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ARCHITECTURAL DESIGN QUALITY REPORT

LISMORE SOUTH PUBLIC SCHOOL – FLOOD RECOVERY REBUILD

69 TO 79 KYOGLE STREET, LISMORE SOUTH

Figure 0.01: Artistic render of main entrance along Kyogle Street

Prepared by EJE Architecture
REV E – 18th June 2025
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LISMORE SOUTH PUBLIC SCHOOL – FLOOD RECOVERY REBUILD

69 TO 79 KYOGLE STREET, LISMORE SOUTH

Issue	Description	Date	Checked Authorised
A	REF Report	10/12/2024	KG
B	REF Report	19/02/2025	KG
C	REF Report	06/06/2025	KG
D	REF REPORT	12/06/2025	KG
E	REF REPORT	18/06/2025	KG

DESIGN VERIFICATION STATEMENT

I am a qualified Architect registered with the Architects Registration Board of New South Wales, Registration Number 5493. I hereby verify that I have led the design for the proposed Lismore South Public School – Flood Recovery Rebuild, as outlined in the Architectural Plans prepared by EJE, dated 06th June 2025.

This Architectural Design Report has been prepared to support a Review of Environmental Factors (REF) for the rebuild of Lismore South Public School (the activity). The purpose of the REF is to assess the potential environmental impacts of the activity prescribed by State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&I SEPP) as "development permitted without consent" on land carried out by or on behalf of a public authority under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act). The activity is to be undertaken pursuant to Chapter 3, Part 3.4, Section 3.37 of the T&I SEPP.
The activity will be carried out at Lismore South Public School (LSPS) located 69-79 Kyogle Street, South Lismore (the site).
The purpose of this report is to show how the design achieves the Transport and Infrastructure SEPP design principles, and Design Quality Principles set out in the GANSW Design Guide for Schools, and to provide a design response for the proposed activity.

Project Description:
The proposal seeks to rebuild the Lismore South Public School to provide improved facilities to meet the educational needs of staff and students in response to the 2022 Floods. The upgrades will cater for a total student population of 230 and includes:

- Demolition of existing structures on the eastern parcel of the site.
- Construction of a new one (1) storey learning hub with undercroft areas below located on the eastern parcel, containing a general learning space (GLS) hub, hall, library, support hub, administration, and pre-school.
- Undercroft outdoor learning areas as well as amenities and storage located on ground level
- Landscaping and public domain works, including tree planting, a games court in the northeast corner and an outdoor playing area adjacent to the preschool.
- A car park on the eastern side of the site, with access from Kyogle Street.
- Waste collection area access from Kyogle Street.
- Ancillary off-site works are also proposed including new pickup and drop-off zones, and improved bus transport arrangements including bus bays and bus stops.

Kathy Gresham, Director
Registered Architect (No 5493)

REVIEW OF DESIGN QUALITY PRINCIPLES

GANSW DESIGN GUIDE FOR SCHOOLS

CONTENTS

PART A

PART B

PART C

PART A

OVERVIEW

DESIGN PROCESS

OVERVIEW

SITE DESCRIPTION

The site, located at 69-79 Kyogle Street, South Lismore, consists of two separate land parcels situated on either side of Wilson Street. The proposed activity will be undertaken on the eastern parcel, where most of the school's existing permanent structures are located. The western parcel contains sports fields and temporary learning facilities in demountable buildings. Figure 0.2 outlines the school's boundary, covering approximately 2.5 hectares. Due to flood damage, the permanent buildings on the eastern parcel are currently unused, and students are temporarily using demountable facilities on the sports field and oval, located on the western side of Wilson Street.

Figure 0.02: Aerial image of site (source: Nearmaps)

PROPOSED ACTIVITY DESCRIPTION

The proposed activity comprises the rebuild of LSPS on the eastern parcel of the existing site in South Lismore, and will be delivered in a single stage. The western parcel is out of the scope of the activity. Any works required on the western parcel (such as removal of demountable classrooms) will be subject to separate approval (if required).
A detailed description of the proposal is as follows:

1. Retention of the existing play equipment, Building K and covered outdoor learning area (COLA) on the western parcel.
2. Bulk earthworks, comprising fill and excavation and other site preparation works on the eastern parcel.
3. Construction of a new building on the eastern parcel for LSPS including:
    a. A one storey building (with undercroft areas below) fronting Kyogle Street containing a general learning space (GLS) hub, hall, library, support hub, administration, and pre-school.
    b. Undercroft outdoor learning areas as well as amenities and storage located on ground level.
4. Landscaping and public domain works, including tree planting, a games court in the northeast corner and an outdoor playing area adjacent to the preschool.

5. A car park on the eastern side of the site, with access from Kyogle Street.
6. Waste collection area access from Kyogle Street.
7. Multiple entrance points, including:
    a. Primary and secondary entries distributed on site frontages.
    b. Vehicular access point to provide access to waste collection/delivery areas and car parking.
8. Ancillary public domain mitigation measures.

Figure 0.03 below show the scope of works.

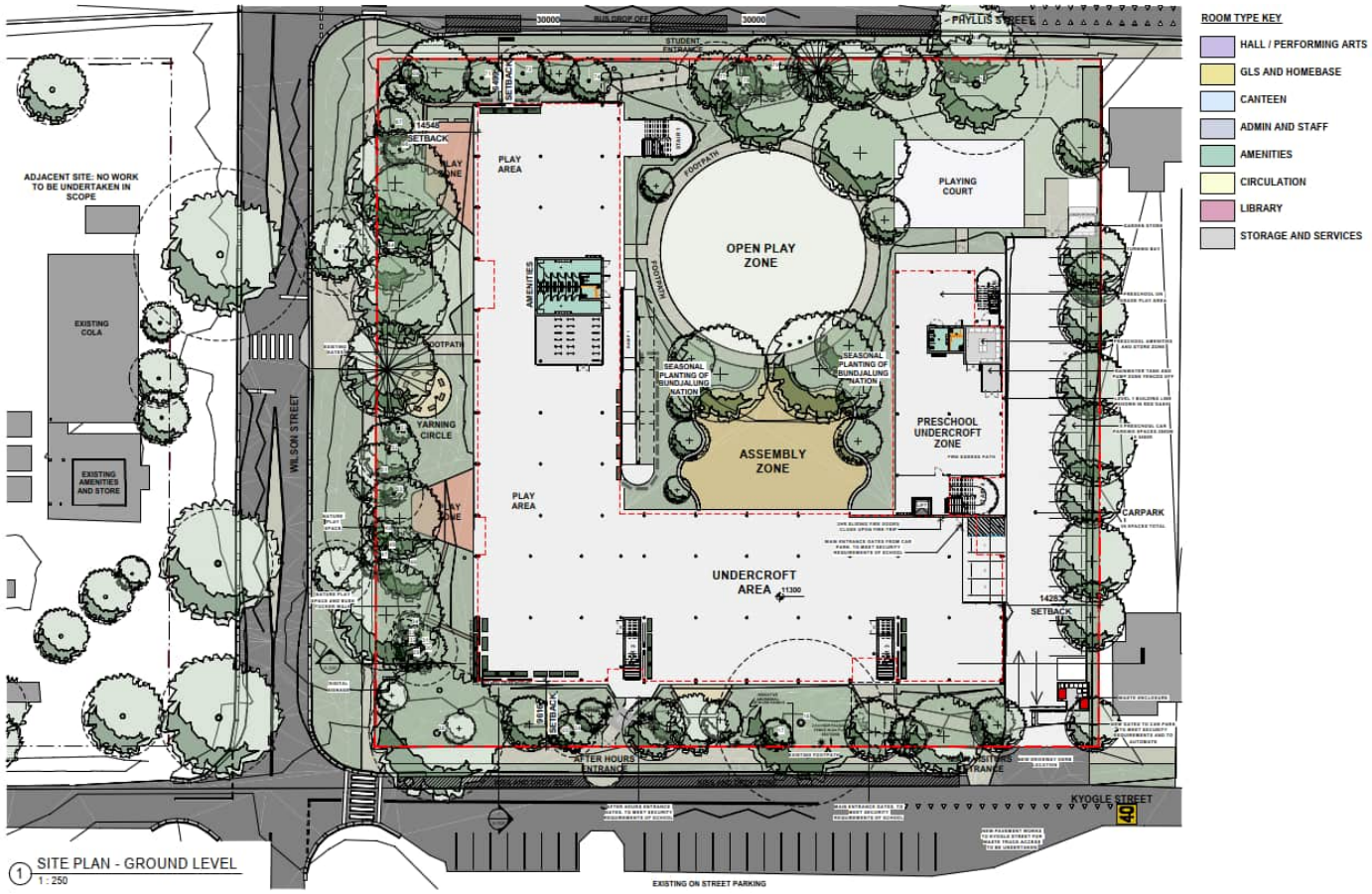


Figure 0.03: Proposed Site Plan and Scope of Works (Source: EJE Architecture)

KEY CONSIDERATIONS OF THE DESIGN PROCESS

1. Connection with Country and design to reflect Indigenous Heritage
2. Reinforcing Community Connections and opportunities for Joint Use
3. Incorporation of ESD principles
4. Creation of Open Space and enhancement of the existing Landscape
5. Standardised Design and incorporation of the Pattern Book developed by SINSW
6. Flood resilience of the Lismore South Public School – Flood Recovery Rebuild

DESIGN PROCESS

DESIGN PROCESS AND APPROACH

The proposed Lismore South Public School – Flood Recovery Rebuild is the result of an ongoing rigorous design process that commenced at the Master Planning phase and continued through to Concept and Schematic Design phases.

During the process options for the school layout and location of facilities were explored, and a wide variety of consultation was undertaken, resulting in a design that addresses the needs of stakeholders, project budget and allows for future growth.

MASTER PLANNING

The development of the Master Plan options was in response to the scope provided by SINSW, which included:

- Analysing the requirements for an upgraded Primary School to accommodate 230 students and a Preschool to accommodate 20 students
- Consideration of alternative sites
- Analysis of flood impact and potential risk

This process included the participation of various Stakeholders which formed the Project Reference Group (PRG). A collaborative approach has been ongoing during this process to ensure viable options were considered and ultimately put forward for consideration.

