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Carlingford West Public School

59-73 Felton Road and part of 183 Pennant Hills Road, Carlingford, NSW

Design Statement

JUNE 2021 Application No. SSD-10879802

Issued for SSDA




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Project Description

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Project Drivers

Carlingford is part of the Greater Sydney Regional Plan key cities initiative. The Central River City plan is focused on Parramatta City with Carlingford being part of a surrounding growth corridor. The student population of CWPS has grown rapidly over the last ten years in part due to the recent high density residential developments in the catchment area. This has resulted in a significant increase to student numbers and a need to house students in permanent classroom facilities. Carlingford West PS has existed on the site since 1967 and shall be designed to support 1610 students.

The project has been developed and accelerated with the utilisation of a DfMA precedent school that best matches the CWPS pedagogy and teaching methods, as well as classroom and module make up. Barramurra PS has been nominated as the appropriate precedent school.

Buildings have been located based on the endorsed masterplan which includes a combination of internal refurbishment, an extension of the existing administration, a new hall and 2 new three-storey high classroom blocks. These classroom blocks, X & Y, are the basis of the State Significant Development Application and have been developed based on the DfMA precedent school.

Scope of Works

The following upgrades are proposed to Carlingford West Public School:

- Proposed upgrades will cater for a capacity of 1,610 students
- Construction of 2 new buildings:
  - Building X - A three-storey building that contains 24 new homebases
  - Building Y - A three-storey building containing 22 homebases, 6 special program rooms and a single storey library, linking the 2 site entry points and includes a covered outdoor learning area below.
- Carpark with 53 parking spaces for staff and visitors, and associated traffic strategy for the precinct.
- Reconfiguration of the current kiss-and-drop zone at Felton Road East and West.
- Landscaping masterplan for the entire school.
- Associated signage, civil works, utilities and services to support the proposed upgrades.

Opportunity for organised Community Use

Schools are often centrally located in communities and thus provide shared spaces and facilities that become the focal point of new communities.
Recreational facilities, open spaces and communal halls are components of schools that offer opportunities for wider organized community use. The school site at Carlingford West will potentially offer facilities in the form of sports ovals, a communal hall, library and canteen for organised community use that has been agreed with the school. These facilities could be used for organised recreational sporting events, performance and dance, music, meetings and many other activities. The canteen provides the opportunity to facilitate catering for these activities. The Carlingford community will benefit from access to the state-of-the-art learning environment and the school shall play an important role in the broader community.

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Standard Education Principles
The Department of Education has provided the following five principles as a guide to create successful, future focused learning spaces.

Education Principle 1: First and foremost, focus on the **needs of learners and learning**.
Education 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.
Education Principle 3: Be aesthetically pleasing.
Education Principle 4: Provide **contemporary, sustainable learning environments** that:

- Promote learning for students and teachers through collaboration, social interaction and active investigation
- Encourage learner self-management and self-direction;
- Support a full range of teaching strategies from direct explicit instruction to facilitation of inquiry and authentic project and problem based learning;
- Facilitate learning and connection anywhere, anytime by providing seamless access to ICT and integration of learning resources throughout the learning spaces;
- Be integrated into, and maximize the use of the natural environment;
- Enable aspects of the buildings, building design and outdoor spaces to be learning tools in themselves—for example, learning from the ecologically sustainable features of the design and associated energy management systems; and
- Are age and stage appropriate.

Education Principle 5: Embed the potential for **re-configurability**, both in the present for multi-purpose use and over time for changing needs.

Design Impact Statement

The proposed development at the school will replace the current temporary learning environments with permanent classrooms and suitable core facilities to provide contemporary future focused learning environments.

The buildings have been sited to ensure minimal adverse impact on neighbouring properties and work with the falls across the site.
Height, scale and bulk has been careful considered to ensure an appropriate design response.
Site investigations has identified a number of heritage and cultural heritage influences including the natural vegetation of the Turpentine Iron Bark trees and the Burramattagal clan totems of the eel and woven eel trap.
ESD measures are proposed to minimise environmental impacts. These include solar panels, rainwater harvesting, high performance thermal treatment to the building envelope and efficient led lighting and air-conditioning augmented by natural light and cross ventilation.

Executive Summary

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The Department of Education has initiated the Carlingford West development project to meet the current enrolments needs for the school. The project will provide 44 permanent teaching spaces accommodating 1610 students, and core facilities, including administration, staff facilities, library and hall.

Part of the project brief is to utilise a DfMA component of an existing precedent school, Barramurra PS (Catherine Fields). The design has taken the precedent school and broken it down into a number of building typologies which combine together to suit the site and create the 2 classroom blocks. The building typologies optimise internal layouts with the rooms accessed from the external verandah. This provided an efficient design solution. Double stacked classrooms ensure natural light and ventilation is maximized and the verandah provides the buildings with an engaged façade where student movement occurs whilst the rest of the facades are articulated with glazing or core facilities.

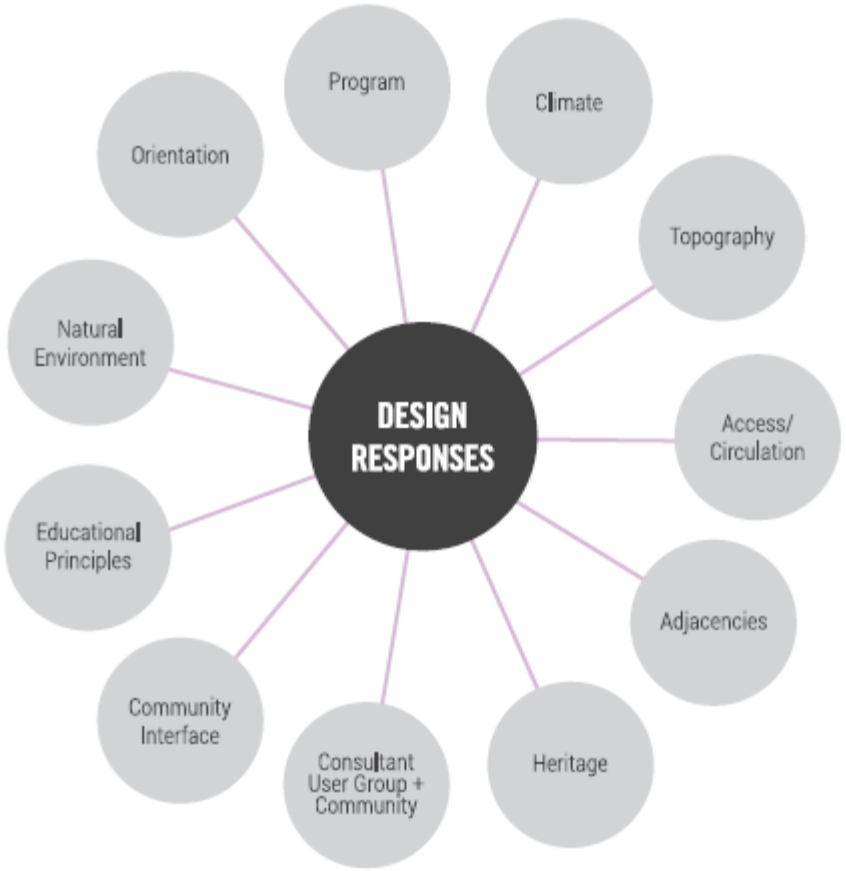
The classroom blocks are utilising similar cladding and fenestrations as the precedent school however there are opportunities on the active facades or verandahs and circulation spaces to respond to the site and sense of place. The design solution responds to many factors. This design summary document articulates the unique contextual influences that have determined siting, circulation, environmental responsiveness, heritage and cultural responsiveness. The design has taken cues from social influences and educational aspirations.

Carlingford is a rapidly developing and changing environment. It is a inclusive, youthful, active growing community, with a cultural mix. The complex weave of all these levers has led to a design concept that is contextual, environmentally respectful and aspirational in striving for an inclusive campus of wellness and support. The central design idea is to create a symbolically unifying campus which respects context, heritage, circulation and safety. The basic education building block is based around creating learning environments which respond to the Educational Principles articulated by the school community.

"In order to act as an education for the child, the environment has to be flexible: it must undergo frequent modification by the children and the teachers in order to remain up-to-date and responsive to their needs to be protagonists in constructing their knowledge" - Lella Gandini (1998)

Architect
Studio Principal - Education

Design Brief Parameters and Process



Any design is a response to the Brief and the Parameters.

The brief is to develop the existing Carlingford West Primary School for 1610 students. The Department of Education, in broad terms, defines the curriculum and spatial requirement for the proposed role. The design must answer to the Department of Education's Educational Facilities Standard Guidelines (EFSG).

The design response should then answer to the unique context of the Carlingford area, and site. Many parameters/levers will determine an appropriate design response which in turn will deliver a unique and contextual solution.

Diagrammatically, below, are a number of the parameters that play a significant part in shaping the design response.

Within each of the above parameters there will be finer grained levers that may take priority. The design response is to study the above in depth and be immersed in an understanding of the site and prioritise solutions.

Design Quality Principles

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Principle 1
Context, Built Form and Landscape

Principle 2
Sustainable, Efficient, Durable

Principle 3
Accessible and Inclusive

Principle 4
Health and Safety

Principle 5
Amenity

Principle 6
Whole of Life, Flexible and Adaptive

Principle 7
Aesthetics

Site Context

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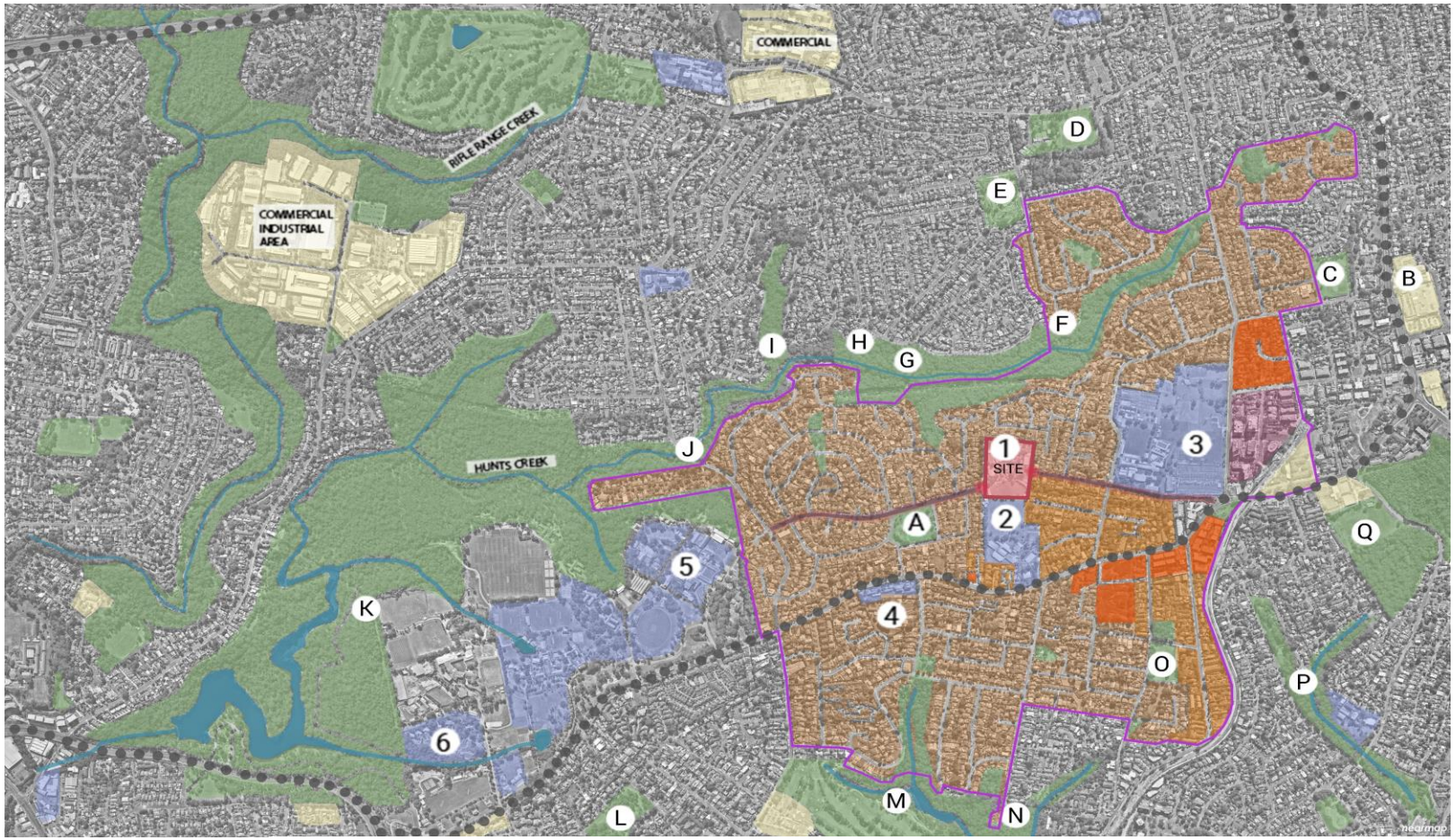
- WATERWAYS
- VEGETATION
- BUSINESS/SPECIAL PURPOSE ZONES
- EDUCATION FACILITIES
- CWPS STUDENT CATCHMENT
- R1 - GENERAL RESIDENTIAL ZONE
- R2 - LOW DENSITY RESIDENTIAL ZONE
- R3 - MEDIUM DENSITY RESIDENTIAL ZONE
- R4 - HIGH DENSITY RESIDENTIAL ZONE



