Prepared for: School Infrastructure
Date: November 2024

architectus™

THE GABLES (BOX HILL)

Schematic Design Report

NEW PUBLIC SCHOOL

Architectus acknowledges the Australian Aboriginal and Torres Strait Islander peoples of this nation as the Traditional Custodians of the lands on which we live and work.

We pay our respects to Elders, past and present and emerging.

Architectus is committed to honouring Australian Aboriginal and Torres Strait Islander peoples' unique cultural and spiritual relationships to the land, waters and seas and their rich contribution to society.

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Project and report	Gables New Public School	
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Report contact	Angela Collings Associate Principal, Architect	
This report is considered a draft unless signed by a Director or Principal	Approved by:	

Contents

1

EXECUTIVE SUMMARY

Executive Summary

This Schematic Design Architectural Design Report has been prepared by Architectus on behalf of NSW Department of Education (the Applicant) to assess the potential environmental impacts that could arise from the development of The Gables New Primary School at Lot 301 DP 1287967 on Fontana Drive, Gables (the site).

This report has been prepared to provide record of the Phase 3 Schematic Design activities that contributed to the development of the design and illustrate the design outcomes.

This report accompanies a Review of Environment Factors that seeks approval for the construction and operation of a new primary school at the site, which involves the following works:

- Construction of school buildings, including learning hubs, a school hall and an administration and library building.
- Construction and operation of a public preschool.
- Delivery of a sports court and fields.
- Construction of car parking, waste storage and loading area.
- Associated site landscaping and open space improvements.
- Associated off-site infrastructure works to support the school, including (but not limited to) services, driveways and pedestrian crossings.

For a detailed project description, refer to the Review of Environmental Factors prepared by Ethos Urban.

Site Context & Constraints

The site is located on Cataract Road, Gables, within The Hills Local Government Area (LGA), approximately 50km northwest of the Sydney CBD and 10km north of the Rouse Hill Town Centre. It comprises one lot, legally described as Lot 301 DP 1287967, that measures approximately 2.2ha in area. The site is bound by Pennant Way to the north, Cataract Road to the east, Fontana Drive to the west and a vacant lot to the south.

Some of the challenges the design team has worked through during Schematic Design includes a bush fire asset protection zone due to new vegetation along the eastern edge (outside of the site), steep level changes from west to east, overland flow risks and traffic considerations.

The Brief

The brief for the new Gables Public School aligns with the SINSW EFSG Large Primary School Brief. In addition, a public Preschool forms part of the project works, and aligns with the SINSW Preschool Brief for a 3 room Preschool. A summary of the Brief agreed by SINSW is as follows:

- 44 General Learning Spaces.
- 3 Special Support Spaces.
- A School Hall.
- Core facilities, including Administration and Library.
- 3 room Preschool.
- Landscape spaces.

Connecting with Country

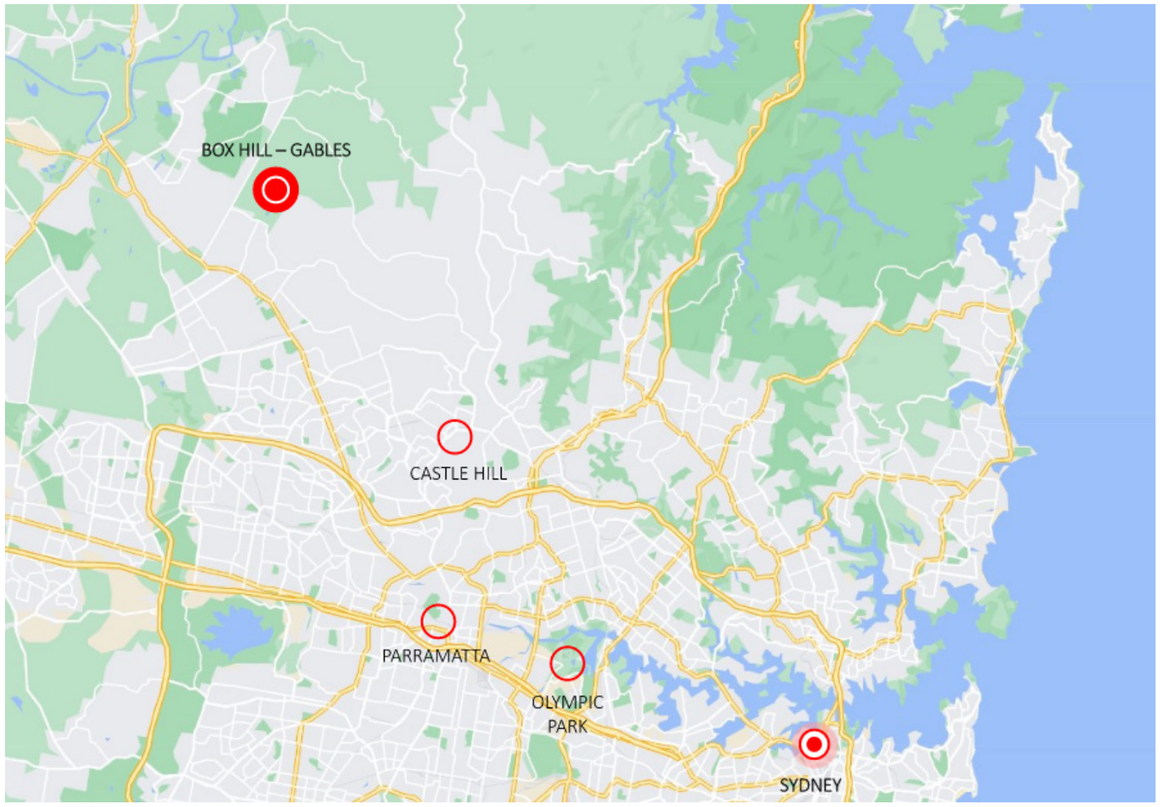
The people of Darug (Dharug) Country, of the Eora Nation are the Traditional Custodians of the land on which The Gables (B ox Hill) Public School development is taking place.

The project team with local Elders participated in a walk on country in January 2023. The gathering presented a welcoming opportunity to discuss the project and gain further insights from the Elders about the site and region and obtain ideas on meaningful initiatives for the design of the project.

The discussed project opportunities include:

- Encouraging connection to nature with outdoor learning opportunities surrounded by native planting of the area.
- Create spaces to gather for sharing knowledge and stories of country.
- Providing opportunities for learning from the land where children can observe, interact, and understand the importance of the surrounding remnant Cumberland Plain Woodland.
- “Re-wild-ing’ of the area as much as possible.

Architectus and Oculus have integrated these elements into the design, encouraging connections to the landscape from the buildings and the placement of outdoor learning opportunities.



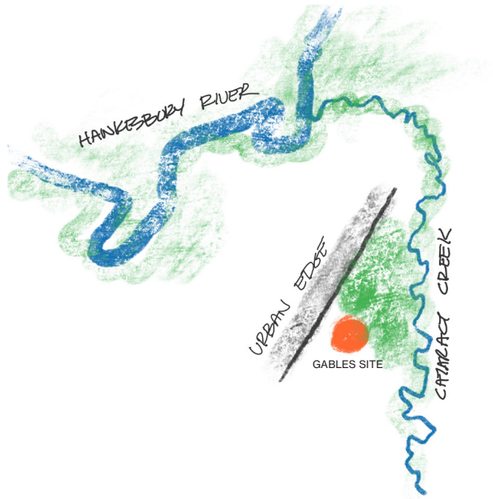
Executive Summary

The Schematic Design

The design vision for the project is to create a school environment that is connected to country, local community and nature. The traditional connections to creeks and river systems is significant within Dharug country. The vision for the project is to preserve and celebrate this context, drawing inspiration from country. The design response for the site looks to address the Urban Edge, and connect the student experience through the landscape, flowing to meet the Nature Edge of Cataract Creek.

The design of the Gables Public School follows a series of forms that create an address to Fontana Drive, broken down in scale and mass to respond to the local context. The scheme draws upon the colours of country, introducing a sense of play reflective of the building uses.

Within the previous Masterplan & Concept Design development for the Gables New Public School, the SINSW mandated Standardised Planning Guidelines had been utilised when setting out the building mass.



This has been maintained through Schematic Design. The 9x7.5m planning grid has been applied across the design. The teaching spaces follow the Standardised Learning Hub of 4. The design of the Administration and the Library building follows the planning grid.

The facade elements adopt the set-out within the 7.5m grid zone. Windows, doors, grille zones and solid areas of facade are standardised to follow the set-out. Sunshading has also been adopted, following the shading ratio guide to suit different facade orientations and to reduce heat load. The window placement strategy is to optimise outlook across the school heart and views across to Cateract Creek, while maximising natural daylight and ventiliation.

The exterior approach adopts the 'Edge' concept, drawing inspiration from the sandstone edges of the local river systems, through colour and use of hardy materials.

External circulation connects the school buildings, with generous walkways and stair connections that are visible to the school heart. The circulation zones offer opportunity for indoor/outood connection. At ground level, the circulation blends with the landscape.

The interior approach has been influenced by the colours of Country, bringing the landscape indoors and introducing a sense of play.

Consultant Inputs

Coordination with the following Consultants has been incorporated into the Schematic Design:

- Landscape
- Connecting with Country Consultant
- Traffic
- BCA
- Civil and Structural Engineering
- Mechanical & Electrical Services, and ESD
- Acoustic
- Hydraulic and Fire Services

REF Requirements

REF Report		
Item	**Deliverable**	**Relevant Section of Report**
Standard Key Planning Documents		
6	Architectural Design Report (Consultation, Design Quality Principles)	Refer to Executive Summary, Section 5 and Section 6.
7	CPTED / Safety by Design Report	Refer to Section 5 of Architectural Design Report
8	Visual Impact Analysis	Refer to Section 5 of Architectural Design Report
9	Solar access analysis and overshadowing impact assessment	Refer to Section 5 of architectural design report
10	Signage Strategy	Refer to Architectural Drawings
12	"Architectural Drawings (Including Existing and Proposed Site Plan, Public Realm Plan (where applicable), Floor Plans, Elevations and Sections, Shadow Diagrams and Schedule of materials + finishes). Include a plan showing all off-site works on a single plan."	Refer to Architectural Drawings
Standard BCA/Design related documents		
20	Kitchen Design and Specification	Refer to Architectural Drawings

Consultation

Engagement

The proposed new primary school will address service need within the North West Growth Area (NWGA) due to expanding green field development and population growth for the new suburb of the Gables and surrounding areas.

Consultation has been held primarily with SINSW Stakeholder Groups. EFSG representatives have been present at the Design Team Meetings (DTM).
The project has also consulted with SINSW TSG, ICT, SSU, Landscape, AMU and the Preschool Advisory Group, as well as the PRG.

Architectus were instructed to commence Schematic Design in July 2024. The following is a list of consultation sessions held during the Schematic Design phase:

SD Kick-off	04.07.2024
PRG 01	04.07.2024
DTM 01	17.07.2024
DTM 02	31.07.2024
DTM 03	07.08.2024
ICT & SSU	09.08.2024
DTM 04	15.08.2024
VM	15.08.2024
Preschool	15.08.2024
TSG	19.08.2024
Risk	21.09.2024
PRG 02	28.08.2024
DTM 05	28.08.2024
ICT	04.09.2024
DTM 06	11.09.2024

SDRP Feedback

The project team presented the selected Master Plan to the State Design Review Panel (SDRP) in June 2023. This was the second meeting with the SDRP, with feedback from the initial meeting (Dec 2022) being considered in the selected Master Plan. The scheme was well received by the panel.

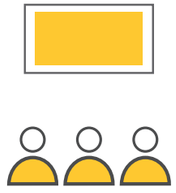
The following elements of the design were supported:
- The buildings location to the north and west of the site.
- Articulation of the SINSW standard blocks to accentuate the hubs.
- Overall landscape strategy.
- Location of the main school entry and the school 'heart'.
- Using the school heart as the major focus for the arrangement of the building.


FIRE HOSE REEL

2

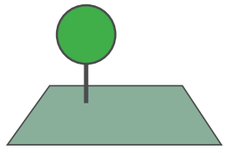
THE BRIEF

The Brief
2.1 School Metrics



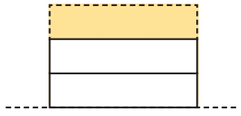
Student numbers

- 1,000 students for a Large Primary School (Core 35) + SLU hub.
- 44 Homebases (HBs)
- Plus 3 Special Support HBs
- 3 Room Preschool



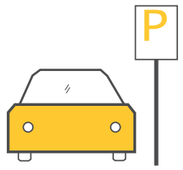
Outdoor space per student

- 10m² per student preferred
- <10m² per student if the site is limited in size
- Preschool External Space



Building height

- Maximum 3 storeys
- 16m LEP height limit updated in line with the VPA, along with the surrounding R4 zoned land

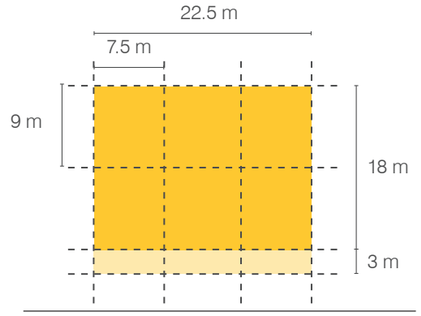


Parking area

- Typical allowance is 1 car space per staff member. Anticipated staff count based on EFSG: 60 staffs
- The DCP requires visitor parking provision of 1 car parking space per 30 students.

Sports Area

- Orientation N/S
- Multi-purpose court



Building envelope shape

- 7.5 x 9 m DfMA Grid module
- 22.5 m module width
- 21 m module depth

The Brief
2.2 Accomodation Summary

The following page is an accommodation summary for Large Primary School.

A Special Support Unit is made up of 3 special support classrooms and support functions. This allocation is subject to change after the confirmation of Special Support type.

As part of the Hall, provision of space for OSHC is included in the accommodation schedule. The design and approval of the fitout of the OSHC space will be undertaken at a later date by the chosen external provider.

The accommodation for the Preschool follows the requirements in the Preschool Brief for 60 Module.

Primary Schools - Large

Unit ID	Facility Name	SQM			Description
PS 100 GENERAL LEARNING SPACES					
PS101	GENERAL LEARNING SPACES HUB				
		Total	Number	GLS	
PS101.01	General Learning Space (GLS)	2970	up to 44 x GLS required *NOTE: the total number of GLS provided is to be determined based on enrolment projections*	44	Minimum GLS area is 60sqm clear (UFA). (refer Example Layouts) Area includes storage as cabinetry, internal walls, services and internal circulation. NOTE: GLSs dedicated to use by the Support Learning Unit are not included in the school capacity count.
PS101.02	Storage		1 storage area per GLS required at 6sqm minimum each		Included within the GLS as cabinetry.
PS101.03	Learning Commons (LC)	1485	11 each LC shared by 4 GLS (L size example layout indicates internal LC only)		Learning Commons to be directly accessible by 4 General Learning Spaces. May be provided as indoor Learning Commons or Outdoor Learning Commons (refer *Example Layouts*) and include a range of zones such as personal effects/bag storage, practical activities areas, break out spaces and the like.
PS101.04	Practical Activities Area (PAA)		2 PAA areas per LC/OLC required		Included within the LC/OLC as cabinetry. Locate in consultation with SLEC and DaIS.
PS101.05	Multi Purpose Space (MPS)		11 one MPS area per LC		Included within the LC/OLC as a room. Distribute in consultation with SLEC and DaIS.
	TOTAL sqm GLS	4455			
PS102	GENERAL LEARNING SPACES (SUPPORT HUB)				
		Total	Number	GLS	
PS102.01	General Learning Space (GLS)	202.5	minimum 3 x GLS required	3*	*not included in the overall school capacity count Minimum GLS area is 52sqm clear (UFA). (refer Example Layouts) May be designed to include a range of zones including retreat areas, personal effects/bag storage areas and ockable storage areas. Classification of Support Class to be determined with School Operations and Performance, furniture provision to be based on number of students expected to be enrolled based on classification, with a minimum of six and maximum of 18 students per support class. Link: https://schoolsequella.det.nsw.edu.au/file/3180627a-c80c-44e4-8378-8e2c42222395/1/Specialist-support-classes.pdf
PS102.02	Storage		1 lockable storage area per GLS required at 6sqm minimum each + 1 PES/Equipment storage area per GLS required at 8m2 each		Included within the GLS as cabinetry
PS102.03	Learning Commons (LC)	135	1 LC shared by 3 GLS		Learning Commons to be directly accessible by 3 General Learning Spaces in Support Hub (*refer Example Layouts*). May be designed to include a range of zones such as shared learning space, practical activities areas, life skills kitchen and theraphy/sensory spaces.
PS102.04	Practical Activities Area (PAA)		2 PAA area per LC/OLC required		Included within the LC/OLC as cabinetry. Locate in consultation with SLEC and DaIS.
PS102.05	Multi Purpose Space (MPS)		1 one MPS area per LC/OLC		Included within the LC/OLC as either a space or a room. Develop in consultation with DST, SLEC and DaIS.
PS102.06	Support Hub Meeting Room	20	1		This is the residual space after all the services/amenities are designed to achieve code compliance. Can be SLU Meeting Room & area decucted from staff unit.
PS102.07	Staff WC	5.5	1		
PS102.08	Access Toilet	13	2 toilets required at 6.5sqm each		
PS102.09	Adult Change Facility + Shower	14	1		To be compliant with NCC Clause F2.9.
PS102.10	Ambulant Toilets	7	2 toilets required at 3.5sqm each		
PS102.11	Laundry	8	1		Access can be provided from within Adult Change Facility and area reduced accordingly.
PS102.12	Outdoor Learning Commons (OLC)	135	1 Shared OLC		Outdoor Learning Commons to be directly accessible by General Learning Spaces in Support Hub (refer Example Layouts). Support Unit OLC to reflect mainstream provision and to be used as a learning area. Environmental restraints (such as fixed fencing across the front of the space are not permitted, unless they align with the Restrictive Practices Policy and Framework, due diligence has been undertaken in alignment with the framework and approval from School Operations and Performance has been obtained.
	TOTAL sqm SUPPORT GLS	540			

PS 200 CORE FACILITIES			
PS201	ADMINISTRATION HUB		
		Total	Number
PS201.01	Entry Vestibule	16	
PS201.02	Principal / Meeting Room	23.5	
PS201.03	Deputy Principal's Office	64	2 x single 13sqm min. offices & 1 x double 26sqm min. office
PS201.04	Interview Room / Office	52	2 x 13sqm rooms min. & 1 x 17sqm room min.
PS201.05	Clerical/Printing	91.5	
PS201.06	Security Store Room	31	
PS201.07	Sick Bay	11	
PS201.08	Accessible Toilet/Shower	6	
PS201.09	Store / Community Clinic		
PS201.10	Circulation	42.5	
	TOTAL sqm ADMIN	337.5	
PS202	STAFF HUB		
		Total	Number
PS202.01	Staff Lounge	147.5	1
PS202.02	Kitchen Area	22	1
PS202.03	Staff Toilets	33	2F + 2M + 1 Acc
PS202.04	External Circulation		
	TOTAL sqm STAFF	202.5	

PS204	LIBRARY HUB		
		Total	Number
PS204.01	Library Main Area	290	1
PS204.02	Shared Office / Workroom	28	1
PS204.03	KLA Resource Store Room	41	1
PS204.04	Staff Toilet	10	1
PS204.05	Special Programs Room	135	4 rooms required at minimum 32 sqm each
PS204.06	Special Programs Storage		1 storage area per SP room required at 6sqm minimum each
PS204.07	Store	21	
PS204.08	Student Toilets	15	
PS204.09	Circulation		
	TOTAL sqm LIBRARY	540	

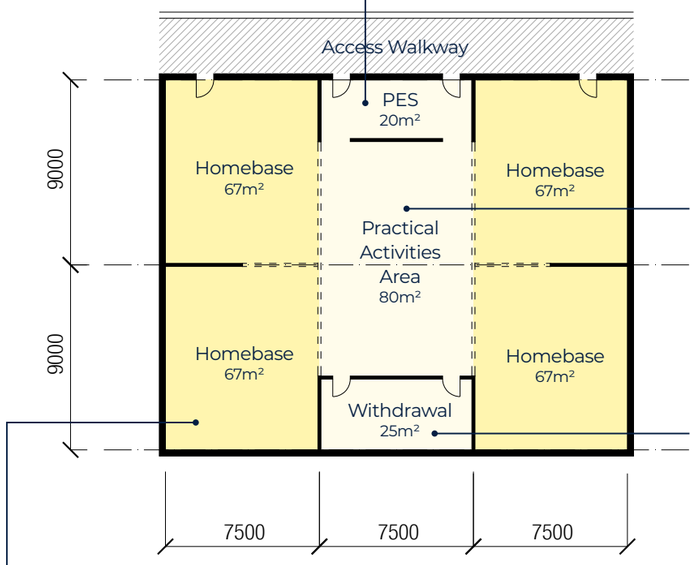
PS203	HALL, CANTEEN & OSHC		
		Total	Number
PS203.01	Communal Hall	310	
PS203.02	Stage	50	
PS203.03	Chair Store Room	15	
PS203.04	PE Store Room	18	
PS203.05	Sports Store Room	17	
PS203.06	Performance Store Room	11	
PS203.07	Sound Cupboard	2	
PS203.08	Toilets	30	4M + 4F
PS203.09	Accessible Toilet/Shower	8	1
PS203.10	OSHC office	13	
PS203.11	OSHC store	32	
PS203.12	OSHC Kitchennette	24	
PS203.13	Canteen Office/Store Room	15	
PS203.14	Canteen	50	
PS203.15	Servery Covered Area		Included in PS501.01 COLA (36sqm min.)
PS203.16	Staff Accessible Toilet	8	1
PS203.17	Garden Store Room	13	
PS203.18	Bulk Store Room	16	
PS203.19	Cleaning Supplies Store Room	7	

PS 400 STUDENT AMENITIES + STORAGE + SERVICES			
PS401	STUDENT AMENITIES		
		Total	Number
PS401.01	Toilets - Girls - WCs	116	29
PS401.02	Toilets - Boys - WCs	100	25
PS401.03	Toilets - Boys - Urinals	-	-
PS401.04	Drinking Facilities		29
PS401.05	Hand Washing Outlets		30 (add +24 for airline style option)
PS401.06	Access Toilet	48	6
	TOTAL sqm STUDENT AMENITIES	264	
PS402	OTHER STORAGE / SERVICES		
		Total	Number
PS402.01	Cleaning Distributed Store Room	3	
PS402.02	Main Communications Room	15.5	
PS402.03	Building Communications Room	50.4	6 min.
PS402.04	Laundry	8	1
PS402.05	Kiln	6	1
PS402.06	Main Switchboard Cupboard	10	
PS402.07	Distribution Board Cupboard		
PS402.08	Other services + Circulation Area Estimate	73.1	
	TOTAL sqm OTHER STORAGE / SERVICES	166	

The Brief
2.3 Standardised Learning Hubs

The School teaching spaces follow the SINSW Standardised Learning Hub of 4. The hub of four incorporates all spaces required in the EFSG schedule of areas.

The spaces included in the Hub can be interchanged, depending on the project specific requirements. The hub layout allows for multiple learning modes. Use of adjustable walls aid customisation of space.



Homebase Room Area Layout

The EFSG asks for 3m² of Personal Effects Storage per Homebase. The Hub of 4 creates a zone for PES that can be interchanged with an air lock in colder zones.

The EFSG requires 17m² for a Practical Activities Area for each Homebase. The Hub of 4 creates a central PAA zone that has the ability to open up between the 4 Homebases and adapt to different learning and teaching modes.

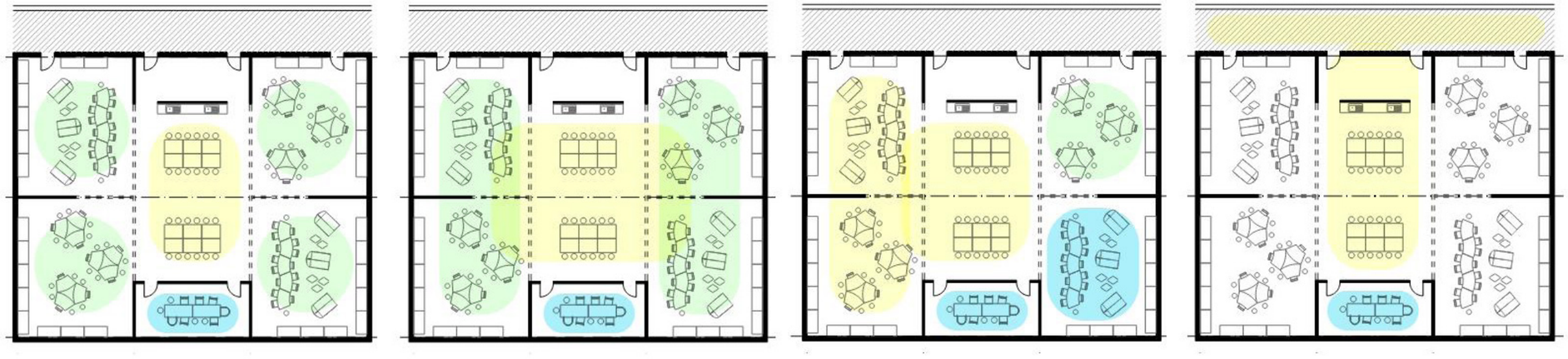
The EFSG requires 12m² for a shared Withdrawal Room between two Homebases. The Hub of 4 creates a Withdrawal Room for 4 Homebases which can be interchanged with a High School seminar room, a specialist store room or an outdoor space.

The EFSG requires 60m² for a Homebase and 6m²for store. The areas have been combined with storage being integrated into the storage elements. The Homebase and storage can be interchanged with a GLS or a Special Education Learning Classroom.

