbox theatre.
- Environment Centre.
  - 3 learning spaces.
- General Assistant Centre.
- Offices storage depot and resource education centre.

The development of these precincts and site works to provide services, roads and car parking are to be completed within stages. An access road will connect the school from Arizona Road to the Pacific Highway and includes the installation of a four-leg intersection in alignment with Jetty Avenue.

The site will be subdivided into two lots so that the school can be located on its own lot. The subdivision boundary will be located on the eastern side of the creek so that the creek can be in single ownership and managed by the school over the long term. In this regard, should the land on the eastern portion never contain any future development this land can be used as an offset site or stewardship site in the future. Alternatively, if the site can be developed by a later rezoning, this lot can be held in separate ownership. In this regard, the subdivision meets the objectives of the current zone allowing proposed lot 2 to be used effectively for conservation or development into the future.

Figure 5 and Figure 6 show the overall extent of the school site plan, Figure 7 shows the extent of works, internal and external to the development site.

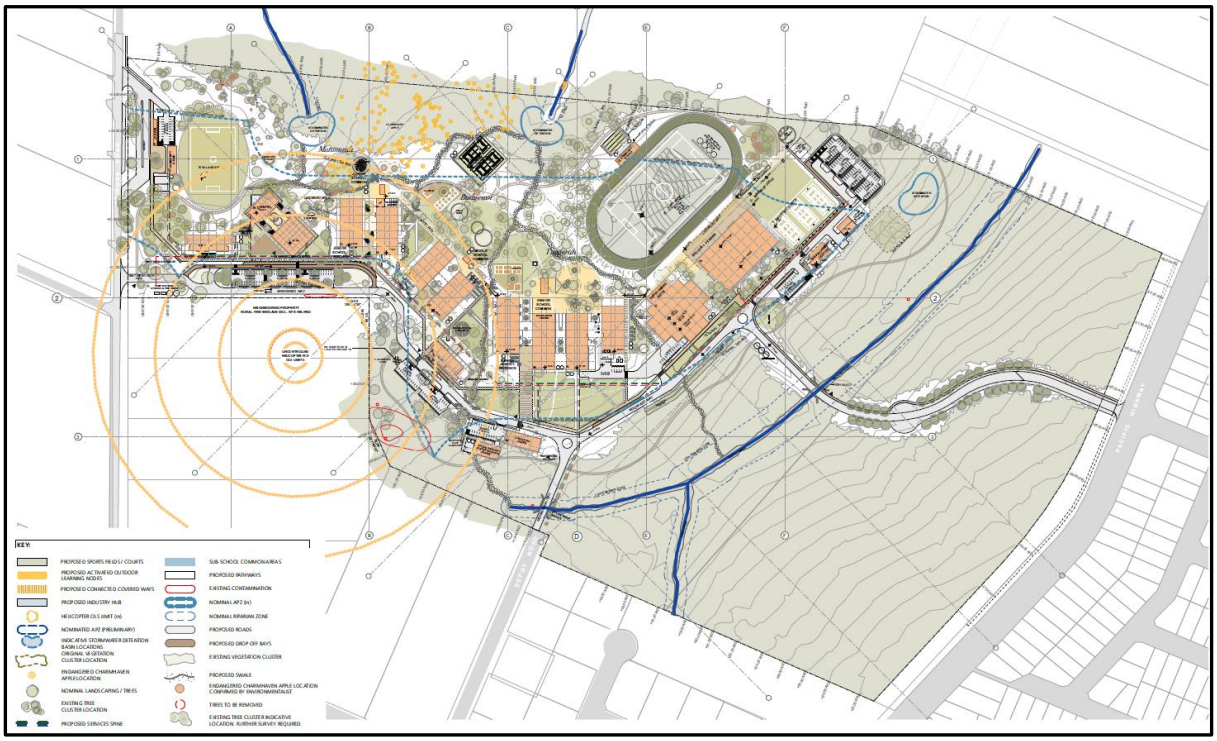

Figure 5 Site Plan Source: SHAC

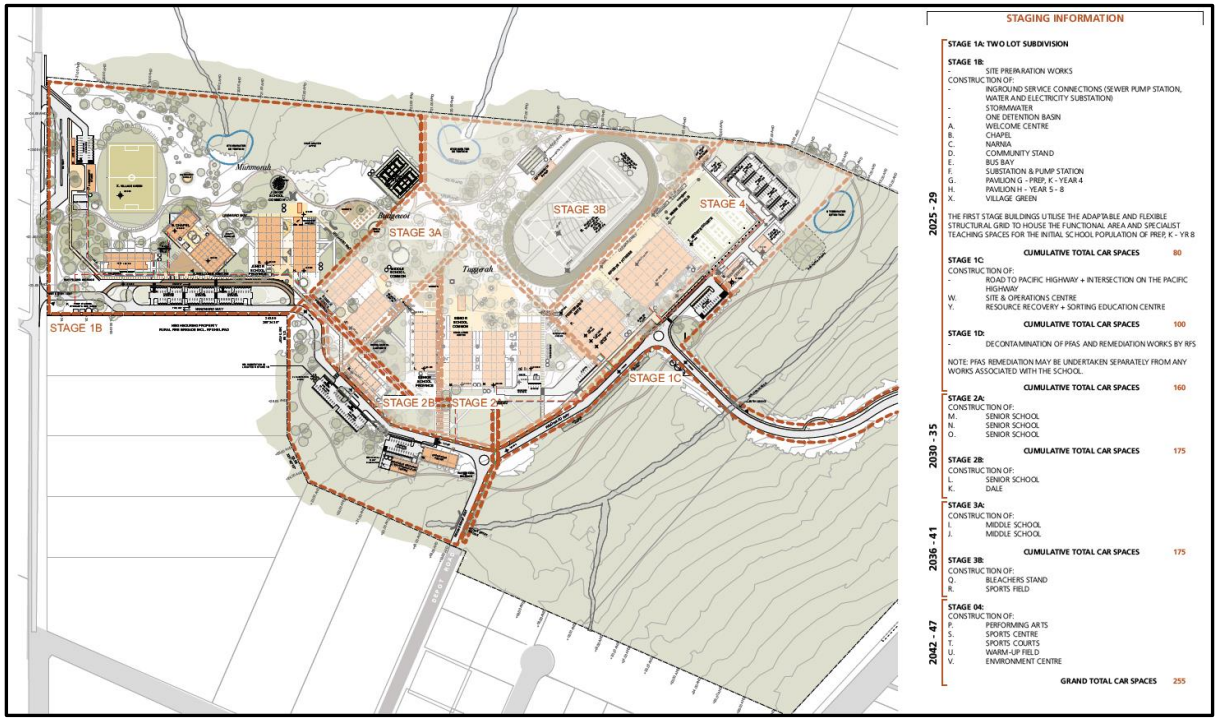

Figure 6 Stages Source: SHAC

Figure 7 Extent of Internal and External Works Source: MJD/ADW

A summary of the project details is provided in Table 5.

Table 5 Project Summary

Project Element	Summary of the Project			
Project Site Area	Total Site Area 39.929 ha			
	Application site area for School: 28.57ha Residual lot: 11.36 ha			
Site Description	St. Philip's Christian College Charmhaven Lot 2 DP 809106 Arizona Road, Charmhaven			
Site Works	Site works including construction of roads and installation of services and utilities will be included in each stage. The access road connecting to and including works on the Pacific Highway will be included in Stage 1C.			
Buildings	**Stage**	**Building Name**	**Height (Storeys)**	**Floor Space (m^2)**
	Stage 1A	Two Lot Subdivision	-	-
	Stage 1B	Building A – Welcome Centre	14.6m (2)	1,428
		Building B – Chapel	25.8m (1)	466
		Building C – Narnia Early Learning Centre	8m (1)	789
		Building D – Community Stand	7.2m (1)	260
		Building E – Bus Bay	7.2 (1)	132
		Building F – Electricity Substation and Sewer Pump Station and inground services	-	290
		Building G – Junior School - Pavilion G	12m (2)	2,274
		Building H – Junior School - Pavilion H	12m (2)	2,282
		Building X – Village Green	-	-
	Stage 1C	Road to Pacific Highway	-	-
		Installation of new Intersection on the Pacific Highway	-	-
		PFAS Remediation Works	-	-
		Building W - Site and Operations Centre	8.05m (1)	484

Project Element	Summary of the Project			
		Building Y – Resource Recovery and Sorting Education Centre	7.55m (1)	482
	Stage 1D	PFAS Remediation Works	-	-
	Stage 2A	Building M – Senior School – Pavilion M	12m (2)	2,734
		Building N – Senior School – Pavilion N	12m (2)	3,089
	Stage 2B	Building O – Senior School – Pavilion O	12m (2)	2,759
		Building L – Senior School – Pavilion L	12m (2)	2,999
		Building K - Dynamic Alternative Learning Environment (DALE)	10.6m (2)	1,042
	Stage 3A	Building I – Middle School - Pavilion	12m (2)	2,345
		Building J – Middle School - Pavilion J	12m (2)	2,345
	Stage 3B	Building Q – Bleachers Stand	7.2m (1)	160
		Building R – Sports Field	-	-
	Stage 4	Building P – Performing Arts	25.35m (2)	3,392
		Building S - Sports Centre	17.95m (2)	5,053
		Building T - Covered Sports Courts	9.2 (1)	
		Building U – Warm-Up Field	-	-
		Building V – Environment Centre	8.9 (1)	576
Maximum Height of all proposed buildings and structures	RL 36.76m, 25.8 metres 2 storeys.			
Sporting or other facilities	Village green Sporting fields Warm up fields Indoor Sports Centre Sports Courts			
Total Student Numbers	Junior School	492		
	Middle School	448		
	Senior School	480		

Project Element	Summary of the Project				
	DALE Special School	80			
	Sub-total	1,500			
	Prep	40			
	Narnia Early Learning Centre	43			
	Sub Total	83			
	Total	**1,583**			
Total Staff Numbers	Administration	40			
	Junior School	49			
	Middle School	35			
	Senior School	40			
	DALE Special School	20			
	Narnia	15			
	Total	**199**			
Access	Vehicle access via Arizona Road. Traffic travelling to the school from the north and south is expected to use the Pacific Highway and Chelmsford Road, traffic from the east would use Lake Haven Drive and Chelmsford Road, while traffic from the west is expected to use Hakone Road. Pedestrian access to be provided using connections to the existing Shared pathway network within.				
Total parking spaces	**Stage 1**	**Stage 2**	**Stage 3**	**Stage 4**	
	101	161	191	271	
Construction Hours	7am to 5pm (Monday to Saturday)				
	8am to 3pm (Saturday)				
	No work on Sundays and Public Holidays				
Operational Hours					
Facility	**Days**	**School Hours**	**Community Hours**	**Total Hours**	
General Hours of Operation4	Monday - Friday	07:00 – 22:00		07:00 – 22:00	
Prep School (4-5 years)	Monday - Friday	07:00 – 18:00	Nil	07:00 – 18:00	
OOSH	Monday - Friday	07:00 – 18:00	Nil	07:00 – 18:00	
Junior School Middle School Senior School	Monday – Friday	08:00 – 15:00	Nil	08:00 – 15:00	

[4] These hours include incidental operations such as parent teacher, staff meetings, information evenings, and excluding gymnasium and performing arts as identified within the table.

Project Element	Summary of the Project			
DALE Special School				
Administration / Office	Monday – Friday	07:00 – 21:00	Nil	07:00 – 21:00
Narnia Early Learning Centre	Monday – Friday	07:00 – 18:00	Nil	07:00 – 18:00
Gymnasium	Monday – Friday	07:00 – 15:30	15:30 – 20:00	07:00 – 20:00
	Saturday	Nil	07:00 – 18:00	07:00 – 18:00
	Sunday/Public Holiday	Nil	08:00 – 17:00	08:00 – 17:00
Performing Arts Centre	Monday-Friday	08:00 – 15:30	15:30 – 22:00	08:00 – 22:00
	Saturday	Nil	08:00 – 22:00	08:00 – 22:00
	Sunday/Public Holiday	Nil	08:00 – 18:00	08:00 – 18:00
Sports Fields	Monday – Friday	08:00 – 15:30	15:30 – 20:00	08:00 – 20:00
	Saturday	Nil	07:00 – 18:00	07:00 – 18:00
	Sunday/Public Holiday	Nil	08:00 – 17:00	08:00 – 17:00
Chapel	Monday – Friday	08:00 – 21:00	Nil	08:00 – 21:00
	Saturday	08:00 – 18:00	08:00 – 18:00	08:00 – 18:00
	Sunday/Public Holiday	08:00 – 18:00	08:00 – 18:00	08:00 – 18:00
*Ancillary activities such as cleaning, deliveries, waste collection may also occur outside of these hours				
Capital Investment Value	$420,454,000.00			

3.2 Project Objective

The vision of SPCC Charmhaven is to create a community hub incorporating a dynamic learning environment in which students are provided the opportunity to pursue excellence intellectually, physically, socially, and spiritually. The proposed new school will cater to the changing needs of students and teachers, as well as the technologies and educational principles of the school. The result will be an inspiring place where young people can grow, collaborate, and contribute.

The objective of the project is to deliver the staged construction of a new K-12 school, “Narnia” early learning centre, OOSH and “DALE” special school to accommodate 1,583 children, while meeting future demands for modern teaching and sporting facilities. The project aims to:

- Establish a new educational establishment facility to meet the demand for quality education within the Greater Warnervale Growth Area.
- Create temporary and permanent job opportunities during the construction and operational phase of the development.
- Implement CPTED principles in the site's design to deter crime.
- Provide a safe and accessible educational establishment.
- Create a series of high quality and modern teaching spaces which are flexible and promote increased social interaction among students and teachers.
- Promote the principles of ecologically sustainable development through a design responsive to the site's unique environmental attributes and which is energy and water efficient.
- Provide a design that celebrates connection to country and the natural and historic attributes of the site.
- Minimise impacts relating to flooding, noise, visual amenity, traffic or any other such impacts on nearby properties; and
- Provide areas within the new school for indoor and outdoor recreation to improve the health and wellbeing of students and the broader community.
- Provide an additional parcel of land that is not required to accommodate The Project and support the effective and economic use of land along a recognised growth corridor.

3.3 Project Area

The entrance to the proposed school will be located on Arizona Road, a service entry from Depot Road and a second access to be provided from the Pacific Highway. There is large residential development to the west and northeast, commercial land to the south and vegetated, undeveloped land to the north which can be seen within Figure 8.

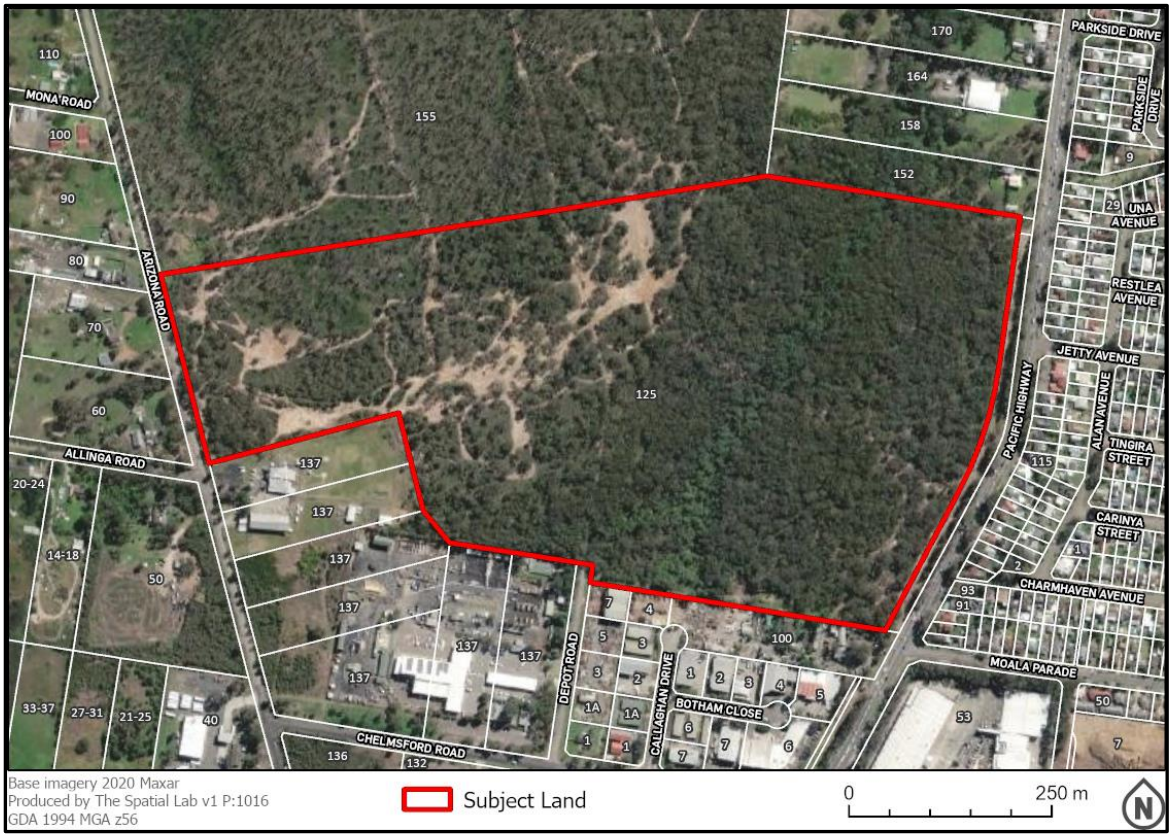

Figure 8 Locality Plan (Source: The Spatial Lab)

There are two watercourses that separate the school footprint from the remainder of the site. Figure 9 shows the location of the watercourses in the southern part of the site running toward the north as well as the established tracks throughout the site. Other than the two road crossings, to Depot Road and the connection to the Pacific Highway, these watercourses are excluded from the development area associated with the school with a buffer area of 10 metres either side of the watercourse.

The site has access to all required services such as water, sewer, electricity, telecommunications, and stormwater as confirmed by ADW Johnson in the Existing Services Plan shown in Figure 10.

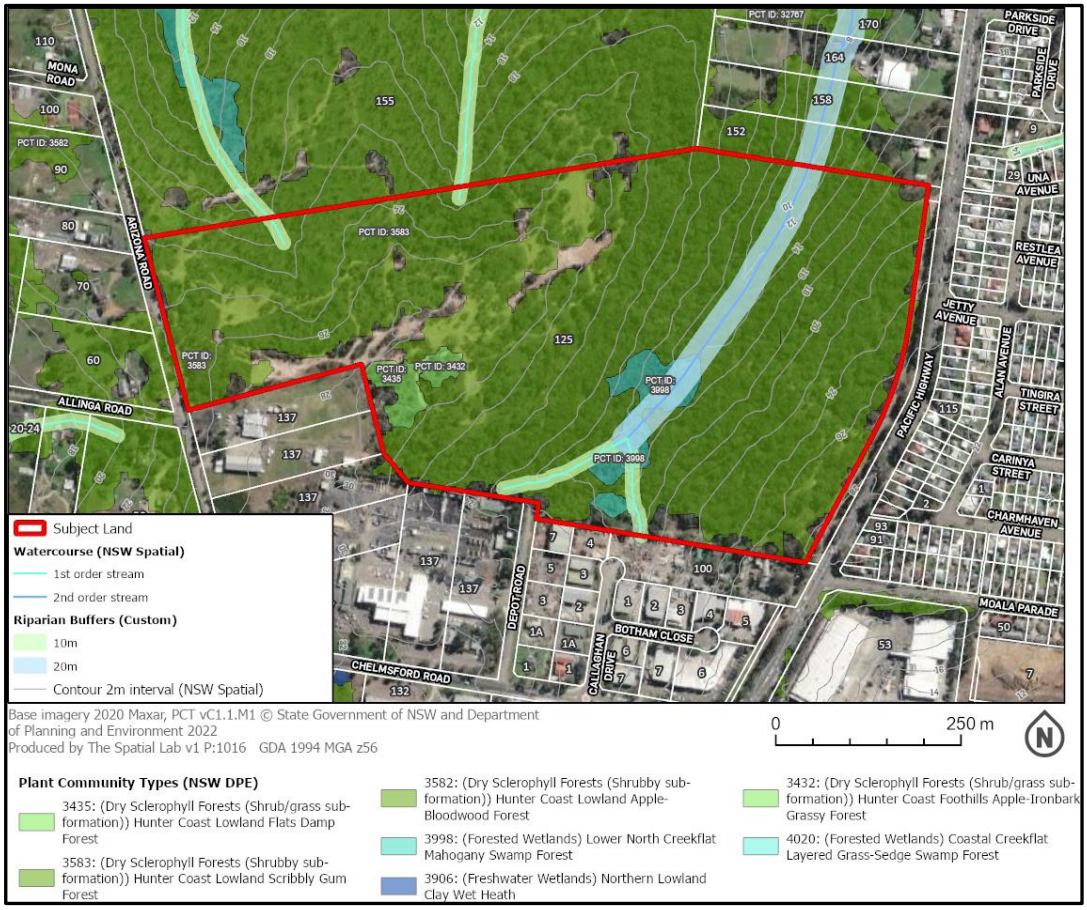

Figure 9 Constraints Map (Source: Spatial Lab)

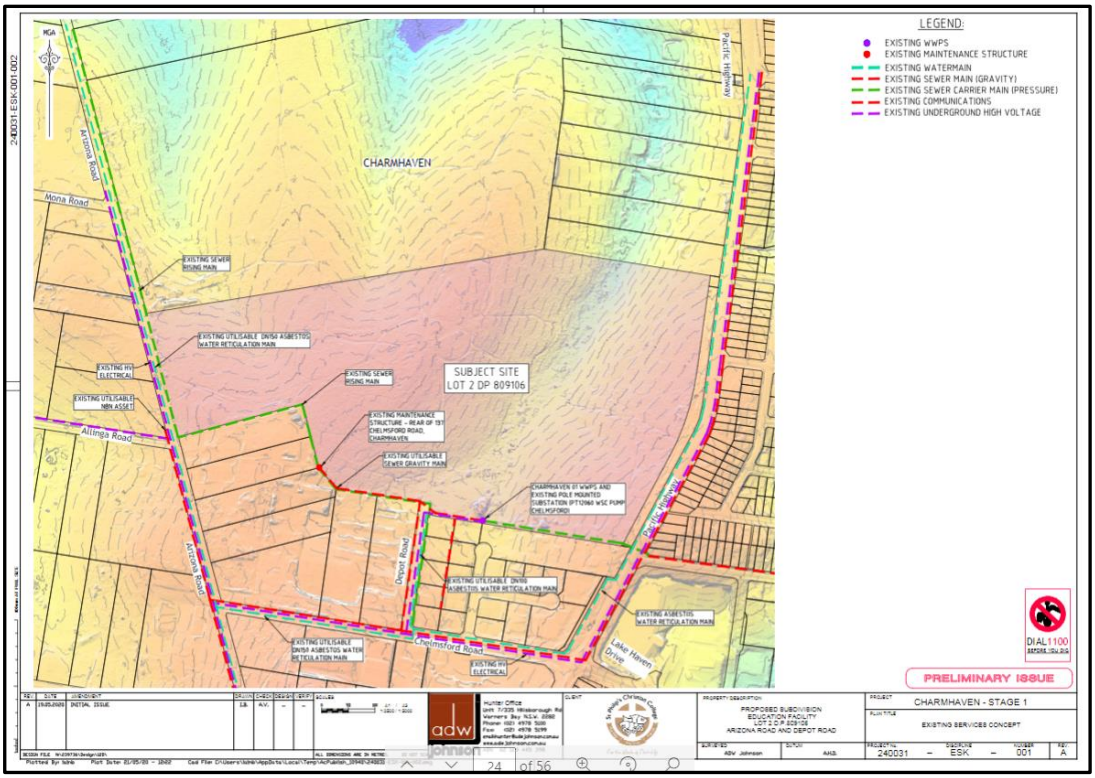

Figure 10 Preliminary Services Plan: Source: ADW Johnson

3.4 Project Details

This section provides a detailed description of the scope of works for which approval is sought and the basis on which the EIS has been undertaken.

3.4.1 Site Works

This includes the removal of vegetation and earthworks, construction of roads and installation of services and utilities will be included in each stage. The access road connecting to and including works on the Pacific Highway will be included in Stage 1C. The extent of cut and fill has been detailed within the Earthworks Commentary provided by ADW Johnson (refer Appendix G28). Approximately 57,110m³ of materials will be excavated and reused (compacted fill) on site. An additional 1,150m³ of fill is required, this will be obtained by either an on-site borrow pit for works to be contained within the site or be imported from an off-site source. The variation over the site is expected to be between 4 m of excavation and up to 4m of fill based on the existing site topography and building design.

3.4.2 Enabling Works and Servicing

The following enabling works are proposed to service the development and enable construction of the development.

Within Arizona Road reserve:

- Installation of two underground High Voltage substation to be connected from the existing 11kV (HV) overhead line.
- Installation of an underground Low voltage cable from the proposed substation to existing low voltage network.
- NBN connection point.
- Connection to the existing 150mm watermain through a trench connection.

Within the southwestern section of the lot fronting Arizona Road:

- Installation of two 1,000kVA substations within the property boundary.
- Installation of an underground Low voltage cable from the proposed substation to existing low voltage network.
- Installation of consumer mains from the substations to the development main switchboard.
- Installation of 400m of sewer rising main to the existing connection point to the rear of 137 Chelmsford Road.

Within the north-western section of the site fronting Arizona Road:

- Installation of a private wastewater pumping station (WWPS).

Full details of the works are detailed within the servicing assessment completed by ADW Johnson, provided in Appendix G5.

3.4.3 Building Design

Overall, the building form for the development is easily accessible, limited to a two-storey built form and provide functional learning spaces to meet the needs of the school. The development consists of twenty-five structures as summarised in Table 6.

Table 6 Building Design Summary

Building Identifier	Height (Storeys)	Floor Space (m^2)
Building A – Welcome Centre	14.6m (2)	1,428
Building B – Chapel	25.8m (1)	466
Building C – Narnia Early Learning Centre	8m (1)	789
Building D – Community Stand	7.2m (1)	260
Building E – Bus Bay	7.2 (1)	132
Building F – Substation and Pump Station	-	290
Building G – Junior School - Pavilion G	12m (2)	2,274
Building H – Junior School - Pavilion H	12m (2)	2,282
Building X – Village Green	-	-
Building W – Site and Operations Centre	8.05m (1)	484
Building Y – Resource Recovery and Sorting Education Centre	7.55m (1)	482
Building M – Senior School – Pavilion M	12m (2)	2,734
Building N – Senior School – Pavilion N	12m (2)	3,089
Building O – Senior School – Pavilion O	12m (2)	2,759
Building L – Senior School – Pavilion L	12m (2)	2,999
Building K – Dynamic Alternative Learning Environment (DALE)	10.6m (2)	1,042

Building Identifier	Height (Storeys)	Floor Space (m^2)
Building I – Middle School - Pavilion I	12m (2)	2,345
Building J – Middle School - Pavilion J	12m (2)	2,345
Building Q – Bleachers Stand	7.2m (1)	160
Building R – Sports Field	-	-
Building P – Performing Arts	25.35m (2)	3,392
Building S – Sports Centre	17.95m (2)	5,053
Building T – Covered Sports Courts	9.2 (1)	
Building U – Warm-Up Field	-	-
Building V – Environment Centre	8.9 (1)	576

Building A – Welcome Centre

The new Welcome Centre is a two-storey building designed in conjunction with the Chapel. The spaces share a common built form, however, are inherently separated by a centralised courtyard called 'The Meeting Place'. The Welcome Centre acts as the arrival entry building to the Project school and includes inviting and spacious amenities which supplements the Reception Area, including gallery, lounge, and exhibition spaces.

The Welcome Centre is supported by several facilities including executive and administrative offices, careers and wellness service spaces, and storage areas. The office spaces are almost exclusively located on the first-floor level. The ground floor spaces are also supported by their respective facilities, including toilets, uniform shop, kitchen, and shared office spaces.

Building B – Chapel

The proposed Chapel is a single storey building space, located to the west of the Welcome Centre across 'The Meeting Place'. The Chapel will serve for services to be attended by students and staff, but also be utilised mainly for school assemblies. The space could also be used for group meetings for staff or for parents or the community. The Chapel will be large enough for 200 people in both formal and informal arrangements.

Its design will reflect its symbolic purpose that clearly expresses the mission and purpose of the school. The building is in a prominent position, where people will see it every time they come to the campus. Like that of most chapel spaces, the space will include vaulted timber ceiling, a large front stage, slightly sloping floors, and large and expansive windows.

Building C – Narnia

Narnia is a new single storey early learning / childcare and OOSH. The two spaces are separate from each other but are wholly contained within the same built form. The early learning centre will cater to children of all pre-school ages, with dedicated spaces for 0-2 years, 2-3 years, and 3-4 years. All spaces include indoor and outdoor playing and activity spaces, including a large cover outdoor deck space located along the northern boundary of the centre.

The centre is well supported by the required facilities, including staff room, administration, and office spaces, indoor and outdoor storage facilities, kitchen and preparation rooms, laundry, and front entry office. The 2-3- and 3-4-years' spaces include shared communal bathrooms, 0-2 years include change spaces and cot rooms, and the after-school care offers separated individual bathrooms.

Building D – Community Stand

Building D includes bleachers seating and combined bus shelter on the western side adjacent to the Village Green. The Community Stand features a trapezoidal hanging roof formation which encompasses the entirety of the seating and partially covers the bush shelter area. A rainwater tank has been incorporated into the design which can be actively reused in the maintenance of the Village Green and surrounds.

Building E - Bus Bay

Concrete hardstand area alongside the bus lanes off Arizona Road for students disembark in the morning and to line up ready to embark in the afternoon.

Building F – Substation and Pump Station

A pump station, hydrant, fire tanks, and substation is located at the southwestern corner of the site, towards the first entry/exit. Due to the substantial bushfire constraints across the site, the incorporation of a hydrant and pump station is considered essential.

Building G and H – Junior School

The new Junior School building is a two-storey building designed in two built forms. The northern section, labelled Pavilion G, will comprise of a Prep area, two (2) Kindergarten GLAs, two (2) TAS GLAs, three (3) food tech GLAs, two (2) office spaces, a staff room, amenities, and a central practical activities area (PAA) on the ground floor. The first floor will contain a further eight (8) GLAs, two (2) seminar rooms, amenities, a large PAA, and an interconnecting bridge walkway to the southern Pavilion H with centrally located PAA.

The southern section of the Junior School, Pavilion H, will comprise eight (8) GLAs, large staff lounge, staff study spaces, library and discovery centre, meeting rooms, and offices for senior staff, administration, and Principal, along with a reception and clerical area, interview room and office. The first floor will effectively be the mirror of Pavilion G, containing a further eight (8) GLAs, two (2) seminar rooms, a large PAA and extensions to the covered outdoor learning areas.

Building I and J – Middle School

The new Middle School building is a two-storey building designed in two sections capable of staged construction. The western section, labelled B1, will comprise six (6) GLAs, two (2) seminar rooms, a staff room, amenities, and a central practical activities area (PAA) on the ground floor. The first floor will contain a further five (5) GLAs, three (3) seminar rooms, amenities, a large PAA and north and south facing covered outdoor learning areas. The Middle School will eventually be connected to the Senior School via an elevated covered walkway.

The eastern section of the Middle School, B2, will comprise six (6) GLAs, a PAA and seminar room on the ground floor, along with a reception and clerical area, interview room and office. The first floor will effectively be the mirror reverse of section B1, containing a further five (5) GLAs, three (3) seminar rooms, a large PAA and extensions to the covered outdoor learning areas.

Building K – DALE

The DALE is a two-storey building, the ground floor comprises an entry exhibition area, a family and group space, student amenities, three GLAs on the ground floor, three breakout rooms, covered outdoor learning area, administration, staff room, kitchen, and office spaces. The first floor comprises a group workspace and life skills area, three (3) GLAs and breakout rooms, a retreat room, staff study, meeting room, staff, and student amenities.

Building L, M, N and O – Senior School

All two-storey buildings within this precinct, linked with external circulation spaces on the ground floor and skywalks on the first floors, the specific learning areas within each building are detailed below, providing a combination of flexible and specific learning areas.

Building L is a shared space between the Middle and Senior School. The ground floor catering for year 9 and 10 students, comprises of twelve (12) GLAs, staff hub and two seminar rooms. The first floor comprises of four (4) GLAs for year 11 and four (4) GLAs for year 12 students, student amenities, lab room, two (2) media rooms, and a senior lounge and study area.

Building M ground floor comprises of the Centre of Excellence, reception, foyer, two (2) special multipurpose rooms, student services, two (2) sick bay rooms, an IT room, four meeting rooms, executive offices for the deputy and principals, staff, and visitor amenities. The first floor comprises of student and staff collaboration landing and separate staff facilities such as meeting rooms, study area and lounge, the language centre links Buildings M and N.

Building N ground floor comprises the makers space and seminar rooms, four (4) TAS areas, staff room and storage area and a covered outdoor working area. The first floor comprises STEM lab, two (2) green and media rooms, and a dance room, two (2) art GLAs, exhibition area, two (2) art studios, kiln, staff hub, general storage areas, staff amenities and an outdoor art area.

Building O ground floor comprises outdoor student dining hall, canteen, seniors' café, hospitality kitchen, VET staff room, two (2) GLAs and two food technology rooms, an IT room, six (6) general storage and one waste storage areas, laundry, and central waste station. The first floor comprises of two (2) chemistry labs, six (6) GLAs, a biology lab, an earth and environmental lab, a seminar room, science prep room, four (4) general storage areas, staff hub and amenities, bio lab terrace and general locker and student space.

Building P – Performing Arts
A split-level building comprising of four levels, with a two-storey aspect from all elevations, the detail of each level is provided below. Large enough to accommodate 750 patrons.

The basement level comprises of two (2) storage areas, trap room, orchestra pit and wing corridors. The lower floor level comprises of the loading dock, two (2) wing areas, stage, waste storage, general storage, two (2) change areas, and the lower ground seating arrangement. The ground floor level comprises of the main theatre area, three (3) drama studios, a 100-seat black box theatre, box office, bar, café, foyer, three (3) services rooms, a waste storage and four (4) general storage areas. The mezzanine level comprises of three (3) seminar rooms, eight (8) small and three (3) medium practice rooms, four (4) GLAs, a staff room, amenities, four (4) services areas, mezzanine seating arrangements and two (2) stalls, a gantry and two (2) general storage areas.

Building Q – Bleachers Stand
Two (2) covered four (4) tier seating arrangements one located alongside the village green, the other alongside the athletics track.

Building R – Sports Field
Two (2) full sized turfed sporting fields measuring 50m by 100m to accommodate multiple sports.

Building S – Sports Centre
A two (2) storey building with the lower ground floor comprises of a three (3) court configuration in the five (5) general storage areas, a gymnastics store, mats store, tramp store, four (4) GLAs, climbing pod, two (2) change areas and amenities, stadium seating arrangement, chair storage area, an IT room and lift. The ground floor comprises two (2) GLAs, cardio studio, weight studio, yoga studio, activity station, lift. kiosk, first aid and officials' room, staff hub, student plaza and two (2) change rooms with amenities.

Building T Sports Courts
Three (3) multi-use courts concrete courts with a practice ball wall.

Building U – Warmup Field
Turfed warm-up field.

Building V – Environment Centre
The environment centre is a single storey building that comprises of two (2) GLAs, a marine lab, seminar room, two (2) offices, staff facilities and amenities, general storage area, observation deck, recreational equipment storage area, equipment, chemical and fuel storage areas required for the general maintenance and operation of the school grounds.

Building W and Y
Building W is the operations Centre A single storey building comprising of mechanical plant room, general works depot and shed, storage and office space. Building Y is the Resource Recovery and Sorting Education Centre.

3.4.4 Construction

Connections to existing available infrastructure from Arizona Road to service the development are detailed as part of the enabling works listed in Section 3.4.1.

The development will be completed in stages as detailed in Section 4 of this report. A new 1,000kVA electrical substation, in addition to the enabling works will be provided within the site power to the development, the location is identified as Building F on the base plan alongside the sewer pump station. The main buildings are limited to two-storeys and have been designed to for manufacturing and assembly in grid and bay pattern with a cassette façade system using horizontal panels. This enables flexibility to modify general learning areas as required.

Construction works for the site will include internal access roads and Pacific Highway intersection, roundabouts, drop off bays, entry bridge and carparks; stormwater infrastructure; landscaping, gardens and play equipment; signage; pedestrian walkways; chapel and school buildings, library and learning centres; athletics fields and sports courts. Earthworks for the installation of services, stormwater, roads, and car parking will be completed in stages, as detailed within Section 4.

3.4.5 Subdivision

A detailed assessment of the subdivision relative to the planning framework and The Project has been undertaken. The assessment confirms consistency with the Objects of the EPA&A Act, CCRP, CCLPS, TISEPP. It further supports the contravention of clause 4.1 of the CCLEP being considered under clause 3.23 of the TISEPP. The subdivision is required for the functionality and financial operations of The Project.

The subdivision is sought based on the natural subdivision of site due to the location of the watercourse and to enable the school to be located on its own lot. **Error! Reference source not found.**

shows the extent of the proposed subdivision, Lot 1 with an area of 28.57ha will form the school site with Easement A providing access to the school from the Pacific Highway Access. Lot 2 will form a residue site with an area of 11.36ha. The subdivision boundary will be located on the eastern side of the creek so that the creek can be in single ownership and managed by the school over the long term. In this regard, should the land on the eastern portion never contain any future development this land can be used as an offset site or stewardship site in the future and held in separate ownership if required.

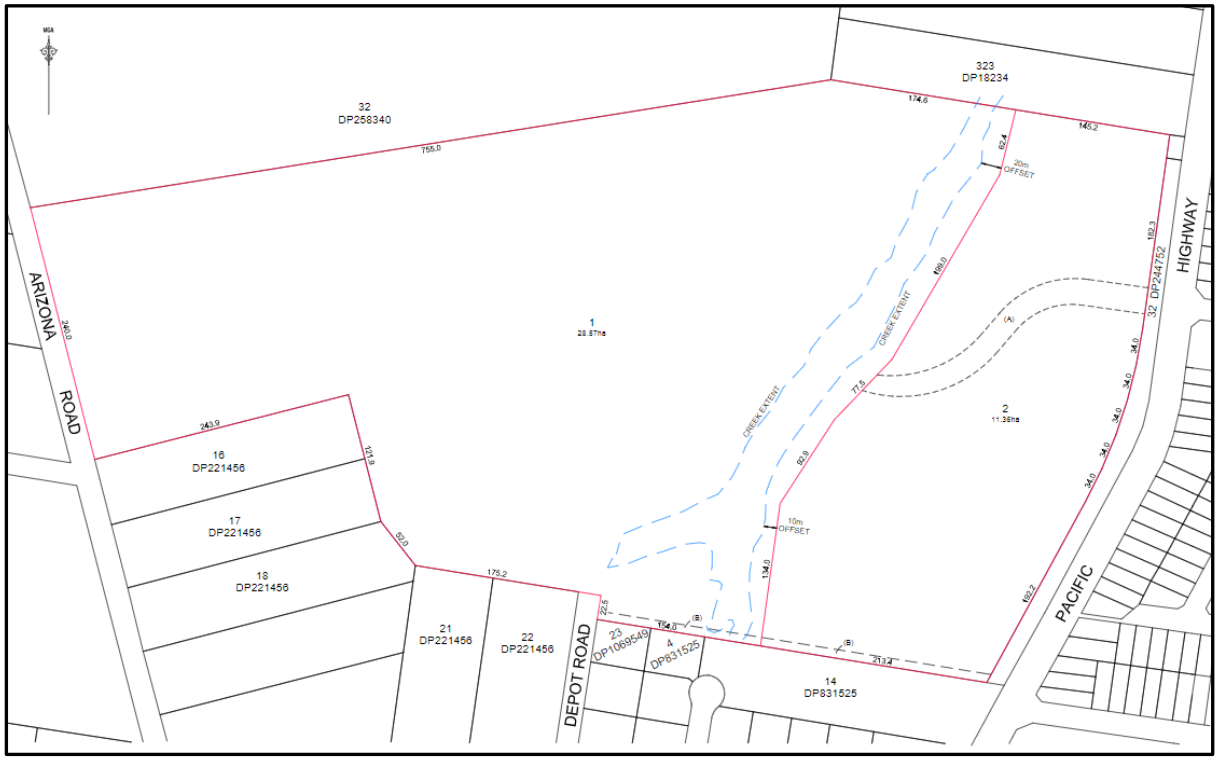

Figure 11 Proposed Subdivision Layout (Source: ADW Johnson)

Under the EP&A Act, the inclusion of the Subdivision aligns with the objects of the Act, specifically objects (a), (b), and (c).

