

The New Primary School at Warnervale

Prepared for

NSW Department of Education

Design Verification Statement for the purposes of a State Significant Development Application

(As set out in Design Guide for Schools by Government Architect NSW)

August 2019





Document Control

Date of Issue	Distribution
05.06.2019	For Review
07.08.2019	For SSDA Issue
13.08.2019	For SSDA Final Issue

Prepared By:

Position:

Kelsey Godwin-Smith

Project Coordinator

Reviewed By:

Position:

Shane Wood

Education Sector Leader/Associate Director

Table of Contents

Document Control

Table of Contents

- 1.0 Project Overview
 - 1.1 Description of the Project
 - 1.2 Design Process Undertaken
 - 1.3 Key Design Considerations
- 2.0 Response to Education SEPP Design Quality Principles
 - 2.1 Context, Built Form and Landscape
 - 2.1.1 Traffic
 - 2.2 Sustainable, Efficient and Durable
 - 2.3 Accessible and Inclusive
 - 2.4 Health and Safety
 - 2.5 Amenity
 - 2.6 Whole of Life, Flexible & Adaptive
 - 2.7 Aesthetics



VIEW OF MAIN ENTRY FROM WARNERVALE ROAD





1.0 Project Overview

1.1 Description of Project

The Department of Education requires school designs that should inspire all who use them day-to-day, and which will also make a positive statement to the community. The designs of all schools must also meet all other requirements in respect of technical and operational performance, health and safety and compliance with law and regulations.

The New Primary School at Warnervale will be a public school providing primary level education for the local community of the Warnervale/Wadalba area on the NSW inclusive school community, with a focus on developing skills, attitudes, and values relevant to present and emerging social, cultural and technological environments. The New Primary School at Warnervale has close relationships with the local educational community as they are part of the Wadalba Schools Learning Community which provides a collaborative schools-network for the Warnervale/Wadalba area.

The New Primary School at Warnervale will deliver a core 21 primary school for 460 students. It will consist of 20 new future focused teaching spaces suitable to deliver modern pedagogy, a new core 35 hall designed for up to 1000 students. Other Core 21 primary school facilities for 720 students (i.e. library, administration, toilets etc.) will be included. Spatial design considerations for the school capacity to increase in future years will also be considered.

The identified site for The New Primary School at Warnervale is located on the site of the previous school, and not on the new Warnervale Public School site. The site is located at 75 Warnervale Road, Warnervale NSW 2259. The land description is Lot 71 DP 7091, owned by the Department of Education (DoE). The total area of the site is 4.56 ha.

The school is surrounded by a large area of bushland which contains a small number of residential properties and is opposite a well-established suburban area (North of the site). Warnervale Oval is also opposite from the site (North), which consists of a large 400m track field. The site is in close proximity to public transport systems; with Warnervale Train Station being 500m (West) from the site, as well as two public bus stops just 10m (West) from the school.

The New Primary School at Warnervale is within the Central Coast primary school cluster, located in the NSW Central Coast District. It is an area with major urban development precincts, additional new housing developments that is generating an increase in primary school student numbers. It is located within a growing residential development in the town of Warnervale. Warnervale is approximately 95km north of the Sydney CBD, located west of Tuggerah Lake, a large shallow coastal lake, and just north of Wyong. The site is situated within a proposed 7A masterplan for a university and education business park precinct that is a key part of the economic development strategy.

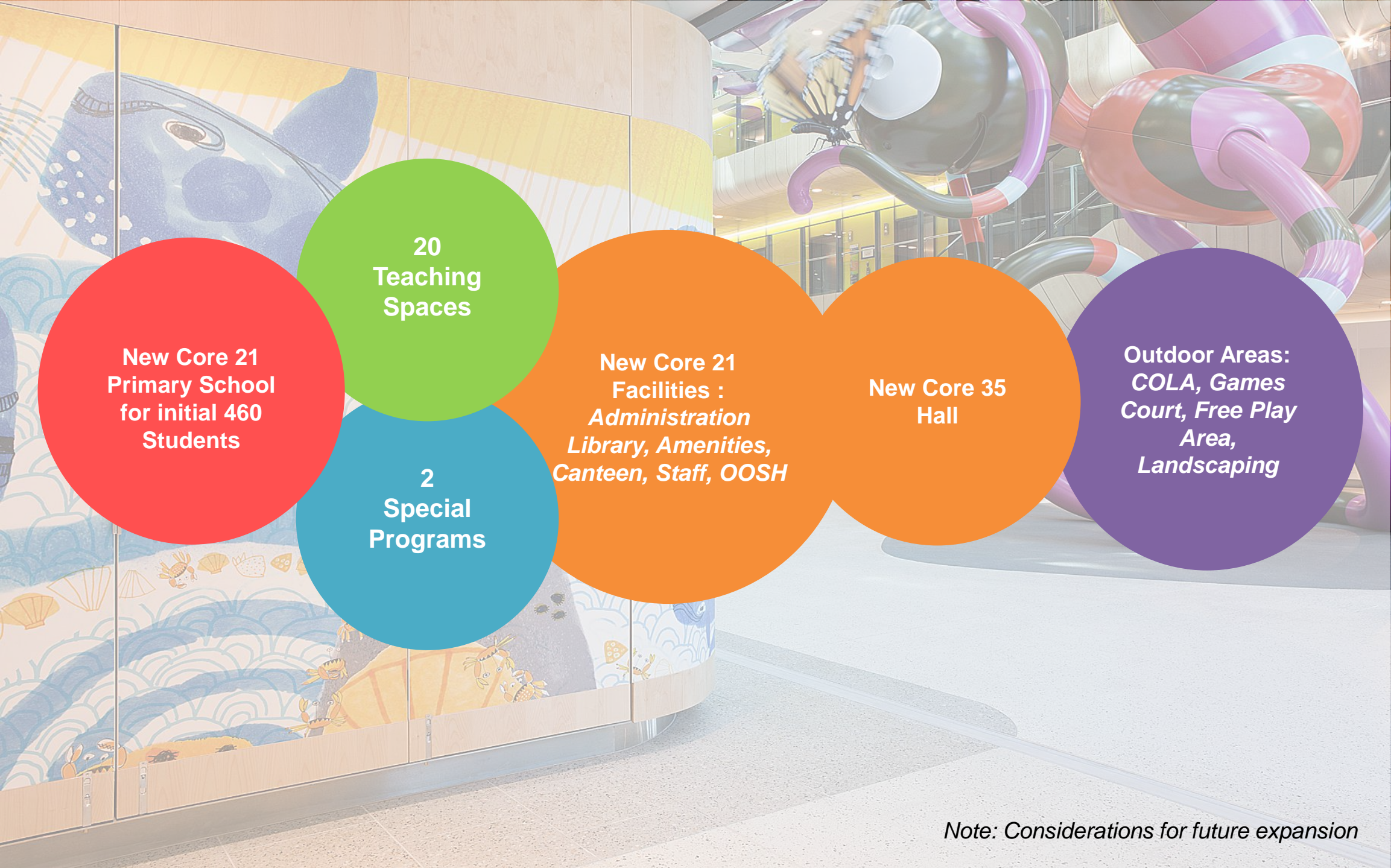


PROPOSED SITE LOCAL CONTEXT PLAN
SITE LOCATION: 75 WARNERVALE ROAD, WARNERVALE, NSW, 2259



1.0 Project Overview

1.1 Description of Project



1.0 Project Overview

1.2 Design Process Undertaken

The design process has been collaboration between Billard Leece Partnership, TSA Management, NSW Department of Education, existing Warnervale Public School Project Reference Group (PRG) and New Learning Environments (Education Specialists). Billard Leece in partnership with New Learning Environments facilitated workshops with the PRG, Warnervale Public School Staff and selected focus groups to develop vision and objectives for the project, Education Planning Principles and an Education Model to inform the functional design brief and spatial planning.

The New Primary School at Warnervale Education Model was developed by New Learning Environments, after extensive consultation with Warnervale Public School stakeholders and staff representatives from all the local schools in the area, involving workshops, surveys and project reference group meetings. The Educational Model articulates a clear educational vision and the possible spatial implications of this vision. This helps stakeholders establish a desirable mindset for the design process that better enables learners and learning-centred decision making. The model may also serve as a professional learning tool used to prepare end users for occupation of the new space or in the process of appointing new staff. A recent report highlighted the value of teacher involvement in a school's design and transition in terms of pedagogy change and effective use of the new environment.

Regarding the educational space planning aspect of the project, the design process is driven by the NSW Department of Education [DoE] Future Focused Learning initiative. The collaborative design process for the school commenced with a PRG meeting involving an introduction to NLE, some of the trends and research affecting the design of new learning spaces and an introduction to the educational space planning process.

Feedback workshops were also conducted by NLE, with BLP and TSA Management. Small groups of staff from teaching faculties, support and administration, selected students and the school executive were invited to give their views via targeted questions and free discussion.

The model is therefore designed to provide a statement of the collective aspirations of the key stakeholders in the development to ensure spatial responsiveness to desirable pedagogical factors. The model and the educational space planning principles guide the design of new developments on the site as well as the use of both new and existing spaces. The reading of this document also provides users with a sound understanding of the drivers behind the design to help establish spatial literacy as a critical factor in ongoing teacher professional development.

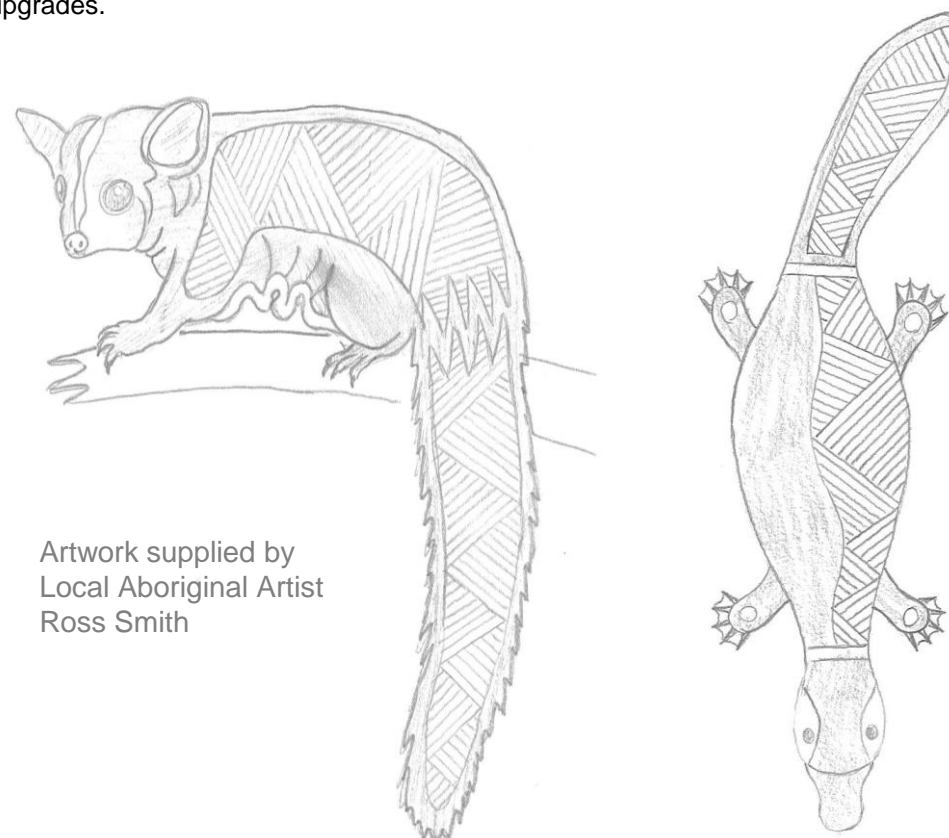
1.2.1 Community Consultation

School Infrastructure NSW is committed to best practice engagement and is guided by its principles to ensure effective and efficient processes for our communities. Plans for the New Primary School at Warnervale were confirmed in 2017, since then efforts to engage and consult with the community throughout the planning process have been undertaken.

To help ensure that the community and stakeholders are informed about the proposed new school development and have an opportunity to provide their feedback, a representative from the Parents & Citizens (P&C) is involved in the fortnightly Project Reference Group meetings, with the aim to support two-way communication with the wider P&C community. Engagement with the broader local community has occurred via a number of different channels including letterbox drops, website updates, media releases, face to face information sessions and project updates/newsletters.

School Infrastructure NSW have also continued to update to the project website each month.
<https://www.schoolinfrastructure.nsw.gov.au/projects/w/warnervale-new-primary-school.html>

Broader consultation has also occurred by engaging with a local Indigenous representative through PRG meetings, workshops and the Department of Planning and Environment Secretaries Environmental Assessment Requirements. The collaborative workshops with Lesley Armstrong will continue to help inform the design process, where we will seek feedback regularly and work collaboratively. Through this consultation Lesley has engaged with a local Aboriginal artist who has provided the design team with hand drawings of a list of Indigenous species that are native to the site. These drawings will be used to label the buildings, help with wayfinding and educating the students the importance of the site. The project team has also met with Central Coast Council throughout the design process to seek recommendations and feedback on the project, and in particular on the services infrastructure and road upgrades.



Artwork supplied by
Local Aboriginal Artist
Ross Smith

1.0 Project Overview

1.3 Key Design Opportunities

The key design opportunity is to create a welcoming new school community within a growing Warnervale community. The design intent is to create a new school that celebrates and educates not only the school community but also the wider community on the biodiversity, Porter's Creek and the indigenous species of the site.

The new school is located in a semi rural area, with a very strong community focus. The site is situated within the Porter's Creek catchment, which has been used as a design narrative throughout the entire site. The opportunity to create a link between the community and Porter's Creek catchment is what drives the design process.