Analysis of the Project Brief, existing Site information and Stakeholder feedback led to consideration of a wide range of Master Plan Options including the consideration of alternative sites for the rebuild as outlined in Figures 0.04 - 0.09 below:

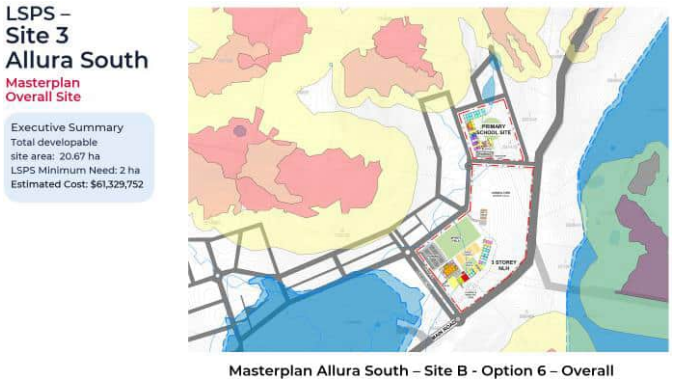
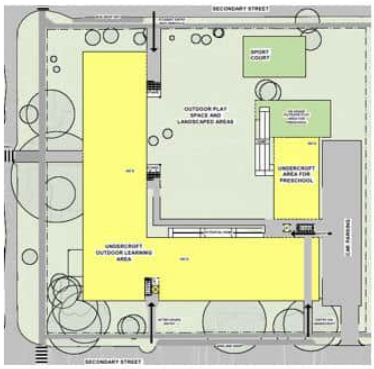
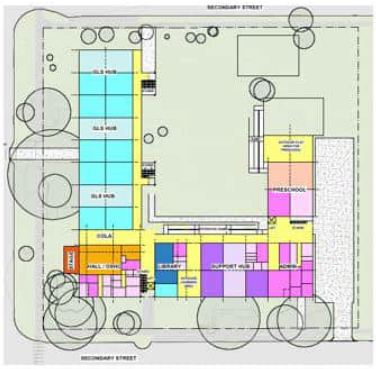


Figure 0.04: Alternative Site Allura South (Source – EJE Architecture)

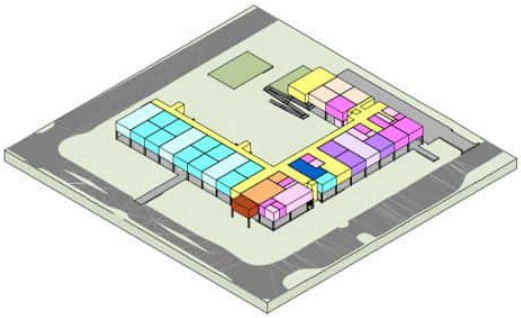
Figure 0.05: Alternative Site Showground (Source – EJE Architecture)



Site - Ground Floor Plan

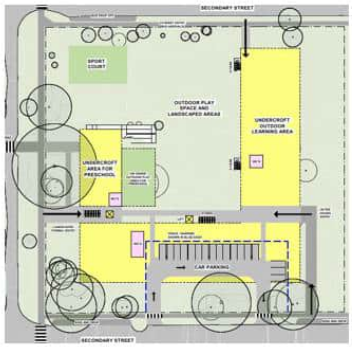


Site - First Floor Plan



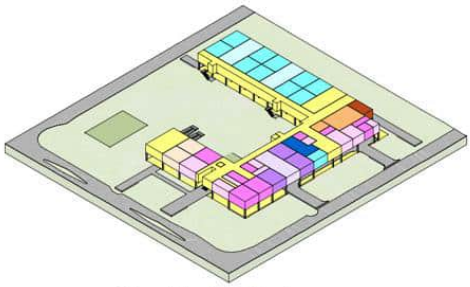
Site – Block & Stack

Figure 0.06: Existing Site Option 1 (Source – EJE Architecture)



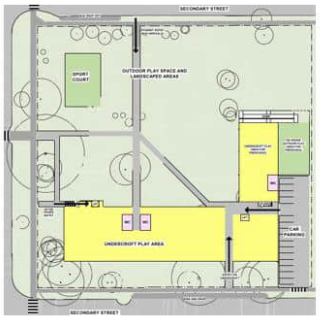
Site - Ground Floor Plan

Site - First Floor Plan

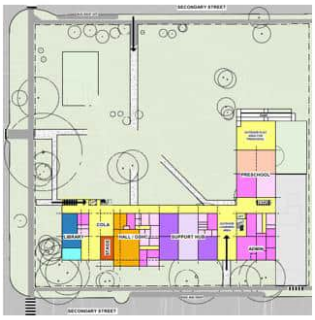


Site – Block & Stack

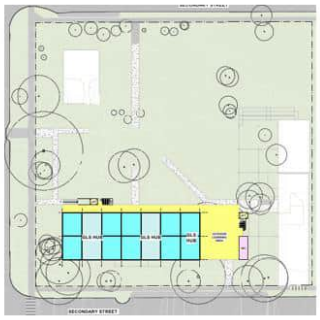
Figure 0.07: Existing Site Option 2 (Source – EJE Architecture)



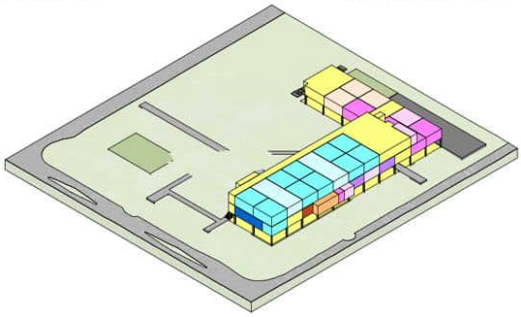
Site - Ground Floor Plan



Site - First Floor Plan



Site - Second Floor Plan



Site – Block & Stack

Figure 0.08: Existing Site Option 3 (Source – EJE Architecture)

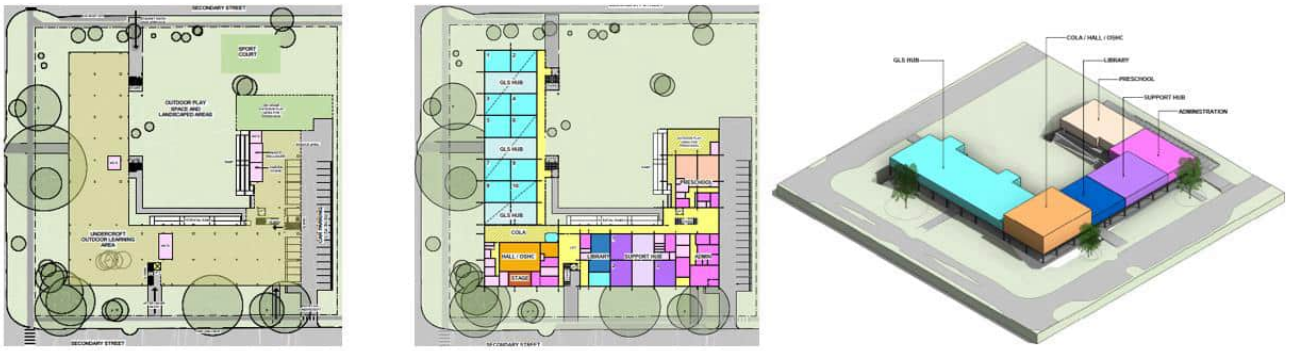
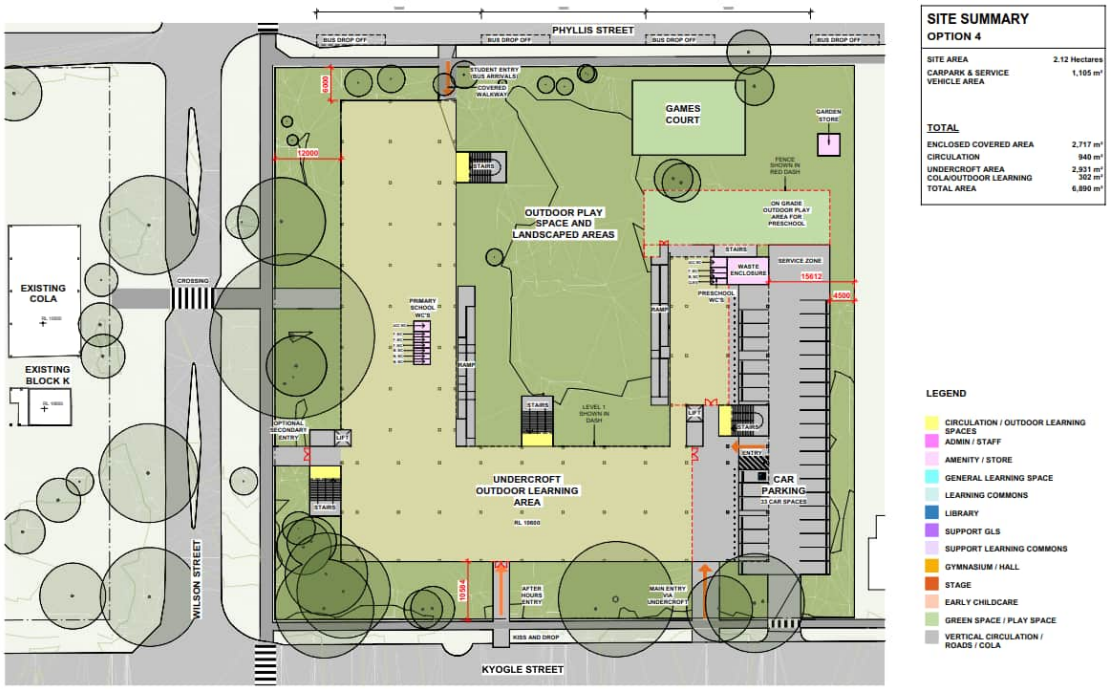


Figure 0.09: Existing Site Option 4 (Source – EJE Architecture)

CONCEPT DESIGN

At the end of the Master Plan process, after analysis of the varying Options and substantial feedback from key stakeholders, the preferred Master Plan on the existing site was settled upon. This Option provides for a 230 student Primary School, with 3 Support Classrooms and 10 General Learning Spaces, and a 20 student Preschool.

The preferred Option developed from the Master Plan process formed the basis for development of the Concept Design, to enable refinement of cost and to respond to site constraints, analysis, regulatory and operational requirements, and is illustrated in Figure 0.10



Site – Ground Floor Plan

Site - Level 1 Floor Plan

Overall 3D View

Figure 0.10: Preferred Master Plan Option (Source: EJE Architecture)

DESIGN PROCESS / CONSULTATION

- **Templates** – The design considered EFSG requirements, standard Learning Hub templates, and the SINSW Pattern Book that use standardised grids for consistent room sizes and structural spacing and therefore building components.

- **EFSG** – The Educational Facilities Standards and Guidelines are referenced to determine the functional spaces and their requirements based on the school size. Stakeholders from the EFSG were consulted and feedback was provided with regard to adaption of the Standardised Learning Hub templates for this specific site and building position relative to the existing buildings.

- **TSG** – The technical stakeholder groups were given opportunity to review the designs to raise any concerns or feedback with respect to the design. This included accessibility, security, maintenance, safety, traffic and cost.

- **PRG** – The project reference group met regularly so that input from stakeholders could be considered throughout the design before signing off on the Concept Design.

- **Connection with Country** – Connection with Country meetings were held to discuss the Lismore South Public School Flood Recovery Rebuild with Bundjalung and Widjabul Wia-bal community and AECG members. These meetings helped to inform the design allowing it to better respond to Country and incorporate the input from the local community.