(a) To promote the social and economic welfare of the community and a better environment by the proper management, development, and conservation of the State's natural and other resources.

The Project provides positive social and economic welfare benefits to the residents on the Central Coast with the consideration of the subdivision being ancillary to the development of the school. No other pathway within the planning framework can be used to facilitate the subdivision through development assessment based on the current planning provisions applying to the land.

The provisions under clause 3.43 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 as made available, explicitly for State Significant Development for schools, to

allow development standards to be contravened to permit school development. This clause is applied here to facilitate the two-lot subdivision as it is integral to the school development.

2. **To facilitate ecologically sustainable development by integrating relevant economic, environmental, and social considerations in decision-making about environmental planning and assessment.**

The subdivision is sought based on the natural subdivision of the site in respective of the environmental constraints. The integration of environmental considerations with the social and economic welfare of the community provides the orderly use and development of the land The environmental considerations are provided below.

Water courses
Wallarah creek traverses the site in a northerly direction, dividing the site in two. The western side forms the staged educational establishment and the eastern section fronting the Pacific Highway.

Biodiversity Offsets
The western portion of the site will retain most of the conservation land attributed to the waterway. The assessment determined this to be the most beneficial outcome for the environmental retention and protection around the waterway. This does not preclude the ability for the use of the eastern site for biodiversity offsets or stewardship potential. Subdivision of the land will be required to establish separate ownership and financial security for the management of the eastern portion.

Access
Road infrastructure will be provided directly from the Pacific Highway to the eastern portion of the land to facilitate the growth of the educational establishment. The provision of a four-leg intersection in this location facilitates the orderly development of the eastern portion of land providing positive economic or social benefits to the community.

3. **To promote the orderly and economic use and development of land,**

The inclusion of the two-lot subdivision within the SSDA is a primary example of where the intentions of the EP&A Act can be implemented. The orderly use and development of the subject land can be achieved in alignment with the above objects, so long as it forms part of the SSDA assessment.

The SSD provides an approval pathway to achieve a better planning outcome that aligns with the objectives of the EP&A Act and subsequent environmental planning instruments through the orderly and economic development of the land within the planning framework. Inclusion of the subdivision can be achieved under clause 3.43 of the TI SEPP as an acceptable methodology within the planning framework with the outcomes facilitating development within an identified strategic corridor.

The TI SEPP, Chapter 3, Clause 3.43 (below) permits both the use and the subdivision to be considered within the SSD assessment.

> '***Clause 3.43 State significant development for the purpose of schools-application of development standards in environmental planning instruments***
> *Development consent may be granted for development for the purpose of a school that is State significant development even though the development would contravene a development standard imposed by this or any other environmental planning instrument under which the consent is granted.'*

The following opportunities are provided through its inclusion.

- Consistency with the objectives of EP& A Act, TI SEPP and strategic planning identified for the Central Coast. The SSD provides an approval pathway to achieve a better planning outcome that aligns with the objectives of the EP&A Act and subsequent environmental planning instruments through the orderly and economic development of the land within the planning framework. Inclusion of the subdivision can be achieved under clause 3.43 of the TI SEPP as an acceptable methodology within the planning framework with the outcomes facilitating development within an identified strategic corridor.

- The subdivision provides functional and financial efficiencies for the educational establishment site as detailed in section. The subdivision and sale of the 12ha eastern portion, is a logical option for SPCEF and is conducive to funding the construction of the educational establishment, reducing environmental management constraints, and enabling further development of the 12ha site. The functionality of the education establishment is limited to the area specified within the BDAR, which excludes the eastern portion of the land. The separation of the site by the creek reduces functional linkages and the ability to manage the eastern portion of the site. The subdivision provides a separate title for each portion, enabling the relevant entity to obtain funding to manage and maintain each part of the site effectively.

- Economic benefits are provided to the School, Council and State within planning framework for a coordinated approach to encourage orderly growth and development and better planning outcomes. Regional Plans and Local Strategic Planning Statements form the bases for rezoning application and intended land uses for land throughout NSW to enable the availability of land for development at the right time to meet demand. The eastern portion is identified within the key strategies for the Central Coast as a key development corridor. The application of the SSD framework provides the opportunity to make this land available without the application of multiple planning pathways reducing cumulative timeframes and costs to achieve the same planning outcome.

The exclusion of the subdivision provides the following limitations on the social, economic, and overall public benefit.

- Sterilisation of 12ha of land will result without the subdivision of the site. The site will not be required for the purpose of an educational established given the extent of development on the western portion. Financially and functionally, the use of the eastern portion of the land by SPCEF is limited. The land becomes unviable and unavailable for development and jeopardises the public interests and benefits that could be achieved through separate titles.

- Uncertainty and inefficiency of land use and the regulatory framework. Duplication of assessment processes and extend timeframe to commence the project and associated works. As identified above, the conventional Part 4 approval pathways cannot achieve the two-lot subdivision of land zoned RU6.

- There is no certainty that a rezoning would resolve this matter.

- If a rezoning was accepted, the time frame to complete the subdivision would be in the order of 3 to 4 years, assuming it progressed, significantly delaying any funding available to the school and the further use of this land.

The subdivision is sufficiently related to the development both financially and functionally. Funding for SPCEF is allocated to different entities within the organisation determined by activity and asset management requirements. The subdivision of the land facilitates the use for the purposes of a school by enabling separate ownership to be established for the efficient development and management of the site. As the subdivision is financially and functionally required for the development and operation of the proposed educational establishment, must be considered as part of the SSD application, despite the contravention to the CLEP2022.

The SSDA provides the best and only pathway available under the provisions of the planning framework to undertake the subdivision of land which is necessary to the development of the school. This pathway achieves the strategic goals and intentions identified by the State Government by enabling 12ha of land within an identified growth area for conservation or redevelopment as it is required. It promotes the orderly, economic use and development of the land and the integration of ecologically sustainable development principles. The inclusion of the two-lot subdivision is a crucial example of where the integration of economic, environmental, and social considerations has been considered within the greater public benefit.

3.4.6 Access and Parking

The initial access to the site will be from Arizona Road accommodating student pick-up and drop-off and bus operations. A second access road to the Pacific Highway is also proposed to service the school. Service access to the site will be from Depot Road. Traffic travelling to the school from the north and south is expected to use the Pacific Highway and Chelmsford Road, traffic from the east would use Lake Haven Drive and Chelmsford Road, while traffic from the west is expected to use Hakone Road. On opening the school will be relying on a single access to the site until the connection to the Pacific Highway has been completed. **Error! Reference source not found.** and Figure 13 show the expected routes.

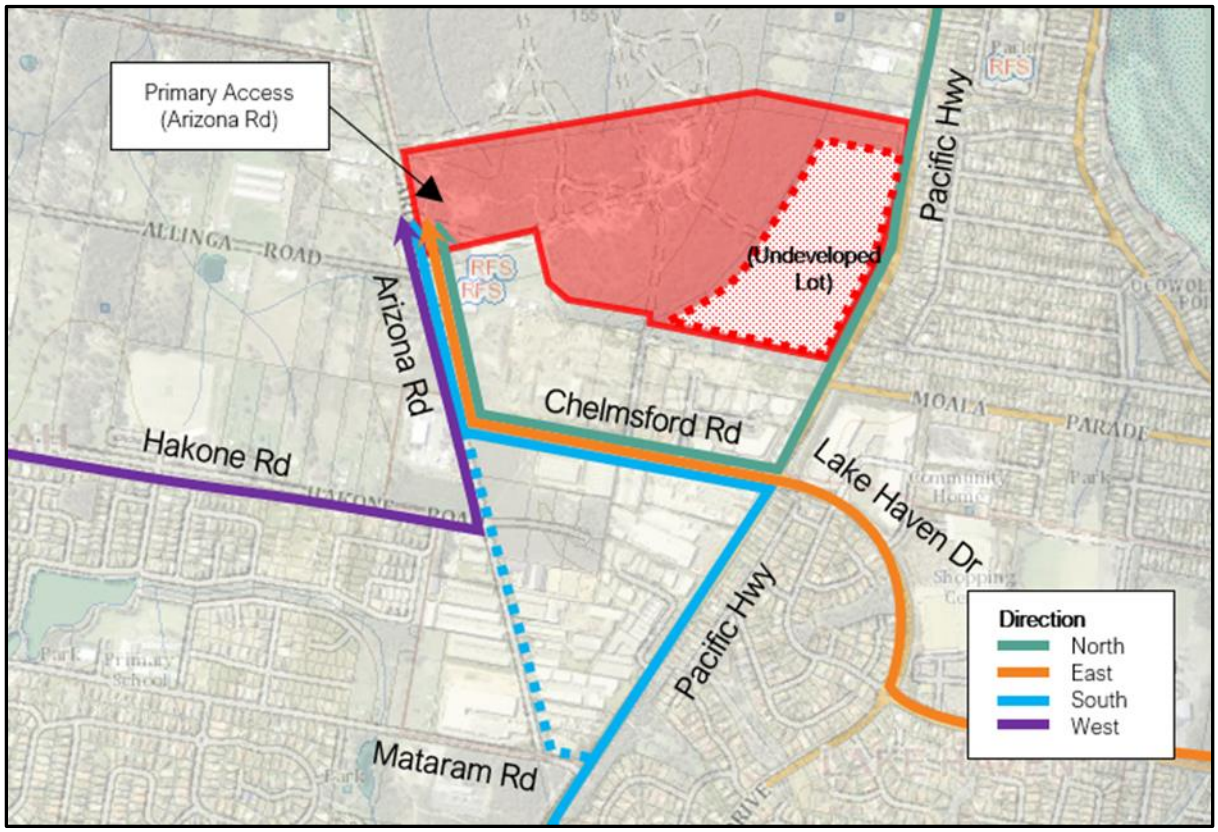

Figure 12 Travel Routes Single Access

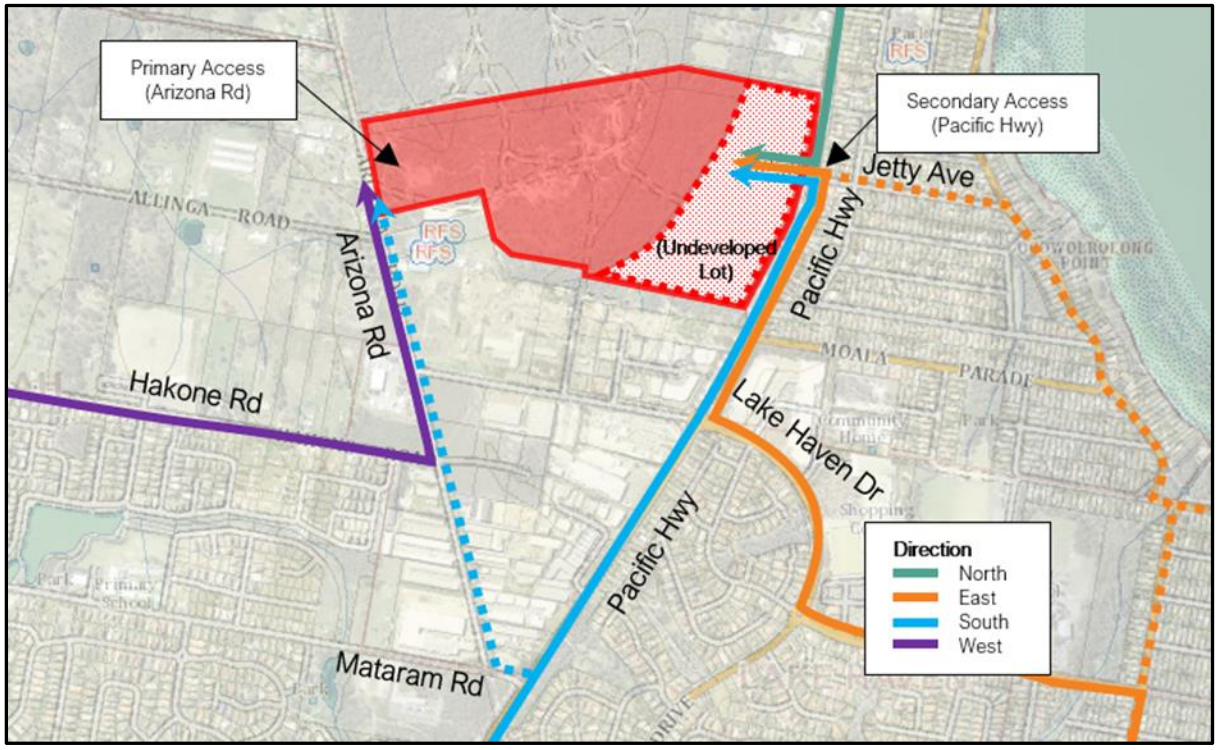

Figure 13 Travel Routes Dual Access

Pedestrian access to be provided using connections to the existing shared pathway network within the area as shown in Figure 14.

The preferred option is to allow the school to commence operations prior to the finalisation of the access and intersection on to the Pacific Highway. It is anticipated that the intersection onto the Pacific Highway will take approximately 3 years to complete, this involves the preparation and endorsement of the detailed design by TFNSW, the tendering, construction, and final sign off of the works. In comparison it is expected that the first stage of the school could be constructed with access from Arizona Road in approximately 18 months.

In this regard, to meet the growing demand for education in the area, commence works as early as possible to make use of State Government grant money and to create construction jobs, the preferred position is to complete stage 1 and to allow the traffic generated from the opening of the school to use Arizona Road, and in this regard access the school, where traffic comes from the Pacific Highway via Chelmsford Road.

It is acknowledged that the roundabout on Chelmsford Road and the Pacific Highway is nearing capacity, as a result it is intended to cap student numbers at 278 students until such time as the intersection on to the Pacific Highway and Jetty Road will be completed. This position is supported by the traffic report.

This approach is a positive application of delivering the education outcomes sooner while managing the immediate traffic constraints on the network, until the new intersection can be completed.

The new intersection on to the Pacific Highway at Jetty Avenue is anticipated to be able to cater for all future traffic which is derived from the school.

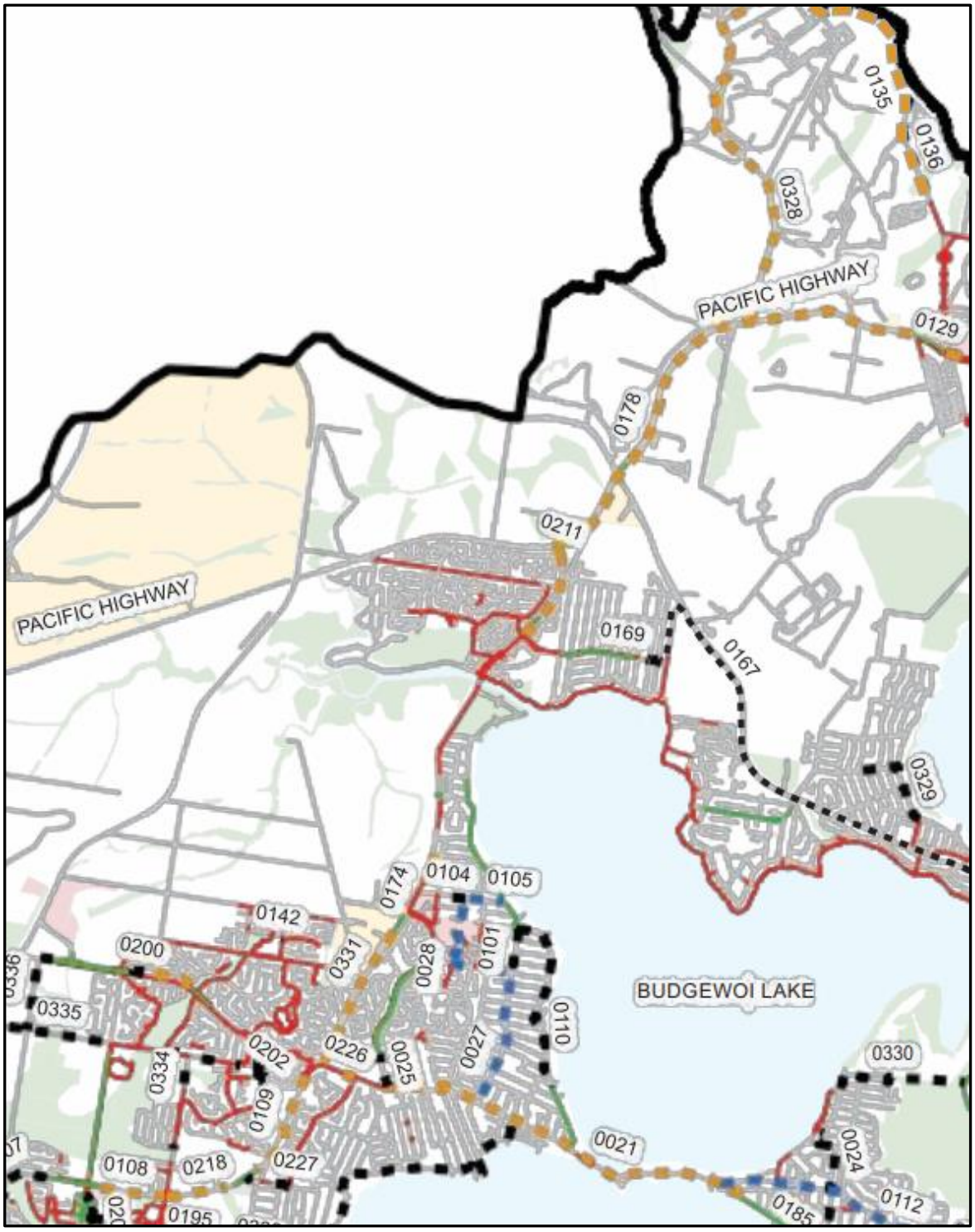

Figure 14 Shared Pathway Network – Source: Central Coast Bike Plan 2018.

The project will provide a total of 271 car parking spaces and 65 kiss and drop spaces at completion of the project.

3.4.7 Stormwater and Drainage

The requirements for predevelopment level stormwater can be achieved by the development. The design completed by ADW Johnson, utilises a combination of rainwater tanks, pit and pipe, swale drains, and bioretention basins to enable reuse onsite and reduce pollutant and sediment downstream within the water catchment and attain water sensitive urban design (WSUD). The design and modelling have been provided in Appendices G10 and G11.

3.4.8 Operation

The operation hours for the school have been summarised in Table 7 below.

Table 7 Operation Hours

Hours of Operation Facility	Days	School Hours	Community Hours	Total Hours
General Hours of Operation[5]	Monday - Friday	07:00 – 22:00		07:00 – 22:00
Prep School (4-5 years)	Monday - Friday	07:00 – 18:00	Nil	07:00 – 18:00
OOSH	Monday - Friday	07:00 – 18:00	Nil	07:00 – 18:00
Junior School Middle School Senior School DALE Special School	Monday - Friday	08:00 – 15:00	Nil	08:00 – 15:00
Administration / Office	Monday - Friday	07:00 – 21:00	Nil	07:00 – 21:00
Narnia Early Learning Centre	Monday - Friday	07:00 – 18:00	Nil	07:00 – 18:00
Gymnasium	Monday - Friday	08:00 – 15:30	15:30 – 20:00	07:00 – 20:00
	Saturday	Nil	07:00 – 18:00	07:00 – 18:00
	Sunday/Public Holiday	Nil	08:00 – 17:00	08:00 – 17:00
Performing Arts Centre	Monday - Friday	08:00 - 15:30	15:30 – 22:00	08:00 – 22:00
	Saturday	Nil	08:00 – 22:00	08:00 – 22:00
	Sunday/Public Holiday	Nil	08:00 – 18:00	08:00 – 18:00
Sports Fields	Monday - Friday	08:00 – 15:30	15:30 – 20:00	08:00 – 20:00

[5] These hours include incidental operations such as parent teacher, staff meetings, information evenings, and excluding gymnasium and performing arts as identified within the table

Hours of Operation Facility	Days	School Hours	Community Hours	Total Hours
	Saturday	Nil	07:00 – 18:00	07:00 – 18:00
	Sunday/Public Holiday	Nil	08:00 – 17:00	08:00 – 17:00
Chapel	Monday - Friday	08:00 – 21:00	Nil	08:00 – 21:00
	Saturday	08:00 – 18:00	08:00 – 18:00	08:00 – 18:00
	Sunday/Public Holiday	08:00 – 18:00	08:00 – 18:00	08:00 – 18:00

Construction works will be limited to 07:00 to 17:00 Monday to Friday, 08:00-15:00 on Saturday with no construction works on Sundays or Public Holidays.

3.4.9 Waste Management

A Waste and Recycling Management Plan has been completed for the school to address waste management and mitigation measures during construction and operation. MRA Consulting Group were engaged to Identify, quantify, and classify the likely waste streams to be generated during construction and operation and provide the measures to be implemented to manage, reuse, recycle and safely dispose of this waste and identify, appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site. A detailed assessment compliance for construction and operational waste management is provided in Section 6.14.

3.4.10 Signage

Identification and wayfinding signage is proposed throughout the school, containing the school logo, colour scheme and materials matching with the theme of the buildings. Two business identification signs will be located on Arizona Road, at each entry point. Additional wayfinding signage will be located from each of the car parking areas to direct site users to the relevant buildings and spaces via pedestrian links.

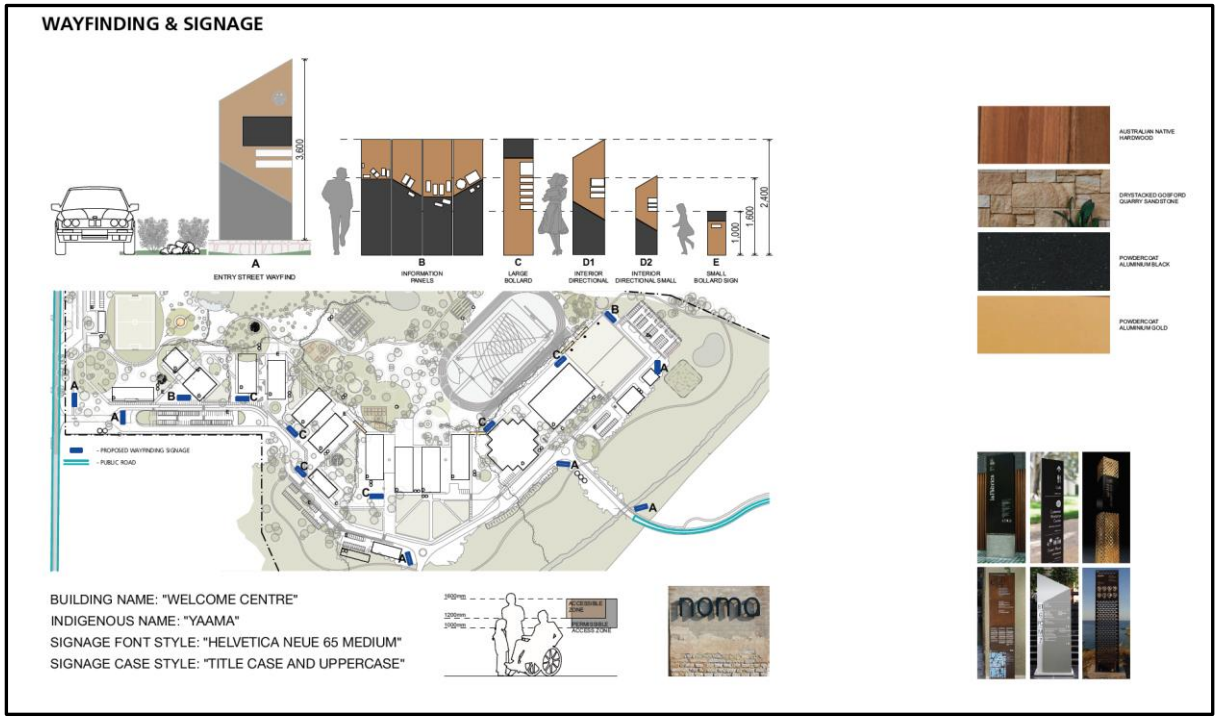

Figure 15 Wayfinding and Signage Source: SHAC

3.5 Staging

The development will be constructed over nine stages, which are grouped together to complete key elements of the school that will function together, as summarised below:

Stage 1A	One into two lot subdivision.
Stage 1B	Site preparation works, construction of inground services (sewer pump station, water, and electricity substation), stormwater, and one detention basin, the welcome centre, chapel, early learning centre, community stand, bus bay, two junior school classrooms, and village green. Demountable classrooms will be used for temporary accommodation during construction as required.
Stage 1C	Construction of the road to and intersection on the Pacific Highway, site operations centre and the resource recovery and recycling education centre.
Stage 1D	PFAS remediation works. An agreement has been made for the RFS to complete these works and as such these works may be undertaken separately from any works associated with the construction of the school (refer to Section 6.7 for further detail).
Stage 2A	Construction of three senior school buildings.
Stage 2B	Construction of senior school building and DALE.
Stage 3A	Construction of the two middle school buildings.
Stage 3B	Construction of bleachers stand and sports field
Stage 4	Construction of the performing arts centre, sports centre, sports courts, warm-up field and environment centre.

The staged construction enables the school to develop and provide facilities as growth requires and funding is available. The sequencing is shown in Figure 16 below and Sheet 4558 SSD4001 of the SHAC Architectural Portfolio.

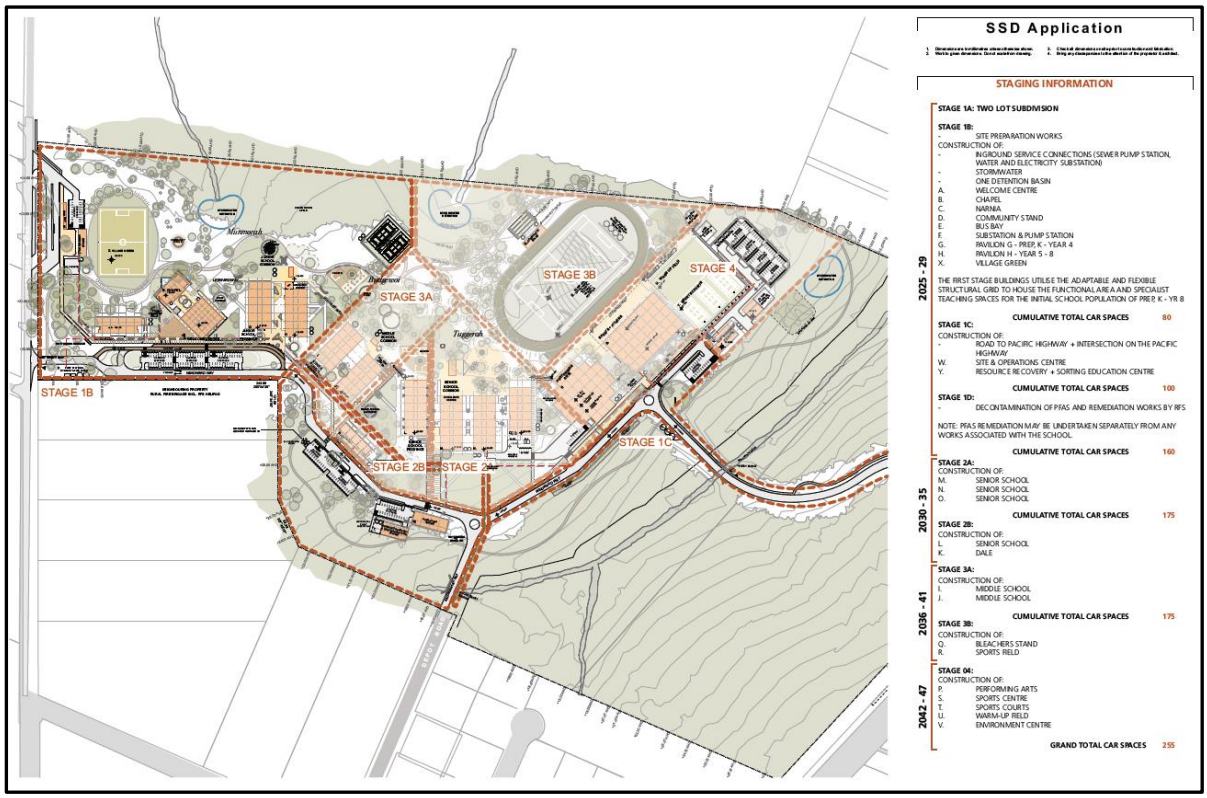

Figure 16 Preliminary Staging Plan. Source: SHAC

4 Statutory Context

4.1 Planning Pathway

The Environmental Planning and Assessment Act 1979 (EP&A Act) and the Environmental Planning and Assessment Regulation 2021 (EP&A Regulation) provide the framework for the statutory environmental planning in NSW. They include provisions relating to approval of development to ensure that proposals which have the potential to impact the environment are subject to detailed assessment.

4.2 Permissibility

During the compilation of this EIS and relevant supporting documents, the Wyong Local Environmental Plan 2013 (WLEP) was repealed with the Central Coast Local Environmental Plan 2022 (CCLEP) coming into effect on the 1 August 2022. The relevant sections and development standards that applied under the former WLEP remain relevant under the CCLEP.

4.2.1 Zoning

The proposed development for a new school including ancillary uses, and subdivision is permissible with consent in the RU6 Transition zone. The site contains C2 Environmental Conservation zoned land, we note that the location of the C2 land does not coincide with the watercourse in the ground. Regardless of this, the mapped location of the C2 zone only impacts the road proposed as part of the development which are permissible within the zone with development consent.

Permissibility of the development is achieved under the TI SEPP, through clauses 3.36 and 3.43. The zoning of the site, RU6 Transition, is a prescribed zone and development for a school can be carried out with development consent under Section 3.36(1). The subdivision, with each new lot proposed being less than the minimum lot size of 40ha under the CCLEP, 28.57ha (Lot 1) and 11.36ha (Lot 2), can be granted development consent despite the contravention of the 4.1 clause development standard CCLEP based on clause 3.43 of the TI SEPP as the development relates to an application as SSD for a school.

4.2.2 Development Standards

The provisions under clause 4.6 of the Standard Instrument cannot be applied to further subdivide a lot within the RU6 Transition zone, that is currently less than the minimum lot size. The Department is asked to consider the subdivision of the land based on the natural subdivision of the parcel by the location of the watercourse affecting the efficient use of the eastern portion in association with the school. A planning proposal is concurrently being sought to amend the CCLEP to rezone the land and amend minimum lot size associated with the land.

The parcel would be better considered for employment land or mixed use like the parcel identified to the north of this eastern portion within the Central Coast Regional Plan 2041 or an offset site for

biodiversity conservation. Either scenario requires this portion of the land to be separate from the school development to facilitate the management of the site.

These actions confirm that the contravention to the minimum lot size standard will not raise any matter of significance for State or regional environmental planning through the granting of consent in this instance as the contravention will be rectified as part of a planning proposal to amend the relevant environmental planning instrument.

The assessment of the subdivision uses the planning framework to provide the orderly and economic use of land. Additional justification relating to the permissibility of the subdivision is provided within Section 3.4.5.

4.3 Pre-Conditions and Matters for Consideration

The statutory definitions relevant to the application that must be met before the approval authority can grant development consent have been listed in Table 8, along with the assessment of the development in accordance with the matters for consideration listed in Section 4.15 of the Environmental Planning and Assessment Act 1979 as outlined below:

Table 8 Requirements and Matters for Consideration

Reference	Requirement/Consideration	Where it is addressed in the EIS
Pre-conditions and mandatory considerations		
EP&A Act Section 2 Objects of the Act	The objects are the guiding principles that need to be considered by planning authorities when making decisions under the Act.	Section 4.4 and Appendix C (Statutory Compliance).
EP&A Act Division 5.2		
Environmental Planning and Assessment Regulation 2021	The SEARs (General SEARs, item 1) require the EIS to be prepared in accordance with Part 3 of Schedule 2 of the Environmental Planning and Assessment Regulation 2021 (see Appendix A (SEARs compliance table)). Part 3 of Schedule 2 provides requirements in terms of the form and contents of the EIS.	Appendix C (Table C.1) documents where the requirements of Part 3 of Schedule 2 have been addressed in the EIS. The EIS is also consistent with the form and content requirements of the current Environmental Planning and Assessment Regulation 2021 as defined by sections 190 and 192 of Division 5 of Part 8, except for the requirement for a declaration under section

Reference	Requirement/Consideration	Where it is addressed in the EIS
		190(3), which does not apply to the project by virtue of a savings and transitional provision contained in Schedule 8 to the Environmental Planning and Assessment Regulation 2021.
Biodiversity Conservation Act 2016	Sections 7.9(1) and 7.9(2) provide that an application for approval of State significant infrastructure must be accompanied by a biodiversity development assessment report unless the proposed development is not likely to have any significant impact on biodiversity values. Section 7.14(2) provides that, when determining an application in accordance with the EP&A Act, the Minister for Planning must take into account the likely impact of a proposed development on biodiversity values as assessed in the biodiversity development assessment report.	A Biodiversity Development Assessment Report has been prepared (Appendix G14). Potential biodiversity impacts are considered in Section 6.3 Biodiversity.
Consideration for other relevant environmental planning instruments		
State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP)	The project site crosses areas mapped as coastal wetlands and proximity areas for coastal wetlands, and coastal environment areas, by the (now repealed) State Environmental Planning Policy (Coastal Management) 2018. The provisions of State Environmental Planning Policy (Coastal Management) 2018 have been incorporated into the Resilience and Hazards SEPP. Chapter 2, section 2.7 of the SEPP provides that a consent authority must not grant consent for development in these areas	As noted above the table, section 5.22(2)(a) of the EP&A Act provides that SEPPs do not apply to or in respect of State significant infrastructure, except where they apply to the declaration of State significant infrastructure. The potential impacts assessed by the EIS encompass relevant matters that are the subject of the Resilience and Hazards SEPP.

Reference	Requirement/Consideration	Where it is addressed in the EIS
	unless it is satisfied that the listed matters have been addressed, including that sufficient measures have been, or will be, taken to protect, and where possible enhance, the biophysical, hydrological and ecological integrity of coastal wetlands. Chapter 3 of the Resilience and Hazards SEPP provides a process to ensure that, in considering an application to carry out potentially hazardous or offensive development, the consent authority has sufficient information to assess whether a development is hazardous or offensive and to impose conditions to reduce or minimise any adverse impact. Chapter 4 of the SEPP provides for a coordinated State-wide planning approach to the remediation of contaminated land, defining the requirements in relation to contaminated or potentially contaminated land that must be considered by a consent authority.	Potential impacts on wetland areas are considered in Chapter 16 (Biodiversity). Potential hydrological impacts are considered in Chapter 17 (Water). Potential contamination impacts are assessed in Chapter 18 (Soils and contamination). Potential hazards associated with the project are considered in Chapter 19 (Hazards and risks).
State Environmental Planning Policy (Biodiversity and Conservation) 2021		The potential impacts of the project assessed by the EIS encompass the matters for consideration listed in the Biodiversity and Conservation SEPP. Relevant Sections include: ▪ 6.12 (Transport and traffic), 6.5 (Non-Aboriginal heritage), 6.2 (Landscape and visual amenity), ▪ 6.3 (Biodiversity), ▪ 6.14 (Soil & Water) ▪ 6.7 (Contamination)

Reference	Requirement/Consideration	Where it is addressed in the EIS

4.4 Objects of Environmental Planning and Assessment Act 1979

The proposed development demonstrates consistency with the objects of the EP&A Act as discussed in the below table:

Table 9 Objectives of EP&A Act

Object	Consideration
1. *to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,*	The proposed development will promote the social welfare of the community through the provision of modern educational facilities for local students. The use of labour and materials during the construction phase will promote economic welfare of the broader area, as will the operation of the school as it will improve the quality of educational service offerings for local families. Additionally, certain recreational and cultural facilities proposed as part of the development are intended to be made available for use by the public providing a further community benefit.
2. *to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,*	The proposed development will facilitate ecologically sustainable development and has been designed with sustainability in mind, including the use of materials and consideration of the environment and landscapes. The school will lead to increased social and economic outcomes through high quality education and employment opportunities in the local area.
3. *to promote the orderly and economic use and development of land,*	The proposed development represents the orderly and economic use of land. The design Investigations and design of the school establishes building the footprint within the most disturbed areas of the site to reduce impacts and provides recreational facilities for public use to optimise the use of existing access infrastructure.

Object	Consideration
4. *to promote the delivery and maintenance of affordable housing,*	The proposed development does not include housing.
5. *to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,*	The Biodiversity Assessment Methodology (BAM) 2020 was used as the assessment method to establish impacts on threatened species and threatened ecological communities in the locality under the Biodiversity Conservation Act 2016. All avoidance measures have been incorporated into the design in the first instance with mitigation measures assessed for the construction phase of the development.
6. *to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),*	The proposed development will not affect European heritage items. Aboriginal heritage on site will be managed in accordance with recommendations of the Aboriginal Cultural Heritage Assessment.
7. *to promote good design and amenity of the built environment,*	The development promotes good design and amenity of the built environment through quality architectural design and site master planning. Demonstration of quality design and amenity, and adherence to the design quality principles under TI SEPP, is contained within the Concept Design Statement.
8. *to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,*	The development will be constructed and maintained in accordance with the relevant codes, regulations, and standards.
9. *to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,*	The SSD application will be assessed in accordance with the relevant provisions of the EP&A Act, which will allow for the appropriate input and responsibility of multiple levels of government.
10. *to provide increased opportunity for community participation in environmental planning and assessment.*	Community participation will be invited in accordance with the relevant provisions of the EP&A Act.

4.5 Environmental Planning and Assessment Regulation 2021

This EIS has been prepared in accordance with Section 173 & Section 175 of the EP&A Regulation.

4.6 Integrated Development

The Project is not considered integrated development under section 4.41 Approvals etc legislation that does not apply, of the EP&A Act.

4.7 Environmental Planning Instruments

The following sections outline the environmental planning instruments relevant to the proposed development.

4.8 State Environmental Planning Policies

State Environmental Planning Policies (SEPPs) are environmental planning instruments administered under the EP&A Act. SEPPs deal with issues considered to be of significance for the State and the people of NSW. In the determination of the development application, the consent authority will consider these matters pursuant to section 4.15(a)(i) of the EP&A Act. The SEPPs relevant to the proposed development, and the land on which the development is situated, are considered below.