The conceptual framework is based on the idea of students learning under a tree. The teaching spaces are designed as 'Pods' that allows for alternative outdoor links and views. The hall and admin roofs are inspired by tree canopies, where the roofs overlap and create a tree like atmosphere that shelters large collaborative spaces.

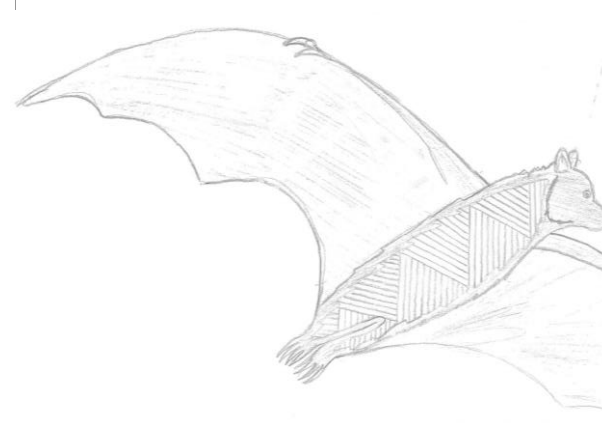
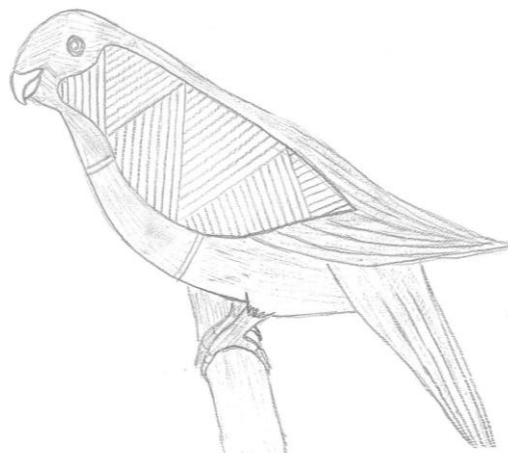
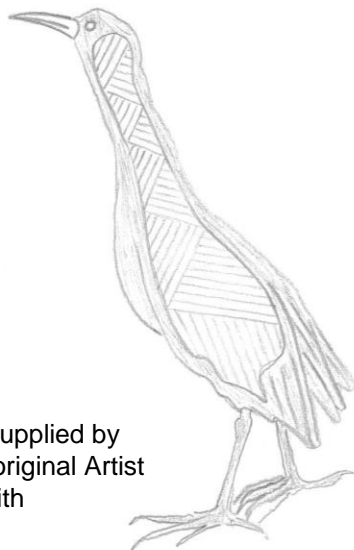
Opportunity for community shared use facilities is allocated in the hall, public forecourt and the retained biodiversity vegetation. The envisioned biodiversity area will be a great opportunity for not only for the school to use but also for the wider school community to create an educational link between the Warnervale area and the Porter's Creek Catchment.

Through the consultation process a common message was expressed that there was an emphasis on the connection with the community, the Porter's Creek Catchment and also the significance of the valued biodiversity land. It became abundantly clear early in the process that design should focus on connection, engagement and collaboration as a core framework for the development of the New Primary School at Warnervale learning community. The outcomes of the Aboriginal Community Workshop showed that there was a strong focus to educate the school community on the indigenous species of the site. Following the workshop, we received several hand drawings from a local Aboriginal artist Ross Smith, of some of the key indigenous species that the site represents.

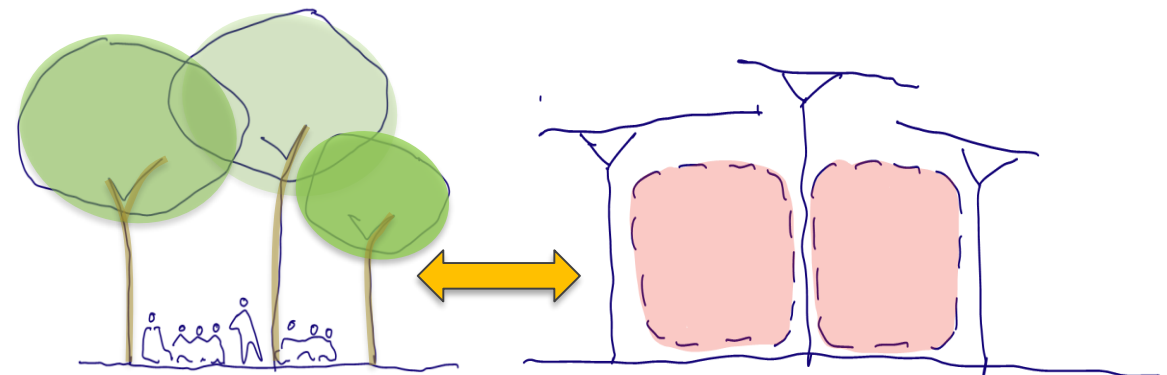
The key design considerations that the design team have established through community consultation and with the site investigations follow:

- Whole of life learning
- Whole of Campus Learning
- Indoor / Outdoor learning
- Future focused learning
- Connect with nature
- Celebrate local context & history
- Welcoming culture
- Flexible & adaptable
- Sustainable
- Safe & secure

Artwork supplied by
Local Aboriginal Artist
Ross Smith



Porter's Creek Catchment



Conceptual Framework

2.0 Response to Education SEPP Design Quality Principles

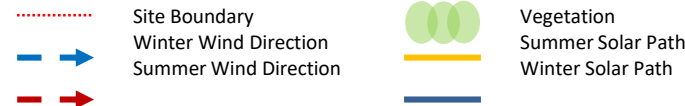
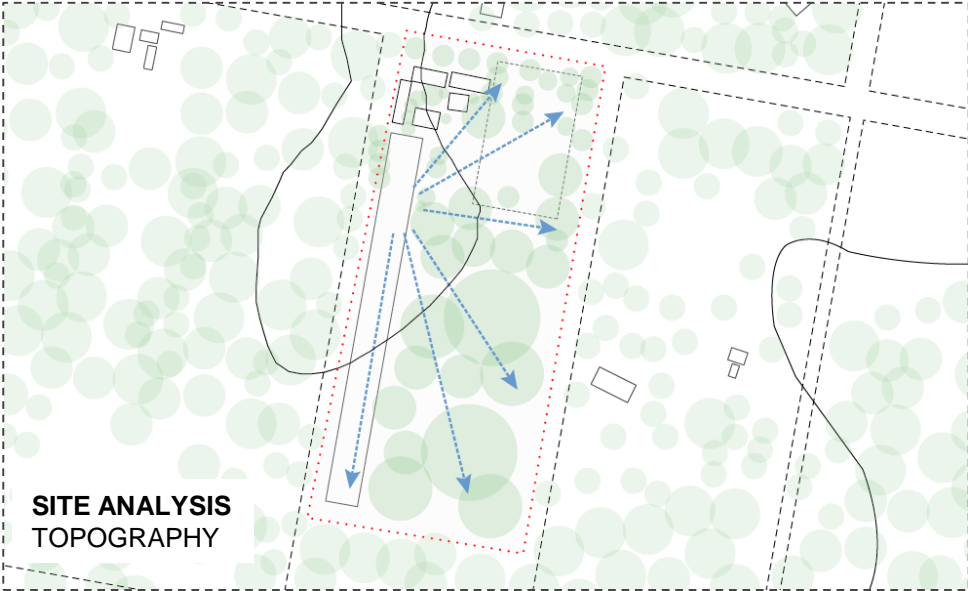
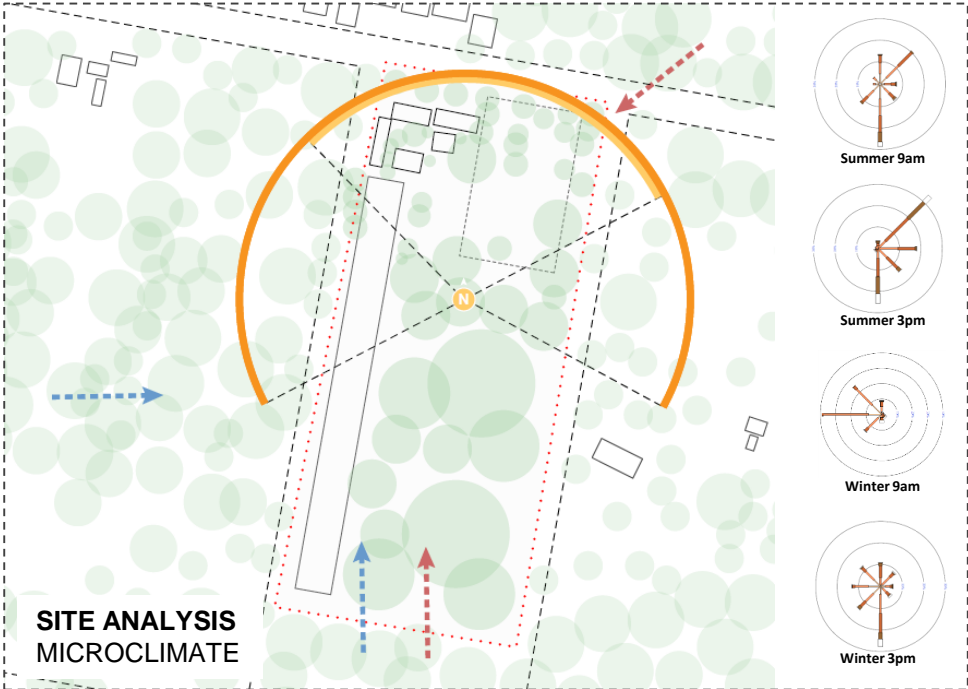
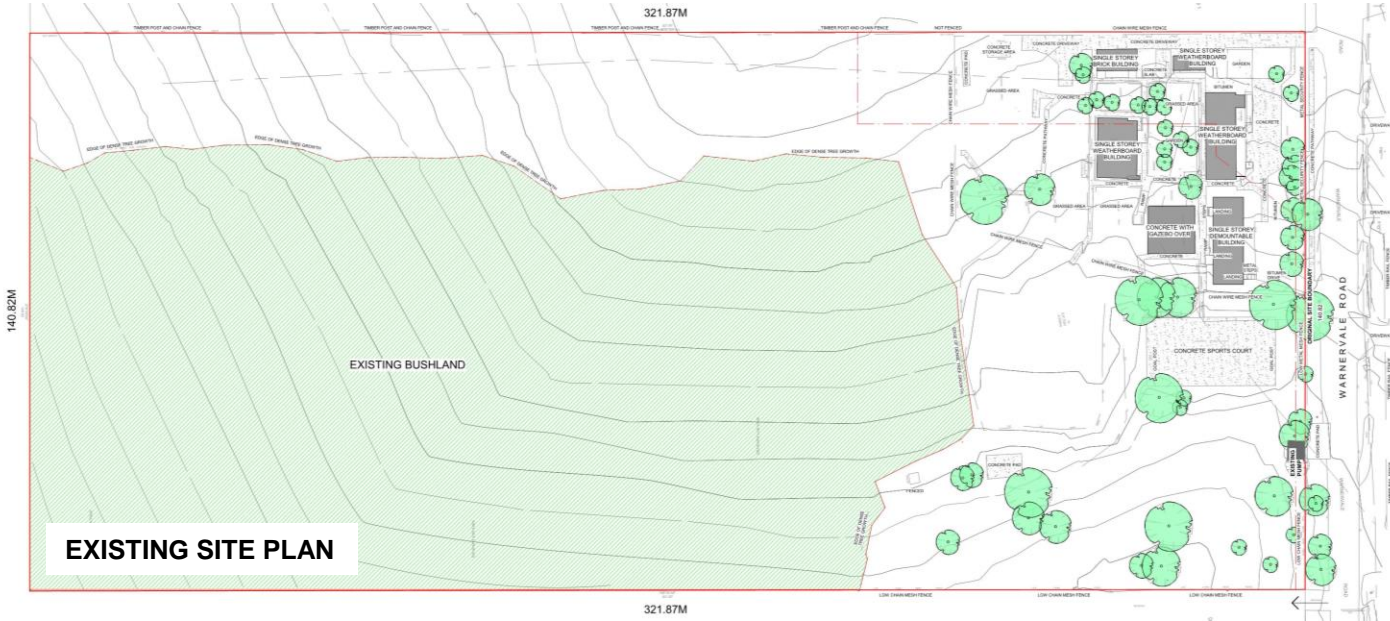
2.1 Context, Built Form and Landscape

The longitudinal sloping east west axis of the site provides an opportunity to incorporate a multi-level building with a north orientation that falls with the contours of the site. The site is bounded by a managed bushland site to the east and an unmanaged property to the West.

The site has a single street frontage to Warnervale Road. The road consists of single storey residential lots. Refer to images below to the materiality of the existing dwellings.



SURROUNDING CONTEXT – WARNERVALE ROAD



2.1 Context, Built Form and Landscape

The site plan illustrates the proposed development at 170000, showing building footprints, parking areas, and landscaping. The plan includes labels for various zones: RL20 (Blue), RL19 (Purple), RL18 (Green), RL17 (Pink), RL21 (Brown), and RL19-17 (Green). Key features include Core 21 Administration & Staff, Core 35, Core 21 Cola, Core 21 Kitchen, Informal Parking, Games Court, Main Field, and Retained Biodiversity. The plan also shows a Boundary, Site Boundary, and various service routes.