SCHOOLS & EDUCATIONAL FACILITIES

1. CARLINGFORD WEST PUBLIC SCHOOL
2. CUMBERLAND HIGH SCHOOL
3. JAMES RUSE AGRICULTURAL HIGH SCHOOL
4. ONESCHOOL GLOBAL SYDNEY CAMPUS
5. THE KING'S SCHOOL
6. CHARLES STURT UNIVERSITY - PARRAMATTA CAMPUS

SPORTS FACILITIES

A. KINGSDENE OVAL
B. CARLILE SWIMMING CARLINGFORD
C. HAROLD WEST RESERVE
D. NORTH ROCKS TENNIS CENTRE
E. JOHN WEARN RESERVE PLAYGROUND
F. HUNTS CREEK RESERVE EAST PLAYGROUND

RECREATION & OPEN SPACE

G. BALAKA FALLS
H. HUNTS CREEK
I. NORTHAM DRIVE RESERVE
J. NORTH ROCKS WILDLIFE SANCTUARY
K. PARRAMATTA LAKE WALK
L. GEORGE GOLLAN RESERVE
M. VINEYARD CREEK
N. VINEYARD CREEK RESERVE
O. TELOPEA OUTDOOR GYM
P. RAPANEA COMMUNITY FOREST
Q. COX PARK

Principle 1

Context, Built Form and Landscape

Site Context

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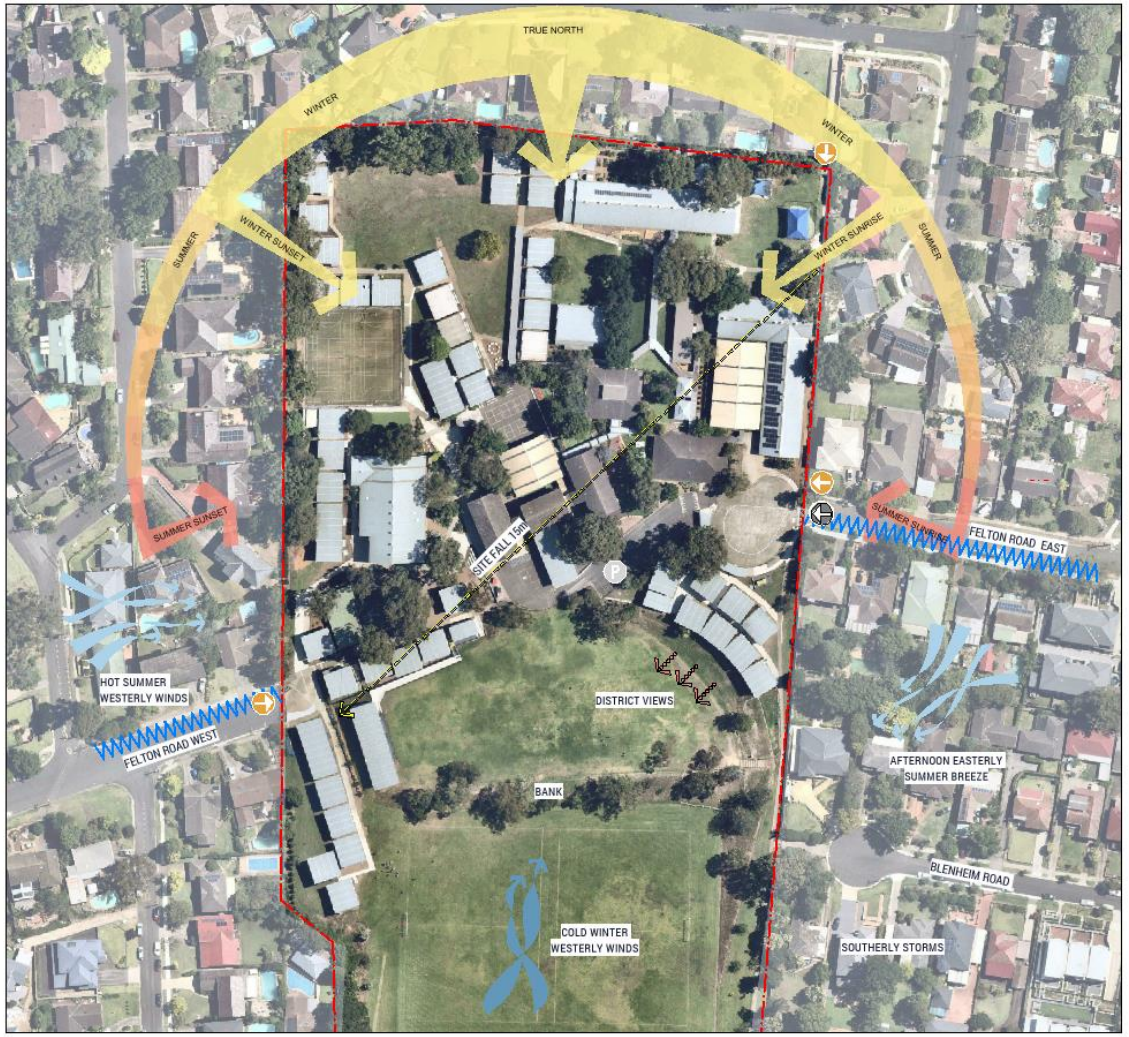
SITE DESCRIPTION
The project design team has carried out site inspections and the following desktop site analysis.

The school site is, approximately, rectangular in shape and with an east - west facing orientation. Where practicable, this orientation provides the opportunity to arrange the school buildings in North-South facing orientation so to optimise passive solar design potential.

The site has 15m topographical change starting from the highest point of the site on the North East tip to the South West corner of the site. With the sloping topography it is natural that the scale of buildings will appear larger on the downhill side of the sloping site Felton Rd West than they would appear on the high end of the site at Felton Rd East.

The existing Carlingford West school site has a few constraints & opportunities that have been identified during design process. These include the following items:
Opportunities

- Improved site connections and supervision of play areas.
- Multi levelled urban connection of Felton Road East and Felton Road West with the pedestrian link.
- Primary and Secondary entry plazas which address both street entries and provide opportunities to reflect a sense of identify and place.
- Limiting car access to the site and significantly improving child and staff safety.
- Orientation of buildings for optimal Environmentally Sustainable Design principals with large eaves overhangs for covered walkways and sunscreens to protect the façade from the summer heat load.
- Improved DDA access to all buildings .



Principle 1

Context, Built Form and Landscape

Site Context

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Constraints

- The site has a significant slope with approx. 15m fall from Felton Road East to Felton Road West.
- DDA access to all proposed & existing buildings requires several covered ramps and 2 lift cores.
- Required building setbacks to surrounding low density residential neighbourhood to limit overshadowing and ensure appropriate privacy
- Limited street address and access to the site particularly vehicular.
- The location of the school blocks the local street patterns which has an adverse effect on the suburb connectivity and traffic movement

Photographic record of the existing site condition dated April 2021.

Outdoor learning environments and play spaces are critical to all school designs. The school currently enjoys a variety of outdoor spaces. The proposal optimises and expands on these spaces providing increased active and passive areas.

Principle 1

Context, Built Form and Landscape

Masterplan

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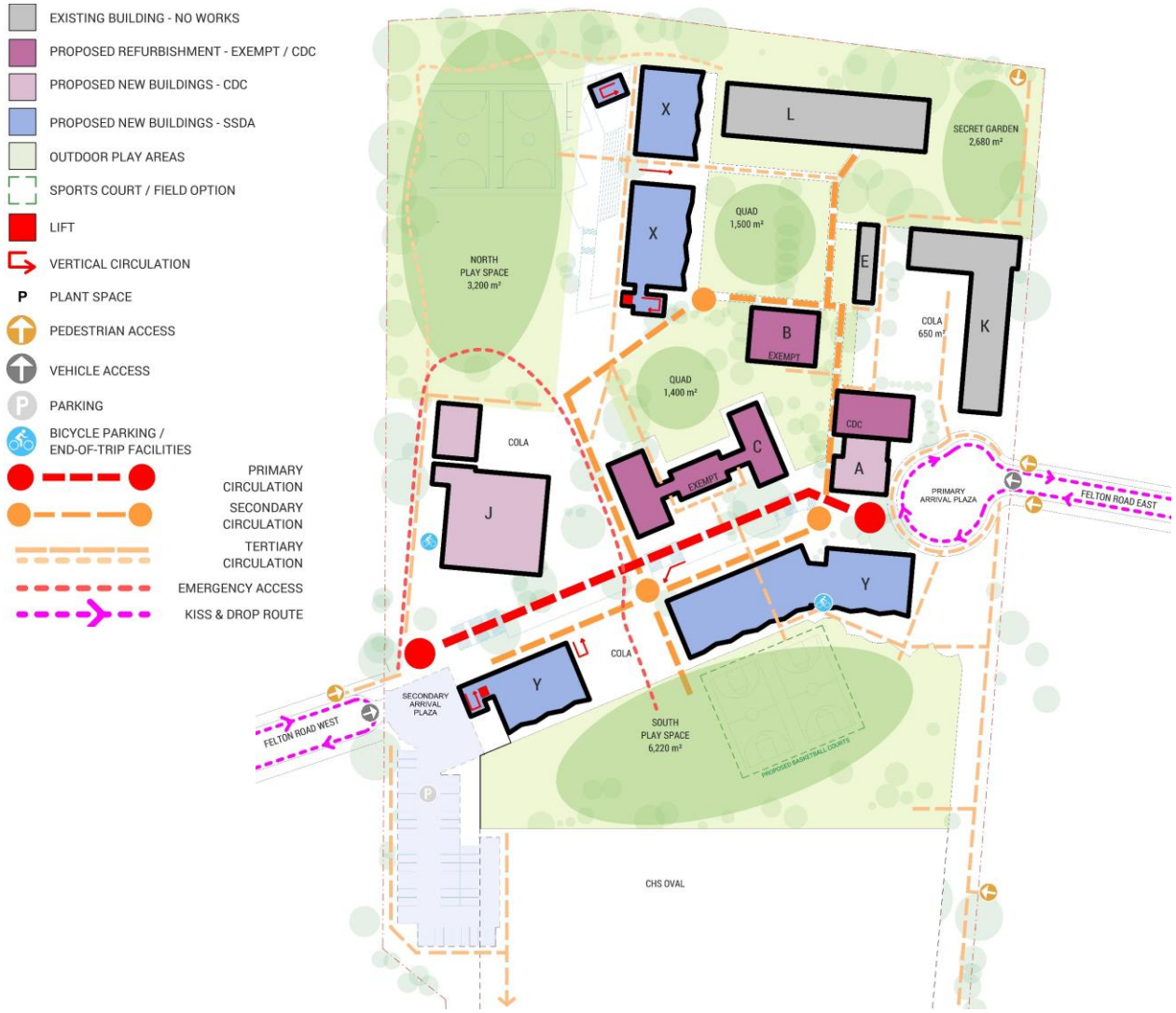
The masterplan preserves the Existing School campus to the North East corner and retains existing Quad and COLA spaces which is a good ESD outcome. *SDRP supported the "re-use of existing buildings where possible".*

New pedestrian arrival plaza, student drop off areas, carparking, and delivery zones, cycle parking and end of trip facilities will simplify site arrival, reduce the existing congestion and create a safer and more relaxed arrival experience.

Two new circulation spines have been developed within the school masterplan and are aligned with lift locations in Block X and Y to provide equitable access around the school site. The East West pedestrian link connecting connects to the two main arrival points at Felton Rd East and West and establishes a natural path of movement across the site. The North South recreation spine connects the ovals Hall and Block X and Y. The double-height space (covered outdoor learning area) located under Block Y opens up this connection. The new circulation spines run along the edge of Block X and Y and is activated by movement along the balconies and flanked by plazas and play spaces creating a vibrant urban interface.

Building Y has been located to face North, capture district views, create a pedestrian connection between Felton Road East and West and preserve school oval space to the south. Building X has been located to address the existing school oval and quad spaces. Both buildings have been located to create clear sight lines across the campus for student safety. The various courtyards and oval spaces that are defined by Block X and Y provide student year groups with age-appropriate play opportunities.



Block A,B,C and J are excluded from SSD scope of works, subject to separate approvals.

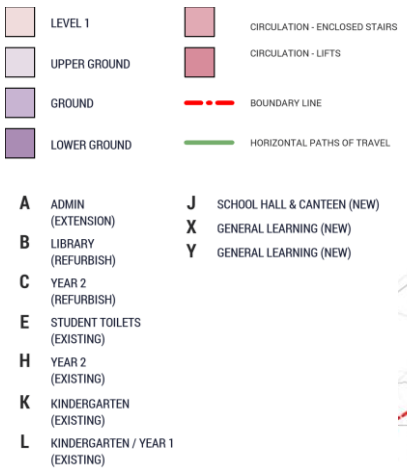
Principle 1

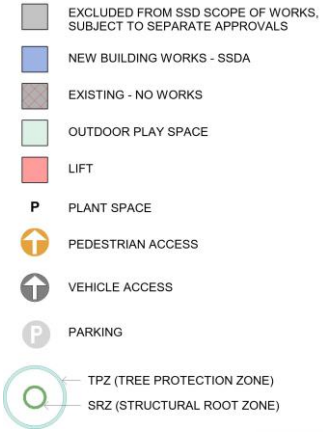
Context, Built Form and Landscape

Masterplan

The library is located at the End of block Y near the Administration building and school entry which will facilitate flexible use for staff planning, meetings and organized after hours community use. The open plan library floor faces south towards the oval and has restful district views and soft natural light from the south.

Block A,B,C and J are excluded from SSDA scope of works, and area subject to separate approvals. The Hall- block J (not part of SSDA) is located on the recreational level and is adjacent to carpark and arrival area to allow easy access for after hours organized community use. The administration building and school reception-block A (not part of SSDA) is located adjacent to the Drop off area at Felton Road East and arrival plaza. The building is located with good sight lines to pedestrian and drop off areas, the main circulation spine into the school and the Library entry.