Instructed Learning

Active Learning

Focussed Learning

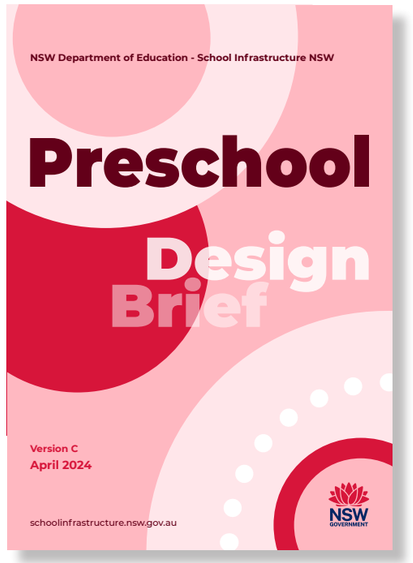


The Brief
2.5 Standardised Preschool

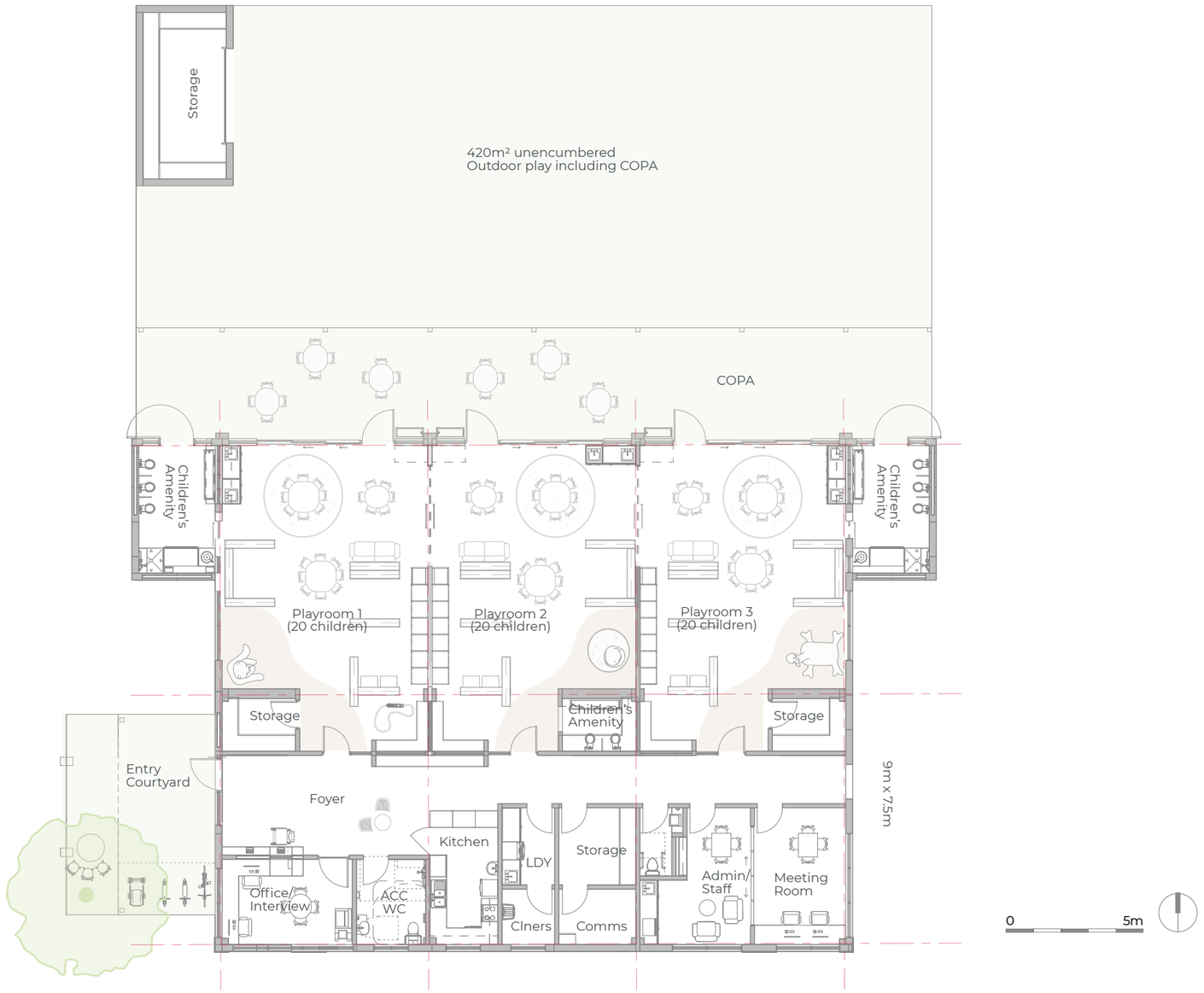
The Preschool follows the Sixty Module brief as proscribed in the SINSW Preschool Design Brief.

The design presents a strong focus on access to nature and collocation of childrens spaces for shared resources and services. The proposed fitout for the Preschool is located in Section 5 of this Report, with the completed Child Care Planning Guideline and National Quality Framework Assessment Checklist in Section 6.

This Preschool will be run by the Department of Education and will cater for children aged between 3-5 years of age.

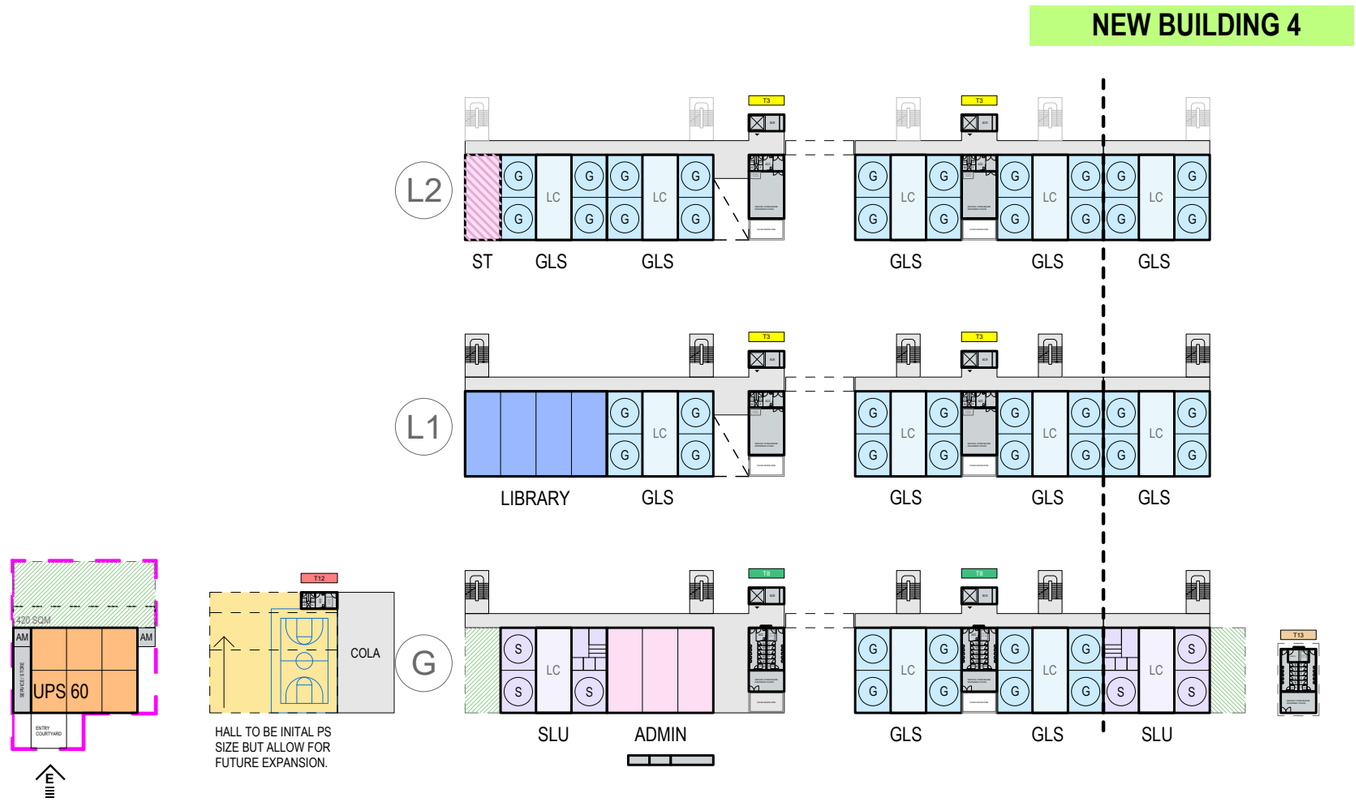


3.1.4 Sixty Module (Side Entry)



The Brief
2.6 Functional Arrangements

The functional arrangement of the project follow the SINSW Pattern Book (Standardised Design for Schools) approach for a large Primary School and Sixty Module Preschool.



G GENERAL LEARNING SPACE
S SUPPORT LEARNING SPACE
LC LEARNING COMMON (INTERNAL)

DO NOT SCALE OFF DRAWINGS

EFSG AREAS ROUNDED TO THE CLOSEST 7.5 GRID FOR VERTICAL STACKING

CONSTRUCTION STAGING + SPATIAL RELATIONSHIPS ONLY

VERTICAL TRANSPORT, FIRE EGRESS + SERVICE REQUIREMENTS ALL TO BE CONFIRMED

APPROX 0.4 SQM PER STUDENT SERVICE ALLOWANCE MADE

SITE TESTING TO BE UNDERTAKEN

3

CONNECTING WITH COUNTRY

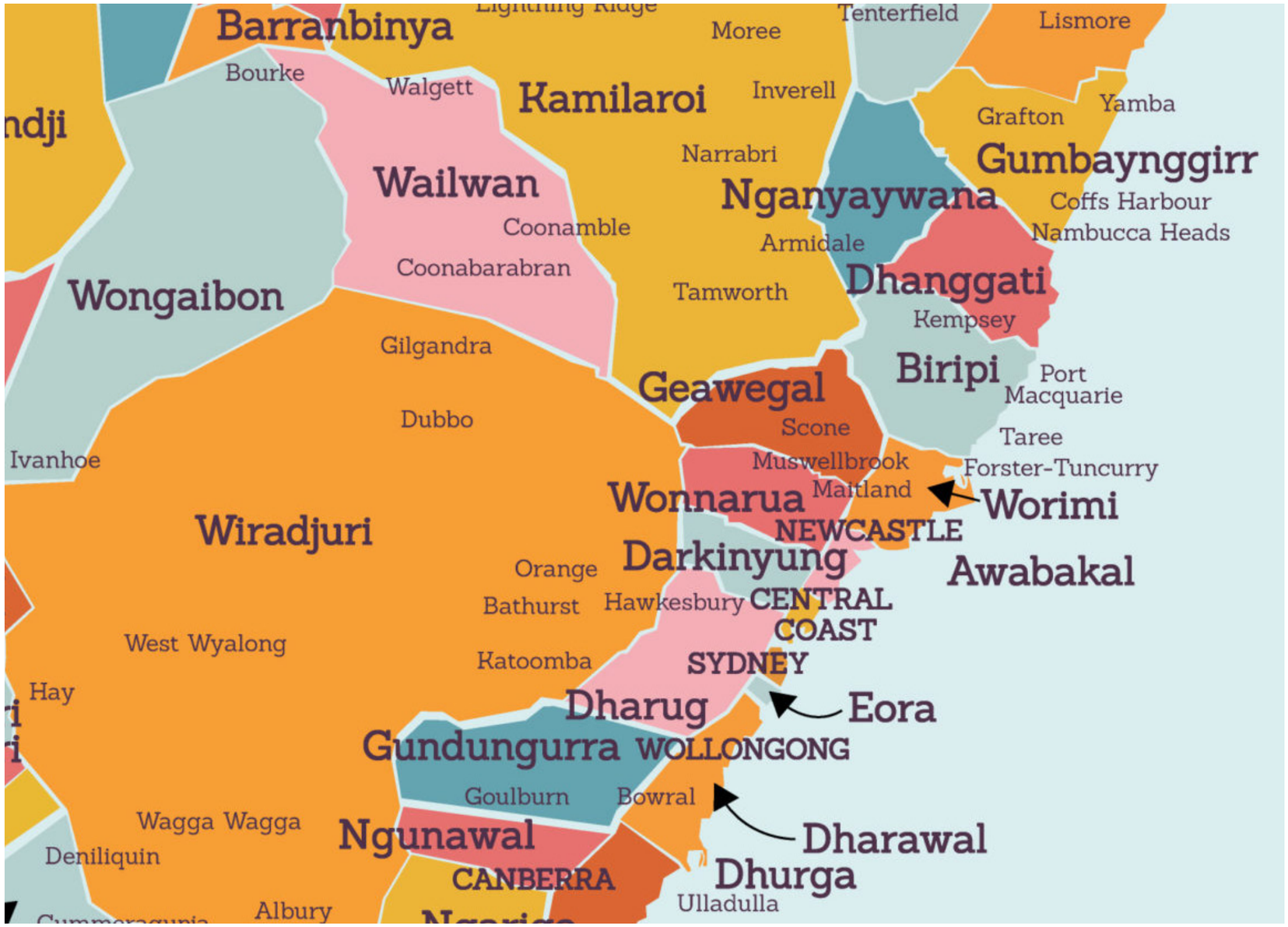
Connecting with Country
3.1 Background

Traditional Owners

The people of Darug (Dharug) Country, of the Eora Nation are the Traditional Custodians of the land on which The Gables (Box Hill) Public School development is taking place.

We understand that Darug Country looked after and sustained many mobs within the Sydney Basin. We also understand, through discussion with elders, that the clans of Darag country were the first point of contact by European invaders.

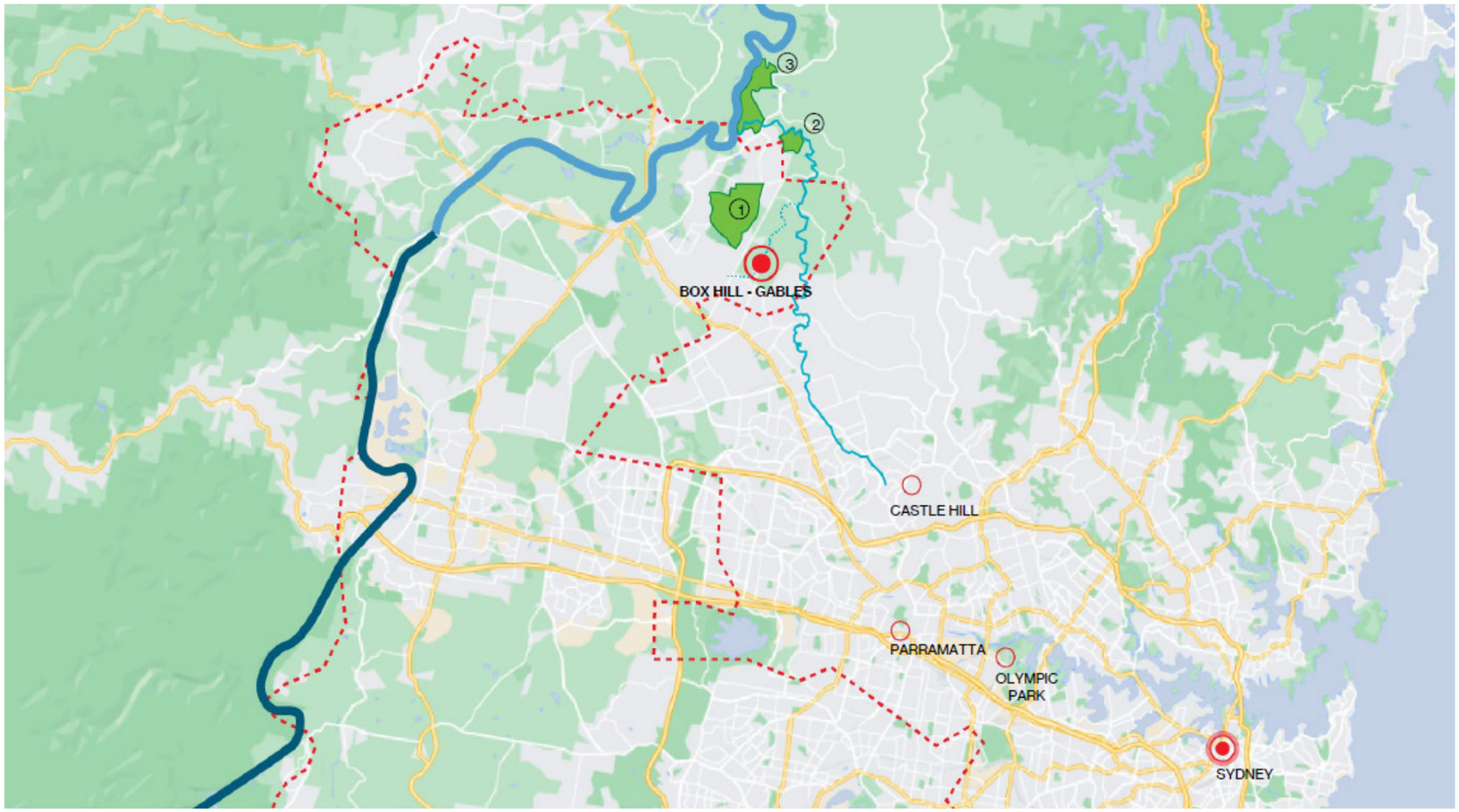
The site sits within the Cumberland Plain region, which is one of the most intensely investigated Aboriginal archaeological regions in Australia.



Connecting with Country
3.1 Background

The Hawkesbury River further north of the site is a significant tributary in indigenous history. Indigenous stories of talk these important river systems and their surrounding ecosystems.

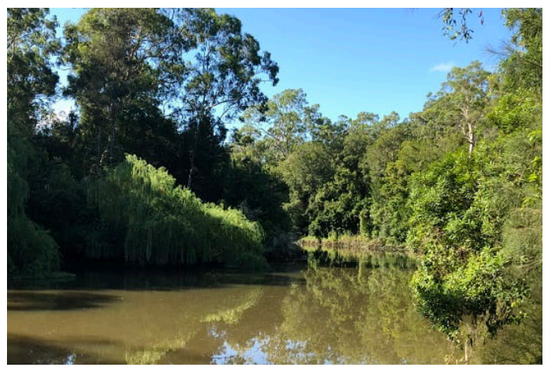
Cattai Creek flows from the Hawkesbury River. Cattai Creek and the Cattai National Park were prominent hunting areas. Cattai feeds into Cataract Creek, which runs past our site.



LEGEND

- Cumberland Plain
- Woodland
- 3 Scheyville National Park
- 2 Cattai National Park
- 1 Mitchell Park
- Lake Burragorang
- Nepean River
- Hawkesbury River
- Cattai Creek
- Cataract Creek

Hawkesbury River



Cattai Creek at Cattai National Park

Cataract Creek in Gables precinct

Connecting with Country
3.2 Walk On Country

Design Opportunities

The project team with local Elders participated in a walk on country in January 2023. The gathering presented a welcoming opportunity to discuss the project and gain further insights from the Elders about the site and region, and obtain ideas on meaningful initiatives for the design of the project.

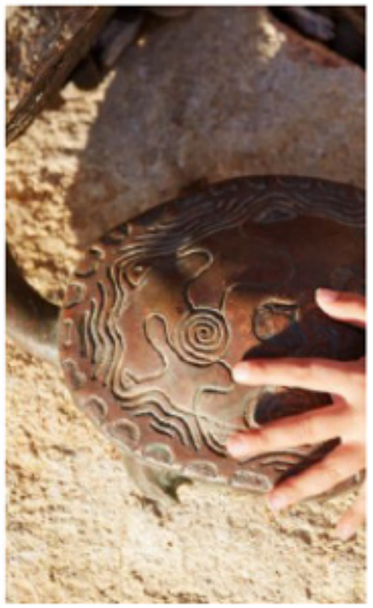
Detailed findings and discussions from the Walk on Country are captured in the Connection with Country Report completed by Yarrawalk. The report outlines opportunities for the project to acknowledge First Nations through the design and operations of the school.

Aunty Cheryl emphasised the importance of use of nature materials and naturally sourced materials, respect for country. As use of natural colour palette.

Aunty Roz spoke about an onsite memorial to recognise the past. This could be an initiative undertaken by the School, along with investing in opportunities to employ and engage with local Aboriginal community members.

Other discussed project opportunities include:

- Encouraging connection to nature with outdoor learning opportunities surrounded by native planting of the area.
- Create spaces to gather for sharing knowledge and stories of country
- Create spaces to gather for festivals and events celebrating Indigenous culture and heritage in the area.
- Providing opportunities for learning from the land where children can observe, interact, and understand the importance of the surrounding remnant Cumberland Plain Woodland.
- Employ responsible landscape management practices
- “Re-wild-ing’ of the area as much as possible.

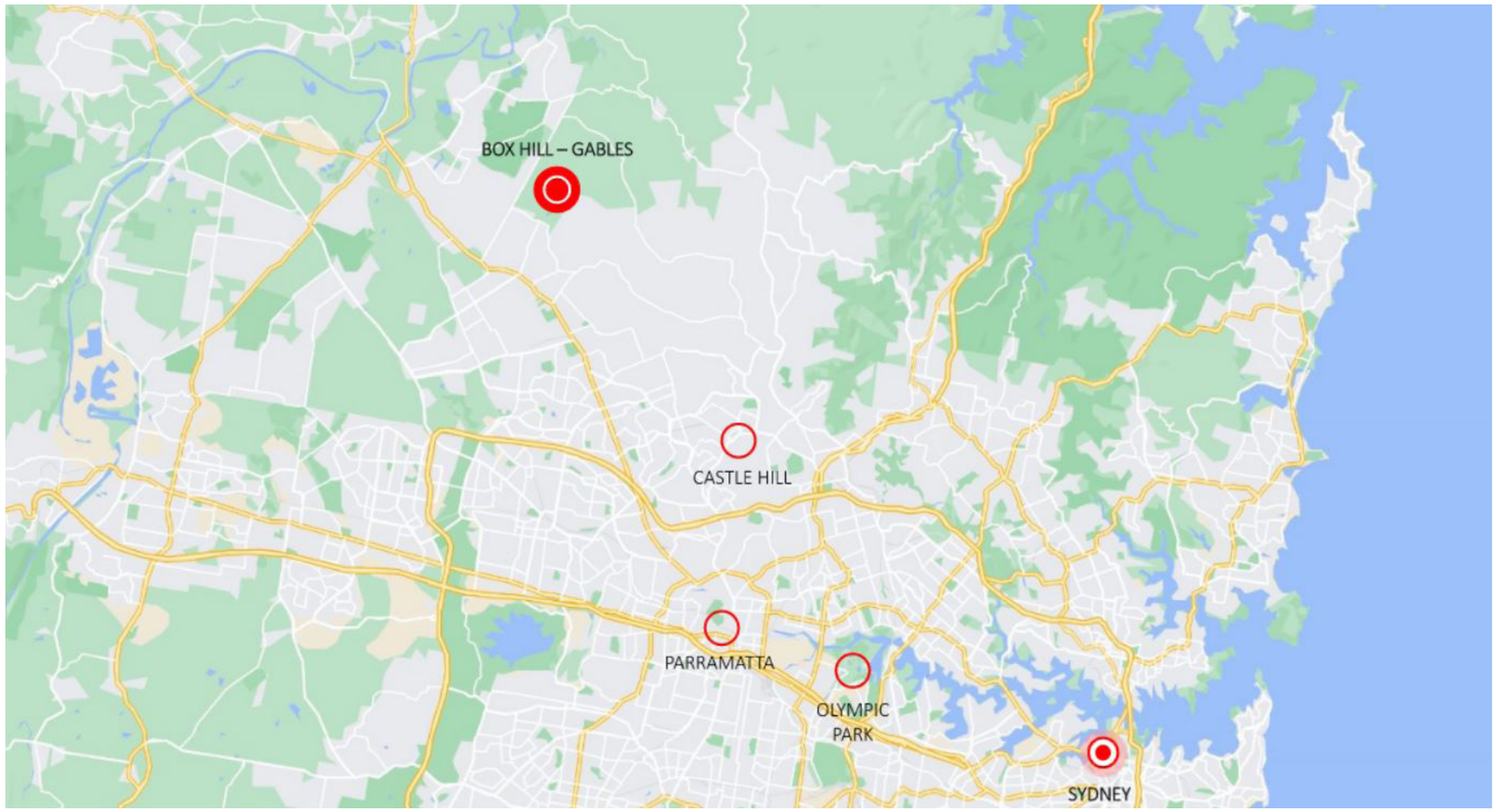


4

SITE AND MASTERPLAN

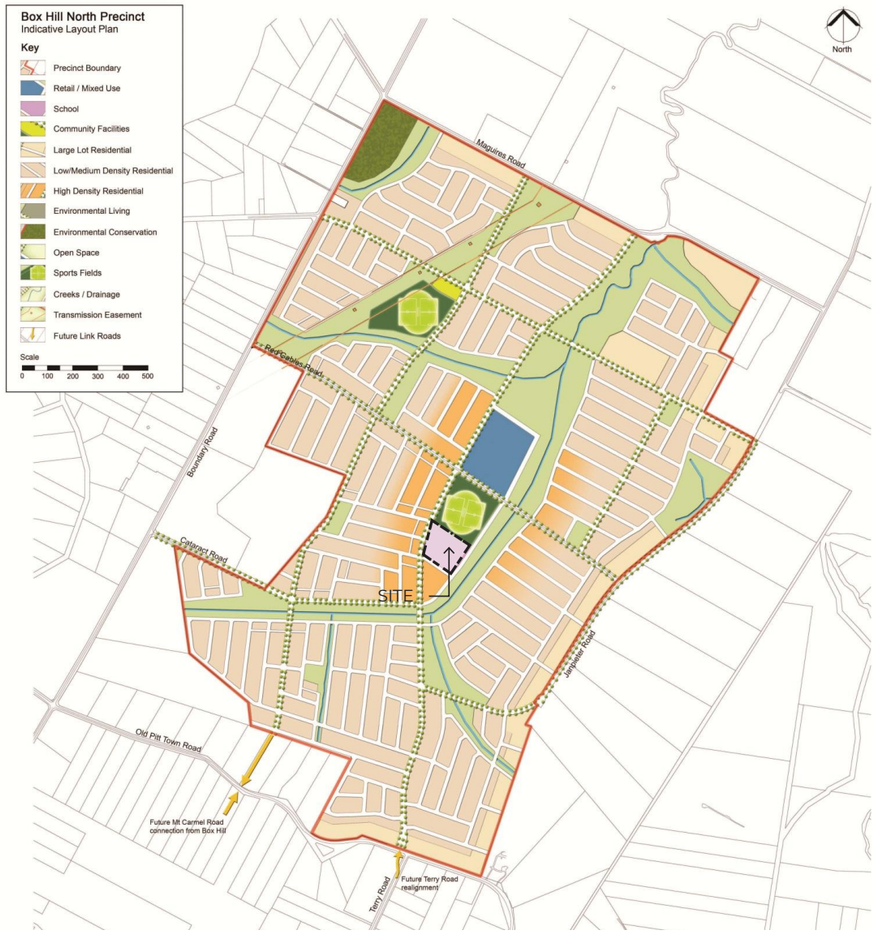
Site & Masterplan
4.1 Location

The Gables Primary School site is located within the Box Hill North Precinct Indicative Layout Plan. The site is approx. 50km north west of Sydney CBD and 10km north of Rouse Hill Town Centre.