4.8.1 State Environmental Planning Policy (Planning Systems) 2021

The aim of Chapter 2 of this policy is to identify development or infrastructure that is State or regionally significant. Section 2.6(1)(a) and (b) provides the requirements for a development to be declared as State significant. The new school has a Capital Investment Value (CIV) of $420,454,000.00 which is consistent with the provisions under Schedule 1, clause 15 for educational establishments, requiring a CIV greater than $20 million. On this basis the new school is consistent with the provisions of Section 2.6(1)(b) as the development is specified in Schedule 1., and therefore is considered State Significant development.

The CCDCP 2022 does not apply to the Project as per the provisions under Section 2.10 of this policy.

4.8.2 State Environmental Planning Policy (Biodiversity and Conservation) 2021

Chapter 4 Koala Habitat Protection 2021

The aim of Chapter 4 of the policy is to encourage the conservation and management of natural vegetation that provide habitat for Koalas to ensure a permanent free-living population over their present range and reverse the current trend of Koala population decline. The Central Coast Council does not have a Koala Management Plan requiring consideration of this chapter as part of the Project.

Within the area of vegetation to be removed as part of the development, there were ten Koala Use Trees identified on the site comprising of the following species *Allocasuarina littoralis* (Black She-oak), *Angophora costata* (Smooth-barked Apple), *Angophora floribunda* (Rough-barked Apple), *Corymbia*

gummifera (Red Bloodwood), *Corymbia maculata* (Spotted Gum), *Eucalyptus capitellata* (Brown Stringybark), *Eucalyptus fibrosa* (Broad-leaved Red Ironbark), *Eucalyptus haemastoma* (Broad-leaved Scribbly Gum), *Eucalyptus moluccana* (Grey Box) and *Eucalyptus robusta* (Swamp Mahogany).

A Koala Assessment Report was completed as part of the BDAR for the site by MJD Environmental to determine the results of target surveys and the habitat value of the above vegetation. Seven spot assessment technique (SATs) were undertaken over the subject land within areas containing relevant tree species listed under Schedule 2 with more than 15% canopy along with call playbacks over two nights. There were no individuals or secondary indications of Koalas observed during the surveys.

Based on the lack of evidence of Koalas being present on the site, it is not considered necessary to prescribe mitigation and management measures for the site. The Project is unlikely to impact connectivity to the wider landscape, enabling Koala populations to traverse the site as required.

4.8.3 State Environmental Planning Policy (Transport and Infrastructure) 2021

The aim of this chapter is to facilitate the effective delivery of infrastructure across the State. The TI SEPP applies to all land in the State.

Chapter 2 Infrastructure

Under Chapter 2, Section 2.121 of the TI SEPP requires that certain traffic-generating development be notified to TfNSW. Prior to determination of the application, the consent authority must take into consideration any submission made by TfNSW, as well as the accessibility, traffic safety, congestion, and parking implications of the development.

The new school is a traffic-generating development under Schedule 3 as it will requires access to the classified road known as the Pacific Highway, will have a peak traffic generation exceeding 50 vehicles per hour and has more than 200 car parking spaces associated with the development. The proposed development must therefore be notified in accordance with Section 2.121 of the SEPP.

Consultation and engagement with TfNSW have been held throughout the development Transport Impact Assessment and EIS to ensure the information provided satisfies TfNSW requirements to enable concurrence with the SSDA to be issued.

Chapter 3 Education Establishments

The aim of this chapter is to facilitate the delivery of educational establishments and early education facilities across the State. Permissibility of the development is achieved under the TI SEPP, through clauses 3.36 and 3.43.

Part 3.3 of the Chapter 3 applies to the development as it outlines specific development controls for childcare centres. The Project has been assessed against the relevant provisions of this Part within the Table 10.

Table 10 TI SEPP Chapter 3 Compliance Table

Clause	Project	Compliance
3.23 Centre base childcare facility		
Before determining a development application for development for the purpose of a centre-based childcare facility, the consent authority must take into consideration any applicable provisions of the *Child Care Planning Guideline*, in relation to the proposed development.	The *Child Care Planning Guideline* is addressed in Section 6.1.4 and in Section 7.3 of the Concept design Report.	Yes
3.26 Centre-based childcare facility—non-discretionary development standards		
(2) The following are non-discretionary development standards for the purposes of section 4.15(2) and (3) of the Act in relation to the carrying out of development for the purposes of a centre-based childcare facility— (a) location—the development may be located at any distance from an existing or proposed early education and care facility, (b) indoor or outdoor space: (1) for development to which regulation 107 (indoor unencumbered space requirements) or 108 (outdoor unencumbered space requirements) of the *Education and Care Services National Regulations* applies—the unencumbered area of indoor space and the unencumbered area of outdoor space for the development complies with the requirements of those regulations, or (2) for development to which clause 28 (unencumbered indoor space and useable outdoor play	There are no other childcare centres within proximity of the site. Applicable. Unencumbered indoor space of 3.25m² and more than 7m² outdoor space is provided for each child. Not Applicable	Yes

Clause	Project	Compliance
space) of the *Children (Education and Care Services) Supplementary Provisions Regulation 2012* applies—the development complies with the indoor space requirements or the useable outdoor play space requirements in that clause,	Noted.	
(c) site area and site dimensions—the development may be located on a site of any size and have any length of street frontage or any allotment depth,	Noted.	
(d) colour of building materials or shade structures—the development may be of any colour or colour scheme unless it is a State or local heritage item or in a heritage conservation area.	Noted. The site does not contain nor is it within the vicinity of a listed heritage item.	

Chapter 3, Part 3.4 applies to the development as it outlines specific development controls for schools. The Project has been assessed against the relevant provisions of 3.36 in Table 11.

Table 11 Section 3.36 Compliance Table

Clause	Proposal	Compliance
3.36 Schools – development permitted with consent		
(1) Development for the purpose of a school may be carried out by any person with development consent on land in a prescribed zone.	The site is zoned RU6 Transition, a prescribed zone under 3.34(1)(d).	Yes
(5)A school (including any part of its site and any of its facilities) may be used, with development consent, for the physical, social, cultural, or intellectual development or welfare of the community, whether or not it is a commercial use of the establishment.	The new school intends to accommodate community uses of the school facilities outside of school hours for sports and training. Use of the chapel and performing arts building are likely	Yes

Clause	Proposal	Compliance
	to be used by various community groups on an ad-hoc basis.	
(6) Before determining a development application for development of a kind referred to in subclause (1), (3) or (5), the consent authority must take into consideration— (a) the design quality of the development when evaluated in accordance with the design quality principles set out in Schedule 4, and (b) whether the development enables the use of school facilities (including recreational facilities) to be shared with the community.	This EIS addresses the design quality of the development. A formal response to the Schedule 4 School Design Principles is included in the Concept Design Report at Appendix G7 The proposed facilities including sports fields, indoor sports courts and various buildings have potential to be used by the community for shared purposes.	Yes

The zoning of the site, RU6 Transition, is a prescribed zone and development for a school can be carried out with development consent under Section 3.36(1). The subdivision, with each new lot proposed being less than the minimum lot size of 40ha under the CCLEP, 28.57ha (Lot 1) and 11.36ha (Lot 2), can be granted development consent under clause 3.43 of the TI SEPP despite the contravention of the development standard as the development relates to an application as SSD for a school.

4.8.4 State Environmental Planning Policy (Industry and Employment) 2021

Chapter 3 Advertising and Signage of this SEPP applies to the development.

Chapter 3 Advertising and Signage

Chapter 3 provides for the regulation of signage within a development however the policy does not apply to signage that is exempt development in accordance with the SEPP or another policy. As the Chapter 3 of the TI SEPP applies, certain signs are identified as exempt development under Schedule 5. Identification, directional, community information or safety signs, must satisfy the following the criteria to be carried out as exempt development:

1. Surface area must not exceed 8m^2.
2. Must be located wholly within property boundary or be attached to existing boundary fence and not projecting more than 100mm from fence.
3. Obtrusive effects of outdoor lighting must be controlled in accordance with AS 4282–1997, Control of the obtrusive effects of outdoor lighting.

4. Distance between ground level (existing) and bottom edge of sign must not be more than 6m.
5. Must not involve electronic signage or moving displays.

All signage, apart from the pylon signs detailed below, associated with the development will comply with the above criteria.

Each of the pylon signs will be installed on a raised triangular plinth, 400mm high, 3.6m wide and 2.6 metres long. The signs will have a height of 3.6 metres, a width of 1.5 metres and a depth of 0.5 metres. The advertising display of each sign will measure 1 metres x 0.6 metres and have an advertising display area of 0.6m^2. Each sign will include the school logo as well as the digital noticeboard used to display dates, events, and messages. See Figure 17 for display of the proposed signage design. An assessment of the pylon signs against the requirements of Schedule 5 is provided.

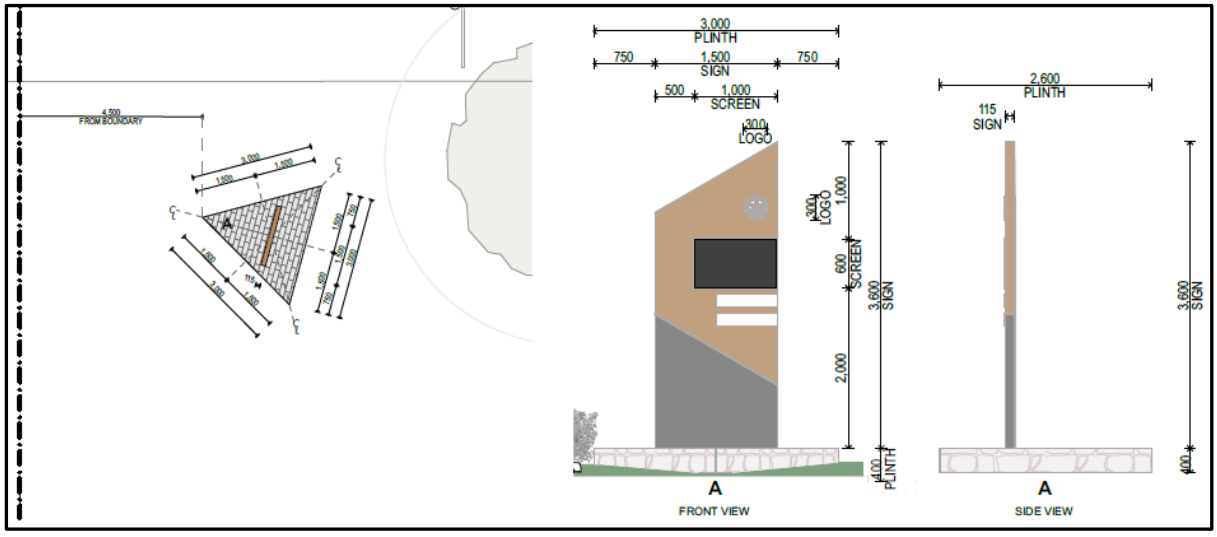

Figure 17 Proposed Signage at Southern Entrance. Source: SHAC

The standard instrument dictionary defines business identification sign to mean a sign that:

(a) that indicates—

(i) the name of the person or business, and

(ii) the nature of the business carried on by the person at the premises or place at which the sign is displayed, and

(b) that may include the address of the premises or place and a logo or other symbol that identifies the business,

but that does not contain any advertising relating to a person who does not carry-on business at the premises or place.

Note—

Business identification signs are a type of signage—see the definition of that term in this Dictionary.

The proposed pylon signs are considered business identification signs as they will:

6. indicate the name of the business, namely SPCC.
7. indicate the nature of business carried on at the premises, namely activities of the school by displaying key dates, events, and messages on the digital noticeboard.
8. include the school logo which will clearly identify the school to vehicular traffic travelling along Arizona Road.
9. will not contain advertising relating to a person who does not carry-on business at the premises or place.

Clause 3.4 of states the following:

(1) This Policy applies to all signage that—

(a) can be displayed with or without development consent under another environmental planning instrument that applies to the signage, and

(b) is visible from any public place or public reserve,

(c) except as provided by this Policy.

The proposed pylon signs are permitted with consent under CCLEP within the RU6 Transition zone as and will be visible from a public place. As such, IE SEPP, Chapter 3 applies to the proposed pylon signage and the relevant provisions of the SEPP are assessed as follows.

Clause 3.6 the SEPP states the following:

A consent authority must not grant development consent to an application to display signage unless the consent authority is satisfied—

(a) that the signage is consistent with the objectives of this Policy as set out in clause 3.1(1)(a), and

(b) that the signage the subject of the application satisfies the assessment criteria specified in Schedule 5.

An assessment of the Schedule 5 criteria is provided in the table below.

Table 12 Assessment of IE SEPP Schedule 5 Criteria

Criteria	Assessment
1 Character of the area.	
Is the proposal compatible with the existing or desired future character of the area or locality in which it is proposed to be located?	The proposed signage is consistent with the desired amenity and visual character and of the area and is consistent with the proposed visual identity of St Philip's Christian College Charmhaven.
Is the proposal consistent with a particular theme for outdoor advertising in the area or locality?	NA – there is no current outdoor advertising theme in the area.
2 Special areas.	
Does the proposal detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes, or residential areas?	No. The proposed signage is of modest scale and form and is positioned in a location which will not adversely impact or detract from the amenity or visual quality of the existing landscape.
3 Views and vistas.	
Does the proposal obscure or compromise important views?	No. The proposed signage does not obscure or compromise important views.
Does the proposal dominate the skyline and reduce the quality of vistas?	No. The proposed signage will not dominate the skyline and will be integrated into the overall bulk and scale of the school.
Does the proposal respect the viewing rights of other advertisers?	NA – there is no existing advertising on the site.
4 Streetscape, setting or landscape.	
Does the proposal reduce clutter by rationalising and simplifying existing advertising?	NA – there is no existing advertising on the site.
Does the proposal screen unsightliness?	NA – there is no existing unsightliness to screen.
Does the proposal protrude above buildings, structures or tree canopies in the area or locality?	No. The sign will be clearly visible, however will not protrude above tree canopies or structures in the area.
Does the proposal require ongoing vegetation management?	No. The proposed signage does not require ongoing vegetation management.
5 Site and building.	
Is the proposal compatible with the scale, proportion and other characteristics of the site	Yes. The proposed signage will be consistent with the scale and proportion of the other buildings proposed on the site and will maintain

Criteria	Assessment
or building, or both, on which the proposed signage is to be located?	a consistent visual identity with the rest of the signage of the school.
Does the proposal respect important features of the site or building, or both?	Yes. The proposed signage will maintain consistent visual identity including colour, font, size and set out with the design and features of the school.
Does the proposal show innovation and imagination in its relationship to the site or building, or both?	Yes. The Project will integrate both static and electronic display and serve multiple purposes. It will provide business identification of the school, indicate the southern entry to the school as well as provide a digital noticeboard to advertise key dates, events, and messages.
6 Associated devices and logos with advertisements and advertising structures.	
Have any safety devices, platforms, lighting devices or logos been designed as an integral part of the signage or structure on which it is to be displayed?	Yes. The proposed signage will be set on top of a stone base platform. The signage will integrate a digital noticeboard into the display.
7 Illumination.	
Would illumination result in unacceptable glare?	No. The proposed signage will include a digital noticeboard which will have an illuminated face which will not result in unacceptable glare.
Would illumination affect safety for pedestrians, vehicles, or aircraft?	No. The illumination will not affect the safety of pedestrians, vehicles, or aircraft.
Would illumination detract from the amenity of any residence or other form of accommodation?	No. The illumination will not detract from the amenity of neighbouring residential dwellings.
Can the intensity of the illumination be adjusted, if necessary?	No. The illumination of the signage will not have capacity to be adjusted, however will not detract from the amenity of neighbouring residential dwellings, nor pose risk to safety of the public road.
Is the illumination subject to a curfew?	No, however the consent authority may apply a condition of consent with curfew times for the display of the digital noticeboard.
8 Safety.	
Would the proposal reduce the safety for any public road?	No. The Project will not reduce the safety of Arizona Road.

Criteria	Assessment
Would the proposal reduce the safety for pedestrians or bicyclists?	NA – there is no existing footpaths or bicycle paths along the adjoining section of Wine Country Drive
Would the proposal reduce the safety for pedestrians, particularly children, by obscuring sightlines from public areas?	NA – the Project will no obstruct or obscure sightlines to public areas.

4.8.5 State Environmental Planning Policy (Resilience and Hazards) 2021

Chapter 2 Coastal Management 2018

The site is considered within the coastal zone under Section 5 of the *Coastal Management Act 2016*, and therefore falls under the policy framework of the SEPP (Coastal Management) 2018. The north-eastern portion of the study area is identified on the Coastal Environment Area Map and Land Application Map within the SEPP. The Project will not impact on the area identified within the Coastal Environment Area Map and Land Application Map as it does not fall within the subject land. Therefore, no further consideration under Chapter 2 of the SEPP is required.

Chapter 4 Remediation of Land

This chapter seeks to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health and the environment and applies to all land in the State.

A consent authority must not consent to development unless it has considered whether the land, and if so whether it is suitable of the development in its contaminated state or if it requires remediation. If the site does require remediation, the remediation must be carried out prior to the proposed development taking place.

A Preliminary Site Contamination Assessment Report prepared by RCA has been submitted to the satisfaction of Section 4.6(2) of this chapter. The Preliminary Site Contamination Assessment Report concludes that the land is suitable in its existing state for the proposed development, except for the south-western portion of the site, where PFAS contamination was identified which has migrated from the adjacent RFS site to the south. If remediation is carried out, the report concludes that the remediated portion of the site will be suitable for the proposed use thereby satisfying the provisions of Section 4.6(1)(b).

RFS have been in consultation with the Environmental Protection Agency (EPA) regarding the contamination on the RFSCC and SPCEF site. Discussions with the EPA resolved that if no remediation works are carried out the PFAS is likely to migrate north, east, and west via surface water and stormwater, thus requiring a Site Improvement Options Plan (SIOP) to be prepared. This was completed by Hardwood Environmental Consultants (HEC) on behalf of the RFS. This assessment

determined that the removal and off-site disposal of the PFAS containing material as the most suitable remediation option for this site. Section 4.3 of the SIOP provides a site improvement plan, validation assessment criteria and offsite disposal criteria to facilitate the works. The SIOP is provided in Appendix G20 for consideration. It is anticipated that the remediation works associated with PFAS contamination will be completed by RFS before the assessment of the SSDA. A Validation Certificate will be provided once received from the EPA.

The RFS have been proactive in addressing the PFAS contamination on site. The RFS has identified that it is their intention to remediate the site through the removal of the contaminated material from the site and replacement of the material with clean fill. The RFS works are expected to be completed under a separate environmental approval, however at this stage the timing of that work is not guaranteed.

As a result, the remediation methodology, which has been endorsed by the EPA, should be included as required work as part of delivering the school. This provides the opportunity for the school to undertake the works as part of the development of the school if that occurs prior to the RFS completing the work, this will avoid any hold ups with the delivery of the school and ensure that the site is clear prior to any children entering the site. However, should the RFS complete the works prior to delivery of the school, which is likely, the RFS will provide certification that the remediation has been completed to EPA standards. If this scenario occurs, the school will only need to present the certification provided by a site auditor to demonstrate that the work has been complete.

4.8.6 Draft State Environmental Planning Policy (Remediation of Land)

An Explanation of Intended Effects (EIE) and draft guidelines relating to the draft Remediation of Land SEPP were exhibited in early 2018 and are currently under consideration by the Department of Planning, Industry and Environment.

The draft SEPP will retain key elements of the Chapter 4 of the RH SEPP (former SEPP 55), whilst also introducing provisions related to approvals for remediation, categorisation of remediation work, and environmental management plans. The draft SEPP instrument is not available, however the EIE does not suggest additional implications for the proposed development beyond the requirements of Chapter 4 of the RH SEPP discussed above.

A timeline for the gazettal of the draft SEPP is not known.

4.9 Local Environmental Plan

4.9.1 Central Coast Local Environmental Plan 2022

Central Coast Local Environmental Plan 2022 (CCLEP 2022) applies to the site. CCLEP 2022 contains permissibility, development standards, and further provisions relevant to development within the Central Coast LGA. Relevant provisions have been discussed below, apart from permissibility which is discussed within Section 4.2 of this EIS.

Clause 4.1 Minimum Lot Size

The subject land is mapped within the CCLEP as AB, with the MLS of 40ha applying to the land. The objects of this clause are:

(a) to reflect State, regional and local planning strategies relating to the provision of various sizes of land,

(b) to ensure lot sizes are able to accommodate suitable development that is consistent with relevant development controls,

(c) to ensure the subdivision of land is carried out in a way that—

(i) protects the physical characteristics of the land, and

(ii) does not create potential physical hazards or adversely affect the amenity of the area for neighbours, and

(iii) enables infrastructure and services to be provided to development on the land, and

(iv) will not, through its potential cumulative effects, overburden existing infrastructure, and

(v) is compatible with the desired future character of the surrounding areas,

(d) to promote the ecologically, socially and economically sustainable subdivision of land.

(2) This clause applies to a subdivision of any land shown on the Lot Size Map that requires development consent and that is carried out after the commencement of this Plan.

(3) The size of any lot resulting from a subdivision of land to which this clause applies is not to be less than the minimum size shown on the Lot Size Map in relation to that land.

The site is less than the minimum lot size (39.96ha) and as such, cannot be subdivided under subclauses (2) or (3). The proposed two-lot subdivision of land is consistent with the intention of the clause along with the regional and local strategic plans for the area. The proposed subdivision of land is permissible however not compliant with this development standard. This contravention is acceptable for consideration under clause 3.43 of the TI SEPP. Clause 3.43 (below) permits both the use and the subdivision to be considered within the SSD assessment.

'***Clause 3.43 State significant development for the purpose of schools-application of development standards in environmental planning instruments***
Development consent may be granted for development for the purpose of a school that is State significant development even though the development would contravene a development standard imposed by this or any other environmental planning instrument under which the consent is granted.'

As the subdivision is financially and functionally required for the development and operation of the proposed educational establishment, must be considered as part of the SSD application, despite the contravention to the Central Coast Local Environmental Plan.

This is further explained under the subdivision of the site. In essence, there is the opportunity to use the land on the eastern side of the creek for either, a separate development, in this case a business

park which is in line with the draft Warnervale Structure Plan. This however this would be subject to a rezoning. Alternatively, if no rezoning is forth coming the site could be used as an environmental offset site. While the site remains a RU6 zone, without the use of this clause and the creation of these two lots, further opportunity to use the eastern land for either development or conservation and have that land on the eastern side of the creek in separate ownership will be lost. As a result, this is a critical requirement at this stage of the project.

Clause 4.3 Height of Building
Height of building controls under Clause 4.3 do not apply to the site.

Clause 5.1 Heritage
Clause 5.10 Heritage conservation applies to the site. Consideration of this clause have confirmed that there are no heritage items within the site, nor was there evidence of archaeological relics. Aboriginal Artefacts were identified during surface and test excavations. The interpretation of the evidence recommended that the site was used transitory with low to moderate local significance. Please refer to the reports completed by Heritage Now in Appendix G15, G16 and G17 for further detail.

Clause 4.4 Floor Space Ratio
Floor space ratio controls under Clause 4.4 do not apply to the site.

Clause 5.21 Flood Plain Risk Management
Under Clause 5.21 of CCLEP 2022, the impact of the development on project flood changes to flood behaviour resulting from climate change, the intended design and scale of whether the development incorporates measures to minimise the risk to life and ensure the safe evacuation of people in the event of a flood. The potential to modify, relocate or remove buildings resulting from development if the surrounding area is impacted by flooding or coastal erosion.

As the site contains water courses and the proposed development includes the use of the site for educational establishments, a hydraulic assessment for the site was completed to determine the flood impacts on the site. The portions of the site containing the flood precincts are excluded from the development footprint apart from the road crossings proposed to the Pacific Highway and to Depot Road. The design of the crossings is sufficient to convey flows within an AEP 1% storm event and will not have any adverse impacts during a flood event. The development is consistent with the provisions of this clause in that the crossings will not be inundated in a flood event and egress from the site can be made safely. As the remainder of the site is not subject to flooding, risk to life is minimal, enabling consent to be granted for the proposed development.

Clause 7.1 Acid Sulfate Soils
Clause 7.1 of WLEP 2013 provides for development in areas subject to Acid Sulfate soils (ASS). The site is mapped as containing class 5 soil. An investigation over the site confirms that an ASS Management Plan is not required for the proposed development.

4.10 Development Control Plans

4.10.1 Central Coast Development Control Plan 2022

As the Project is being completed as a State Significant Development, the controls under this DCP do not apply, refer to Section 4.9.1.

4.11 Other Approvals

4.11.1 Environmental Protection Biodiversity Conservation Act 1999 (Commonwealth)

Preliminary assessment was undertaken in relation to threatened entities listed under this Act. It was determined that actions completed by the development are likely to have a significant impact in a Matter of National Significance. The BDAR has noted non-significant impacts on the population of listed Vulnerable Angophora inopina (Charmhaven Apple) and recommended a referral to Department of Agriculture, Water, and the Environment (DAWE) to determine if the Project is considered a controlled action.

It is important to note that such a referral is at the discretion of the proponent and has no bearing on the outcome of this development assessment process. Despite this, the proponent can advise that a referral has made in respect to this project as part of their due diligence. Should the response be received during the development assessment process, a copy will be provided to DPE for information.

4.11.2 Biodiversity Conservation Act 2016

The purpose of the Biodiversity Conservation (BC) Act is to maintain a healthy, productive, and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development.

The assessment requirements under Part 8 of the BC Act have been completed. The BDAR prepared for the project determined that clearing of 21.84 ha of existing ecosystem will require approval under the BC Act and will necessitate the retirement of 3,388 offset credits.

An application for Biodiversity certification is also being applied for over the site, under a planning proposal to rezone the land from RU6 Transition to SP2 Educational Establishment and B6 Enterprise Corridor. Should this certification be granted, future development of the site will not require additional certification.

4.11.3 Water Management Act 2000

Section 4.41 of the EP&A Act provides that a water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the Water Management Act 2000 is not required for State significant development authorised by a development consent.

4.11.4 Heritage Act 1977

Section 4.41 of the EP&A Act provides that an Aboriginal heritage impact permit under section 90 of the National Parks and Wildlife Act 1974, is not required for State significant development authorised by a development consent. Nor does Division 8 of Part 6 relating to controlling and restricting harm to buildings, works, relics and places not subject to interim heritage orders or State Heritage Register (SHR) lists.

4.11.5 Rural Fires Act 1997

Section 4.41 of the EP&A Act provides that a bush fire safety authority under section 100B of the Rural Fires Act is not required for development of land for special fire protection purposes, for State significant development authorised by a development consent.

4.11.6 Roads Act 1993

Concurrence from TfNSW is required under Section 138 of the Roads Act 1993 to connect and construct the new intersection on the Pacific Highway, linking the site and Jetty Avenue.

5 Engagement

This chapter provides an overview of the engagement activities undertaken to date by the proponent as part of the preparation of the EIS, and the future activities proposed in the assessment and post approval phases.

5.1 Engagement Process

To support the SSD Application process, including the preparation of the site master planning, architectural and landscape design and the EIS, the project team undertook to engage with key stakeholders.

The SEARs specified that in preparing the EIS consultation was to be undertaken with the relevant local, State or Commonwealth Government authorities, service providers, community groups, relevant special interest groups, including local Aboriginal land councils and registered Aboriginal stakeholders and affect land holders. Particularly consultation with:

- Central Coast Council.
- Government Architect NSW (through the NSW SDRP process).
- Transport for NSW.
- Subsidence Advisory.

This process was carried out ahead of the lodgement of the SSD and is complementary to the statutory requirements for public exhibition of an SSD, in accordance with Clause 56 to the EP&A Regulation. The consultation techniques utilised to engage with various stakeholders are described below.

Table 13 Summary of Engagement Process

Stakeholder	Tool / Technique	Description
Central Coast Council	Meeting	A meeting was held 7 December 2020 and was attended by Andrew Roach, Emily Goodworth, and Scott Cox from Council.
Government Architect – State Design Review Panel	Online Meeting	An online meeting on the 29 September 2021 was held to review the preliminary concept. A second meeting on the 13 April 2022 provided additional feedback to inform the final design.

Stakeholder	Tool / Technique	Description
Authorities		
Transport for NSW	Online Meeting.	An online meeting was held on the 01 September 2021 with Liz Smith and Masa Kimura to discuss preliminary requirements.
Subsidence Advisory	Verbal and Written.	A phone call and email with SA to review the draft Geotechnical Assessment.
Aboriginal Stakeholders		
Registered Aboriginal Parties	Written Notification.	Draft ACHA report was sent on the 23 September 2021 with 28-days to review. Recommendations were incorporated into the final report, which was supported by the RAPs.
Guringai Tribal Link Aboriginal Corporation	Connection to Country Site Walkover.	Site walkover with the Guringai representative on the 17 June 2022.
Landowners		
Residents	Letter Box Drop.	Letter box drop in July 2021 provided residents and occupiers with a written summary of the proposed development and opportunity to respond raising concerns or queries.
RFS (adjoining landowner)	Online Meeting.	An online meeting was held with RFS and EPA representatives to discuss the PFAS detection on the school site. No further discussion in relation to the operation of the RFS site and the school.
School Community		
The SPCC User Group	Design Workshops.	Eleven (11) workshops were held between the 18 June 2021, and 20 September 2022, facilitated by the architect SHAC, throughout the design process with school executive and teaching staff to providing the opportunity to give input into the functional needs and use of space and facilities.

5.2 Outcomes of Engagement

The following section provides a summary of the outcomes of the engagement. Further details regarding the above meetings are contained at Appendix D.

Table 14 Summary of Outcomes engagement

Stakeholder	Issues raised	Response
Central Coast Council	Biodiversity and Approval Pathway.	A BDAR has been prepared. See Appendix G14. The SSDA pathway was confirmed in the meeting and is being submitted.
Government Architect – State Design Review Panel (Meeting 1)	1. Connecting with Country and Landscape. 2. Engage with Traditional Custodians and continue consultation throughout the development of the project. 3. Demonstrate a holistic approach to Connecting with Country. Ensure it is applied beyond the landscaping and outdoor spaces, but also informs the architecture, internal planning, master planning, wayfinding, materiality, pedagogy, and relationships (between buildings and people). **Landscape** 4. Develop and illustrate site-specific landscape design principles that convey the	Refer to Section 2.1.5 and Section 7.7 of the Concept Design Report by SHAC Appendix G7 and Appendix G4 Landscape Strategy and Design Report by Moir Landscape Architecture.

Stakeholder	Issues raised	Response
	key aspects of the landscape approach. 5. Identify the different landscape characters throughout the site such as the vegetation near the creek and along the ridgeline. Demonstrate how each will have a strong presence in the design response. 6. The Asset Protection Zones (APZ) outlined need further development to reflect the complex range of significant vegetation within the site. 7. Minimise large, single level expanses of car parking requiring avoidable cut and fill, and potentially locate carparking within the undercrofts of buildings. 8. The approach of respecting and keeping the ridgelines clear is supported. Demonstrate how the ridgelines will be developed as opportunities for gathering, learning and play.	

Stakeholder	Issues raised	Response
	Provide the sustainability approach for the project, including ESD metrics, Green Star targets and percentage of the energy needs of the school being met by on-site regeneration. 9. Aiming for a net-zero building is highly encouraged to reach NSW's Net Zero emissions goal by 2050. Refer to 'NSW, DPIE, Net Zero Plan, Stage 1: 2020-2030' for further information. **Transport and connectivity** The school requires a civic and welcoming identity to the community. In the masterplan it has little street presence, and the disconnect of the school from the Pacific Highway is a missed opportunity. Community use of the school facilities is encouraged, therefore a strategy for access afterhours and on weekends should be demonstrated. 10. The school requires a civic and welcoming identity to the community. In the masterplan it has little street presence, and the disconnect of the school from the Pacific Highway is	

Stakeholder	Issues raised	Response
	a missed opportunity. Community use of the school facilities is encouraged, therefore a strategy for access afterhours and on weekends should be demonstrated. Illustrate how the school will have a strong street presence and identity reflective of its unique context. 11. Provide diagrams showing how areas for community use can be accessed outside school hours and how the analysis is informing the parking circulation and locations. 12. Provide staging diagrams and demonstrate how the school will operate in each delivery phase and have flexibility for future expansion. Include how the overall circulation strategy will function at each stage. 13. Propose a clearly identifiable vehicular access entry from Pacific Highway that serves as a community marker for the school. Demonstrate it will successfully integrate into the campus's circulation,	

Stakeholder	Issues raised	Response
	even if delivered at a later stage. 14. The parcel of land east of Wallarah Creek is subject to a separate rezoning process and understood not to form part of this project. Any proposed connection with Pacific Highway should not assume that this land will be rezoned and should demonstrate due consideration of its biodiversity and ecological value. 15. Illustrate the arrival sequence and amenity experienced along the pedestrian journey from the different modes of transport to the varying destinations within the school. **Masterplan** 16. The vision for the campus as a bush school is commended, however the constraints need to be carefully integrated with the masterplan to ensure a significant amount of vegetation can remain and have a strong presence in the school.	

Stakeholder	Issues raised	Response
	17. Provide diagrams of all the site-wide considerations, constraints, and design strategies. Overlay and demonstrate how the analysis is informing an integrated approach to the design. Include the following: ○ Ecology – significant vegetation, what is being retained and removed, ecological communities, endangered flora and fauna, important habitats, data from the flora and fauna survey. ○ Fire safety strategy – including bespoke approach to Asset Protection Zones ○ Hydrology - existing waterflows, soil conditions, water collection, fire-fighting needs, watering requirements, WSUD and OSD strategies ○ Amenity – solar access, shading and views	

Stakeholder	Issues raised	Response
	○ Circulation – vehicle and pedestrian, car parking, travel distances and journey timings ○ Safety – security lines, access points, gates, and fencing ○ Sustainability approach ○ Earthworks– topography, flat expanses such as sports fields. 18. The arrangement of the built forms disconnects the surrounding landscaping from the school campus. Provide a revised masterplan illustrating an integrated relationship with the surrounding environment. Allow more existing vegetation to filter in between buildings, into the campus heart and introduce a north / south landscape connection. 19. Implement strategies to reduce the impact of the built forms. Two storey buildings	

Stakeholder	Issues raised	Response
	to reduce footprint and consolidation of built forms is encouraged.	
Transport for NSW	Modelling and Intersection Mitigation measures to be provided.	Refer to Section 6.12 and Appendix G24 and Appendix G25.
Subsidence Advisory	An assessment of the whole area proposed for development is required to confirm that the geotechnical risk is low.	Refer to Section 6.15 and Appendix G19 and G27.
RFS	PFAS Remediation works.	Refer to Section 6.7 and Appendix G20.

5.2.1 Aboriginal Stakeholders

In accordance with the Office of Environment and Heritage Guideline and Part 6 of the National Parks and Wildlife Act 1974, the 28-day Aboriginal Stakeholder Consultation was undertaken to inform the preparation of the ACHA. The following parties registered as stakeholders (RAPS) to the ACHA process:

- A1 Indigenous Services
- Awabakal & Guringai Pty Ltd
- Awabakal Traditional Owners Aboriginal Corporation
- Darkinjung Local Aboriginal Land Council
- Didge Ngunawal Clan
- Lower Hunter Aboriginal Incorporated
- Widescope Indigenous Group
- Yinarr Cultural Services

All RAPS were given a copy of the ACHA Information Packet including details of the research methodology and given 28 days to respond to this methodology. Formal responses were received to the proposed methodology by A1 Indigenous Services Pty Ltd, Widescope Indigenous Group and Awabakal Traditional Owners Aboriginal Corporation, all parties supported the methodology.

The RAPS did not disclose any information pertaining to sites or places of cultural significance associated with the historic or contemporary periods within the project area or surrounding area. However, it is noted that traditional/cultural knowledge and/or information regarding sites and/or places of cultural significance may exist, that were not divulged.

All RAPS were given a copy of the draft ACHA and were given a minimum of 28 days to comment. No responses were received, and all RAPs were provided a copy of the final report. Appendix 1 of the ACHA (at Appendix G15) includes details of all correspondence with RAPs with regards to the stages outlined in the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010).

Further engagement with RAPS was undertaken through the Designing with Country process on the 07 May 2021 and 17 June 2022 was initiated with the Aboriginal stakeholders. Areas for interpretation were identified, for inclusion in the interpretation and design strategy.

Additional consultation is being undertaken relative to the test excavations, Archaeological Report (AR) (Appendix G16) and the revised ACHAR (Appendix G15). RAPs were provided with the draft test excavations methodology. This methodology was agreed upon and undertaken with RAPs being present onsite during the works.

5.2.2 Affected Landowners

Of the eleven adjoining land holders and occupiers contacted, two responses were received. Details of issues raised and a response, is contained in the table below.

Table 15 Summary of Engagement with Affected landowners

Stakeholder	Issues raised	Response
Commercial landowner and business operator.	1. Traffic – increased traffic at drop-off and pick up time. Effects on functionality of Arizona and Chelmsford Road, intersections, and the Pacific Highway. 2. Preservation of the existing C2 Environmental Conservation Zoned part of the site.	Refer to Section 6.12 and Appendix G25. Refer to Section 6.3 and Appendix G14
Landowner with residential and business interests in the area immediate to the site.	1. Traffic – Absence of bus and passenger vehicle turning areas on Arizona Road (a no through road), appropriate drop-off and pick up zones, traffic congestion, traffic hazards associated with heavy vehicle movements in the immediate vicinity of the	Refer to Section 6.12 and Appendix G25.

Stakeholder	Issues raised	Response
	school site associated with the industrial estate. 2. Noise effects particularly on DALE students generated by aircraft (helicopter) use at the adjacent NSWRFS Central Coast Fire Control Centre, during fire emergencies.	Refer to Section 6.6 and Appendix G18. Section 6.16 and Appendix G30.

5.3 Further Engagement

If the project is approved, further engagement would occur with affected or potentially affected landowners regarding expected timing of works and proposed impact mitigation measures. Additionally, an ongoing program of interaction and engagement with relevant Aboriginal stakeholders will continue to inform the development and the school landscape.

6 Environmental Impact Assessment

The SEARs identify the need to undertake an assessment of potential environmental risks as part of the EIS. This Chapter describes how the matters identified in the SEARs have been assessed and how any potential impacts are mitigated.

6.1 Built Form, Urban Design and Design Excellence

6.1.1 Built Form and Urban Design

The Charmhaven SPCC campus is a new school, with one and two storey buildings and associated sports courts/fields and car parking to be constructed on the site over four main stages. The height, density, bulk and scale, setbacks, and interface of the Project in relation to the surrounding development, bushland setting, and topography have been considered in detail in the Concept Design Report (Appendix G7) and Functional Design Brief (Appendix G8). Five main drivers for the project were to:

- Respond to the needs of the local Charmhaven community by providing an exemplary educational campus and community place making.
- Provide a contemporary learning environment that facilitates STEM and inquiry-based learning.
- Create a welcoming and naturally stimulating landscape that compliments learning and encourages discovery.
- Provide a dynamic learning environment that is iconic, aesthetically pleasing and contributes positively to the urban design of Charmhaven.
- Facilitate the growth of the campus from Stage one.

Methodology

Aligned with the requirements of the GANSW guidelines identified in Section 2.1.5 of this report, the design considered the existing environmental constraints of the site and looked at 11 master plan and massing options. Comprising of a formal variations and layouts based around the ridgeline running east-west through the site. Options considered development along, perpendicular, parallel, fragmented, connected communities throughout the site, using the ridge as the spine, all led to option K resulting in the preferred option, enabling the project drivers to be delivered around the environmental constraints.

Existing environment

The design of the school was required to consider several site constraints are detailed in Section 4.2 of the Concept Design Report (Appendix G7) and summarised below:

1 Contours and creeks – the beginning of the catchment, where contours bend down and around one another to form dips, gullies, and slopes, providing a place of catchment for the watercourse, the watershed.