2.0 Response to Education SEPP Design Quality Principles

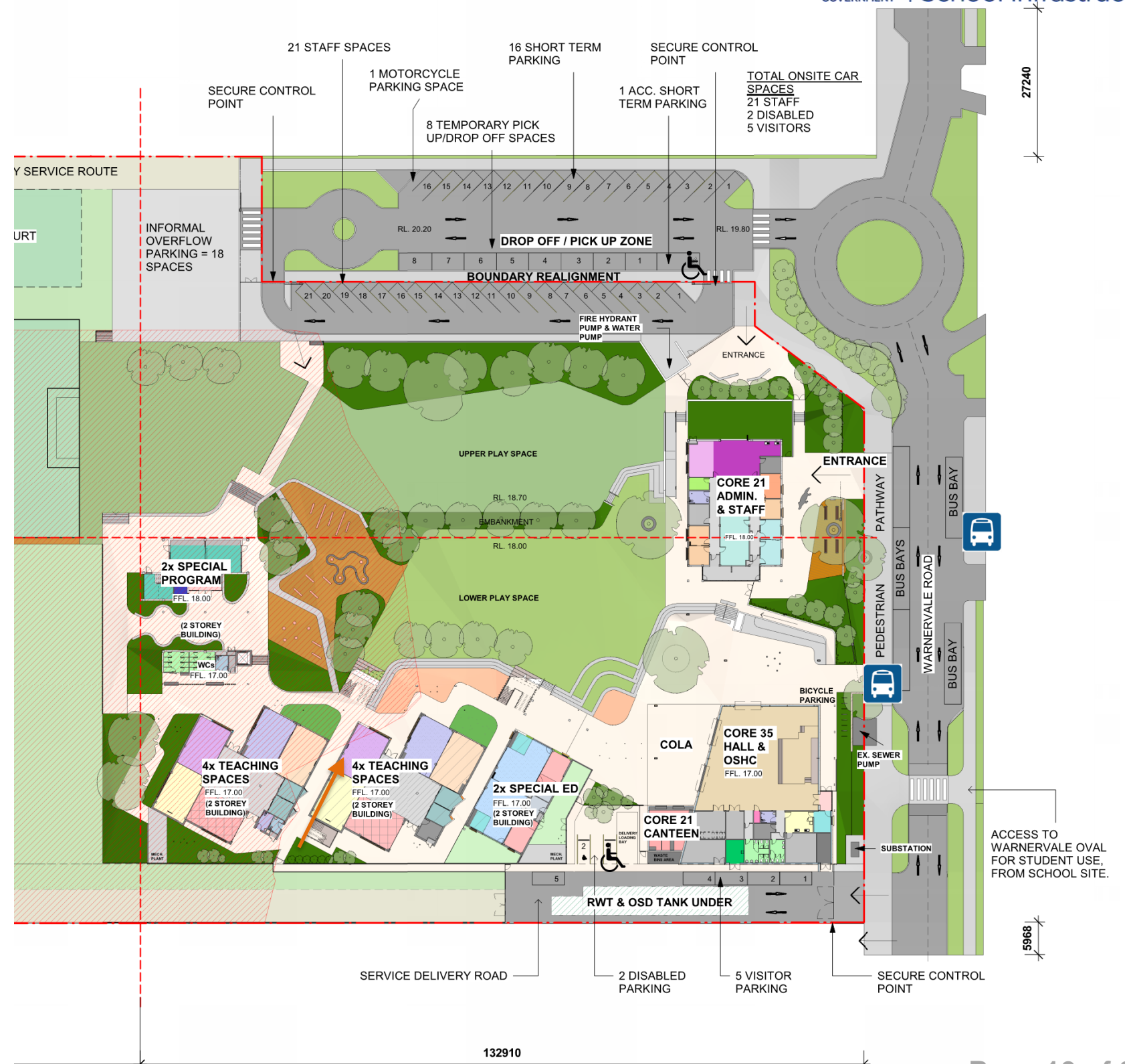
2.1.1 Traffic

Several options to resolve the challenges as to how to access the site safely has been reviewed and determined with relevant authority groups and the traffic design consultant, to focus on a separation of vehicles and pedestrians and promote safer movement on and off campus for all students, staff and visitors. The application seeks to redefine the front boundary to improve delineating of land. This redefined boundary line is identified on the accompanying drawings. The bus drop off/pick up on Warnervale Road will be improved with additional bus bays to cater for the school demand. The proposed road works will be designed to local council code requirements, with the new school boundary aligned to the western side of the site, around the proposed drop off/pick up zone.

Advantages of the proposed traffic design as follow:

- Right/Left hand turn in and out of school is achieved via roundabout for all vehicles deleting need for problematic right-hand turning lane on Warnervale Rd
- Bus stops can be located in front of school by busses having access to a roundabout
- Two access points into the school reduce congestion of pedestrian and traffic movement through controlled gates
- Staff have direct access into the Admin building from staff car park (Staff carpark has access control)
- P10min temporary parking and P2min Kiss and Ride zone taken off Warnervale Rd and bus relocated to front of school reduces extent of impact beyond the eastern and western boundaries along Warnervale Rd
- Overflow and future carpark expansion to the south can be achieved
- Access for emergency vehicles to the ring road around the school boundary is achievable
- Bringing vehicles and pedestrians off Warnervale Road improves safety concerns
- Staff car park set back from Warnervale Road.

For further detailed information on traffic refer to Traffic Report.



2.0 Response to Education SEPP Design Quality Principles

2.1.1 Traffic

Table 6-3: Estimated Parking

Within School Carpark	
Proposed Short term Parking	16 spaces
Proposed accessible short-term parking	1 Space
Maximum time allowed for short-term parking (Austroads Guide to Traffic Management Part 11: Parking)	10 minutes
Maximum time allowed for accessible short-term parking (Austroads Guide to Traffic Management Part 11: Parking)	30 minutes
Proposed Kiss and Ride	8 spaces
Maximum time allowed for Kiss and Ride (TfNSW) ¹⁰	2 minutes
Peak Period Demand (30 minutes)	131 vehicles
Estimated capacity /30 minutes (Kiss and Ride)	120 vehicles
Estimated capacity / 30 minutes (Short Term Parking)	50 vehicles
TOTAL	170 vehicles
Estimated Number of vehicles waiting during peak period	0 vehicles

As shown in **Table 6-3**, the number of parked vehicles allowed based on eight “Kiss and Ride” bays and 16 short-term parking, including one accessible short-term parking space will result in the capacity for at least of 170 vehicles during the peak period (30 minutes). This is under the assumption that the maximum time allowed in the respective bays be adhered to. As noted within Austroads Guide To Traffic Management Part 11, enforcement should ensure compliant turnover of parking. Given that the expected parking to be generated during the peak period is 131 vehicles, there would be ample space to facilitate the drop off and pick up of the students during peak periods.

Based on the calculations and assumptions used for the future enrolment of 460 students above, it is determined that the provision of 16 short-term parking and eight temporary pick up/drop off spaces will satisfy the expected parking demands of the school.

The provision of these temporary parking spaces will also satisfy the expected parking demands for the future expansion of 1000 students, through the implementation of the Green Travel Plan which encourages more students and parents to choose sustainable modes of transport, such as taking buses, walking and cycling.

6.2.4 Survey of Existing Travel Patterns

For this assessment travel mode surveys were conducted for students at the existing Warnervale Public School located at Minnesota and Warnervale Road Hamlyn Terrace NSW. The travel mode surveys determine the existing travel modes used to get to / from the school.

Table 6-2 presents a summary of the existing travel mode distribution for students of the existing Warnervale Public school.

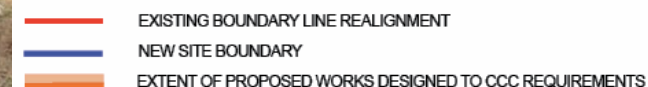
Table 6-2: Travel mode survey results for Students

Model of Travel	Number of Students	% of Students
Walk	47	10%
Bus	64	14%
Train	0	0%
Bicycle	6	1%
By Car – Drop off	346	74%
Passengers in a car driven by a member of staff	3	1%
Other	2	0%
TOTAL	468	100%

Note: On the day of the survey 57 students were absent so have not been accounted for in the table.

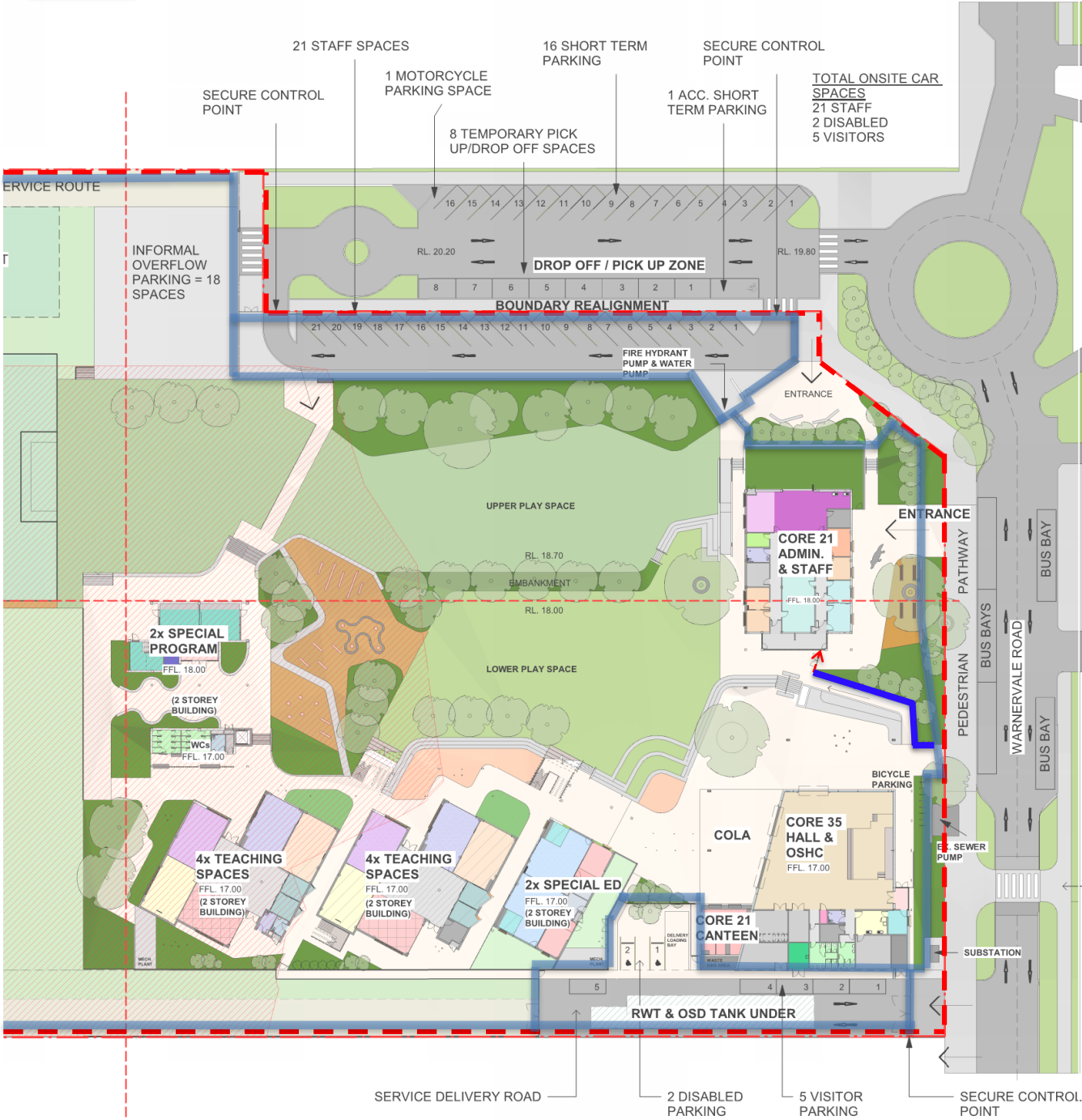
NOTE:

- TRAVEL MODE SURVEY BASED ON EXISTING WARNERVALE PUBLIC SCHOOL.
- 500 STUDENT POPULATION.
- TRAFFIC DESIGN IS BASED ON CORE 35, 1000 STUDENT SCHOOL POPULATION