SCHEMATIC DESIGN

The following design processes were important contributors to the development of the Schematic Design:

Pattern Book and Standard Hub Templates–
Continuing to develop the layouts using the Pattern Book and standard Hub Templates. This enabled the approved Concept Design to be developed to follow the standardised designs, whilst responding to specific site requirements, Stakeholder requirements and regulatory requirements resulting in the final Schematic Design.

Connection to Country – A consultant was engaged to facilitate group consultation sessions with the local indigenous community to discuss the project and their engagement and input into design development.

Building Scale –
Another major design principle throughout Concept and Schematic Design development has been consideration for the neighbouring residential buildings. Although the Design proposes a like for like replacement (and comparable maximum student capacity), a different built form is proposed to respond to the needs of the school and the flood planning requirements. Key principles have been followed to mitigate the impact on these buildings.

- The U-shaped building opens to the north with the major lengths of the building running along the western and southern boundaries of the site and the eastern length is shorter to reduce overshadowing.
- The height of the proposed new building has been determined by the flood level. The new building sits 500mm higher than the 2022 flood level over an undercroft area. To mitigate the height impact, the roof pitch runs away from the boundaries and the height of the first story is in line with the Pattern Book standard set out by SINSW.
- The building has been set back from the boundaries by a minimum of 6 metres. Greater setbacks have been provided along the western and southern boundary to accommodate existing trees, and along the eastern boundary to provide a buffer to the existing residential buildings.

Stakeholder Consultation –

- **User Groups**: Regular consultation has resulted in the design more closely reflecting the specific requirements of the school.
- **Community Consultation**: SINSW has organised community consultation drop-in sessions at the school library during the Concept and Schematic phases
- **Design Team Meetings**: Held regularly to coordinate the design with specialist consultants
- **PRG Meetings**: Held to consultant and inform the school community and the DoE of the project status and discuss issues.
- **EFSG, TRG Meetings**: Held at key milestone for review by the SINSW to provide specialist feedback to the design team
- **State Design Review Panel**:
    - The project was presented to the SDRP twice, as outlined below:
    - 24th April 2024: Master Plan process at the initial presentation
    - 27th November 2024: Further development of the design during the Schematic Phase in response to the Panel's initial comments.

The responses to the SDRP presentation and comments are enclosed as Appendices to this document:
Appendix 1: Presentation to SDRP No. 1
Appendix 2: Comments from SDRP No.1
Appendix 3: Presentation to SDRP No. 2
Appendix 4: Comments from SDRP No. 2
Appendix 5: Design Team Response to SDRP No. 2

The current design reflects the Response to SDRP No2 as outlined in Appendix 5.

PART B

SEPP PRINCIPLES

PRINCIPLE 1: RESPONSIVE TO CONTEXT

PRINCIPLE 2: SUSTAINABLE, EFFICIENT AND RESILIENT

PRINCIPLE 3: ACCESSIBLE AND INCLUSIVE

PRINCIPLE 4: HEALTHY AND SAFE

PRINCIPLE 5: FUNCTIONAL AND COMFORTABLE

PRINCIPLE 6: FLEXIBLE AND ADAPTABLE

PRINCIPLE 7: VISUAL APPEAL

1. PRINCIPLE 1: RESPONSIVE TO CONTEXT

1.1. Schools should be designed to respond to and enhance the positive qualities of their surroundings.

1.2. In designing built forms and landscapes, consideration should be given to a Country-centred approach and respond to site conditions such as orientation, topography, natural systems, Aboriginal and European cultural heritage and the impacts of climate change.

1.3. Landscapes should be integrated into the overall design to improve amenity and to help mitigate negative impacts on the streetscape and neighbouring sites.

1.1 SITE CONTEXT

Lismore South Public School is established as the major public primary school for Lismore South and broader catchment area. It is located within 2km from Lismore CBD. Wilson Street is the major street adjacent to the site. The Richmond River Rail Line, which is being converted into a cycle path, passes along Kyogle Street directly to the south of the school. Significant tree planting forms a strong line along the Wilson Street, Kyogle Street and Phyllis Street frontages.

Figure 1.01: Site Analysis – Built Environment (Source: EJE Architecture)

Figure 1.02: Wilson Street existing pedestrian crossing

Figure 1.03: Kyogle Street existing streetscape

Figure 1.04: Phyllis Street existing streetscape

Figure 1.05: Corner of Phyllis and Wilson Street existing streetscape

Figure 1.06: Western parcel Wilson Street frontage

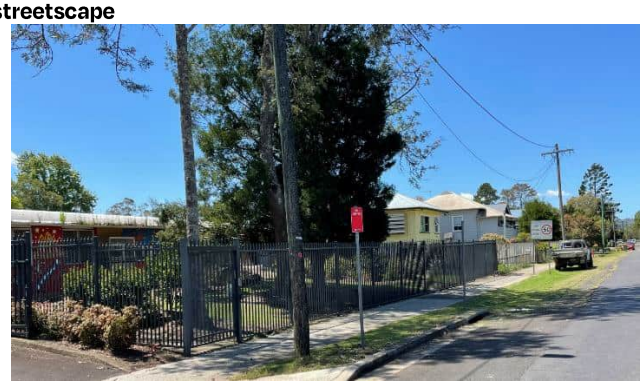


Figure 1.07: Preschool and neighbouring buildings on Kyogle St

Figure 1.08: Kyogle Street entrance

Figure 1.09: Corner of Kyogle and Wilson Street

1.2 SITE CHARACTERISTICS

The site analysis undertaken by EJE identified the following characteristics:

- The site has an area of 2.2ha over 2 parcels of land to the west and east divided by Wilson Street.
- The original school is located on the eastern parcel has 3 street frontages along Phyllis Street (north) Wilson Street (west) and Kyogle Street (south).
- The western site is used for sporting fields and the temporary demountable school
- The site is generally level, with the lowest point of the eastern parcel to the northeast.
- There are no heritage listed buildings on the site.
- There are 12 existing structures on the eastern parcel and 8 existing structures on the western parcel including temporary demountable structures, sheds, and COLA's.
- The elevated buildings range in height from 10.500 RL to 15.120 RL and are predominantly of brick or weatherboard construction.
- Established existing trees along Phyllis, Wilson and Kyogle Street frontages are an important contribution to the area.
- Bus drop-off and pickup is along the Phyllis Street frontage.
- There are multiple pedestrian entrances along the three street frontages, reflecting the variety of ways staff and students access the site.

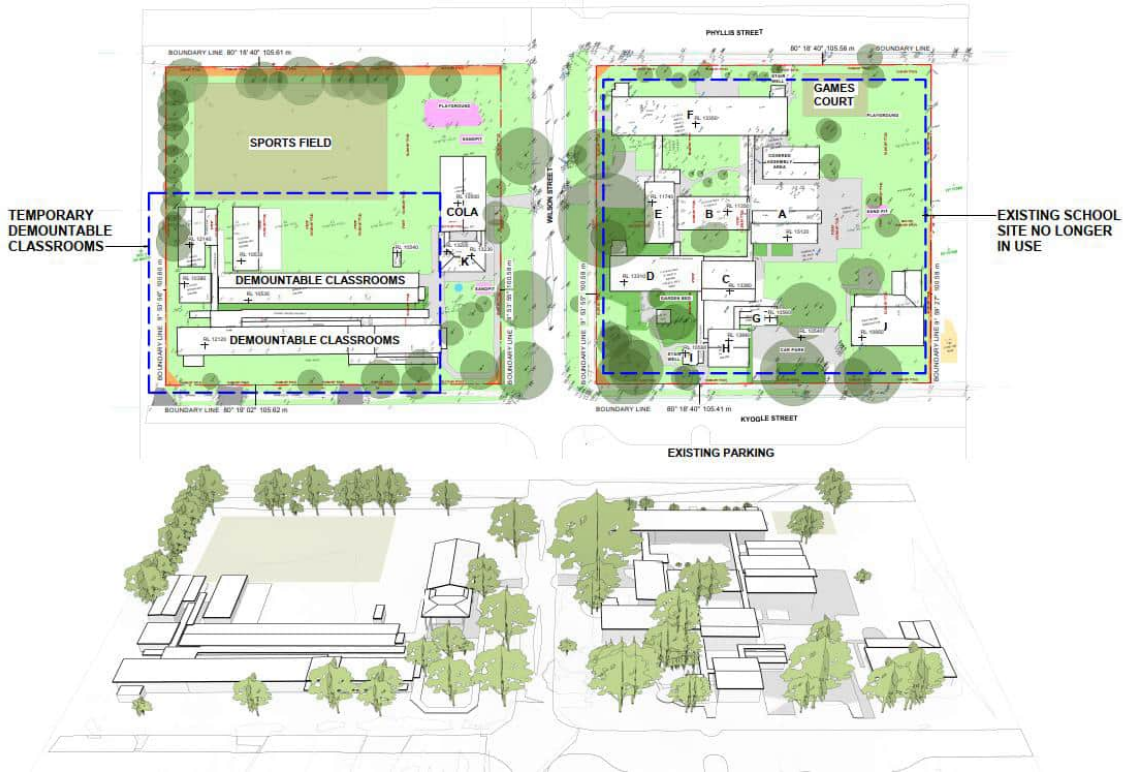


Figure 1.10: Existing site plan (Source: EJE Architecture)

Figure 1.11: Site Analysis (Source: EJE Architecture)

1.3 LANDSCAPE CHARACTER

- The existing vegetation of the eastern parcel includes amenity tree planting to the perimeter of the 3 street frontages of the site with a turf and mass planted understory
- Vegetation species around the perimeter consists of 'Spotted Gum', 'Weeping Paperbark', 'Silky Oak', 'Bush Cherry', 'Weeping Bottle Brush', 'Weeping Lilly Pilly', and 'Golden Penda'.
- Several trees have been categorised as having a high retention value. These species include 'Silky Oak', 'Spotted Gum', and 'Black Tea Tree'