Site & Masterplan

4.2 Planning Context and The Gables Master Plan



Box Hill North (The Gables) - Indicative Layout Plan, The Hills DCP 2012

The Gables - Master Plan

The ‘Gables’ (formerly known as ‘Box Hill North’) is a separate Precinct located to the north of Box Hill. This area is a ‘landowner nominated site’ and is mainly under the control of a single developer. All required infrastructure for this area such as open spaces, traffic and transport infrastructure and drainage/ water management infrastructure is being provided by the developer under a Voluntary Planning Agreement (VPA).

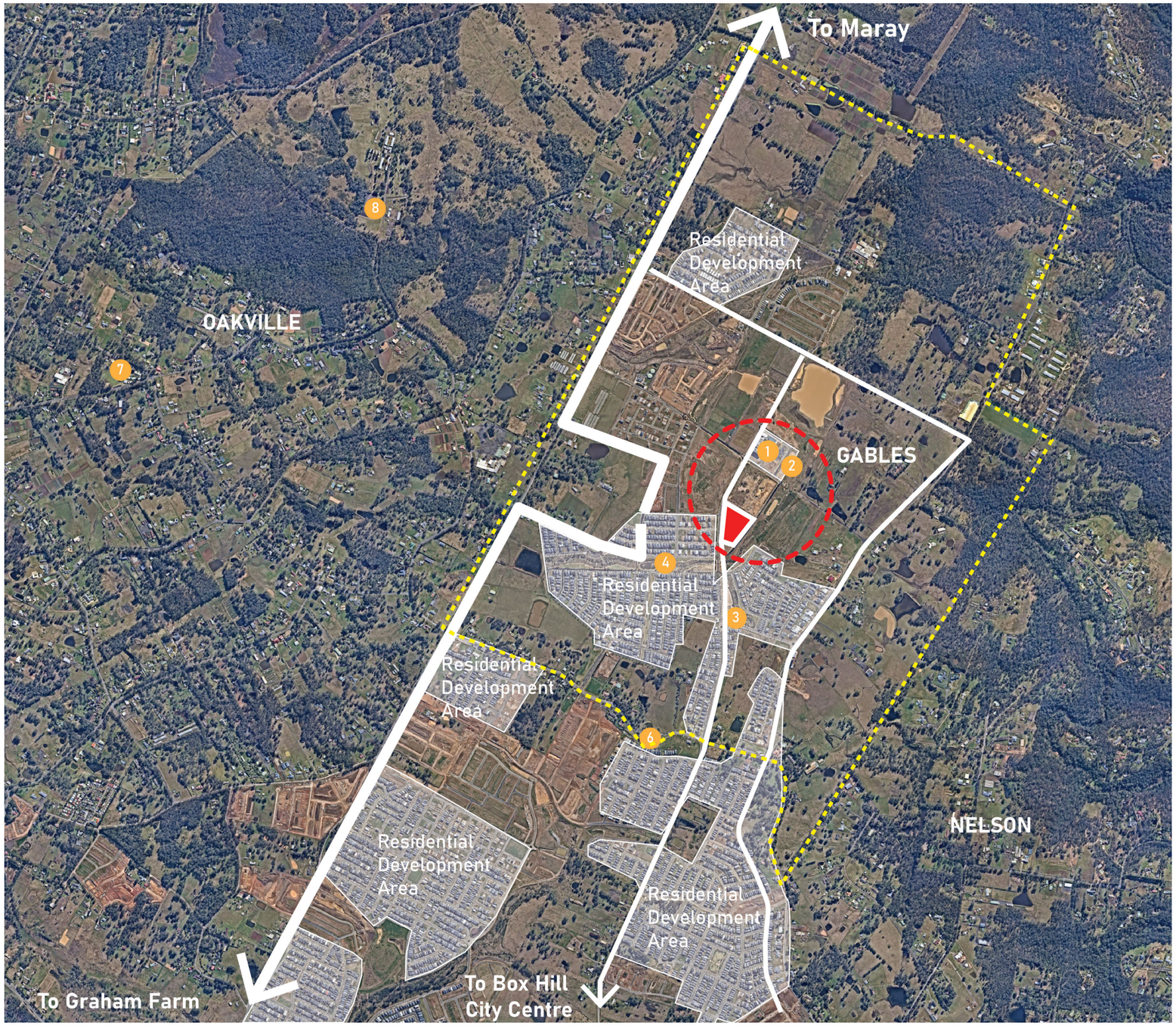
The precinct sits within the North West Growth Area (NWGA) and will provide an additional 4600 dwellings. The VPA has been adopted within The Hills DCP 2012 and this sets out development visions and objectives. Final alignment of roadways and site boundaries along with delivered infrastructure is subject to change.

Part text from Department of Planning, Infrastructure and Environment (DPIE) Website https://www.dpie.nsw.gov.au/

A Master Plan and design guide has been developed by the land holder to further describe the precinct and design objectives in addition to DCP controls.

Site & Masterplan
4.3 Site Context

The site is located at the corner of Fontana Dr and Cataract Dr, Gables, approximately 2.5km north of Box Hill.
The surrounding context mainly are newly residential development areas as well as local parts. The future Gables town center will be approximately 300m north of the subject site.

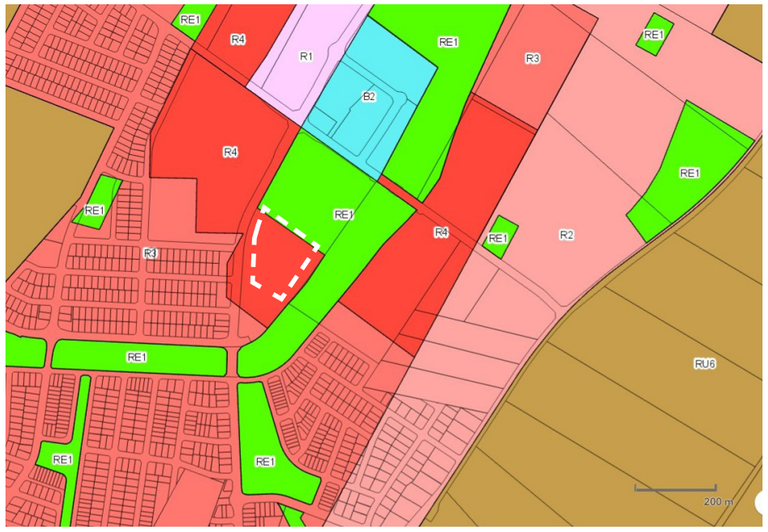


Legend

1. Santa Sophia Catholic College
2. Future Gables Townhall
3. Slidey Park
4. Bunyarra Parade Reserve
5. Orchard Park
6. Box Hill Nelson Fire Station
7. Oakville Public School
8. Oakville Preschool Learning Centre

Future Gables Centre Precinct

Site & Masterplan
4.4 Local Planning Controls

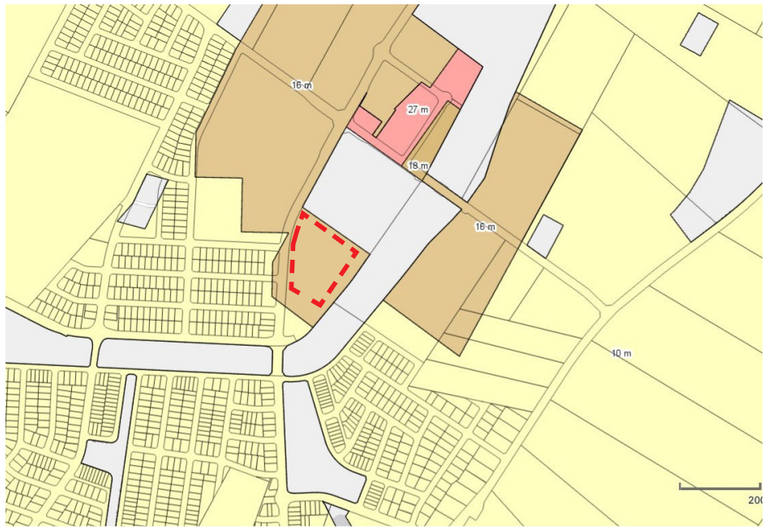


LEP Land use zoning

- The site is zoned R4 - High density residential
- The surrounding area is zoned R3 and RE1

Legend

- B4 Mixed Use
- R2 Low Density Residential
- R3 Medium Density Residential
- R4 High Density Residential
- RE1 Public Recreation
- RE2 Private Recreation
- SP1 Special Activities
- SP2 Infrastructure



LEP Height Control

- The LEP plans for maximum building height have been updated in line with the VPA. The site carries a 16m maximum building height along with surrounding R4 zoned land
- R3 zoned land has a maximum building height of 10m

Legend

J1	9	P2	18
J2	9.2	Q1	19
J3	9.5	Q2	20
K	10	R	21
L	11	U1	31
M	12	U2	34
N1	13	V1	36
N2	14	V2	37
O1	15	W	40
O2	16	X1	48
P1	17	X2	49

Bushfire Prone Land

- The site is identified as bush fire prone land.
- The bushfire hazard within 140 m of the site is located within the riparian corridor to the east which will be revegetated to Cumberland Plain Woodland and is classified ‘woodland’ under Planning for Bush Fire Protection (PBP; RFS 2019).

Legend

- Vegetation Category 1
- Vegetation Category 2
- Vegetation Category 3
- Vegetation Buffer

Site & Masterplan
4.5 Bushfire Buffer Zone & Flooding

Bushfire Prone Land

- The site is identified as bush fire prone land.
- The bushfire hazard within 140 m of the site is located within the riparian corridor to the east which will be revegetated to Cumberland Plain Woodland and is classified ‘woodland’ under Planning for Bush Fire Protection (PBP; RFS 2019).
- Further discussion with local authorities is being undertaken to understand further implications to the design.

Legend

- Vegetation Category 1
- Vegetation Category 2
- Vegetation Category 3
- Vegetation Buffer

PMF Flood Map

- In The Hills DCP, the school is classified as a sensitive land use and is therefore subject to the highest "FPL4" Flood Planning Level - which is the PMF level. The DCP states that habitable floor levels must be no lower than FPL4 (PMF level)

Legend

- Site Boundary
- Watercourses
- 0.0-0.1m
- 0.1-0.2m
- 0.2-0.3m
- 0.3-0.5m
- 0.5-1.0m
- 1.0-2.0m
- >2.0m

1% AEP Flood Levels

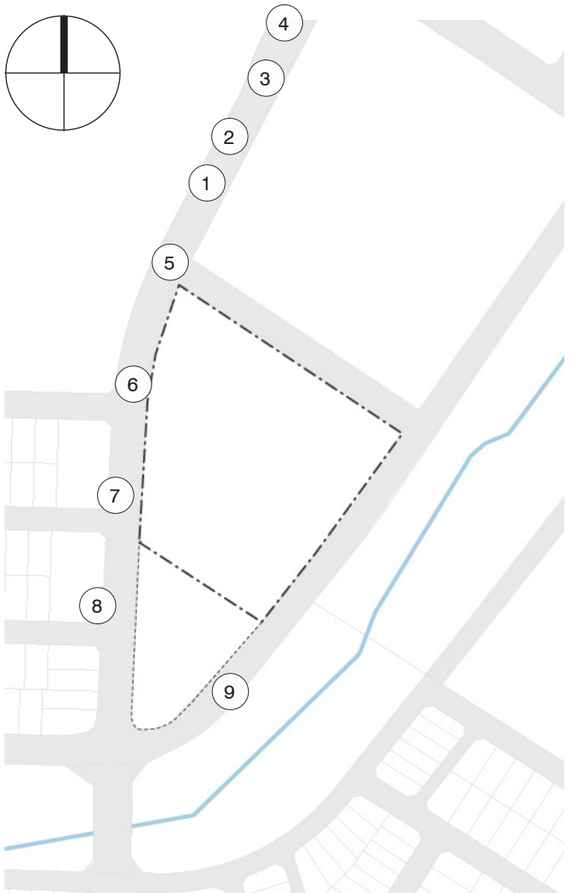
- In the 1% AEP, floodwaters are contained within the riparian corridor with a flood level of approximately RL 32.00m – 33.00m east of the site, leaving the site flood immune. Flood levels to the east of the site are between RL 34.00m 35.00m, while levels reach RL 38.00m to the south and west. At the northeast of the site flood levels range between 0.1m - 0.3m.
- Investigation by TTW Engineers confirmed flood risk is from overland flow.
- Mitigation measures have been included in the Schematic Design.

Legend

- Site Boundary
- 0.1-0.3m
- 0.3-0.5m
- 0.5-1.0m
- 1.0-2.0m
- Greater than 2.0m

Site & Masterplan
4.6 Site Character

The site is a recent redevelopment of former rural land. Future development plans indicate a mix of medium and high density residential surrounding the site. Proposed site has good street frontages on 3 sides and access primary access suitable from 2 sides. A road separates the school site from adjacent land indicated as playing fields and park lands.



Site & Masterplan
4.7 Opportunities

1. Adjacent to the proposed public reserve
2. Close proximity to The Gables proposed town centre
3. Future sport and playing field, future car park. Potential to joint use agreement of open space, playgrounds and car parking
4. Green corridor provides a good setback from the residential neighbor.
5. Future bus stops at the north-west corner provide public transport access to the site
6. North aspect - good solar access
7. Opportunity to form a community heart for the local precinct
8. Potential future Childcare Centre to the south – opportunities for shares facilities, connect as a precinct
9. Topography – opportunity to connect at multiple levels

Site & Masterplan
4.8 Constraints

1. Proximity to Bush Fire Prone Land
2. Topography - 5 meters slope from West to East.
3. No right-hand vehicular turn in new Pennant Way. No pedestrian crossing / connection across Fontana Dr
4. Long distance to train and metro

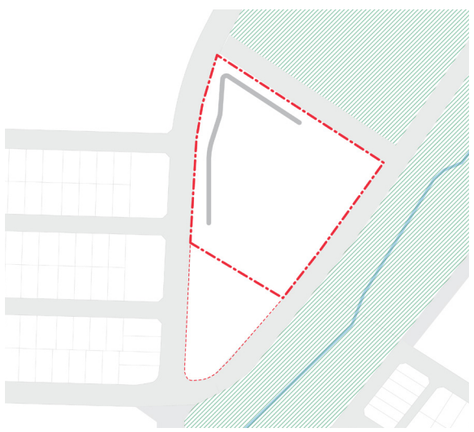
Site & Masterplan
4.9 Ordering Principles

The following ordering principles were considered in determining design approach.

Green Context

Future Local Public Recreation

Bushfire Zone



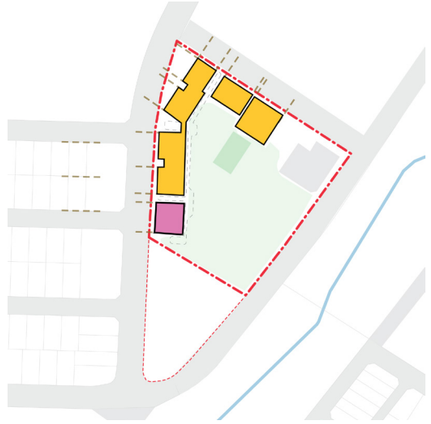
Prominent Corner

Prominent Entries

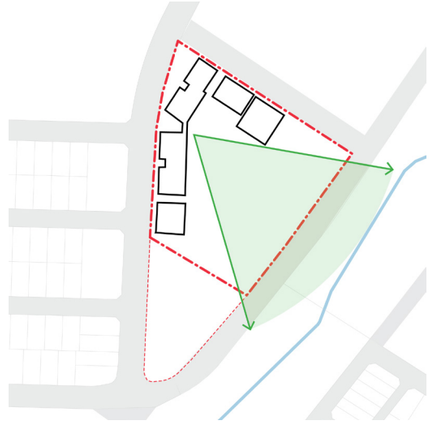
Multiple Sites

Site & Masterplan
4.10 Key Moves

ELC Allocation



School Address Key Corner



Visual Connection with the Creek and Nature Reserve

Circulation around School Heart

Site & Masterplan

4.11 Preferred Masterplan

The selected Masterplan for The Gables New Public School works with the site topography. The location of the built form addresses the Urban Edge along Fontana Drive and presents a front door for the school along the new Pennant Way. This enhances the internal school heart, and the landscape opportunities within the site.

The front door location enables easy connection with the northern recreation reserve, and simplifies strategy for traffic access for pick-up & drop-off.

The built form is completely outside of the Bush fire Buffer zone, minimising risk for the school.

The Preschool has its own separate zone on site, with opportunity to connect to the school functions.

5

SCHEMATIC DESIGN

Schematic Design
5.1 Design Vision

To create a school environment that is connected to country, local community and nature.

The traditional connections to creeks and river systems is significant within Dharug country.

We aim to preserve and celebrate this context through exploring edge conditions within the school site and acknowledging:

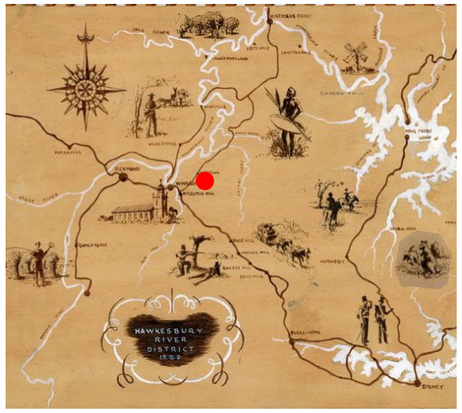
- The sandstone ridges
- The flow of the water
- The forest canopies

Schematic Design
5.2 Timeline

35,000 – 50,000 years ago

The Darug people occupied the area prior to European arrival.

The Hawkesbury River further north of the site is a significant tributary in indigenous history. Cattai Creek flows from the Hawkesbury River. Cattai Creek and the Cattai National Park were prominent hunting areas. Cattai feeds into Cataract Creek, which runs past our site.



1794

Very early 1800 map of Hawkesbury

1794 saw the beginning of settlement in the shire when Governor Hunter officially granted the first parcel of land on the Hawkesbury Road.

1800s

1806_The Hunting Lodge
Built by S.H. Terry on Governor Bligh's "Copenhagen Farm"

It was common During the 1800's for people to come from the city to their country hunting boxes for a few days hunting.

The position of the boxes on the hills made it easy for hunters to take aim at their targets. One building has survived: "The Hunting Lodge", thought to have been built by S.H. Terry on Governor Bligh's "Copenhagen Farm"

Early 1900s

1950s Shore 40 acre orchard Cattai Ridge Road.

The McCall Garden Colony Box Hill

Early 1900s the bulk of the estate was subdivided into small farmlets.

Late 1900s

1983, a farm house looking up Mason Road towards Nelson

From the 1950s, agriculture declined in the shire as urban development rapidly extended northward, with Box Hill being one of the last areas to change. There are still some rural properties in the North but many farms have been reduced in size to accommodate hobby farmers.

Schematic Design
5.2 Timeline

2009

Near map taken on 20 Oct 2009

Early 2000s, Box Hill, Maraylya (and then Gables in the future), remained their geography housing of the farming and large houses.

2016

Near map taken on 02 Oct 2016

Celestino was the original developer of The Gables. The area start to have major infrastructure changes including site demolition, roads, services in 2016.

Early 2020

Gables suburb proposal map

Not until 17 July 2020, Gables was gazetted officially.

A large portion of Gables was previously part of the suburb of Box Hill and a smaller portion in the north was part of the suburb of Maraylya.

Late 2021

Near map taken on 24 Jan 2021

Gables suburb keeps growing and see its first educational building, Santa Sophia Catholic College, completed and opened for learning on 8 November 2021.

2023

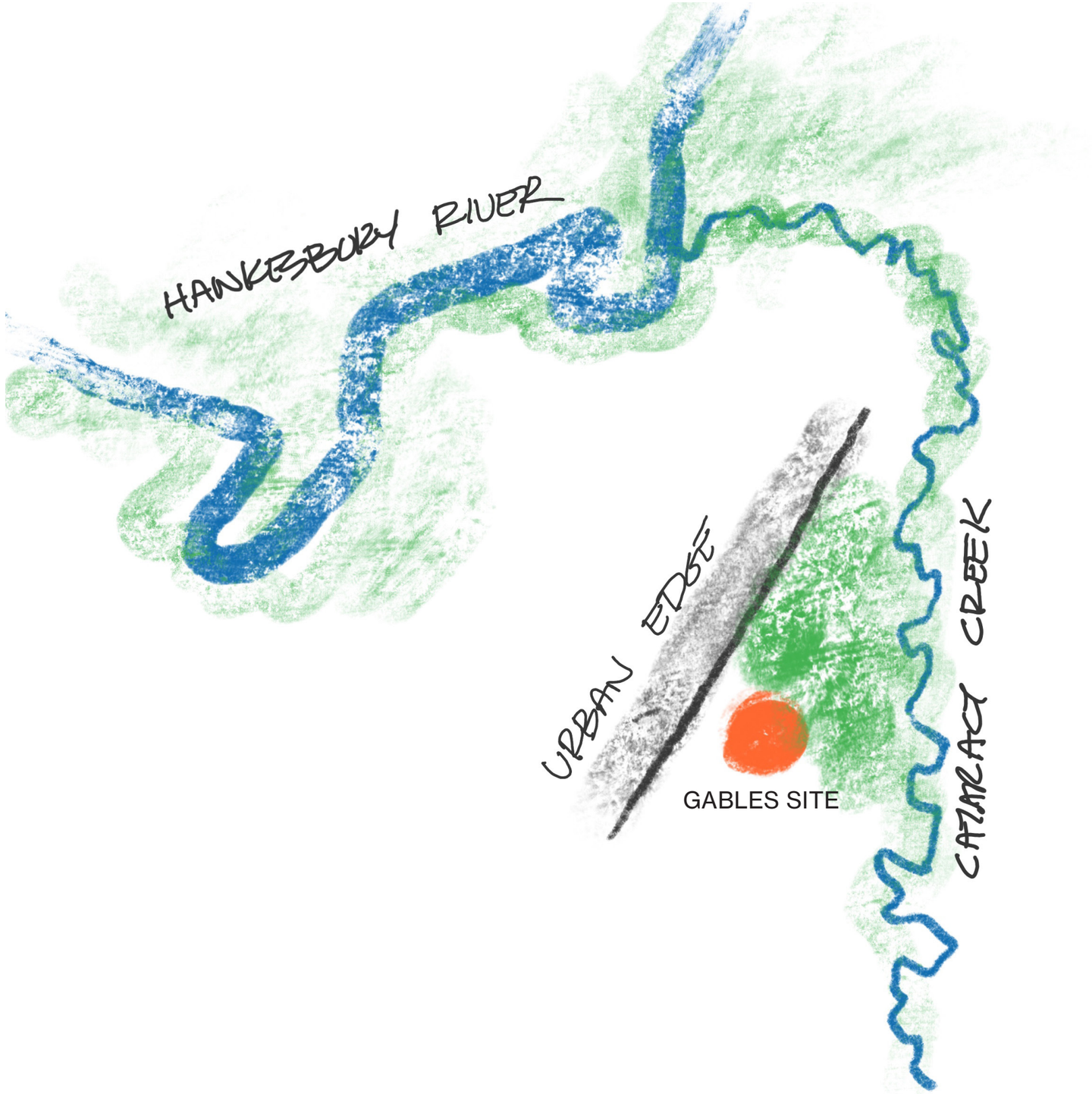
Near map taken on 19 March 2023

The subjected site of Gables Primary school now sits on an established context or the urban residential house with a completion of the entry road Pennantway at the North boundary.

Schematic Design
5.3 Design Approach

The site with within the Gables estate is defined by edges – the Urban Edge to the west and Nature Edge to the east.