2.0 Response to Education SEPP Design Quality Principles

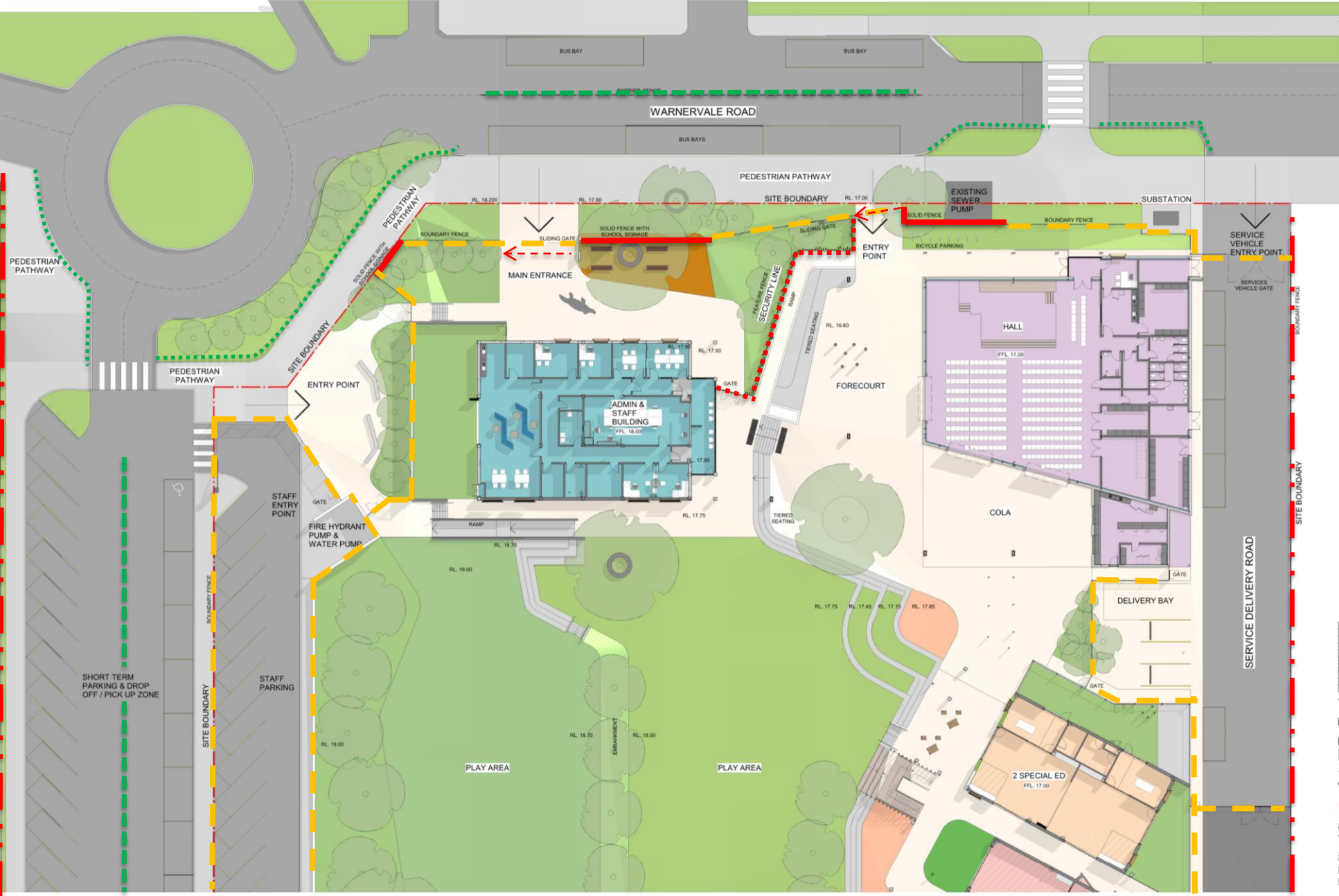
- PROPOSED BOUNDARY LINE
- SITE FENCE LINE
- SITE SECONDARY FENCE LINE



Proposed Fencing Design – View from Warnervale Road

2.0 Response to Education SEPP Design Quality Principles

Fencing Types



Solid Fence 2100 High
- Masonry Blockwork
(Split face and/or smooth face yet to be determined)



1200 High Access fence barriers to road
- Safety barrier fencing to Council code requirements to direct pedestrian movement.



Sliding Gates
(Automatic and Manual)
- Steel framed with 'Corromesh' infill



Standard Fence 2100H
- 'Corromesh' metal fencing



Standard Boundary Fence
- Powdercoated Pallasade metal fencing to match in with existing



Feature Transparent Fence 2100 High
- Decorative powdercoated aluminium battens on steel frame



Median Strip Barrier Fence

2.0 Response to Education SEPP Design Quality Principles

2.1.2 Educational Model

This Educational Model (the Model) is based on the assumption that future-focused pedagogies will have a significant presence at the proposed New Primary School at Warnervale (NPSaW, the school – working title only).

It is a framework of the directions which the building project at NPSaW will take. Because the school has not yet been established, this model consolidates feedback from consultation with the existing Warnervale Public School (WPS) professional and student community, to inform the likely context for the NPSaW. It provides research-informed validation for the design choices that reflect the school's possible educational direction, while acknowledging that the interpretation of this vision must be determined by the new principal and leadership team: it may be necessary to revisit this Model as they clarify their vision for the NPSaW.

The Model is also informed by the current DoE objectives and frameworks interactive workshop including teaching staff from local primary and high schools in May 2018. The teacher consultation was assumed to be representative of the future NPSaW culture and ideals, and is discussed here on that basis. The first workshop with the PRG provided an introduction to the work of NLE, some of the trends and research affecting the design of new learning spaces, and an overview of the educational space planning process.

The second workshop sought teacher feedback on elements both within WPS and applicable to education in general, including pedagogy, learning spaces and values. This consultation, along with an earlier document detailing planning principles for other schools in the area, was used as the basis for a draft of the Educational Space Planning Principles, which were then edited and endorsed by the PRG in June 2018.

*“engaging and growing community/connections.”
WPS Teachers, “What Inspires You?”, 2018*

Maintaining meaningful relationships with the broader community was seen as a priority for many WPS teachers. WPS student feedback mostly spoke of an enthusiasm for learning and concern for others.



WPS Student, “School Plan: Must Have” drawing, 2018

2.0 Response to Education SEPP Design Quality Principles

2.1.2 Educational Model

Department Principle 1: First and foremost, focus on the needs of learners and learning

NPSaW Sub-Principles

The learning environment will:

1.1 Provide safe and comfortable experiences for all users – learners, teachers, families.

- Spatial responses will include strategies for access, lines of sight, wayfinding.

1.2 Support future-focused learning with an emphasis on personalisation

- Spatial responses will include diverse learning settings, increased spatial connectivity and flexibility.

1.3 Engage learners and foster a love of learning

- Spatial responses will include fun design elements and opportunities for students to customise their environment.

1.4 Support educators as facilitators, collaborators, role models and professional learners.

- Spatial responses will include spaces for educators to collaborate and increased visibility of learning and teaching, including supervision, passive and active, of adjacent areas.

Department Principle 2: Build community and identity and create a culture of welcome, inclusion and belonging that reflects and respects diversity within the school's community

NPSaW Sub-Principles

The learning environment will:

2.1 Acknowledge the social, cultural and physical diversity of its users and remove barriers to inclusion.

- Spatial responses will include the opportunity for large group gatherings and celebrations, equitable access to learning spaces and facilities and spaces to support students with additional educational needs.

2.2 Honour the people of the Darkinjung nation as the traditional custodians of the land on which the school will stand and celebrate the contributions and cultures of all Aboriginal and Torres Strait Islander peoples in the school's community.

- Spatial responses will include the acknowledgement of the school as an identified site of significance, connecting to country through the use of landscape and indoor/outdoor connectivity.

2.3 Foster a welcoming culture which celebrates the place of the school in the community.

- Spatial responses will include a positive street presence with a welcoming and strong identity and some facilities (e.g. hall) that can be shared with the community including out of hours use.

Department Principle 3: Be aesthetically pleasing

NPSaW Sub-Principles

The learning environment will:

3.1 Be an icon for lifelong learning and pride in the local community.

- Spatial responses will include architectural expression that projects a strong, positive identity and beautiful outdoor learning/landscaping.

Department Principle 4: Provide contemporary, sustainable learning environments

NPSaW

W Sub-Principles

The learning environment will:

4.1 Support the evolving role and operation of a school that aims to equip students for the future.

- Spatial responses include learning spaces and settings that are responsive to rapid change throughout the course of the day and over time in response to pedagogical, social, cohort and technological shifts.

4.2 Provide integrated background technologies to enhance, but not dominate, learning in all settings.

- Spatial responses will include the use of mobile technologies so as to create high or low tech spaces and can be easily replaced within minimal interference to the buildings.

4.3 Connect its users with nature and maximise opportunities for purposeful outdoor learning.

- Spatial responses will include maximising natural light, fresh air, physical and visual links to nature (including through the use of terraces on upper levels) and landscaped elements that can shape the site as a tool for learning, including incorporating opportunities for creative play.

4.4 Utilise sustainable design concepts that also serve as a tool for environmental learning.

- Spatial responses will include environmentally sustainable design elements that can be used to teach students about their environment and build environmentally responsible behaviours.

Department Principle 5: Embed potential for reconfigurability, multi-purpose use over time

NPSaW Sub-Principles

The learning environment will

5.1 Be composed of purposefully flexible, adaptable spaces.

- Spatial responses will include the ability to connect and/or enclose spaces in accordance with their proposed pedagogical function.

5.2 Be mindful of potential future usage patterns and expansion.

- Spatial responses will include the ability to identify areas for future growth, including the use of pre-fabricated facilities in a manner that meaningfully connects those users to the existing facilities and does not interfere with the effectiveness of existing facilities.

2.1.3 Community & Shared Use

As the proposed school is located 1km east of the Town Centre, the school provides a great opportunity to support its surrounding community into the future as the population grows through anticipated residential development in the local area.



The site plan illustrates the proposed layout of a new school building. Key features include:

- Forecourt:** A large orange-shaded area at the top of the plan.
- Communal Hall Community & Shared Use:** A large yellow-shaded area in the center of the plan.
- OSHC:** A blue-shaded area at the bottom right of the plan.
- Other Rooms and Areas:**
 - Canteen (44.47 m²)
 - PE & Chair Store (31.84 m²)
 - Performance Store (16.52 m²)
 - Bulk Store (31.42 m²)
 - Garden Store (13.94 m²)
 - Female WC (18.75 m²)
 - Male WC (11.18 m²)
 - OSHC Kitchenette (19.45 m²)
 - OSHC Office (12.57 m²)
 - OSHC Store (30.44 m²)
 - Substation
- Other Features:**
 - Existing trees (EX. TREE)
 - Existing sewer pump
 - Parking area
 - Service delivery road

The plan is overlaid with a grid system with vertical lines labeled B1 through B7 and horizontal lines labeled 8400 through 8800.

2.0 Response to Education SEPP Design Quality Principles

2.1.3 Potential Community Use Facilities

The following table below highlights potential community uses of The New Primary School at Warnervale Facilities as guided by the Department of Education regarding Community Use of Schools Implementation Procedures. This table is a guide only and requires consultation with the school regrading which facilities can be used, types of use and hours of operation. The below facilities highlighted are located within the schools front secure line and secondary secure line, facilities beyond this point will not be available to be accessed by the public as is indicated in the diagram on the previous page.

School Facilities	Types of Functions/Activities	Indoor/Outdoor	Occupancy	Hours of Operation
Hall & Outside School Hours Care	<ul style="list-style-type: none">Community language schoolsDance, music or drama lessonsCommunity education and trainingCommunity productionsCommunity MeetingsSporting eventsVacation Care	Indoor	Max 200 approx. OSHC : TBC	School Hours: 8:00am – 4pm After School Hours 4-00pm – 10:00pm (Times are indicative only and will have to be confirmed with school)
Public Forecourt	<ul style="list-style-type: none">Community education and trainingCommunity productionsCommunity meetings	Outdoor	Public Forecourt Max: 400 approx	School Hours: 8:00am – 4pm After School Hours 4-00pm – 10:00pm (Times are indicative only and will have to be confirmed with school)



CHAIRS
Current brief requirements
Core 35 Hall – Open Hall Area 370m2 (EFSG Area)
Core 21 COLA – Area 210m2 (EFSG Area)
No of Seats;
Hall – 280 seats
COLA – 260
Total – 540 Seats



COCKTAIL
Current brief requirements
Core 35 Hall – Open Hall Area 370m2 (EFSG Area)
Core 21 COLA - Area 210m2 (EFSG Area)
No of People;
Hall – 150 pax
COLA – 140 pax
Total – 290 pax



SEATING & CHAIRS
Current brief requirements
Core 35 Hall – Open Hall Area 370m2 (EFSG Area)
Core 21 COLA - Area 210m2 (EFSG Area)
No of Seats;
Hall – 420 pax
COLA – 260 Seats
Total – 680 Seats

2.0 Response to Education SEPP Design Quality Principles

2.1.4 Landscape

By utilising the natural gradient equitable access to all areas of the site can be achieved with the incorporation of minimal ramps and a single central lift. Outdoor learning opportunities are incorporated at all levels of the building with an undercroft area at the lower level of the library to create the central student hub of the school. This area will be an educational space area known as the 'Wetland Centre', where the students can gather to find graphics provided by Ross Smith, Local Aboriginal Artists, of the indigenous species native to the site found on the pavement, surrounded by images on the library façade, showcasing the Porter's Creek Wetlands.

The proposed school site presents a number of key landscape opportunities which include;

- Views through to the native biodiversity land
- Reduction in pavement in favour of softscape treatments
- Expression of native trees, plants and the drawings of the indigenous species used as a journey through the site as a wayfinding and environmental education tool
- Visible eco-services through water sensitive urban design principles
- Retention of significant trees throughout the school
- Additional tree planting required for shade provision to buildings and courtyards, playing areas, and greater visible connection to native buffer
- Expression of environmental narrative through refurbished pavements and furniture
- Sustainable outcomes through material re-use

The proposed development focuses on the 'whole of campus' as a learning opportunity whether across all internal or external environments. The landscape design has a strong focus on people, nature and learning. The design prioritises a variety of spaces for staff and students to engage socialising. There are spaces for recreation and sporting activities, natural spaces for immersion, exploration and discovery. Outdoor learning spaces directly linked to internal learning areas provide an opportunity for integrated learning across the entire campus.

The landscape design incorporates key design opportunities that create engaging learning environments which include;

- Social outdoor spaces for socialising and play through visible and connected open spaces.
- Visual connectivity that strengthens view links to the natural landscape amenities and ecological networks
- Legible landscaped environments that establishes a narrative and wayfinding cues and are integrated into landscape elements throughout the framework of open spaces.
- Creating outdoor pedagogy zones that access the native buffer and stormwater system to create outdoor learning environments
- Sustainable integrated stormwater design and visible WSUD elements to express the movement of water through the school
- Green spaces with a reduction of paved surfaces and extension of green perimeter to define a closer relationship with nature

For further detailed information on landscape design please refer to Landscape Design Report

2.1.5 Cultural Heritage

Opportunities through materials and colour selection, graphics, signage and wayfinding using aboriginal art and language, will be woven throughout the campus to be informative, expressive and educational this can be in zones such as room names, public art zones, nature trail, place making zones and welcome to country at the entry of the school. We propose to continue to engage further with the local Aboriginal artist to develop the appropriate aboriginal culture into the proposed school during the detailed design.