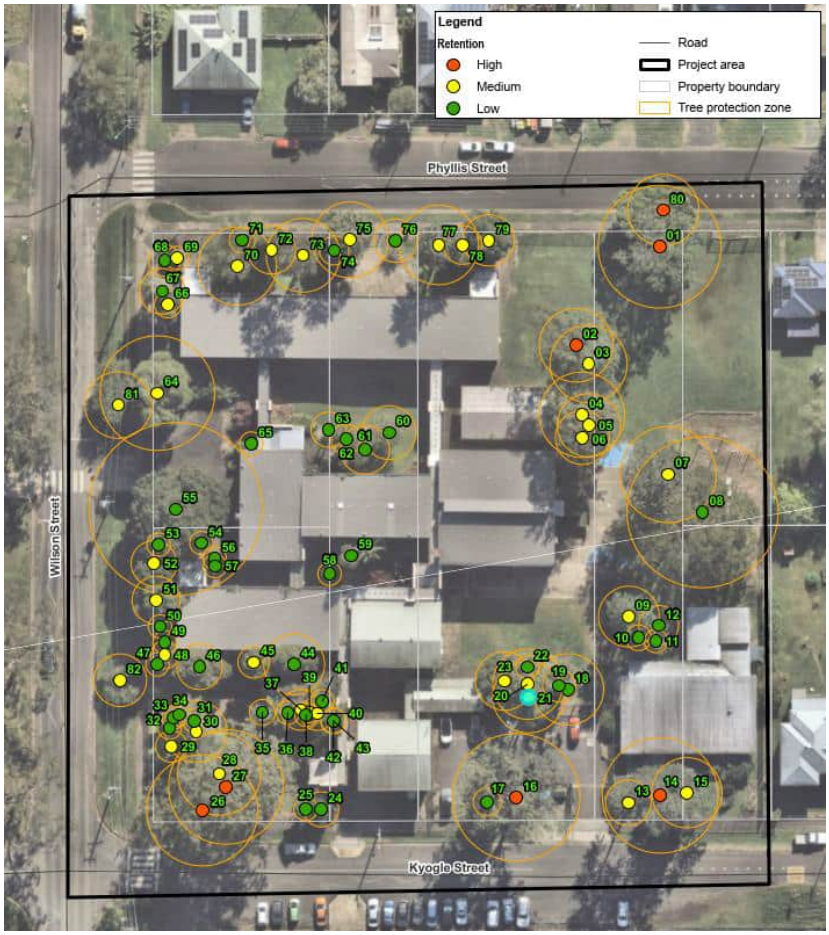


Figure 1.11: Tree retention value diagram (Source: GHD)

Figure 1.12: Site Photos (Source: EJE Architecture)

1.4 PHYSICAL CONTEXT

The opportunity to enhance the physical context of the site by opening the site up to the North and raising the building above the 2022 flood level was identified in the Master Plan. The strategies to improve the physical context of the site include:

- Positioning the proposed U-shaped building to open to the North with the Open Play areas located in the north to provide access to sunlight.
- Setting the building away from the eastern boundary to reduce overshadowing over the neighbouring buildings.
- Increasing the canopy coverage to 28% to provide shading and reduce the Urban Heat Island (UHI) effect. The original design intent was to maintain 30% canopy coverage to provide shade, create an outlook from classrooms and shield the school from the street. This intent has been achieved via the 28% canopy coverage, as well as the location of play equipment strategically placed in the undercroft to provide shaded play spaces.
- Raise the building up above the 2022 flood level to increase durability, flood resistance, and provide undercroft amenity for the students.
- Position the kiss and drop along Kyogle Street.
- Locate the car park to the eastern side of the site partially below the undercroft.

Figure 1.13: Overall Site Strategy

Figure 1.14: Masterplan Render (Source: EJE Architecture)

Figure 1.15: Overall Masterplan Render (Source: EJE Architecture)

1.5 VISUAL ANALYSIS OF NEIGHBORHOOD CHARACTER AND STREETSCAPE

The 2.2ha site is in Lismore South and is divided into two (2) parcels of land by Wilson Street, and bounded by Phyllis St and Kyogle St. The site is in a predominantly low density residential (R2) zone with general industrial (E4) zone to the south and a public recreation (RE1) zone to the north. The eastern parcel of the site contains the original school built over 80 years ago with many of the original buildings replaced by a new school opened in 1978. The western parcel of the site contains the temporary demountable structures currently being used, and sporting fields, and a COLA and amenity block.

Residential developments are located to the east and to the north across the road frontage of Phyllis Street. The residences are generally raised 1 storey weatherboard homes with hipped and gabled roof forms. The road frontage across Kyogle Street faces existing on-street parking, and the old Richmond River rail line which is being converted into a 123km cycleway connecting Casino to Murwillumbah.

Significant established trees planted along the boundaries of the school site are the dominant streetscape element and contribute to the local Lismore South character. Existing school buildings sit behind the boundary tree planting. Retention of these trees has been an important design component, ensuring that the new buildings are set generously back from the boundary by 6-10 metres, allowing the established character of the significant trees to remain the primary visual element.

Figure 1.16: Corner of Wilson St and Kyogle St (Source: Google)

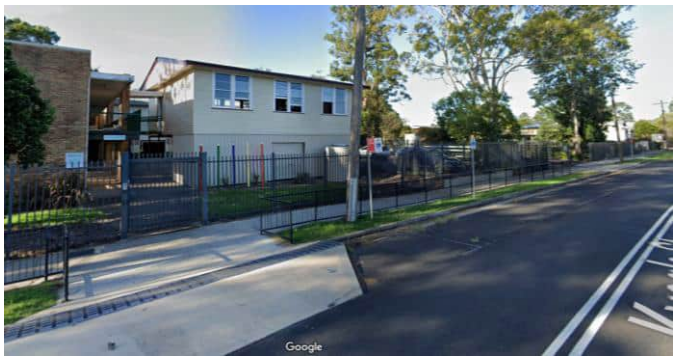


Figure 1.17: Kyogle St (Source: Google)

Figure 1.18: Kyogle St car park (Source: Google)

Figure 1.19: Kyogle St residential buildings (Source: Google)

Figure 1.20: Western Site along Kyogle St (Source: Google)

Figure 1.21: Wilson St facing north (Source: Google)

Streetscape 1: Corner of Wilson and Kyogle Street

The proposed school is designed to be an elevated single storey building with significant undercroft to place it 800mm above the 2022 flood level. The pitched roof is raked away from the boundaries to reduce the visual impact, and the building is set back from the boundaries to minimise overshadowing of neighbouring buildings. A photomontage of the proposed building from the corner of Kyogle Street and Wilson Street is indicated in Figure 1.22. This is a primary corner of the site when travelling through Lismore South. Most of the building sits behind the tree canopy, with gaps revealing the façade of the building and signage elements. The roof line of the corner of the building is raised to accommodate the hall and provide a visual change and point of interest along the façade, and highlight this corner.

Figure 1.22: Streetscape image from corner of Kyogle Street and Wilson Street (Source: EJE Architecture)

Streetscape 2: Corner of Wilson and Phyllis Street

The view of the proposed building from the corner of Phyllis and Wilson Street is indicated in Figure 1.23. Similarly, the building is set behind the established boundary trees. In this view the raised one storey building is visible through the gaps of the landscape elements. The building is slightly higher than the surrounding residential buildings but still has an appropriate scale in the residential neighbourhood, which also contains elevated single storey buildings.

Figure 1.23: Streetscape image from corner of Phyllis Street and Wilson Street (Source: EJE Architecture)

1.6 ABORIGINAL CONSULTATION AND CULTURAL HERITAGE

Aboriginal Cultural Heritage:

The ACHAR investigation identified that:

- The primary Aboriginal sites nearby are within 700m to 1km of the project site and are associated with the waterways.
- The area is considered to be "a moderately intact undifferentiated alluvial landform, with proximity to the river" and is predicted to have a "low level of archaeological potential for Aboriginal objects".
- No Aboriginal sites are recorded on AHIMS in the vicinity of the project area.

Site Investigations were undertaken to determine the presence of any Aboriginal objects, and the outcomes are included in the final ACHAR which accompanies the REF.

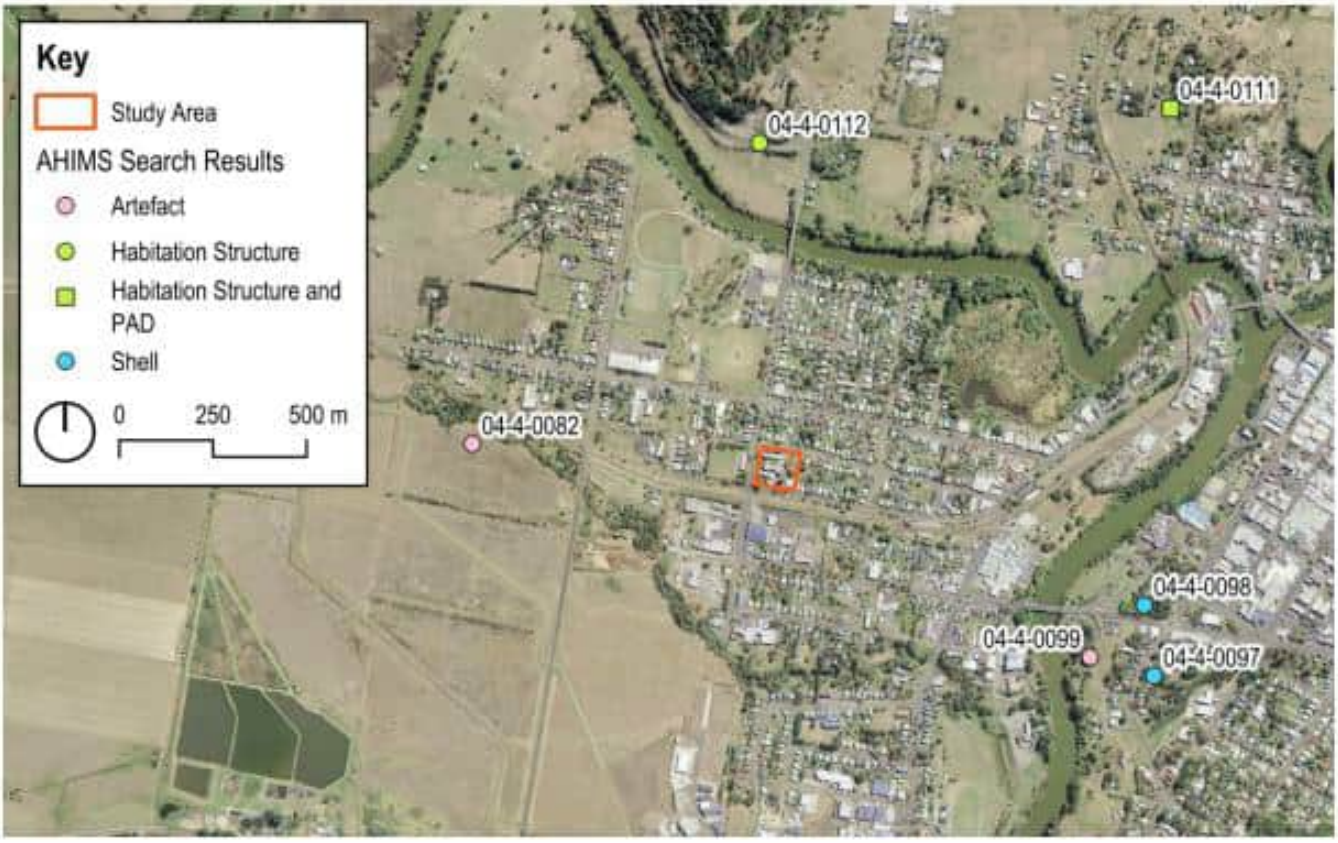


Figure 1.24: AHIMS result within close proximity of the study area (Source: GML Heritage)