2 Riparian and Vegetation – Layers of grasses, shrubs, branches, and trees that intertwine and cover the surface and soil of the site. Vegetation encases the creeks and watercourses, protecting the riparian zones. Bushfire + APZ's to be managed alongside habitat and ecological communities.
3 Ridgeline – A ridgeline flows across the site, presenting moments of outlook, aspect, and prospect along its journey. Places and pathways on which the school can be created.
4 Scars, erosion, and vandalism – The richness of the soil degraded and scraped away, flowing down into the river-ways below. Patched and roughly sewn, anticipating fresh and invigorated purpose for this land.
5 Existing remnant trees – significant trees and vegetation, holding post and providing verticality and shade, an important marker of the meandering potential, allowing immersive experience of landscape.

Assessment

Option K was determined the preferred option as it showcases the vegetation to be retained and protected on the site, provided the best building locations, footprints, key circulation paths, green zones and sporting facilities and options for stormwater drainage and play spaces whilst minimising cut and fill over the site. The visual impact, height, bulk, and scale of the design is appropriate and well considered for the locality and surrounding development along with the materials, colour palette and building articulation zones. The building typology enables adaptable and flexible learning spaces to be provided as the school changes. Access to natural light and natural ventilation is provided through the roof and glazing design. Direct access from the buildings into the landscaped areas and play spaces for each area is defined.

Mitigation measures

Section 5.2 of the Concept Design Report details the mitigation measures considered within the design. Threatened vegetation communities identified are to be retained and protected within the C2 Environmental Conservation zoned land and retention of native grasses and trees within the northern and southern sections of the site, not affected by construction. The built form has been located within the portion of the site already disturbed by erosion and vandalism with the reduced footprint minimising further disturbance to the site.

6.1.2 Site Wide Landscaping Strategy

Methodology

A site-wide landscaping strategy was prepared by Moir Landscape Architecture in accordance with the 'Better Placed' policy from the Government Architect NSW (GANSW) as detailed within Section 2.1.5. The strategy identified the relevant landscape design principles and the proposed master plan to define the spatial typologies for outdoor spaces, the sub-school identities, landscape character zones and precincts. Section 5 outlines the four main precincts and their characters which are summarised below:

- Welcome precinct – A welcoming entry sequence for the school to create a distinct sense of arrival through passive seating spaces and shared gathering points, as well as vehicular and pedestrian functional aspects with formal and sculptural forms, paths, and seating.
- Learning precinct – An inclusive and flexible learning environment for students that cater for individual age groups, through passive and active functions that integrate with the natural environment. Each area (Junior, Middle and Senior) has outdoor learning spaces, gathering spaces, planting, and furniture at a scale that is functional and appropriate for the age groups.
- Recreation precinct – High quality active environment for students that and the wider community that is functional, flexible, and inclusive, and has a strong connection with the surrounding bushland. Retention of existing vegetation, provision of shade and functionality for spectators and participants and creating distinct areas for community use. Environmental precinct – Engagement with the environmental features of the site through reflective and educational spaces that celebrate the site and connection to 'Country'. Using existing drainage lines, dry swales, and basins to create areas of play and discovery pathways to provide connection with nature and educational opportunities with local flora and fauna.

The strategy details the site planting palette, the retention of existing vegetation and enhanced plantings, identifies the unique character of the key five precincts, cohesion of the overall design of the campus and enhance the overall amenity of the site.

Existing environment

Section 2 of the Site Wide Landscaping Strategy details the assessment of the existing environment on the site. The assessment details local context, Aboriginal heritage and cultural context, vegetation, hydrology, and constraints associated with the site.

Assessment

There are a significant number of trees located on the site, the extent too great for an arborist to complete a detailed report. It is the intention of the school to retain as much of the existing vegetation as possible as indicated within the strategy. Section 4.3 of the Site Wide Landscaping Strategy details the height and density of plantings proposed throughout the development. 6.1 of the strategy identifies the planting palette proposed to enhance the vegetation being retained and currently found on the site or within the locality. The outdoor spaces within the precinct are considered in Section 5 of the Site Wide Landscaping Strategy, confirmed the equity and amenity of the outdoor spaces and interaction with built form across each of the precincts and particular areas within the learning precinct.

Mitigation measures

The strategy demonstrates that the proposed development contributes to the long-term bushland and landscape setting associated with the locality and increases tree canopy cover where appropriate. It provides appropriate zones and elements that provide shade and cooling effects as well open areas to reduce urban heat island impacts and provide appropriate comfort levels on the site.

6.1.3 Trees

Consideration of existing vegetation on site was important to the school as well as maintaining a bushland setting for their students. The site contains significant vegetation and the areas of development have been designed within areas of the site that were the most cleared or contained damaged vegetation and isolated patches. A Preliminary Arboricultural Assessment (AIA) (Appendix G10) was undertaken by Assurance Trees, being an Australian Qualifications Framework (AQF) Arborist to evaluate the most appropriate level of assessment and detail the method of controls to manage the retention and clearing of trees during construction.

Methodology

Due to the size of the development and the site it was not considered feasible to complete a detailed justification for each tree to be removed. A more detailed assessment will be required for each stage of the development, prior to construction of each stage. The existing canopy coverage and biodiversity values were discussed within the BDAR complete by MJD Environmental, and this data relied upon for the AIA. The following methodology was undertaken to complete the assessment:

- Site Inspection – undertaken on the 8 February 2023.
- Desktop Assessment using plans, consultant reports and estimates provided by the client.
- Site Assessment.

A detailed survey has not been completed based on the species of vegetation present and their general condition detailed within the BDAR. It is considered that a detailed Arboricultural Impact Assessment detailing the number of trees to be removed and their individual assessment is not conducive in respect to costs or time based on the extent of vegetation. The assessment under undertaken to confirm locations for full clearing zones, retention clearing zones and asset protection zones.

Assessment

A Tree Management Plan (TMP) was developed as shown in Figure 18 identifying the known areas where there will not be any clearing of vegetation, areas directly impacted by the construction of the development and areas in which a detailed tree management plan is required to accompany a Construction Environmental Management Plan (CEMP).

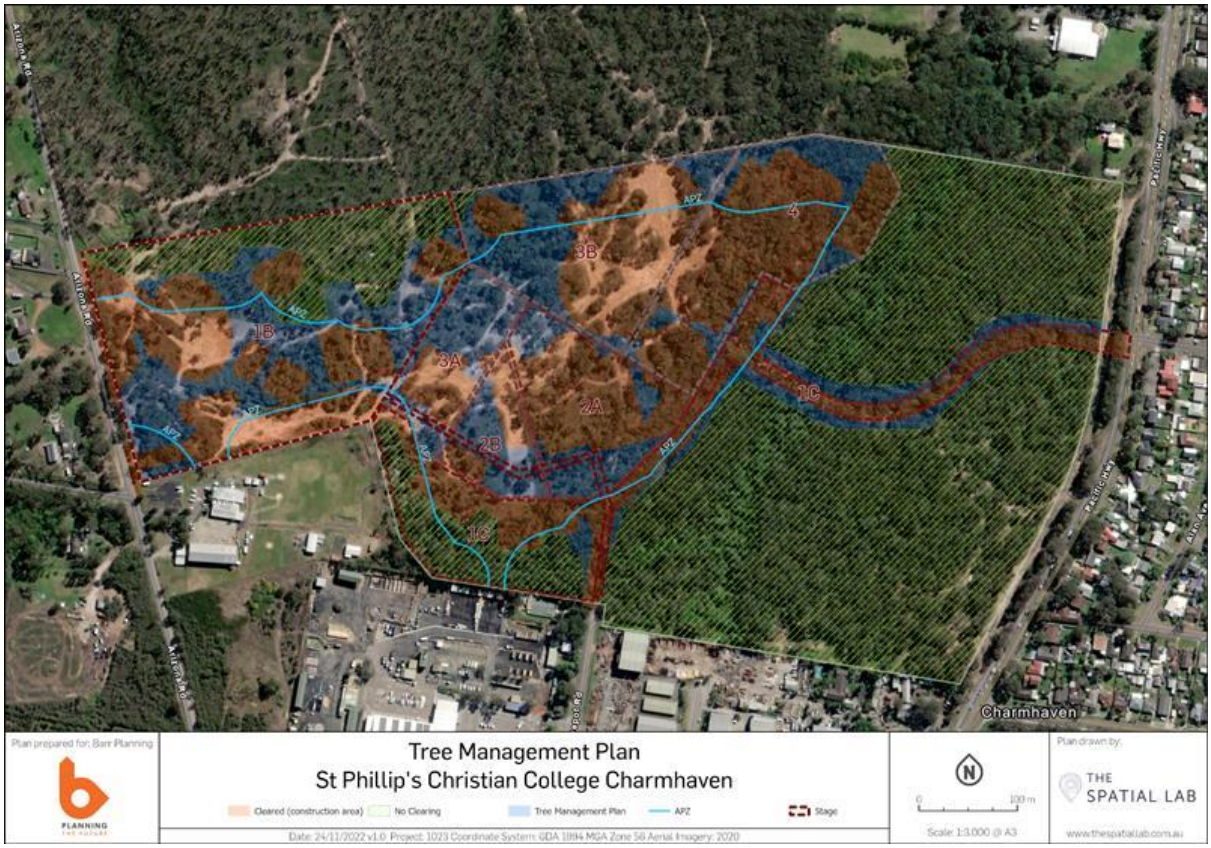

Figure 18 Tree Management Plan Source: The Spatial Lab November 2022

Using the TMP, a site assessment was undertaken which noted the condition of the site as ranging from highly disturbed to undisturbed. The areas most impacted by the development is located within the most disturbed area with the location of structures clearly planned to minimise disturbance to vegetation. The tree conditions varied greatly across the site with the most notable being the vandalism of trees in sections and large sections if trees within the northwest being burnt and structurally compromised. Overall, the health of trees is good to excellent with no noticeable diseases, parasite, or fungi across the site. The assessment cross referenced the BDAR and Aboriginal Heritage reports and visual assessment of species identified by the Arborist onsite the relevant species for retention are identified within Table 16.

Table 16 Species for Retention (Source: Assurance Trees)

Tree Species	Arborist Note – Suitability
Eucalyptus haemastoma (Scribbly Gum) Decurrent tree to 15m covered in scribbles caused by a moth larva. These trees are excellent species for retention in a school environment due to the decurrent form (low and wide spreading), lack of high-risk branch	These trees should be utilised wherever possible in the new landscaping plan.

Tree Species	Arborist Note – Suitability
defects, strength of limbs during wind loading, resistance to whole tree failure and moderate resistance to common wood decay fungi	
Angphora costata (Smooth-bark Apple) A moderate size tree growing to about 25m maximum in this area, although more commonly much smaller at around 15m. Smooth bark shedding during hot weather. A wide spreading habit with twisted branches. A higher risk tree due to its habit of dropping limbs and more brittle branches.	Considered suitable for retention in a school environment if the tree is in good/excellent form with annual inspections.
Corymbia gummifera (Red Bloodwood) Tree to 30m high, red/brown bark persistent to smaller branches, tessellated.	Suitable for retention in a school environment if the tree is in good/excellent form, only minor defects, and annual inspections.
Eucalyptus capitellata (Brown Stringybark) Tree to 20m high, grey to brown stringy fibrous bark.	Suitable for retention in a school environment if the tree is in good/excellent form, only minor defects, and annual inspections.
Allocasuarina littoralis (Black She-Oak) Small 5 – 15m high tree.	Suitable for retention in school environment with canopy uplifting to prevent climbing, as branches are extremely easy to snap and a hazard for climbing children.
Corymbia 120aculate (Spotted Gum) Large tree to 30m tall in this area. Species must be closely monitored for Sudden Branch Drop and over extended branches. This is best conducted by way of an annual inspection and inspections if branches fail in times of no wind.	Suitable for retention with good/excellent form and only minor defects.
Eucalyptus umbra (Broad-leaf White Mahogany) Large tree to 25m with stringy brown bark.	Suitable for retention in a school environment if the tree is in good/excellent form, only minor defects and with annual inspections.

Tree Species	Arborist Note – Suitability
Eucalyptus umbra (Broad-leaf White Mahogany) Large tree to 25m with stringy brown bark.	Suitable for retention in a school environment if the tree is in good/excellent form, only minor defects and with annual inspections.
Eucalyptus crebra (Narrow-leaved Ironbark) Large tree to 30m with grey to black hard and fissured bark.	Suitable for retention in a school environment if the tree is in good/excellent form, only minor defects and with annual inspections.
Angophora inopina (Charmhaven Apple) Threatened Species, refer to BDAR (MJD) for details. A small size tree growing to about 8m. Often multi-stemmed, bark persistent, grey, and shortly fibrous. Little is known about the common defects of this tree.	Due to its small size the posed risk is low, and the tree is suitable for retention in a school setting.
Melaleuca nodosa (Prickly-leaved Paperbark) Shrub 1 – 4 metres high, corky to papery bark. A low-risk tree due to its small size.	Suitable for retention in middle and senior school areas but may be a problem in junior school areas due to the prickly nature of the tree and bark being pulled off in ribbons by children. Good for retention in non-play zones and as barriers.
Melaleuca sieberi Shrub to 5 metres high with papery bark. A low-risk tree due to its small size.	Suitable for retention in middle and senior school areas but may be a problem in junior school areas due to the prickly nature of the tree and bark being pulled off in ribbons by children. Good for retention in non-play zones and as barriers.
Leptospermum juniperinum (Prickly Tea-tree) Shrub to 3m high, prickly leaves, strong smelling leaves when crushed.	Low-risk and suitable for retention with consideration given to the prickly leaves.

Based on the TMP, the following impacts on vegetation were identified within the assessment:

- **Full Clearing zones** – All trees (100%) within the clearing zones will be removed as they fall within the footprint of built structures. This aligns with the BDAR.
- **Retention Clearing Zones** – Areas where trees can be retained within the landscape plan or left as natural bushland within the school environment. It is estimated that between 15 to -25 percent will be removed due to major Tree Protection Zone (TPZ) encroachments or compromised Structural Root Zones (SRZ) being unsuitable for retention.
- **Asset Protection Zones** – The APZ will be consistent with the Bushfire Management Report with 20 to 30 percent reduction in canopy volume.
- **Tree Retention Zones** – It is estimated that most trees on site fall within a Moderate to High (40 to 45 percent) retention value classification with the remaining 15 percent being of Low to Very Low value.

Mitigation Measures

It was recommended that clearing of the entire development site be undertaken as one stage. Should it occur in stages, the same methodology can be applied. The following mitigation measures are identified:

- **Site Survey** – Surveyor to set out locations where full clearing is required with pegs. Set out locations of the APZ perimeter. Project Arborist to conduct walkthrough and identify all retainable trees within the retention zones (areas not inside building footprints) and clearly mark these trees with flagging tape around the stem of the tree.
- **Pre-Clearing** – Removal of all rubbish on site to avoid entanglement and contamination of mulch. Ecologist to inspect areas prior to clearing commencing and during clearing operations to remove wildlife or aid if injured.
- **Clearing of Building Zones** – Clearing of all building zone (removal of all vegetation) with an excavator. Vegetation can be cut up and ground for forest mulch to be stockpiled onsite for landscaping. This method is not to be used in retention areas or the APZ.
- **Under scrubbing of Retention and APZ Zone** – A compact scrub mulcher (100hp – 300hp) using a drum style mulcher head should be used to conduct all APZ under-scrubbing required within the APZ area detailed in the Bushfire Assessment Report by MJD Environmental. The above-mentioned mulcher should also be used to clear any undesirable and/or unsuitable vegetation from within the retention zones.
- **Selective Tree Removal and Pruning –** A low impact method as these trees being removed and pruned are in and around trees that will be retained and need to be completed without the use of large machinery. These works need to be supervised by the Project Arborist as this work is being conducted inside the TPZ of retained trees (AS4970). This will ensure that the trees will be in good condition and that minimal tree work will be required at the end of the project. Hand felling and pruning inside the APZ will need to occur to provide for a discontinuous canopy as detailed in the Bushfire Assessment Report (MJD). This can be completed by thinning out of poor-quality trees and pruning of selected canopies under the direction of the Project Arborist (AQF5).

- **Surveying of Retained Trees** – A survey check should be completed to determine precise locations of the retained trees to confirm those suitable for retention in the school environment. The above updated survey can be used to update the landscaping plan, and to detail a suitable Tree Protection Fencing Plan if this is deemed to be suitable for the site with respect to the ecological requirements (movement of wildlife). Refer to project ecologist at this stage. From this point forward a standard approach to tree management according to *Australian Standards 4970-2009 Protection of Trees on Development Sites* can be employed. Refer to ecologist for any additional requirements.

6.1.4 Landscaping

A Detailed Landscape Plan is included in Appendix G11. This plan has been developed by Studio 151 for Stage 1 of the development and considered the outcomes of the Landscape Strategy and Design Report, and Preliminary Arboricultural Assessment including the identification of existing trees that can be retained within the tree retention zone within the design.

6.1.5 Disability Discrimination Access

Methodology

A Disability Access Report (DAR) was prepared by Lindsay Perry Access to address the requirements of the SEARs for the proposed development and is included in Appendix G12. The DAR involved an assessment of the proposed development against the current accessibility legislation and standards including:

- The Commonwealth Disability Discrimination Act 1992 (DDA).
- Disability (Access to Premises (Buildings)) Standards 2010.
- Access Code for Buildings 2010.
- The National Construction Code Building Code of Australia Volume 1, Amendment 1 2019 (BCA):
- Section D2.14 / D2.15 / D2.17 – landings, thresholds, and slip resistance.
- Section D3 – Access for People with Disabilities.
- Section E3.6 – Passenger Lifts.
- Section F2.4 – Accessible Sanitary Facilities.
- Australian Standard AS1428.1 (2009) Amendment 1 & 2, – Design for Access and Mobility.
- Australian Standard AS1428.2(1992) – Design for Access and Mobility: Enhanced and additional requirements – Buildings and facilities.
- Australian Standard AS1428.4.1 (2009) Amendment 1 – Design for Access and Mobility: Means to assist the orientation of people with vision impairment – Tactile ground surface indicators.
- Australian Standard AS2890.6 (2009) – Parking Facilities – Off street carparking For People with Disabilities.
- Australian Standard AS1735.12 – Lifts, escalators and moving walks: Lifts for persons with a disability.

The report includes a disability access assessment of buildings included within the Stage 1 works:

- Building A: Welcome Centre
- Building B: Chapel
- Building C: Narnia
- Building G + H: Junior School

Existing environment

The site is currently undeveloped and comprises a greenfield site which will accommodate the new St Philip's Christian College Charmhaven campus. New disability access will be provided as part of the new development.

Assessment

Subject to addressing the actions identified, the DAR confirms that the project documentation provides appropriate accessibility, capable of complying with the BCA & Disability (Access to Premises – Buildings) Standards 2010 and the objectives of the DDA. The detailed design will be developed in a manner consistent with the requirements of the report.

Mitigation measures

Overall, the aims and objectives of the relevant legislation are met. Section 11 of the DAR provides a list of best practice measures for consideration that are above the minimum standards.

6.2 Environmental Amenity

To demonstrate that the development maintains a high level of environmental amenity and minimal impacts on the surrounding locality in respect to solar access, visual privacy, visual amenity, overshadowing, wind impacts and acoustic impacts. Each of these impacts have been addressed below.

6.2.1 Overshadowing and Solar Access

Methodology

The design sought to provide a high level of environmental amenity and minimal impacts on the surrounding locality in respect to solar access, visual privacy, visual amenity, overshadowing, wind impacts and acoustic impacts.

Existing environment

The site is currently undeveloped with the only existing development directly adjoining the site being located along the southern boundary, comprising of infrastructure and industrial uses located approximately 40 metres south of the nearest school buildings proposed.

Assessment

The location of buildings associated with the school do not create any overshadowing or solar impacts on adjoining properties or existing buildings. Section 6.3 of the Concept Design Report (Appendix G7) provides shadow diagrams showing the extent of overshadowing in both June and December.

Mitigation measures

The deep overhangs provide sun shading to outdoor circulation, play spaces and internal learning spaces in summer. Skylights and deep windows provide natural light within the building for amenity and energy efficiency.

6.2.2 Visual Impact

Methodology

A Visual Impact Assessment (Appendix G13) was prepared by Moir Landscape Architects to assess the visual impacts of the proposed development within the locality. Visual impact was assessed in a two staged approach, firstly completing the following actions:

1. An objective assessment of the landscape.
2. Determination of the landscape sensitivity to change.
3. Assessment of viewer sensitivity.
4. Viewpoint analysis.
5. Assessment of Visual impacts to determine mitigation measures.

Secondly, a quantitative approach using photomontages to depict the Project and identify mitigation measures.

Existing environment

A photographic survey was undertaken using key viewpoints and locations with potential views towards the site to determine the existing visual extent of the site. Section 4.0 of the report details the existing landscape character of the site and the wider area, used to complete the assessment.

Assessment

Using the existing character assessment, four key viewpoints were identified where the development would be most prominent based on degree of exposure or number of people likely to be affected. After analysis of the four points identified the objective assessment of the proposed school was determined as having Low to Moderate impacts as summarised in Table 17.

Table 17 Viewpoint Visual Impact Summary: Source Moir Landscape Architecture

Viewpoint	Visual Sensitivity	Visual Magnitude	Potential Visual Impact
VP01	Moderate	Moderate	Moderate
VP02	Moderate	Moderate	Moderate
VP03	Moderate	Moderate	Moderate
VP04	Moderate	Low	Moderate

The quantitative approach using photomontages to superimpose the development into two of the key viewpoints being from the North (southbound on Arizona Road) and Proposed entry road to the school from Arizona Road as shown in Figure 20 below. Figure 21, Figure 22, Figure 23 and Figure 24 show the difference between the existing extent and proposed development of the two key viewpoints.

The assessment concluded that the combination of vegetation, built form and topography, limits potential viewing opportunities of the proposed development. Resulting in a low to moderate impacts on the existing and surrounding environments, screening from additional vegetation to be provided as part of the development, it is unlikely the Project will have a significant impact on the visual character of the area.

Figure 19 Location of Viewpoints: Source VIA Moir Landscape Architecture

Figure 20 Photomontage Locations: Source Moir Landscape Architecture

Figure 21 Existing View from Viewpoint 01 Looking South East along Arizona Road. Source Moir Landscape Architecture

Figure 22 Proposed View from Viewpoint 01 Looking Southeast along Arizona Road. Source Moir Landscape Architecture

Figure 23 Existing View from Viewpoint 04 Looking East along Arizona Road. Source Moir Landscape Architecture

Figure 24 Proposed View from Viewpoint 04 Looking East along Arizona Road. Source Moir Landscape Architecture

Mitigation measures

The following mitigation measures are proposed to reduce any potential visual impacts associated with the development:

1. Retention of existing canopy trees and midstory vegetation where possible during construction.
2. Consideration of the architectural design and construction materials to provide a quality architectural and visual 'subject' in a controlled visual sequence for passing motor vehicle traffic.
3. Consideration of building materials to minimise contrast and blend any new structures as far as possible into the landscape.
4. Rehabilitate existing degraded areas of vegetation.
5. Implement screen planting to tie in with existing native vegetation planting in the road reserve along the Arizona Road site frontage, while allowing for breaks in the planting to achieve controlled views to the quality architectural 'subjects' of the Narnia building, Welcome Centre, and Chapel.

6.2.3 External Lighting

Existing environment

The site is undeveloped with no existing external lighting on site. External lighting is found on the adjoining industrial sites.

Assessment

Lighting within school grounds and sporting facilities will be selected and installed to effectively to minimise impacts on adjoining properties, in accordance with AS 4282:2019 Control of the obtrusive effects of outdoor lighting. It is intended for the use of the sporting fields and performing arts facilities to be limited to 8pm (daylight hours)and 10pm respectively.

Mitigation measures

- Development of a lighting strategy, and curfew of 10pm for lighting associated with the development.
-

6.3 Biodiversity

Methodology

A planning proposal to rezone the land is being assessed concurrently to this SSDA, under this proposal application has been made for Biodiversity Certification to be issued over the land. Despite this, a Biodiversity Development Assessment Report (BDAR) has been completed and certified by MJD Environmental for the developable area identified for the school (Refer to Appendix G14). The assessment was completed using the Biodiversity Assessment Method (BAM), in accordance with the BC Act 2016. The data was then entered into the Biodiversity Offsets Scheme (BOS) as required under *Biodiversity Conservation Regulation 2017* to determine the extent of offsets required by the development. It is noted that the extent of land identified adjacent to the Pacific Highway, and north of roundabout and Chelmsford Road in all figures were included in the assessment and extent of works based on options reviewed during the scope and design process only. This extent does not form part of the works associated with the development application and was included for assessment based on preliminary consultation and discussions with TfNSW.

Existing environment

Vegetation within part of the site has been heavily disturbed by years of unauthorised vehicle access. Nonetheless, the site supports a range of biodiversity values. A Biodiversity Development Assessment Report (BDAR) was prepared by MJD Environmental based on field survey investigations undertaken between July 2020 and March 2022. The assessment identified the following four Plant Community Types (PCTs) within the site:

1. PCT 1590: *Spotted Gum - Broad-leaved Mahogany - Red Ironbark shrubby open forest –*
2. PCT 1619: *Smooth-barked Apple - Red Bloodwood - Brown Stringybark - Hairpin Banksia heathy open forest of coastal lowlands*
3. PCT 1636: *Scribbly Gum - Red Bloodwood - Angophora inopina heathy woodland on lowlands of the Central Coast*
4. PCT 1718: *Swamp Mahogany - Flax-leaved Paperbark swamp forest on coastal lowlands of the Central Coast*

The northern part of the site contains individual stands *of Angopohora Inopina* (Charmhaven Apple), listed as vulnerable in both the BC Act 2016 and EPBC Act 1999. The site is mapped on the Important Areas Map as habitat for *Lathamus discolor* (Swift Parrot) listed as Endangered under the BC Act 2016 and Critically Endangered under the EPBC Act 1999. Figure 4 highlights the environmental site constraints of the site based on the DPE data available.

Assessment

The proposed development is seeking to clear up to 21.04ha of native vegetation, the site has a minimum lot size of 40ha site is identified on the Biodiversity Values Map. The amount of clearing proposed triggers the BOS and the requirement of a BDAR.

The landscape context for the site has been summarised below:

- The landscape features of the site did not identify any areas of outstanding biodiversity value within the vicinity of the site.
- Connectivity to broader landscape is high, extending to the north-western region of Yengo National Park.
- The site is located within the Lake Macquarie and Tuggerah Lakes Catchment Area, a second order stream being a tributary of Wallarah Creek.
- There are no groundwater dependent ecosystems associated with the site.
- The north-eastern portion is mapped on the Coastal Environment Area Map however, the development will not impact on this area and requires no further assessment.
- The part of the site being developed is not affected by acid sulfate soils, however, has potential for a high erosion.
- Native vegetation cover on the site is 33%. The site area is 39.9ha containing 34.01ha of native vegetation. The developable area is 27.66ha containing 21.09ha of native vegetation.
- The patch size is identified as being greater than 100ha.

Targeted flora and fauna surveys undertaken between December 2020 and February 2022 for candidate species in accordance with the BAM. The results of these surveys are detailed in Section 5.4 of Appendix G14 to determine if, and the extent of, any threatened species and habitat identified on the site. The five threatened species identified on site and their habitat have been summarised in Table 18 below.

Table 18 Threatened Species identified.

Threatened Species	Habitat
Angophora inopina	There is suitable habitat throughout six of the vegetation zones assessed. Three of the vegetation zones (VZ4, VZ1 and VZ9) were not suitable habitat and did not contain any individuals.
Crinia tinnula	There is suitable habitat throughout the site for this species within the exception of VZ4.
Lathamus discolour	No individuals were identified on the site, however, provides for foraging habitat in winter.

Threatened Species	Habitat
Myotis macropus	No individuals were detected using harp trap deployments, were detected using Anabat recorders. Hollows within riparian zone provide suitable breeding habitat.
Petaurus norfolcensis	Recorded nocturnally on multiple cameras throughout the sites. Suitable foraging habitat throughout the site.

There were no geological features, human made structures or non-native vegetation on the site that would provide potential habitat to the above species. There are two bridge crossings required for the development, these will have minor impacts on the two Strahler first order streams and second order watercourse during construction. Post construction, the Project will have no impacts on the habitat and continuation of the watercourses.

Matters of National Environmental significance were considered with seven species having the potential to occur on the site, refer to Section 7 of Appendix G14. It was concluded that the Project is unlikely to have significant impacts on any of these species.

Direct and potential indirect impacts are detailed within Sections 10 and 11 of Appendix G14. The resulting assessment has determined the following direct impacts on the removal of threatened species (candidate species) below and vegetation summarised in Table 19:

- 66 *Angophora inopina* individuals – (19.6 ha loss of suitable habitat).
- *Crinia tinnula* habitat (7.2 ha of suitable habitat).
- *Petaurus norfolcensis* habitat – (20.9 ha loss of potential habitat).
- *Myotis macropus* – (6.6 ha loss of potential habitat); and
- *Lathamus discolor* – (20.0 ha of important areas mapping).

Table 19 Direct Impacts - Vegetation

Vegetation Zone	Condition	Threatened Ecological Community	Area (ha)	Current V.I score	Future V.I Score
1590: Spotted Gum - Broad leaved Mahogany – Red ironbark shrubby open forest					
VZ1	1590_Disturbed	No	0.05	42.8	0
1619: Smooth-barked Apple – Red Bloodwood – Brown Stringybark – Hairpin Banksia healthy open forest of the Central Coast					
VZ2	1619_High	No	50.3	50.3	0

Vegetation Zone	Condition	Threatened Ecological Community	Area (ha)	Current V.I score	Future V.I Score
VZ3	1619_Dsiturbed	No	55.9	55.9	0
VZ4	1619_Road	No	42.6		
1636: Scribbly Gun- Red Bloodwood – Angphora inopina healthy woodland on lowlands of the Central Coast					
VZ5	1636_High	No	5.90	70.5	0
VZ6	1636_Disturbed	No	5.10	41.6	0
VZ7	1636_Burnt	No	1.90	22.7	0
1718: Swamp Mahogany – Flax-leaved Paperbark swamp forest on coastal lowlands of the Central Coast.					
VZ8	1718_High	Yes – Commensurate with BC Act listed EEC Swamp Sclerophyll Forest on Coastal Floodplains of the North coast, Sydney Basin and Southeast Corner Bioregions.	0.18	41.4	0
VZ9	1718_Disturbed		0.81	44.0	0

Mitigation measures

The mitigation measures identified to manage direct and indirect impacts are detailed in Section 12 of Appendix G14. The measures for direct impacts such as vegetation clearing, habitat tree removal. and indirect impacts for retained vegetation, weeds, disease and edge effects, noise and light impacts, dust, and pest animal impacts. Prescribed biodiversity impacts such as erosion and sediment control, and speed limits are provided.

Section 13 of Appendix G14 details the offset requirements for unavoidable impacts, it is considered that mitigation for these impacts will be via payment to the Biodiversity Conservation Fund based on the following credits:

Ecosystem Credits

- 0.05 ha of PCT 1590 requiring 1 ecosystem credits.
- 7.90 ha of PCT 1619 requiring 150 ecosystem credits.

- 12.9 ha of PCT 1636 requiring 286 ecosystem credits.
- 0.99 ha of PCT 1718 requiring 22 ecosystem credits.

Species Credits

- *Angophora inopina* (Charmhaven Apple) requiring 517 credits.
- *Crinia tinnula* (Wallum Froglet) requiring 136 credits.
- *Myotis Macropus* (Southern myotis) requiring 168 credits.
- *Lathamus discolor* (Swift Parrot) requiring 788 credits.
- *Petaurus norfolcensis* (Squirrel Glider) requiring 546 credits.

6.4 Aboriginal Cultural Heritage

Methodology

An Aboriginal Cultural Heritage Assessment (ACHA) and Aboriginal Archaeological Report (AR) was completed by Heritage Now to address Item 8 of the SEARs for the proposed development and is included in Appendix G15 and Appendix G16. The assessment was undertaken to ensure that Aboriginal archaeology and cultural heritage would not be adversely impacted upon by the Project and was prepared in accordance with:

- National Parks and Wildlife Act 1974
- National Parks and Wildlife Regulations 2009
- Environmental Planning and Assessment Act 1979
- Wyong Local Environmental Plan/Central Coast Local Environmental Plan 2022
- State Environmental Planning Policies
- Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011)
- Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010a)
- Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010b)

An Archaeological Assessment (AR) provided the methodology for the completion of test excavations to be conducted in accordance with Requirement 15b of the Code of Practice. The outcomes of the assessment were to determine both the characterisation of Aboriginal occupation and a comparison of the subsurface artefacts with the surface artefacts.

Consultation and feedback on the methodology was undertaken with RAPs. All three parties supported the methodology.

Existing environment

Aboriginal occupation in the area has been dated to 11,000 years before present. This date comes from a rock shelter site in Mangrove Creek, 25 km southwest of Wyong. Due to the limitations in dating techniques, this figure may be even older. Evidence of Aboriginal occupation in the Central Coast is found throughout the region with 2,985 registered Aboriginal sites within the boundary of the Darkinjung Local Aboriginal Land Council.

The subject site is largely undeveloped bushland. There are a few tracks running through the site, including a central east-west and north-west track, based on the aerial images. Satellite images show that the west half of the Project Area is more disturbed with large areas of exposure and several tracks.

Assessment

The historical context of the site identified the area as being ideal for camping, hunting, and gathering. The archaeological survey results are shown in Figure 25. The survey identified an artefact scatter (HN-CH-A01) comprising of two mudstone flakes and a mudstone core and was associated with a small area of potential associated subsurface artefacts of very low density. This is a common site type being representative of Aboriginal sites within the local area. The site provides an educational opportunity and overall has a low to moderate significance on a local scale. A scarred tree (labelled as HN-CH-T01) was identified 30 m north of the artefact scatter; however, the tree is young, and the scar appears to be recent. The RAPs requested that a professional arborist be engaged to examine the tree. The arborist report has identified that the scar is the result of insect damage. As such, this scarred tree has been determined not to be an Aboriginal site.

The AR provided in Appendix G16 confirmed the methodology used to complete the test excavations are consistent with the Code of Practice. The field and general assessment methodology was agreed to by the RAPs which saw test excavations completed for HN-CH-A01 identified within the initial survey along with two creek crossing areas identified within Figure 26. A total of 18 0.5 x 0.5 m trenches were excavated and three artefacts were recovered, two from HN-CH-A01 and one from Creek Crossing 1.

The artefacts consisted of different raw materials, silcrete, quarts and indurated mudstone-tuff. Artefact scatter HN-CH-A01 (now registered in AHIMS as 45-3-4589) will be impacted by the proposed development, specifically, by the construction of the sports field and track. Assessment of the type, size, fragmentation, and density of the artefacts was interpreted as evidence of transitory occupation of the landscape by Aboriginal people between Wallarah Creek and Budgewoi Lake.

Due to the low frequency of artefacts (only two recovered) at HN-CH-A01 no further salvage excavation is warranted. Likewise, no further salvage excavation is warranted at Creek Crossing 2 where only one artefact was identified. However, this site should be registered in AHIMS and an ASIR form submitted on approval of the Aboriginal Cultural Heritage Management Plan.

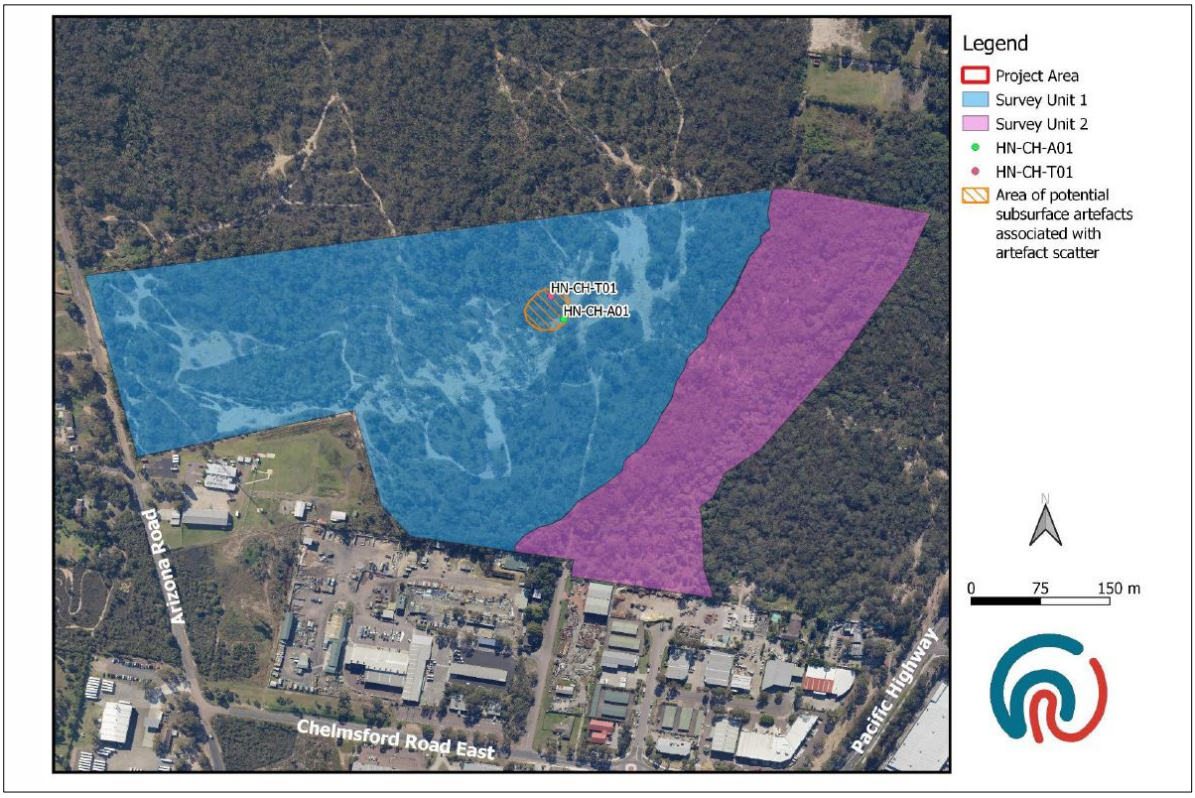

Figure 25 Archaeological Survey Results (Source: Heritage Now).