Block A,B,C and J are excluded from SSD scope of works, subject to separate approvals.

Principle 1

Context, Built Form and Landscape

Built Form

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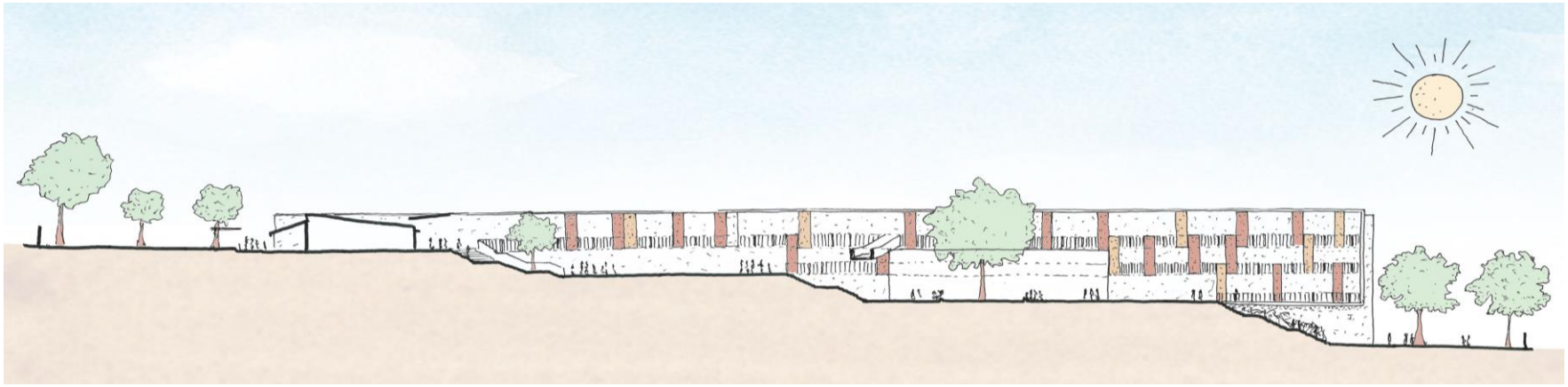
The perspective demonstrates how the buildings have been sited and the bulk and scale of the proposal. Outdoor learning environments and play spaces are critical to all school designs. The proposal optimises these spaces with a variety of spaces available providing both active and passive areas. *The SDRP supported the configuration and location of new buildings and open spaces providing possibilities to connect with different age groups.*

The section through the site along the pedestrian link or tiered promenade responds to the break in Felton Road. It is intended to be activated with the circulation running across all 3 levels. *The SDRP supported the central spine connecting both entry plazas and operating as a significant wayfinding element within the site.* The design quality, amenity and scale of this 20m wide plaza is indicated in proposed perspectives views.

The Block Y elevation enjoys the northern light and great views across the site and potentially out to Hunts Creek reserve from the higher levels.



Built Form

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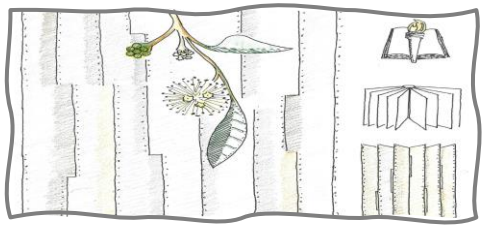
The section is bookended with entry plazas addressing both Felton Road East and West. A single-storey low scale at the east and due to the nature of the site a multistorey elevation to the west. The drama of the western façade in conjunction with generous landscaped plaza and tree planting creates an exciting and welcoming space for students and parents on arrival.

The proposed Block Y building is a three-storey building and has been sited with the narrow end addressing Felton Rd West to reduce the visual impact of the building mass to the street and adjacent residential lots. The building has a generous setback of approximately 20m to reduce overshadowing and the visual impact of the façade. The façade has also been broken down into a series of elements to reduce the mass and scale of the western façade. The main building mass is articulated separately to the balcony area and vertical circulation.

It is fitting that the school is a beacon within the urban grain of the community and consistent with other civic and church buildings in the area it should have a scale that reflects the schools important role as a place of learning in the community. The school site has a limited opportunity for identity given the small amount of street frontage. The western façade of block Y has been designed as a beacon for learning with the main circulation stair screen reflecting learning and resilience with the folding screen representing the pages of a book in the school logo and the bark of the Turpentine tree a native tree of this area.



Principle 1

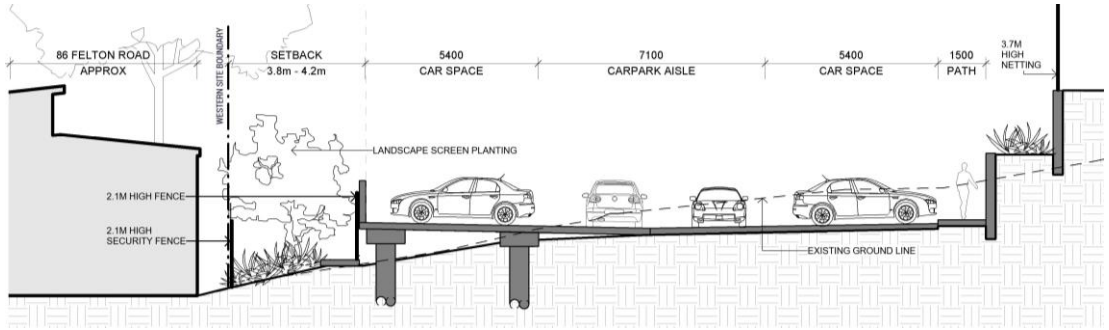
Built Form

Both Block Y and Block X are oriented to face into the existing school grounds with generous setbacks to existing property boundaries to reduce the impact from noise overlooking to adjacent residential lots.

Low pitched skillion roofs have been used on Block X and Y to help reduce the overall height of the building with pop up roofs designed to break up the roof form and provide natural light into internal spaces.

The carpark has been carefully sited to minimise impact to residential properties. The Carpark level ranges from meeting natural ground on western boundary edge to a maximum of 1.73m above natural ground on the South end and has a solid 1300mm high wall to prevent light spill from vehicle lights and reduce acoustic issues. The built form of the carpark has a lower scale than most residential houses, is setback 3.8 - 4.2m from boundary and screened with landscape planting along boundary edge.

The design of the retaining wall on the eastern side of the carpark has been carefully considered with a stepped retaining wall approach and integrated planting to reduce the scale of the retaining wall. The extent of retaining on the Eastern side of carpark is a function of trying to reduce the impacts of the carpark level on adjacent residential lots and to maximise external school oval space. Various carparking options were reviewed as part of design development. The current carpark option was the only viable option given site constraints.



Principle 1

Context, Built Form and Landscape

Built Form

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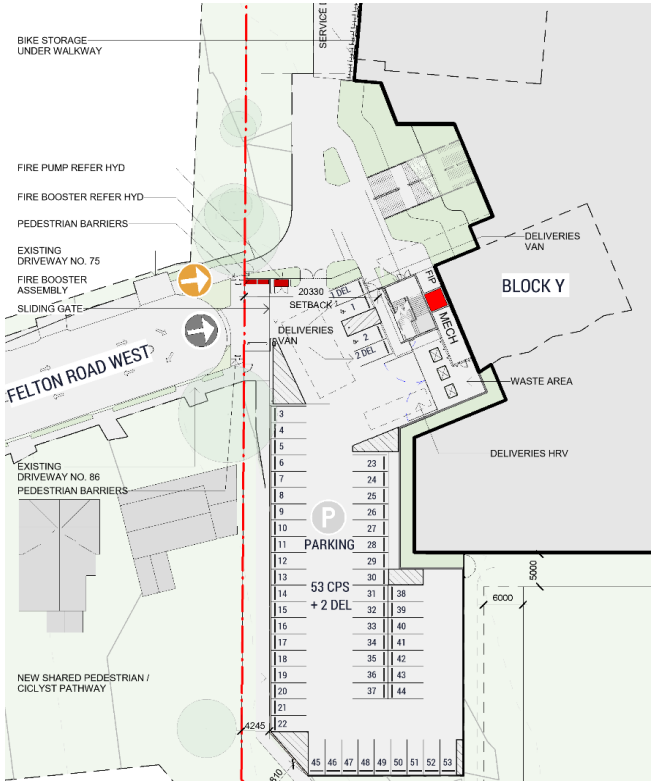
Services, including but not limited to waste management, loading zones, and mechanical plant, are integrated into the design of the development.

Given the size of the school, waste management was an early consideration. Waste storage facilities have been integrated into the carpark design with a screened enclosure and located close to the Felton Road West entry point.

Plant spaces have been located across the site to reduce noise impacts to external play spaces and adjacent residential neighbours. They have been integrated into the design and are generally screened to reduce noise and conceal equipment.



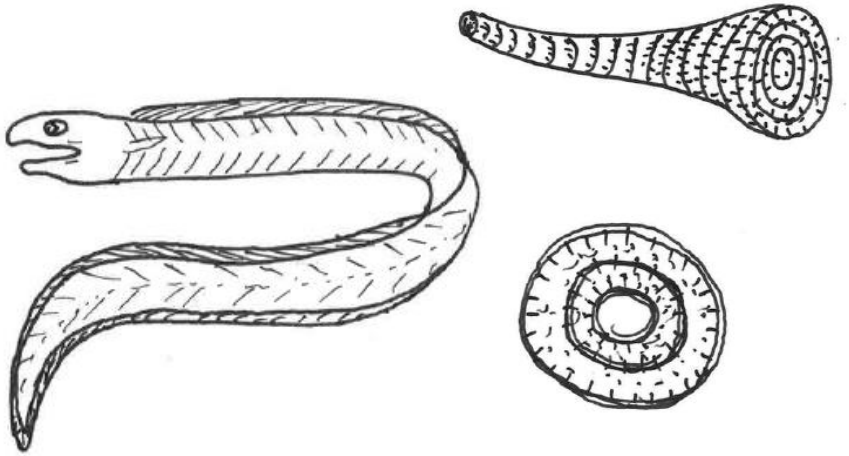
Principle 1

Context, Built Form and Landscape

Response to Cultural and History

Burramattagal – place where the eels lie down to breed

Burramattagal People of the Darug Nation are the original people of the Carlingford area. The Burramattagal are responsible for caring for the eel and its environment. They wove eel traps to catch the eels as they swam up-stream. The design of these traps is quite ingenious and was developed many years ago without technology and academic knowledge. We would like to celebrate this ingenuity and reference these items as motifs throughout the school in the landscape, signage and graphical features.



The eel is also known for its strange, but intelligent and versatile survival instinct: it's ability to swim in freshwate then transition with ease into the saltwater of the ocean. It also has the ability to survive on land which has seen the eel as a totem of inspiring resilience, an appropriate motif for a school.

Consultation and Framework for connecting with country

We have also meet with Scott Franks from Tocomwall an Aboriginal cultural heritage consultancy firm on the 18.05.21 and discussed an approach to incorporating ideas about connecting with country. The ideas, framework, and process outlined below was developed out of this meeting and in conjunction with framework outlined in The Draft Connecting with Country Framework.

The Design team has also reached out to Justine Coplin from the Darug Custodian Aboriginal Corporation following a recommendation from Scott that the group could be approached to discuss the indigenous history of the site and stories relevant to the Carlingford West public school site. We are currently waiting for a response. The consultation will be ongoing process through the detailed documentation of the project to ensure a meaningful and respectful outcome. There is a clear framework outlined in the design documentation to ensure there is approval, design input and ownership of Aboriginal themed elements within the school. This includes input from the school Aboriginal liaison officer, Aboriginal students, local Aboriginal Artists. Any items or themes used will be approved by local elders, the School and SINSW.

Principle 1

Context, Built Form and Landscape

Response to Cultural and History

Burramattagal – place where the eels lie down to breed

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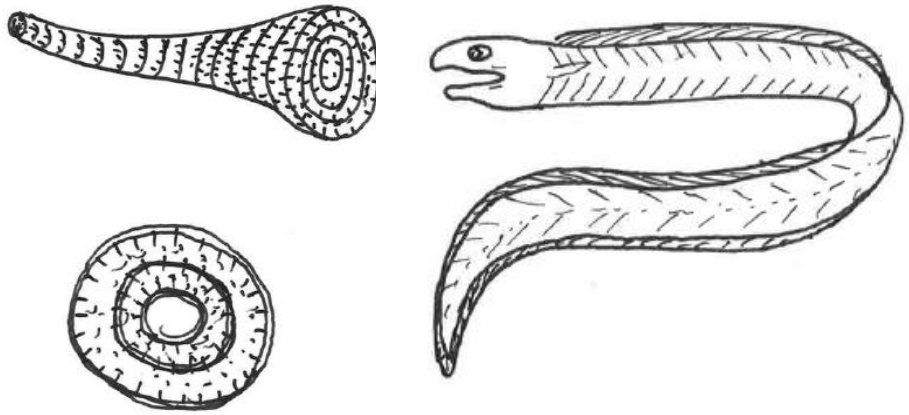
Connecting with country opportunities: The ideas that were discussed as well as suggestions made by Scott Franks are outlined below. These items could be worked through and integrated with the design in consultation with Aboriginal stakeholders in detailed design. Please also refer to the Landscape documents 'connecting with country'.

Welcome to country art installations: Felton Rd East and West Entry points. Installation produced by a local aboriginal artist. Acknowledgement of country text may include: "We proudly learn on the lands of the Burramattagal People of the Darug Nation…"

Walking country: A natural trail designed to allow students to connect with and walk country. Natural play, the journey of the seasons, indigenous language signs, arts and craft program to install woven sculptures inspired by Eel trap, interpretations and information about indigenous flora and fauna and seasons with engravings or paintings on rocks.