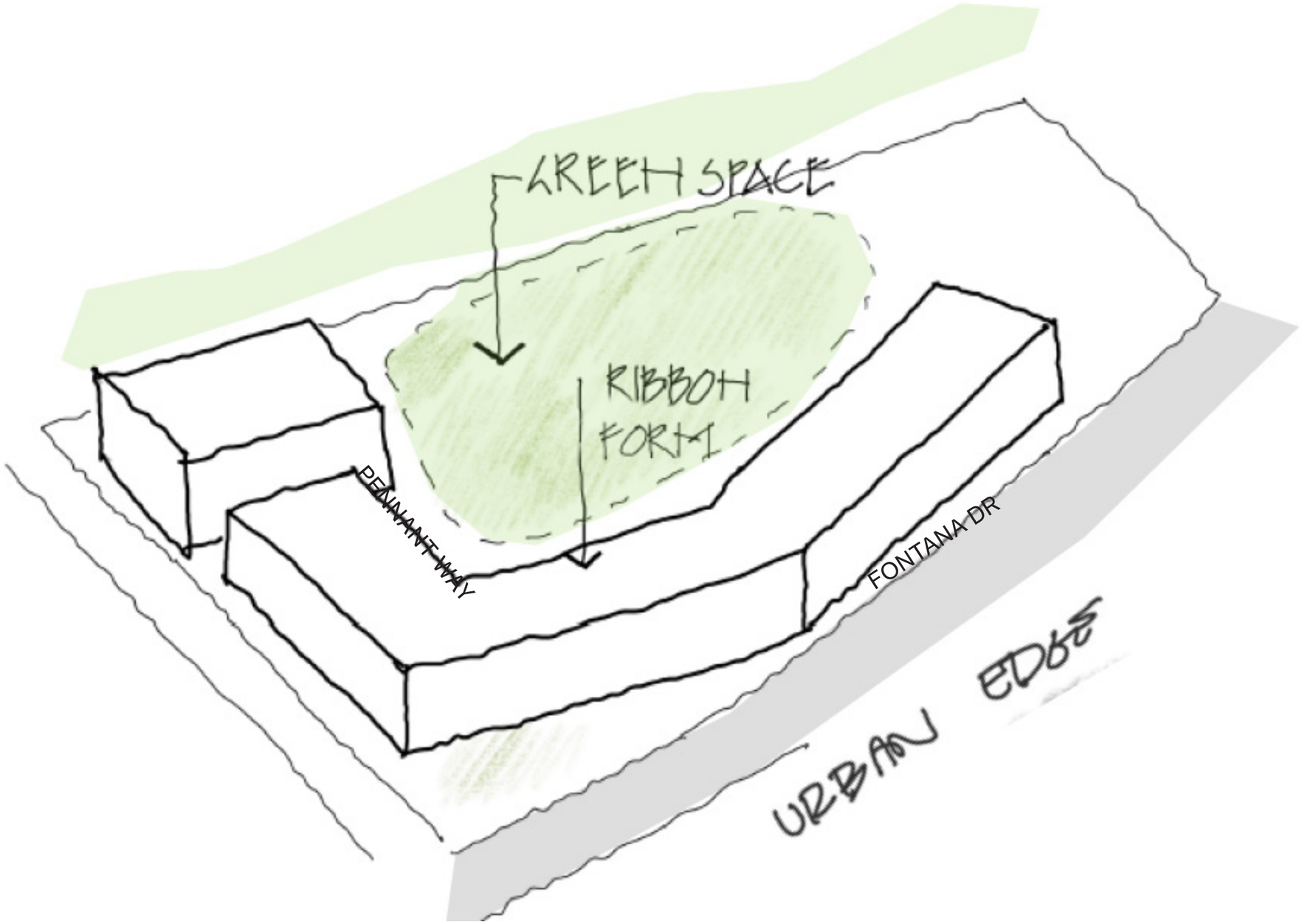
The Urban edge is much like the like the hard, sandstone ridges. The design response for the site looks to address the Urban Edge, and connect the student experience through the landscape, flowing to meet the Nature Edge of Cataract Creek.



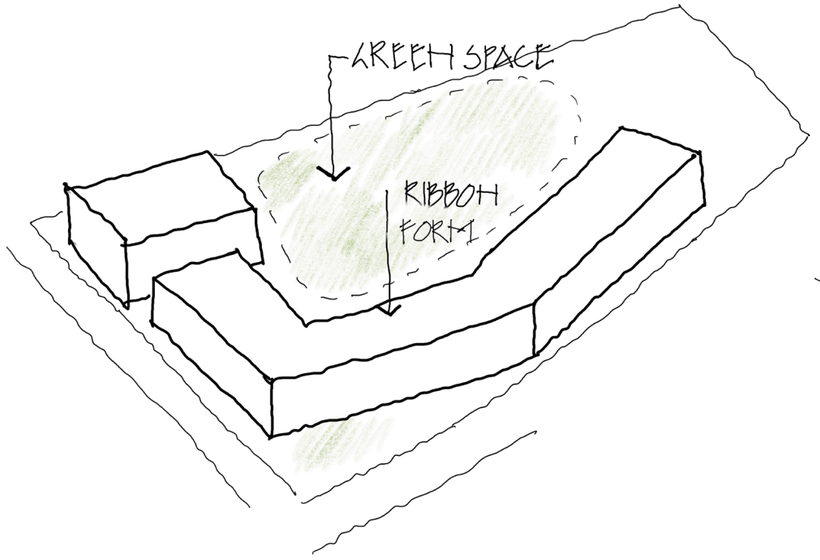
Schematic Design
5.4 Concept Development

The traditional connections to creeks and river systems is significance within Dharug country. The vision for the project is to preserve and celebrate this context, drawing inspiration from country.

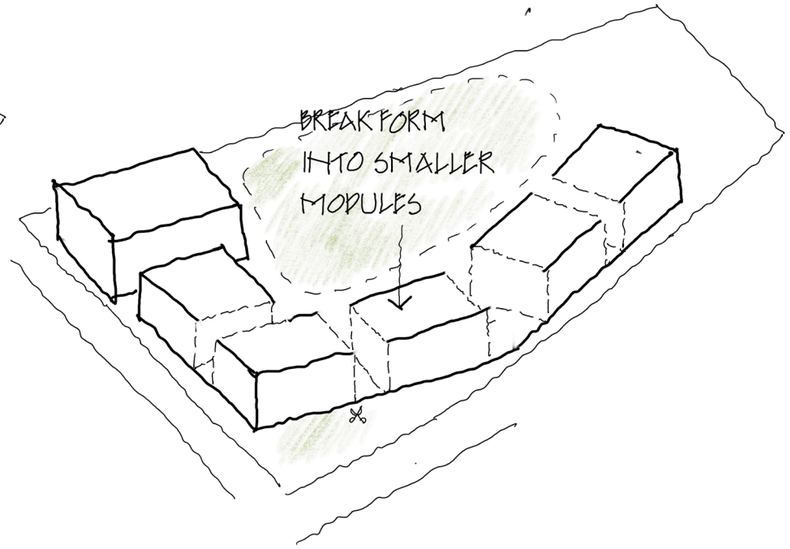
The design response for the site looks to address the Urban Edge, and connect the student experience through the landscape, flowing to meet the Nature Edge of Cataract Creek.



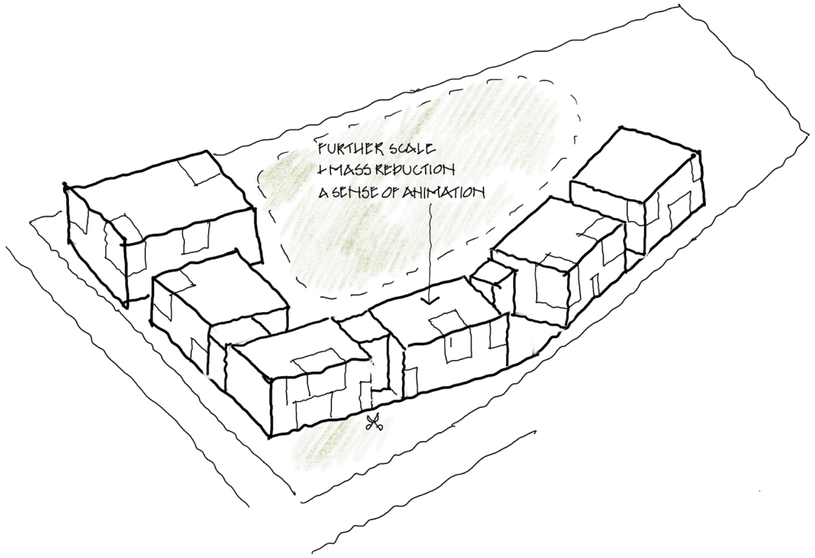
Schematic Design
5.4 Concept Development



Create an address to the urban edge



Breakdown the form



Further scale & mass reduction, respond to the urban context

Schematic Design
5.5 Block and Stack

Block & Stack

The overall proposed height is to be maximum 3 storeys, in line with the vertical framework proscribed in the SINSW Pattern Book.

The Administration functions and the School Hall are located at the main pedestrian access off Pennant Way.

The Library is proposed above a COLA space with Learning Hubs above. Learning Hub buildings also run long Fontana Drive.

The Preschool sits at the southern end of the site fronting Fontana Drive.

Legend

- Administration + Staff
- Library
- Learning Hub
- Communal Hal + Canteen
- Sport Field
- Preschool
- Parking
- Circulation

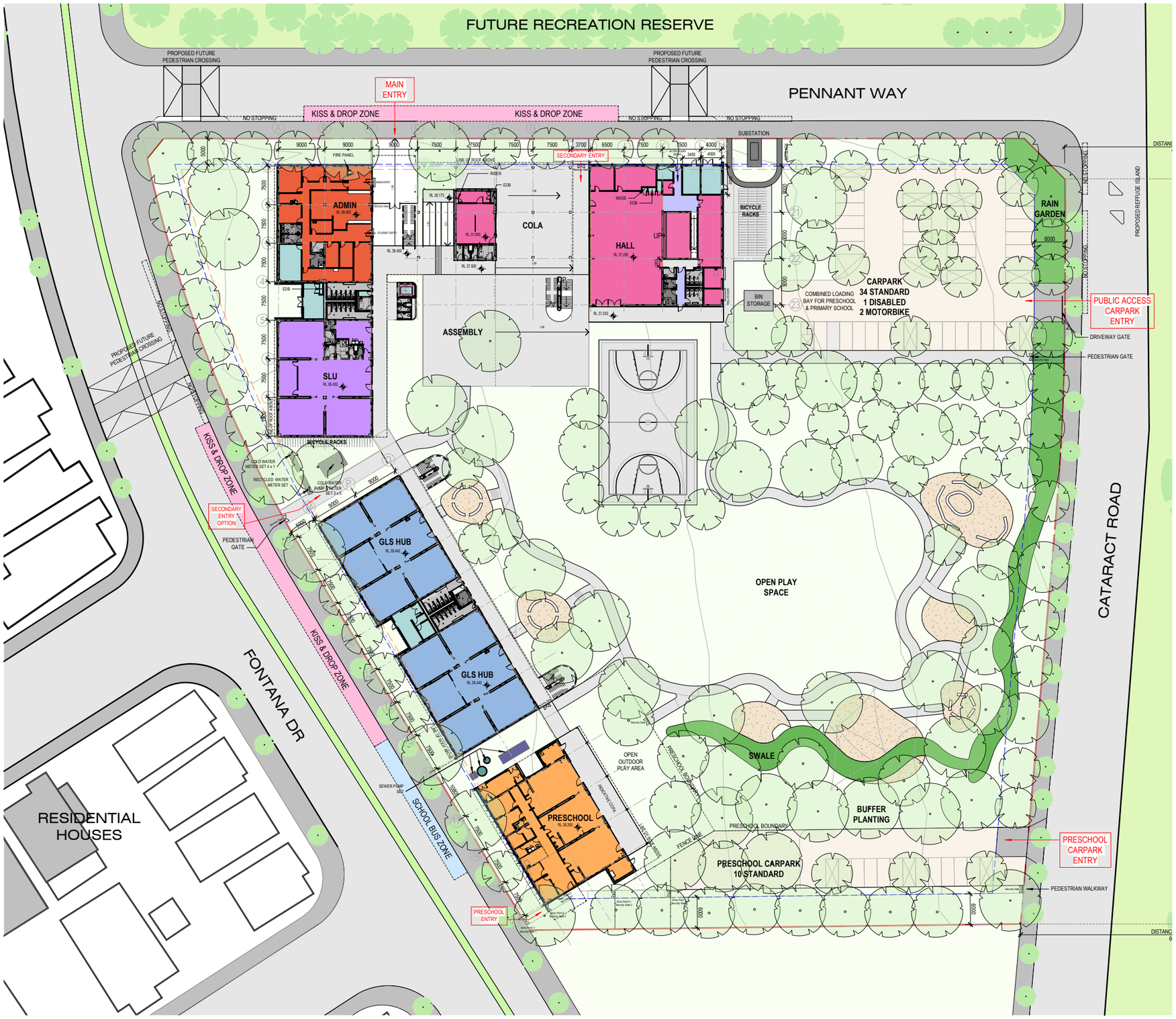
Schematic Design
5.6 Site Plan

0 1 2 3 4 5 10 m

Do not scale drawings. Verify all dimensions on site

Schematic Design

5.7 Ground Level Plan



Legend

- Administration + Staff
- Library
- Learning Hub
- Communal Hal + Canteen
- Sport Field
- Preschool
- Parking
- Circulation

0 4 8 12 16 20 40 m

Do not scale drawings. Verify all dimensions on site

Schematic Design

5.8 Level 1 Plan

Legend

- Administration + Staff
- Library
- Learning Hub
- Communal Hal + Canteen
- Sport Field
- Preschool
- Parking
- Circulation

0 4 8 12 16 20 40 m

Do not scale drawings. Verify all dimensions on site

Schematic Design

5.9 Level 2 Plan

Legend

- Administration + Staff
- Library
- Learning Hub
- Communal Hal + Canteen
- Sport Field
- Preschool
- Parking
- Circulation

0 4 8 12 16 20 40 m

Do not scale drawings. Verify all dimensions on site

Schematic Design
5.10 Roof Plan

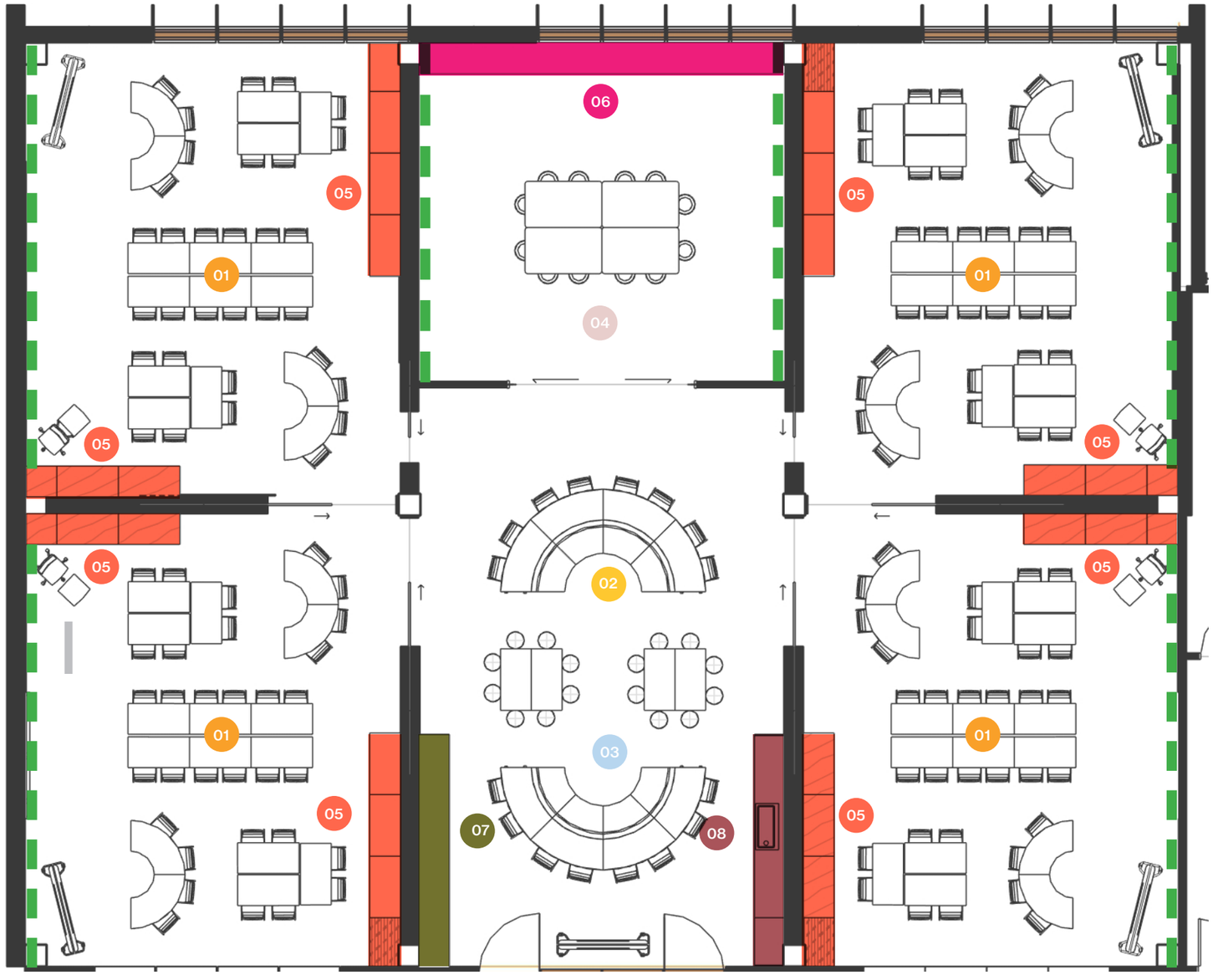
0 4 8 12 16 20 40 m

Do not scale drawings. Verify all dimensions on site

Schematic Design
5.11 Interior Layout + Design

The proposed interior GLS and learning commons have been designed following the SINSW Standardised 7.5m x 9m planning grid.
The proposed GLS are designed to sustain collaboration. The relationship between the GLS and learning commons are linked by a glazed sliding door that can hidden behind the full height storage.

Practical activities are located adjacent to the entry to allow for opportunities of extending the learning areas outside for a variety of learning activities.

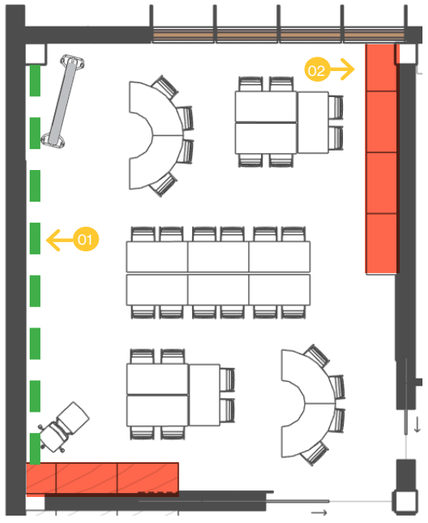


Legend

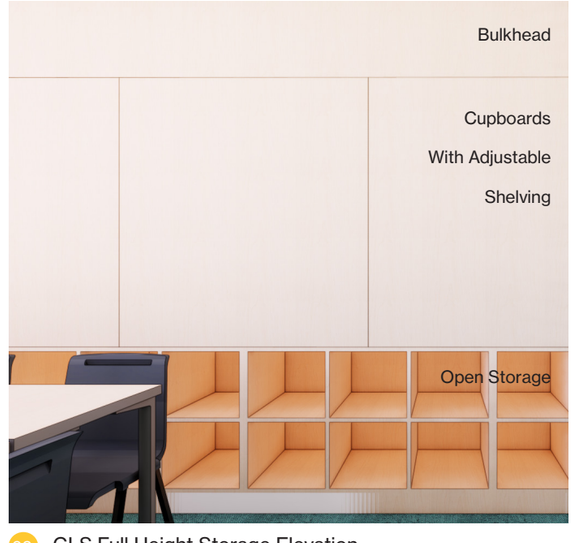
- 01 General Learning Space
- 02 Learning Commons
- 03 Practical Activities Breakout
- 04 Breakout Area
- 05 GLS Full Height Storage
- 06 GLS Low Height Storage
- 07 Practical Activites Joinery Seat
- 08 Practical Activities Joinery w/Sink
- Project Wall w/Acoustic wall panel, whiteboard

Schematic Design
5.11 Interior Layout + Design - GLA

The materiality of the interior is restrained through the use of warm timber joinery, coloured carpet and ceiling finishes. The interior palette's intention is to preserve natural light and connect the students tactile experience with natural materials.



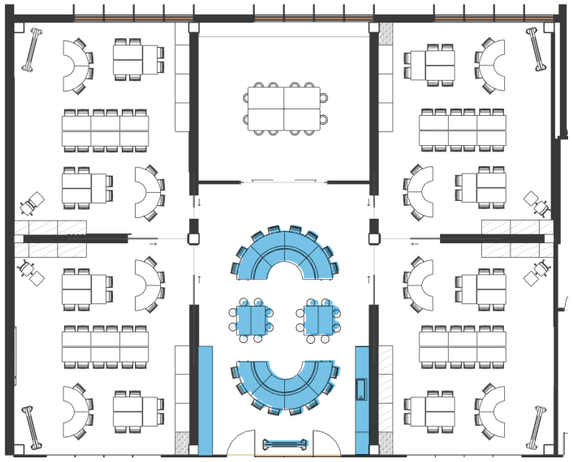
01 GLS Project Wall Elevation

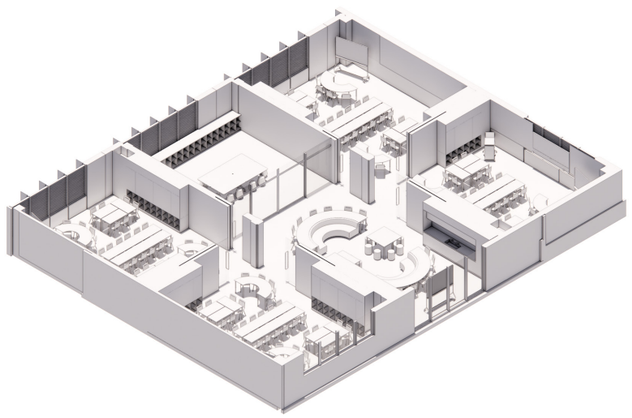


02 GLS Full Height Storage Elevation

Schematic Design
5.11 Interior Layout + Design

The learning commons requires a resilient flooring due to the practical activities area. This flooring offers opportunities to introduce a range of colours to the interiors.
The design proposes utilsing a specific colour scheme on each level of the building to allow an intuitive wayfinding strategy to users and a sense of ownership to students and staff.





Schematic Design
5.11 Interior Layout + Design

The proposed interior plan for the Preschool is based on the SINSW Preschool Brief.

The core facilities are located near the entry and clustered into one zone of staff and administrative services. Children's spaces are co-located for shared use of resources and services and with direct adjacency to the outdoor learning spaces. The key concepts for the interior design of the Preschools should be closely aligned to the educational aspirations outlined in the Early Year Learning Framework for Australia.

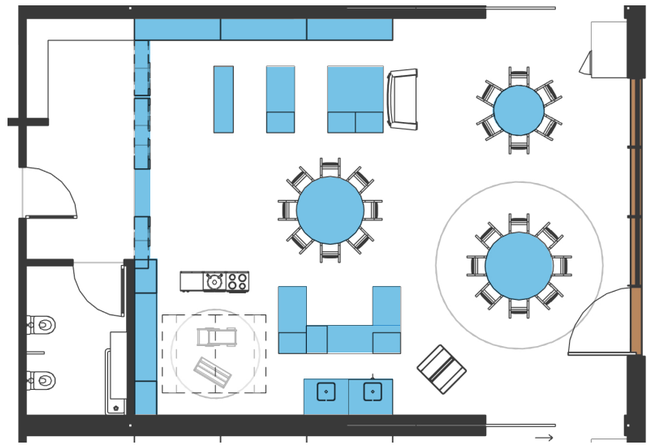
Legend

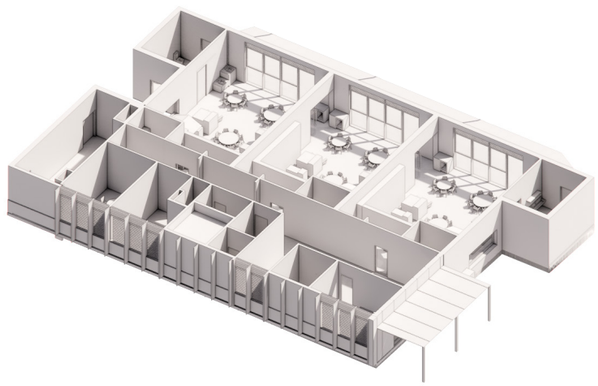
- 01 Playroom
- 02 Children's Amenity
- 03 Staff Admin
- 04 Office
- 05 Meeting Room
- 06 Kitchen
- 07 Storage
- 08 Staff Amenities
- 09 Full Height Joinery
- 10 Messy Play/ Craft Zone

Schematic Design

5.11 Interior Layout + Design - Playroom

The Preschool incorporates various textures, such as soft fabrics, smooth surfaces, or tactile flooring, to enhance childrens tactile experiences. This tactile stimulation is essential for sensory development, encouraging childrento positively engage with their surroundings.





Schematic Design
5.12 Interior Concepts

The interior approach has been influenced by the colours of Country, bringing the landscape indoors and introducing a sense of play.

The learning spaces are designed to sustain collaboration, with high visual and direct physical connection to the learning commons. The interior design will consider student sensory experience, providing a welcoming, comfortable, and safe environment.

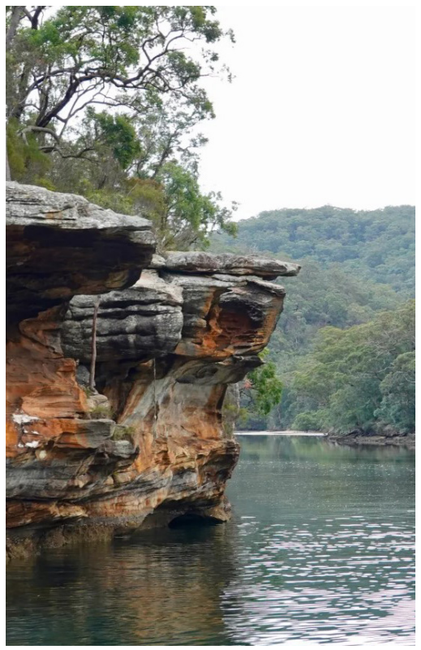
Internal materials, fixtures and furniture will be robust and fit-for-purpose, and follow the specification requirements of the EFSG.