Community Consultation:

Community consultation meetings have been held with Widjabul Wia-bal community groups with Brendan Blakeley of Elumni Consulting. These meetings were held to discuss ways to acknowledge and celebrate Bundjalung Culture and Country and provide a safe and inclusive learning environment for all students. These meetings identified 5 ways for the design to achieve this:

1. Gathering on Bundjalung Country
2. Planting for the Bundjalung Seasons
3. Telling Bundjalung Stories
4. Learning about Bundjalung Country and Culture
5. Celebrating Bundjalung Language

These recommendations were considered and developed into the design through the landscaping plan. Cultural gathering spaces are incorporated within the design and located close to the hall. A seasonal planting bed has been included near the assembly zone to showcase the plants of the Bundjalung seasons and these plants will be incorporated holistically into the planting plan. Signage and QR Codes will be placed around the garden beds to teach the students about Bundjalung stories and language. Planting is to be staged to allow multiple groups of students to learn about Bundjalung Country and Culture through plants.
The planting and landscape materials palette will continue to be developed in consultation with Aboriginal representatives. These palettes are proposed to be utilised site wide to ensure integration and continuity. Landscape design will include artwork with reference to Widjabul Wia-bal heritage. It will also use this artwork to inform the layout and design language utilised throughout the site.
The architectural palette reflects the colours of a eucalypt forest, with highlight colours of blue and terracotta to provide contrast. This principle reflects the sites proximity to bushland surrounding Lismore South and the wider region.

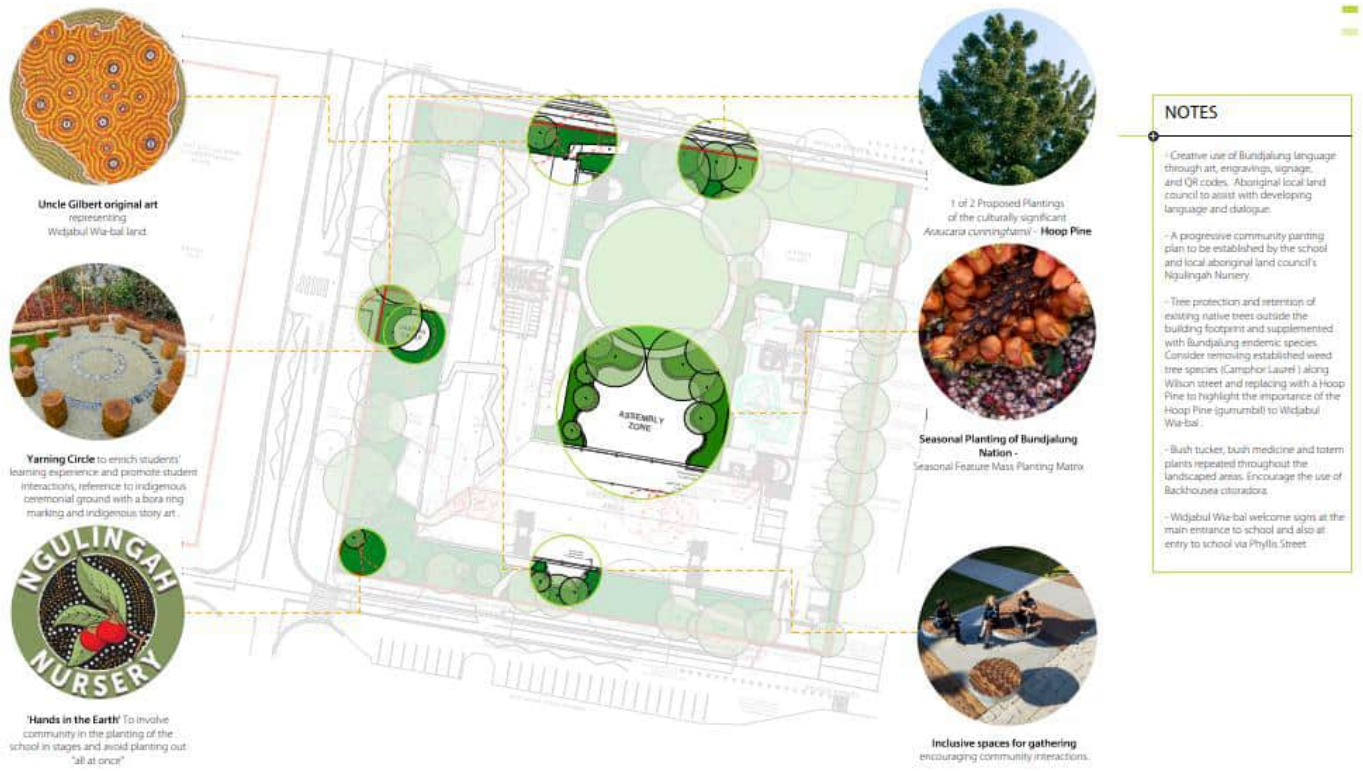


Figure 1.25: Connection to Country landscape diagram (Source: Terras)

1.7 EUROPEAN HERITAGE

A Heritage impact Statement by TZG has been completed and determined that no heritage buildings are located on the site. All existing buildings on site have significant damage from previous and the 2022 floods and are to be demolished.

The new buildings are to provide a modern and integrated learning facility which provides students with an opportunity for contemporary teaching methods. The character of the site is maintained through the existing boundary tree line, whilst the building is designed to be resilient during a flood event, raised 800mm above the 2022 flood level and designed with a durable material palette.

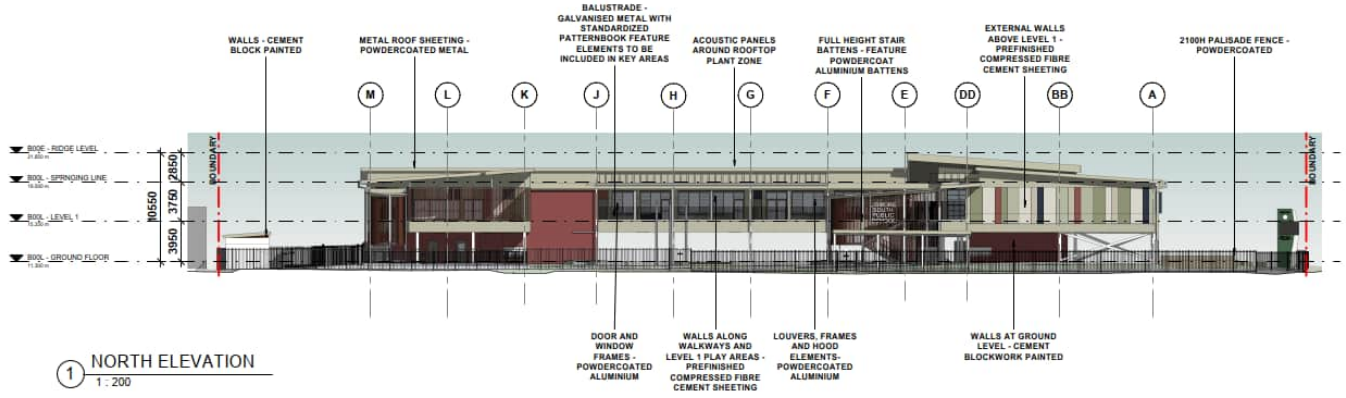


Figure 1.26: North Elevation (Source: EJE Architecture)

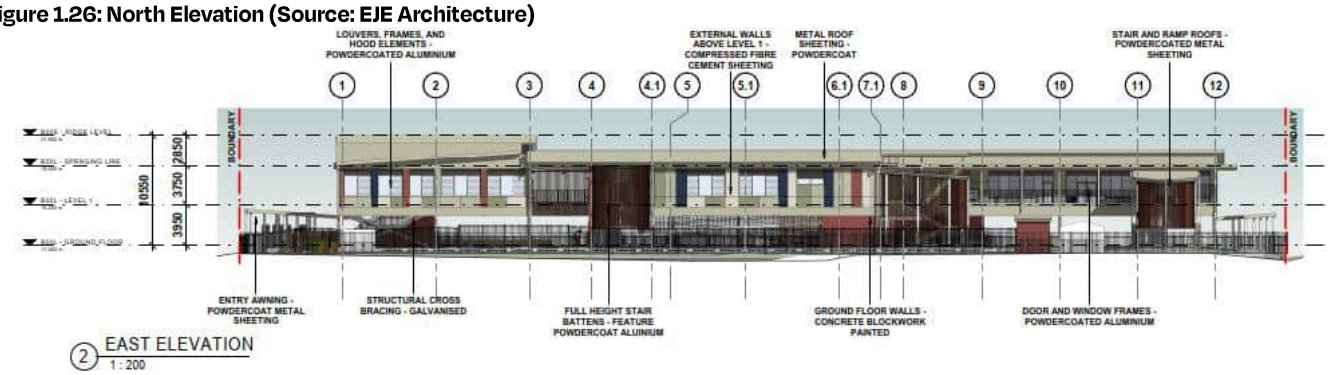


Figure 1.27: East Elevation (Source: EJE Architecture)

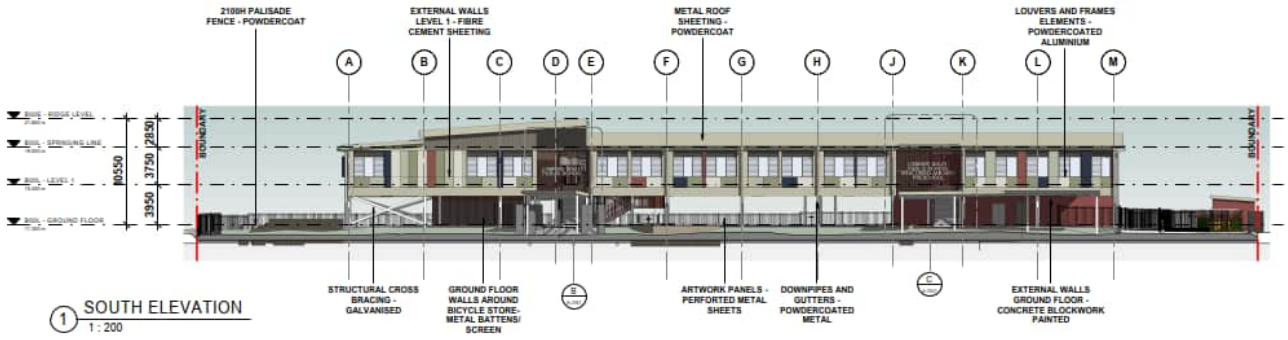


Figure 1.28: South Elevation (Source: EJE Architecture)