Yarning Circles: Create learning opportunities to pass on language and the connection story can be shared.
Hunts Creek inlay in pavement: Pavement inlay representing Hunts creek and playful plinths of eel fossils.



Aboriginal mural with connection story: Located at Arrival Plaza and COLA.
Wall Graphics with reference to Eels; Educational Graphics to glass partitions in learning spaces: Age-appropriate graphics to glass with themes covering Darug language for boy, girl, local animals, trees etc, . The Aboriginal people as first conservationists, engineers, artists, astronomers, farmers and land managers of this country. There is a lot that can be learned from the resilience of the eel and turpentine tree, the construction of eel trap, the emu in the sky and rock engravings, canoe building etc.

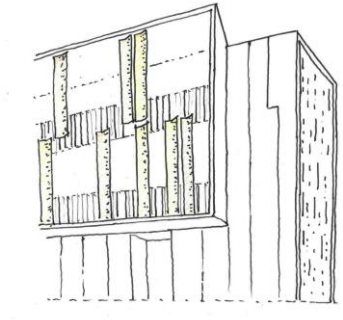
Museum grade artifacts case: In accordance with RAP Aboriginal artifacts found on site could be stored for display.
Façade Screening & cladding: The development of the façade and façade screening in reference to the Turpentine tree which was native to this area of Sydney. Establishes a harmonious colour palette with the surrounding natural landscape, provides a necessary ESD response to climate, and helps to break down the mass of the building form. This building element can create a great educational storey for students about the history of the area the resilience of the Turpentine timber, the resilience of proposed façade materials and of the character of school students.

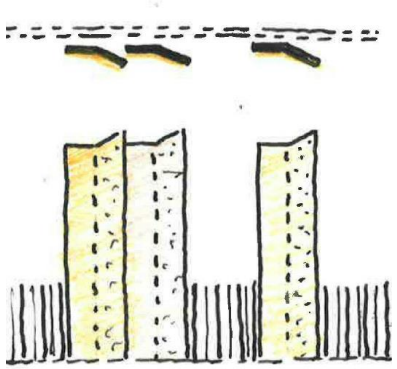
Principle 1

Context, Built Form and Landscape

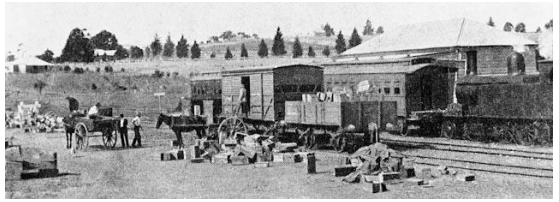
Response to Culture and History

Inspiration Turpentine Iron Bark

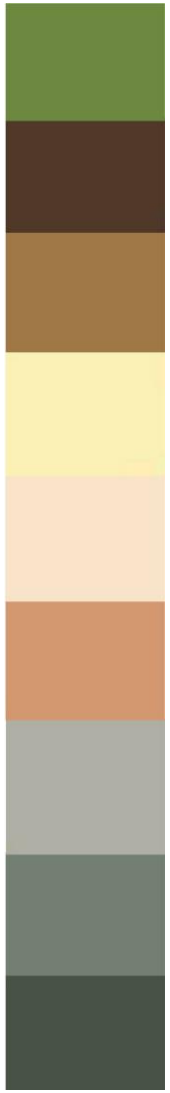




The area surrounding Carlingford West public school has a diverse natural beauty Hunts Creek track and Balaka Falls are a few streets north of the site. The Sydney Turpentine–Ironbark Forest occupies sections of the reserve as you move up the hill away from the creek and are evident on the site today. They form an inspiration for the facades. The image of the layers of rough textured bark peels back to reveal an ochre colour below. This imagery is the inspiration of the colour palette and the sunshading screens to protect the buildings from the solar heat gain.



- European settlers established a well-known citrus orchard in 1869
- Railway station in 1896 established a small village and shops grew
- Residential properties established on the orchards after World War II



Principle 1

Context, Built Form and Landscape

Landscape Masterplan


IDENTITY


INCLUSIVITY & ACCESSIBILITY


SUSTAINABILITY & RESILIENCE


PROGRAMMABLE SPACE

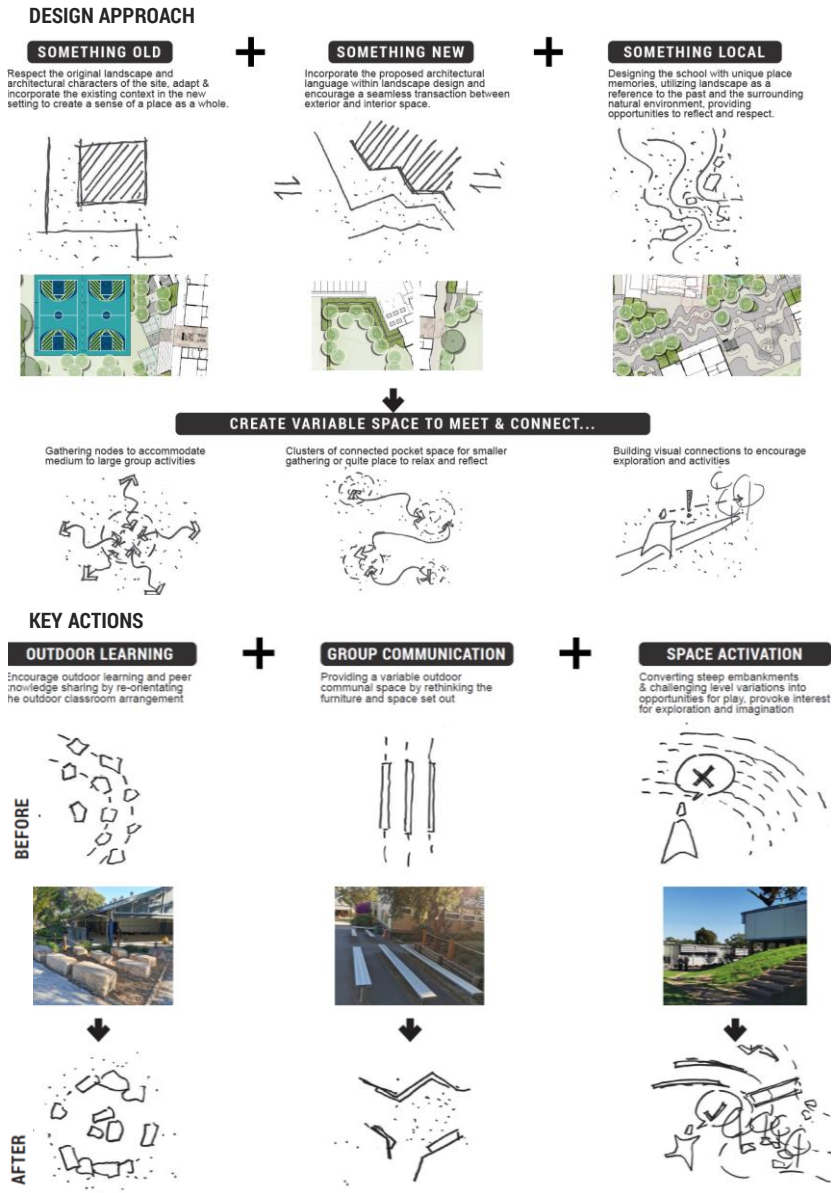
Four landscape design principles (based on Education SEPP Design Quality Principles and Educational Facilities Standard and Guidelines), are set as the foundation of the concept design to provide diverse learning opportunities and help facilitate the educational outcomes.

1. Identity
   - Promote the identity of the place through design interpretations of the site history.
   - Respect and celebrate the characters and culture of the land.
   - Select materials that are robust and unique to the environmental setting.
   - As a landmark within this new community.

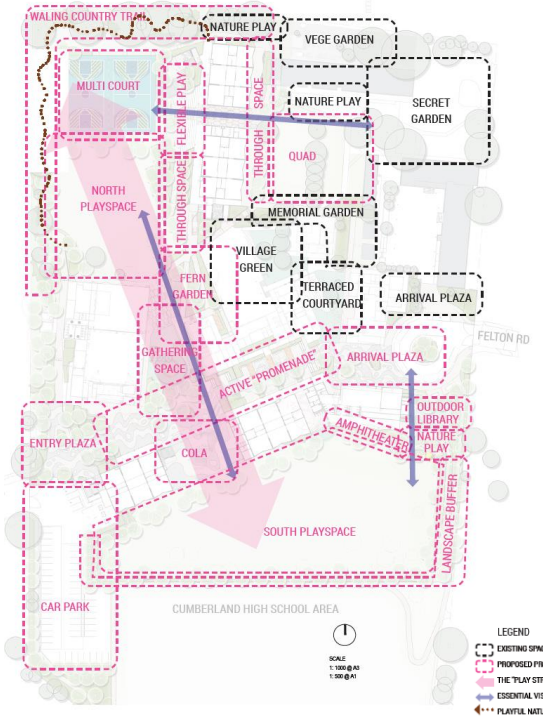
2. Inclusivity and Accessibility
   - Ensure the design presents an accessible, inclusive, and welcoming environment, both physically and culturally.
   - Create a safe and pleasant environment which encourages outdoor learning and activities.
   - Ensure equal access is provided and structured to allow for clear circulation and connections.
   - Allow for passive/dynamic play and learning spaces for different age groups.
   - Provide access and connections to the natural environment that encourages learning and interactions.
   -

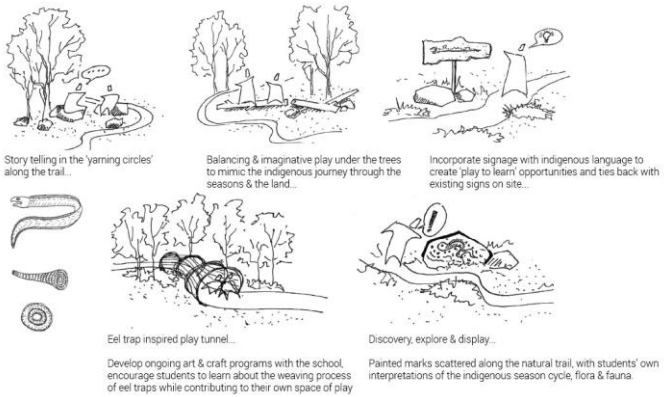
3. Sustainability and Resilience
   - Planting selections are responsive to local environment, with opportunities to provide shade and reinstate the local habitat.
   - Accommodate the varying climate conditions.

4. Programmable Spaces
   - Provide flexible and engaging outdoor spaces.
   - Encourage outdoor learning and activities in groups or individually and interactions.
   - Active and passive play areas are provided to cater for different users.
   - A variety of spaces that can accommodate flexible functions and programmes.



NBRSARCHITECTURE.





Principle 1

Landscape Masterplan

NBRSARCHITECTURE.

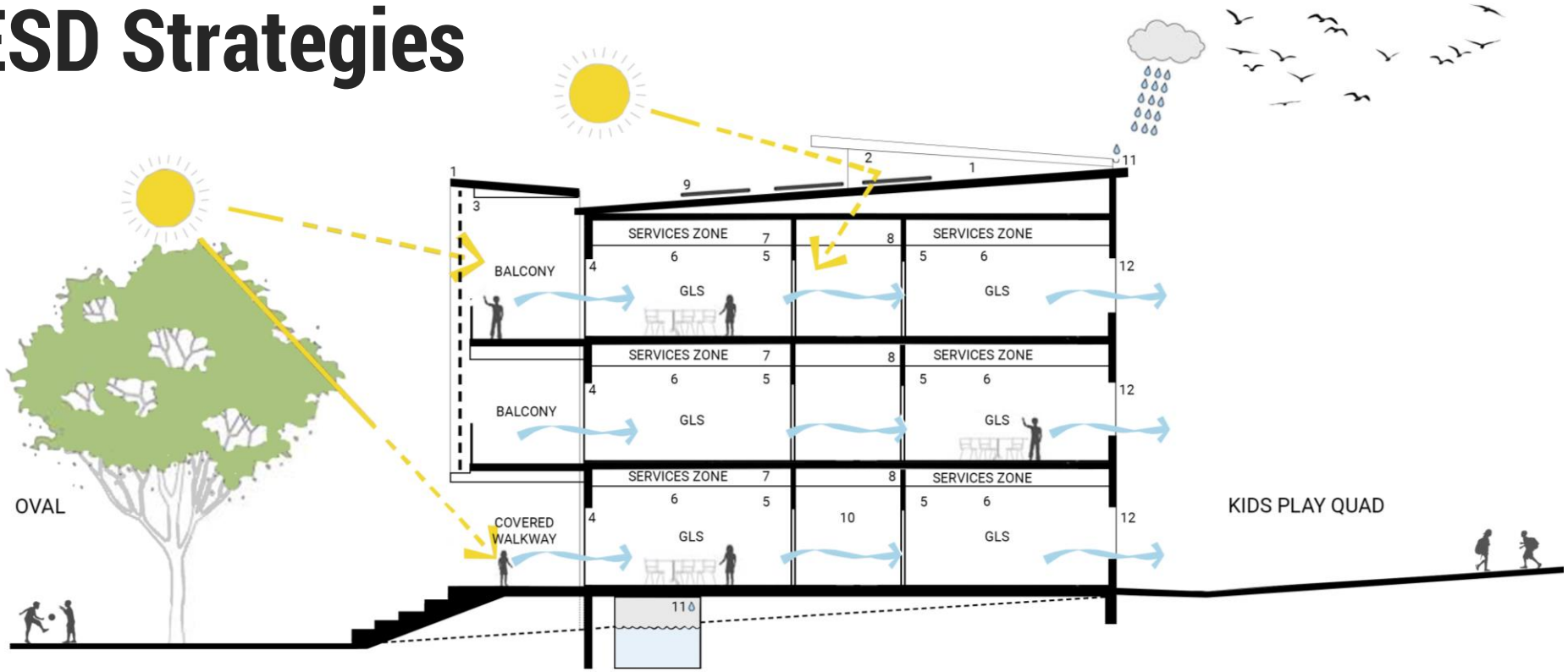
In relation to GANSW Environmental Design in Schools the new landscape will:

- Include tree, shrub and groundcover planting that enhances opportunity for play and learning in relation to native species as well as learning through the growth, maintenance and harvesting of herb and vegetable gardens as well as bush tucker species.
- The landscape will improve the amenity of the school grounds as well as adjacent land-uses. The adjacencies will benefit from canopy tree planting utilising native endemic species and offer an extension of canopy and habitat to other planting in the area
- Maximise soft surface areas for the benefit of rainwater recharging groundwater.
- Maximise deep soil planting
- Include areas of passive and dynamic play for a range of age groups with dedicated open play areas, games courts, nature play and smaller free play zones.
- Provide access to all areas for all users of the site, with DDA compliant ramps
- Have welcoming, visible and distinct entry spaces
- Have good connectivity to local footpaths and onsite bike parking facilities in order to support safe walking and cycling to and from school
- Incorporate CPTED principles in relation to planting, fences and walls
- Provide a diversity of open spaces to facilitate informal and formal uses with stepped terraces offering small group seating or performance, with seating areas beneath shade trees, with the courtyard and covered space providing a range of use
- Provide buffer planting within the site to soften building facades and reduce the visual impact of the new structures
- Integrate the landscape and building design through thoughtful connections to open space and use of complimentary materials.