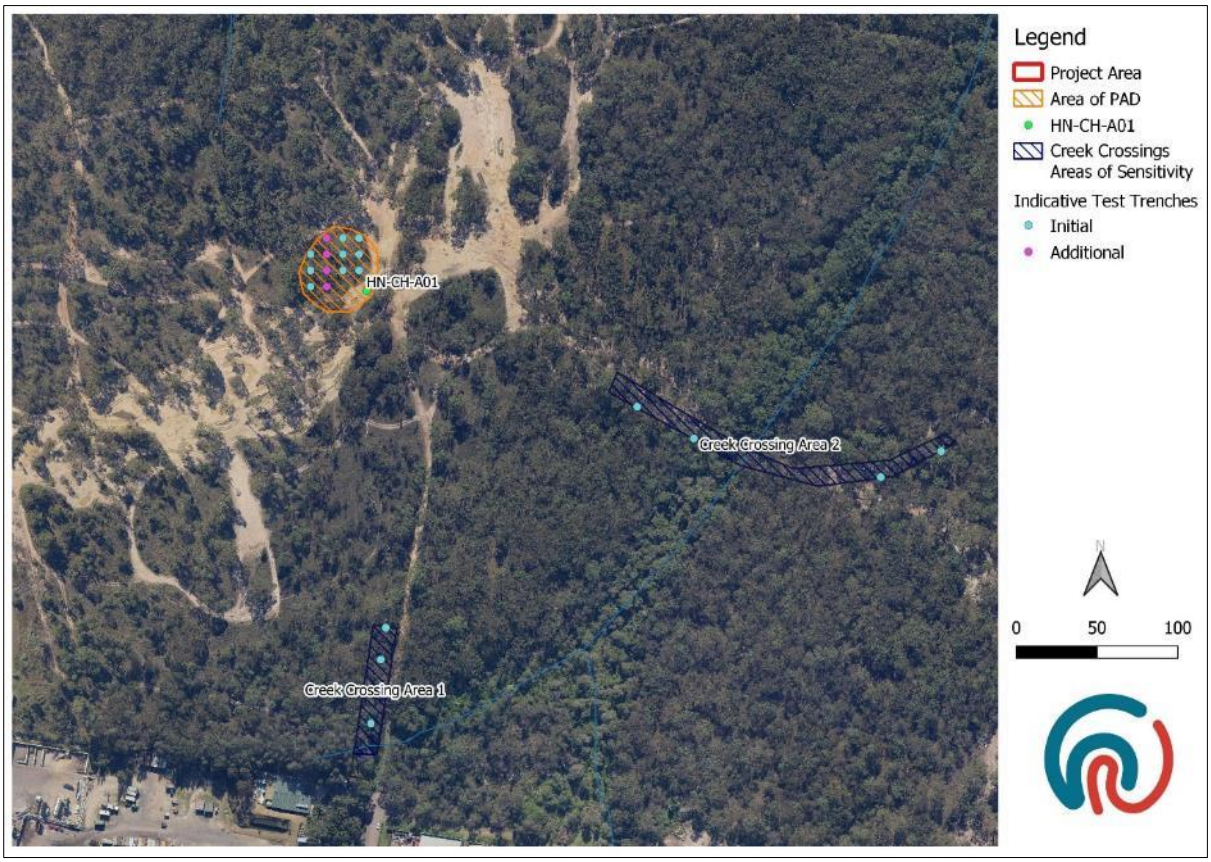

Figure 26 Location of Test Excavations (Source: Heritage Now)

The assessment and methodology assessed the cultural values of the object relative to the social, historical, and aesthetic values within the Burra Charter, alongside the archaeological or scientific value. HN-CH-A01 was considered a representation of common site types, resulting in the site is having a low to moderate archaeological value on a local level.

The proposed works do not pose a threat of serious or irreversible damage to the environment. The artefact sites are represented elsewhere in the local area, and the mitigation measures proposed provide acceptable conservation outcomes as an educational tool relating to the local Aboriginal landscape.

Mitigation measures

The artefact scatter (HN-CH-A01) will be impacted by the Project and therefore the following recommendations are to be adopted by The Project:

- An Aboriginal Cultural Heritage Management Plan is to be developed post approval for the management of the HN-CH-A01. The Aboriginal Cultural Heritage Management Plan is to include the collection of the surface artefacts with no additional salvage excavations required at the two creek crossing locations. The Aboriginal Cultural Heritage Management Plan is to include, amongst others, protocols for unexpected finds and discovery of human remains.
- The Aboriginal site is to be clearly marked on all relevant construction drawings, along with buffers and fencing as relevant. All on-site personnel are to be made aware of their obligations under the *National Parks and Wildlife Act 1974*, through an on-site induction or other suitable format.
- The Designing with Country process will continue past the ACHA process and through to the further design phase of the project which will provide opportunity for public heritage interpretation and engagement with Aboriginal cultural heritage values of the Central Coast area.

The mitigation measures proposed will ensure that the Aboriginal site is conserved ex-situ and thus satisfies the principal of inter-generational equity.

6.5 Historic Heritage

Methodology

A Statement of Heritage Impact was carried out in accordance with relevant Heritage NSW guidelines being Assessing Heritage Significance, Statements of Heritage Impact and NSW Heritage Manual.

Existing environment

An inspection of the site confirmed that the east side of the site Area is undeveloped and is mostly covered in trees and grasses (Plate 1). No historical structures are present. The sitet Area also

contained several tracks with good ground surface visibility. Aboriginal artefacts were observed (see ACHA Report HN221-A), but no artefacts associated with European settlement were observed (Plate 2). There were also large areas of the west side of the site Area that contained no vegetation and 100% ground surface visibility (Plate 3), as well as areas of exposed soil profiles (Plate 4). No archaeological relics were observed in these areas. The surrounding streetscape is primarily industrial estate, and none of these buildings are of heritage significance.

Assessment

A desktop review of databases and legislation, a site visit and assessment of heritage significance were carried out for the site. The Statement of Heritage Impact (Appendix G17) determined there are no heritage items within the site area and no heritage items will be impacted by the proposed development. No evidence of archaeological relics was identified during survey and therefore no known relics will be impacted by the proposed development. No areas of non-Aboriginal heritage significance are present in the site Area.

Mitigation measures

The following mitigation measures have been recommended for the development:

- All on-site personnel are to be made aware of their obligations under the NSW Heritage Act 1977, including the reporting of any archaeological or historic materials, including those suspected to be archaeological or historic. This may be implemented through an onsite induction or other suitable format.
- In the unlikely event that archaeological, or suspected archaeological material is uncovered during works, then works in that area are to cease and the area cordoned off. The material is to be inspected by a heritage consultant and works in that area are only to recommence once heritage clearance has been gained and/or mitigation and management measures implemented.

6.6 Noise and Vibration

Methodology

An Acoustic Assessment was prepared by RAPT Consulting to address the requirements of Item 10 of the SEARs for the proposed development and is included in Appendix G18. The assessment of noise and vibration has considered the following policies and guidelines:

- Road Noise Policy (RNP, DECCW, 2011).
- Noise Policy for Industry (NPfI) (NSW EPA, 2017).
- Interim Construction Noise Guideline (ICNG) (NSW DECC, 2009).
- Development Near Rail Corridors and Busy Roads - Interim Guideline (Department of Planning, 2008).
- German Standard DIN 4150, Part 3: Structural Vibration in Buildings: Effects on Structures.
- British Standard BS 7385 Part 2-1993 Evaluation and measurement for vibration in buildings.
- Assessing Vibration: A Technical Guideline (DECC, 2006).

- Australian Standard AS2107:2016 - Recommended design sound levels and reverberation times for building interiors.
- Australian Standard 2363 Acoustics - Measurement of noise from helicopter operations.
- Association of Australian Acoustical Consultants Guideline for Educational Facilities Acoustics.

Noise monitoring was undertaken by RAPT Consulting to establish background and ambient noise levels. Noise monitoring was undertaken from 23-29 September 2021 along Arizona Road to capture background and ambient noise for properties to the west of the site. Noise monitoring was undertaken from 17-23 September 2021 at the eastern end of the Charmhaven Garden Centre to capture background and ambient noise for properties to the east of the site. Further noise monitoring was completed from 17-18 September 2021 in the western end of the Charmhaven Garden Centre to capture ambient noise emanating from the delivery and loading operations from the garden centre.

Existing environment

The area surrounding the site is zoned C2 Environmental Conservation, IN2 Light Industrial, R2 Low Density Residential, RU6 Transition and SP2 Infrastructure. The site itself is largely undeveloped bushland. The background and ambient noise monitoring levels were established using three locations:

- 60 Arizona Road ('M1')
- Charmhaven Garden Centre West ('M2')
- Charmhaven Garden Centre East ('M3')

The background and ambient noise levels recorded are detailed in the table below:

Table 20 Background & Ambient Noise Levels

Location	Rating Background Level LA90, dB(A)			Ambient noise levels, LAeq, dB(A)		
	Day	Evening	Night	Day	Evening	Night
60 Arizona Road ('M1')	36	36	33	50	44	47
Charmhaven Garden Centre West ('M2')	42	37	30	51	52	48
Charmhaven Garden Centre East ('M3')	35	35	33	50	52	41

Assessment

The Acoustic Assessment assessed the potential impacts associated with the development related to construction noise and vibration, operational noise, road traffic noise and external noise intrusion. A summary of each of the identified factors is detailed below.

Potential construction noise impacts were assessed based on the assumed construction sequence involving both excavation and construction of buildings. As the plant and equipment to be used was unspecified at the time of the assessment, the noisiest data for each piece of equipment was used to present the worst-case scenario. The proposed hours of work were taken to be standard work hours of Monday to Friday, 7am to 6pm inclusive and Saturday, 8am to 1pm with no work being undertaken on Sundays or public holidays. The construction noise impact assessment identified compliance with all noise management levels except for excavation works in the west of the site where there is a predicted exceedance at residential receivers R1-R6, and for building works at residential receiver R1. The highly affected noise level, however, is expected to be complied with in all situations. Measures to mitigate construction noise impacts are noted further below.

Potential construction vibration impacts were assessed. Adverse impacts were deemed to be unlikely given the distance between the surrounding receivers and plant exceed those recommended for safe work in terms of structural damage and human response.

Potential operational noise assessed included noise associated with the following sources:

- Mechanical plant,
- Performing arts, sport hall and chapel,
- Onsite vehicles,
- School pickup and drop off,
- School PA and bell,
- Sporting field and outdoor play.

The results of the assessment indicate compliance with project noise trigger levels can be achieved in all situations, except for a predicted exceedance of daytime outside play activities at residential receivers at R2 – R6 having regard to the Noise Policy for Industry (NPfI). It is noted, however that if the Australian Acoustical Consultants (AAAC) Guideline of 45 dB(A) for outdoor play is applied, then the noise goal is met. This result is considered a reasonable worst-case scenario. Additionally, this has been conservatively assessed with the final number of students at 1500.

Potential road and traffic noise impacts were assessed based on projected traffic levels provided by Stantec. Based on the projected traffic generation of 120 vehicle trips during the AM peak half hour and 129 vehicle trips during the PM peak half hour at the school's Arizona Road intersection in year 2026, noise levels are projected to exceed 2dB(A) for residences on Arizona Road. It is noted that the Acoustic Assessment focused on the first two years of opening the development, namely 2025-2026, following which it is expected that the new proposed signalised intersection on the Pacific Highway will be completed. It is expected that most school-related trips arriving and departing from and to the

north, south and east would utilise this new intersection to gain access to the development and consequently road traffic noise on Arizona Road is expected to decrease.

Potential external noise intrusion impacts on the proposed development include road traffic, mechanical plant, and other natural noise sources. The proposed mitigation measures to external intrusive noise impacts are identified below in the mitigation measures.

Mitigation measures

Construction noise impacts are proposed to be managed via a construction noise management plan (CNMP) to be prepared prior to the commencement of the works and implemented through all phases of proposed construction. The Acoustic Assessment recommended that the CNMP include the following mitigation measures:

- Notification to adjoining properties before and during construction.
- Best practice measures to be implemented when operating on construction site.
- Complaint handling procedures.

Operational noise impacts associated with outdoor play are proposed to be managed via a site management plan to address the following recommendations:

- Restrict the use of outdoor play areas prior to 7.00am
- Minimise PA use and ensure speakers are appropriately located and limited to achieve acceptable levels.
- The PA system should use small low-powered horn-type speakers oriented in such a manner to operate away from residential premises.
- Speakers should be mounted at a downward angle of 45° and as close to ground level as possible.
- Only nominated persons, trained in the appropriate use of the system, should be permitted to operate the PA system.

Road and traffic noise impacts are expected to exceed an increase in 2dB(A) above existing background levels.

If the land use fronting Arizona Road changes from rural residential to residential, which potentially would bring residential dwellings closer to the road. A further acoustic assessment is likely to be as part of any future development on the western side of Arizona Road focussing on post 2027 traffic projections for the project.

External noise impacts to the development from intrusive noise is proposed to be managed through the implementation of building performance recommendations for materials and finishes to achieve appropriate internal amenity standards. Further detail on the recommended treatments for walls, glazing, entry doors and ceilings and roof systems is detailed in the Acoustic Assessment.

6.7 Contamination

Methodology

A Detailed Preliminary Site Contamination Assessment (DPSCA) was prepared by RCA Australia and the SIOP to address Item 19 of the SEARs for the proposed development. The DPSCA is provided in Appendix G19. The SIOP was completed in relation to polyfluoroalkyl substances (PFAS) contamination within its operational facility and areas identified within the subject land and is provided in Appendix G20.

The DPSCA provided a preliminary site investigation and identified relevant considerations for the preparation of a remedial action plan (RAP) to make the site suitable for the proposed use as a school. The assessment did not comment on the requirements of a long-term environmental management plan, noting that containment of contaminated soils is not proposed on the site.

The assessment updated the previous contamination assessment completed by RCA Australia in July 2020. Soil samples were collected on the general grid across the areas which would be disturbed as part of the development. Water and sediment samples were also collected from three (3) and five (5) locations respectively in the Creek which traverse the site from south to north. A further water sample was collected from within a puddle that was observed adjacent the boundary with an adjacent RFS facility. Drilling was undertaken to identify the potential presence of groundwater within ten (10) metres of the surface of the site in the southwestern corner of the site.

The SIOP reviewed previous investigations by RCA, the EPA, and HEC and completed a DSI which in included soil and water sampling over the RFS FCC site and the northern and eastern boundaries of the RFS FCC that a adjoins the SPCC land and the drainage line in the southeast corner. There were ten (10) soil sample, eight (8) surface water sampling locations evenly spaced along the northern and eastern boundaries. Three (3) surface water sampling locations were taken within the SPCC land.

Existing environment

Establishing the existing site environment relied in part upon the site contamination assessment undertaken by RCA Australia in July 2020 which included full site history information. A review of historic photographs was undertaken from 1954 to present which indicated that the site has remained as vacant bushland except for some cleared tracks through the site and evidence of illegal dumping of stockpiles located on the site. A review of the NSW EPA public lands register was undertaken which did not return any record of Environment Protection licences, applications, notices, audits or pollution studies and reduction programmes applicable to the site.

Results from the July 2020 RCA Australia assessment established that no contaminant concentrations were identified in any of the soil samples exceeded the residential guidelines. While asbestos was identified within three (3) of the sampled bulk materials, no asbestos was identified in soil within proximity to these materials nor in any of the other samples. Based on the absence of asbestos in the soil it was considered that the asbestos was not substantially friable.

Anecdotal information indicated the potential presence of PFAS on the site due to its proximity to the RFS facility immediately adjacent on the western portion of the site. Information provided by the RFS confirmed previous storage and historic use of PFAS materials at the RFS facility. This was confirmed by the SIOP.

Assessment

The DPSCA identified two areas of contamination to be considered on the site, the first was the existing waste on the site, such as tyres, tipped rubbish, cars, etc.

The second area of contamination was an area adjacent to the RFS land held to the south, which was identified to contain PFAS. In this regard RFS have taken responsibility for the PFAS plume and have committed to remediate the site. The RFS have been proactive in addressing the issue. Based on the DPSCA, this area was the only area of focus on the site regarding contamination.

The SIOP confirmed that PFAS was identified in the soils adjacent to the south-eastern corner and in surface water sampling in the south-eastern and northern site boundaries of the RFS FCC. PFAS compounds were present on the SPCC site surface water sample locations to the north and the east and in the Wallarah Creek tributary at concentrations exceeding the adopted SAC of 99% species protection limits for freshwater ecosystems, confirming that the contamination within the SPCC is likely caused by runoff from the RFS FCC site.

The SIOP was prepared by the RFS in consultation with the EPA to undertake remediation of the area affected by PFAS. The timing of the remediation in relation to the delivery of the first stage of the school is not certain. While it is likely that the contamination will be removed and the site remediated prior the completion of the first stage of the school, this is not guaranteed. As a result, the consent for the school needs to include the ability for the remediation to occur as part of the school development and therefore needs to be considered as part of this EIS.

In the event that the RFS complete the remediation in line with the EPA approved remediation prior to the school opening, the RFS would furnish the school with the appropriate certification to demonstrate that the site has been remediated to the satisfaction of a site auditor. Where, this has not occurred the remediation would be undertaken as part of the school development, in line with the EPA approved remediation framework, which would ensure that the school can open on time.

The above process ensures that the site is remediated and is suitable for the use of the school at the time of the opening of the first stage.

Section 4.2 of the HEC SIOP (Appendix G20) details the possible methods to remediate contaminated portions of the land and improve the site to prevent further contamination internal and external to the RFS FCC. The outcome of the assessment identified the excavation and offsite disposal of PFAS impacted material as the appropriate option selected for these circumstances. HEC determined that this course of action negates Environmental Management Plan requirements for the RFS FCC and

works on the SPCC sites. The removal of the majority of PFAS contamination assists in reducing further impacts on the SPCC site, conservation land and local aquatic ecology.

Mitigation measures

With regards to the exiting bulk waste present on the site, this will be removed from the site and disposed of at an appropriate licenced premise.

The SIOP determined that the removal and off-site disposal of the PFAS containing material as the most suitable remediation option. The works are proposed to be completed in three stages; the works specific to the SPCC site are detailed within the table below.

Table 21 Site Improvement Works (SIOP)

Stage	Proposed Works
Stage 1: Site Improvement Works (Offsite).	1. Drainage of the surface water ponded in the "puddle" (if present) prior to any concrete/soil disturbance. 2. Excavation of a 25m² area to approximately 1m Below Ground Level (BGL) in the "puddle" hotspot, as shown in Figure 8 (Appendix G20). The estimate volume of material to be excavated is 25m³. 3. Excavation of a 25m² area 1m BGL in the vicinity of the BH8 hotspot, extending 7.5m to the north and south, and 5m east, and west of the sample point. The estimate volume of material to be excavated is 150m³. All excavation works will be completed in a manner sufficient to prevent damage or disturbance to the site infrastructure, including helicopter landing areas, above-ground fuel storage and underground services. To achieve this, the following should occur: ▪ The area to be excavated should be clearly marked out and a walkover completed by the excavator operator and site supervisor to ensure above-ground infrastructure is not damaged. ▪ Excavated soils can be disposed to the SUEZ Kemps Creek waste disposal facility. Waste classification data reported in HEC DSI (2022) indicates the material sampled is classified as General Solid Waste - non putrescible, however PFAS results from TP08 and TP09 contained detections for PFHxS +PFOS which would exceed the Specific Contaminant Concentration 1 (SCC1) limits laid out in the NSW EPA (2016) Addendum to the Waste Classification Guidelines and depending on the results of TCLP testing may warrant

Stage	Proposed Works
	classification as Restricted Solid Waste. Excavated soils should be stockpiled and sampled as outlined in Section 5.10 of Appendix G20.
Stage 2: Validation and Backfill	▪ Validation sampling of the excavations to confirm removal of hotspots. ▪ Backfill of the excavations with Virgin Excavated Natural Material (VENM) and road-base. Material used to backfill excavations must be certified as VENM and will undergo further sampling and analysis on arrival to site to confirm suitability for use as backfill. Note the off-site "puddle" excavation should be backfilled so that accumulation of surface water does not occur in the future. ▪ Re-installation of the concrete slab and drainage sump (onsite if required). ▪ Validation sampling of surface water runoff across the site, covering the areas adjacent to the FTA, the central turfed areas of the site, and at site boundaries. ▪ If elevated levels of PFAS are still detected in surface water adjacent to site boundaries, then Stage 3 will be triggered.
Stage 3: Further Delineation if Improvement Works Fail.	Additional sampling across the site to determine areas of PFAS persistence. Reporting, including mapping of PFAS contamination and remaining hotspot areas. Reporting is to include further recommendations for site improvement options based on investigation results.

6.8 Utilities

Methodology

ADW Johnston completed a review of existing utility infrastructure and service provider assets surrounding the site to determine what infrastructure upgrades are required off-site to facilitate the development and any arrangements to ensure that the upgrades will be implemented on time and be maintained. Infrastructure delivery has been provided within the overall staging plan for the development. The servicing assessment is provided in Appendix G5 and the Electrical Services Masterplan in Appendix G6.

Existing environment and assessment

The development is located within the Central Coast Kanwal Reservoir water supply zone with a potable water supply being available from an existing 100mm and 150mm water main along Arizona Road. Lead in work is required to establish a connection to the main, to service the school.

No existing gravity sewer infrastructure is readily available for a traditional connection based on the topography, an onsite wastewater pumpstation is required. Capacity within the existing system has been identified, with the onsite wastewater pumpstation to connect to the maintenance hole at the rear of 137 Chelmsford Road, Charmhaven.

Two existing low voltage pole networks and a high voltage network run along Arizona Road. The pole networks were assessed and determined not to be suitable to service the development based on their current capacity. The high voltage has capacity to service the development and provides the best connection point. Lead in work is required to service the school.

The development is within the existing NBN footprint with pit and pipe infrastructure extending to the boundary without the requirement for lead in works.

The following lead in works are proposed to service the development and enable construction of the development.

Within Arizona Road reserve:

- Installation of two underground High Voltage substation to be connected from the existing 11kV (HV) overhead line.
- Installation of an underground Low voltage cable from the proposed substation to existing low voltage network.
- NBN connection point.
- Connection to the existing 150mm watermain through a trench connection.

Within the southwestern section of the lot fronting Arizona Road:

- Installation of two 1000kVA substations within the property boundary.
- Installation of an underground Low voltage cable from the proposed substation to existing low voltage network.
- Installation of consumer mains from the substations to the development main switchboard.
- Installation of 400m of sewer rising main to the existing connection point to the rear of 137 Chelmsford Road.

Within the north-western section of the site fronting Arizona Road:

- Installation of a private wastewater pumping station (WWPS).

Stages 1B will establish the onsite substation, NBN connection points, sewer pump station and extension of the water supply.

Full details of the enabling works are detailed within the servicing assessment completed by ADW Johnson, provided in Appendix G5.

Mitigation measures

The lead in works to establish connections to services will be enabling works, to be paid for and carried out by SPCEF prior to stage one commencing.

All relevant onsite services connections are to be established in Stage one to future proof the development and facilitate connections to the existing infrastructure as each stage of the development occurs.

6.9 Bushfire

A Bushfire Assessment Report (Appendix G21) was completed by MJD Environmental to address Item 21 of the SEARs.

Methodology

A school is identified as a Special Fire Protection Purpose (SFPP) under the Rural Fires Act 1997. The assessment aims to determine whether the proposed development is bushfire-prone, and if so, which setbacks and other relevant Bush Fire Protection Measures (BPM) will be appropriate, based on the methodology and procedures outlined in PBP (2019). This includes an assessment of acceptable solutions as outlined in Chapter 6 for the purposes of SFPP developments of PBP (2019) based on the bushfire hazards in and around the site at the time of the report.

Existing environment

The site is bounded by roads to the west, east and south, while the northern boundary is bordered partially by residential premises (to the northeast) though primarily bordered by continuous forested land extending to Wallarah Creek. The site abuts existing industrial and special use infrastructure to the south of the site. The site is subject to impacts of illegal refuse dumping and recreational activities such as 4WD and dirt bikes resulting in a high level of disturbance in some areas. Tracks created from anthropogenic activities has created patches of vegetation throughout the subject land.

The site contains an area of C2 Environmental Conservation which will be largely retained within works. The C2 zone forms the riparian zone for the two first order watercourses which join and feed into a second order watercourse. There are also two headwaters which form at the northern border of the site. All watercourses join Wallarah Creek to the north (off site) and subsequently into Tuggerah Lake. The site has been fenced to minimise illegal refuse dumping and trespassing activities on the privately owned lot, with concrete blocks and cable.

The site occurs within a relatively low-lying area with the highest elevation within at 26m ASL, though the lowest is 10m ASL which occurs within the riparian corridor. The land to the north which the site abuts is low-lying floodplain from the northern watercourse. The site lies within a geographical area with a Fire Danger Index (FDI) rating of 100. The site is classified as being affected by Category 1 Vegetation and Vegetation Buffers from Category 1 Vegetation on the Bushfire Prone Land Map on the ePlanning Spatial Viewer.

Assessment

Completed in accordance with the PBP, a vegetation classification, slope assessment, and relevant bushfire protection measures were determined to confirm that an adequate level of protection for the school can be achieved. The results from the vegetation classification are provided below in Table 22 below.

Table 22 Vegetation Assessment: Source MJD Environmental

Direction	Description	Vegetation Classification
North	▪ Unmanaged vegetation with open native canopy and grassy understory. Some shrubbery present.	Woodland
East	▪ Riparian zone and watercourse containing a 1st order transitioning into a 2nd order watercourse. Closed canopy and understorey containing sedges and shrubbery. ▪ Remnant vegetation beyond subject to future DA following planning proposal.	Riparian / Forest
South-east	▪ Industrial areas containing Council works depot.. ▪ Small triangular patch of unmanaged vegetation less than 1ha in area	Rainforest
South-west	▪ Central Coast Fire Control Centre and Wyong Operational Support Rural Fire Brigade. ▪ Small area of unmanaged grassland.	No Hazard / Grassland
West	▪ Rural properties. ▪ Patch of unmanaged remnant.	No Hazard / Forest

An assessment of slope using f and 1m contours was completed to determine the level of gradient which will most influence fire behaviour on the site and the effective slope class of bushfire hazards within 100m of the site. Asset Protection Zones (APZs) were calculated based on the vegetation and slope assessments and determine the Bushfire Attack Level (BAL). A summary of the acceptable solutions is provided in Table 23 below.

Table 23 Acceptable Solution BAL: Source MJD Environmental

Transects	Vegetation Classification	Slope Class	APZ (Table A1.12.1 PBP 2019)	Separation Distance	BAL
T01	Woodland	0-5° Downslope	50m	<12 12-<16 16-<23 23-<32 32-<100	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5
T02	Woodland	0-5° Downslope	50m		
T03	Woodland	0-5° Downslope	50m		
T04	Woodland	0-5° Downslope	50m		
T05	Woodland	0-5° Downslope	50m		
T06	Forest	Flat/Upslope	67m	<18 18-<24 24-<33 33-<45 45-<100	BAL-FZ BAL-40 BAL-29 BAL-19
T07	Forest	Flat/Upslope	67m		
T08	Riparian (Rainforest)	Flat/Upslope	38m	<8 8-<11 11-<16 16-<23 23-<100	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5
T09	Riparian (Rainforest)	0-5° Downslope	47m	<11 11-<14 14-<21 21-<29 29-<100	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5
T10	Forest	Flat/Upslope	67m	<18 18-<24 24-<33 33-<45 45-<100	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5
T11	Forest	Flat/Upslope	67m		
T12	Riparian (Rainforest)	0-5° Downslope	47m	<11 11-<14 14-<21 21-<29 29-<100	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5
T13	Remnant Vegetation (Rainforest per PBP A1.11.1)	Flat/Upslope	38m	<8 8-<11 11-<16 16-<23 23-<100	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5
T14	Grassland	Flat/Upslope	36m	<8 8-<10 10-<15 15-<22 22-<50	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5
T15	Grassland	Flat/Upslope	36m		
T16	Forest	0-5° Downslope	79m	<22 22-<29 29-<40 40-<54 54-<100	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5

Transects	Vegetation Classification	Slope Class	APZ (Table A1.12.1 PBP 2019)	Separation Distance	BAL
T17	Short Heath	Flat/Upslope	33m	<7 7-<9 9-<14 14-<20 20-<100	BAL-FZ BAL-40 BAL-29 BAL-19 BAL-12.5

The proposed development meets the performance criteria for access, providing safe operational access for emergency services personnel whilst occupants are evacuating the site. Direct access to the site shall occur from Arizona Road to the west and the Pacific Highway to the east. Development of the site will establish a road connection across the central watercourse, thereby enabling the school to utilise both existing public roads for site ingress/ egress. A third connection to the site will be made to Depot Road as part of the future school development.

The servicing of the development satisfies the acceptable solutions through connection to a reticulated water supply, provision for spacing and design of adequate hydrants, electricity supply and any future gas connections can be installed in accordance with the PBP guidelines. Several fire stations are located within the area to response in an emergency. A Bushfire Management and Evacuation Plan will need to be prepared for the school. Landscaping and ongoing fuel management will need to be maintained to complete the APZ stands within the PBP.

There is a minor non-compliance between Pavilion H and the nominated APZ on the northern boundary shown outlined in yellow in Figure 27 and Figure 28 affecting 352m² of GFA being approximately 1% of the total classroom area for the site and 266m² of outdoor space and amenities.

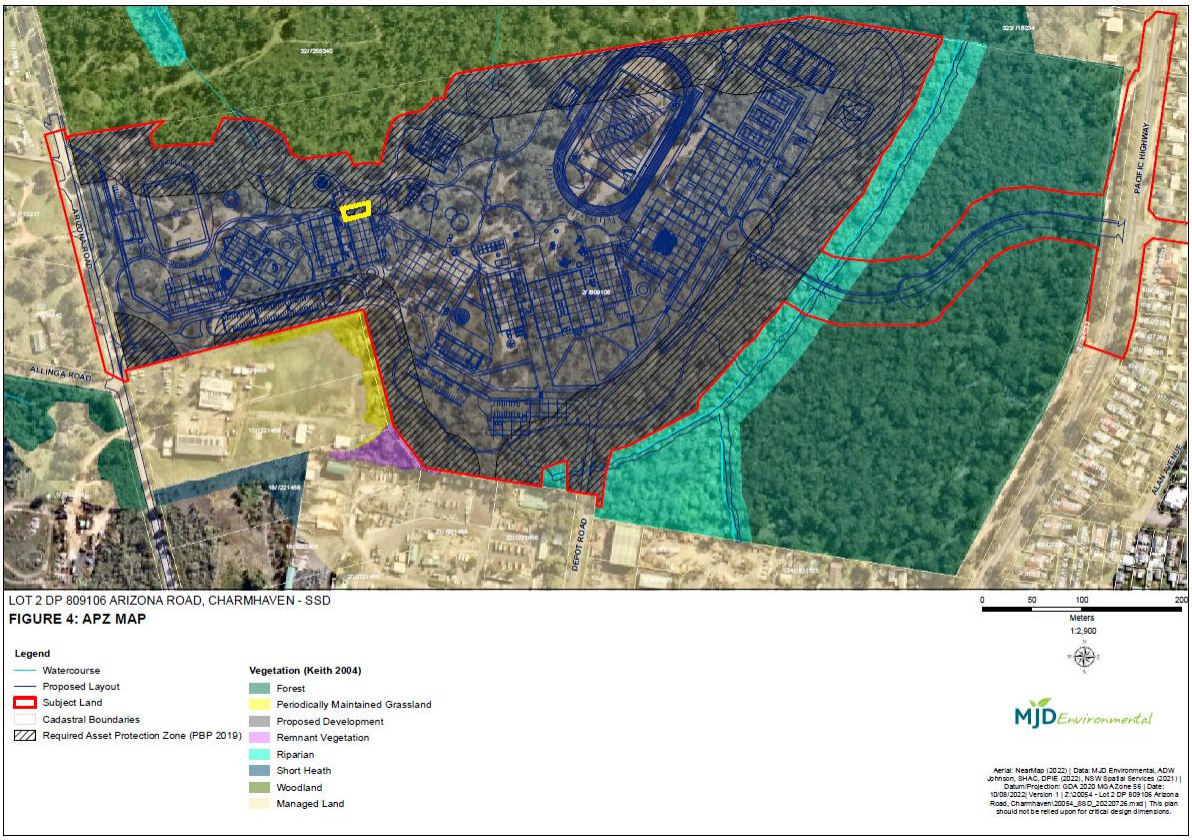

Figure 27 Non-Compliance in Context with Site (Source: MJD Environmental)

Figure 28 Inset of Non-Compliance (Source: MJD Environmental)

This part of the building comprises part of the library, practical activities and wet weather play space area, amenities block and tiered outdoor learning and performance space on the ground level and an

upper activity terrace on the first floor. The area is shown outlined in red, in Figure 28, Figure 30 and Figure 31.

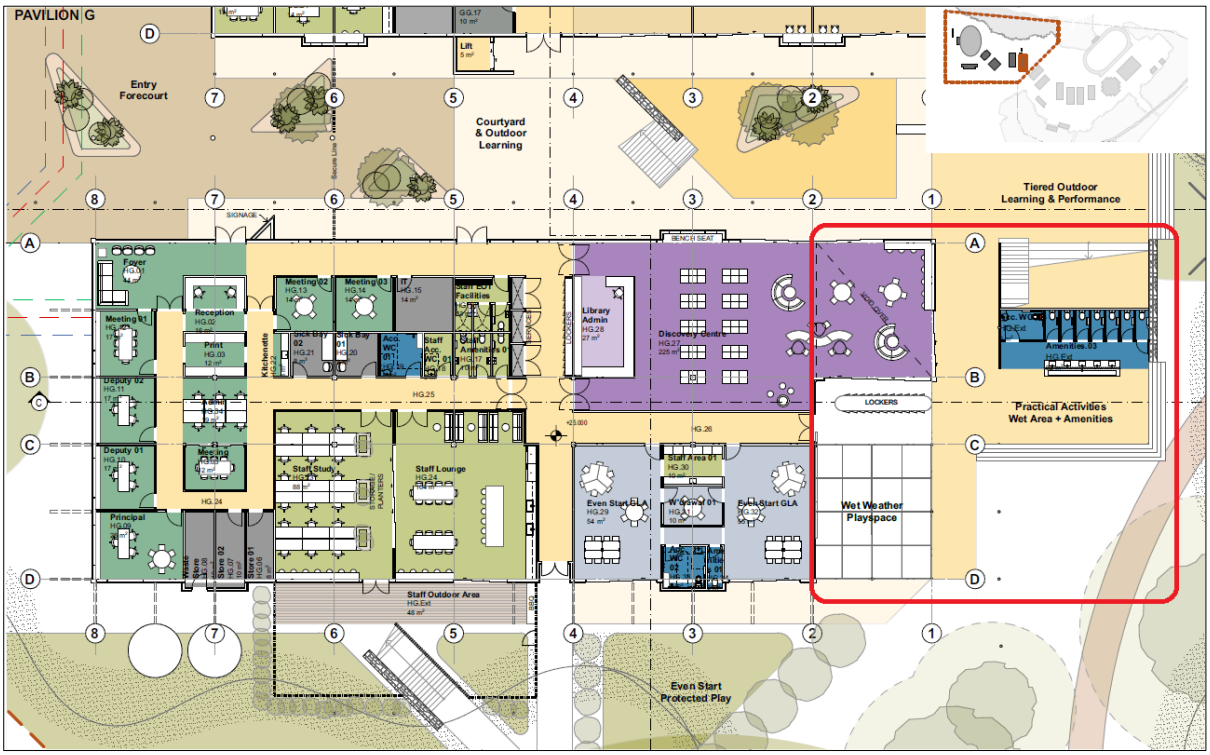

Figure 29 Area of Non-Compliance Ground Floor (Source: SHAC)

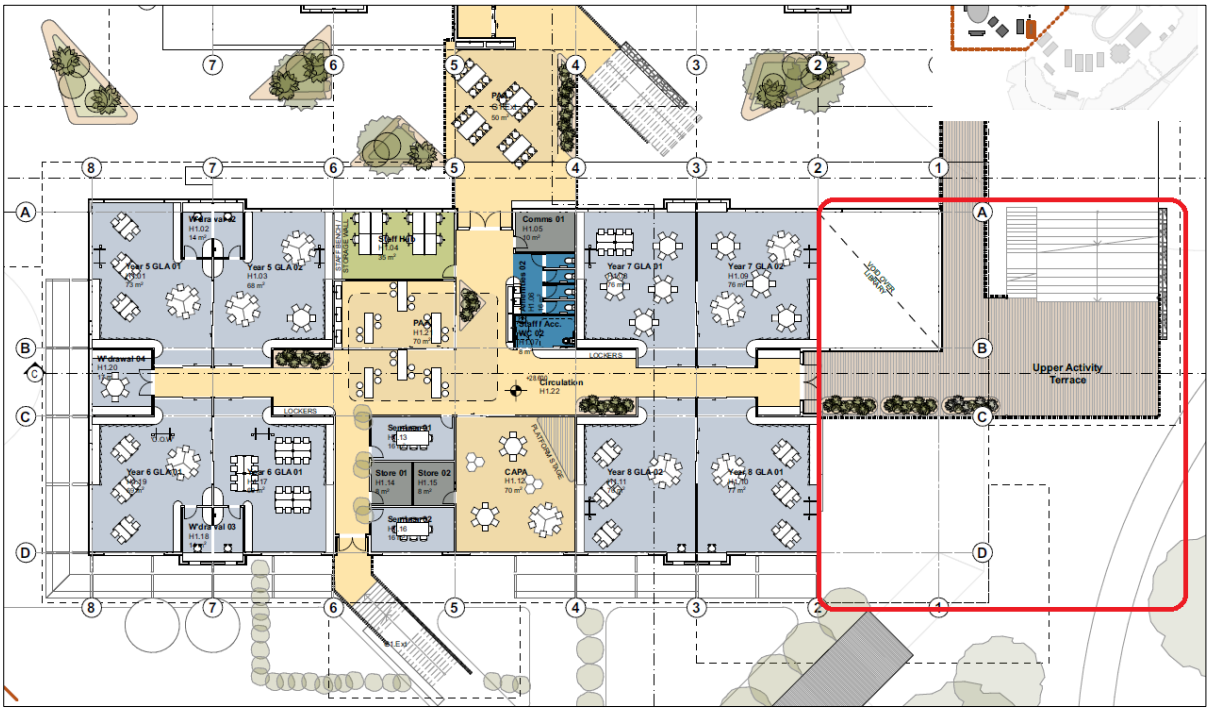

Figure 30 Area of Non-Compliance First Floor (Source: SHAC)

Figure 31 Area of Non-Compliance West Elevation (Source: SHAC)

The area of non-compliance is considered minor in relation to the whole development and can maintain a Bushfire Attack Level of 12.5, consistent with the remainder of the development in compliance with required mitigation measures.

Mitigation measures

The assessment recommended the follow mitigation measures to minimise bushfire hazards for the new school.

Asset Protection Zones

The school site is to be maintained to an IPA standard for life of development. Notably land proposed to be C2 Environmental Conservation will not require APZ management. The APZs required are detailed in Table 24.

Table 24 Required Asset Protection Zones Source: MJD Environmental

Transect	Vegetation Classification	Slope Class	APZ (Table A1.12.1 PBP 2019)
T01	Woodland	0-5° Downslope	50m
T02	Woodland	0-5° Downslope	50m
T03	Woodland	0-5° Downslope	50m
T04	Woodland	0-5° Downslope	50m
T05	Woodland	0-5° Downslope	50m
T06	Forest	Flat/Upslope	67m
T07	Forest	Flat/Upslope	67m
T08	Riparian (Rainforest)	Flat/Upslope	38m
T09	Riparian (Rainforest)	0-5° Downslope	47m
T10	Forest	Flat/Upslope	67m
T11	Forest	Flat/Upslope	67m
T12	Riparian (Rainforest)	0-5° Downslope	47m

Transect	Vegetation Classification	Slope Class	APZ (Table A1.12.1 PBP 2019)
T13	Remnant Vegetation (Rainforest per PBP A1.11.1)	Flat/Upslope	38m
T14	Grassland	Flat/Upslope	36m
T15	Grassland	Flat/Upslope	36m
T16	Forest	0-5° Downslope	79m
T17	Short Heath	Flat/Upslope	33m

Access

- Direct access to the site shall occur from Arizona Road to the west and the Pacific Highway to the east. Development of the site will establish a road connection across the central watercourse, thereby enabling the future school to utilise both existing public roads for site ingress/ egress. A third connection to the site will be made to Depot Road as part of the future school development.
- The Project has been designed with due regard to the requirements of Table 6.8b, and Appendix 3 of PBP.
- Services – Water supply, Gas and Electricity
- The Site will be connected to the reticulated water.
- The Site shall be connected to the existing power supply.
- Any future gas connection can be installed in accordance with the provisions of PBP.
- Fire hydrant spacing, design and sizing can comply with the relevant clauses of AS 2419.1:2005.