SOCIAL



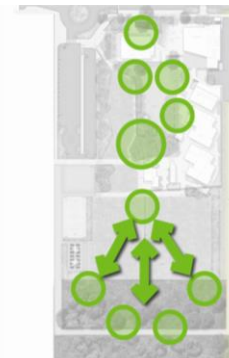
VISUAL



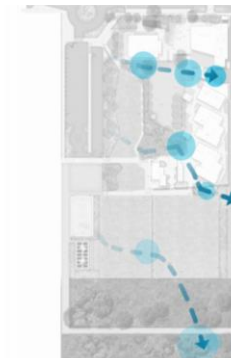
LEGIBLE



CONNECTION



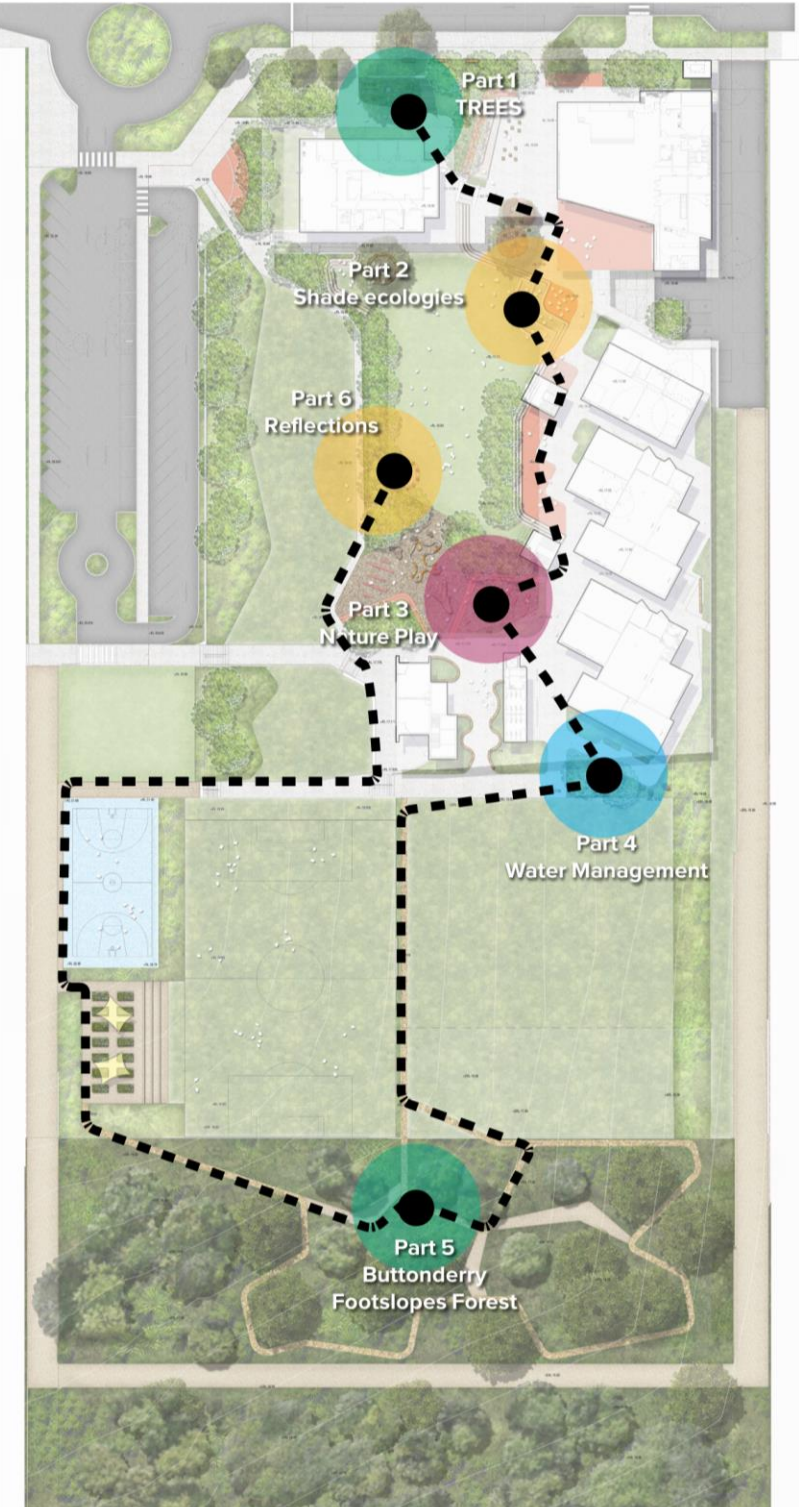
SUSTAINABLE



GREEN



2.0 Response to Education SEPP Design Quality Principles



PART 1 - TREES

The nature trail will help to introduce the students to a wider world of environmental awareness and stewardship.

They will begin by learning about endemic tree types and gain an appreciation for some of the endangered and significant species present.



PART 3 - NATURE PLAY

Play is bound and surrounded by natural elements creating an immersive bushland style play experience. Students will learn to play using the natural undulation of the land building strength and creativity through engaged play.



PART 5 - BUTTONDERRY FOREST

Students as part of the nature trail will learn finally about the history of the local vegetation community characteristic of the site (the Buttonderry Footslopes Forest).



PART 2 - SHADE ECOLOGIES

Continuing along the trail the students will learn about the variety of flora that thrives in cooler parts of the local ecological system.



PART 4 - WATER MANAGEMENT

The way water is captured and treated within the site is on display through dry creek bed and rain gardens.



PART 6 - REFLECTIONS

Students can learn and reflect through a hands on gathering within a natural setting about the bush.

Play and outdoor learning/discovery areas are tied together both by vegetation indigenous to the site and for unified series of elements and materials, creating a journey throughout the site.

2.0 Response to Education SEPP Design Quality Principles

CONCEPT | LANDSCAPE MASTERPLAN



2.0 Response to Education SEPP Design Quality Principles

2.2.1 Sustainable, Efficient and Durable

ESD principles have been developed to create a sustainability framework.

The design has taken advantage of the natural contours and enhances the natural ecosystem of mature vegetation in the front of the site and within the biodiversity area of the site. Incorporation of bio-retention and storm water detention systems provides an opportunity to utilise the natural overland stormwater flow path of the site as a learning opportunities for the students. Nature walks, cultural and agricultural gardens and opportunities for exploration of this area demonstrates the school's commitment to sustainability and the teaching of such for generations to come.

Rainwater will be collected in large storage tanks for reuse back into the school. A large 40Kw solar array will be located on the roof and power generated will be used across the campus. Energy efficient mechanical systems and highly efficient water fixtures and fittings are proposed to reduce consumption.

The landscape design focuses on the integration of people, nature and learning across the whole of campus through cultural and agricultural gardens, remembrance gardens and a centralised courtyard as a social gathering place. A southern courtyard for recreation activities is connected to the sporting oval at the rear of the site.

North facing buildings and clerestory windows encourage solar access to all parts of the learning spaces and support cross flow ventilation and air movement between and through the buildings. Multi-level floor plates provide an opportunity for views in all directions across the campus. Roof overhangs and sun shading devices provide solar protection. The large undercroft space in the centre of the campus under the library provides a weather protected communal gathering space for the student cohort.

The materials and finishes selected for the external facade treatment is predominantly a mix of masonry at low levels and insulated light weight prefinished compressed fibre cement cladding at upper levels. Concrete columns and floor slabs form the substructure with a steel framed metal cladding roof to all new building elements. These materials are considered robust and durable and are in line with NSW Department of Education requirements.

The sustainable focus of the school redevelopment is a holistic and careful balance of economic prosperity, social responsibility and environmental sensitivity. This state significant New Primary School at Warnervale aims to focus on reimagining and transforming the school into a 21st century learning environment that supports and integrates with the growing size of the Warnervale community.

Management

- Contractor is to develop a site-specific Environmental Management Plan and hold an accredited Environmental management System
- Involvement of a qualified Green Star consultant throughout project
- Setting of Energy, Water and Waste consumption/production targets
- Carrying out a commissioning, servicing and maintainability review
- Providing O&M Manuals and a Building Log Book
- Setting performance measures and reporting against these
- Installing a meter monitoring system to track consumption data
- Develop and implement an operational waste management plan
- Recycling and waste management operations plan

Indoor Environment Quality

- Natural Ventilation;
 - Provision for 50% increase in outdoor air
 - Promote cross flow ventilation through buildings
 - Promote breezeways between buildings and across campus
- Photocopiers will meet EU Emissivity standards
- Acoustic noise levels and reverberation through the buildings will meet Australian Standards (EFSG requirement)
- Lighting;
 - flicker free and colour rendering index greater than 80
 - reduce glare through the use of diffusers and baffles
 - compliant with Australian Standards Best Practice
- Blinds will be provided on all glazing (EFSG requirement)
- Natural Daylight;
 - Daylight and access to external views provided to 60% of all learning spaces.
- Materials with low VOC

Energy

- PV Cells 40kW (EFSG Requirement for Core 21 Primary School)
- Building fabrics will achieve or exceed BCA Section J requirements
- Energy performance monitoring as visible learning tool
- Mixed mode solutions including natural ventilation initiatives supplemented by A/C for extreme conditions
- Maximise energy efficiency & thermal comfort through;
 - Roof, ceiling & wall insulation
 - High performance single glazing
 - External Sun shading devices

Transport

- A green transport plan will be developed and implemented

Water

- Rainwater harvesting for reuse in toilet flushing and irrigation
- Efficient water systems;
 - Timed flow tapware
 - Hot water systems
 - Dual Toilet flushing cisterns

Materials

- Concrete will reduce Portland cement content by 40% and use recycled water
- 5% reduction in use of Steel through efficient innovative design
- Timber will be FSC certified or equivalent (EFSG Requirement)
- All PVC will be GBCA Best Environmental Practice certified
- 90% of construction and demolition waste is to be diverted from landfill

Emissions

- Reduced stormwater peak discharge from the site
- Light spill must meet AS 4282:1997 and all external lighting must have an ULOR of less than 5%

Land use and ecology

- Protect and support biological and ecological diversity
- Restrict the flow of pollutants into natural environments
- Landscaping to minimise overland stormwater through dry creek beds
- 75% soft landscaped surfaces
- Tree and plant selections that respond to biodiversity precinct
- Showcase Porters Creek Wetland and significance of local Biodiversity precinct as a learning opportunity for the community

Innovation

- Whole of Campus Learning - Variety of learning opportunities across all areas of the campus

2.0 Response to Education SEPP Design Quality Principles

2.2.2 Climate Change Adaptability

No significant perceived threats of serious or irreversible environmental damage result of the proposed New Primary School at Warnervale. CSIRO's Projected impacts of climate change relating to this site have been considered, with the highest risks being identified as:

- an increase in maximum temperatures
- extended periods of drought
- more extreme rainfall events
- gustier wind conditions
- increase in frequency of heatwave events

The proposed development seeks to embody sustainability principles designed and arranged to maximise the passive performance of the buildings through harnessing natural daylight and natural ventilation in an effort to reduce energy consumption of air conditioning systems and in turn reducing carbon emissions.

The large roof forms have been designed to accommodate solar panels and to maximise the capture of rainwater for reuse in irrigation, wash down facilities and for toilet flushing purposes. The large roof and upper floor overhangs also assist with the predicted rise in temperatures and extreme rainfalls by providing protection to building facades, circulation pathways and covered outdoor learning and play spaces. The corridors between buildings coupled with breezeway allow for students and teachers to seek refuge from the extreme weather conditions in and around the built environment. Large expanses of soft landscaping and minimal hard paved surfaces will also assist in minimising thermal heat sinks that often contribute to increased localised temperatures.

Buildings have been set out in a horseshoe arrangement on the site to create a protected central courtyard that is protected from extreme windy conditions. The potential for future expansion with additional built forms to the western side of the courtyard could see the central courtyard become fully protected. Gaps between building elements provide opportunities for cross flow breezes through the courtyard but shield the outdoor learning and play spaces from extreme gustier wind conditions.

The current development proposes to reinstate the site's original function as a school, only larger in scale and more modern to accommodate the growing population of the local Warnervale community. A school development within this growth area should assist in reducing reliance on the car and aid in minimising the carbon footprint of the area. This will also be assisted further through promoting the use of bicycles along future bicycle pathways proposed by council. Dedicated bicycle parking and end of trip facilities are located on site as part of this development. Students and staff living in the local community will be able to walk and ride to school, thus, minimising reliance on the car.