Classroom

Learning Commons

Outdoor Learning (GF)

Outdoor Connection

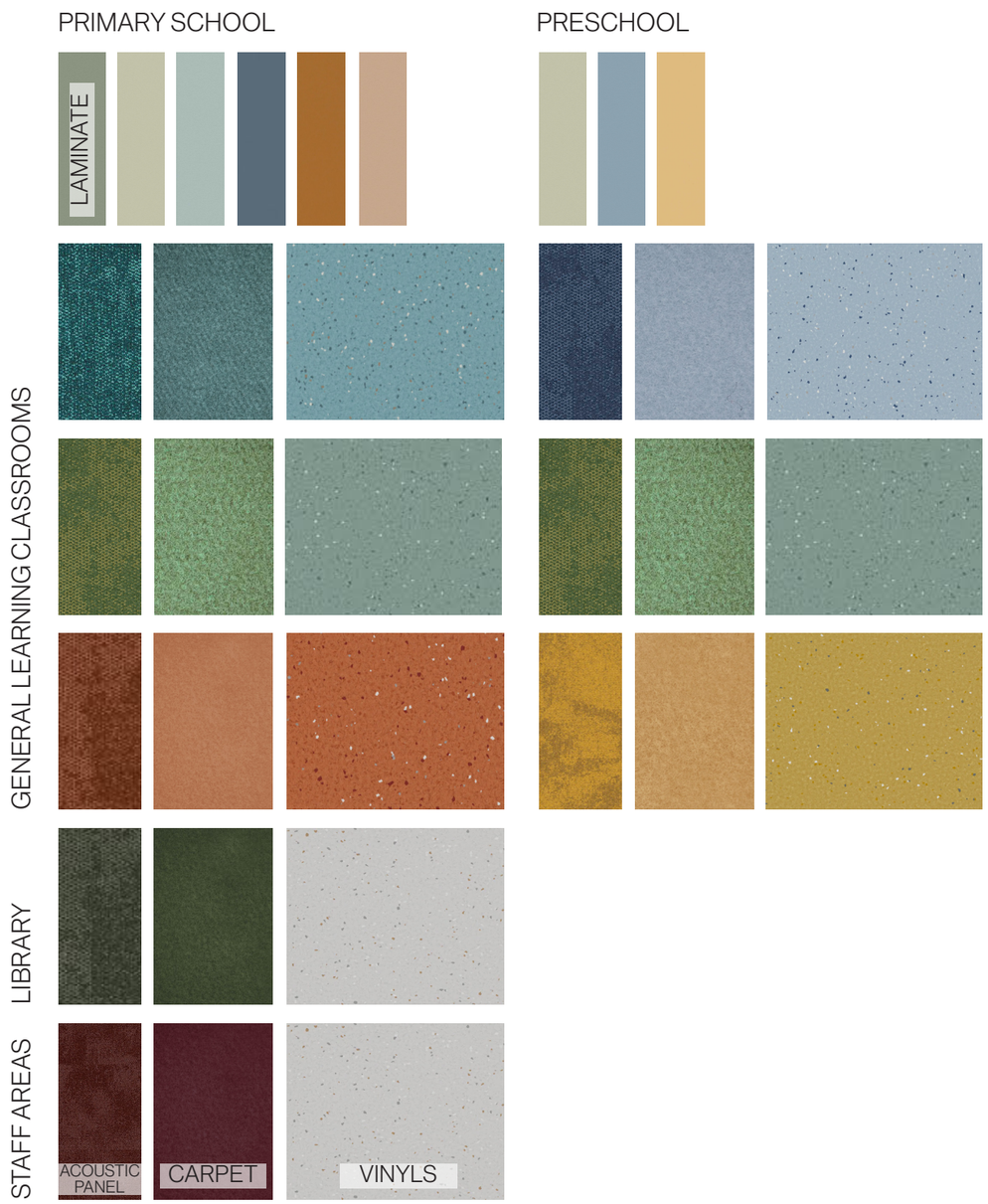


Images from nearby national parks

Schematic Design
5.12 Interior Concepts

Base Palette

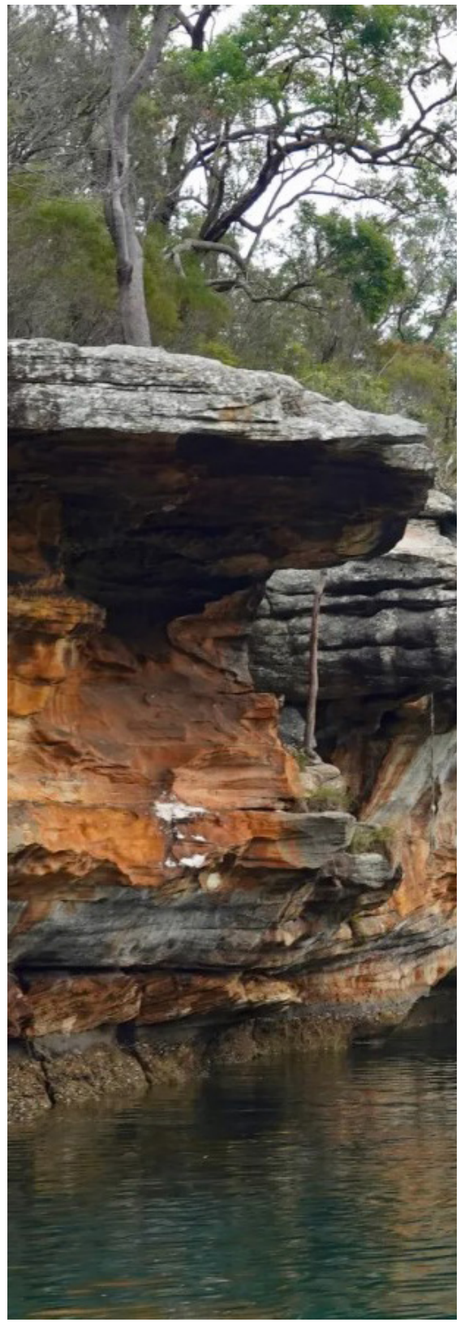
Additional Colourways



Schematic Design
5.13 Exterior Concepts

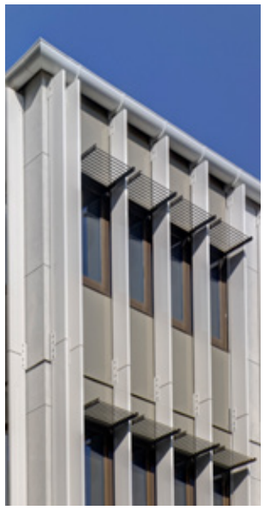
The exterior approach adopts the 'Edge' concept, drawing inspiration from the sandstone edges of the local river systems, through colour and use of hardy materials.

All proposed materials have been selected with care and maintenance in mind in line with SINSW requirements, considering UV resilience, optimising ESD features and robust.



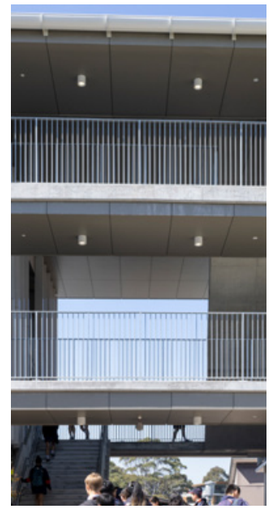
Precedent Study

Standardised modules to breakdown scale



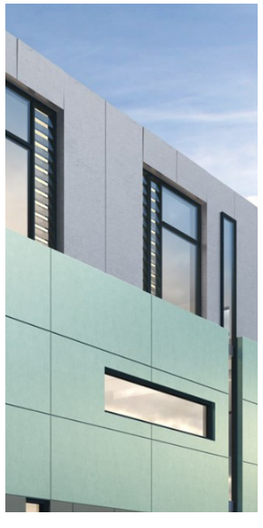
Sunshading

Blend of vernacular materials

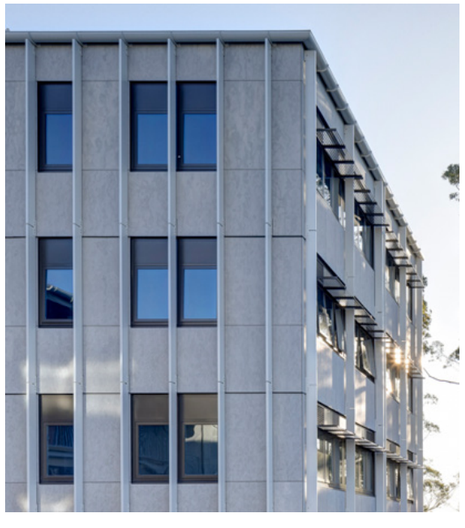


Outdoor Circulation

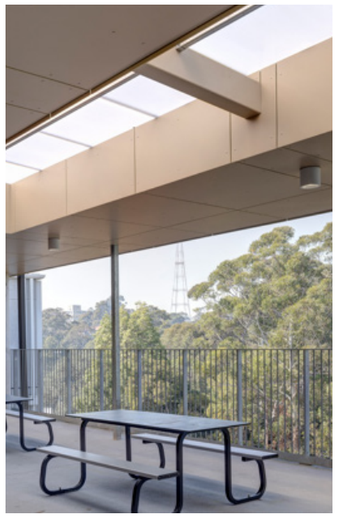
Proposed Materials



Prefinished CFC Sheeting

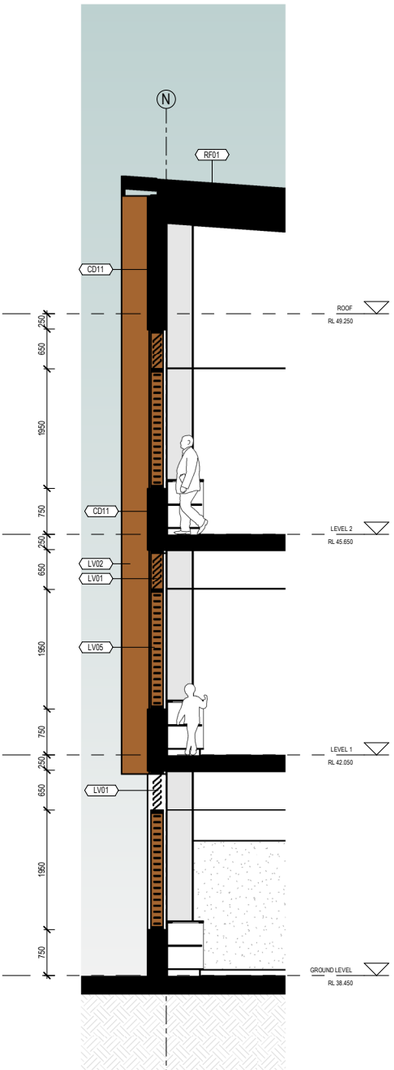


Aluminium Vertical & Horizontal Shading



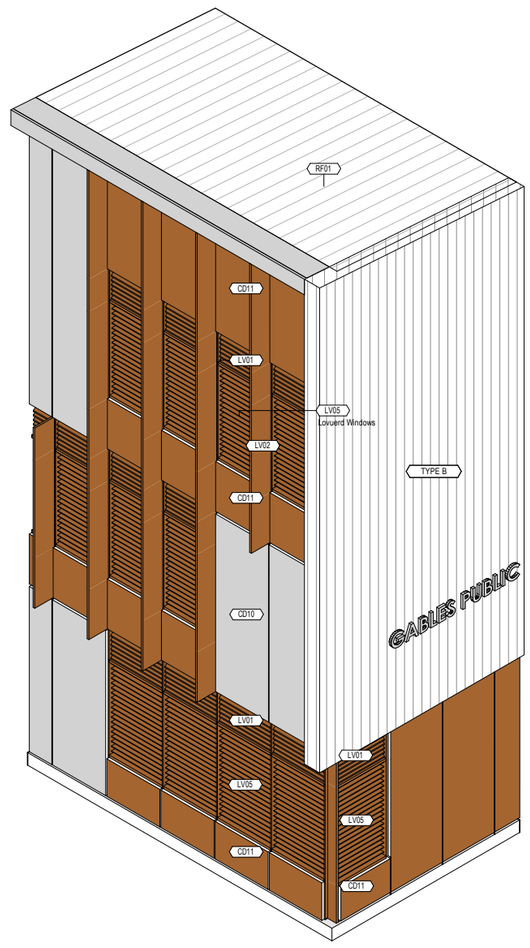
Metal Balustrades

Schematic Design
5.14 Facade Typologies



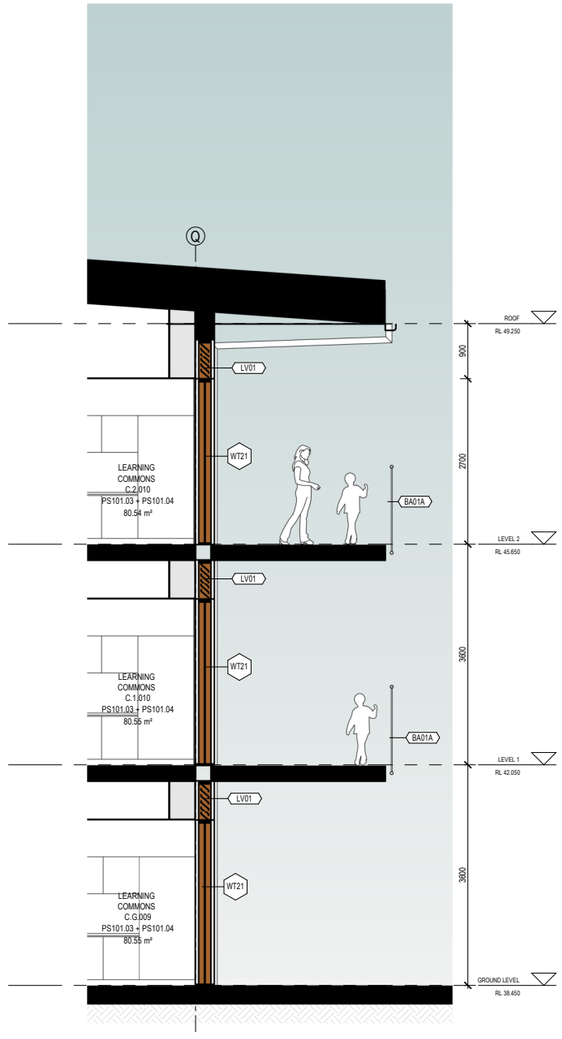
1 TYPICAL WEST FACADE SECTION

SCALE: 1 : 50



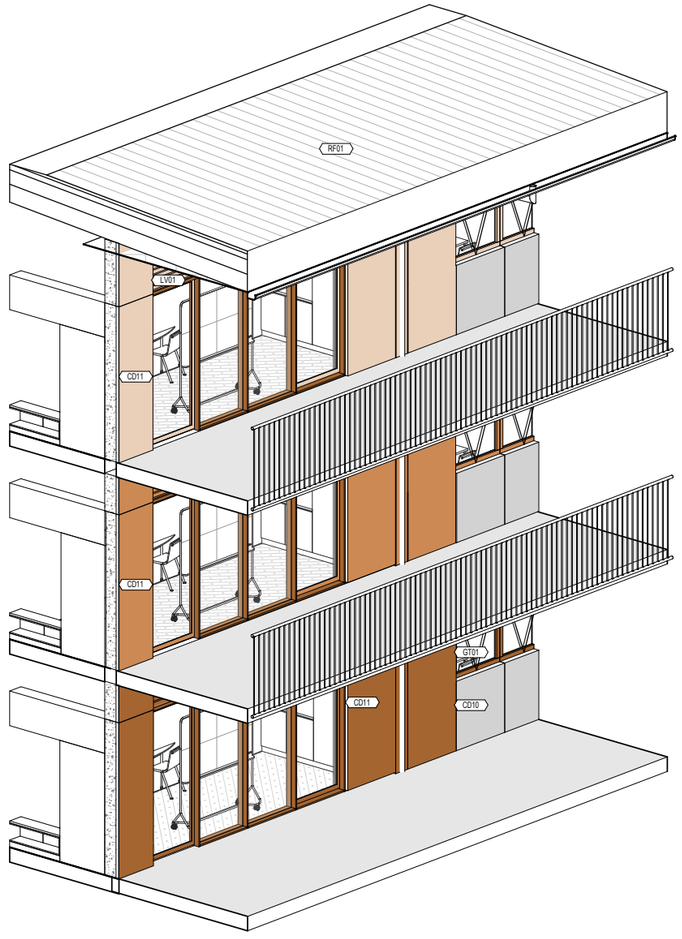
2 WEST Facade Section - AXO

SCALE:

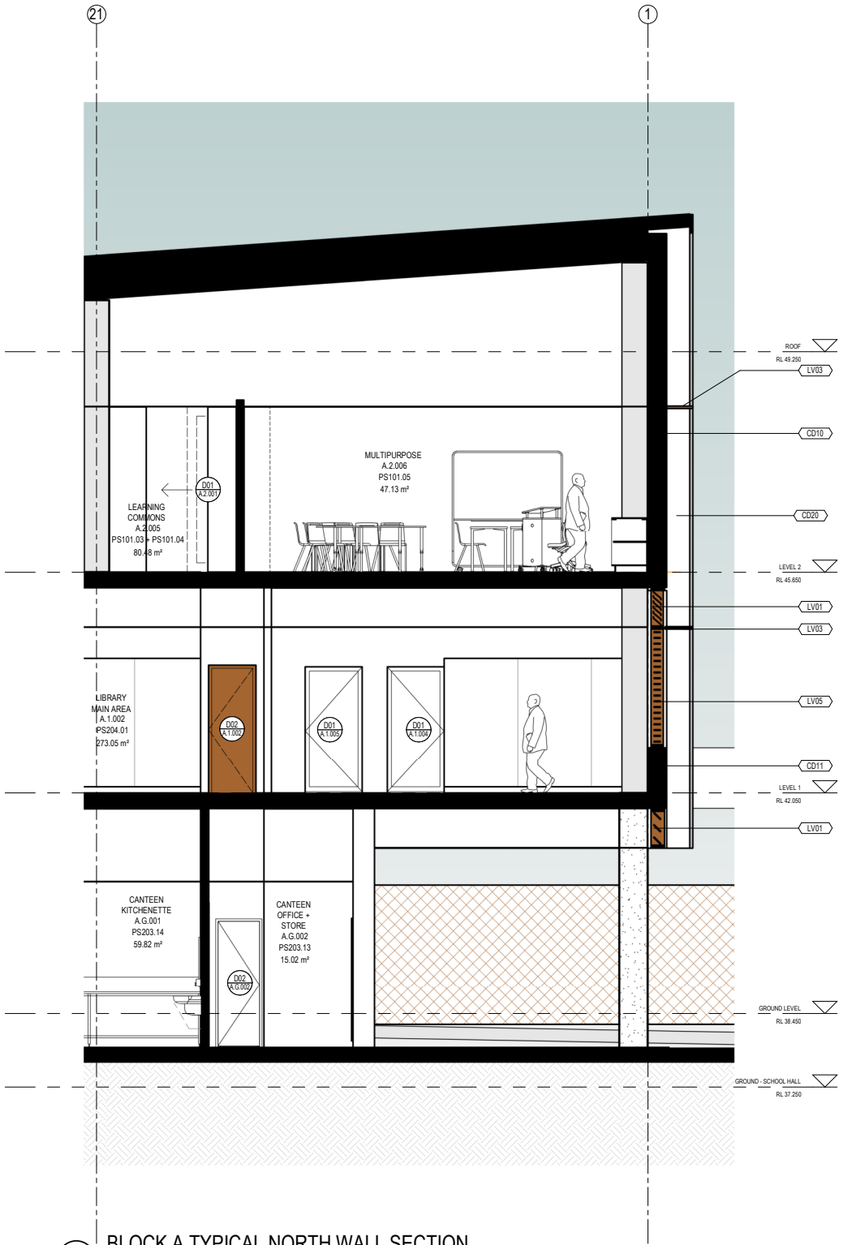


3 TYPICAL COURTYARD SECTION

SCALE: 1 : 50



Schematic Design
5.14 Facade Typologies



1 BLOCK A TYPICAL NORTH WALL SECTION

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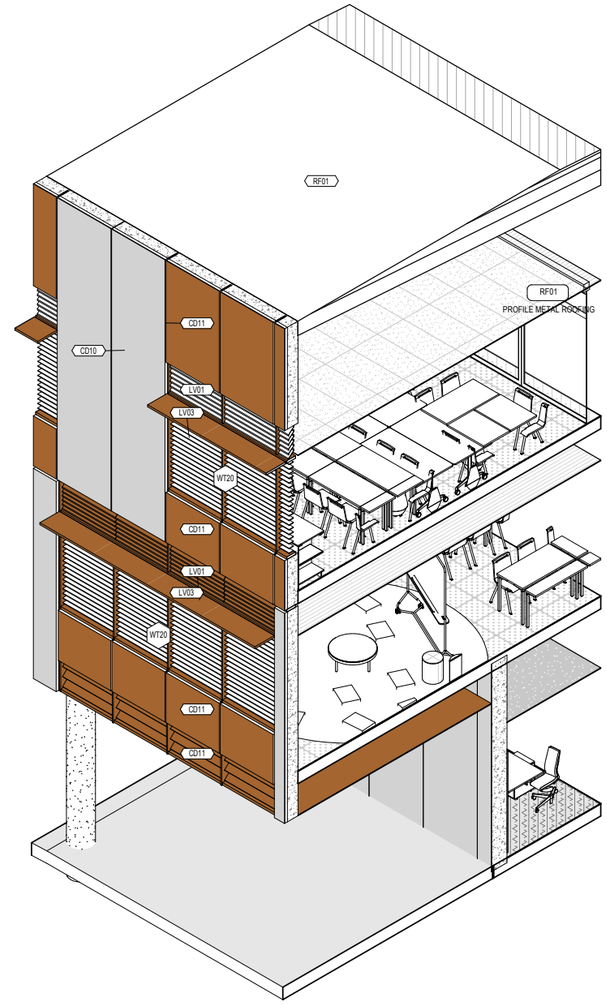
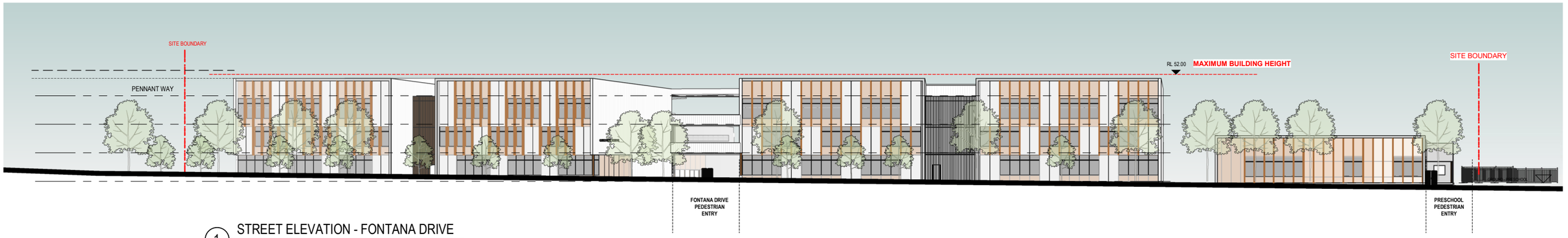


2 NORTH FACADE SECTION - AXO

SCALE:

Schematic Design
5.15 Exterior Elevations



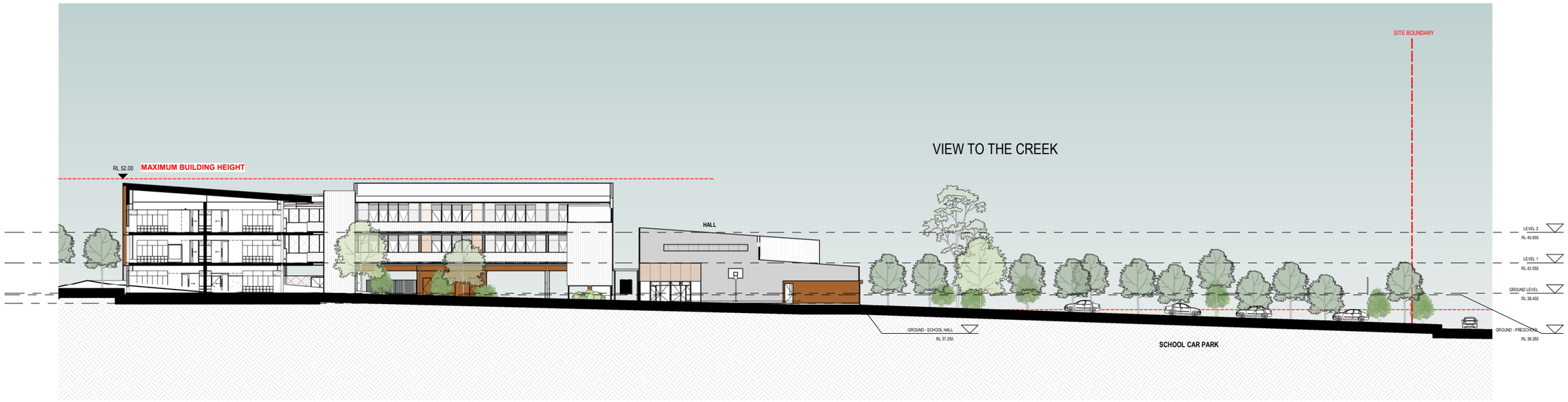
1 STREET ELEVATION - FONTANA DRIVE
SCALE: 1 : 250

2 STREET ELEVATION - PENNANT WAY
SCALE: 1 : 250

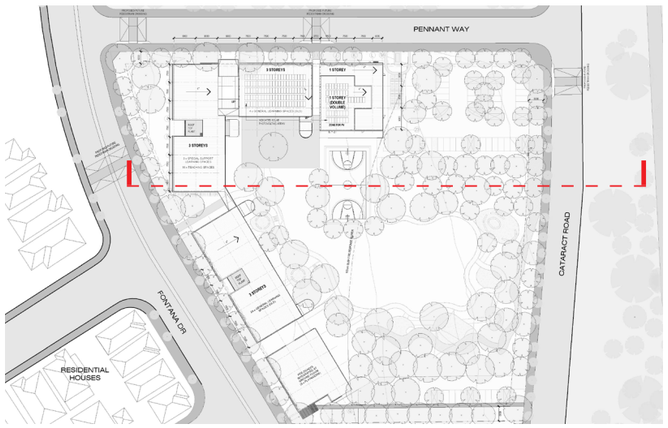
3 STREET ELEVATION - CATARACT ROAD
SCALE: 1 : 250