Landscaping and Fuel Management

- Consideration of PBP Appendix 4 was made within Stage 1 landscape design to minimise ongoing fuel management and the potential impact of bushfire on the site.

Emergency Management

- A Bush Fire Emergency Management and Evacuation Plan shall be prepared for the site as set out in Table 6.8d of PBP. A copy of the Bushfire Emergency Management and Evacuation Plan is to be provided to the Local Emergency Management Committee. Any existing emergency management plans must be updated to reflect the Project and RFS guidelines.

6.10 Flooding

Methodology

A Flood Impact Assessment (Appendix G22) was completed by ADW Johnson to address Item 16 of the SEARs. A review of the Wallarah Creek Catchment Flood Study by Catchment Simulations Systems (2016) and Brisbane Water Foreshore Flood Study 2010 were overlaid onto the development footprint to determine the potential flood risk and if any further designs solutions are required to mitigate risk. Impacts in respect of overland flow on and off the site were assessed using the U.S Army Corps of Engineers' River Analysis System (HEC-RAS) software to simulate one-dimensional flows through a full network of open channels, dendritic systems and single river reaches.

Existing environment

Councils flood mapping identifies the areas surrounding the second order stream being affected by flood. The extent of Councils flood precinct data shown in Figure 32 and the AEP 1% is shown in Figure 33.

Figure 32 Central Coast Flood Mapping with Development Overlay Source: ADW Johnson

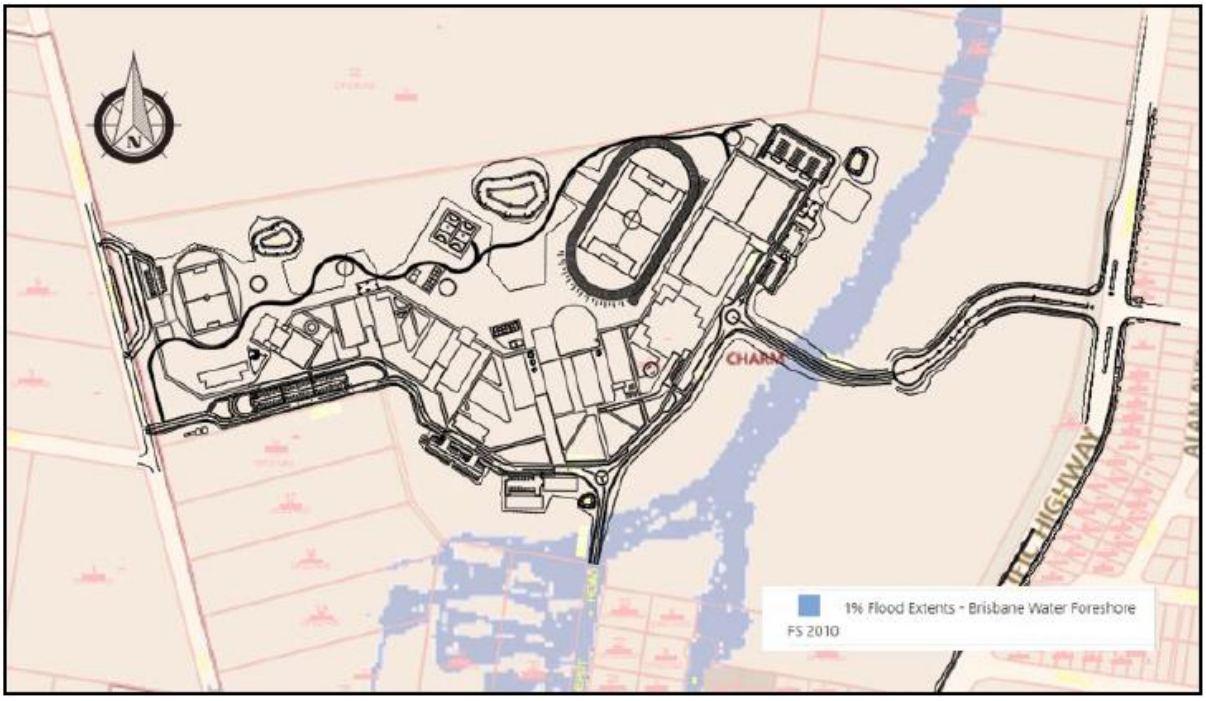

Figure 33 Council AEP1% Flood Extent with Development Overlay Source: ADW Johnson

Assessment

The overall development footprint is not affected by, or encroaches within, the areas within the flood extents. Section 4 of Appendix G22 details the modelling completed to determine overland flow. Overland flow within this location is limited to local catchment flooding without backflow implications. The extent of impact applies to the regions within the watercourse around the culvert crossings.

Potential impacts of climate change on flood risk on and off-site were assessed. Australian Rainfall and Runoff 2019 (ARR 2019) provides commentary on the Probable Maximum Flood (PMF), defined as the limiting value of flood (or largest possible flood) that could reasonably be expected to occur. The PMF is a hypothetical flood estimate not affected by the effects of climate change or any potential increase in rainfall intensities. The extent of the PMF event does not encroach on the development footprint the development is not affected by the PMF and commentary within ARR 19 suggests that the development will have a negligible impact on the magnitude of this event. Given that the site is located at the at the head of a first order and second order watercourses and the lowest point of the site is approximately RL 10m AHD, it is reasonable to consider that the site will be unaffected by sea level rise.

Mitigation measures

- The design of the culverts has been completed to ensure flows are not inhibited and safely convey upstream flows to provide road crossings that are not inundated in any storm events. The development does not increase flood impacts external to the local catchment area.

6.11 Stormwater Drainage

Methodology

A preliminary stormwater management plan has been prepared by a ADW Johnson (Appendix G23) that details the proposed drainage design for the site including on-site detention facilities, water quality measures and the nominated discharge point. The design is in accordance with Central Coast Councils Civil Works Specification Design Guideline 2020 and meet the targets of the Engineers Australia 'Australia Runoff Quality' – A Guide to Water Sensitive Urban Design.

The assessment included the completion of a desktop review of rainfall and flood data, establishing catchment areas to complete MUSIC and DRAINS modelling. The modelling informed the preliminary stormwater management system design to ensure that post development flow from the school does not exceed pre-development flows outside of the development.

Existing environment

There are three watercourses that drain most of the site as shown in Figure 34:

1. Unnamed tributary of Wallarah Creek – 2nd order Strahler watercourse bisects the eastern region of the site and exits at the north-eastern boundary.
2. Unnamed tributary of Wallarah Creek – 1st order Strahler watercourse exits the site. along the northern boundary; and
3. Unnamed tributary of Wallarah Creek – 1st order Strahler watercourse exits the site in the north-western boundary.

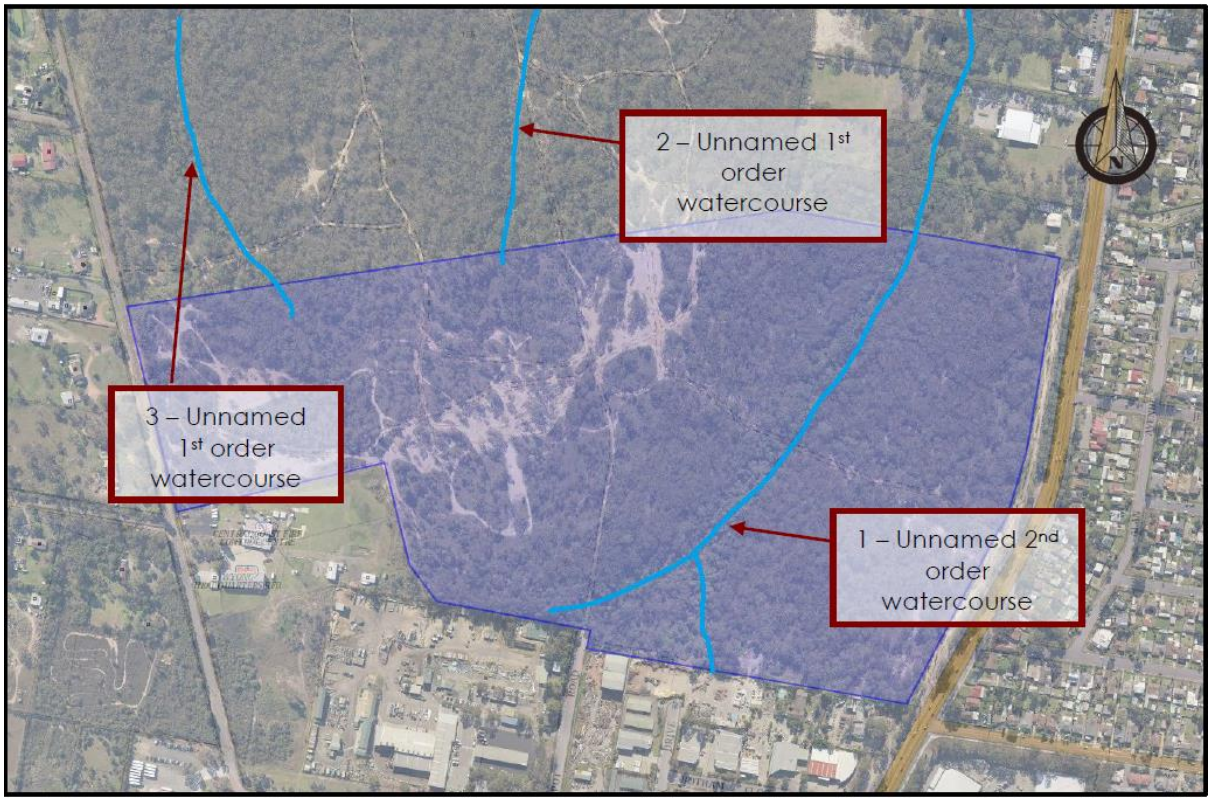

Figure 34 Existing Watercourse Network: Source ADW Johnson

The site is bisected by unnamed tributary of Wallarah Creek running through the site towards the northern edge of the site. The site is currently vacant and is largely vegetated noting some cleared areas. Majority of the site is of low to moderate slope (5-10%). The steeper slopes are primarily associated with banks of the watercourse that runs through the site.

Assessment

A DRAINS modelling confirmed the peak discharge from the site for both pre-development and post-development to inform the stormwater design. MUSIC modelling was used to simulate the source elements of the development to test the design in accordance with Council's modelling requirements. A summary of the results is identified in Table 25 below.

Table 25 Assessment Results Source: ADW Johnson

Catchment Area	AEP Storm Event	Pre-Developed Peak (m^3/sec)	Post-Developed Peak (m^3/sec)	% Reduction-Pre-Post
North	5%	0.369	0.366	0.8%
	1%	1.53	1.50	1.9%
East	5%	0.426	0.425	0.5%
	1%	1.77	1.30	26.5%
South	5%	0.225	0.225	0%
	1%	0.822	0.614	25.3%
West	5%	0.538	0.47	12.6%
	1%	2.23	2.23	0%

A water-quality treatment train consisting of rainwater tanks, turf-lined swales, gross pollutant traps and bioretention basins has been identified to appropriately treat stormwater runoff for pollutants prior to discharging from the site. A MUSIC model was prepared to simulate source elements for the proposed development. Modelling confirmed that the stormwater treatment train surpasses Council's pollutant reduction targets at each point of discharge and that the proposed development will not have any adverse impacts on the surrounding environment regarding stormwater quality.

6.12 Transport and Accessibility

Methodology

Appendix G25 provides a Transport Impact Assessment prepared by Stantec Consulting which undertook a review of the proposed development, and an analysis of the existing transport network within the enrolment boundary and operational impacts the proposed school will have on the existing and future transport networks in accordance item 5 of the SEARs. Consultation with the architect and school informed the design process for the effective operation and access from public roads, for pedestrian, bicycle, and vehicular arrangements, loading, unloading, parking, drop off zones and bus bays. An analysis of operational impacts was made to determine the modal split of all users, and the

estimated trip generation determined the overall impact the proposed school will have on the current and future transport network, based on SIDRA Modelling and forecasting. Mitigation measures and a Preliminary School Transport Plan were developed to reduce and manage the impacts of the development within the transport network.

Existing environment

Road Hierarchy

Section 2.2.3 of the report details the road hierarchy within the local network. The Pacific Highway is a classified State Road runs north south along the eastern boundary of the site. The following local two-way roads are identified as being suitable to provide direct and indirect access to the school as detailed within the design:

- Arizona Road
- Allinga Road
- Chelmsford
- Depot Road
- Mataram Road
- Jetty Avenue
- Hakone Road

There are three existing bus stops between 300-400 metres walking distance that can service the site in addition to a specific school route being provided in the future. There is limited pedestrian and bicycle paths around the site.

Base Operation of Network and Background Growth

SIDRA modelling was completed using baseline data obtained through traffic surveys and tube counts with a 1.5% per annum traffic growth rate applied to provide a conservative model to determine the current baseline traffic and intersection operation (refer to Table 26). The existing local road network surrounding the site operates well with spare capacity during the AM and PM peak periods. However, the key intersections with the Pacific Highway (namely Chelmsford Road/ Lake Haven Drive and Jetty Avenue) are approaching capacity and will require upgrades due to background growth in the next three years (i.e., by 2024 and 2025 respectively). Furthermore, the Pacific Highway/ Mataram Road intersection currently operates at Level of Service (LOS) F during the PM peak hour, primarily due to delays associated with the right turn movement from Mataram Road southbound onto the Pacific Highway.

Table 26 Intersection Operation – Base Traffic

Scenario	Peak	Approach	Degree of Saturation	Average Delay (Sec)	95th percentile Queue (m)	Level of Service
2021 Existing	AM	Lake Haven Drive	0.47	16.0	29.2	LOS B
	PM	Lake Haven Drive	0.77	20.7	71.6	LOS B

Scenario	Peak	Approach	Degree of Saturation	Average Delay (Sec)	95th percentile Queue (m)	Level of Service
2022 Base	AM	Lake Haven Drive	0.50	17.1	31.5	LOS B
	PM	Lake Haven Drive	0.80	22.5	78.8	LOS B
2023 Base	AM	Lake Haven Drive	0.52	18.2	33.9	LOS B
	PM	Lake Haven Drive	0.83	25.2	89.0	LOS B
2024 Base	AM	Lake Haven Drive	0.55	19.5	36.5	LOS B
	PM	Lake Haven Drive	0.86	28.8	102.5	LOS C
2025 Base	AM	Lake Haven Drive	0.59	21.8	41.5	LOS B
	PM	Lake Haven Drive	0.90	33.8	121.6	LOS C
2026 Base	AM	Lake Haven Drive	0.62	24.0	45.3	LOS B
	PM	Lake Haven Drive	0.96	45.8	169.6	LOS D
2027 Base	AM	Lake Haven Drive	0.66	27.2	50.7	LOS B
	PM	Lake Haven Drive	1.00	56.3	211.0	LOS E

Assessment

Catchment Area and Project

Section 6.3 of the report identifies the catchment area for the school comprising of three statistical regions, Warnervale/Waldalba to the west and south, Bluehaven to the north and Gorokan/Kanwal and Charmhaven to the east and south of the site. The modelling and scenarios completed by Stantec was based on background growth figure of 1.5%, provided by TfNSW, using the half hour peak concentrations between 7:30am to 8:00am and 2:30pm to 3:00pm and the details below provided by SPCCF.

The school will accommodate 1,500 school students and 83 children within the early learning centre. The proposed opening year for the school is 2025 with the increased capacity for the modelling was staged as follows:

- 2025 – 192 students and 22 staff.
- 2030 – 745 students and 95 staff.
- 2035 – 1,129 students and 143 staff.
- 2047 – 1,583 students and 199 staff.

Catchment data identified by SPCCF estimates the origin of traffic for the school will comprise of:

- 20% from the north.
- 20% from the east.
- 30% from the south.
- 30% from the west.

Operational Arrangements

Expected trip generation (Table 27) and Mode share (Table 28) for the proposed school has been based on a similar development by St Philip's in Cessnock for 2025 to 2028, future estimates are based on the targets expected as part of the green travel plan for the campus. The Project is expected to generate between 83 and 89 vehicles during the AM and PM peak half hours at year of opening in 2025, increasing to between 493 and 517 vehicles at full development (capacity) in 2047.

Table 27 Trip Generation

	School Population		Vehicle Trips	
Year	**Students**	**Staff**	**AM Peak**	**PM Peak**
2025	192	22	83	89
2026	278	33	120	129
2027	451	59	198	210
2028	541	69	237	252
2029	652	85	286	304
2030	745	95	304	313
2035	1,129	143	352	369
2047	1,590	199	493	517

Table 28 Car Mode Share

	Mode Share – Students		Mode Share - Staff	
Year	**AM**	**PM**	**AM**	**PM**
2025-2028	65%	50%	95%	95%
2029-2034	60%	45%	95%	95%
2035 onwards	45%	35%	80%	80%

It is important to reiterate that the existing intersection at Chelmsford Road and the Pacific Highway is currently at capacity and constrained and will fail by 2027 regardless of the school development. The impacts of the additional school traffic within the first two years of operation on the intersection were tested under two scenarios:

- 2025 further development: existing intersection layout modelled with projected 2025 traffic volumes (1.5% background growth) plus 2025 school student population of 192 students.
- 2026 further development: existing intersection layout modelled with projected 2026 traffic volumes (1.5% background growth) plus 2026 school student population of 278 students.

The operation of key intersections was assessed under Section 6.6 of the report. The outcomes of the modelling indicated that the increase in average delay for each approach of the intersection of 14 seconds delay except on the Lake Haven Drive approach. This approach increases by 30 second in 2025 and 60 seconds in 2026, the average delay for the intersection being 14.9 seconds a LOS of B in 2025 and LOS C in 2026. The degree of saturation of the Pacific Highway/Chelmsford Road/Lake Haven Drive within the PM peak is at capacity. The failure of the intersection will occur sooner with the additional

school traffic based on existing saturation levels. The Pacific Highway/Mataram Road intersection is also exceeds capacity and is currently failing with the Pacific Highway/Jetty Avenue intersection failing in 2025.

The operation of the above bays enables vehicles to drop off/pick up and depart the site in either direction towards Arizona Road or the Pacific Highway as required. The bus zone is located off Arizona Road and indented within the site. Buses can approach and depart onto Arizona Road. Sections 4, 5 and 6 of this report confirms the adequacy of these facilities.

Infrastructure Strategies

Two upgrade strategies were considered based on the above outcomes, to alleviate the impacts to the network. Being, upgrade the existing intersection or provide a new signalised intersection to the north, linking Jetty Avenue and a new access to the school site. The existing intersection can be upgraded by providing extended departure auxiliary lanes north and southbound along the Pacific Highway has the potential to extend the life of the roundabout, including the school traffic to 2030 before further intervention is required making this an interim solution at best. The alternative options is for a new four leg signalised intersection to be located on the Pacific Highway at Jetty Avenue which provides operational and safety benefits to the network. Traffic will have the ability for a right-hand turn from Jetty Avenue to head northbound on the Pacific Highway and have a dedicated crossing point within the vicinity of existing public transport infrastructure. The modelling indicates that the provision of double diamond phasing will be able to accommodate background growth and the traffic volumes of the whole development in both peak times with an acceptable level of service using a 140 second cycle.

It is important to note that TFNSW have undertaken minor works on the Pacific Highway to create a U – turn bay for traffic leaving Jetty Avenue, forcing traffic to turn left due to the safety concerns of traffic turning right. The proposed lights will provide a long-term solution to this existing problem and resolve this issue on the network.

Access Arrangements

For the first two years, access to the school will be from the primary frontage of the site, being Arizona Road. The northern end of Arizona Road will provide the bus bay in which buses will turn into the bay, set down or pick up, and return to Arizona Road. The southern entry off Arizona Road will provide the main vehicular access point to the school, with a kiss and drop bay located in front of the Welcome Centre and Junior School Province. Traffic from all directions will access the school from this frontage as indicated in Figure 35. Depot Road to the south is designated for delivery and maintenance vehicles only, school traffic will not be directed to this route.

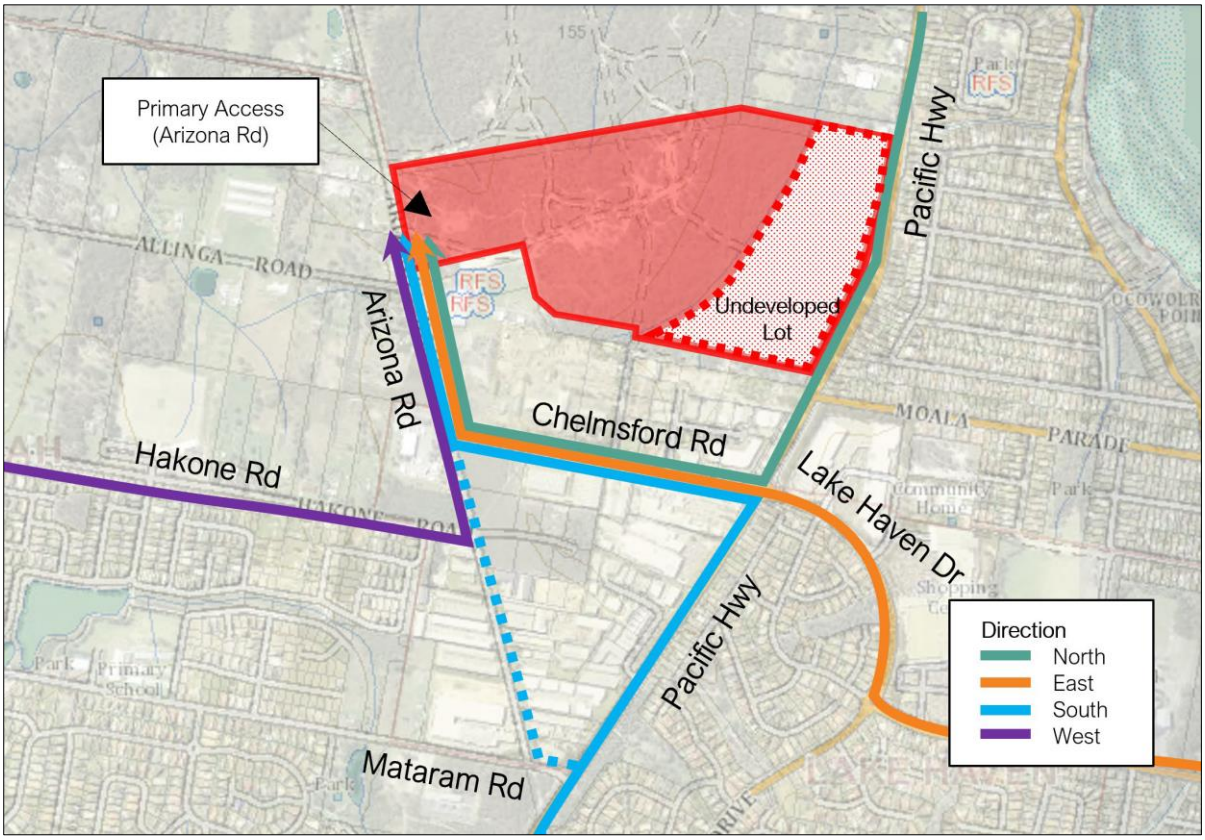

Figure 35 Single Access Scenario (Source: Stantec)

Construction of a new signalised intersection on the Pacific Highway at Jetty Avenue will provide an alternative access to services the school site and relieve constrained traffic conditions. Appendix G25 includes a preliminary concept design of the intersection. The dual access scenario is expected to change the travel behaviours and capture school related traffic from the north, east and south which will alleviate the pressure on the Mataram Road and Lake Haven Drive intersections to the south as shown in Figure 36.

It is expected that the delivery of the intersection on to the Pacific Highway at Jetty Avenue will take approximately 3 years to complete, including detailed design, TFNSW approvals, tendering and construction. However, the initial works for the school is expected to be completed in approximately 18 months. As a result, to allow the school to open prior to the completion of the new intersection, it is proposed to allow the school to open with a cap of 278 students, until such time as the Jetty Street intersection has complete and is available to the school to use.

This initial opening of the school will lead to the failure of the Chelmsford Street and the Pacific Highway intersection, however only on a single leg, being the one from Lake Haven Drive. It is important to note that the intersection is expected to fail regardless of the opening of the school. The delivery of the new Jetty Road intersection will relieve the pressure on the roundabout regarding school traffic.

If the school is required to upgrade the Chelmsford Road intersection, this will create more capacity in the roundabout in the short term and would likely lead to the delay in the delivery of the Jetty Street intersection until approximately 2030.

The implications of this approach are as follows:

- The school pays for the upgrade of infrastructure at Chelmsford Road that is on the verge of failure. The cost of this upgrade should be borne by others due to its current state. To request the school to pay the cost of this upgrade is unreasonable given the infrastructure is on the verge of failure and is expected to fail in the next few years regardless of whether the school is built or not.
- There is currently a concern with traffic leaving Jetty Avenue and the new intersection will resolve this existing safety hazard in the short term, if the roundabout is upgraded this will delay the delivery of the Jetty Street intersection.
- There is delivery of the lights will create a safe place for future students and residents to cross the Pacific Highway to attend the school. Delaying the delivery of these lights would endanger children crossing the Pacific Highway to come to school.
- The area adjacent to the Pacific Highway within the site, identified as the undeveloped lot, has been identified as future employment generating land in the Draft Warnevale Structure Plan. The intersection would provide future access to this site to increase the likelihood of the delivery of the business park which is expected to deliver approximately 600 jobs. Delaying the intersection risks missing out on this important project.

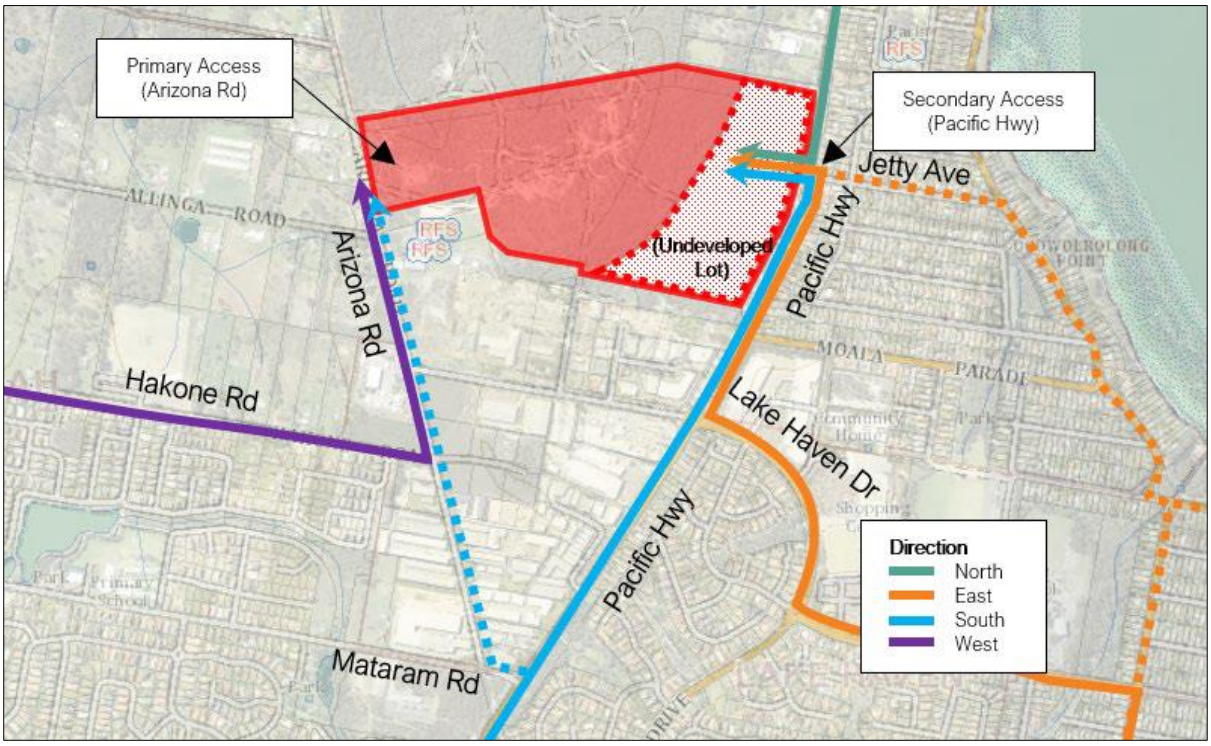

Figure 36 Dual Access Scenario (Source: Stantec)

Construction Traffic

Requirements for the preparation of a detailed Construction Pedestrian and Traffic Management Plan (CPTMP) are indicated within Section 8 to ensure the construction works will:

- minimise the impact on pedestrian and cyclist movements,
- maintain appropriate public transport access,
- minimise the loss of on-street parking,
- minimise the impact on adjacent and surrounding buildings,
- maintain access to/ from adjacent buildings,
- restrict construction vehicle movements to designated routes to/ from the site,
- manage and control construction vehicle activity near the site, and
- to carry out construction activity in accordance with approved hours of works.

Car Parking and Kiss and Drop

Car parking for the school, has been determined using the rates outlined within the CCDCP 2022 as a guide. The relevant rates being:

- Early learning / Child Care – 1 drop off space for each 6 children and 1 space per employee.
- Primary - 1 space per 1 staff member and 14 drop off spaces per 100 students.
- Secondary - Staff: 1 per 1 Staff member and 1 per 8 Senior Students, 7 drop off spaces.

For both Primary and Secondary:

- Visitors: 1 per 100 Students.
- Minimum of 2 spaces for disabled students for each primary and secondary (minimum of 4 for the development).

The following table shows the cumulative assessment of students, staff, and car parking provision over the four stages of the project.

Table 29 Car Parking provision

Stage One (554 students and 83 Narnia / Prep children)	Required	Proposed	Difference
Staff (65)	65	80	
Senior (129)	17		
Narnia and Prep Staff (15)	15	21	
Narnia and Prep Drop off spaces	14		
Total	**111**	**101**	**-10**

Stage Two (1076 students, including DALE)	Required	Proposed	Difference
Staff (136)	136		
Senior (269)	34		
Narnia and Prep Staff (15)	15		
Narnia and Prep Drop off spaces	14		
Total	**199**	**161**	**-38**

Stage Three (1454 students, including DALE)	Required	Proposed	Difference
Staff (159)	159		
Senior (438)	55		
Narnia and Prep Staff (15)	15		
Narnia and Prep Drop off spaces	14		
Total	**243**	**191**	**-52**

Stage Four (1500 students, including DALE)	Required	Proposed	Difference
Staff (184)	184		
Senior (480)	60		
Narnia and Prep Staff (15)	15		
Narnia and Prep Drop off spaces	14		
Total	**273**	**271**	**-2**

Whilst there will be some deficiency in Stages 1, 2 and 3, on completion of the school sufficient parking is provided onsite, with a minor deficit of two spaces.

There are 13 spaces for people with a disability throughout the carparks, exceeding the requirements.

The CCDCP 2022 was used as a guide to determine the kiss and drop space calculation, 14 drop off spaces per 100 students for primary and 7 drop off spaces for a secondary school. The assessment

Table 30 Kiss and drop assessment.

		Required	Proposed	Difference
Junior School	492			
Middle School (Years 5 + 6)	176			
Primary Subtotal	*668*	94		
Middle School (Years 7 + 8)	352			
Senior School	480			
Secondary Subtotal	*832*	7		
Total	**1500**	**101**	**65**	**-36**

Under the CCDCP 2022 the calculation identified that 101 drop off spaces required for school, exclusive of drop off spaces provided for Narnia and Prep. The development provides 65 kiss and drop space, which is a deficit of 36 space in accordance with the CCDCP rate. However, the mode share analysis outlined in the TIA, anticipates a decline in the numbers of students and staff using private vehicles over first ten years of the schools' operations. This will mean that demand for kiss and drop spaces and staff car parking will also decline over time.

Motorcycle Parking

Motorcycle parking is to be provided at a rate of at least 1 motorcycle space per 50 car spaces in accordance with the Central Coast DCP 2022. Based on a proposed provision of 250 parking spaces, five motorcycle spaces should therefore be provided. These are not currently shown on the site layout plans but can be readily substituted in place of car parking spaces during subsequent design development stages.

Bicycle Parking

The Planning Guidelines for Walking and Cycling contain suggested bicycle parking rates for different land use types. The suggested bicycle parking provision for schools is five per cent for staff and 10 per cent for students/ visitors as summarised in the table below.

Table 31 Bicycle Parking

	Required	Proposed	Difference
Staff (5%)	10		
Students (10%)	158		
Total	168	168	0

The development will include provision for 168 bicycle parking spaces at full development, distributed across the school campus at various locations as shown on the architectural plans.

Mitigation measures

The following mitigation measures have been identified to satisfactorily reduce the traffic impacts generated by the development:

- Installation of a four-leg signalised intersection to be constructed within two years of the school operating.
- The opening of the first stage of the school limited to 278 students until the Jetty Street intersection is complete.
- Green travel plan to be developed and implemented by the school.
- Re-routing of school traffic and minimising travel distances on the surrounding road network, particularly for traffic travelling from the north, east and south.
- Opportunities at nearby side streets or accesses for traffic to cross or enter the Pacific Highway, due to the platooning effects associated with traffic signals.
- Increased safety for vehicles exiting Jetty Avenue (and other adjacent side roads) and intending to travel north, with a dedicated traffic signal phase provided for this purpose.
- Opportunity to potentially divert some existing traffic away from the already constrained Lake Haven Drive.
- Benefits along Arizona Road, with a reduction in the volume of school traffic using the Arizona Road site access.

6.13 Waste Management

Methodology

A Waste Management Plan (WMP) was prepared by MRA Consulting Group to address Item 18 of the SEARs and is contained in Appendix G26. The WMP considered demolition, construction and operational waste management practices and requirements for the proposed development. In preparation of the WMP, the requirements of the following documents were addressed:

- The Wyong Local Environmental Plan 2013 (WLEP)
- The Wyong Development Control Plan 2013 (WDCP)
- Wyong Shire Council Waste Control Guidelines 2015
- NSW EPA (2019) Better Practice Guide for Resource Recovery in Residential Developments.
- NSW EPA's (2012) Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities.

Existing environment

The site is surrounded by a mixture of land uses including the Central Coast Rural Fire Service (RFS) facility and industrial uses to the south, the Pacific Highway, residential dwellings and Budgewoi Lake to the east, rural and larger lot properties to the west and undeveloped land to the north. The site itself remains undeveloped and is well vegetated. There are currently no structures on site and the need for a hazardous materials survey is not required.

Assessment

Demolition Waste

The proposed development will occur on a parcel of land which is undeveloped, and as such no demolition of buildings or structures will occur. Notwithstanding this, the Project will necessitate the clearing of trees and vegetation across the lot prior to construction works, and a small amount of excavated material is also expected to be generated from site preparation works. It is expected that this material will be generated in quantities that can be either reused onsite for fill material through construction or vegetation shredded and used as mulch in landscaping.

Construction Waste

Waste storage during construction operations will involve some stockpiling and separation of reusable material, as well as placement of skip bins for the separation of construction materials for recycling. A skip bin for residual waste or contaminated material will also be made available at the site for disposal where necessary. Waste streams expected to be generated during the construction phase of the developments is outlined in the table below.

Table 32 Construction Waste Management

Waste Type	Quantity (m^3)	Reuse	Recycling	Disposal	Methods of reuse, recycling, and disposal
Excavation material	1,000-1,500	✓	✓	–	On site: testing (if necessary) for contamination and stockpiling of material for reuse as fill material. Reuse onsite for backfilling or landscaping. C&D processor: reuse/ recycling of VENM and ENM Landfill if contaminated.
Concrete	<100	✓	✓	–	On site: to be separated wherever possible to enhance resource recovery. C&D processor: crushing and recycling for recovered products (aggregates).
Bricks/pavers	<20	✓	✓	–	On site: cleaned and separated wherever possible for reuse or to enhance resource recovery. C&D processor: recovery for reuse where possible, crushing and recycling for recovered aggregate products.

Waste Type	Quantity (m^3)	Reuse	Recycling	Disposal	Methods of reuse, recycling, and disposal
Tiles (Interior & Roof)	Minor	✓	✓	–	On site: cleaned and separated wherever possible for reuse or to enhance resource recovery. C&D processor: recovery for reuse where possible, crushing and recycling for recovered aggregate products.
Timber (engineered/ treated)	<10	–	✓	–	On site: to be separated wherever possible to enhance resource recovery. Reuse: surplus and offcut material returned to manufacturer for reuse. C&D processor: recovery and recycling for recovered product (e.g., mulch) or organics processing.
Metals (ferrous and non-ferrous)	<10	–	✓	–	Onsite: to be separated wherever possible to enhance resource recovery. C&D processor: metals recovery and recycling.
Plasterboard	<15	✓	✓	–	On site: to be separated wherever possible to enhance resource recovery. Reuse: surplus and offcut material returned to manufacturer for reuse.
Glass	Minor	✓	✓	–	On site: to be separated wherever possible to enhance resource recovery. Reuse: surplus and offcut material returned to manufacturer for reuse where possible. Glass recycler: recovery and recycling.
Fixtures and fittings	Minor	✓	✓	–	On site: reuse wherever possible or return to manufacturer. Reuse:

Waste Type	Quantity (m^3)	Reuse	Recycling	Disposal	Methods of reuse, recycling, and disposal
					surplus and offcut material returned to manufacturer for reuse where possible. C&D processor: recovery and recycling.
Floor coverings	<10	✓	✓	–	On site: to be separated wherever possible to enhance resource recovery. Reuse: surplus and offcut material returned to manufacturer for reuse where possible. C&D processor: recovery and recycling.
Garden organics (Vegetation)	<5	✓	✓	–	Garden organic waste from landscaping. Organics processor: storage on-site (from minor excavations) processing for recovered product (e.g., mulch or other blended recovered fines) or organics treatment.
Containers (cans, plastic, glass)	Minor	–	✓	–	Commercial contractor: recycling.
Packaging materials (pallets, cardboard, plastic film, etc)	<20	–	✓	–	Commercial contractor: segregation of paper, cardboard, or other streams.
Residual waste (general refuse)	<10	–		✓	Separate recyclables where possible and disposal at principal licensed waste facility.
Hazardous/ special waste	Unknown	–		✓	Management by a licensed asbestos and site hygienist should hazardous or special waste be found at the site.

Waste Type	Quantity (m^3)	Reuse	Recycling	Disposal	Methods of reuse, recycling, and disposal
(e.g., spills and contaminated wastes)					

Operational Waste

The WMP assessed the projected operational waste generated for the proposed students and staff, as well as a 230m^2 café which is open to staff, parents and visitors.

In total, the site is expected to generate the following volumes per week:

- General Waste = 13,475L
- Paper and Cardboard = 16,365L
- Recycling = 16,365L
- Food waste = 13,475L

General waste and recycling streams will be stored in bulk mobile garbage bins (MGBs) for collection by a waste service provider (WSP). A substantial proportion of the general waste stream is made up of food waste which has resource recovery potential.

Section 4.3 of the WMP breaks down the bin requirements for each school area including the recommended bin infrastructure for temporary bin hold areas. The bulk bins will be stored in the bin hold area near the senior school waste room and collection point.