Porter's Creek Catchment

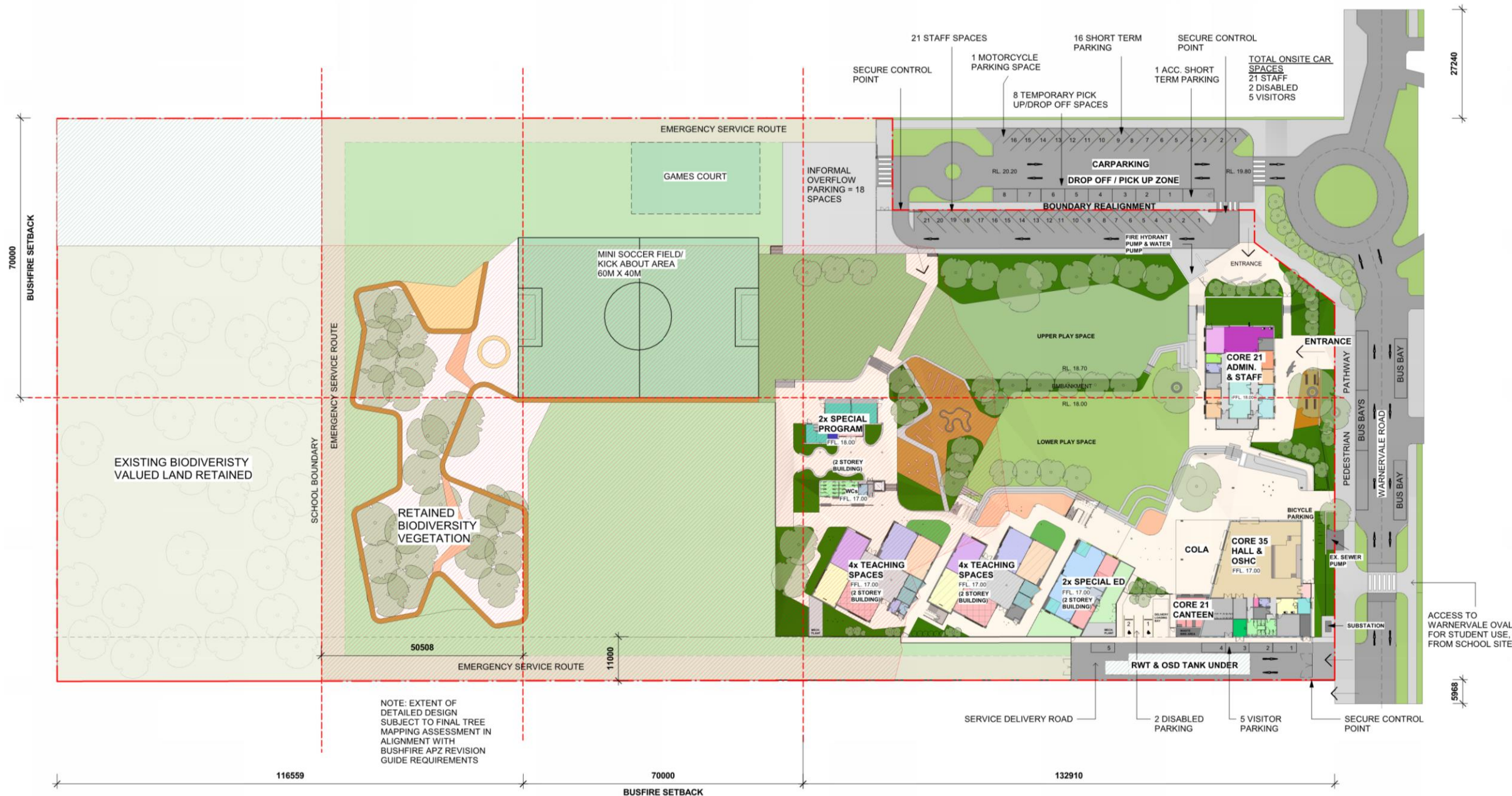
Source: <http://www.blueplanet.nsw.edu.au/porters-creek-case-study/.aspx>

Nestled amongst surrounding sites identified in the local Council's DCP for residential subdivisions, this proposed school development seeks to not only provide an educational environment for students but to reach the broader community in celebrating and demonstrating the significant importance of the history and future of the Porter's Creek Wetland catchment area that this site and the local region sits within. The development seeks to embrace the climate change message through educating the community. This will be achieved through the establishment and ongoing management of a biodiversity and indigenous educational native learning environment that is embraced and promoted throughout the entire school design starting at the front gate and public interface.

As such, it is anticipated that no serious or irreversible damage is expected from the establishment and operation of the proposed development. However it is anticipated to embody and embrace the significance of the local history and future of the natural environment by helping to support climate change adaptability through education.

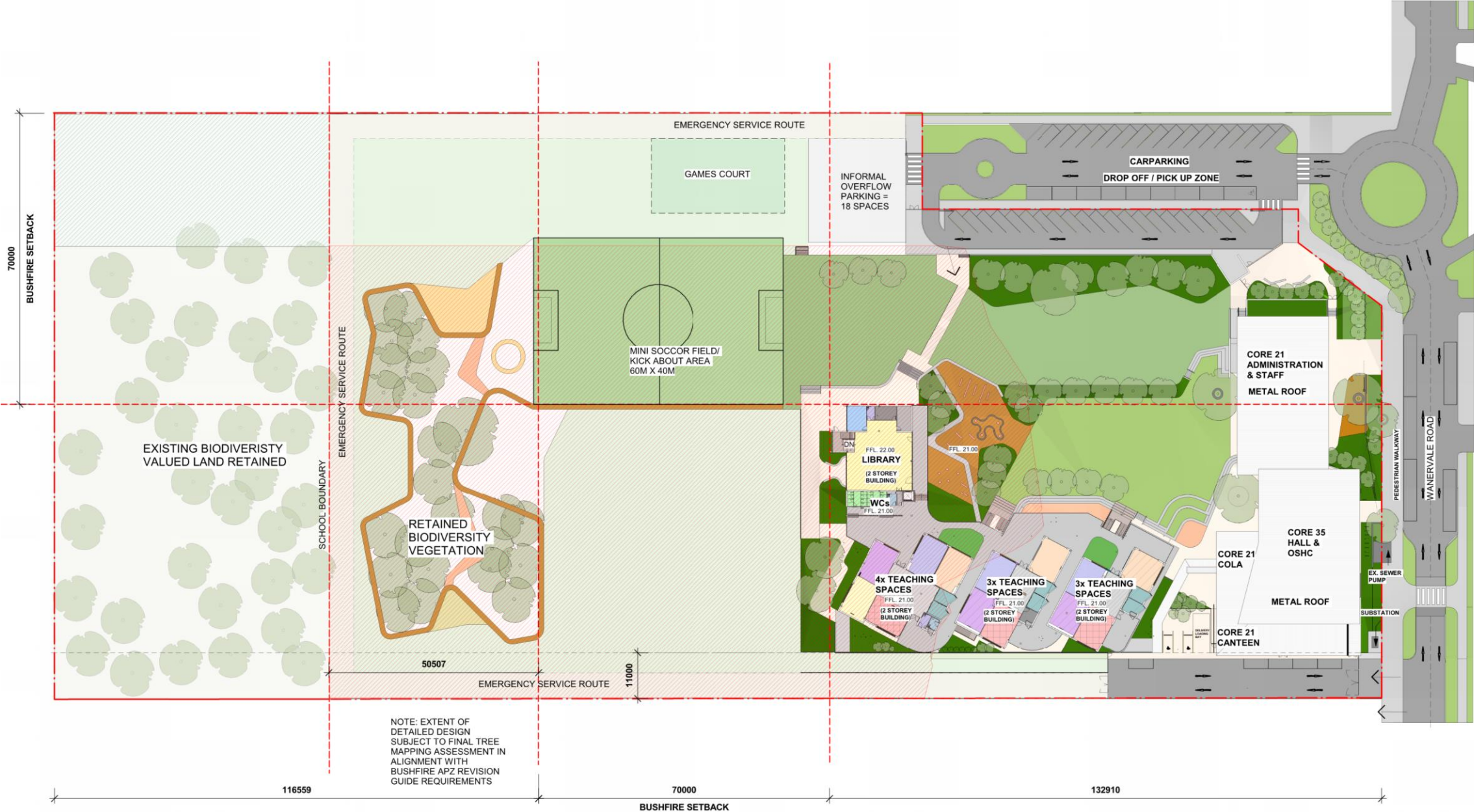
2.0 Response to Education SEPP Design Quality Principles

Site Context – Lower Ground Floor Plan



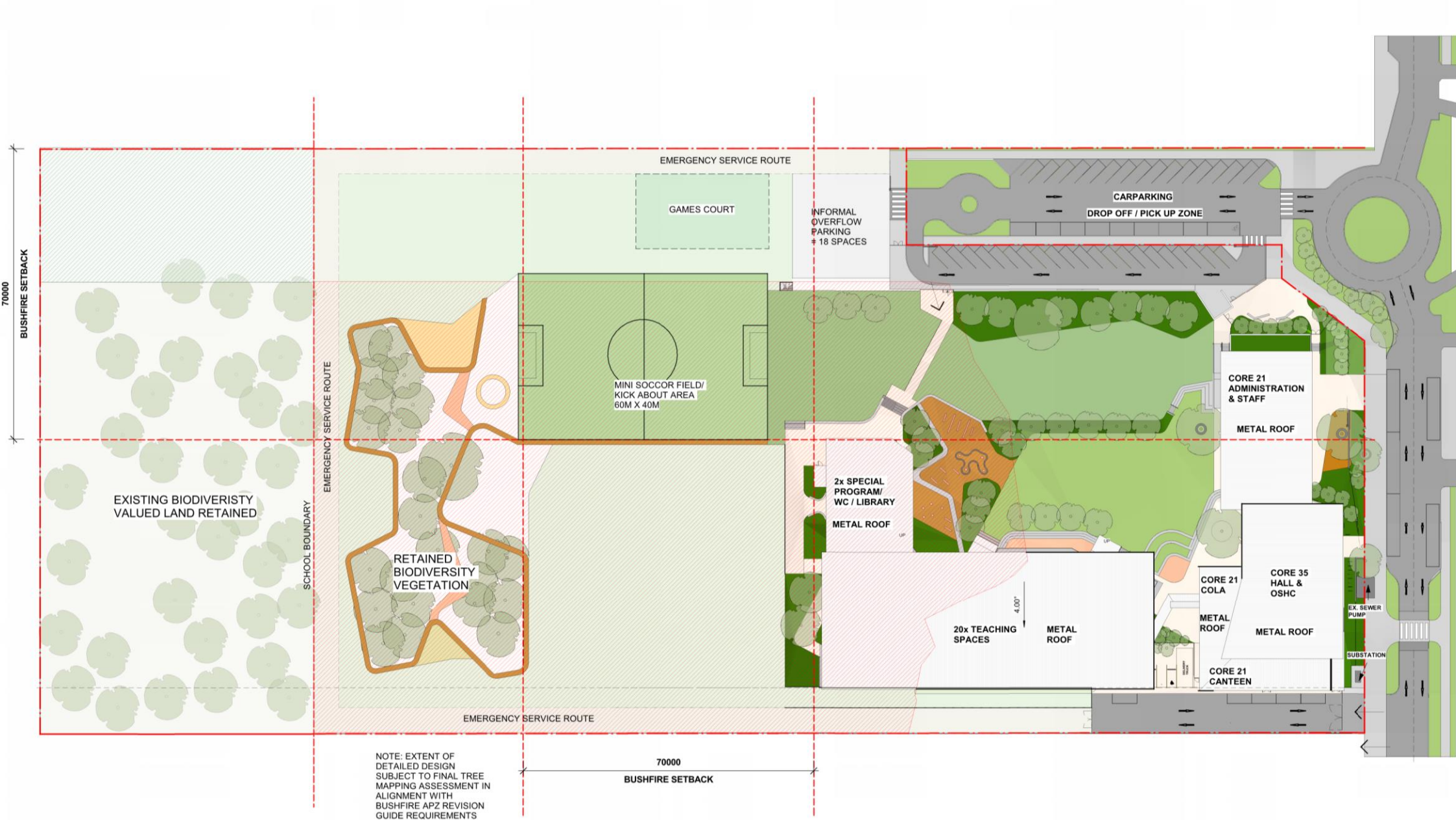
2.0 Response to Education SEPP Design Quality Principles

Site Context – Ground Floor Plan



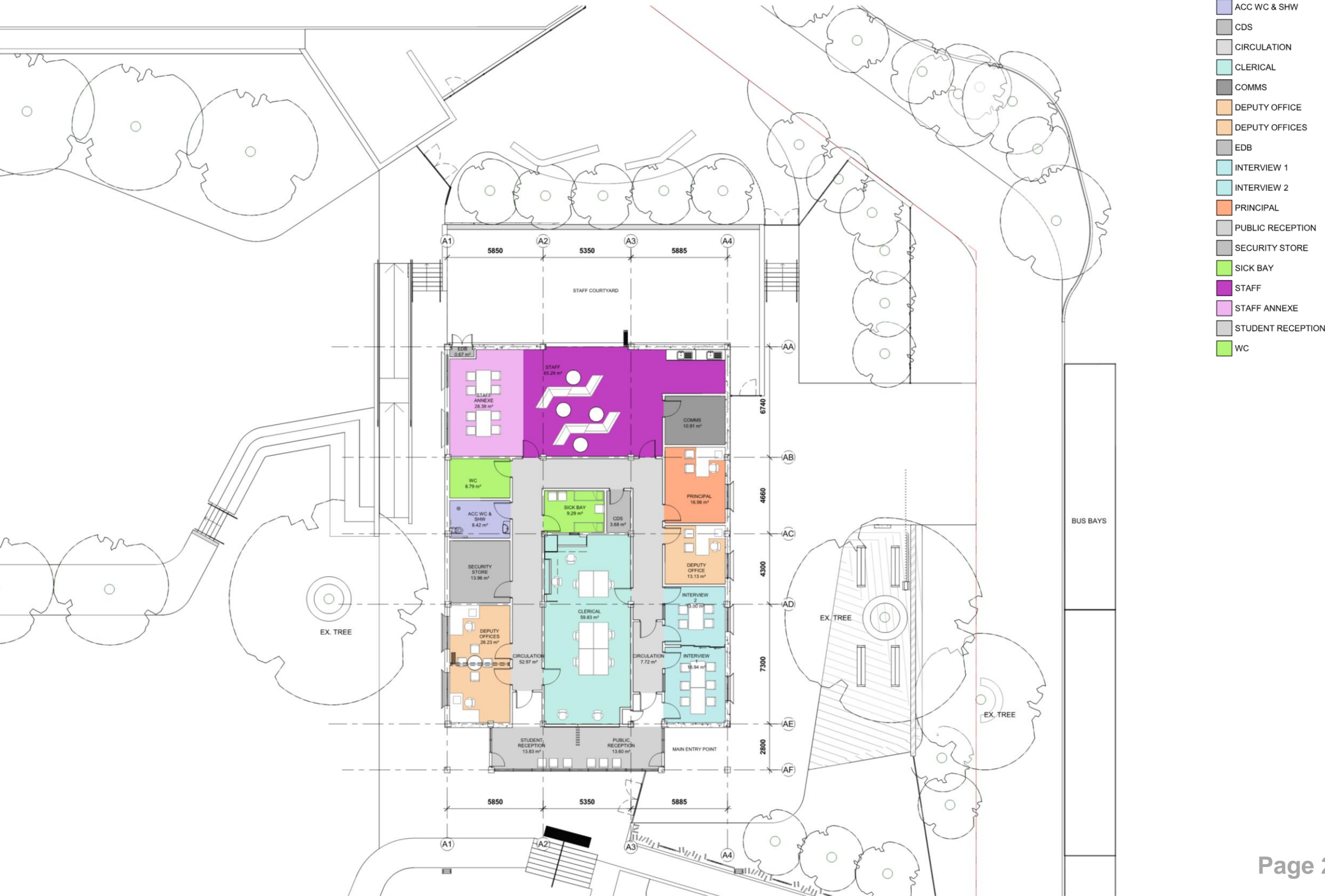
2.0 Response to Education SEPP Design Quality Principles