Principle 1

Context, Built Form and Landscape

ESD Strategies



Environmental sustainability is vital in the design of schools, with natural lighting and ventilation to maximize learning opportunities. Thermally treated building envelopes, solar panels and rainwater harvesting are all part of the proposal to achieve a 5 star Greenstar equivalent design.

Sun-shading devices and optimal building orientation will control solar heat gain and contribute to building efficiencies.

The School will be constructed of durable, resilient, and adaptable materials which will preserve their look and feel over time and have timeless and durable qualities, to ensure they knit into the existing community.

The DfMA methodology includes design intent to reduce construction waste and encourages use of light-weight low carbon materials

Integrated landscaping strategies soften the architectural composition, with planting enhancing the public facing areas and addressing the heat island effect. Creating high quality outdoor landscape and teaching spaces adjacent to the classrooms facilitates flexible breakout from internal learning spaces.

NBRSARCHITECTURE.

1. High performance insulation which minimizes energy loss
2. Minimising building depth and fenestration design and clerestory windows, maximises natural light and cross ventilation
3. Sun shade screening and appropriate building overhangs , covered walkways and large COLA structures reducing direct summer heat load and glare
4. Application of a DfMA typologies
5. Acoustic treatment to ceilings for speech intelligibility
6. Efficient linear LED lights and daylight filters with controlled switching systems
7. Heating and cooling systems which are designed for optimal efficiencies and safety and augments natural ventilation strategy
8. Low VOC paint systems
9. PV solar panels & battery storage reduce substation load
10. Opportunity for reduction of the heat island effect
11. Rainwater harvesting and reuse for irrigation
12. Maintain and restore local landscape
13. Specification of energy efficient white goods and electrical equipment
14. Minimisation of reflective surface glare in assembly areas and adjoining roofs and walls

Principle 2

Sustainable, Efficient, Durable

Welcoming and Inclusive

- The school is surrounded by low density housing on 3 boundaries and the High school playing field to the south. There is a small street frontage at the ends of Felton Rd which restricts access and opportunity for buildings to address the street.
- New generous pedestrian arrival plaza, canopy roof structures, student drop off areas, carparking, delivery zones, cycle parking and end of trip facilities will simplify site arrival, reduce the existing congestion and create a safer and more relaxed arrival experience.
- *The location of the School reception and glass entry is welcoming and connects directly with the arrival plaza.*
- The pedestrian promenade link between entry plaza spaces creates a natural and welcoming and active urban circulation spine through the school.
- The recreational level and North South link through the site has been designed as an inclusive recreational zone.
- Trees on this site are significant to the design intend and amenity of the area. We have carefully located our buildings to maintain the significant trees for shade, amenity and aesthetic quality.
- Buildings have been sited to ensure access is provided to all areas. A series of covered walkways and ramps cross the site. 2 lift cores are provided to access the upper level of the multistorey blocks X & Y.
- Due to the steep slope across the site DDA access to all buildings has been carefully considered. The site is divided into 4 ground planes with the lowest adjacent Felton Road West.
- Shared organised community use of the hall and library has been considered

LEVEL 1
UPPER GROUND
GROUND
LOWER GROUND

CIRCULATION - ENCLOSED STAIRS
CIRCULATION - LIFTS
BOUNDARY LINE
HORIZONTAL PATHS OF TRAVEL

A ADMIN (EXTENSION)
B LIBRARY (REFURBISH)
C YEAR 2 (REFURBISH)
E STUDENT TOILETS (EXISTING)
K KINDERGARTEN (EXISTING)
L KINDERGARTEN / YEAR 1 (EXISTING)
J SCHOOL HALL & CANTEEN (NEW)
X GENERAL LEARNING (NEW)
Y GENERAL LEARNING (NEW)

NEW OR REFURBISHMENT WORKS *SUBJECT TO SEPARATE PLANNING PATHWAY*
NEW BUILDING WORKS - SSDA
EXISTING - NO WORKS
OUTDOOR PLAY SPACE
LIFT
P PLANT SPACE
PEDESTRIAN ACCESS
VEHICLE ACCESS
PARKING
TPZ (TREE PROTECTION ZONE)
SRZ (STRUCTURAL ROOT ZONE)

Principle 3

Accessible and Inclusive

Block A, B, C and J are excluded from SSD scope of works, subject to separate approvals.

Health and Safety

Safety, access and connection are critical in providing a welcoming and secure place for children.

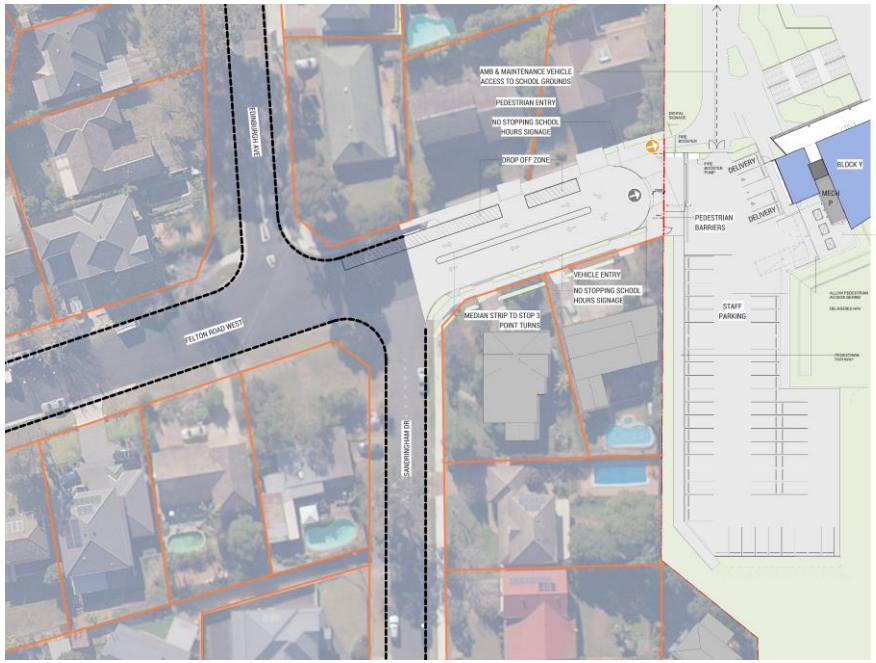
Landscaped areas and materials have been considered to minimise safety risks, safety gates control access and open areas promote sight lines and passive surveillance.

The development has been designed following Crime Prevention through Environmental Design (CPTED) principles. Safety and security is addressed on several levels. The large site is fully fenced however the entry plazas have been designed to ensure the community still feels a sense of welcome and inclusion.

Principle 4

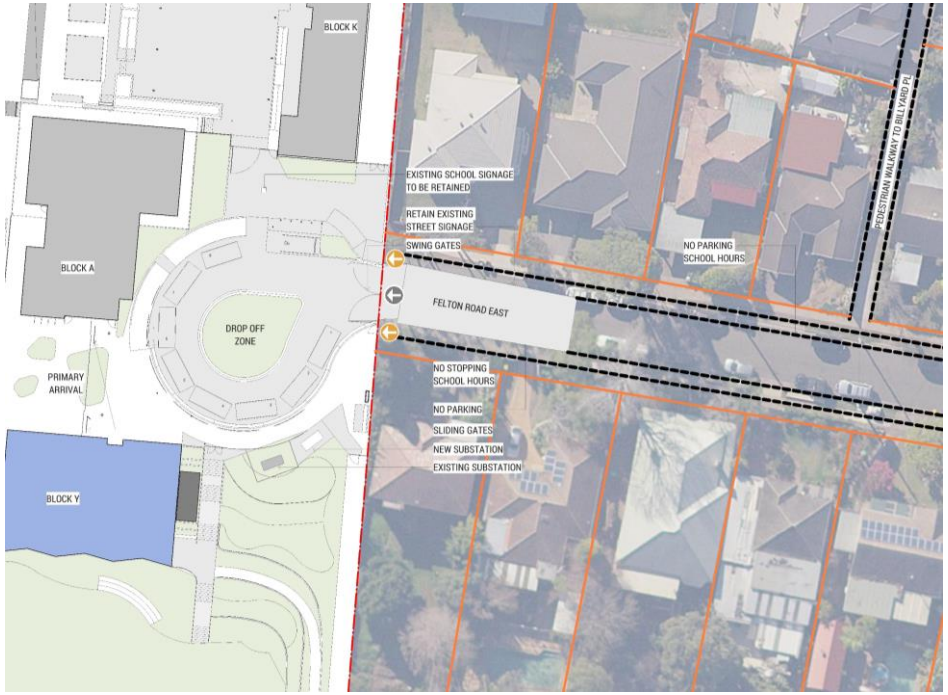
Health and Safety

Traffic Strategy

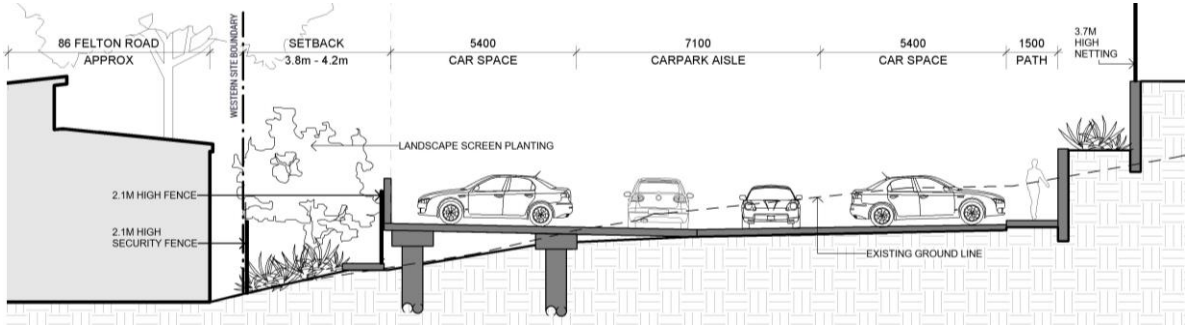


TRAFFIC STRATEGY
FELTON RD WEST

The traffic consultant has provided numerous alternatives and in consultation with SINSW, Parramatta council and Transport NSW we have arrived at these options which priorities child safety and encourages the implementation of a green travel plan. With so many schools in the area the direction is to look at a greater strategy across the catchment for green travel and to limit school drop off to on street at Felton Road West and utilise the existing infrastructure to Felton Road East. Vehicle access is completely separated from pedestrian access.



TRAFFIC STRATEGY
FELTON RD EAST



Principle 5

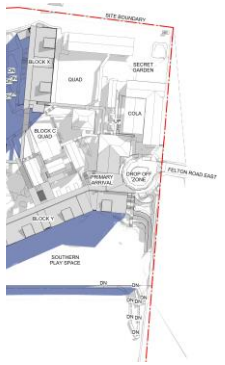
Amenity

Site Amenity and Shadow Diagrams

NBRSARCHITECTURE.

Clear navigation on arrival and through the school is a key driver in the design. The main pedestrian link which is an urban response to the disconnect of Felton Road provides a connection between the 2 entry plazas, orientates the user and deals with the steep nature of the site. Whilst the secondary pedestrian link between the play spaces is on grade and engages more with the adjacent facilities. There are multiple secondary links created across the site which form a weave or net. These pathways along with the buildings start to form edges which defined courtyards or a variety of outdoor environments. These spaces between the building breaks down the site into active and passive environments which gives the school the flexibility for different year groups to use different play spaces especially considering the student numbers.

The location of Blocks X & Y and significant setbacks to boundaries has ensured minimal overshading and privacy concerns with the neighbouring properties.
The shadow diagrams clearly show the overshadowing in winter has minimal affect on neighbouring properties. Refer to detailed shadow diagrams in drawing package.