0 1 2 3 4 5 10 m
Do not scale drawings. Verify all dimensions on site

Schematic Design
5.16 Site Section

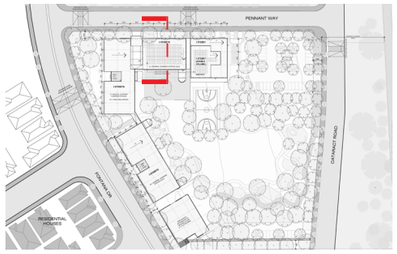


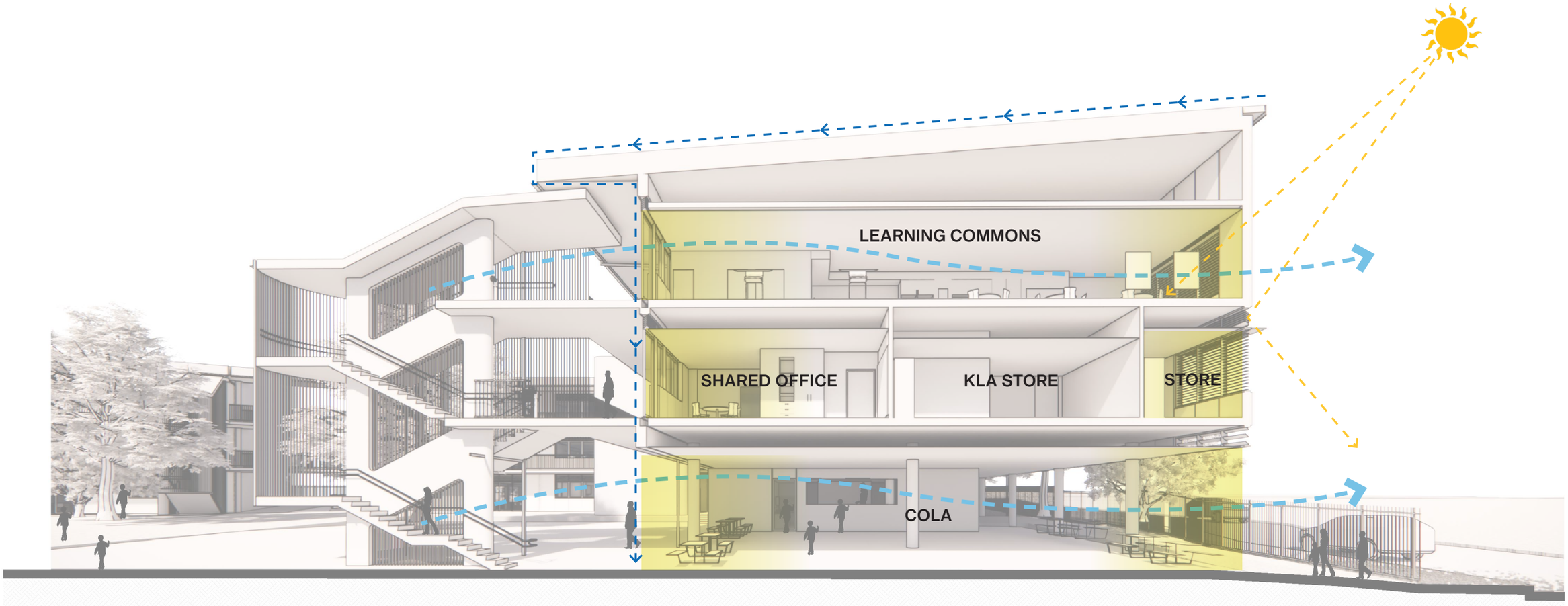
A-A SITE SECTION - CATARACT ROAD
SCALE: 1 : 250



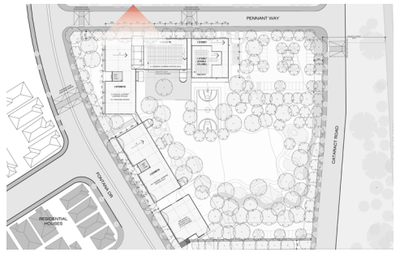
0 4 8 12 16 20 40
m
Do not scale drawings. Verify all dimensions on site

Schematic Design
5.16 Sectional Perspective - Block A



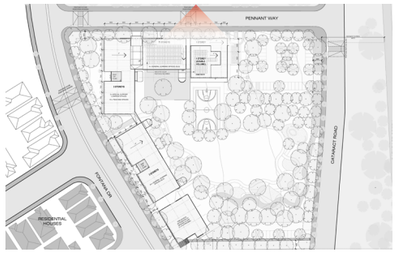


Schematic Design
5.17 Exterior Perspectives



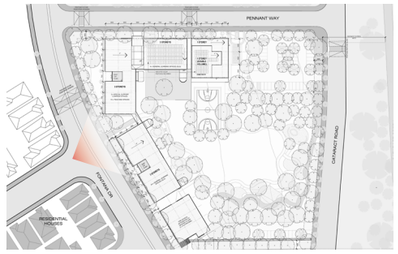
PENNANT WAY - NORTHERN ELEVATION

Schematic Design
5.17 Exterior Perspectives



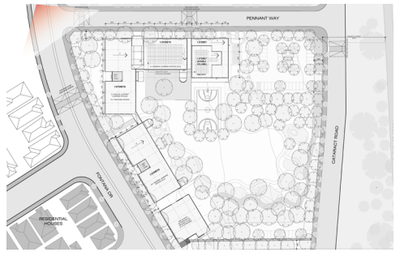
MAIN ENTRY

Schematic Design
5.17 Exterior Perspectives



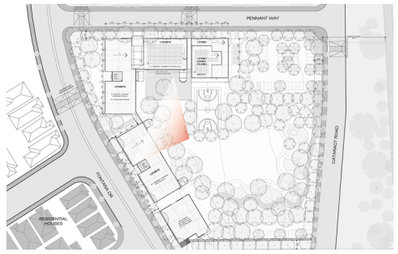
FONTANA DRIVE - WESTERN FACADE

Schematic Design
5.17 Exterior Perspectives



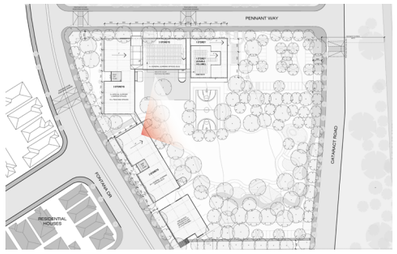
FONTANA DRIVE & PENNANT WAY - NORTH-WEST CORNER

Schematic Design
5.17 Exterior Perspectives



VIEW OF SCHOOL HEART

Schematic Design
5.17 Exterior Perspectives



CORRIDOR OVERLOOKING SCHOOL HEART

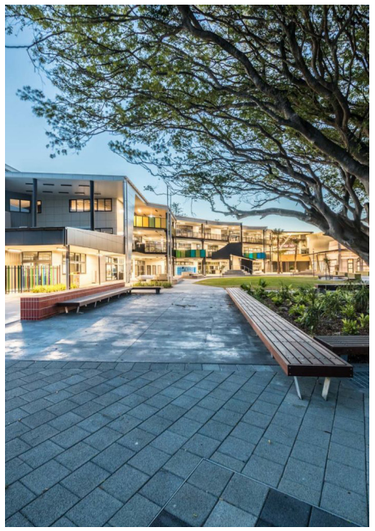
Schematic Design
5.18 Landscape & Public Domain

Landscape Approach

The following landscape design principles have been developed in conjuction with the Schematic Design

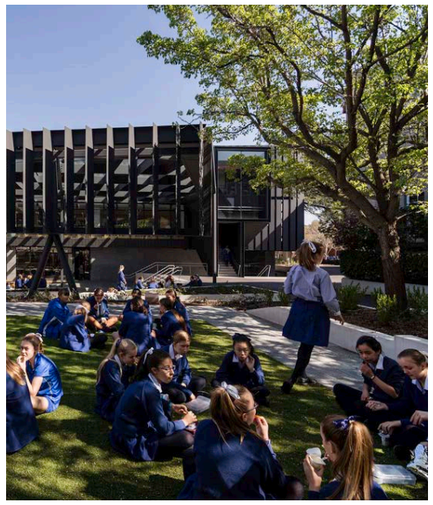
Context, Built Form and Landscape

Sustainable, Efficient and Durable

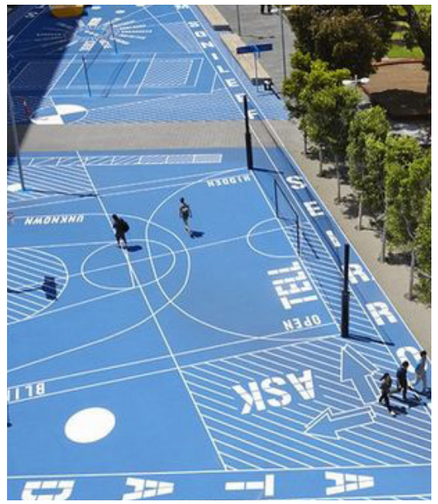


Accessible and Inclusive

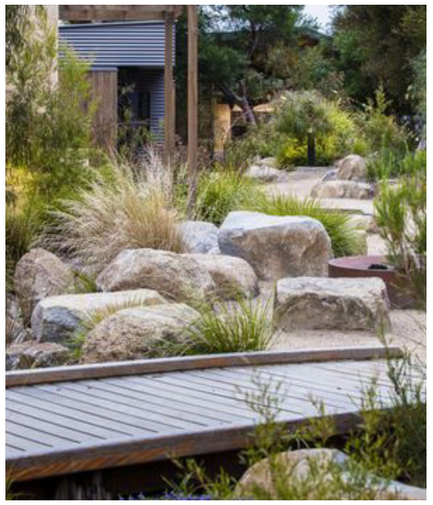
Health and Safety



Amenity



Whole of Life, Flexible and Adaptive



Aesthetics

Schematic Design
5.18 Landscape & Public Domain

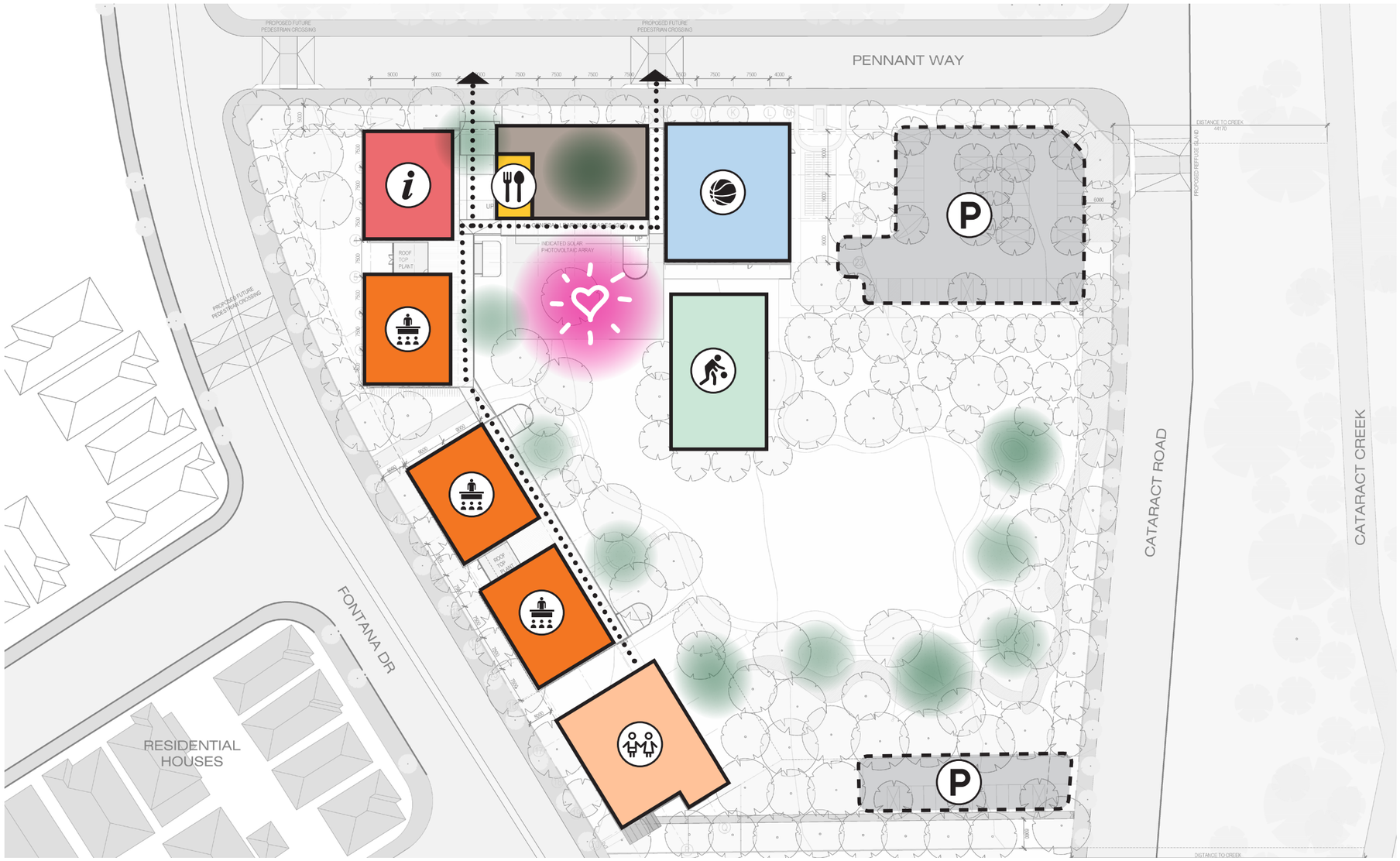
OCULUS have developed a Schematic Design approach as a response from the consultation process with traditional knowledge holders.

LEGEND

1. Integrated Outdoor Learning Area & Yarning Circle
2. Native & Productive Garden / Buffer Planting
3. Dharug Country Inspired Nature Play Playground
4. Passive Open Space Central Lawn
5. Assembly Court
6. Outdoor Kitchen & Amenities / Educational Space
7. Grinding Groove Educational Space
8. Perimeter Planting
9. Games Court
10. Car Parking & Access
11. Bike Parking
12. Dry Creek Bed
13. WSUD Overland Swale

Potential Reconciliation Artwork / Motifs Series

Schematic Design
5.19 Site Zoning



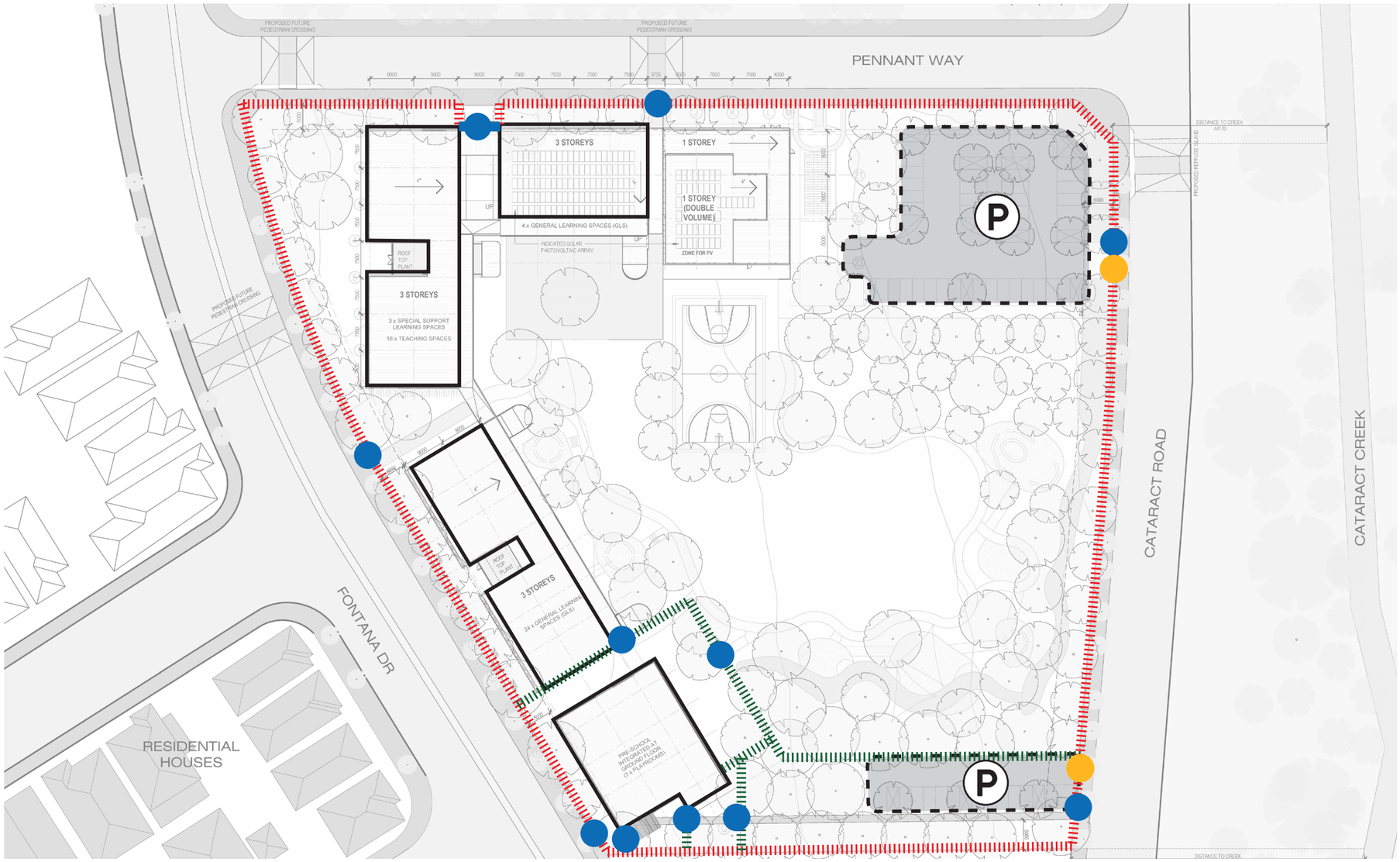
Site Zoning

The diagram above shows the programmatic zones and the functional relationships across the site.

Legend

- Administration
- Canteen
- Learning Hub
- Communal Hall
- Sport Field
- Preschool
- Cola
- Car Park
- Featured Landscaped Spaces
- Campus Heart
- Main Pedestrian

Schematic Design
5.20 Access and Security



Access and Security

The diagram above shows the proposed pedestrian access and security measures for the school. After hours entrances provide access to the games court and hall after hours.

Although separated by fences, there is opportunity for the Preschool and School to connect.

Legend

- Security
- 2.1m Boundary Security Fence
- 2.1m Internal Site Security Fence
- 2.1m Security Gate - Traffic Access
- 2.1m Security Gate - Pedestrian Access

Schematic Design
5.21 Access and Security - CPTED Principles

1
Surveillance

Effective Surveillance can reduce the attractiveness of crime targets. This can be accomplished by 'deterrance', which in design amounts to:

- clear sightlines between public and private areas

- effective lighting of public spaces

- landscaping without hiding spaces for potential offenders to entrap/hide victims

Mitigation Measures to Site and Design

1. sightlines through separation of form
2. public spaces visible from street
3. screen views from street to school

2
Access Control

Physical and symbolic barriers are effective in channeling, restricting, and attracting movement of people. These are ctitical in determining spatial boundaries, proving as obstacles for potential offenders. The design of these barriers must balance flow of people, whilst not being too hostile in character. This can be achieved by:

- landscapes and physical locations that channel movement into target areas

- public spaces that attract gathering rather than discourage

- restricted access to internal areas/high risk areas

Mitigation Measures to Site and Design

1. fence around site + types of fence
2. boundary formed by placing forms on the periphery
3. landscaping that gathers students in the middle of the courtyard

3
Territorial Reinforcement

Community ownership of space will naturally gather a sense of responsibility, leading to well cared for spaces. These increase frequency of community gatherings, and reduce opportunity for crime. This also increases the likelihood that people will be quicker to respond to crime, and try to prevent it. Through design this can be accomplished by:

- design that encourages community gatherings

- design with clear transitions and boundaries between spaces

- clear design cues on use of space and who it is for

Mitigation Measures to Site and Design

1. clear distinction between spaces - public spaces and school spaces.
2. clear site entries that are open and visible for casual surveilence.
3. Large COLA on Pennant Way encourages community interaction.

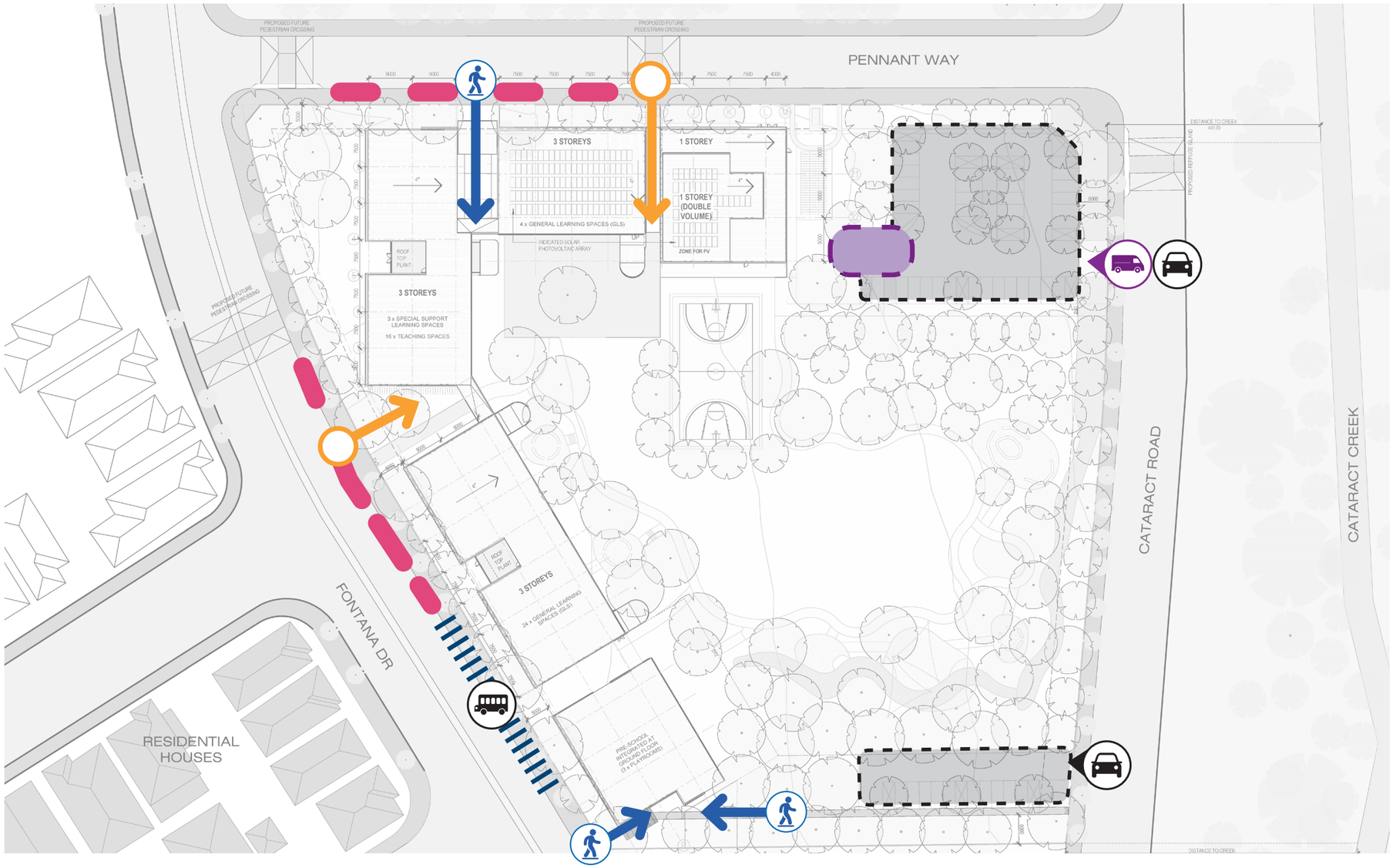
4
Space Management

This ensures that spaces are properly utilised and well maintained. Management stratgies include: site cleanliness, quick repair of vandalism, replacement of burned out pedestrain and car park lighting, removal of decayed physical elements and refurbishment of frequently used areas.