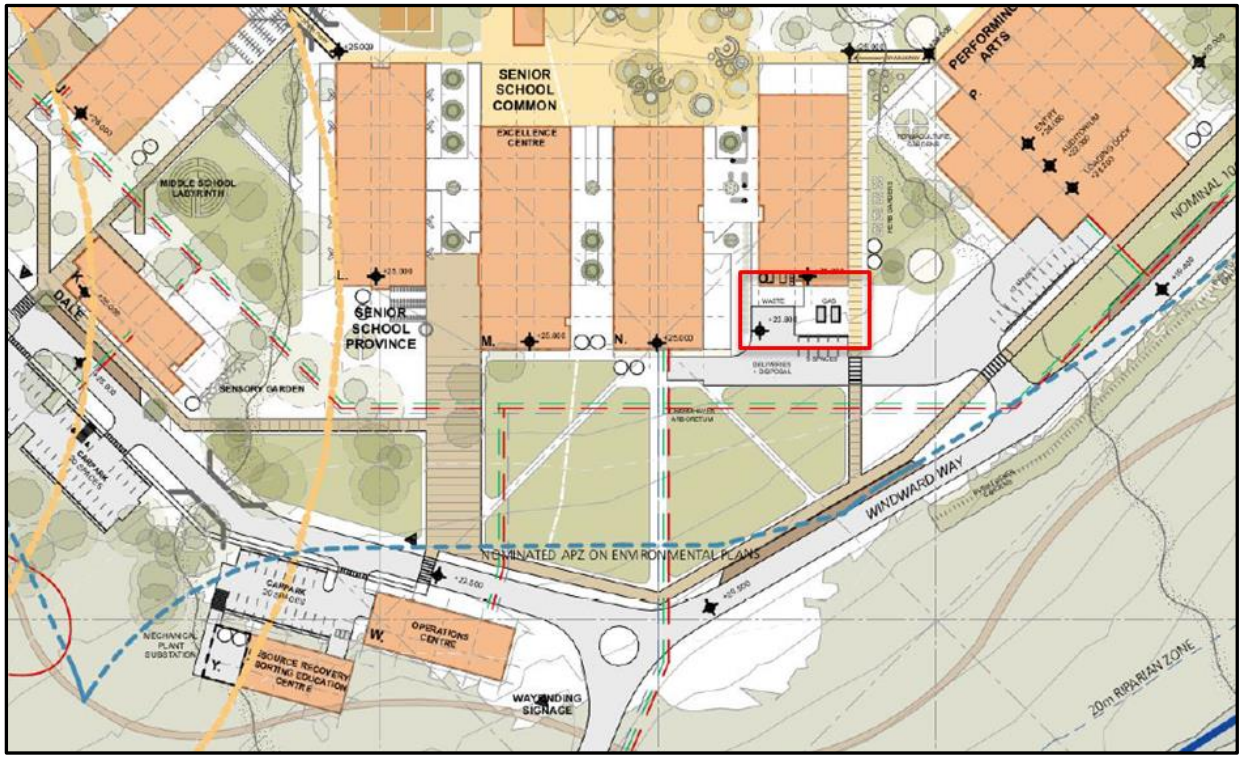

Figure 37 Proposed Bulk Bin Hold Area (in red). Source: adapted from SHAC

Collection will be conducted by a private waste contractor, using either a standard rear-loading vehicle, front-loading vehicle, or hook-lift truck. The collection vehicle will enter and exit the site in a forward-facing direction and may either reverse or drive forward into the waste loading area. There are no overhead obstacles in this area and will have sufficient space for a front-lift or hook-lift mechanism. Scheduled waste collection will occur outside the ordinary school operating hours of 7am to 8pm.

The collection schedule for the various waste streams is proposed as follows:

- General Waste: Two 3m³ bins emptied three times a week.
- Commingled Recycling: Two 3 m³ bins emptied three times a week.
- Paper and Cardboard: One 1.5 m³ bin emptied once a week.
- Other waste streams may be collected irregularly or less frequently than once per week, depending on specific needs.
- Two 240L confidential paper waste bins will be collected once a month, screened for contaminants, shredded, and baled before it is sent for reprocessing.

Mitigation measures

The Project will implement a range of different waste management practices to manage and mitigate the risks posed by problem wastes including the following:

- Secure Document Destruction Waste – Two 240L lockable MGBs will be provided for collection and destruction of confidential paper and media materials, monthly. This would

include business records, personnel records, medical/health records, contracts and tenders, office files, archive files, video tapes, CDs, DVDs, and microfiche.

- Batteries and Printer Cartridges – batteries and printer cartridges will be stored in allocated bins and collected on an as needed basis, at the request of the user, when the provided bins become full. Bins for this purpose can be retained in the main photocopy room, administrative office, or computer labs.
- E-Waste – A waste or specialist E-waste management contractor may be engaged to provide bins for the collection on E-waste generated at the Campus. E-waste bins can be serviced on a regular basis or as needed when bins become full, by the engaged contractor.
- Light Globes and Fluorescent Tubes – Light globes and fluorescent tubes are typically managed by the electrical contractor, with old and damaged units being taken away upon their replacement.
- Bulky Waste (Furniture) – Unwanted furniture can be stored onsite and collected on a regular basis or as required.
- Clinical/Sanitary Waste – Sanitary (including clinical waste where applicable) waste handled by trained (or qualified) personnel using appropriate personal protective equipment and stored in dedicated bins and containers for collection by an appropriate qualified and licensed service provider for transport to a facility appropriate for the purpose of disposing of that waste. Clinical waste containers may be stored in the school sick bay for collection as required.

In addition to the above, the school will implement a waste management system to effectively manage waste and mitigate the risk of the environment. The waste management system will:

- Provide educational materials and information on sorting methods for recycled waste, awareness of waste management procedures for waste minimisation and resource recovery.
- Maintain a valid and current contract with a licensed waste service provider for waste and recycling collection and disposal.
- Make information available to students, visitors, and site staff about waste management procedures.
- Collect waste from ground floor ancillary services in a mobile waste management/janitor trolley, for direct disposal into designated bins retained in the waste storage area.
- Manoeuvre bins to specified onsite collection point prior to and following scheduled collection of waste bins.
- Organise, maintain, and clean waste management areas as part of a regular maintenance schedule (every 3-6 months); and
- Maintain equipment and infrastructure for waste where possible (within the means of staff).

6.14 Soil and Water

Methodology

The assessment of soil and water is provided within the Preliminary Geotechnical Assessment (Refer to Appendix G27) prepared by RCA Australia and Stormwater Management Plan (SWMP) completed by ADW Johnson (refer to Appendix G23), to address Item 17 of the SEARs for the proposed development. Earthworks associated with the development are provided within the Earthworks Commentary completed by ADJW Johnson (refer to Appendix G28).

Existing environment

The Gosford-Lake Macquarie 1:100,000 Geology Map indicates that the site is within the Tuggerah Formation described as comprising grey to green-grey laminate, red-brown claystone, and siltstone, interbedded with fine to medium grained green-grey sandstone. The landscape is characterised by undulating low hills and rises on lithic sandstones of the Tuggerah Formation with broad crests and ridges, long gentle slopes, and broad drainage lines and moderately deep (0.5 metre to 1.5 metre) soils. Contours from LiDAR data indicate the site surface elevation falls from a high point of about 28 metres AHD at the southeast corner of the site down to 10 metres AHD on the northern boundary of the site where the watercourse flows off the site.

Ground slopes over majority of the site range from areas of relatively level ground near the centre of the site to slopes of some 3° to 4° generally falling towards the water course on the eastern half of the site and toward to north over the western half of the site. The site contains three watercourse which provide drainage for most of the sites, one of the unnamed water courses enters from the south and exits to the northeast boundary. bisecting the school site from the eastern portion of the site.

Assessment

Searches of the NSW water register confirmed there are no known water licences associated or existing approvals associated with the watercourses on the site resulting in minimal impacts to adjacent licensed water users, related infrastructure, adjacent licensed water users.

A detailed and consolidated site water balance analysis was provided in Section 7.0 of the SWMP. The flows from the development are adequately captured to ensure pre-development surface water is maintained. Rainwater tanks and connection to a reticulated water supply ensure an adequate and secure water supply for the life of the project.

Minor impacts on surface, groundwater, and watercourses, will be occur during the construction of the culverts detailed in Civil Engineering Design in Appendix G24. The design of two culverts proposed on the 2nd order 1st order water courses, do not inhibit the flow of the watercourses, and prevent the inundation on the proposed roads during a storm event. during construction. Clean water entering the site from upstream will be diverted around the site where possible to remain clean.

Approximately 57,110m³ of materials will be excavated and reused (compacted fill) on site during construction. An additional 1150m³ of fill is required, this will be obtained by either an on-site borrow pit for works to be contained within the site or be imported from an off-site source. The variation over the site is expected to be between 4m of excavation and up to 4m of fill based on the existing site topography and building design.

Any runoff generated will be treated and managed using treatment devices such as silt fencing, strawbale, geotextile fencing, kerb inlet controls and sediment traps, sandbags, shaker ramps, diversion drains and sediment basins. Works, for each stage of construction, will generally be carried out in the following sequence:

Stage 1:

a) Install sediment fencing around downslope areas of the site.
b) Install a stabilised site access point.

Stage 2:

a) Construct diversion drains to divert clean water from upstream catchments around disturbed areas.
b) Construct diversion drains to divert all runoff from disturbed areas to sediment basins.

Stage 3:

a) Strip the disturbed area and place topsoil into a stockpile; and
b) Place sediment fencing to the downslope side of the stockpile.

Stage 4:

a) Place turf to road verges.
b) Mulch all other disturbed areas.
c) Remove erosion sediment controls once permanent landscaping and complete ground rehabilitation has been achieved.

The Dooralalong and Catherine Hill Bay Acid Sulfate Soil Risk Map indicates that the site is situated in an area of no known occurrence of acid sulfate soil materials. An Acid Sulfate Soils Management Plan is not required for the development.

Mitigation measures

The following controls and mitigation measures are to be applied to the site during construction.

- All land shall be protected from erosive forces with vegetation, paving, armouring, etc. as outlined in the engineering plans.
- A sediment fence or mulch berms, barrier fence and diversion drain will be installed where shown on the soil and water management plan and elsewhere, where required at the

discretion of the Site Superintendent. Sediment removed from such devices shall be relocated to a location where pollution of downstream lands cannot occur.

- The area disturbed should be minimised to works area only and reinstated immediately on completion of works in the area.
- Dust suppression is to be used on access roads and stockpiles.
- Acceptable bins shall be provided and emptied, when necessary, in an appropriate manner.
- Weekly inspections by the Site Superintendent shall be carried out to ensure the following:
  a) All erosion control devices are operational, and all drains and sediment fences are clear of trapped sediment and are well maintained.
  b) Areas subject to high velocity flows are clear of construction materials.
  c) Rehabilitation areas do not require additional maintenance and are working effectively to reduce the erosion hazard of the site.
  d) Additional erosion control devices are employed if necessary.
  e) Temporary soil and water management devices are removed at the end of the construction and rehabilitation period.
- Each inspection shall be recorded by the Site Superintendent in a logbook that is kept onsite and accessible authorised persons on request. As a minimum, the logbook entries shall include:
  a) Inspection date.
  b) Current weather conditions and recent rainfall events.
  c) The condition of the soil and water management devices, vegetation, and downstream areas.
  d) Any required repairs or additions to the soil and water management control devices.
  e) The need for dust prevention or irrigation.

6.15 Mine Subsidence

Methodology

A Preliminary Geotechnical Assessment was prepared by RCA Australia to address Item 20 of the SEARs for the proposed development. The Preliminary Geotechnical Assessment Appendix G29 extends an initial geotechnical assessment previously completed by RCA Australia in 2020. The additional geotechnical fieldwork conducted in June 2021 undertook the following investigations:

- Preparation of a slope stability assessment in accordance with guidelines set out in Australian Geomechanics LRM 2007. Excavation of four test pits over the easter portion of the site to depths ranging from 0.75 metres to 1.6 metres. Test pits were excavated using a 5.5T excavator with a 600mm bucket.
- Completed in situ sampling and testing of disturbed samples and undisturbed 50 mm diameter tube samples.
- In addition to this, a Mine Subsidence and Geotechnical Conditions Review was undertaken based on the mine plan of board and pillar workings in the Great Northern seam to assess subsidence risk by a structural engineer, Northrop and is provided Appendix G29.

Existing environment

The site is identified within the Swansea North Entrance mine district with Subsidence Advisory with Guideline 2 being applicable to the site. The site conditions determined by RCA identified subsurface conditions to consist typically of very stiff residual soil to around one metres in depth, underlain by weathered sandstone with a preliminary classification of M, site reactivity of the residual soil layer. The parameters are provided in Table 33, are generally on the lower end of the scale.

Table 33 Proposed Mine Subsidence Parameters Used (Source:Northrop)

Parameter	Absolute Worst Case
Maximum Subsidence (m)	0.3
Maximum Tensile Strain (mm/m)	0.5
Maximum Compressive Strain (mm/m)	0.8
Maximum Tilt (mm/m)	2.3
Tensile Radius of Curvature (km)	17.5
Compressive Radius of Curvature (km	12

Assessment

Provide details of how mine subsidence has been considered and addressed in the proposed development, including a detailed desktop geotechnical study of the recorded workings to provide a more accurate assessment of the risk of subsidence to the development that incorporates a sensitivity analysis and an examination of the likelihood of pillar punching failure of the floor and roof in the Great Northern seam workings.

The architectural master plan was reviewed against the Preliminary Geotechnical Investigation Assessment. The two storey buildings will have a maximum relative ground subsidence value around 100mm, spanned across the length of the building the peak differential settlement will be around 25mm and can be easily mitigated with shallow foundations isolated from the ground and minor reinforcements within the slab design. The Sports Centre will experience up to 300mm of ground subsidence based on the length of the building, by adopting a waffle pod slab on ground, the building can be readily isolated from ground strain effects with a thin blinding layer of sand. The structure needs to be articulated/jointed to accommodate the subsidence values. The drainage services in the buildings will need to incorporate an additional fall of 2.3mm per metre for maximum tilt.

Mitigation measures

The proposed design can incorporate the construction requirements identified as part of the construction drawings to be certified by structural engineer prior to the issue of a construction certificate. These shall include:

- Two Storey Buildings - Shallow foundations, isolated from the ground, with a reinforced concrete frame building designed in accordance with the requirements of the concrete structures Australian standard AS3600 -2018 is required in the suspended slab.

- Sports Centre – Steel structure, supported on waffle pod slab on ground designed for Class M site in accordance with Australian standard AS2870-2011: Residential slabs and footings.
- The structure of the building (cladding, wall framing and slab) will require articulation to accommodate the subsidence values.
- Drainage services for the buildings to provide a fall of 0.23%.

6.16 Aviation

A report was completed by Rehbein Airport Consulting to address the requirements under Section 22 of the SEARs and is provided in Appendix G30.

Methodology

A review of design plans was completed, to consider the potential impact of the proposed development on the following:

- Rural Fire Service operational requirements for the helicopter landing sites located on the adjacent NSW Rural Fire Service Control Centre (RFSCC) site.
- Protected operational airspace of the nearby Warnervale aerodrome (Central Coast Airport)
- Other relevant National Airports Safeguarding Framework (NASF) guidelines.

Existing environment

A preliminary evaluation of the existing obstacle environment by desktop assessment, obstacle survey data was not available for the helicopter land site (HLS) and a site inspection was not undertaken for the RFSCC. The evaluation determined a consistent obstacle height of approximately 10m within the area surrounding the HLS and school site.

CCA

Warnervale aerodrome comprises of a single sealed runway 02/20, with restricted movements permitted between 10pm and 6.30am local time. The aerodrome is not certified under the *Civil Aviation Safety Authority Part 139 (Aerodromes) Manual of Standards 2019.* The site is considered an aeroplane landing area (ALA) with the responsibility on the pilot to determine the suitability of the site.

Assessment

RFSCC

The proposed development may have impacts on the operation of the adjacent RFSCC due to the proximity of the development to the RFS HLS. These impacts may arise from buildings and other obstacles intruding into the specified obstacle limitation surfaces, but also from other factors. The presence of the proposed development, in particular the nature of its use, may affect helicopter operator decision making to approach or depart the RFS Control Centre over the site, due to the large numbers of people that may be affected. Confirmation must be obtained from the RFS and helicopter operators on the impacts the proposed development will have on the RFSCC operations due to:

- Infringement of buildings into the specified obstacle limitation surfaces for Performance Class 1, 2 and 3 helicopter operations respectively; and
- The nature and use of the site in relation to its compatibility with helicopter operations, and the potential impact on RFSCC operations and effectiveness (i.e., ability to respond in emergency situations) if flight paths over a sector from the northwest clockwise to an easterly direction cannot be flown.

The relationship between the school and RFCC operations is shown in Figure 38.

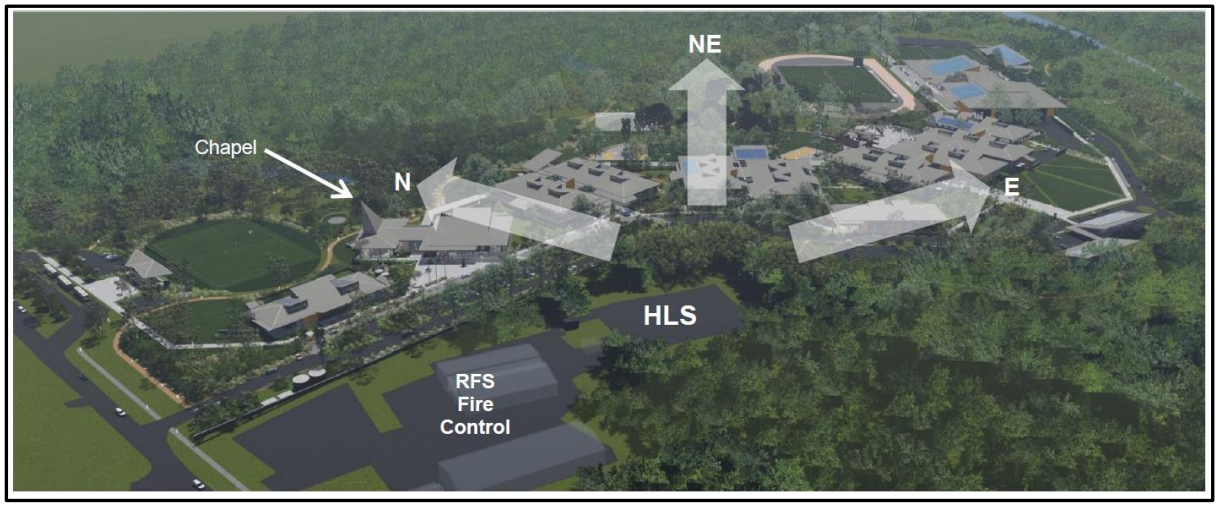

Figure 38 Proposed OLS Relationship: Source Rehbein

Table 34 provides a summary of the operations assessment based on information that was publicly available.

Table 34 Performance Class Assessment: Source Rehbein

PC Operation	Required Slope	Building	Extent of Intrusion	Impacts on Flight Paths
1	4.5%	Chapel	7m	Avoidance to of the obstacle possible if it is identifiable and the incline raised to 10.7m and 4.5% slope.
2	12.5%	Chapel	8m	Yes, precludes paths due North, depending on operator. All other directions remain clear.
		Welcome Centre	3.6m	
		Pavilion G	2m	
3	8%-16%	Chapel	10.8m	

PC Operation	Required Slope	Building	Extent of Intrusion	Impacts on Flight Paths
		Welcome Centre	5.1m	Yes, precludes paths north, and northeast depending on operator. All other directions remain clear.
		Pavilion G	2m	
		Pavilion H	1.5m	
		Pavilion I	2m	
		Pavilion J	2m	

CCA

The proposed development is not expected to impact the protected operational airspace of the Warnervale Aerodrome. In relation to other National Airports Safeguarding Framework guidelines, the proposed development is within the 8km Wildlife buffer zone. Attachment 1 to NASF Guideline C identifies 'Sports facility' and 'Park/Playground' as a Recreation Land Use with a Wildlife Attraction Risk as 'moderate' and indicates that proposed developments within an 8km radius must 'mitigate'. In accordance with Guideline C risk mitigation measures must be developed in consultation with the aerodrome operator and qualified bird and wildlife management experts.

Mitigation measures

Confirmation by the RFS and helicopter operators is required to determine the extent to which different types of operations may be affected by the proposed development and any mitigation measures that may assist their operations. While the report states, *"the only building which appears to intrude on the OLS as defined is the point-shaped Chapel roof ridge proposed at 47.8 m AHD. This infringes the PC1 OLS by approximately 7 m. However, it is a relatively isolated obstacle and, if it is sufficiently visible, it is considered likely that helicopter operators would be able to adjust flight path directions slightly to avoid it."* (Page 13)

Confirmation must be obtained from the RFS and helicopter operators on the impacts the proposed development will have on the availability of flight path directions and the consequential impact on RFSCC operations and effectiveness (i.e., the ability to respond in emergency situations), if flight paths over a sector from the northwest clockwise to an easterly direction cannot be flown due to an inability to comply with legal flight requirements or other pilot decision making.In accordance with Guideline C risk mitigation measures must be developed in consultation with the aerodrome operator and qualified bird and wildlife management experts.

6.17 Social Impact

Methodology

A Social Impact Assessment (SIA) was prepared by Aigis Group to address Item 9 of the SEARs for the proposed development (Appendix G31). The SIA was prepared to comply with the requirements of the Department of Planning and Environment (DPE) Social Impact Assessment Guideline and adjunct Technical Supplement, to the extent practicable in the context of the project. The preliminary reports of specialist consultants were also considered in the formulation of proposed avoidance, management and mitigation initiatives that may be employed by the school in respect of the potential for impacts resulting from the Project.

The demographic profile supporting the assessment of the social baseline for the project was primarily based on data drawn from the Australian Bureau of Statistics (ABS) 2016 Census data. The analysis in the SIA established the social baseline for the proposed school, as the Wyong Statistical Area Level 3 (SA3).

The SIA included stakeholder engagement which utilised a letterbox drop of engagement material to 11 properties, for which 2 responses were received. The responses are included in the assessment of social impacts noted below.

Existing environment

Having regard for the primary and secondary enrolment catchment areas for the school, the SIA established the social baseline and demographic profile based on the Wyong Statistical Area Level 3 (SA3). The summary characteristics for the social locality compared to the Lake Macquarie Local Government Area (LGA) and state of NSW were noted as follows:

- Gender distributions broadly similar across the locality, LGA and state.
- Age distributions for the SA3 and LGA were similar, noting, however that the SA3 area had a higher proportion of residents aged 0 to 14 years than the LGA and NSW.
- Economic indicators demonstrated that the SA3 had generally lower income and wealth levels than the LGA and state of NSW. This was consistent with the trend for regional areas to have generally lower economic indicators than the NSW average.
- Religious affiliation indicated that the SA3 had a higher proportion of residents identifying as Christian when compared with the LGA and NSW.

A review of school enrolment data indicated that independent combined schools in the area have increased enrolments at a greater rate than government and Catholic schools over recent years. Government school enrolments have declined marginally, Catholic school enrolments have increased modestly whilst independent school enrolments have increased strongly. Enrolment data published by the Australian Curriculum Assessment and Reporting Authority (ACARA) showed that in the period from 2014 to 2020, non-government independent school enrolments grew 12.5% whilst government school enrolments decreased 3.3% over the same period. Data published by Independent Schools

Australia (ISA) showed that between 1970 and 2020, there has been a sustained increase in independent school enrolments, at a faster rate than government schools, particularly since 1990s.

The SIA included a review of baseline population growth projections to 2041 from DPE and TfNSW sources. The results showed that most of the Lake Macquarie LGA population increase will occur in the Wyong SA3 over this period, likely to be influenced by the identified, regionally significant urban release areas around Warnervale and Wadalba, and the potential for further land release and population increase in the Bushells Ridge area.

Assessment

The social impacts of the proposed development are expected to be generally positive. The proposed new school will be strategically located within the LGA to accommodate a substantial part of projected population growth. The school will also address the strong demand for independent school education.

The school will also provide ongoing direct employment to teachers, administrative and support, and maintenance staff. This is likely to involve full-time, casual, and occasional employment opportunities. This increase in employment is also consistent with regional social and economic aims, in respect of generating employment, and will also support the households of future employees.

Following stakeholder engagement, some preliminary issues were raised as potential adverse social impacts associated with the development. School-related traffic generation is considered the most material potential social impact. The materiality of this effect, however, is likely to be mitigated due to the existing traffic context. Traffic associated with existing and future commercial uses in the vicinity of the site will be adaptable to morning and afternoon peaks during school terms. The nature of the businesses in the existing light industrial/commercial area are such that a substantial proportion of vehicle movements would generally take place before and after school traffic peaks. As such, movements during other times of the day are likely to be relatively unaffected. The inclusion of traffic management infrastructure and onsite parking in project design may also facilitate the movement of traffic around the school, providing further mitigation of effects.

Preservation of C2 Environmental Conservation Area was also identified as a matter of concern, and this aspect of the site will be preserved. In addition to this, it is noted that contamination risks associated with asbestos and PFAS on the site will be suitably addressed through a remediation action plan and is expected to result in positive outcomes for other land users in the area.

Noise concerns were also raised, with specific reference to the potential for aircraft noise to impact students, particularly DALE students due to the proximity to helicopter activity associated with the RFS Fire Control Centre. Notwithstanding this potential noise impacts on students, the SIA noted that the Statutory Bush Fire Danger Period runs from 1 October to 31 March each year. This coincides with approximately seven (7) weeks of the school holiday period, in which the school would be significantly less occupied, and thus less subject to noise impacts from the presumed greater intensity of RFS aerial operations that may occur during the danger period.

Mitigation measures

Longer term effects are likely to be largely related to increased vehicular and pedestrian traffic, consistent with the use of the site as a school. The Transport Impact Assessment (TIA) for the site indicates that there is capacity in the local road network to accommodate the additional traffic. As the operator of several school campuses in a variety of urban settings, SPCC is familiar with promoting compliance with general and specific road use rules as they relate to a school site. Promotion of road safety rules specific to the school's immediate area, to students, staff, and other school-related parties, will contribute to ensuring the safest achievable environment.

School operations will be subject to well-developed operational plans and protocols. Given the highly regulated nature of the sector, it is assumed that a substantial element of management planning is mandatory. As SPCC is a highly experienced education provider with several operating schools in various areas, SPCC will develop and implement such plans which will be treated to be equivalent to a Social Impact Management Plan, in terms of aims, function and intended outcomes.

6.18 Ecologically Sustainable Development

A Sustainable Design assessment was completed by Steensen Varming to address the SEARs requirements relating to Ecologically Sustainable Development. Clause 6(2) *Protection of the Environment Administration Act 1991* outlines the four principles of ESD that have been considered in this EIS and are addressed in Table 35 below.

Table 35 ESD Considerations

ESD Principal	Comment
The ***precautionary principle***, namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by— careful evaluation to avoid, wherever practicable, serious, or irreversible damage to the environment, and an assessment of the risk-weighted consequences of various options,	The project site has been selected to minimise the amount of greenfield / park land that will be used. The landscape strategy has been developed to enhance the environmental performance of the land, including integration of native plant species and incorporation of water sensitive urban design features to passively manage storm water falling on the site and enhance biodiversity.
inter-generational equity, namely, that the present generation should ensure that the health, diversity, and productivity of the environment are maintained or enhanced for the benefit of future generations,	The project will minimise the impacts on the environment through: ▪ Resource efficiency measures and selected low embodied carbon materials and using recycled materials where possible. ▪ Energy, water and waste reduction and conservation measures to reduce consumption of resources. ▪ Landscape strategies and WSUD features to enhance biodiversity and the site's ability to passively control stormwater. ▪ Connection to country – Integration of indigenous and aboriginal design considerations and features.
conservation of biological diversity and ecological integrity, namely, that conservation	The landscape strategy considers the protection of existing ecological features, and the design

ESD Principal	Comment
of biological diversity and ecological integrity should be a fundamental consideration,	will enhance the overall biodiversity and ecological performance of the site.
improved valuation, pricing, and incentive mechanisms, namely, that environmental factors should be included in the valuation of assets and services, such as— polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance, or abatement, the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste, environmental goals, having been established, should be pursued in the most cost-effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.	A sustainability strategy is being developed for the project to assess a wide range of sustainability strategies between the client, design team and stakeholders. Strategies have been developed to achieve the highest sustainability and environmental performance while aiming to remain within budget and minimise high costs

The GANSW Environmental Design in Schools was considered along with best practice sustainable building practices in view of resource conservation measures and minimising resource consumption. Table 36 summarises the measures identified within Section 5 Appendix G32.

Table 36 Resource Conservation (Source: Steenson Varming)

Resource	Conservation Measures
Energy	▪ Building form (facades, natural light, ventilation). ▪ Passive design principles. ▪ Building envelope performance. ▪ Mixed modal ventilation strategy. ▪ Building energy performance improvements (exceed NCC level by 10%). ▪ Energy efficient LED lighting, zoning, controls, and site coordination.

Resource	Conservation Measures
	▪ Occupancy controls (Systems can be shut down both automatically and manually). ▪ Performance glazing, glazing ratio and position. ▪ External shading. ▪ Building airtightness (automatic doors/revolving doors). ▪ Thermal mass. ▪ Solar Panels. ▪ High efficiency heating cooling and ventilation system. ▪ CO^2 monitoring. ▪ Building management systems. ▪ Comprehensive system commissioning. ▪ Switching to renewable energy and building electrification.
Water	▪ Water efficient fixtures/fittings to be specified. ▪ Rainwater reuse for landscape irrigation and toilet flushing. ▪ Fire Systems test water capture for reuse. ▪ Efficient water management (reuse, wastewater management, leak detections, monitoring and managing). ▪ Drip and demand and controlled irrigation. ▪ Native species of plant for low water demand landscape strategies.
Materials and construction	▪ Sustainable timber – Timber products used for concrete formwork, structure, wall linings, flooring and joinery will be sourced where possible from reused, post-consumer recycled or FSC-certified, or PEFC certified timber. ▪ Steel – will be specified to meet specific strength grades, energy-reducing manufacturing technologies, and off-site fabrication. Steel will also be sourced with a proportion of the fabricated structural steelwork via a steel contractor accredited by the Environmental Sustainability Charter of the Australian Steel Institute. ▪ Recycled concrete – The project aims to reduce the use of Portland cement through substitutions. Fine and coarse aggregate inputs are to be sourced from manufactured sand or other alternative materials, and the amount of Portland cement will be reduced within the concrete mix. ▪ High recycled content or recyclability – Furniture items with high recycled or recyclability content to be considered.

Resource	Conservation Measures
	▪ Site waste management plan. During the demolition and construction phase, a project-specific site waste management plan (WMP) will be developed and implemented, for recycling of demolition and construction waste.
Emissions	▪ Water Sensitive Urban Design (WSUD) integrates water cycle management with urban planning and design. The aim of WSUD is to manage the impacts of storm water run-off from the development to protect and improve waterway health by replicating the natural water cycle. As part of the WSUD, the development will aim to incorporate rainwater reuse and storm water management. ▪ Storm water pollution prevention - This would include implementation of measures to prevent storm water contamination, to control sedimentation and erosion during construction and operation of the building. The storm water drainage system can prevent storm water contamination, control sedimentation and erosion during construction and operation of the building. ▪ Pollution of night sky will be minimised by ensuring that the electric lighting within the site will not cause any direct beam of light into the night sky. Light pollution can disturb the habitat of migratory birds and impacts the behaviour of nocturnal animals in the site vicinity.
Climate Change (Climatic variables and NARClim projections).	▪ Passive Design Optimisation for buildings. (Increasing insulation R-values / Glazing ratios and performance / Shading / Air tightness / Heat recovery / etc.). ▪ Allow for natural ventilation and good air flow in indoor and outdoor areas to allow for some increase in temperatures during peak times while maintaining comfortable conditions. ▪ Increase in plant capacity in buildings to accommodate increased temperatures. ▪ Provision of trees and covered walkways for shading to connect outdoor spaces with buildings. ▪ Use of soft landscape to reduce the heat island effect and improve outdoor thermal comfort. ▪ Where possible, include cool paving with high albedo surface and hardscaping and roofing materials with high Solar Reflectance Index (SRI) being mindful of glare.

Resource	Conservation Measures
	▪ Include planting around parking and other areas adjacent to hardscaped areas to improve shading and to reduce the heat island effect. ▪ For landscaping, select native species with low water requirements. Include Water Sustainable Urban Design features such as bioswales, raingardens, permeable paving, and attenuation tanks in paving systems to contribute towards natural absorption and water detention against potential increased storm events. ▪ Collect and reuse rainwater from roofs to be used for irrigation and potentially other uses if possible. ▪ Reduce Water consumption through efficient irrigation systems and efficient water fixtures. ▪ Design hardscape levels to allow for passive irrigation. ▪ Selection of robust materials. Include shading around external plant areas for improved cooling performance. ▪ Maximise landscaping ▪ Include onsite energy generation where possible (On roofs and other structures such as shading).

6.19 Economic Impacts

The proposed development will have a significant positive economic impact within the Central Coast LGA, and the immediate local area.

The SEARs require the EIS to be accompanied by a detailed calculation of CIV. The report within Appendix G9 provides a CIV value of The Project of $420,454,000.00. This value is based on the interpretation advice received from DCDID regarding PS 21-020. Direct investment for major projects is based on CIV calculations within PS 21-020 and has been previously misinterpreted. Noting the recognised risk of projects not being delivered due to underestimated capital investment. On this basis, escalation and contingency rates have been calculated for construction works up to the midpoint of The Project (from 2027-2033) in alignment with the definition of Section 3 of the Regulation and PS 21-020.

The overall CIV of the proposed works is $420,454,000.00. It is noted that the works are to be staged over 10 plus year construction timeframe, however even the initial stages of development will generate economic benefit due to construction activity, which, when economic multipliers are applied, will have a positive influence on the local economy.

In addition, growth of the school will generate operational jobs for both teaching and non-teaching staff up to 199 FTE. Moreover, the availability of student places and the enhancement of quality educational facilities as the only non-government school in the Wyong will serve to attract more population and economic activity to the area.

While the economic impacts of the school can be determined in terms of direct employment in the school based on likely teacher numbers and supporting administration staff and the expected jobs demonstrated from construction activities on the site, which is likely to be in the order of 1800 jobs over the life of the project, based on 9 jobs being created directly and indirectly, as a result of the construction of the school, it is the long term benefits of providing a good education which are difficult to measure.

Deloitte Access Economics (Deloitte Access Economics, 2016), provides a study that considered the overall economic benefits, of improving education standards for students when measured against a 5% improvement in academic outcomes across the board. Broadly speaking this led to key economic drivers for capital growth, including human capital, increase in the labour force, building works, technological progress and institutions which lead to a $26 Billion increase in GDP over 50 years.

Similarly in relation to the economic returns from individual student outcomes, through average direct increase in wages as a result of being better educated and obtaining better wages, an increase in indirect wages generally through obtaining higher education and then ultimately improving labour productivity.

Overall, the annual increase in economic return is estimated to be $12 Billion over 50 years nationally.

It is difficult to understand what the economic benefits are locally as a result of building a new school, which is accessible to existing and future children in the area. Some will stay in the area, other will move away. It is demonstrated from the Deloitte study that increasing educational opportunities and lifting education outcomes is likely to lead to long term economic outcomes for not just the individual but also the region and State in the long term.

7 Project Justification

This chapter provides a justification and evaluation for the whole project, having regard to the economic, environmental, and social impacts of the project and the principles of ecologically sustainable development.

As outlined in this EIS

- The development will provide for a new independent school within a notable growth area within the Central Coast.
- The site is zoned RU6 Transition which is identified as a 'prescribed zone' under Clause 3.36, under Chapter 3 of the TI SEPP. This clause permits development for the purpose of a school to be development with consent within a prescribed zone.
- The subdivision of the land is sufficiently related to The Project and promotes the orderly, economic, and efficient use of resources to support the community within the Central Coast.
- The Project has been designed such that the school remains sympathetic to the bushland setting and character of the location and respects visual and acoustic amenity of adjoining or adjacent residential dwellings.
- The Project is consistent with the objectives of relevant planning controls and achieves a high level of planning policy compliance and design excellence.
- Flooding constraints applying to the site have been thoroughly investigated and accounted for in the project design, no buildings are within the flood planning level and offsite flood impacts will remain within acceptable limits.
- Management of transport impacts has been integral to the design of the Project, which features a staged response to mitigating traffic impacts through improvements to access and road infrastructure.
- Biodiversity impacts will be minimal, with vegetation removal to be offset in accordance with the BDAR recommendation, and compensatory planting to occur within the site as per the landscape master plan.
- The Project respects the Aboriginal cultural heritage of the site and surrounds.
- The Project will result in the development of a high-quality educational environment for staff and students, with sporting and cultural facilities to be made available for community use – providing a positive social impact and relieving demand for public facilities; and
- The Project will contribute positively to energy efficiency and environmental sustainability. The design has incorporated many ESD features to reduce energy consumption during the life of the proposed development.

The Project satisfies each item within the SEARs. All reasonably foreseeable environmental impacts have been identified and assessed, and mitigation measures applied or recommended where necessary.

Considering the above and the content contained in this EIS, it is recommended that the Department approve this SSD Application, subject to appropriate conditions.