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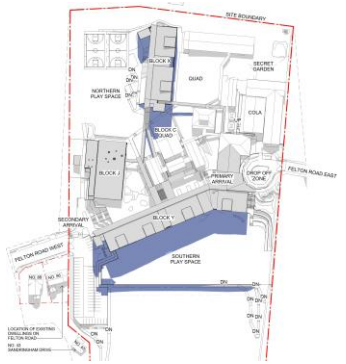
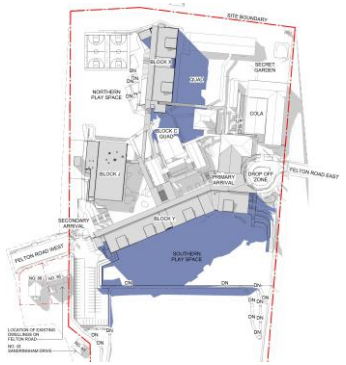


WINTER, 21 JUNE, 12PM



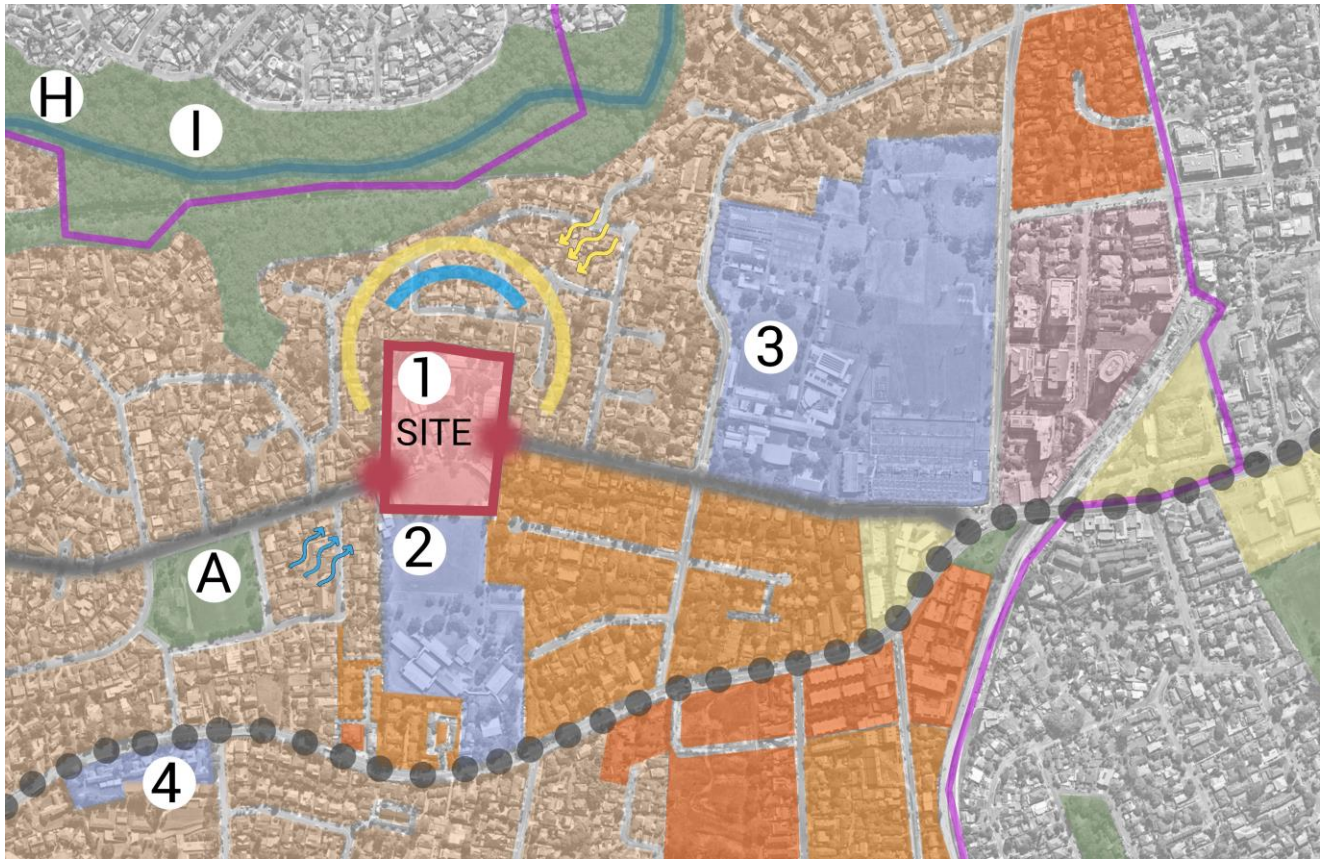
WINTER, 21 JUNE, 3PM

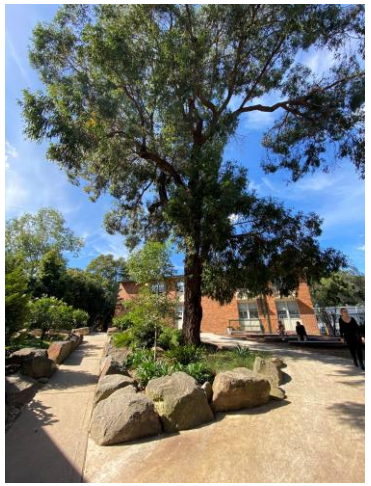
Principle 5

Amenity

Site Analysis and Observations

NBRSARCHITECTURE.





SCHOOLS & EDUCATIONAL FACILITIES

1. CARLINGFORD WEST PUBLIC SCHOOL
2. CUMBERLAND HIGH SCHOOL
3. JAMES RUSE AGRICULTURAL HIGH SCHOOL
4. ONESCHOOL GLOBAL SYDNEY CAMPUS
5. THE KING'S SCHOOL
6. CHARLES STURT UNIVERSITY - PARRAMATTA CAMPUS

SPORTS FACILITIES

A. KINGSDENE OVAL
B. CARLILE SWIMMING CARLINGFORD
C. HAROLD WEST RESERVE
D. NORTH ROCKS TENNIS CENTRE
E. JOHN WEARN RESERVE PLAYGROUND
F. HUNTS CREEK RESERVE EAST PLAYGROUND

RECREATION & OPEN SPACE

G. BALAKA FALLS
H. HUNTS CREEK
I. NORTHAM DRIVE RESERVE
J. NORTH ROCKS WILDLIFE SANCTUARY
K. PARRAMATTA LAKE WALK
L. GEORGE GOLLAN RESERVE
M. VINEYARD CREEK
N. VINEYARD CREEK RESERVE
O. TELOPEA OUTDOOR GYM
P. RAPANEA COMMUNITY FOREST
Q. COX PARK

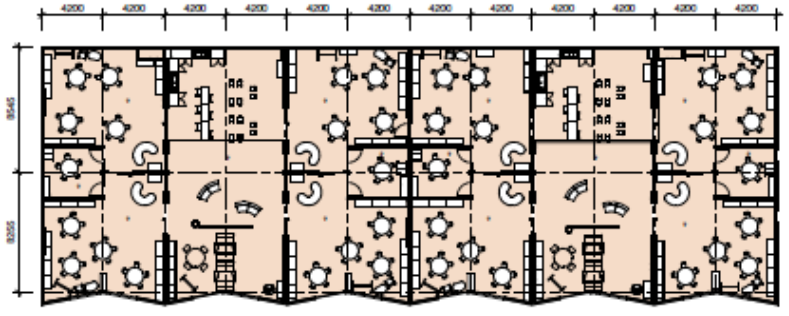
Principle 5

Amenity

Building Typologies (DfMA)

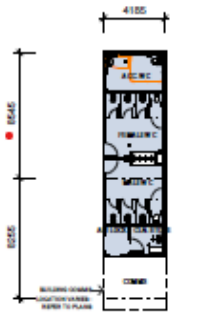
NBRSARCHITECTURE.

1A TYPICAL MODULE 1A
1 : 200



2 TYPICAL MODULE 2
1 : 200

1B TYPICAL MODULE 1B
1 : 200



T TOILET MODULE
1 : 200

The building typologies optimize internal layouts with the rooms accessed from the external verandah. This provided an efficient design solution. Double stacked classrooms ensure natural light and ventilation is maximized and the verandah provides the buildings with an engaged façade where student movement occurs whilst the rest of the facades are articulated with glazing or core facilities.

The utilisation of the precedent school has provided building typologies which are a combined to form the classroom building block. These classroom blocks respond to the masterplan and site conditions.

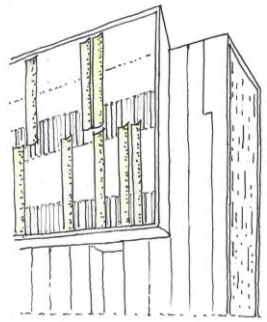
Adaptability is a response to evolving learning outcomes. The children's needs can be supported by the manipulation of fixtures and furnishings. It addresses the ability for multi modal spaces to become efficient and personal environments. Catering for children to be free in their learning experience.

All the general learning areas open to a practical activities area. Learning spaces also have sliding door connections between them to encourage combined teaching arrangement.

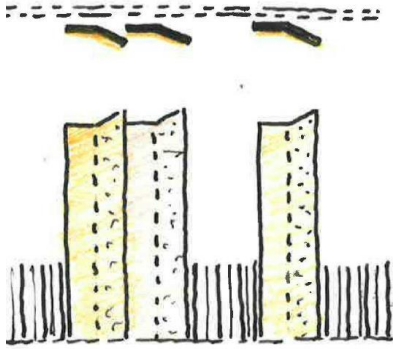
Principle 6

Whole of Life, Flexible and Adaptive

Aesthetics



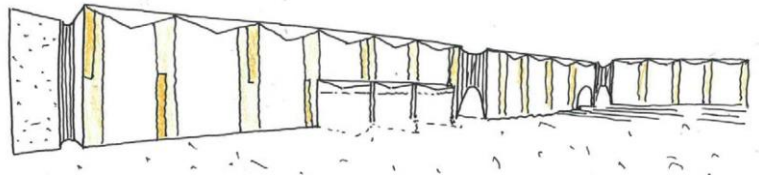
The project is following a DfMA philosophy which means we need to be considered in our response to how the buildings present a sense of place. In this case we have an opportunity with the verandahs and circulation cores at the end of the building. Here we take our original big idea and develop the bark of the turpentine trees, also reflecting textured layering of the façade with sun shading screens. Folding in the school logo and bark into the Felton Road entry as a beacon to the community of the school' s role in imparting knowledge and developing resilient students.

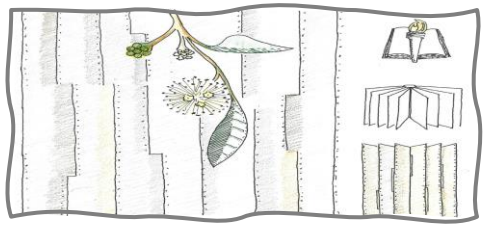


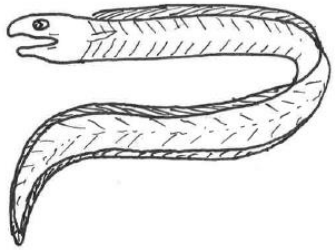
We shall also work with the bookended entry plazas to develop space which reflect the history with graphics, signage and impressions in the concrete showing eels and weaved basket traps of motifs.

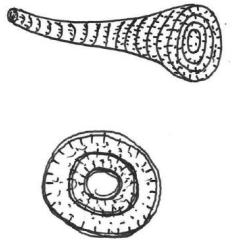
Principle 7

Aesthetics









The design will provide socially and environmentally responsive solutions creating pleasant and engaging spaces internally and externally. The design provides a variety of learning modes through flexibility of spatial arrangement, agile furniture, interactive indoor / outdoor environments that allow for individual, teamwork and gathering forms of learning.

Principle 7

Appendix

APPENDIX A – SEARS RESPONSE
APPENDIX B – RESPONSE TO SDRP SESSION 76 12.05.2021
APPENDIX C – RESPONSE TO SIA

ARCHITECTURAL RESPONSE TO SEARS

Carlingford West Public School

59-73 Felton Road and part of 183 Pennant Hills Road, Carlingford, NSW

Application No. SSD-10879802

Document Control

Version	Rev 2
Author	Ewan Saunders
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Nominated Architects;
Andrew Duffin: Reg No. 5602

ARCHITECTURAL RESPONSE TO SEARS

The following table provides a breakdown of sears comments and responses relating to Architectural Design for the new building works at Carlingford West.

No.	COMMENTS	RESPONSE
General Requirements		
A1.10	A detailed constraints map identifying the key environmental and other land use constraints that have informed the final design of the development.	Refer Architectural SSDA Application Site observations & opportunities dwg number 21058-NBRS-00-DR-A-SSDA-0008 and sheets 0003, 0004, 0009
A1.11	Plans, elevations, and sections of the proposed development.	Refer Architectural SSDA Application
A1.12	Cladding, window, and floor details, including external materials.	Refer Architectural SSDA Application Typical wall sections dwg. number 21058-NBRS-00-DR-A-SSDA-0410
A1.13	A site plan showing all infrastructure and facilities (including any infrastructure that would be required for the development, but the subject of a separate approvals process).	Refer Architectural SSDA Application Proposed site plan dwg. number 21058-NBRS-00-DR-A-SSDA-0092 and dwg's NBRS-00-DR-A-SSDA-0100-0105. Drawings to be read in conjunction with SSDA services dwg's
A1.14	Plans and details of any advertising/business identification signs to be installed, including size, location, and finishes.	Refer Architectural SSDA Application Signage dwg. number 21058-NBRS-00-DR-A-SSDA-0120 and Landscape Connection with Country Document.
A1.15	Any staging of the development.	There is no staging of the works. SSD components of the works will be delivered in a single stage
Built Form & Urban Design		
3.1.1	The height, density, bulk and scale, setbacks, and interface of the proposal in relation to the surrounding development, topography, streetscape, and any public open spaces.	Please refer to Architectural design statement – Principle 1and SSDA drawing package
3.1.2	Design quality and built form, with specific consideration of the overall site layout, streetscape, open spaces, façade, rooftop, massing,	Please refer to Architectural design statement – Principle 1and SSDA drawing package

	setbacks, building articulation, materials, and colours.	
3.1.3	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.	Please refer to Architectural design statement Principle 1, page 22 principle 2, and Architectural and landscape SSDA drawing package
3.1.4	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).	The proposed design seeks to achieve a high quality outcome Refer Architectural design statement for more details.
3.1.5	How services, including but not limited to waste management, loading zones, and mechanical plant are integrated into the design of the development.	Refer Architectural design statement- Principle 1 -Page 17 and Architectural SSDA Application drawings: 21058-NBRS-00-DR-A-SSDA-0092 21058-NBRS-00-DR-A-SSDA-0100-0105 21058-NBRS-00-DR-A-SSDA-0121 Drawings to be read in conjunction with SSDA services drawings. Please refer to reports: Traffic report Waste management report Acoustic report (plant and vehicle noise)
3.3	To justify the proposed site planning and design approach including massing options and preferred strategy for future development.	Refer Architectural design statement for site planning and design approach including massing. For future development strategy refer response to SDRP 76- Carlingford West Public School - Comment 8.