Site Context – Roof Floor Plan



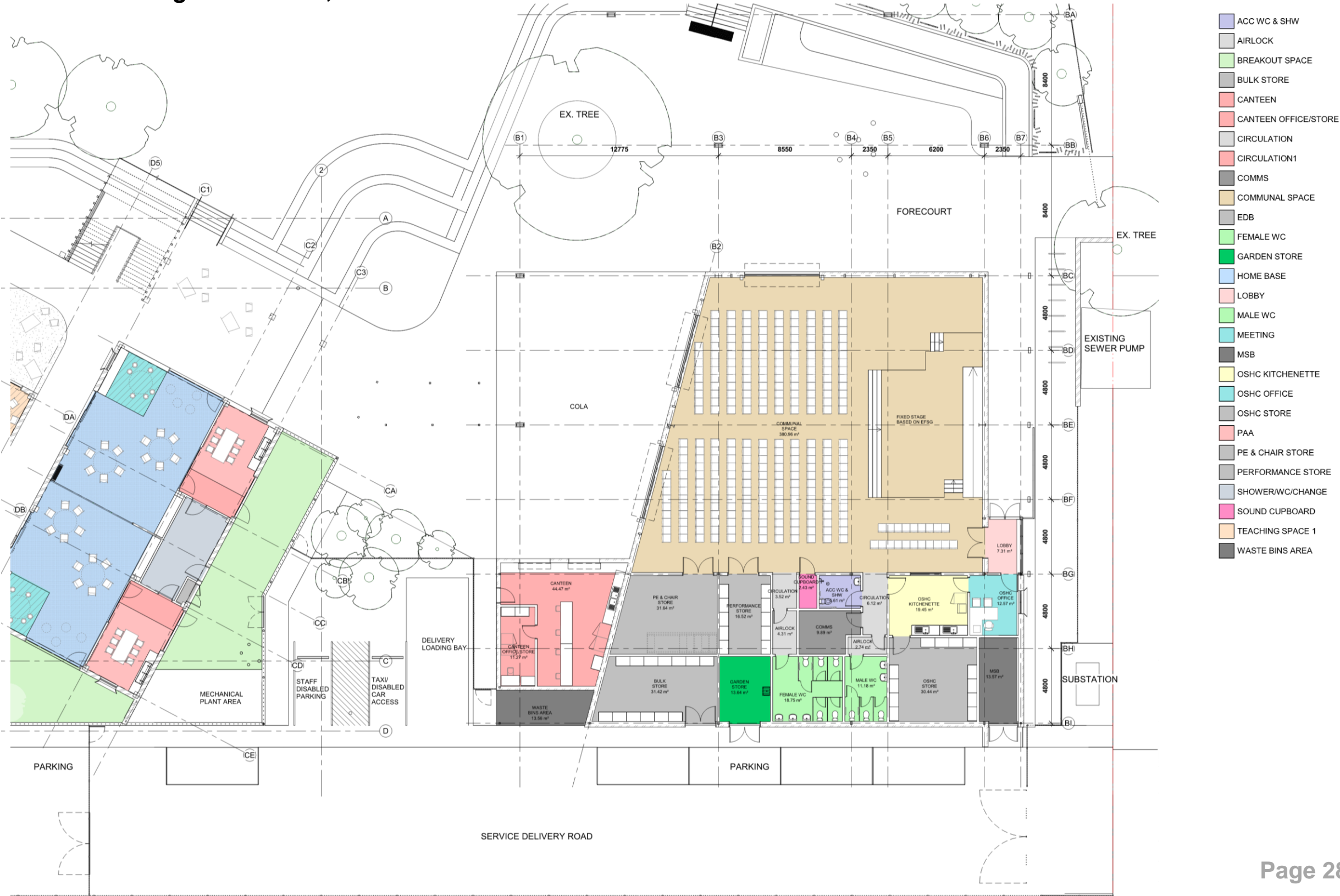
2.0 Response to Education SEPP Design Quality Principles

General Arrangement – Administration/Staff



2.0 Response to Education SEPP Design Quality Principles

General Arrangement – Hall, OSHC & Canteen



2.0 Response to Education SEPP Design Quality Principles

General Arrangement – Teaching Spaces

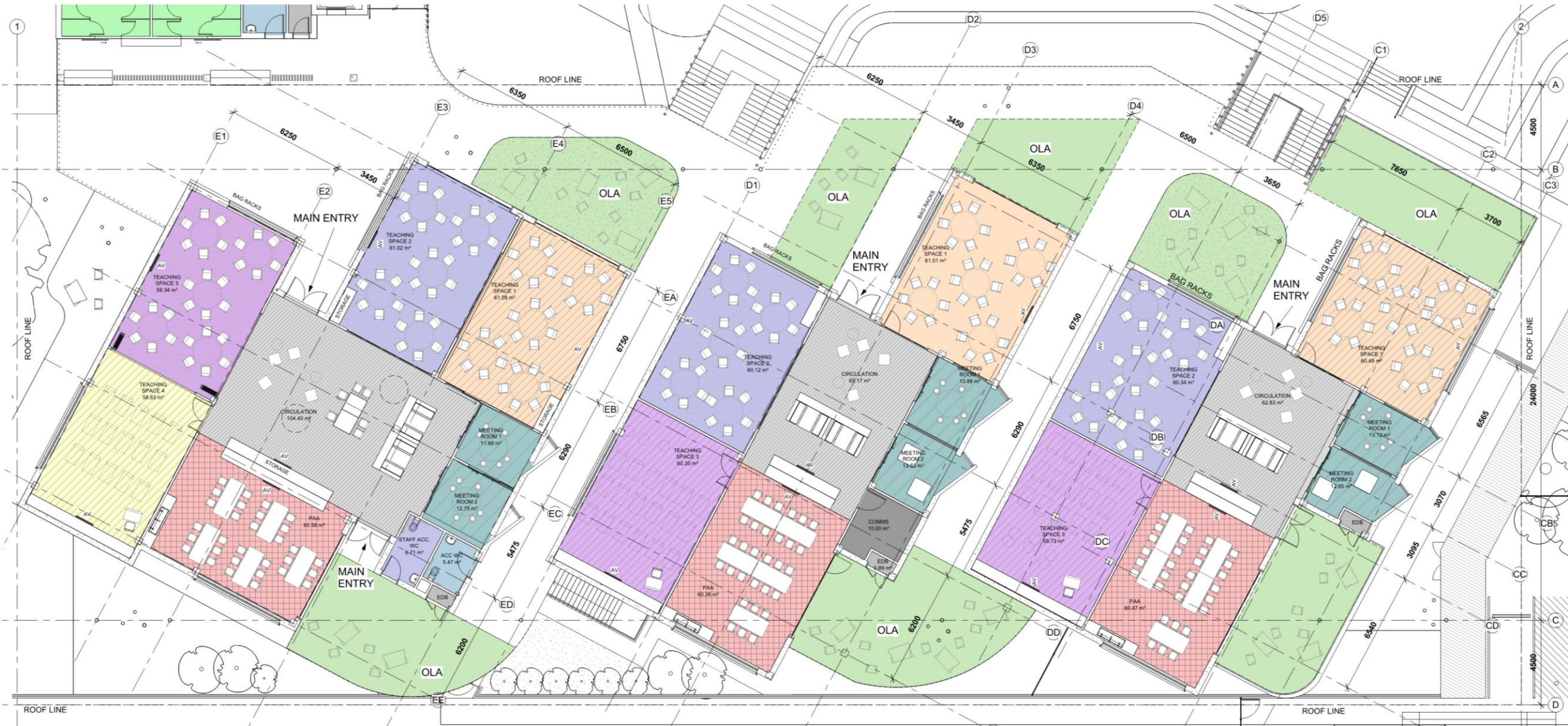


LOWER GROUND

- | | |
|----------------|------------------|
| ACC WC | MEETING ROOM 1 |
| BREAKOUT SPACE | MEETING ROOM 2 |
| CIRCULATION | PAA |
| CIRCULATION1 | SHOWER/WC/CHANGE |
| COMMS | STAFF ACC. WC |
| EDB | TEACHING SPACE 1 |
| FEMALE WC | TEACHING SPACE 2 |
| HOME BASE | TEACHING SPACE 3 |
| MALE WC | TEACHING SPACE 4 |
| MEETING | |