Mitigation Measures to Site and Design

1. Well lit external spaces.
2. Selection of robust building materials.
3. Operational plan by SINSW.

Schematic Design
5.22 Traffic and Transport



Traffic and Transport

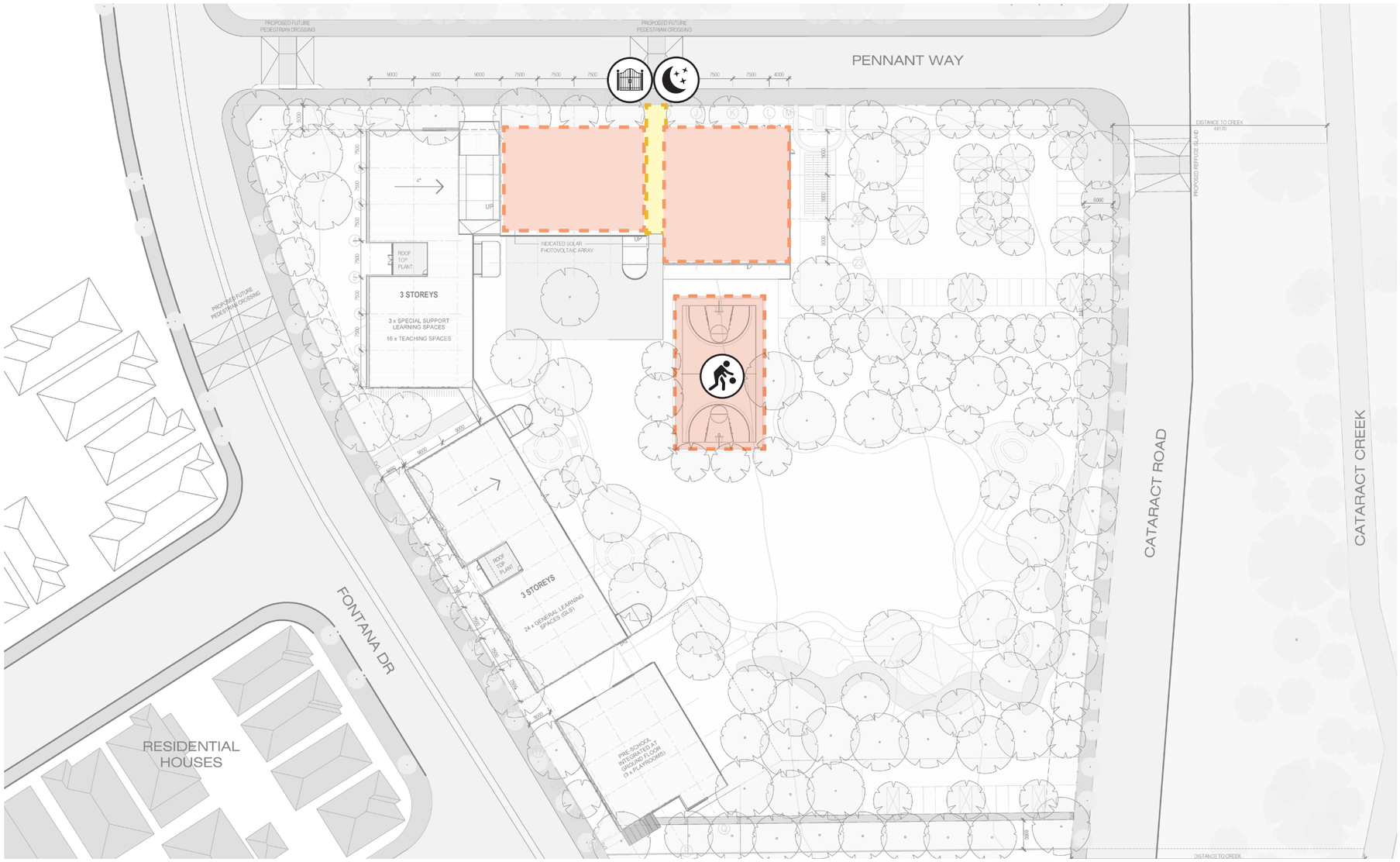
The traffic review at proposed the above opportunities for the project:

- 34 Car Park spaces for the Primary School, with access from Cataract Road.
- Separate Car Park for the Preschool, with access from Cataract Road.
- Loading & Servicing from the Primary School Car Park entrance.
- Primary School Pick-up and Drop-off on Pennant Way at front door and a secondary Pick-up and Drop-off on Fontana Drive.
- School bus layover on Fontana Drive.

Legend

- School Carpark
- Loading Area / Service Carpark
- School Bus Zone
- Kiss and Drop
- Main Pedestrian Entry
- Secondary Pedestrian Entry
- Staff Parking
- Loading

Schematic Design
5.23 Out of Hours Access



Out of Hours Access

It is intended that the games court and hall, as a minimum be available to community access out of hours. There is also desire for the Library other Programs to be accessible to the community out of hours.

Legend

- Illuminated Pathway
- Potencial Facilities Available Out of Hours
- Vehicular Gate
- After Hours Entry Point
- Playing Field

Schematic Design
5.24 Visual Impact Analysis

Visual Catchment

The visual catchment of the site (ie, from where the site can be seen) is contained to parts of Fontana Dr, Pennant Wy and Cataract Rd. To the east of the site is retained vegetation with steep level changes from West to East. It is surrounded by continuous rows of 2 storey residential development with upcoming an upcoming sports field to the north of Pennant Way.

Existing and Future Character

Visual catchment is similar in character across the area, majorily comprised of residential developments (20th century townhouses), with the town center nearby.

The streetscape is similar in character to the wider inner west of Sydney, including two way bitumen paved roads adjoined by bitumen paved or concrete footpath punctuated by generally widely spaced, not yet mature trees (often eucalypt) and power poles and lines.

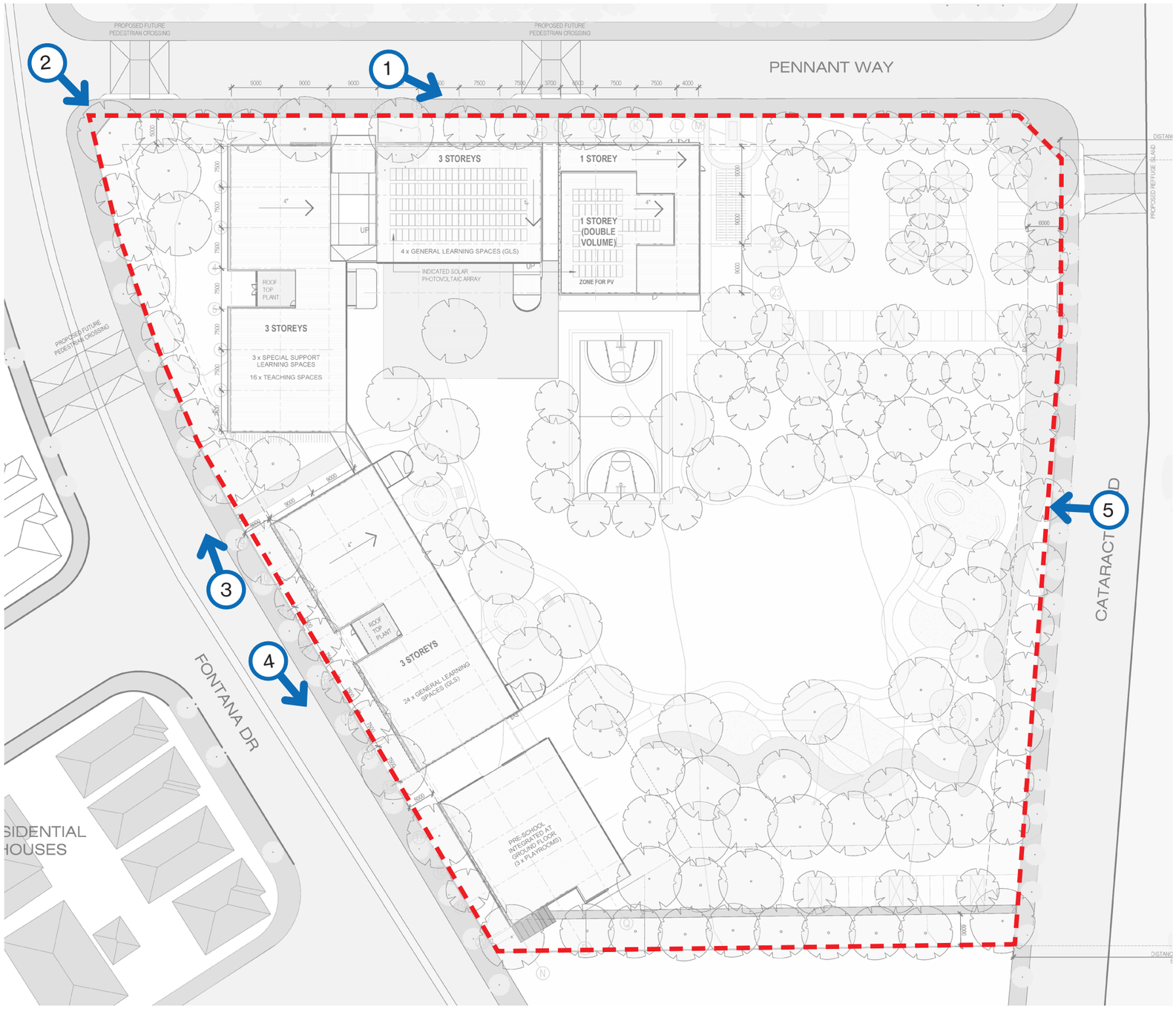
Visual Impact Assessment

The overall proposed form of the school at 3 storeys high will not impact the overall consistency of the scale, and proportions of residential development. The roof design and, materials palette is sympathetic to contextual elements whilst maintaining a contemporary character. There are no visually prominent elements, including through shape, line, colour or texture that results in major changes to composition of area. Overall, it is consistent with the visual character of the catchment.

There will be some views into the site from the east past Cataract Rd due to a steeper topography. Conversely, some views into the site will also be accessible from Fontana Rd and Pennant Wy due to distances between the building forms.

Schematic Design
5.24 Visual Impact Analysis

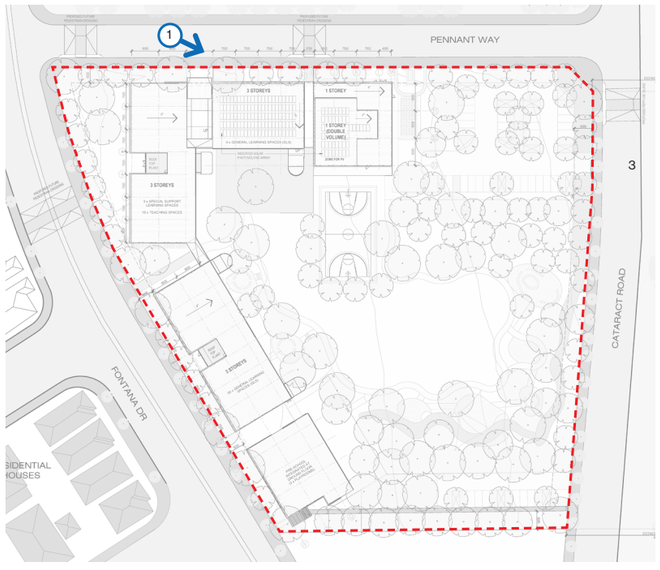
VIEW NUMBER	DESCRIPTION
1	VIEW 1 - VIEW OF CAMPUS FROM PENNANT WY
2	VIEW 2 - VIEW OF CAMPUS FROM THE CORNER OF FONTANA DR AND PENNANT WY
3	VIEW 3 - LOOKING UP AT CAMPUS FROM FONTANA DR
4	VIEW 4 - LOOKING DOWN AT CAMPUS FROM FONTANA DR
5	VIEW 5 - VIEW FROM CATARACT RD



5

Schematic Design
5.24 Visual Impact Analysis

VIEW 1 - VIEW OF CAMPUS FROM PENNANT WY

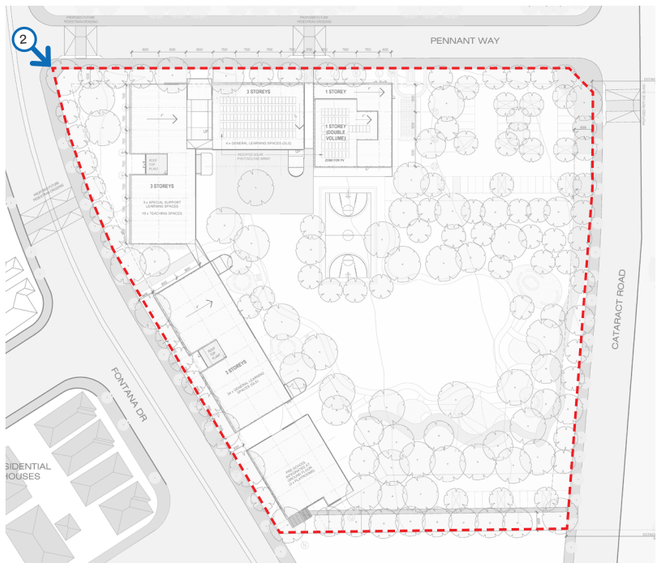


Proposed Site Boundary

View Location & Direction

Schematic Design
5.24 Visual Impact Analysis

VIEW 2 - VIEW OF CAMPUS FROM THE CORNER OF FONTANA DR AND PENNANT WY

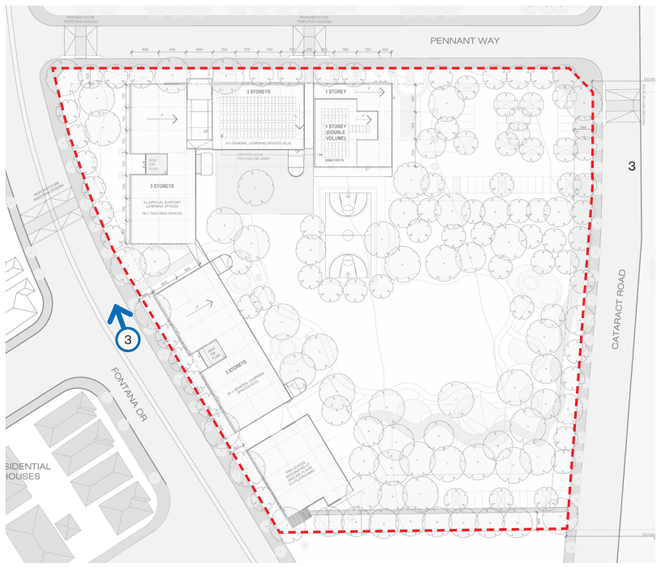


Proposed Site Boundary

View Location & Direction

Schematic Design
5.24 Visual Impact Analysis

VIEW 3 - LOOKING UP AT CAMPUS FROM FONTANA DR



Proposed Site Boundary

View Location & Direction

Schematic Design
5.24 Visual Impact Analysis

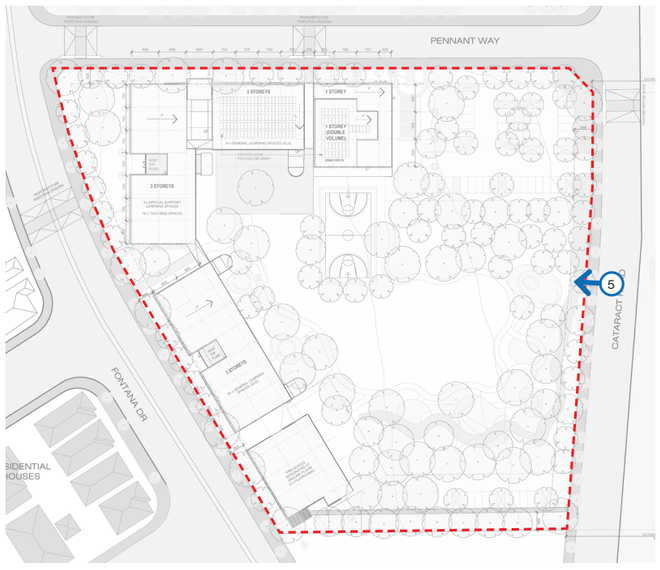
VIEW 4 - LOOKING DOWN AT CAMPUS FROM FONTANA DR

Proposed Site Boundary

View Location & Direction

Schematic Design
5.24 Visual Impact Analysis

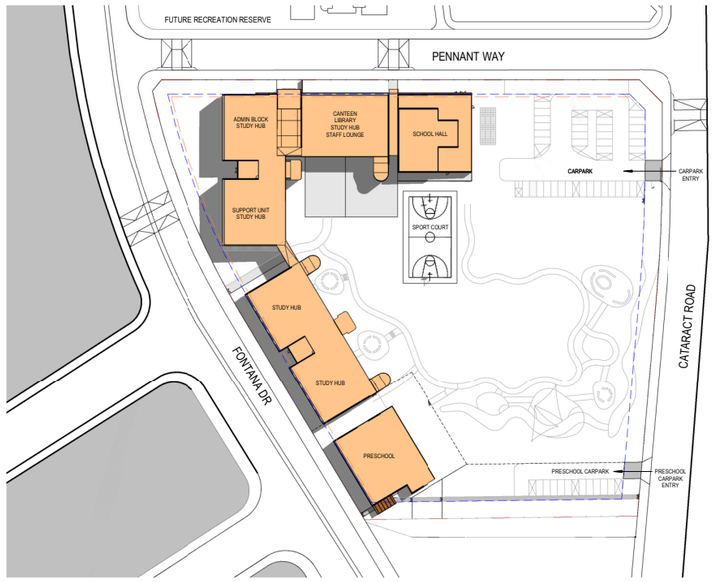
VIEW 5 - VIEW FROM CATARACT RD



Proposed Site Boundary

View Location & Direction

Schematic Design
5.25 Shadow Studies



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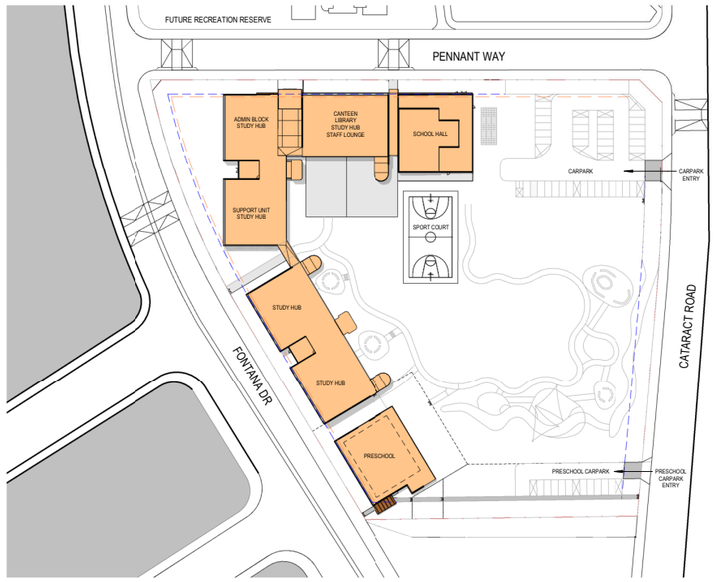
SCALE: 1 : 1000



2 21st Dec - 12pm
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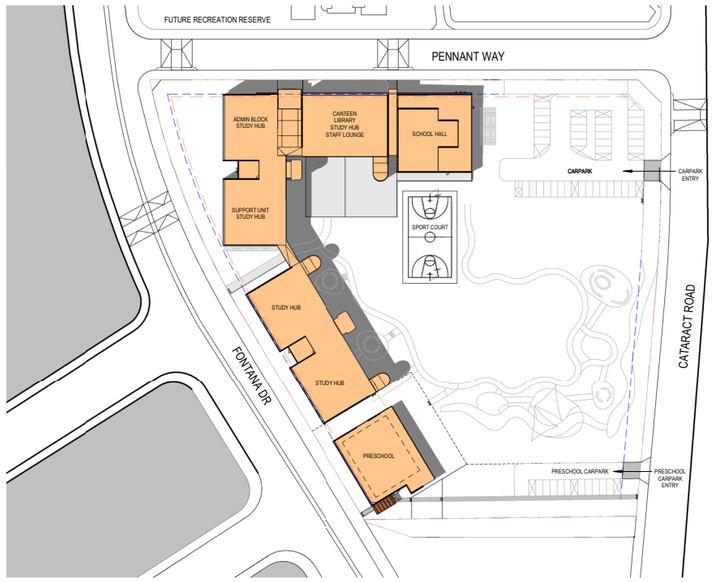

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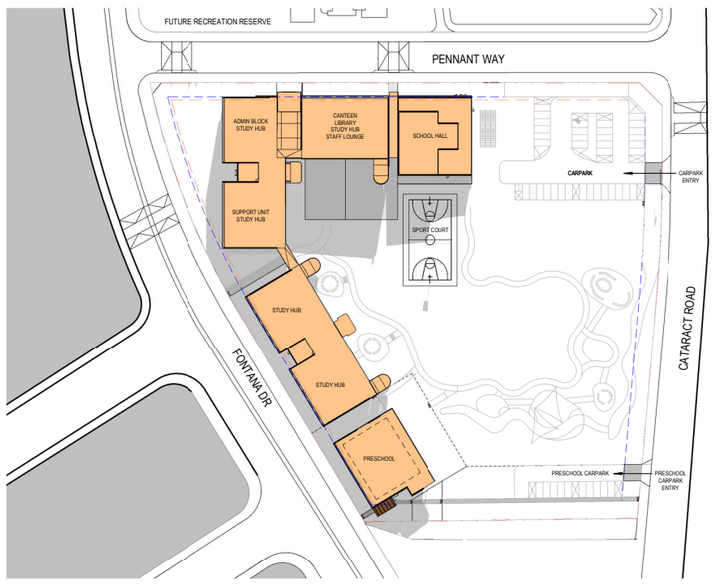

4 21st June - 9am
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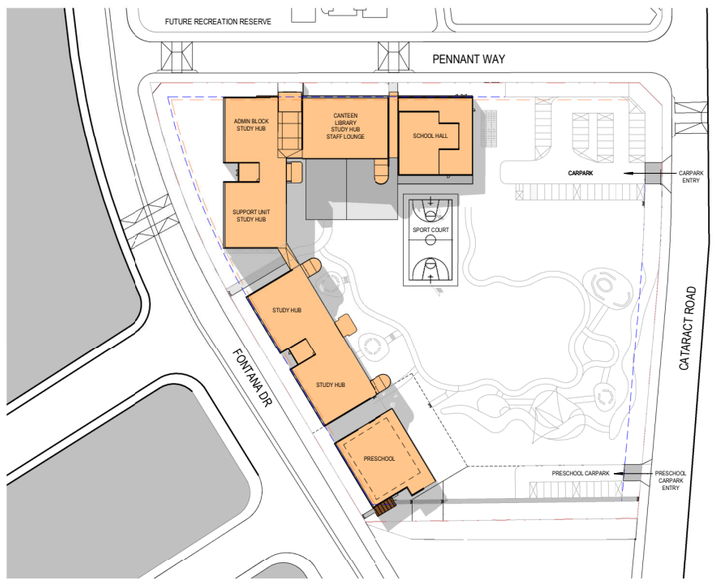

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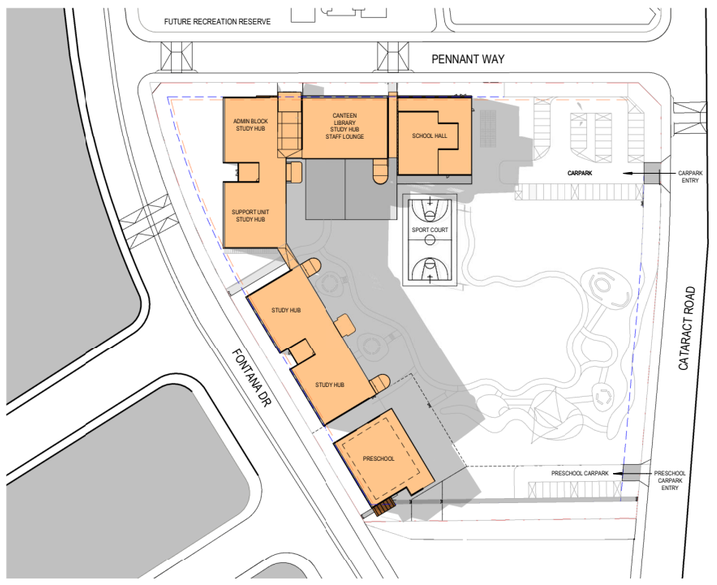

6 21st June - 3pm
SCALE: 1 : 1000

Schematic Design
5.26 Sustainability

75% of the whole site area comprises of heat island effect mitigation strategies: Vegetation, Light colour roofing materials, shading structures with minimum SRI 64

10% reduction in building's upfront carbon emissions & Peak electricity demand using passive design solutions and high performing materials

60% of regularly occupied spaces have access to views; and at least 5% of the site area is planted allowing occupants to interact with nature

50% improvement of outdoor air above Australian standards to all occupied spaces

Inclusive design for equitable, appealing, safe, and secure access to all stakeholders with physical and mental disabilities

Glare control from sunlight through 95% of all viewing façades using a combination of screen and blinds with VLT ≤

Insulation to exposed floors, external walls and roofs for thermal efficiency and prevention of heat loss in winter

95% of internally used paints, adhesives, sealants, and carpets will meet low ‘Total Volatile Organic Compounds (TVOC)’ Limits

40% of all classrooms and regularly occupied spaces received high levels of daylight

Operable windows for mixed mode conditioning and cross ventilation

Acoustic separation and sound insulation between teaching

High performing solar glazing on external façade to reduce excessive solar gain in summer

External soft landscaping provided to the site with a percentage of total plantation as indigenous species

greenstar

5 Star

Australian Excellence

Sustainability Target
(Green Star Design & As Built v1.3 rating tool)

6

DESIGN QUALITY PRINCIPLES

Design Quality Principles

Education SEPP Design Quality Principles

1 / Context, built form and landscape

Schools should be designed to respond to and enhance the positive qualities of their setting, landscape and heritage.

The design and spatial organisation of buildings and the spaces between them should be informed by site conditions such as topography, orientation and climate.

Landscape should be integrated into the design of school developments to enhance on-site amenity, contribute to the streetscape and mitigate negative impacts on neighbouring sites.

2 / Sustainable, efficient and durable

Good design combines positive environmental, social and economic outcomes. Schools and school buildings should be designed to minimise the consumption of energy, water and natural resources, reduce waste and encourage recycling.

Schools designs should be durable, resilient and adaptable enabling them to evolve over time to meet future requirements.

3 / Accessible and inclusive

Schools buildings and their grounds should provide good wayfinding and be welcoming, accessible and inclusive to people with differing needs and capabilities.

Schools should actively seek opportunities for their facilities to be shared with the community and to cater for activities outside of school hours.

4 / Health and safety

Good school development optimises health, safety and security within its boundaries and the surrounding public domain, and balances this with the need to create a welcoming and accessible environment.

5 / Amenity

Schools should provide pleasant and engaing spaces that are accessible for a wide range of educational, informal and community activities, while also considering the amenity of adjacent development and the local neighbourhood.

Schools should include appropriate, efficient, stage and age appropriate indoor and outdoor learning and play spaces, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage and service areas.

6 / Whole of life, flexible and adaptive

School design should consider future needs and take a whole-of-life-cycle approach underpinned by site wide strategic and spatial planning.