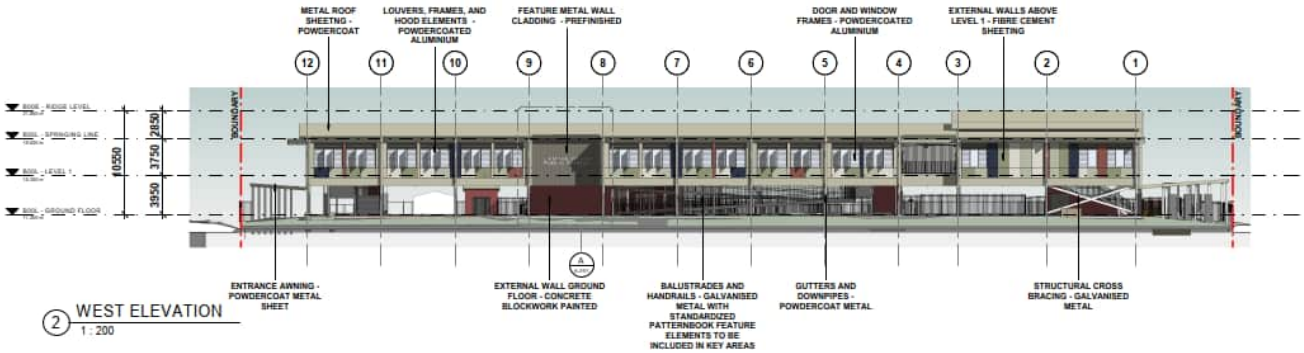


Figure 1.29: West Elevation (Source: EJE Architecture)

1.8 SPATIAL ORGANISATION

The site analysis and options explored in the Master Plan indicate that the optimum result for the site was to consolidate the footprint into a single storey building raised up over the 2022 flood level. This increases the flood resilience of the building, and also create an undercroft area for the school to utilise as a covered play area. The U-shaped design opening to the north was determined to be the best outcome for the site as it provides a large open play area to the north and is set away from the significant trees along the boundaries of the site. This shape allows the building to address the major drop off points along Kyogle Street and Wilson Street which divides the site into two.
Within the buildings there are several Hubs which have been located specifically to optimise the design and efficiency of planning.
The Hall is located on the prominent corner of Wilson and Kyogle Street. This element is naturally higher to provide room for the hall functions and creates a point of interest on the site and a reference point for the community to identify the school.

Figure 1.30: Artistic render of the Hall corner (Source: EJE Architecture)

The GLS Hubs are located along the western wing of the building. This positions them close to the bus drop off and pick up point for ease of access for the students. The amenities are positioned between the two GLS Hubs to allow equal and easy access by the students. The large undercroft zone provides the opportunity for flexible outdoor learning areas and covered play areas for wet weather and sun protection.

Figure 1.31: Artistic render of the large undercroft area being used as a shaded play space (Source: EJE Architecture)

The Administration and Staff Hub have been placed at the southeastern corner of the site. This is close to the staff car park for ease of access. There is a main entrance for staff from the car park and for students and visitors along Kyogle Street. Stairs and a lift are placed near both entrances to provide easy wayfinding around the site. The stair elements are recessed and highlighted to break up the façade along Kyogle Street between the admin and Library Hubs, and the Hall and Support Learning Hubs. School signage is placed above the stair elements facing the street.

Figure 1.32: Admin and staff hub close to main entrances to the site (Source: EJE Architecture)

The Preschool hub is located to the eastern wing of the building and positioned close to the Admin and Staff hub due to operational requirements determined by the school. The Preschool has an outdoor covered learning area directly off the play areas to the north, with a dedicated undercroft area provided on ground as well as an outdoor play area at Level 1. Access to the ground floor play area is provided through both a stair and a lift.

Figure 1.33: (Source: EJE Architecture)

1.9 LANDSCAPE DESIGN

The principles for the Landscape design were developed in conjunction with the Architecture team to inform the placement of the building. The Connection with Country consultation process also helped to inform the design and provided an opportunity for the Landscape to help educate the school community and provide a welcoming and safe place for all people visiting and using the site.

Landscape design principles and strategies:

- Connection with Country principles developed in the consultation process informed the design. This includes artworks, a yarning circle, bush tucker walks, incorporation of local language, and planting selection. These are all designed to reflect Bundjalung and Widjabul Wia-bal stories, language, and culture providing opportunities for learning, gathering, and reflection.
- Retention of the perimeter and significant trees was a key consideration during the design of the building and landscape plan. They are a key feature of the site and provide character to the local area.
- An east-west access way was developed in the building to provide access to cooling breezes and sight lines to the western parcel of the site.
- The activation of the undercroft area was key to providing opportunities for the landscape. This area will provide a cool and shaded place for outdoor play for the students throughout the year in a Climate Zone 2 environment. Activities and areas placed in the undercroft include seating, games courts, pick up waiting areas, multi-purpose spaces, and play equipment. This will be further developed in detailed design.
- The canopy coverage of the site will be increased to a minimum of 28% to reduce the Urban Heat Island effect and provide places of shade for students to play under.
- Passive surveillance will be maximised throughout the site and the monitoring of students will not impeded by too many physical structures.
- Native species of plants have been selected to reduce maintenance requirements and better connect to local Aboriginal culture.

Figure 1.34: Landscape Masterplan (Source: Terras)

1.10 LANDSCAPE ZONES

A range of landscape zones have been created that can be used for both passive recreation as well as for outdoor learning. These areas are shown below in Figure 1.35.

1) **Central Assembly Area:** between the undercroft area and the open play area is zone provides a space for the whole school community to gather for assemblies and school events.
2) **Yarning Circle**: located close to the Hall and visitor entrance to the school. This location is away from the main play areas to provide a private space for cultural conversations and learning opportunities. A bush tucker walk is to the west of the yarning circle.
3) **Open Play Area**: is a flexible open grassed space lined with garden beds including the four seasons planter beds. It is located to the north of the building, which wraps around the open space. A sports court is to the northeast.
4) **Primary School Undercroft**: the undercroft is a flexible covered outdoor area providing shelter from the summer sun and periods of rain. It provides spaces for seating, games courts, waiting areas, play equipment, and most spaces are multi-purpose in nature.
5) **Preschool Undercroft**: The preschool undercroft is located directly below the preschool for fire separation purposes. The Preschool undercroft opens onto outdoor play facilities for the preschool and is generally a multipurpose space with room for play equipment, storage and amenities.
6) **Community Gathering Place**: Located to the south between the main entrance and visitor entrance along Kyogle Street. It is within the school boundary and fence line for security purposes. This place provides space for the community to gather and come together. Within this gathering space six (6) panels have been designated to be artistic panels for the six (6) Widjabul Wia-bal families to collaborate on.
7) **Nature and sensory play:** Located on the western side of the building and includes obstacle course challenges and nature play sensory elements

Figure 1.35: Landscape Plans indicating Activity Zones (Source: Terras)

1.11 VEGETATION COMMUNITIES

Figure 1.36: Vegetation communities extract from landscape design (Source: Terras)

1.12 LANDSCAPE MATERIALS

The proposed material palette is inspired by the site's history and heritage. The rich floodplains and wetlands provide fertile land throughout Lismore, with sedimentary and volcanic rocks such as rhyolite and granite being the predominant materials. Wetland trees such as Paperbark will be used to create the place. Local timber is proposed in a variety of applications throughout the site with the introduction of coloured concrete to create interest speaking to the natural earthy colours of the surrounding landscapes. Timber referencing the Paperbarks and Melaleuca from the banks of Wilsons River will be used in furniture and features. Planting endemic vegetation will help create a sense of place unique to the site. Swathes of native grasses are proposed to reinforce movement and the site's relationship to water. The introduction of bush tucker plants represents the fertility of the greater Lismore area while creating opportunities for outdoor and cultural learning.

Figure 1.37: Material palette from landscape plan (Source: Terras)

2. PRINCIPLE 2: SUSTAINABLE, EFFICIENT, AND RESILIENT

2.1. Good school design combines positive environmental, social and economic outcomes and should align with the principles of caring for Country.
2.2. Schools should be designed to be durable and resilient in an evolving climate.
2.3. Schools and their grounds should be designed to minimise the consumption of energy, water and other natural resources and reduce waste.

2.1 SUSTAINABILITY STRATEGY

This project is targeting a 4-star Green Star Buildings v1 Rating and NCC 2022 Section J – Energy Efficiency. The project framework as requires adoption of Net-Zero ready design features, and those to support a circular economy. There is also a strong focus on features to support indoor environmental quality.
The project includes the following sustainability framework:

- Passive Design using the appropriate extents of glazing, combined with shading and envelop thermal performance to minimise active energy use and provide comfort.
- Learning spaces have natural ventilation and ceiling fans to allow passive cooling for a majority of the year, providing the opportunity to minimise the use of mechanical systems.
- Building services such as HVAC and lighting with energy performance over minimum prescribed standards.
- Electrification of hot water plants as a strategy to integrate net zero ready design principles.
- Photovoltaic panels on the roof for onsite energy generation.
- Specifying the use of low impact / low toxicity materials.
- Use of recycled materials in concrete
- Materials from accredited sustainable supply chains and suppliers.
- Energy and water efficient fittings and appliances
- Waste will be reduced by recycling of suitable paper and plastic products.

Figure 2.01: Sustainability Targets (Source: LCI)

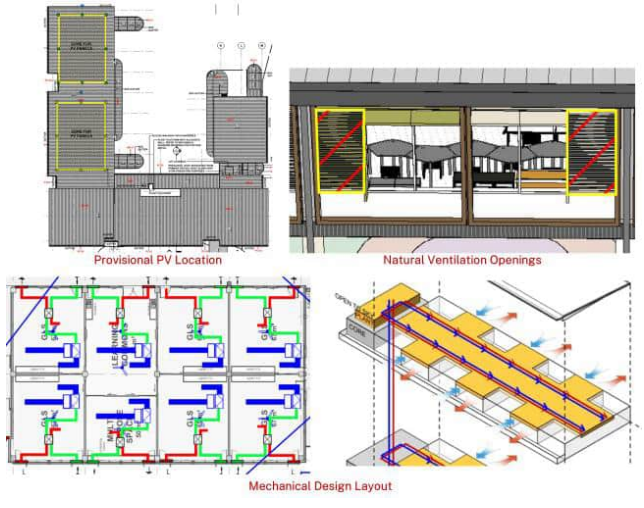


Figure 2.02: Net Zero by 2050 Strategy (Source: LCI)

2.2 PASSIVE DESIGN PRINCIPLES

The project includes the following passive design features designed to improve amenity and minimise reliance on mechanical systems.