3.4	Identifies any potential impacts on the surrounding built environment and landscape including views to and from the site and any adjoining heritage items.	Please refer to the Visual Impact Assessment
5 Environmental Amenity		
5.1	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.	Refer Architectural design statement Principle 1 and 5, Architectural SSDA shadow diagrams and Acoustic report
5.1.1	A view analysis of the site from key vantage points and streetscape locations and public domain including photomontages or perspectives showing the proposed and likely future development.	Please Refer to Visual Impact Statement
20 Plans & Documents		
20.1	Architectural Design statement	Refer Architectural Design statement
20.2	Diagrams, structure plan, illustrations, and drawings to clarify the design intent of the proposal.	Refer Architectural Design statement and SSDA Architectural drawing
20.3	*Detailed site and context analysis*	Refer Architectural Design statement and SSDA Architectural drawing
20.5	*Summary of feedback provided by GANSW and NSW State Design Review Panel (SDRP) and responses to this advice.*	Please refer to document response to SDRP session 76 12.05.2021 – Carlingford West Public School

RESPONSE TO SDRP SESSION 76 12.05.2021

CARLINGFORD WEST PUBLIC SCHOOL

59-73 Felton Road and part of 183 Pennant Hills Road, Carlingford, NSW

Application No. SSD-10879802

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RESPONSE TO SDRP SESSION 76 12.05.2021 - CARLINGFORD WEST PUBLIC SCHOOL

The following section covers a response to comments raised by the State Design Review Panel. The design team's response will follow SDRP comments below.

SDRP Comment: Connection with country

An understanding of Country offers the potential to inform richer and more place responsive design solutions. The Draft Connecting with Country Framework outlines opportunities to better respond to place. As yet, this potential is not demonstrated in the proposal.

1. *Engage with Traditional Custodians to ensure their heritage is being used appropriately, and the proposal is responding to living culture. Articulate, in future representations, how engagement with Traditional Custodians and the community has informed the design strategy.*
2. *The façade interpretation of the Sydney Turpentine Ironbark Forest appears superficial and a deep connection between the materiality of the project and Country was not demonstrated. There is an opportunity to engage in a stronger and less literal way with place to embed opportunities for learning about culture into the education process.*
3. *Consider how a rich connection with place, for example the resilience of the eels or ingenuity of the eel traps might inform the school's pedagogical approach and strategy to accommodate future growth.*
4. *Explore opportunities to engage with the ecology endemic to the region, which will help to establish a place-based identity for the school. Draw on both the flora and fauna, acknowledging that the fauna has strong belonging and a right to the place.*
5. *Consider opportunities for practices and processes, naming, massing, materiality, form, circulation and movement, landscape, specification of plant species that are endemic to the bioregion.*
6. *Consider providing an Indigenous Interpretation Strategy guided by Country that celebrates Aboriginal Cultural Heritage.*
7. *Refer to the draft framework Connecting with Country on the GANSW website.*

Design Response:

We have also meet with Scott Franks from Tocomwall an Aboriginal cultural heritage consultancy firm on the 18.05.21 and discussed an approach to incorporating ideas about connecting with country. The ideas, framework, and process outlined below was developed out of this meeting and in conjunction with framework outlined in The Draft Connecting with Country Framework.

The Design team has also reached out to Justine Coplin from The Darug Custodian Aboriginal Corporation following a recommendation from Scott that the group could be approached to discuss the indigenous history of the site and stories relevant to the Carlingford West public school site. We are currently waiting for a response. The consultation will be ongoing process through the detailed documentation of the project to ensure a meaningful and respectful outcome.

There is a clear framework outlined in the design documentation to ensure there is approval, design input and ownership of Aboriginal themed elements within the school. This includes input from the school Aboriginal liaison officer, Aboriginal students, and local Aboriginal Artists. Any items or themes used will be approved by local elders, the School and SINSW.

At the time of SDRP the design team did not present a detailed list of all items that had been discussed in relation to connecting with country.

In response to connecting to country the project team has a layered approach to creating opportunities for engagement and learning about country. The layered approach will allow students and visitors to investigate a deeper connection with country. The building façade represents one layer in this approach with art instillations, landscaping, interior design, and design of learning spaces creating opportunities to learn about country. Please refer to Architectural design statement, Landscape document connecting with country and the list of opportunities below:

The ideas that were discussed as well as suggestions made by Scott Franks are outlined below. These items could be worked through and integrated with the design in consultation with Aboriginal stakeholders in detailed design.

-Welcome to country art installations - Felton Rd East and West Entry points. A natural sculpture and acknowledgement of country produced by a local aboriginal artist. Text may include: "We proudly Learn on the lands of the Burramattagal People of the Darug Nation……"

-Walking country – A natural trail designed to allow students to connect with and walk country. Natural play, the journey of the seasons, indigenous language signs, Art and craft program to install woven sculptures inspired by Eel trap, interpretations and information about indigenous flora and fauna and seasons with engravings or paintings on rocks.

-Yarning Circles - Create learning opportunities to pass on language and the connection storey can be shared.

-Hunts Creek inlay in pavement -Pavement inlay representing Hunts creek and playful plinths of Eel Fossils

-Aboriginal mural with connection storey -Located at Arrival Plaza and COLA

-Wall Graphics with reference to Eel trap and Eel

-Educational Graphics to glass partitions in learning spaces - Age appropriate Graphics to glass with themes covering Dharug language for boy, girl, local animals, trees etc. The Aboriginal people as first conservationists, engineers, artists, astronomers, farmers and land managers of this country. There is a lot that can be learned from the resilience of the eel and turpentine tree, the construction of eel trap, the emu in the sky, emu rock engravings, and Canoe building etc.

-Museum grade artifacts case- In accordance with RAP Aboriginal artifacts found on site could be stored for display.

-Façade Screening & cladding-The development of the façade and façade screening in reference to the Turpentine tree which is local to this area of Sydney establishes a harmonious colour palette with the surrounding natural landscape, provides a necessary ESD response to climate, and helps to break down the mass of the building form. This building element can create a great educational storey for students about the history of the area the resilience of the Turpentine timber, the resilience of proposed façade materials and of the character of school students.

SDRP comment: Masterplan and Landscape

SDRP-8. Concern was raised with the potential reliance on either existing or additional demountable structures to accommodate future capacity, which may create adverse spatial impacts on the landscape strategy. It has not been demonstrated that future growth can be accommodated within the site and achieve high quality design outcomes. Review the school's capacity targets and demonstrate different options for accommodating future growth.

Design Response: Growth projections for the next 5 years suggest student numbers could increase in the short term and the figure of 1610 has been established for the business case and is based on the long-term DPIE catchment projections.

SDRP -9 .There in statement of tree canopy at a 2:1 ratio is supported, and exceeding that ratio is encouraged. Demonstrate how tree canopy has been maximized for biodiversity, shade and amenity.

Design Response: Tree canopy selection has been maximised for biodiversity by selecting tree species from local plant associations, tree locations will provide shade to student areas and building facades, planting to boundary will provide amenity to the school and neighbouring properties and will soften building facades. The design exceeds the tree ratio of 2:1. Refer to landscape report.

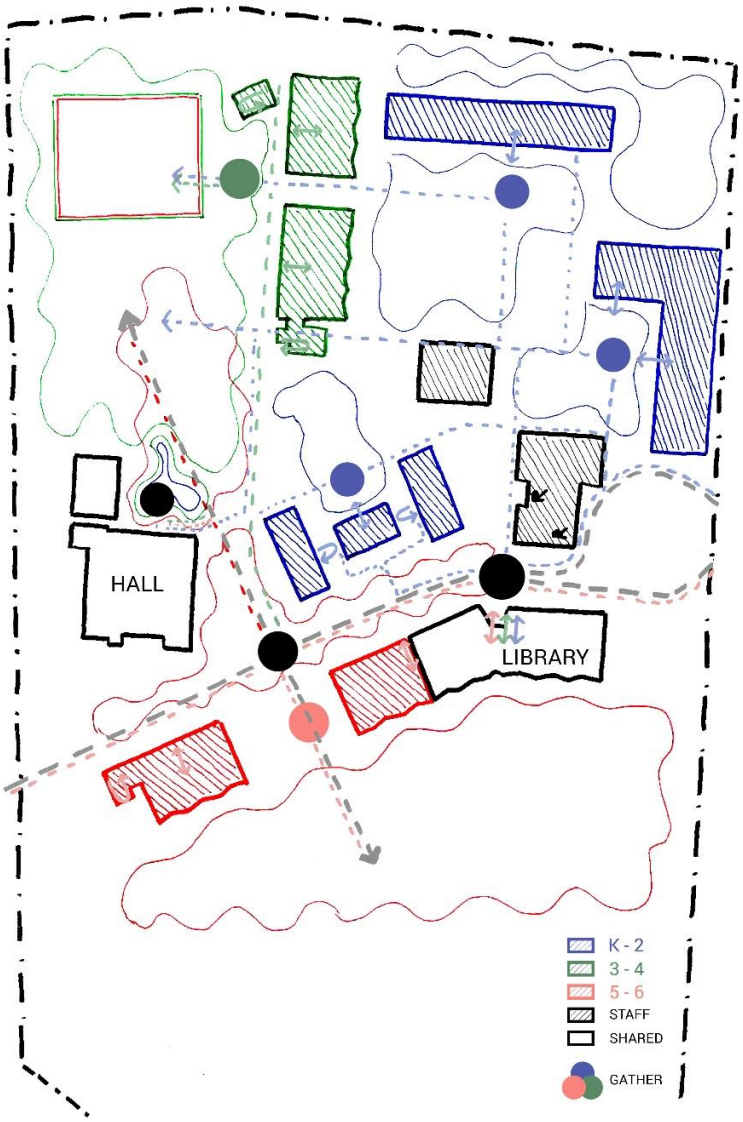
SDRP -10 Demonstrate how the proposal will meet or exceed the 40% tree canopy target.

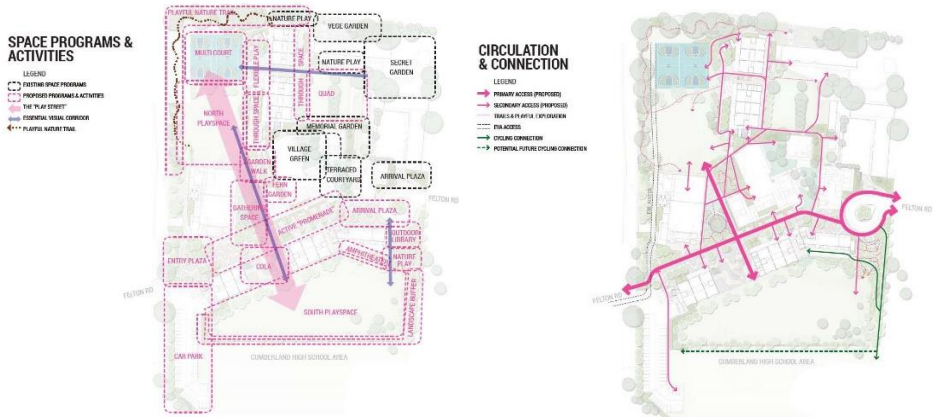
Design Response: Tree canopy coverage cannot achieve 40 % as the school requires large areas of unencumbered open space for children's active play. Extensive tree planting occurs in throughout other areas of the school. If the open play areas are removed from the calculation we achieve 43.5 % canopy coverage. Refer to landscape report.

	 25,313 m^2 - External Uncovered Area without Open Play Area	 34,168 m^2 - External Uncovered Area including Open Play Area
Canopy Coverage (%)	42 %	31%

SDRP -11 Provide a mapping study to inform and illustrate how different age groups will arrive, use and circulate through the site at key times of the day. Demonstrate how the study has informed the scale, character and legibility of the architecture and open spaces, particularly at the primary and secondary entries, so that they reflect and relate to the needs of different age groups. Include detailed sections through the site and perspective views.

Design Response: Detailed student movement and arrival studies where undertaken during the project development this was necessary because of the steep topography on the site, restricted arrival points and the need to maximise connection to external space. Student movement will naturally be much more complicated than outlined in attached diagrams. To simplify an understanding of this circulation year groups have been broken down into three student cohorts in diagram below K-Y2 Blue, Y3-4 Green and Y5-6 Red shared circulation is shown in black. The circles represent the main external spaces the students will meet in before class, and use for recess and lunch. The thin coloured lines represent the main play zones for the year groups.