2.0 Response to Education SEPP Design Quality Principles

General Arrangement – Teaching Spaces

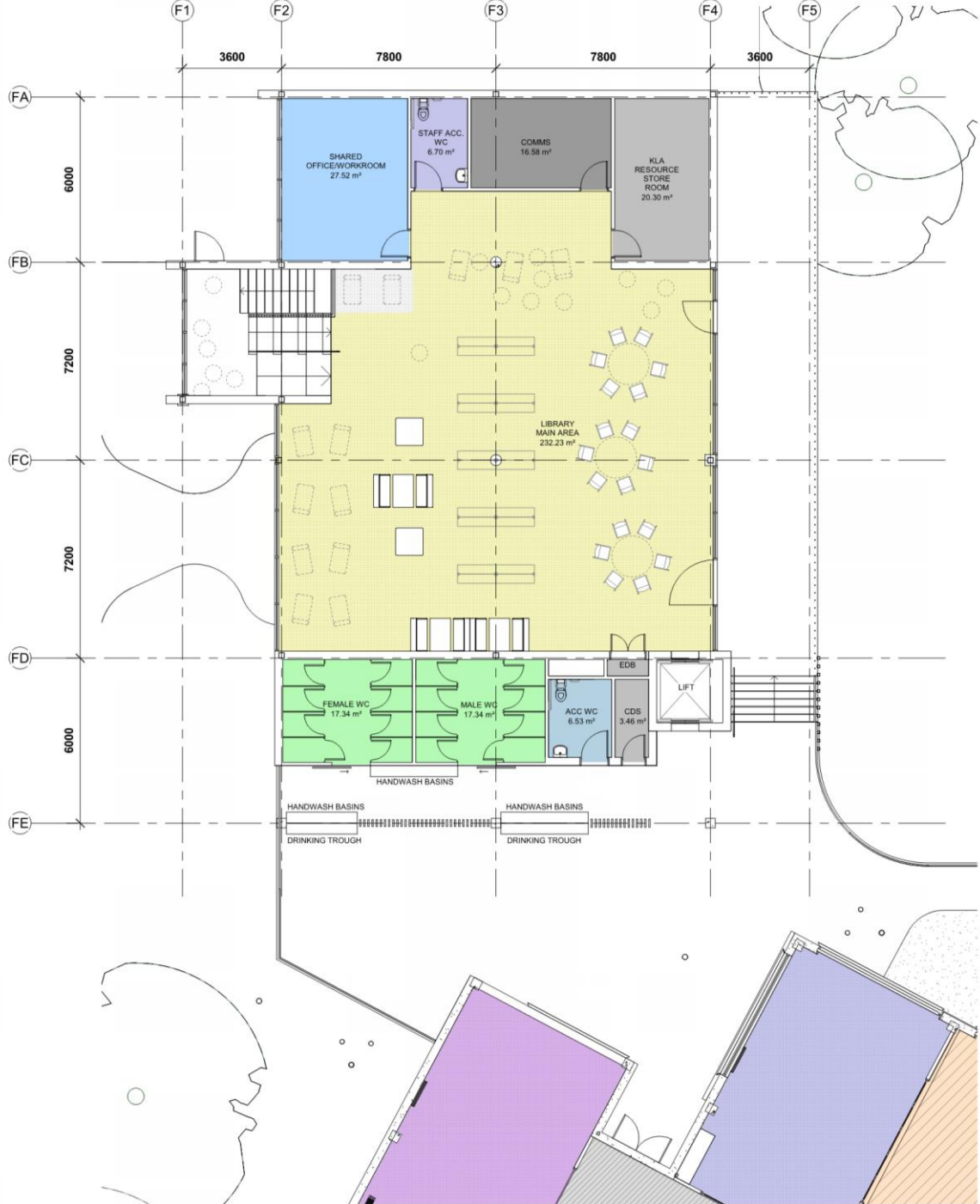
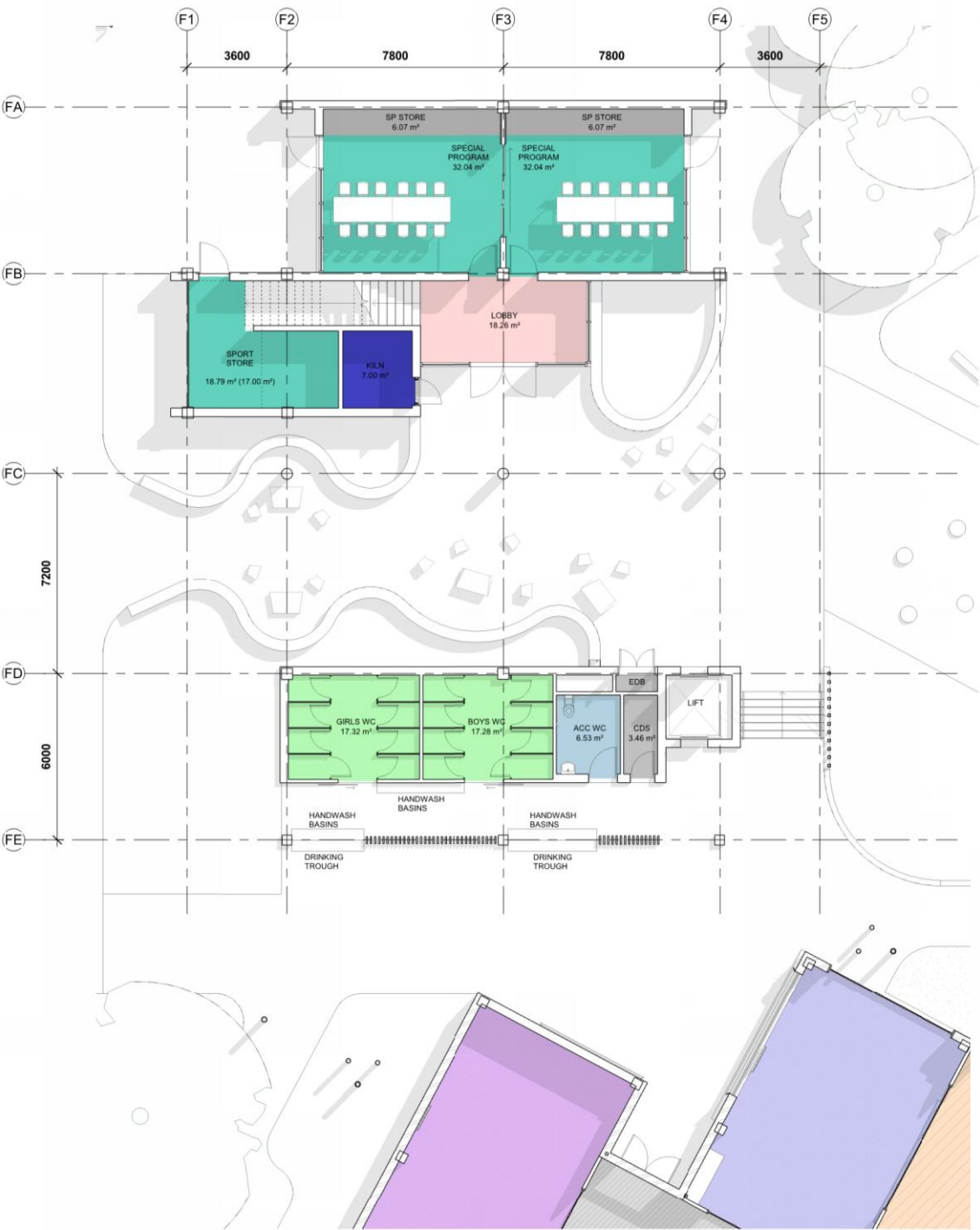


GROUND

- | | |
|-------------------|------------------|
| ACC WC | PAA |
| CIRCULATION | STAFF ACC. WC |
| COMMS | TEACHING SPACE 1 |
| EDB | TEACHING SPACE 2 |
| FEMALE WC | TEACHING SPACE 3 |
| LIBRARY MAIN AREA | TEACHING SPACE 4 |
| MALE WC | |
| MEETING ROOM 1 | |
| MEETING ROOM 2 | |

2.0 Response to Education SEPP Design Quality Principles

General Arrangement – Library, Special Programs & Student Amenities



2.0 Response to Education SEPP Design Quality Principles

2.4 Health and Safety

The design provides a public forecourt to encourage student and public access onto the school. During school hours the front boundary gates will remain open to allow public entry while a secondary fence line surrounding the forecourt provides a secure line into the school. Administration will have good surveillance of the public forecourt and people entering and leaving the site. A separated student and public reception has been developed within the Administration facility aligning with secure lines between the secure school and public forecourt interface.

Surrounding the site, standard school fencing will provide security for the school. Automatic entry gates with intercom systems will provide controlled access onto the school site at various entry points including the staff carpark and the service delivery road. All roadways and car parking areas are proposed to be fenced off from student access to maintain security and safety. Delivery access off Warnervale Road allows for deliveries and taxi/mini bus drop off for special needs students. This area will also be fenced to keep students safe from moving vehicles.

External walls to all teaching spaces promote natural daylight cross flow ventilation. Openable windows, louvres at low and high levels will promote convection air movement circulating fresh air through the internal environments to support healthy learning spaces.

Open planned learning environments support collaborative learning opportunities and provide good surveillance of all learning spaces. All external environments are open and visually connected hence promoting good surveillance. The buildings internally and externally provide views to the retained biodiversity vegetation south of the site and create views overlooking the central courtyard.

Direct access from internal learning spaces to deep verandas and deck areas from all learning spaces provide opportunities for learning to extend to the outdoors. Landscaped areas with a variety of settings will also encourage learning to take place in the outdoors.

Large roof canopies over circulation pathways and outdoor learning spaces provide protection from harsh weather conditions and allow for seamless connections between facilities. They provide protected areas for students to seek refuge during periods of extreme weather conditions, and support safe access around the site.



Main School Front Entry from Warnervale Road



Library and Teaching Spaces connection to central landscaped courtyard space.

2.0 Response to Education SEPP Design Quality Principles

2.5 Amenity

The proposed new school has been positioned to respond to and comply with all site constraints and investigations that have been undertaken. The buildings utilise the 4m cross fall from the West to the East of the site, where the two storey buildings are located on the lower part of the site. This aims for lowering the impact of the surrounding context by helping to reduce the scale and height of the development.

The buildings on the eastern boundary have been set back from adjoining neighbours' managed land. This helps to create a buffer towards potential future developments. A service access road is proposed along the boundary to ensure emergency service vehicles have adequate access into and around the site.

The buildings have been offset from the western and southern boundary to comply with the bushfire APZs that have been established with RFS. The proposed design has retained many significant existing trees which will be used as a biodiversity educational tool for the students. As is noted in the landscape design, a native trail connecting the existing trees to the retained biodiversity vegetation will be incorporated into the proposed development. The design aims to limit the amount of hard landscaping elements. An alternative soft landscaping materials will be used along with celebrating the existing site's indigenous species. This will also help to assist with students' everyday wellbeing and students with behavioural needs.

As identified previously in this report, the front arrival zone focuses on addressing the issues of the pedestrian and vehicle movement on and off the site, this way encouraging safe and secure access. The design promotes a welcoming and inviting public forecourt and encourages school and community interaction.

The variety of spaces and learning settings designed across the campus both internally and externally will support the variety of needs of students and staff alike. The arrangement of the core facilities and centralised teaching pods, support classes and library was design to encourage integration and collaboration, inter-disciplinary activity based learning and efficient movement of students and staff between teaching and learning spaces. The incorporation of the teaching pods was created to support stage related learning needs and to encourage a sense of place and belonging for students and staff.



2.0 Response to Education SEPP Design Quality Principles

2.6 Whole of Life, Flexible & Adaptive

The brief for the project was to design a school for 460 students with future expansion considerations. The proposed new school has considered future expansion opportunities in such a way to minimise potential interruption of any future development proposed. The lower and upper ground level learning pods and library are currently designed with large outdoor areas on a concrete slab and with a generous covering roof overhang. These areas can be internalised for future expansion with minimal impact to other parts of the building.

Other expansion areas have been considered including additions to administration, by expanding into the large public forecourt and west of the building, into the additional area provided that is within in the staff courtyard.

The multi-level teaching pods and library building design frees up sufficient ground plane space should additional buildings need to be added to the site in the future for further expansion without impacting on the outdoor spatial requirements across the campus.

The internal floor plates are designed to be fitted out with non-load bearing partition walls to enable future modifications to be made with minimal impact to the building structure. The predominant use of loose and moveable furniture in lieu of fixed joinery units will also enable learning spaces to be flexible for teaching and learning changes into the future. The open planned future focused learning model encourages flexible shared use of space and increased utilisation of circulation areas. The learning pods have been designed with facilities to be multi-purposed and multi-functioned to encourage a variety of learning activities. Spaces can be adapted and connected for various teaching and learning styles and activities making the school adaptable for changing pedagogical needs.



Teaching Spaces

2.0 Response to Education SEPP Design Quality Principles

2.7 Aesthetics

The overall design has been sympathetic to the current semi-rural community of Warnervale whilst considering the potential future growth in population and residential developments across the region. The school being located in close proximity to the Town Centre on Warnervale Road has a strong presence in the community and so the proposed new school development attempts to deliver a positive and welcoming expression. This is demonstrated through the physical forms and public forecourt fronting the street.

The built form surrounding the public forecourt that faces open towards Warnervale Road, intends carefully on expressing a sense of pride and place in the community. Whilst receding the building back into the site to not dominate the streetscape. The simplicity of the Hall and Administration buildings sits well within the surrounding native contexts. The roofs act as canopies, which is inspired by the existing biodiversity trees that the site holds.

The low profiled roof keeps the overall height of the built form to a minimum and is in proportion with residential single and double storey streetscape. The buildings' set-in from the eastern and western boundaries helps to minimise the impact on adjacent existing and potential future residential properties.

The materials, finishes and profile of the built form for the facade treatment has been chosen to reflect and celebrate the natural green biodiversity valued land surrounding the site and to bring emphasis to the Porters Creek Catchment. A solid masonry base grounds the building, where light weight upper cladding helps to break up the teaching building facade. The two storey feature columns supporting the contoured roof profile mirrors the surrounding natural bushland and tree canopy of the rural Warnervale region.

The landscape surrounding the built forms has been designed as a native and educational journey across the site. This is reflected in the selection of natural materials. Natural stone block walls provide tiered a stepped design that follows the natural contours of the site. Native mass planting, turfed areas and scattered proposed and existing trees reflect the natural surrounds of the region. The natural landscape design from Warnervale Road creates an educational journey that celebrates the existing native bushland from the main entry through to the back of the site where the retained biodiversity vegetation is proposed. Integration of existing trees and way finding noted as the indigenous species that were beautifully hand drawn by Ross Smith, a local aboriginal artist aims to enhance and celebrate the history and natural ecosystems of the site.

The overall design of the proposed New Primary School at Warnervale has set out to reflect the values of the Warnervale community proposes to celebrate and enhance the existing biodiversity valued land it includes well as the Porters Creek Catchment into a grounding sense of pride and place in the community.



Library, Special Programs and Student Amenities Building

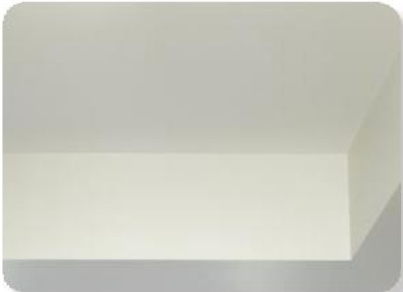


Forecourt & Admin/Staff Building

2.0 Response to Education SEPP Design Quality Principles

Interior Materiality and Finishes

CEILING GENERAL



50% SET PLASTERBOARD
50% ACOUSTIC SET PLASTERBOARD

PINBOARDS

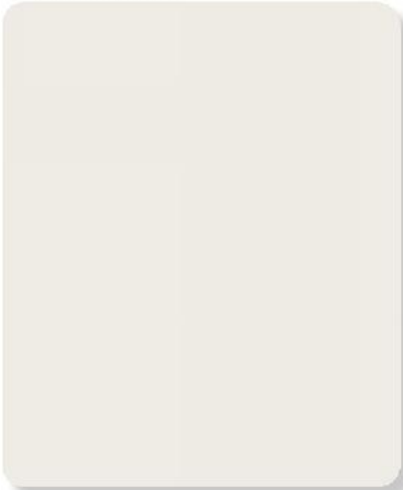


FEATURE CEILING



PERFORATED FEATURE PLYWOOD
(10% OF AREA APPROX.)

GENERAL WALL



ACOUSTIC WALL



FEATURE WALL
DULUX PAINTED



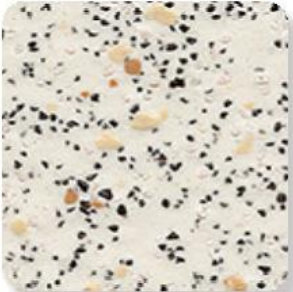
DOOR & FRAMES



GENERAL CARPET



VINYL FLOORING



TIMBER VINYL FLOORING



Exterior Materiality and Finishes



NOTE: ALL AREAS EXCEPT SOFFIT 2 MINI ORB PERFORATED/MINI ORB METAL SHEET (30% OF AREA APPROX.) SOFFIT LINING WHERE ACOUSTICS REQUIRED AS PER EFSG.