- Natural light is generally provided to habitable spaces.
- Natural ventilation is provided in all teaching spaces and the Hall.
- Areas of paving without shade have been minimised on the site, noting however, that it is a requirement of the brief provided by SINSW that a sport court and car parking be provided for the Primary School
- Substantial new planting of trees will be incorporated, and the species have been selected to maximise shade potential.
- Outdoor spaces have been designed to benefit from local microclimates, and outdoor communal areas are designed to be shaded by either the undercroft or with vegetation.
- With the proposed landscape design, a 28% tree canopy coverage is achieved across the site.

2.3 NET ZERO DESIGN STRATEGIES

The project sustainability framework includes adoption of Net Zero design principles, and the design currently includes several features to support this including:

- Using passive design and energy efficient HVAC and DHW systems to reduce energy demand and consumption.
- Electric heat pump hot water systems with instantaneous boost system for areas with intermittent high-water demand. Electrification is a key net zero strategy for buildings and enables projects to use green power or benefit from the decarbonisation of the grid over time.
- Space provided on the roof for a mounted solar PV system. This will provide renewable energy and offset some of the project grid electrical demand.

Once implemented, DoE will need to ensure the building has its remaining energy sourced from 100% renewable power.

2.4 WATER SENSITIVE URBAN DESIGN

Water Sensitive Urban Design (WSUD): Stormwater quantity controls are outlined in the Lismore City Council DCP – Chapter 22 – Water Sensitive Design. The site will implement new stormwater drainage inlet pipes and pits, bio-swales, and rainwater re-use tanks to minimise the development impact on the natural water cycle. Due to the flood prone nature of the site, overland flow paths will be designed to cater for an increased frequency of discharge.

Stormwater: Onsite stormwater detention (OSD) is required on site due to the increased impervious area proposed in the development. By removing a portion of stormwater runoff, the proposed OSD reduce stormwater peak discharges and volumes to downstream catchments. They also improve the quality of stormwater discharged to the receiving environment.

Rainwater Reuse / Water Conservation: One rainwater tank has been proposed for the site and shall be incorporated into the stormwater drainage system. A 10,000L rainwater harvesting tank has been proposed and will serve irrigation of the site.

Education: Opportunities to educate the school community on Water Sensitive Urban Design principles will be included in the detail design of the project. This includes information signage at tank and infiltration trench locations, and real time evaluation of water collection and reuse as part of the Building Management System.

2.5 DURABLE MATERIALS

The proposed buildings will use robust prefinished cladding materials that are durable and require minimum ongoing maintenance. The materials predominantly used on the façade are concrete block and concrete at ground floor, with prefinished compressed fibre cement sheets used to clad most Level 1 walls and powder coated aluminium for feature elements, screens, frames, hoods, etc. The roof will be a Colorbond steel element.

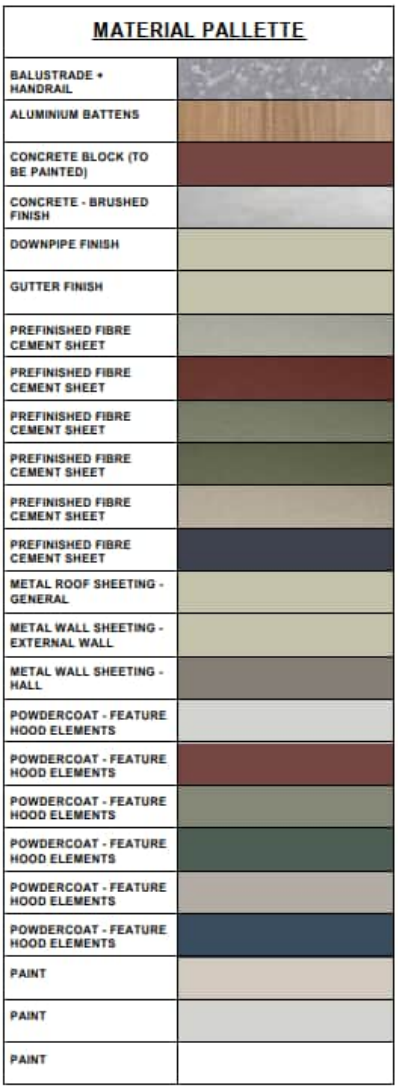


Figure 2.01: Material palette and artistic render (Source: EJE Architecture)

3. PRINCIPLE 3: ACCESSIBLE AND INCLUSIVE

3.1. School buildings and grounds should be welcoming, easy to navigate and accessible and inclusive for people with differing needs and abilities.
3.2. Schools should be designed to respond to the needs of children of different ages and developmental stages, foster a sense of belonging and seek to reflect the cultural diversity of the student body and community.
3.3. Schools should be designed to enable sharing of facilities with the community and to cater for activities outside of school hours.

3.1 SITE ENTRIES

There are three (3) main pedestrian entries to the site, one (1) restricted pedestrian entry, and a two-way car park which is entered and exited from Kyogle Street.

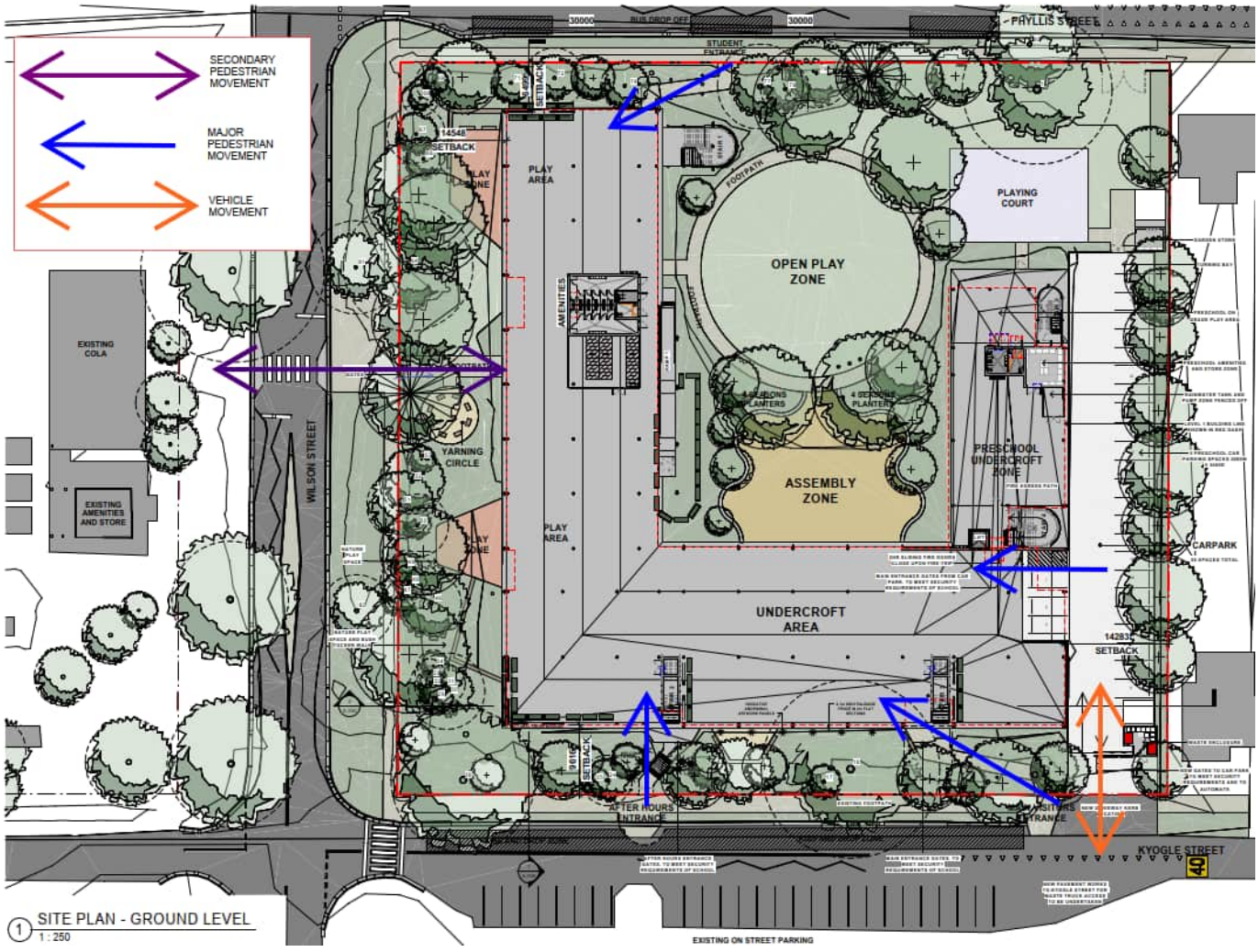


Figure 3.01: Site Entries Diagram (Source: EJE Architecture)

The pedestrian entrance to the north along Phyllis Street is for student use from the bus drop off. It is covered from the boundary to the undercroft by an awning. This entrance point is located close to the GLS Hubs and Stair 1 for easy student way finding once off the bus.

The pedestrian entrance to the southeast along Kyogle Street is the main entrance to the school for anyone accessing the site. It is under cover from the boundary to the building and directly faces Stair 4 which leads to the Admin Hub. There is line of site from this entrance to the lift and Stair 5 which leads to the Preschool and Admin entrance. This entrance is next to the community gathering space along Kyogle Street and is to be a welcoming and culturally considerate space for the community to gather.

The pedestrian entrance to the southwest along Kyogle Street is the after-hours access point to the school. It is close to the community gathering space, as well as the Hall. It leads directly to Stair 3 which lands outside of the Hall.

The minor pedestrian entrance which enters along the western boundary facing Wilson Street is for during school hours use to allow the students to cross Wilson Road to the sports field on the western parcel of the site. This entrance is accessed by the footpath running from the undercroft to the pedestrian crossing.

Vehicle access to the site is via Kyogle Street. The driveway has been widened to allow for garbage trucks to provide the waste service for the site.

Figure 3.02: Render of main entrance to LSPS (Source: EJE Architecture)

3.2 SIGNAGE

- Wayfinding signage within the site will be included and developed during the detailed design stage. The site has been designed to comply with AS1428.1 and AS1428.2.
- Key signage for school identification is proposed on the buildings near key entry points. A freestanding digital signboard is also proposed to be located on the corner of Kyogle and Wilson Streets. Signage location and detail is included in the architectural drawing set.

3.3 ACCESSIBILITY

- A lift has been provided close to the main entry points to allow inclusive access for all staff and students.
- An AS1428.2 compliant 1 in 14 ramp is provided from the ground floor to Level 1 for the primary school to allow for inclusive access for all staff and students.
- New graded pathways are provided from the footpath around the site to the building where the main entrances are indicated.
- An AS1428.2 compliant 1 in 14 ramp is provided within the Hall to provide access to the stage
- A disabled car park has been provided within the onsite car park near the main entrance to the school, to enable a continuous path of travel from the car park to the Support Learning Hub and general access for wheelchair and mobility aid users.
- A network of paths throughout the site are accessible complaint and connected to each area of the school.
- Hearing induction loops are proposed for the new Library and Hall, whilst portable systems will be provided for learning areas and classrooms.
- Colours and finishes are selected to meet the requirements AS1428.1 and the BCA and assist users with visual impairment. This includes colour contrast for internal and external spaces.
- Accessible and ambulant amenities on all levels of the new buildings are provided.
- Security of the building has been considered with good passive sightlines maximised from the street and strengthened through opening of the site, providing clear visual connections between buildings, whilst maintaining accessibility and inclusiveness.
- The Landscape design has established a variety of defined external spaces for active and passive uses, as well as being inclusive by recognising variable user groups.