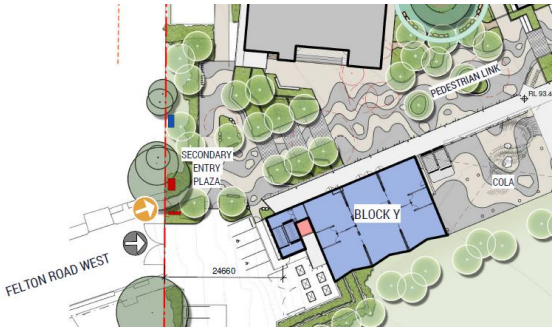




These studies informed the design of the circulation stairs, pathways, circulation nodes. The scale of the Felton road East arrival and years K-2 buildings are generally single storey with some buildings 2storey in height a scale that is sympathetic to the younger students using the campus. The teachers and year 2-6 students would be more likely to use the Felton road west than the Years K-2 students given the location of the learning spaces but would also arrive at Felton road East . The scale of the western entry is larger and would suite the older students. Please refer to drawing package for detailed sections, site perspectives and views of the entry areas and buildings.

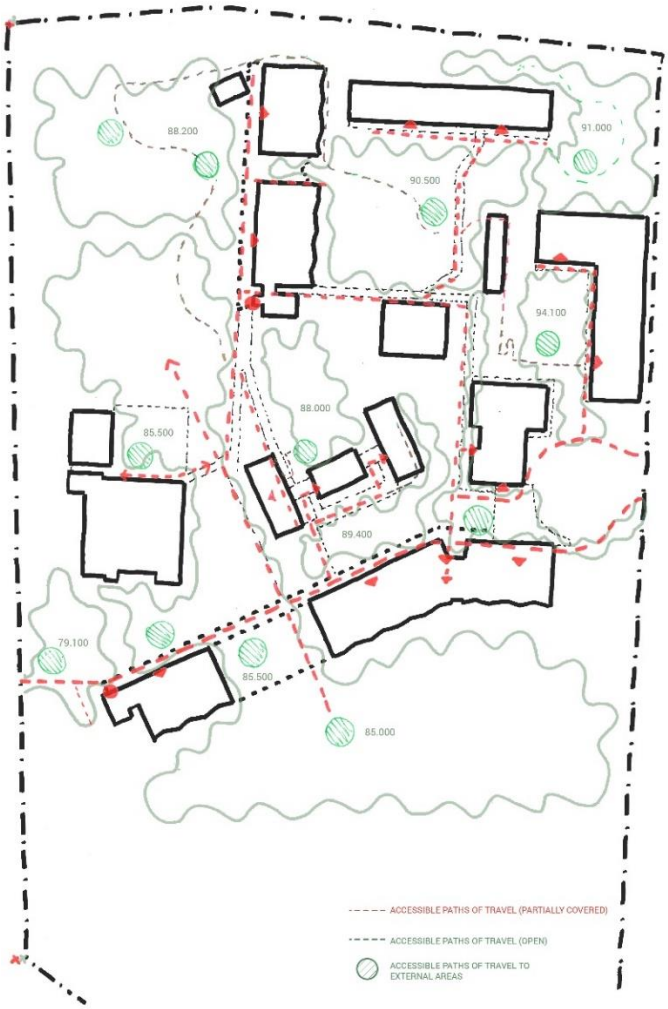
SDRP -12 *Provide detailed drawings, including sections, elevations and perspective views, to illustrate the dimensions, scale, character, interface with built form and legibility of the entry plazas.*

Please refer to detailed Architectural and landscape drawing package. The arrival plazas and tiered promenade that run through the middle of the school has been widened to approximately 20m to ensure sufficient amenity and function.



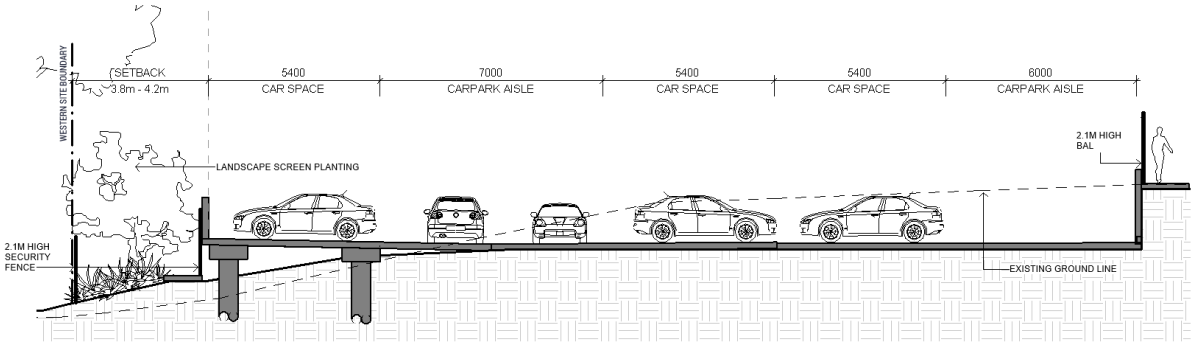
SDRP -13 The accessible path through the site appears convoluted and circuitous. Clarify and simplify DDA accessibility and circulation through the site. Provide drawings with RLs to illustrate that accessible circulation through the site is intuitive, weather-protected, legible and inclusive for people with different needs and capabilities.

Design Response: Accessible paths of travel were not highlighted on SDRP drawings. We have included diagrams below. There is a 15m level difference across the site with existing buildings and external areas at many different levels. The site also has many mature trees and associated root systems making substantial modifications to existing ground levels difficult without removal of existing trees. Despite these challenges covered accessible paths of travel have been provided to all floor levels with the exception of the upper level of the existing Block C building which has three different split levels. An accessible path of travel has also been provided to all external teaching and gathering spaces. The design has simplified existing circulation paths within the school and site navigation and wayfinding is more intuitive. *We note the SDRP support of "the central spine connecting both entry plazas and operating as a significant wayfinding element within the site"*. Central to the development of the masterplan is a new recreation level and North/South circulation spine connecting oval spaces, MPS and Block X and Y floor levels. The new stepped promenade that runs through the site creates a new urban connection between Felton Rd East and West. The promenade forms the main East/West connection through the site and aligns with block Y elevated walkways and lift core which can be used to traverse this space in an accessible way. Please refer to circulation diagrams below.



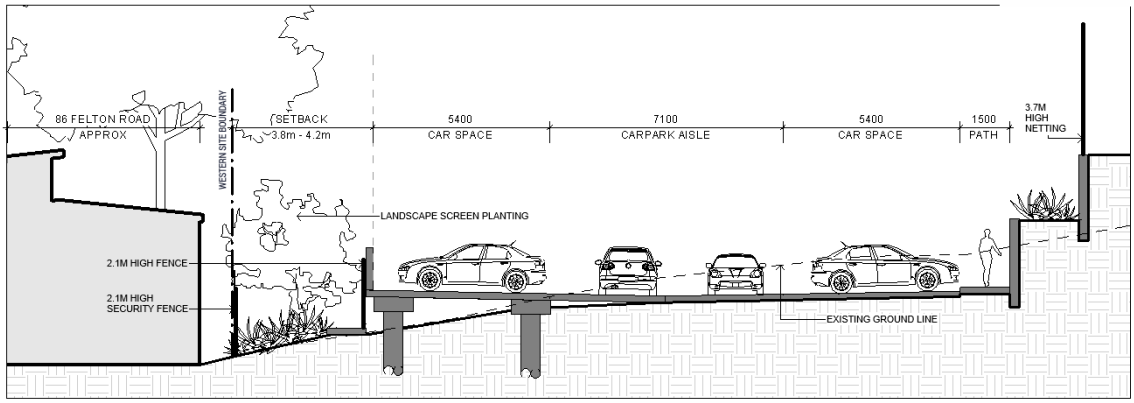
SDRP -14 The form of the following interfaces and edges will create adverse spatial impacts:
-the interface between the semi-suspended carpark and the low- density residential dwellings adjacent the western site boundary
-the 4m high retaining wall along the southern boundary adjoining the sports field.
Reconsider the form and treatment of these interfaces and edges to mitigate adverse spatial impacts and illustrate how the built form edges will make a high- quality contribution to the character of the landscape. Provide detailed sections, elevations and perspectives (extending beyond the immediate site boundaries).

Design Response: The southern end of the carpark has been pulled back from the residential boundary in the design development of this area since SDRP meeting to reduce impact to residential properties. The carpark has been carefully sited to minimise impact to residential properties. The Carpark level ranges from meeting natural ground on western boundary edge to a maximum of 1.73m above natural ground on the South end and has a solid 1300mm high wall to prevent light spill from vehicle lights and reduce acoustic issues. The built form of the carpark has a lower scale than most residential houses, is setback 3.8-4.2m from boundary and screened with landscape planting along boundary edge.



Carpark Section (Southern Section)

The design of the retaining wall on the eastern side of the carpark has been carefully considered with a stepped retaining wall approach and integrated planting to reduce the scale of the retaining wall. The extent of retaining on the Eastern side of carpark is a function of trying to reduce the impacts of the carpark level on adjacent residential lots and to maximise external school oval space. Various carparking options were reviewed as part of design development. The current carpark option was the only viable option given site constraints.



Carpark Section (Adjacent 86 Felton Road)

SDRP comment: Architecture

SDRP -15 The potential connection between the materiality of the project and Country is as yet unrealised, refer to the Connection with Country commentary above.

Design response: The proposed material have been selected to tie into the schools bushland setting and mature tree canopy. Materials are light weight, durable, have low embodied energy and colours have been selected to match the bark of the Turpentine tree, local to the area. It is a natural and sensitive environmental response to place. It is a simple response that speaks to the durability and resilience of the Turpentine tree.

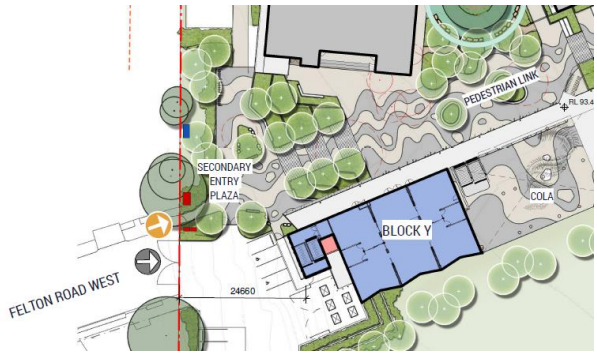
SDRP -16 Explore how the architectural expression can be developed with greater specificity to place, and how the DfMA methodology can be deployed to deliver best practice, place-based outcomes.

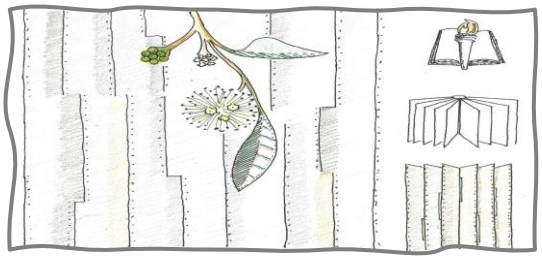
Design response: The area surrounding Carlingford West public school has a diverse natural beauty Hunts Creek track and Balaka Falls are a few streets north of the site. The Sydney Turpentine–Ironbark Forest occupies sections of the reserve as you move up the hill away from the creek and are evident on the site today. They form an inspiration for the facades. The image of the layers of rough textured bark peels back to reveal an ochre colour below. This imagery is the inspiration of the colour palette of façade materials and the sun-shading screens to protect the buildings from the solar heat gain. The solution has strong ESD benefits and is an elegant site specific DfMA response that expresses the beauty of the repetition found in nature. These themes are further developed in the landscape and interior design packages. Please refer to SDRP comment 1-7.

SDRP -17 The 4 storey façade to the western end of building Y dominates the entry to the school from Felton Road. Explore opportunities to mitigate its scale and provide a more welcoming entrance, particularly for young students.

Design response: The generous landscaped arrival plaza, canopy tree planting and 20m wide stepped landscape promenade that leads into the school in conjunction with the importance of the western building façade creates an exciting and welcoming space for students and parents on arrival. The proposed block Y is a three-storey building and has an ESD North/South orientation with the narrow end addressing Felton Rd West to reduce the visual impact of the building mass. The building has a generous setback of approximately 20m to reduce overshadowing and the visual impact of the

façade. The façade has also been broken down into a series of elements to reduce the mass and scale of the western façade. The main building mass is articulated separately to the balcony area and vertical circulation. It is fitting that the school is a landmark within the urban grain of the community and consistent with other civic and church buildings in the area it should have a scale that reflects the schools important role as a place of learning in the community. The school site has a limited opportunity for identity given the small amount of street frontage. The western façade of block Y has been designed as a beacon for learning with the main circulation stair screen reflecting learning and resilience with the folding screen representing the pages of a book in the school logo and the bark of the Turpentine tree a native tree of this area.





ARCHITECTURAL RESPONSE TO SIA

Carlingford West Public School

59-73 Felton Road and part of 183 Pennant Hills Road, Carlingford, NSW

Application No. SSD-10879802

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ARCHITECTURAL RESPONSE TO SIA

The following table provides a breakdown of social impacts and responses relating to Architectural Design for the new building works at Carlingford West.

No.	COMMENTS	RESPONSE
General Requirements		
	Access to modern, high quality school facilities	Existing demountables on site are being replaced with flexible, high quality learning school facilities. Refer Architectural SSDA documents and Architectural design statement.
	Pressure on public open space	Refer to Landscape design statement. Consistent with EFSG school design requirements for external free space EFSG requirement for 10m2 free play area per child has been achieved.
	Traffic and parking	There have been significant improvements made to the pedestrian arrival points, car drop off areas, site servicing and end of trip facilities. This will improve traffic congestion, site safety, parking and the arrival experience. Please refer to SSDA documents and Architectural design statement P1-Masterplan and P5-Amenity.
	Safety and security	Refer Architectural Design Statement-P4 - Health and Safety.
	Engagement with Aboriginal Culture	Refer Architectural Design Statement P1`- Responce to cultural and history p17. SSDA drawings and Landscape Connection with Country Document.