Good design for schools should deliver high environmental performance, ease of adaptation and maximise multi-use facilities.

7 / Aesthetics

School buildings and their landscape setting should be aesthetically pleasing by achieving a built form that has good proportions and a balanced composition of elements.

Schools should respond to positive elements from the site and surrounding neighbourhood and have a positive impact on the quality and character of a neighbourhood.

The built form should respond to the existing or desired future context, particularly to those elements that have a positive impact on the quality and sense of identity within the neighbourhood.

Source: Government Architect NSW Better Schools Design Guide

Design Quality Principles

Analysis of Concept Design Against SEPP Design Quality Principles

Education SEPP Design Quality Principles	
Key Issues	Comments
1. Context, built form and landscape	– Distinct character as design responds well to context and landscape. – The scheme takes full advantage of the nature setting by maximising views to the nature edge, use of topography for siting of building forms and creating the school 'heart'.
2. Sustainable, efficient and durable	– Site maximises views to nature. – A variety of sustainable practices are put in place as part of the building and landscape design. – Buildings material selected for durability and longevity. – Mixed mode mechanical systems allow for natural ventilation opportunities.
3. Accessible and Inclusive	– Site circulation strategy provides both accessible connection both internally and externally across both sites. – Equity is provided and accessibility improved. – Diverse range of teaching spaces within the buildings and landscape enable better educational outcomes and connections between peers and teachers.
4. Health and Safety	– Secure lines around & through campus located appropriately for Schools operations & safety. – Optimal site lines on site and internal layouts for supervision.
5. Amenity	– Diverse range of teaching spaces within the buildings and landscape enable better educational outcomes and connections between peers and teachers. – Community program provided through publically accessible facilities – Opportunity for the Preschool to utilise School spaces and grounds.
6. Whole of life, flexible and adaptibe	– Adaptable and future focused learning environments provided as part of educational model – Robust building materials selected
7. Aesthetics	– Design explores a distinct character and materiality for the campus, that responds to the urban character.

Child Care Planning Guideline and National Quality Framework

Assessment Checklist

D. National Quality Framework Assessment Checklist

Table 2 - Assessment checklist

REGULATION	PROPOSED	COMPLIES (TICK OR CROSS)
104. Fencing or barrier that encloses outdoor spaces. Outdoor space that will be used by children will be enclosed by a fence or barrier that is of a height and design that children preschool age or under cannot go through, over or under it. Note: This clause does not apply to a centre-based service primarily for children over preschool age or a family day care residence or venue for over preschool age children.	Indicate height, materials and style on plans.	✓ Fencing will be designed as per EFSG requirements
106. Laundry and hygiene facilities The proposed development includes laundry facilities or access to laundry facilities OR explain the other arrangements for dealing with soiled clothing, nappies and linen, including hygienic facilities for storage of soiled clothing, nappies and linen prior to their disposal or laundering. Laundry / hygienic facilities are located where they do not pose a risk to children	On-site or off-site facilities	On-site Off-site ✓ Laundry facilities are provided on site. Refer to room P.G. 019 on drawing AR-DS2107
107. Unencumbered indoor space The proposed development includes at least 3.25m^2 of unencumbered indoor space for each child. Refer to Regulation 107 of the Education and Care Services National Regulation for further information on calculating indoor space.	Number of children: 60 children Required area: 195 sqm Provided Area: 220sqm approx	✓
108. Unencumbered outdoor space The proposed development includes at least 7.0m^2 of unencumbered outdoor space for each child. Refer to Regulation 108 of the Education and Care Services National Regulation for further information on calculating outdoor space, and for different requirements for out-of-school-hours care services.	Number of children: 60 children Required area: 420 sqm Provided Area 420sqm +	✓
109. Toilet and hygiene facilities The proposed development includes adequate, developmentally and age-appropriate toilet, washing and drying facilities for use by children being educated and cared for by the service. The location and design of the toilet, washing and drying facilities enable safe and convenient use by the children.	Show number of toilets and hand basins on plan	✓ Child sized WC facilities are provided on site. Refer to drawing AR-DS2107

A

CONSULTANT INPUTS

Consultant Input

Refer to separate Consultant Reports

B

EFSG DEPARTURE SCHEDULE

EFSG Departure Schedule

Education
School Infrastructure

EFSG DEPARTURES SCHEDULE

PROJECT INFORMATION

SCHOOL NAME	The Gables New Public School	Prepared By: Architectus	Revision: A	Date: 20/09/2024	EFSG Edition at Tender Date: <V2.1>

PROJECT TEAM

SI Project Director: Christopher King
Contractor: insert name & initial here
Architect: Angela Collings
Project Manger: Luke Brady

Contractor/Architect/Consultant Input								Stakeholder Input				Project Management Input		
Item #	EFSG #	EFSG Requirement	Proposed Departure	Reason for Departure	Supporting Appendix or RFI Details Issued (package title)	Request by	Date	Stakeholder(s) Response	Other Stakeholder(s) to review	Issuer	Date	Closed Y/N	ESC Approval by	Date
1	0001c Design checklist Sustainability	Ecologically Sustainable Development: ESD principles must be applied in the design, development and operation of all state assets, and are an important contribution to developing a considered whole of life cost development approach.	No Departure	N/A	N/A	N/A	N/A					Y		
2	0001c Design checklist Sustainability	Heat Loss/Gain: Controlling heat loss from the building during cooler winter months and heat gain during the warmer months is an important part of reducing the on-going cost associated with providing an efficient indoor environment. As part of the whole of life approach to design, an assessment must be undertaken to determine the most appropriate heating and cooling systems.	No Departure	N/A	N/A	N/A	N/A					Y		
3	0001c Design checklist Sustainability	Cooling / Heating: The inclusion of active cooling within school facilities is directed by the Department's Air Cooling policy which is included in this Design Guide. A heating strategy is to be developed in conjunction with a Mechanical Engineer, for each school based on the local environmental conditions to maintain reasonable comfort conditions within each habitable space.	No Departure	N/A	N/A	N/A	N/A					Y		
4	0001c Design checklist Sustainability	Sun Control: Controlling direct sunlight into spaces is necessary to reduce unwanted heat gain and reduce the adverse effects of glare into a work environment. Sun exclusion and glare control can be achieved by the use of elements such as sun shades, eave extensions, vertical blades and the like. Glare must only be controlled by blinds as a last resort.	No Departure	N/A	N/A	N/A	N/A					Y		
5	0001c Design checklist Sustainability	Light - Natural: Maximise Natural Daylight in all habitable spaces, to reduce energy usage, improve the indoor amenity and create a pleasant environment.	No Departure	N/A	N/A	N/A	N/A					Y		
6	Design Framework - site selection	Site Selection: The suitability of any site for new or extended school infrastructure needs to be assessed on a case-by-case basis to ensure the requirements of the school development can be met appropriately. Site Investigations must be undertaken and detailed information to be developed. Review Masterplanning Guidelines.	No Departure	N/A	N/A	N/A	N/A					Y		
7	0001c Design checklist Circulation	Circulation: An assessment of the required movement within the classroom/ learning areas should be undertaken based on the number of students in these areas. A Single lane of students will be at least 0.7m wide to allow for movement. Refer to DG08.01, 08.02, & 08.03 for calculation for circulation and stairs for mass movement. Circulation Areas provided between administrative, staff and all student spaces (except Agriculture), should be protected from sun, rain and unfavourable winds.	No Departure	N/A	N/A	N/A	N/A					Y		
8	0001c Design checklist Areas	Rooms are to be designed with sufficient area to enable usability for the functions to be performed in the spaces. Refer to Schedule of Accommodation for Departures.	No Departure	N/A	N/A	N/A	N/A					Y		
9	0001c Design checklist Areas	EFSG Amenities Calculations	Hall Amenities to be included in overall Amenities count for Students. In addition, proposed Departure for overall Student WC numbers to be reduced. Proposed Departure = 6 Student WCs (including Hall numbers)	Value Management Departure. The project with reduction will still have many more WCs than the BCA required.	VM Workshop	AC/SINSW	15/08/2024	Supported in principle based on adoption of Pattern Book, site specific conditions, including separation of canteen and access to amenities in the hall. Please provide additional detail as requested, including table differentiating EFSG/BCA and project WC quantities.		VLM	18/09/2024	Y		

Contractor/Architect/Consultant Input								Stakeholder Input				Project Management Input		
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10	0001c Design checklist Bushfire protection	NSW Building regulations requires that school buildings near potential bush fire areas (or on Bushfire Prone land) are to be designed to safeguard occupants from the effects of a bush fire. Section 100B (6) of the Rural Fire Act 1997 states that a school is considered a Special Fire Protection Purpose and therefore requires increased level of safety from bush fires.	No Departure	N/A	N/A	N/A	N/A					Y		
11	0001c Design checklist Building regulations	Within the EFSG Design Guide a reference to the Building Code of Australia, BCA or building regulations is also to be read as a reference to the NCC. Where a requirement of this section conflicts with that within another section of the EFSG Design Guide, the more onerous requirement or characteristic shall prevail.	Proposed Departure	Proposed Performance Solutions for travel distances and egress. Project Budget constraints. Value Management Departure.	VM Workshop	AC/SINSW	15/08/2024	Additional information required from BCA consultant, including difference in distances of travel. Include in Risk register.	XX, XX	VLM	18/09/2024	N		
12	0001c Design checklist Acoustics	The purpose of this section is to give guidance on the acoustic performance requirements of the various areas and spaces within a school so as to encourage and foster an environment conducive to learning. The noise levels within a space can either assist or hamper the ability of both students and teachers to hear each other and work together in the learning environment.	Proposed Depature - Rain Noise Layer	Delete rain noise layers to ceilings (Wavebar or solid lining above acoustic ceiling) where there are metal roofs above. Project Budget constraints. Value Management Departure.	VM Workshop	AC/SINSW	15/08/2024	Supported in principle. Provide supporting documentation from acoustic engineer to determine no impact on acoustics to learning spaces.	XX, XX	VLM	18/09/2024	Y		
13	0001c Design checklist Accessibility	All new facilities must meet current Deemed to Satisfy Provisions of the National Construction Code (NCC) and the associated standards (AS1428.1, AS1428.2 & AS1428.4). It is acknowledged that existing schools may not be able to provide this level of access.	No Departure	N/A	N/A	N/A	N/A					Y		
14	0001c Design checklist Hygiene & Food preparation	Food preparation spaces must satisfy building regulations and food safety standards to provide a hygienic environment commensurate with their intended use. Area must comply with National Food Safety Standards.	No Departure	N/A	N/A	N/A	N/A					Y		
15	0001c Design checklist Safety	Security Categories for Openings	No Departure	N/A	N/A	N/A	N/A					Y		
16	0001c Design checklist Structure DGN 007 Structural design criteria	Structural design should consider both the short term functional requirements and a realisation that schools usually have a long service life. Consequently, flexible structural solutions that allow for future adaptability to suit changing planning needs should be considered.	No Departure	N/A	N/A	N/A	N/A					Y		
17	0431 Cladding - combined	The building fabric needs to be considered as a Whole of Life approach. Design of the external fabric should consider "off-the-shelf" materials and standard colours where possible, representing best practice. Detailing should allow for movement, thermal and other environmental tolerances. Water tightness is an essential criteria.	No Departure: However - we propose to depart from the SINSW façade design intent (Pattern Book), to address building orientation and project budget.	To ensure the façade design is fit-for-purpose, safe, and aligned with the Value Management Departure.	VM Workshop	AC/SINSW	11/09/2024	Noted.		VLM	18/09/2024	Y		
18	0431 Cladding - combined	SINSW Pattern Book Façade Window Assembly	Proposed Departures: Simplified Window Assembly that addresses Natural Ventilation, Daylighting and Buildability requirements. Practical design departure that address Value Management items.	Aligned with Value Management Departure.	VM Workshop	AC/SINSW	11/09/2024	Noted and to be reviewed through design development.		VLM	18/09/2024	Y		
19	0421 Roofing - combined	SINSW Pattern Book Stairs	Proposed Departures: Steel frame to roof instead of concrete.	Aligned with Value Management Departure.	VM Workshop	AC/SINSW	11/09/2024	Noted.		VLM	18/09/2024	Y		
20	0421 Roofing - combined	SINSW Pattern Book Roof	Proposed Departures: Roof slope proposed to depart from Pattern Book to simplify roof structure and drainage. Practical design departure that address Value Management items.	Aligned with Value Management Departure.	VM Workshop	AC/SINSW	11/09/2024	Accepted in principle. Requires additional information with regard to proposed roof and drainage (i.e. - note the design changes)		VLM	18/09/2024	Y		

Contractor/Architect/Consultant Input								Stakeholder Input				Project Management Input		
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21	0421 Roofing - combined	The roof slope for metal roofing (not including external covered ways) is to be 4° minimum to avoid drainage failure. Provide access for the maintenance of roof surfaces, gutters and down pipes on buildings of 2 storeys or more, within the design of the building. The method of maintenance is to be identified for review during design and subsequent documentation, to ensure the provision and proper co-ordination of maintenance requirements. Roof guttering should be outside the line of the external walls so that any overflow will be outside the envelope of the external walls. Concealed gutters behind parapet walls, or box gutters between roof slopes should be avoided. The colour selected will have an impact on the thermal performance of the roofing. Light colours will reflect more of the sun's heat and darker colours absorb more of the sun's heat, which will be transferred into the roof structure. When selecting roofing for an extension to an existing building the colour of the roofing should match the existing roofing.	No Departure	N/A	N/A	N/A	N/A					Y		
22	0421 Roofing - combined	Provide a minimum of two roof ventilators to each Secondary General Learning Space or a Primary Home Base unless otherwise directed, or other number recommended by the manufacturer for the size of the space (whichever is the greater).	No Departure	N/A	N/A	N/A	N/A					Y		
23	0451 Windows & glazed doors	Windows are to be commercial grade integrated system that includes flexible options and configurations, including doors, sliding windows, awning windows, louvers and double-hung components. Building regulations require that the thermal performance of the façade, the window size, glass type and arrangement be assessed to ensure that excessive amounts of energy are not required to maintain a suitable indoor environment. Fly screening must be provided in all schools to the doors, windows and other openings in food preparation, biology, and non-water-closet toilet spaces or where specifically nominated in the EFSG	No Departure: However - we propose to depart from the SINSW façade design intent, to address building orientation and project budget. Flyscreens to remain on all windows.	To ensure the façade design is fit-for-purpose, safe, and aligned with the Value Management Departure.	VM Workshop	AC/SINSW	15/08/2024	Additional information required in relation to proposed elemts departing from. Finish of commercial grade windows to be equivalent of Interpon D2525.		VLM	18/09/2024	Y		
24	0453 Doors & access panels 0454 Overhead doors	Door selection should consider the following characteristics: -Functionality -Durability -Maintainability -Minimum clear door openings are to be in compliance with building regulations -Safety -Threshold steps -Operable walls require minimum Rw 45 rating -Accordion doors are not recommended -Fire rated doors to be used where required for regulation requirements.	No Departure	N/A	N/A	N/A	N/A					Y		
25	06 Finish	Materials & Finishes: Roof: Steel Drainage: Steel Structure: Steel, Timber, Masonry Wall: Steel, aluminium, masonry, glass Doors: Steel, aluminium, timber, glass. Walkways: Hot dipped galvanised (balustrade, handrail, stairs)	Simplify covered walkways – delete soffit linings. Isolated locations for soffit linings to reticulation pathways for cable trays. Minimise soffit lining to be limited to cables trays.	Project Budget constraints. Value Management Departure.	VM Workshop	AC/SINSW	15/08/2024	Additional information required relating to the proposed finish of each element departing from. Departure relating to minimisation of soffit linings to be limited to cable trays is accepted as a VM departure.		VLM	18/09/2024	Y		
26	06 Finish	Floor materials are to be selected to suit the use conditions and the function of the area. Materials indicated below are the preferred floor finishes required in spaces throughout the school. 'User' performance requirement is given rather than the technical specification.	No Departure	N/A	N/A	N/A	N/A					Y		
27	06 Finish	Ceiling materials are to be selected to suit the acoustic needs and function of the space.	Proposed use of ceiling tiles to Student areas, and in lieu of perforated PB.	Project Budget constraints. Value Management Departure.	VM Workshop	AC/SINSW	15/08/2024	Accepted. All ceiling tiles to areas accessed by students to be fitted with ceiling clips to restrict access.		VLM	18/09/2024	Y		
28	001c Design checklist - Hazardous materials	Asbestos Containing Materials (ACM), Synthetic Mineral Fibres (SMF), Polychlorinated Biphenyl's, Lead Paint, Ozone Depleting Substances.	No Departure	N/A	N/A	N/A	N/A					Y		
29	001c Design checklist - Hydraulics	Rain Water Tank	Partial Departure due to recycled water use - continued development through Schematic Design. EFSG 0816 Tanks - 0.02 Roof water harvesting and tank storage. "It is DoE policy to include roof water harvesting in projects and tank storage must be included in new schools…to reduce the demand on drinking water supplies"	This school/site has access to a non-drinking water main that can be connected to the irrigation system and toilets. Which, meets the goal of reducing the demand on the drinking water supply.				DAIS 18.09.24 Awaiting additional information regarding council requirements.		VLM	18/09/2024	Y		
30	0581 Signage	Appropriate signage is required to identify the school, elements within the school and to assist students and visitors in finding their way about the school.	No Departure	N/A	N/A	N/A	N/A					Y		

Contractor/Architect/Consultant Input								Stakeholder Input				Project Management Input		
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31	0581 Signage	Two types of signage are required to the doors: -Fixed Room Identification Signs -Variable Room Identification Signs Statutory signage is required by building regulations.	No Departure	N/A	N/A	N/A	N/A					Y		
32	0574 Window coverings	To be provided to external windows to facilitate brownout, control glare and visual privacy.	No Departure	N/A	N/A	N/A	N/A					Y		
33	0551 Joinery DGN 005 FF&E in primary schools GLS	Fixture selections must ensure fit for purpose, durability, longevity, low maintenance and value for money.	No Departure	N/A	N/A	N/A	N/A					Y		
34	0572 Miscellaneous furniture	The selection of fixtures must be based on a knowledge of the proposed use. Use impact resistant materials in all pupil accessible areas. Visible surfaces should be capable of being easily cleaned and repaired if damaged. Furniture selections should be reviewed by DoE Project Reference Group and EFSG Technical Stakeholders.	No Departure	N/A	N/A	N/A	N/A					Y		
35	001c Design Checklist - Landscape & Open space	Removal of fencing around the external Sports Court.	Proposal to remove fencing to the perimeter of the external Sports Court due to location within the campus. Low risk of balls going outside of the boundary.	Project Budget constraints. Value Management Departure.	VM Workshop	AC/SINSW	15/08/2024	Accepted in principle and to be reviewed in conjunction with landscape design plan.		VLM	18/09/2024	Y		

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PENNANT WAY

PROPOSED FUTURE PEDESTRIAN CROSSING

PROPOSED FUTURE PEDESTRIAN CROSSING

PROPOSED FUTURE PEDESTRIAN CROSSING

DISTANCE TO CREEK
44170

PROPOSED REFUGE ISLAND

ROOF TOP PLANT

INDICATED SOLAR PHOTOVOLTAIC ARRAY

ROOF TOP PLANT

FONTANA DR

RESIDENTIAL HOUSES

CATARACT ROAD

CATARACT CREEK

DISTANCE TO CREEK

PENNANT WAY

PROPOSED FUTURE PEDESTRIAN CROSSING

PROPOSED FUTURE PEDESTRIAN CROSSING

PROPOSED FUTURE PEDESTRIAN CROSSING

3 STOREYS

4 x GENERAL LEARNING SPACES (GLS)

1 STOREY

1 STOREY (DOUBLE VOLUME)

ZONE FOR PV

INDICATED SOLAR PHOTOVOLTAIC ARRAY

ROOF TOP PLANT

3 STOREYS

3 x SPECIAL SUPPORT LEARNING SPACES

16 x TEACHING SPACES

ROOF TOP PLANT

3 STOREYS

24 x GENERAL LEARNING SPACES (GLS)

PRE-SCHOOL INTEGRATED AT GROUND FLOOR (3 x PLAYROOMS)

DISTANCE TO CREEK 44170

PROPOSED REFUGE ISLAND

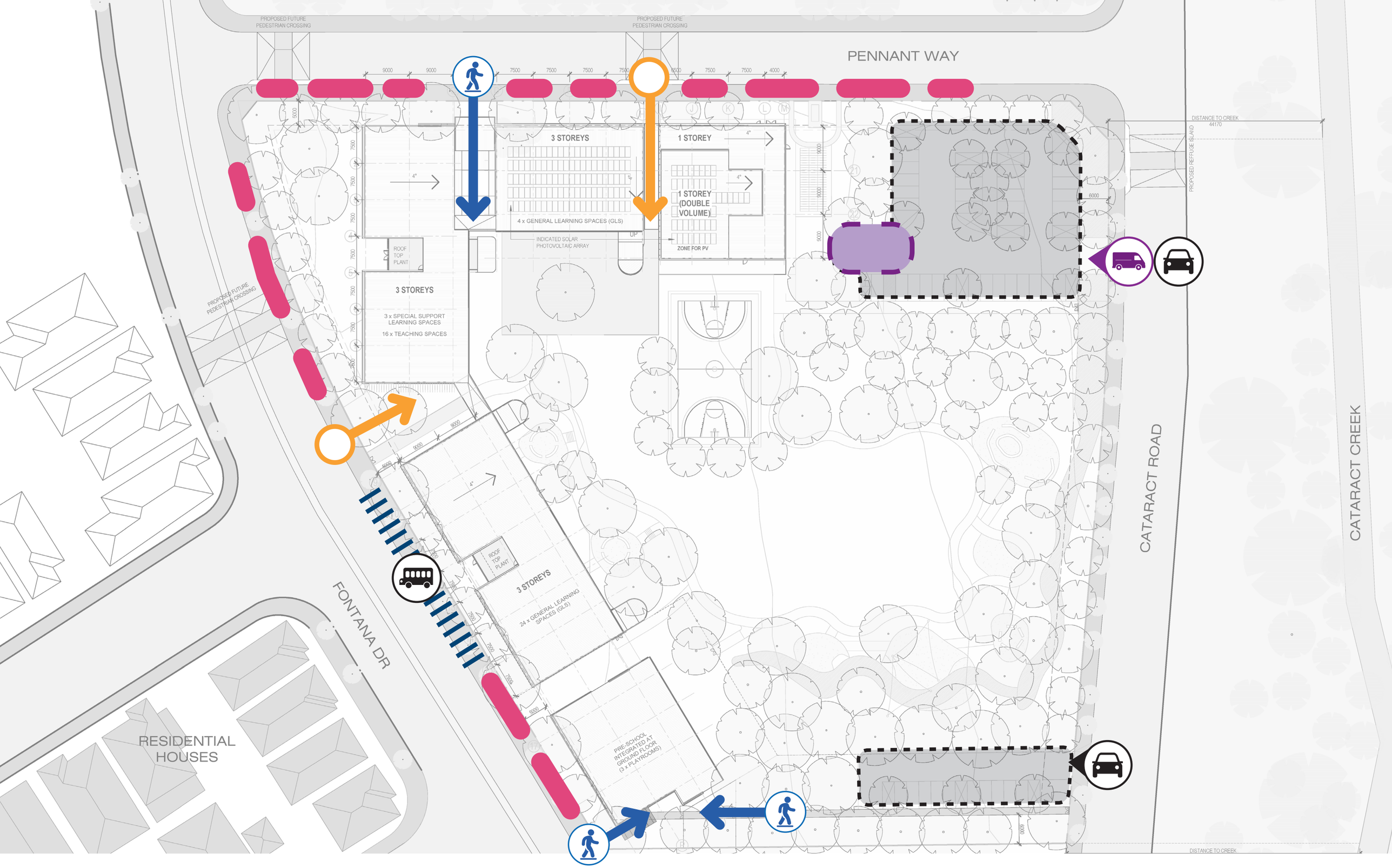
CATARACT ROAD

CATARACT CREEK

DISTANCE TO CREEK

FONTANA DR

RESIDENTIAL HOUSES


PENNANT WAY
PROPOSED FUTURE PEDESTRIAN CROSSING
PROPOSED FUTURE PEDESTRIAN CROSSING
PROPOSED FUTURE PEDESTRIAN CROSSING
3 STOREYS
4 x GENERAL LEARNING SPACES (GLS)
1 STOREY
1 STOREY (DOUBLE VOLUME)
INDICATED SOLAR PHOTOVOLTAIC ARRAY
ZONE FOR PV
ROOF TOP PLANT
3 STOREYS
3 x SPECIAL SUPPORT LEARNING SPACES
16 x TEACHING SPACES
DISTANCE TO CREEK
44170
PROPOSED REFUGE ISLAND
6000
3 STOREYS
24 x GENERAL LEARNING SPACES (GLS)
ROOF TOP PLANT
PRE-SCHOOL INTEGRATED AT GROUND FLOOR (3 x PLAYROOMS)
FONTANA DR
RESIDENTIAL HOUSES
CATARACT ROAD
CATARACT CREEK
DISTANCE TO CREEK

PENNANT WAY

PROPOSED FUTURE PEDESTRIAN CROSSING

PROPOSED FUTURE PEDESTRIAN CROSSING

PROPOSED FUTURE PEDESTRIAN CROSSING

3 STOREYS

3 x SPECIAL SUPPORT LEARNING SPACES

16 x TEACHING SPACES

ROOF TOP PLANT

INDICATED SOLAR PHOTOVOLTAIC ARRAY

UP

UP

3 STOREYS

24 x GENERAL LEARNING SPACES (GLS)

ROOF TOP PLANT

PRE-SCHOOL INTEGRATED AT GROUND FLOOR (3 x PLAYROOMS)

DISTANCE TO CREEK
44170

PROPOSED REFUGE ISLAND

CATARACT ROAD

CATARACT CREEK

DISTANCE TO CREEK

FONTANA DR

RESIDENTIAL HOUSES