8 References

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9 Appendices

9.1 Appendix A – SEARs Compliance

Requirement	Location in EIS or Application	Supporting Technical Report(s)
General Requirements		
Executive Summary	Page 15	-
Need for the development	Section 3.2	
Justification for the development	Section 3.2	
Suitability of the site	Section 2.3 – Key Features of the Site	Appendix G7 – Concept Design Report Appendix G13 – Visual Impact Assessment Appendix G25 – Transport Impact Assessment Appendix G17 - Statement of Heritage Impact Appendix G15 - Aboriginal Cultural Heritage Assessment Report. Appendix G16 – Archaeological Report Appendix G14 - Biodiversity Development Assessment Report Appendix G21 - Bush Fire Assessment Report Appendix G22 - Flood Impact Assessment Appendix G27 - Preliminary Geotechnical Investigation Assessment Appendix G19- Detailed Preliminary Site (Contamination) Assessment Appendix G20 – Site Improvements Options Plan
Alternatives considered	Section 2.6 – Options considered	Appendix G7 – Concept Design Report

Requirement	Location in EIS or Application	Supporting Technical Report(s)
Likely interactions between the development and existing, approved, and proposed operations in the vicinity of the site	Section 2.4 – Cumulative impacts; Section 5.2 – Affected Land Owners.	Appendix G31 – Social Impact Assessment
Description of proposed building works	Section 3 – The Project	Appendix G2 – Architectural Plans Appendix G5 – Infrastructure Servicing Report. Appendix G24 – Preliminary Engineering Design
Existing/proposed staff and student numbers, hours of operation	Section 1.2 – Project Summary and 1.3 Project Overview	
Details of any proposed before/after school care services and/or community use of school facilities.	Section 3.4 – Project Details	
Site Survey Plan		Appendix G1
Detailed Constraints Map identifying the key environmental and other land use constraints that have informed the final design of the development.	Section 2.3 – Key Features of the Site	Appendix G2 – Sheets SSD3000, SSD3001.
Site Survey Plan		Survey Plan by De Witt Consulting – Appendix G1
Constraints Map	Section 2.3 – Key Features of the Site	Appendix G2 – Architectural Plans (Sheet SSD3000)
Architectural Plans elevations, and sections		Appendix G2 - Architectural Plans

Requirement	Location in EIS or Application	Supporting Technical Report(s)
Cladding, window and floor details, external materials		Appendix G2 – Architectural Plans Sheets SSD4008, SSD4013, SSD5104, SSD5307, SSD5313, SSD5605, SSD5413, SSD5519, SSD5525,
Site plan showing all infrastructure and facilities (including any infrastructure and facilities that would be required for the development, but the subject of separate approvals process)	Section 3.4 - Project Details	Appendix G5 – Infrastructure Servicing Report Appendix G2 – Sheet SSD3001
Signage plans and details including size, location, and finishes	Section 3.4 – Signage	Appendix G3 – Arizona Road Signage
Staging Plan	Section 3.5 – Staging	Appendix G2 – Sheets SSD4001
Construction and decommissioning details	Section 3.5 – Sequencing	Concept Design Report – Appendix G7 – Page 70
Construction and operational jobs	Section 6.19.	
Detailed assessment of the key issues		
Detailed assessment of the key issues identified below, and any other significant issues identified in the risk assessment.	Refer to Key Issues section below.	Refer to Key Issues section below.
Consolidated summary of all the proposed environmental management and monitoring measures, identifying all commitments included in the EIS.	Appendix E – Mitigation Measures	
The reasons why the development should be approved and a detailed evaluation of the merits of the development, including	Section 2.6 – Analysis of Project Alternatives; Section	

Requirement	Location in EIS or Application	Supporting Technical Report(s)
consequences of not carrying out the development.	7 – Project justification	
QS Report detailing Capital Investment value as per Schedule 7 (formerly Clause 3) of EP&A Regulation		Appendix G9 - Site Masterplan Capital Investment Value Estimate
Key Issues		
1. Statutory and Strategic Context		
State Environmental Planning Policy (Planning Systems) 2021	Section 4.8 and Appendix C	
State Environmental Planning Policy (Biodiversity) 2021	Section 4.8	Appendix G14 – Biodiversity Development Assessment Report
State Environmental Planning Policy (Transport and Infrastructure) 2021	Section 4.8	Appendix G25 – Traffic Assessment Report
State Environmental Planning Policy (Industry and Employment) 2021	Section 4.8	Appendix G3 - Arizona Road Signage
State Environmental Planning Policy (Resilience and Hazards) 2021	Section 4.8	Appendix G27 – Geotechnical Assessment Report. Appendix G19 – Detailed Preliminary Site (Contamination) Assessment. Appendix G20 – Site Improvement Options Plan. Appendix G14 – BDAR
Central Coast Local Environmental Plan 2022	Section 4.9	
Strategic Context		

Requirement	Location in EIS or Application	Supporting Technical Report(s)
NSW State Priorities	Section 2.1	
Central Coast Regional Plan 2041	Section 2.1	
State Infrastructure Strategy 2022 – 2042 Staying Ahead	Section 2.1	
Future Transport Strategy 2056	Section 2.1	
Crime Prevention through Environmental Design (CPTED) Principles	Section 2.1	Appendix G2 – Sheet SSD3101 and Appendix G8 – Section 5.2
Better Placed: An integrated design policy for the built environment of New South Wales (Government Architect NSW (GANSW), 2017).		Appendix G8 – Section 7
Healthy Urban Development Checklist (NSW Health, 2009).		Appendix G8 – Section 7.4
Draft Greener Places Design Guide (GANSW).		Appendix G4 – Landscape Strategy and Design Report
Wyong DCP (now Central Coast DCP)	Section 4.10	
Central Coast Local Strategic Planning Statement 2020	Section 2.2	
2. Built Form and Urban Design		
Height, density, bulk and scale, setbacks, and interface of the Project in relation to the surrounding development, topography, streetscape, and any public open spaces. design quality and built form, with specific consideration of the overall site layout, streetscape, open spaces, façade, rooftop, massing, setbacks, building articulation, materials, and colour palette.	Section 6.1 – Built form and urban design.	Appendix G2 – Architectural Plans Appendix G7 – Concept Design Report

Requirement	Location in EIS or Application	Supporting Technical Report(s)
Crime Prevention through Environmental Design (CPTED) principles are to be integrated into development.	Section 2.1.4 - Crime Prevention through Environmental Design (CPTED) principles	Appendix G7 – Concept Design Report – Section 7.3
How good environmental amenity would be provided, including access to natural daylight and ventilation, acoustic separation, access to landscape and outdoor spaces and future flexibility.	Section 6.1 – Design Quality	Appendix G8 – Functional Design Brief – Section 4.3
How design quality will be achieved in accordance with Schedule 4 Schools – design quality principles of State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 and the GANSW Design Guide for Schools (GANSW, 2018)	Section 6.1 – Design Quality	Appendix G8 – Functional Design Brief – Section 4.3
How services, including but not limited to waste management, loading zones, and mechanical plant, are integrated into the design of the development.	Section 6.3 – Impacts and Mitigations Section 6.10 – Utilities Section 6.13 – Waste Management Section 6.14 – Soil and Water	Appendix G26 – Waste Management Plan.
Detailed site analysis	Section 2.3 – Key features of the site	Appendix G7 – Concept Design Report – Section 3
Visual Impact Assessment	Section 6.2 – Visual Impact	Appendix G13 – Visual Impact Assessment
4. Trees and Landscaping		
Where relevant, an Arboricultural impact assessment prepared by a Level 5 (Australian	Section 6.3 – Biodiversity	Appendix G14 – BDAR

Requirement	Location in EIS or Application	Supporting Technical Report(s)
Qualifications Framework) Arborist, which details the number, location, and condition of trees to be removed and retained, includes detailed justification for each tree to be removed and details the existing canopy coverage on-site.	Section 6.1 – Trees	Appendix G10 – Preliminary Arboricultural Assessment
A detailed site-wide landscape strategy, that: Details the proposed site planting, including location, number and species of plantings, heights of trees at maturity and proposed canopy coverage. Provides evidence that opportunities to retain significant trees have been explored and/or informs the plan. Considers equity and amenity of outdoor play spaces, and integration with built form, security, shade, topography, and existing vegetation.	Section 6.1. – Landscaping	Appendix G4 Landscape Strategy and Design Report
Detailed landscape plan prepared by a suitably qualified person.	Section 6.1 – Landscaping	Appendix G11 – Detailed Landscape Design.
5. Environmental Amenity		
Assess amenity impacts on the surrounding locality, including solar access, visual privacy, visual amenity, overshadowing, wind impacts and acoustic impacts. A high level of environmental amenity for any surrounding residential land uses must be demonstrated.	Section 6.2 – Environmental Amenity	Appendix G7 – Concept Design Report – Section 7.1 Appendix G13 – Visual Impact Assessment Appendix G25 – Traffic Impact Assessment Appendix G18 – Acoustic Assessment
Shadow diagrams.	Section 6.2 – Environmental Amenity	Appendix G7 – Concept Design Report – Section 6.3

Requirement	Location in EIS or Application	Supporting Technical Report(s)
A view analysis, where relevant, of the site from key vantage points and streetscape locations and public domain including photomontages or perspectives showing the proposed and likely future development.	Section 6.2.2 – Visual Impact	Appendix G13 – Visual Impact Assessment
An analysis of proposed lighting that identifies lighting on-site that will impact surrounding sensitive receivers and includes mitigation management measures to manage any impacts.	Section 6.2.3 – External Lighting	
Details of the nature and extent of the intensification of use associated with the proposed development, particularly in relation to the proposed increase in staff and student numbers and detail measures to manage and mitigate the impacts.	Section 6.12 – Transport and Accessibility. Section 6.6– Operational Noise	
6. Transport and Accessibility		
Provide a transport and accessibility impact assessment, which includes, but is not limited to the following: ▪ Analysis of the existing transport network to at least the existing or proposed enrolment boundary, including: • Road hierarchy, cycle, and public transport infrastructure. • Details of current daily and peak hour vehicle movements based on traffic surveys and/or existing traffic studies relevant to the locality. • Existing transport operation for the 1hr before and after (existing or proposed) bell times such as span of service, frequency for public transport and school buses, pedestrian phasing for signals.	Section 6.12 – Transport and Accessibility	Appendix G25 – Transport Impact Assessment

Requirement	Location in EIS or Application	Supporting Technical Report(s)
• Existing performance levels of nearby intersections utilising appropriate traffic modelling methods such as SIDRA modelling. ▪ Details of the nature and extent of the intensification of use associated with the proposed development. ▪ Details of the proposed development, including: • A map of the proposed access which identifies public roads, bus routes, footpaths, and cycleways. • Pedestrian site access and vehicular access arrangements, including for service and emergency vehicles and loading/unloading, including swept path analysis demonstrating the largest design vehicle entering and leaving the site and moving in each direction through intersections along the proposed transport routes. • Car and motorcycle parking, bicycle parking and end-of-trip facilities. • Drop-off / pick-zone(s) and arrival/departure bus bay(s). • Pedestrian, public transport or road infrastructure improvements or safety measures. ▪ Analysis of the impacts due to the operation of the proposed development including: • Proposed modal split for all users of the development including vehicle, pedestrian, bicycle riders, public transport, school buses and other sustainable travel modes. • Estimated total daily and peak hour vehicular trip generation. ▪ A clear explanation and justification of the:		

Requirement	Location in EIS or Application	Supporting Technical Report(s)
• Assumed growth rate applied. • Volume and distribution of proposed trips to be generated. • Type and frequency of design vehicles accessing the site. • Details of performance of nearby intersections with the additional traffic generated by the development both at the commencement of operation and in a 10-year time period (using SIDRA network modelling). • Consideration of traffic impacts on nearby intersections if the proposed school seeks to open prior to construction of the new intersection with the Pacific Highway near Jetty Avenue, Charmhaven. • Cumulative traffic impacts from any surrounding approved development(s). • Adequacy of pedestrian, bicycle and public transport infrastructure and operations to accommodate the development. • Adequacy of car and motorcycle parking and bicycle parking provisions when assessed against the relevant car / bicycle parking codes and standards. • Adequacy of the drop-off / pick-up zone(s) and bus bay(s), including assessment of any related queuing during peak-hour access. • Adequacy of the existing / proposed pedestrian infrastructure to enable convenient and safe access to and from the site for all users. ▪ Measures to ameliorate any adverse traffic and transport impacts due to the		

Requirement	Location in EIS or Application	Supporting Technical Report(s)
development based on the above analysis, including: • Travel demand management programs to increase sustainable transport (such as a School Transport Plan). • Arrangements for the Travel Coordinator roles. • Governance arrangements or relationships with state and local government transport providers to update roads safety. • Infrastructure improvements, including details of timing and method of delivery. • Preliminary school transport plan detailing an operational traffic and access management plan for the site, pedestrian entries, the drop-off / pick-up zone(s) and bus bay(s). • Preliminary Construction Traffic and Pedestrian Management Plan and associated Traffic Control Plans.		
6. Ecologically Sustainable Development (ESD)		
▪ How ESD principles (as defined in section 193 of the Regulation) would be incorporated in the design and ongoing operation phases of the development. ▪ Proposed measures to minimise consumption of resources, water (including water sensitive urban design) and energy. ▪ How the future development would be designed to consider and reflect national best practice sustainable building principles to improve environmental performance and reduce ecological impact. This should be based on a	Section 6.18	Appendix G7 – Concept Design Report – Section 7.5 Appendix G32 – Sustainable Design

Requirement	Location in EIS or Application	Supporting Technical Report(s)
materiality assessment and include waste reduction design measures, future proofing, use of sustainable and low-carbon materials, energy, and water efficient design (including water sensitive urban design) and technology and use of renewable energy. Include: ▪ An assessment against an accredited ESD rating system or an equivalent program of ESD performance. This should include a minimum rating scheme target level. ▪ A statement regarding how the design of the future development is responsive to the NARCliM projected impacts of climate change.		
How environmental design will be achieved in accordance with the GANSW Environmental Design in Schools Manual (GANSW, 2018).	Section 2.1.5	Appendix G7 – Concept Design Report – Section 7.5
An Integrated Water Management Plan detailing any proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design.		Appendix G32 – Sustainable Design Appendix G24 – Preliminary Engineering Design Report – Section 5
7. Heritage		
▪ Identify any archaeological potential or archaeological significance on and adjacent to the site and the impacts the development may have on this significance. ▪ Provide a statement of significance and an assessment of the impact on the heritage significance of the heritage items on and adjacent to the site in accordance with the guidelines in the	Section 6.5 – Non-Indigenous Heritage	Appendix G17 - Statement of Heritage Impact

Requirement	Location in EIS or Application	Supporting Technical Report(s)
NSW Heritage Manual (Heritage Office and DUAP, 1996) and Assessing Heritage Significance (OEH, 2015).		
8. Aboriginal Cultural Heritage		
▪ Provide an Aboriginal Cultural Heritage Assessment Report (ACHAR) that: • Identifies and describes the Aboriginal cultural heritage values that exist across the site. • Includes surface surveys and test excavations where necessary. • Has been prepared in accordance with the Guide to investigating, assessing, and reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011) and Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (OEH, 2010). • Incorporates consultation with Aboriginal people in accordance with Aboriginal Cultural Heritage Consultation Requirements for Proponents (Department of Environment, Climate Change and Water, 2010). • Documents the significance of cultural heritage values of Aboriginal people who have a cultural association with the land. • Identifies, assesses, and documents all impacts on the Aboriginal cultural heritage values. • Demonstrates attempts to avoid any impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR and EIS	Section 6.4 – Aboriginal Cultural Heritage.	Appendix G15 - Aboriginal Cultural Heritage Assessment Report Appendix G16 – Aboriginal Archaeological Report

Requirement	Location in EIS or Application	Supporting Technical Report(s)
must outline measures proposed to mitigate impacts. • Demonstrates attempts to interpret the Aboriginal cultural heritage significance identified into the development. • Any Aboriginal objects recorded as part of the Aboriginal Cultural Heritage Assessment Report must be documented and notified to the Aboriginal Heritage Information Management System (AHIMS) within Heritage NSW of the Department of Premier and Cabinet.		
9. Social Impacts		
Provide a Social Impact Assessment, prepared in accordance with the draft Social Impact Assessment Guideline 2020.	Section 6.17 – Social Impact Assessment	Appendix G31 - Social Impact Assessment
10. Noise and Vibration		
▪ Provide a noise and vibration impact assessment that: • Includes a quantitative assessment of the main noise and vibration generating sources during demolition, site preparation, bulk excavation and construction. • Details the proposed construction hours and provide details of, and justification for, instances where it is expected that works would be carried out outside standard construction hours. • Includes a quantitative assessment of the main sources of operational noise, including consideration of any public-address system, school bell,	Section 6.6 – noise and vibration	Appendix G18 – Acoustic Assessment

Requirement	Location in EIS or Application	Supporting Technical Report(s)
mechanical services (e.g., air conditioning plant), use of any school hall for concerts etc. (both during and outside school hours) and any out of hours community use of school facilities. • Outlines measures to minimise and mitigate the potential noise impacts on nearby sensitive receivers. • Considers sources of external noise intrusion in proximity to the site (including, road rail and aviation operations) and identifies building performance requirements for the proposed development to achieve appropriate internal amenity standards. • Demonstrates that the assessment has been prepared in accordance with polices and guidelines relevant to the context of the site and the nature of the proposed development.		
11. Biodiversity		
▪ Provide a Biodiversity Development Assessment Report (BDAR) that assesses the biodiversity impacts of the proposed development in accordance with the requirements of the *Biodiversity Conservation Act 2016*, *Biodiversity Conservation Regulation 2017* and Biodiversity Assessment Method, except where a BDAR waiver has been issued in relation to the development or the development is located on biodiversity certified land.	Section 6.3 - Biodiversity	Appendix G14 – Biodiversity Development Assessment Report
12. Contributions		

Requirement	Location in EIS or Application	Supporting Technical Report(s)
Identify: ▪ Any Section 7.11/7.12 Contribution Plans, Voluntary Planning Agreements or Special Infrastructure Contribution Plans that affect land to which the application relates or the proposed development type. ▪ Any contributions applicable to the proposed development under the identified plans and/or agreements. Justification is to be provided where it is considered that the proposed development is exempt from making a contribution. ▪ Any actions required by a Voluntary Planning Agreement or draft Voluntary Planning Agreement affecting the site or amendments required to a Voluntary Planning Agreement affected by the proposed development.	Section 2.5 – Relevant Planning Agreements and Contributions Plans	
13. Staging		
Assess impacts of staging where it is proposed and detail how construction works, and operations would be managed to ensure public safety and amenity on and surrounding the site.	Section 3.5 - Staging	Appendix G2 – Sheet SSD4001
14. Utilities		
In consultation with relevant service providers: ▪ Assess of the impacts of the development on existing utility infrastructure and service provider assets surrounding the site. ▪ Identify any infrastructure upgrades required off-site to facilitate the development and any arrangements to ensure that the upgrades will be	Section 6.8 - Utilities	Appendix G5 – Infrastructure Servicing Report. Appendix G6 – Electrical Services Master Plan.

Requirement	Location in EIS or Application	Supporting Technical Report(s)
implemented on time and be maintained. ▪ Provide an infrastructure delivery and staging plan, including a description of how infrastructure requirements would be co-ordinated, funded and delivered to facilitate the development.		
15. Stormwater Drainage		
Provide: ▪ A preliminary stormwater management plan for the development that: • Is prepared by a suitably qualified person in consultation with Council and any other relevant drainage authority. • Details the proposed drainage design for the site including on-site detention facilities, water quality measures and the nominated discharge point. • Demonstrates compliance with Council or other drainage authority requirements. • Stormwater plans detailing the proposed methods of drainage without impacting on the downstream properties. • Where drainage infrastructure works are required that would be handed over to Council, provide full hydraulic details and detailed plans and specifications of proposed works that have been prepared in consultation with Council and comply with Council's relevant standards.	Section 6.11 - Stormwater Drainage	Appendix G23 – Stormwater Management Plan. Appendix G24 – Preliminary Engineering Design Report.
16. Flooding		

Requirement	Location in EIS or Application	Supporting Technical Report(s)
▪ Identify any flood risk on-site in consultation with Council and having regard to the most recent flood studies for the project area and the potential effects of climate change, sea level rise and an increase in rainfall intensity. ▪ Assess the impacts of the development, including any changes to flood risk on-site or off-site, and detail design solutions to mitigate flood risk where required. *Relevant Policies and Guidelines:* NSW Floodplain Development Manual (DIPNR, 2005).	Section 6.10 – Flooding	Appendix G22 – Flood Impact Assessment.
17. Soil and Water		
Provide: ▪ An assessment of potential impacts on surface and groundwater (quality and quantity), soil, related infrastructure and watercourse(s), and adjacent licensed water users (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts. ▪ Details of measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles. ▪ An assessment of salinity and acid sulphate soil impacts, including a Salinity Management Plan and/or Acid Sulphate Soils Management Plan, where relevant. ▪ A detailed and consolidated site water balance analysis. ▪ The identification of an adequate and secure water supply for the life of the	Section 6.14 – Soil and Water	Appendix G19 – Detailed Preliminary Site (Contamination) Assessment Appendix G24 – Preliminary Engineering Design Appendix G5 – Infrastructure Servicing Report.

Requirement	Location in EIS or Application	Supporting Technical Report(s)
project. This includes confirmation that water can be sourced from an appropriately authorised and reliable supply. ▪ Proposed surface and groundwater monitoring activities and methodologies.		
18. Waste		
▪ Identify, quantify, and classify the likely waste streams to be generated during construction and operation. ▪ Provide the measures to be implemented to manage, reuse, recycle and safely dispose of this waste. ▪ Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site. ▪ Provide a hazardous materials survey of exiting aboveground buildings that are proposed to be demolished or altered.	Section 3.4 Project Details. Section 6.13 Waste Management	Appendix G26 – Waste Management Plan
19. Contamination		
▪ Assess and quantify any soil and groundwater contamination and demonstratethat the site is suitable for the proposed use in accordance with SEPP 55. This must include the following prepared by certified consultants recognised by the NSW Environment Protection Authority: • Preliminary Site Investigation (PSI). • Detailed Site Investigation (DSI) where recommended in the PSI. • Remediation Action Plan (RAP) where remediation is required. This must specify the proposed remediation strategy.	Section 4.8 – SEPP Resilience and Hazards) 2021. Section 6.7 – Contamination	Appendix G19 - Detailed Preliminary Site (Contamination) Assessment. Appendix G20 – Site Improvement Option Plan.

Requirement	Location in EIS or Application	Supporting Technical Report(s)
• Preliminary Long-term Environmental Management Plan (LEMP) where containment is proposed on-site.		
20. Mine Subsidence		
Provide details of how mine subsidence has been considered and addressed in the proposed development, including a detailed desktop geotechnical study of the recorded workings to provide a more accurate assessment of the risk of subsidence to the development that incorporates a sensitivity analysis and an examination of the likelihood of pillar punching failure of the floor and roof in the Great Northern seam workings.	Section 6.15 – Mine Subsidence	Appendix 29 – Mine Subsidence and Geotechnical Conditions Review. Appendix G27 – Preliminary Geotechnical Investigation Assessment.
21 Bush fire		
Provide a bush fire assessment that details proposed bush fire protection measures and demonstrates compliance with Planning for Bush Fire Protection (NSW RFS, 2019).	Section 6.9 – Bushfire	Appendix G21 Bushfire Assessment Report
22 Aviation		
Provide a report prepared by a suitably qualified aviation expert identifying and assessing the potential impacts of the future development on the aviation operations of any nearby airports and affected flight paths of any existing on shore Helicopter Landing Site (HLS), including HLSs located on the adjoining NSW Rural Fire Service Fire Control Centre, in accordance with the relevant sections of the National Airports Safeguarding Framework (NASF).	Section 6.16 – Social Impact	Appendix G30 Aviation Assessment.
Plans and Documents		

Requirement	Location in EIS or Application	Supporting Technical Report(s)
In addition to the plans and documents required in the General Requirements and Key Issues sections above, the EIS must include the following:		
Section 10.7(2) and (5) Planning Certificates (previously Section 149(2) and (5) Planning Certificate).	Appendix F – Planning Certificates	
▪ Design report to demonstrate how design quality would be achieved in accordance with the above Key Issues including: • Architectural design statement. • Diagrams, structure plan, illustrations, and drawings to clarify the design intent of the Project. • Detailed site and context analysis. • Analysis of options considered to justify the proposed site planning and design approach. • Summary of feedback provided by GANSW and NSW State Design Review Panel (SDRP) and responses to this advice. • Summary report of consultation with the community and response to any feedback provided.	Section 2.6 Section 2.1.5 Section 5	Appendix G7 - Concept Design Report
Geotechnical and Structural Report.		Appendix G27 –Preliminary Geotechnical Investigation Assessment
Accessibility Report.		Appendix G12 - Disability Access Report

9.2 Appendix B – Detailed Maps and Plans

Maps and Plans	Author	EIS Location
Locality Plan	The Spatial Lab	Section 2.3
Regional Context	The Spatial Lab	Section 2.3.1
Land Use Context	The Spatial Lab	Section 2.3.1
Environmental Constraints	The Spatial Lab	Section 2.3.3
Tree Management Plan	The Spatial Lab	Section 6.19

9.3 Appendix C – Statutory Compliance

Consideration under the Environmental Planning and Assessment Regulation 2021

Table 37 Form and Content of the EIS

Section Consideration	Location in EIS
190 Form of environmental impact statement	
(1) An environmental impact statement must contain the following information— (a) the name, address and professional qualifications of the person who prepared the statement, (b) the name and address of the responsible person, (c) the address of the land— (i) to which the development application relates, or (ii) on which the activity or infrastructure to which the statement relates will be carried out, (d) a description of the development, activity or infrastructure, (e) an assessment by the person who prepared the statement of the environmental impact of the development, activity or infrastructure, dealing with the matters referred to in this Division.	Refer to Page 3. Refer to Page 15. Refer to Pages 110-185.
(2) The person preparing the statement must have regard to— (a) for State significant development—the *State Significant Development Guidelines*, or (d) for State significant development or State significant infrastructure—the statement contains the information required under the *Registered Environmental Assessment Practitioner Guidelines*.	Refer to Page 14 – Consideration of the State significant development guidelines- preparing an environmental impact statement (Department of Planning, 2022).
192 Content of environmental impact statement	
(1) An environmental impact statement must also include each of the following— (a) a summary of the environmental impact statement,	Executive Summary
(b) a statement of the objectives of the development, activity or infrastructure,	Section 2.6 and Section 3.2
(c) an analysis of any feasible alternatives to the carrying out of the development, activity or infrastructure, having regards	Section 2.6

Section Consideration	Location in EIS
to its objectives, including the consequences of not carrying out the development, activity or infrastructure,	
(d) an analysis of the development, activity or infrastructure, including— (i) a full description of the development, activity or infrastructure, and	Section 3
(ii) a general description of the environment likely to be affected by the development, activity or infrastructure, together with a detailed description of those aspects of the environment that are likely to be significantly affected, and	Section 3.3
(iii) the likely impact on the environment of the development, activity or infrastructure, and	Section 6
(iv) a full description of the measures proposed to mitigate adverse effects of the development, activity or infrastructure on the environment, and	Section 6 and Appendix E
(v) a list of any approvals that must be obtained under another Act or law before the development, activity or infrastructure may lawfully be carried out.	Section 4.11
(e) a compilation (in a single section of the environmental impact statement) of the measures referred to in item (d)(iv).	Appendix E
(f) the reasons justifying the carrying out of the development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development set out in subclause (4)	Section 6 and Section 7

Preconditions and Mandatory Considerations

Table 38 Pre-conditions and Mandatory Considerations

Reference	Requirement/Consideration	Where it is addressed in the EIS
Pre-conditions and mandatory considerations		
EP&A Act Section 2 Objects of the Act	The objects are the guiding principles that need to be considered by planning authorities when making decisions under the Act.	Section 4.4 and Appendix C (Statutory Compliance).
EP&A Act Division 4.7	Section 4.36(2) provides the declaration of the development as State Significant Development. Section 4.38(3) and (5) enables the Planning Secretary to grant development consent to SSD that is wholly or partially prohibited.	Section 4.2 and 4.8, and Appendix C (Statutory Compliance). Section 4.2
EP&A Act Division 5.1	Section 5.2(1) provides that the approval of the Minister for Planning is required to carry out State significant Development.	This chapter. This EIS has been prepared in accordance with the requirements of Division 5.2.
Environmental Planning and Assessment Regulation 2021 Part 8	The SEARs (Item 1) require the EIS to be prepared in accordance with Part 3 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000. Part 3 of Schedule 2 provides requirements in terms of the form and contents of the EIS.	Appendix A - SEARs compliance, Appendix C Statutory Compliance. The requirements of Part 3 of Schedule 2 have been addressed in the EIS and confirmation that the form and content are consistent with requirements of the Environmental Planning and Assessment Regulation 2021 as defined by sections 190 and 192 of Division 5 of Part 8.

Reference	Requirement/Consideration	Where it is addressed in the EIS
Biodiversity Conservation Act 2016	Sections 7.9(1) and 7.9(2) provide that an application for approval of State significant infrastructure must be accompanied by a biodiversity development assessment report unless the proposed development is not likely to have any significant impact on biodiversity values. Section 7.14(2) provides that, when determining an application in accordance with the EP&A Act, the Minister for Planning must take into account the likely impact of a proposed development on biodiversity values as assessed in the biodiversity development assessment report.	A Biodiversity Development Assessment Report has been prepared (Appendix G14). Potential biodiversity impacts are considered in Section 6.3 Biodiversity.
Consideration for other relevant environmental planning instruments		
State Environmental Planning Policy (Planning Systems) 2021	Chapter 2 identifies development or infrastructure that is of State or regional significance and the requirements in which they are declared as such.	Declaration of the development as State significant is provided in Section 4.2 and 4.8.1.
State Environmental Planning Policy (Resilience and Hazards) 2021	Chapter 2, section 2.7 of the SEPP provides that a consent authority must not grant consent for development in these areas unless it is satisfied that the listed matters have been addressed, including that sufficient measures have been, or will be, taken to protect, and where possible enhance, the biophysical, hydrological, and ecological integrity of coastal wetlands.	Potential impacts on wetland areas are considered in Section 4.8.5.
	Chapter 4 of the SEPP provides for a coordinated State-wide planning approach to the remediation of contaminated land, defining the requirements in relation to	Potential contamination impacts are assessed in Section 4.8.5 State Environmental Planning

Reference	Requirement/Consideration	Where it is addressed in the EIS
	contaminated or potentially contaminated land that must be considered by a consent authority.	Policies and Section 6.7 Contamination.
State Environmental Planning Policy (Biodiversity and Conservation) 2021 (Biodiversity and Conservation SEPP)	The objectives of the policy encourage the conservation and management of natural vegetation that provide habitat for Koalas to ensure a permanent free-living population over their present range and reverse the current trend of Koala population decline strategically and through the development assessment process and using Koala Management Plans. The Central Coast Council does not have a Koala Management Plan requiring consideration of this chapter as part of the Project.	Potential impacts of the project are assessed in Section 4.8.2 State Environmental Planning Policies and Section 6.3
State Environmental Planning Policy (Transport and Infrastructure) 2021	Chapter 2, Section 2.121 of the TI SEPP requires that certain traffic-generating development be notified to TfNSW. Prior to determination of the application, the consent authority must take into consideration any submission made by TfNSW, as well as the accessibility, traffic safety, congestion, and parking implications of the development. Chapter 3 aims to facilitate the delivery of educational establishments and early education facilities across the State. Permissibility of the development is achieved under the TI SEPP, through clauses 3.36 and 3.43.	Potential impacts of the project are assessed under Section 4.8.3 State Environmental Planning Policies and Section 6.
State Environmental Planning Policy (Industry and Employment) 2021	Chapter 3 aims to t ensure facilitate and regulate signage within NSW that is compatible, effective in appropriate locations and of high-quality design.	Potential impacts of the project are assessed under Section 4.6.4.

9.4 Appendix D - Stakeholder Engagement

Stakeholder	Tool / Technique	Description	Outcome
Agencies			
Central Coast Council	Meeting.	A meeting was held 7 December 2020 and was attended by Andrew Roach, Emily Goodworth, and Scott Cox from Council.	Scoping Report prepared based on outcomes discussed.
Government Architect – State Design Review Panel	Online Meeting	An online meeting on the 29 September 2021 was held to review the preliminary concept. A second meeting on the 13 April 2022 provided additional feedback to inform the final design.	Preliminary advice used to develop the design strategy, concept, and design of the development.
Transport for NSW	Online Meeting	An online meeting was held on the 01 September 2021 with Liz Smith and Masa Kimura to discuss preliminary requirements.	Preliminary advice and confirmation of modelling used to develop the intersection design and complete the Transport Impact Assessment.

Stakeholder	Tool / Technique	Description	Outcome
Subsidence Advisory	Verbal and Written	A phone call and email with SA to review the draft Geotechnical Assessment.	Advice developed the final Geotechnical Assessment.
Aboriginal Stakeholders			
Registered Aboriginal Parties	Written Notification	Draft ACHA report was sent on the 23 September 2021 with 28-days to review. Recommendations were incorporated into the final report, which was supported by the RAPs.	ACHA finalised based on feedback provided.
	On site	RAPs present onsite during surface and test excavations associated with the Aboriginal Archaeological Report.	Confirmation of artefacts identified, and cultural significance included within the report.
Guringai Tribal Link Aboriginal Corporation	Connection to Country Site Walkover	Site walkover with the Guringai representative on the 17 June 2022.	ACHA and architectural design finalised based on feedback provided.

Stakeholder	Tool / Technique	Description	Outcome
Adjoining Landowners			
Residents	Letter Box Drop	Letter box drop in July 2021 provided residents and occupiers with a written summary of the proposed development and opportunity to respond raising concerns or queries.	Concerns identified by the residents were included in consultant scopes to address and mitigate impacts and concerns raised.
RFS	Online Meeting	An online meeting was held with RFS and EPA representatives to discuss the PFAS detection on the school site. No further discussion in relation to the operation of the RFS site and the school.	RFS developed a Site Improvements Options Plan to remove the PFAS contamination from the SPCC site and mitigation measures for the RFS FCC site to reduce future impacts.
School Community			
The SPCC User Group	Design Workshops	Eleven (11) workshops were held between the 18 June 2021, and September 2022,	Feedback was used to develop and finalise the

Stakeholder	Tool / Technique	Description	Outcome
		facilitated by the architect SHAC, throughout the design process with school executive and teaching staff to providing the opportunity to give input into the functional needs and use of space and facilities.	design to ensure it met the end user requirements.

9.5 Appendix E – Mitigation Measures

Table 39 Summary of Mitigation Measures

Impact	Potential Impact	Approach	Residual Impact
Visual impact	Adverse visual impact on the surrounding rural character and nearby residential dwellings	Increases tree canopy and vegetation screening where appropriate. The design and materials used create visual interest points, colour, and theme tie into the bushland setting, reducing contrast.	Low
Lighting	Light spill from school at night causes nuisance to surrounding residences and adjoining RFSCC.	Comply with AS 4282:2019 Control of the obtrusive effects of outdoor lighting in the development of a lighting strategy for the site.	Low
Transport and accessibility	Construction-related traffic causes congestion and safety issues.	Construction Pedestrian and Traffic Management Plan.	Low
	Increased school population exacerbates traffic congestion and queuing during peak drop-off and pick-up times	Construction of a four-legged signalized intersection and re-routing of school traffic and minimising travel distances on the surrounding road network, particularly for traffic travelling from the north, east and south.	Moderate
	Over-reliance on private vehicle trips by students and staff	Implementation of a Green Travel Plan	Low to moderate
Crime	Increased crime activity associated with additions to school	Integration of design with Crime Prevention Through Environmental Design Principles	Low to moderate

Impact	Potential Impact	Approach	Residual Impact
Ecological sustainability	Construction and operation of proposed facilities results in unsustainable practices or excessive resource consumption	Implement water-sensitive urban design elements, buildings designed to make use of passive solar design, and maximise opportunities for natural light and ventilation. Implement recommendations of ESD audit of existing school facilities.	Low
Aboriginal cultural heritage	Development impacts on Aboriginal cultural heritage items	An Aboriginal Cultural Heritage Management Plan be developed post approval to manage surface artefacts as needed.	Low to moderate
Noise and vibration	Construction noise causes amenity impacts on nearby residents	Constructure noise to be managed through a Construction Noise Management Plan along with the notification of neighbours prior to construction commencing on the site.	Low to moderate
	Operational noise causes amenity impacts for nearby residents	Restrict outdoor activities during sleep disturbance criteria times. Ensure outdoor PA equipment is low-power and directed downwards.	Low
	Operational noise from RFCC	Use of relevant construction materials and treatments including glazing, wall, and ceiling panels, to mitigate external impacts.	Low to moderate
Biodiversity	Development adversely impacts on biodiversity	Development sited to minimise requirement for vegetation clearing. Implement mitigation actions recommended in BDAR.	Low

Impact	Potential Impact	Approach	Residual Impact
Stormwater management	Stormwater runoff causes pollution of waterways	Stormwater quality treatment devices are implemented as per Stormwater Management Plan. Construction utilises erosion and sediment control practices outlined in concept erosion and sediment control plan.	Low
Mine Subsidence	Subsidence movement within the site causing damage to structures.	Footings and structural design to be reviewed and completed.	
Waste	Development results in excessive or uncontrolled disposal of construction waste	Implement construction waste management plan	Low
	Development results in irresponsible waste practices during school operations	Implement operational waste management plan	Low
Geotechnical and contamination	Development suffers premature structural damage.	Adhere to recommendations of geotechnical report in relation to pavement and footing design	Low
	Development results in human exposure to contaminated soil or materials.	Implement mitigation measure recommended in Preliminary Site Contamination Assessment	Low
Bush fire	Development increases risk to life or property from bush fire.	Provide/maintain Asset Protection Zones and implement other recommendations of Bush fire assessment report.	Low
Aviation	Flights paths directly over school may create downdraft and acoustic impacts.	Develop an Emergency Management Plan with RFCC to reduce impacts during school operations in emergency situations requiring frequent helicopter activity.	Low to moderate

Impact	Potential Impact	Approach	Residual Impact
	Wildlife attracted to, migrating, and living within the site have potential to impact aircraft.	Preparation of a risk mitigation plan to be developed with the Central Coast Airport operator to mitigate wildlife risks.	Low
Social	Issues and complaints relating to operation of the school.	Preparation of a School Operational Plane and protocols details policies and procedures to manage potential issues.	Low
Trees	Damage to significant trees in areas close to construction zones.	Trees to be retained within each stage are to be identified and protected by a Tree Protection Zone as detailed within the detailed Tree Management Plan.	Low

9.6 Appendix F – Planning Certificates

Table 40 Planning Certificates

Planning Certificate	Property Details
10.7(2) and (5) Certificate 50761	Lot 2 DP 809106 – 125 Arizona Road, Charmhaven NSW 2263

10 Appendix G – Technical Reports

The following technical reports have been prepared and submitted to support this SSD application These have been provided as separate documents with the NSW Major Projects portal.

Table 41 Appendix Reference Table

Appendix	Document	Consultant	Revision	Date
G1	Survey Plan	De Witt Consulting	A	21/10/2021
G2	Architectural Plans Drawing Portfolio	SHAC	D	18/10/2022
G3	Arizona Road Signage	SHAC	A	29/07/2022
G4	Landscape Strategy and Design Report	Moir Landscape Architecture	C	19/07/2022
G5	Infrastructure Servicing Report	ADW Johnson	D	30/01/2023
G6	Electrical Services Masterplan	Electrical Projects Australia	C	02/12/2022
G7	Concept Design Report	SHAC	D	18/10/2022
G8	Functional Design Brief	SHAC	B	08/07/2022
G9	Site Masterplan Capital Investment Value Estimate	Muller Partnership		01/07/2022
G10	Preliminary Arboricultural Assessment	Assurance Trees	A (Final V1)	27/02/2023
G11	Detailed Landscape Design	Studio 151	2	27/02/2023
G12	Disability Access Report	Lindsay Perry Access	2	22/11/2022
G13	Visual Impact Assessment	Moir Landscape Architecture	A	18/07/2022
G14	Biodiversity Development Assessment Report	MJD Environmental	4	01/08/2023
G15	Aboriginal Cultural Heritage Assessment Report	Heritage Now		258/07/2023
G16	Archaeological Report	Heritage Now		03/08/2023
G17	Statement of Heritage Impact	Heritage Now		06/07/2022
G18	Acoustic Assessment	RAPT Consulting	1	28/11/2022
G19	Detailed Preliminary Site (Contamination) Assessment	RCA Australia	3	09/12/2023
G20	Site Improvement Options Plan	Hardwood Environmental Consultants	3	09/11/2022
G21	Bushfire Assessment Report	MJD Environmental	2	28/10/2022
G22	Flood Impact Assessment	ADW Johnson	A	14/12/2022

Appendix	Document	Consultant	Revision	Date
G23	Stormwater Management Plan	ADW Johnson	B	10/08/2022
G24	Preliminary Engineering Design	ADW Johnson	A	10/08/2022
G25	Transport Impact Assessment	Stantec	B	08/12/2022
G26	Waste Management Plan	MRA Consulting Group	1	15/07/2022
G27	Preliminary Geotechnical Assessment	RCA Australia		26/07/2021
G28	Earthworks Commentary	ADW Johnson	A	28/11/2022
G29	Mine Subsidence and Geotechnical Conditions Review	Northrop	1	15/11/2022
G30	Aviation Assessment	Rehbein Airport Consulting	2	24/07/2022
G31	Social Impact Assessment	AIGIS Consulting		25/05/2022
G32	Sustainable Design	Steensen Varming		22/06/2022

11 Appendix H – Subsequent Advice from DPE