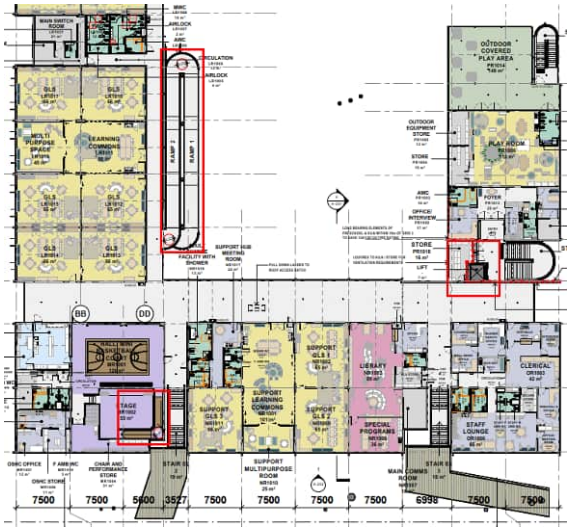


Figure 3.03: A Ramp and Lift systems allows access from ground to Level 1 (Source: EJE Architecture)

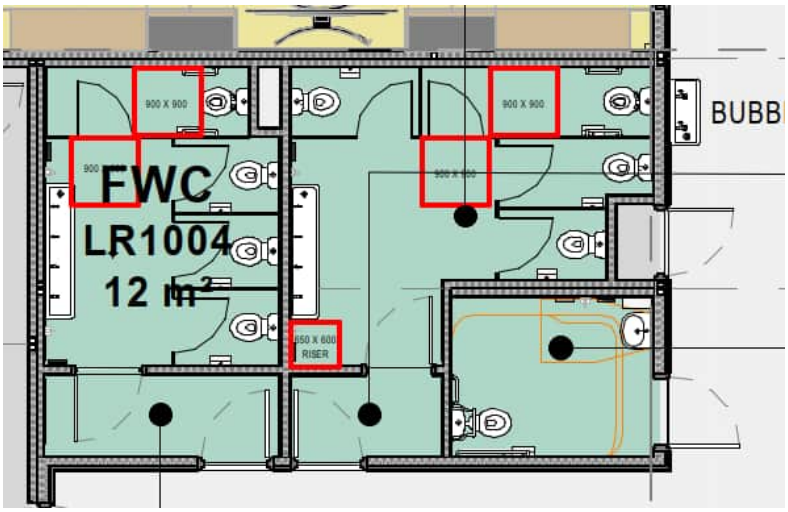


Figure 3.04: Amenities block contains ambulant and accessible bathrooms (Source: EJE Architecture)

3.4 SHARED USE

The Hall has been positioned and designed with consideration of providing access to the facility after hours. It is adjacent to the after-hours visitor entrance on Kyogle Street to provide easy and secure access by the community.
There is a community gathering space proposed between the main visitor entrance and the after-hours visitor entrance to provide opportunity for the community to gather before school community events. Within this space there is a provision for six (6) artwork panels which are to be designed by each of the six families of the Widjabul Wia-bal community.

4. PRINCIPLE 4: HEALTHY AND SAFE

4.1. Good school design should support wellbeing by creating healthy internal and external environments.
4.2. The design should ensure safety and security within the school boundaries, while maintaining a welcoming address and accessible environment.
4.3 In designing schools, consideration should be given to connections, transport networks and safe routes for travel to and from school.

4.1 HEALTHY BUILDINGS

The buildings are designed and orientated to maximise natural light and ventilation whilst addressing the road frontages and creating inviting outdoor spaces.
The buildings are designed to achieve a 4 Star Greenstar Design Rating, considering passive cooling, heating, natural light, occupant comfort and safe material use.
To protect students from sun and rain during outdoor activities and movement, a large undercroft area creates sheltered hub and raises the building above the 2022 flood level for flood resilience. A COLA is also provided as an attached awning to the hall and the connection of the of the hall to the outdoors provides additional sheltered outdoor activity space. New covered walkways link the raised buildings and provide weather protection whilst moving between spaces.

4.2 SAFETY

- **Building Location** – The new building has been located adjacent to street frontages with clearly recognisable, accessible, and safe pedestrian entries. The new pedestrian accessways are also separated from vehicle driveways, and they do not cross paths with vehicles.
- **Entry Points and Cycling Connection** – The main entrances to the school are connected to the wider community through a network of pedestrian and bicycle paths. These entries also directly link to the onsite secure bicycle parking area behind the amenities block to the western wing of the building.
- **Fencing** – The proposal will replace the existing perimeter palisade fencing due to flood damage. The new fencing will provide security around the school boundary and suit the new entries enabling students to be secure within the school grounds. The buildings are set back from the boundaries allowing active and landscaped spaces to the boundary. The landscape design along Phyllis Street, Wilson Street and Kyogle Street creates a welcoming interface between the school and the public realm whilst still maintaining visual permeability with the open fencing.

5. PRINCIPLE 5: FUNCTIONAL AND COMFORTABLE

5.1. Schools should have comfortable and engaging spaces that are accessible for a wide range of formal and informal educational and community activities.

5.2. In designing schools, consideration should be given to the amenity of adjacent development, access to sunlight, natural ventilation, proximity to vegetation and landscape, outlook and visual and acoustic privacy.

5.3. Schools should include appropriate indoor and outdoor learning and play spaces, access to services and adequate storage.

5.1 NEIGHBORHOOD

The rebuild of Lismore South Public School will facilitate engagement with the community and surrounding environment through positioning of the new buildings to activate street frontages and create connections through provision of community gathering spaces, and access to school facilities. The buildings reflect and respect the surrounding context, whilst offering inviting, lively additions, with a variety of shared educational and active spaces. The new development will give the school renewed presence and identity within the community, strengthening its position within the Lismore South neighbourhood.

5.2 NOISE MITIGATION

The Lismore South Public School site is bound by three local roads, with Wilson Street busy at peak times in the morning and afternoon. Although traffic noise may be present at these times, the building walls and windows of the raised school building will be designed to meet noise level requirements specified in the acoustic design report. This includes wall insulation and minimum 6.38mm thickness glass in all windows. Most of the peak hour traffic occurs before and after regular school hours, reducing the impact of street noise.

The school has the benefit of being significantly screened by established trees around the perimeter of the site providing an additional level of noise buffering, and a visual screen to the street. The building is set back 14.5m from the Wilson Street boundary.

The design addresses the sensitive residential developments on the eastern boundary by providing:

- a carpark buffer between the buildings and the boundary (14.1m setback)
- plant screening between the carpark and boundary fence

Figure 5.01: Screening effect of existing trees along Wilson Street (Source: EJE Architecture)

5.3 STAGE CONSIDERATION AND FLEXIBLE DESIGN

Indoor -The school has been designed with General Learning Spaces spread across the western wing of the building, separated by the amenities hub which helps to divide the learning spaces up and allows the school to manage the stages as required. Access to technology is provided across all areas to facilitate flexibility of use across all subjects and stages.
Outdoor - A variety of outdoor zones have been provided including play equipment, ball courts, seating areas, open play zones, and activity areas and are incorporated into the landscape design. This will facilitate organisation of a variety of informal and formal activities across the stages and subjects, whether it be for cultural, support, exercise, or subject specific purposes. The site sits over two parcels of land which the school can use to divide up the stages during play times.

5.4 NATURAL LIGHT AND VENTILATION

The footprints of the new buildings are designed using the EFSG standard templates which allow for ample access to natural light and ventilation to all learning areas.

- The 6m wide circulation space along the southern zone of the building will capture the dominant easterly sea breezes in summer. The southern wing has a northerly aspect to maximise northern light in these areas.
- Central Learning Commons located within clusters of 4 classrooms, provides opportunity for cross-ventilation. This can be utilised by the adjoining classrooms with the provision of large sliding doors to enable opening to the Learning Commons as needed.
- The library has north and south facing aspect to provide ample natural light and ventilation
- The cluster of GLS Hubs have been positioned along the western wing to provide access to natural light and ventilation from the east. Classes are predominantly facing east and located on external walls where possible to access natural light and ventilation to all rooms.
- The hall is provided with translucent vertical folding doors across the width of the northern wall which combined with high level glazing will provide abundant natural light.

Figure 5.02: View of 6m wide classroom corridor which provides an east/west breezeway along the southern wing (Source: EJE Architecture)

5.5 OUTLOOK AND PRIVACY

Learning spaces in the Lismore South Public School facility have the opportunity for an outlook over the landscaped grounds and the existing tree lined perimeter, which also provides a visual screen of the road and mitigates overlooking of neighbouring properties.

- The Preschool opens up to the north with a view of the primary school grounds and existing perimeter trees along Phyllis Street, as well as high value trees within the site located to the northwest of the on grade outdoor play areas for the preschool children.
- Most learning spaces in Lismore South Public School face the internal landscaped grounds. The remainder facing Wilson St and have views to 10m deep landscaped grounds and the existing trees lining the perimeter of the site.
- The outlook is emphasised for students, with use of an external covered walkway on the internal side of the U-shaped building linking the learning areas of the facility. These walkways face the landscaped internal courtyard.
- The undercroft space is open on all sides and from within the undercroft the existing and proposed landscape elements are frames by the grid of the proposed building.
- The eastern boundary of the site abuts a residential area. The landscape plan proposes extensive planting of trees to provide a visual and acoustic buffer between the school site and residential areas. The carpark adjacent to this boundary provides 14.1m setback between the buildings and boundary.

Figure 5.03: Internal courtyard of Lismore South Public School with a northern perspective (Source: EJE Architecture)

5.6 STORAGE AND SERVICES

- The school is designed with two zones for Amenities, Services and Storage at the same location on each level. This standardises the services provision across the building and simplifies the cable runs and reticulation of sewer and water services.
- Due to the flooding hazard on this site, where possible storage is raised above the 2022 flood level. Storage and required student amenities provided in the undercroft are designed with durable materials and construction to increase flood resilience.
- Storage is provided to meet SINSW EFSG standards requirements for each Learning Space. This is predominately provided in the form of joinery and loose furniture.
- Large storage areas are provided in the hall facility for chairs and equipment for the mini–Basketball Court.
- The Preschool is provided with separate large storage areas to meet DPHI and EFSG planning requirements related to this facility, including bulk storage, sports equipment and toy storage.

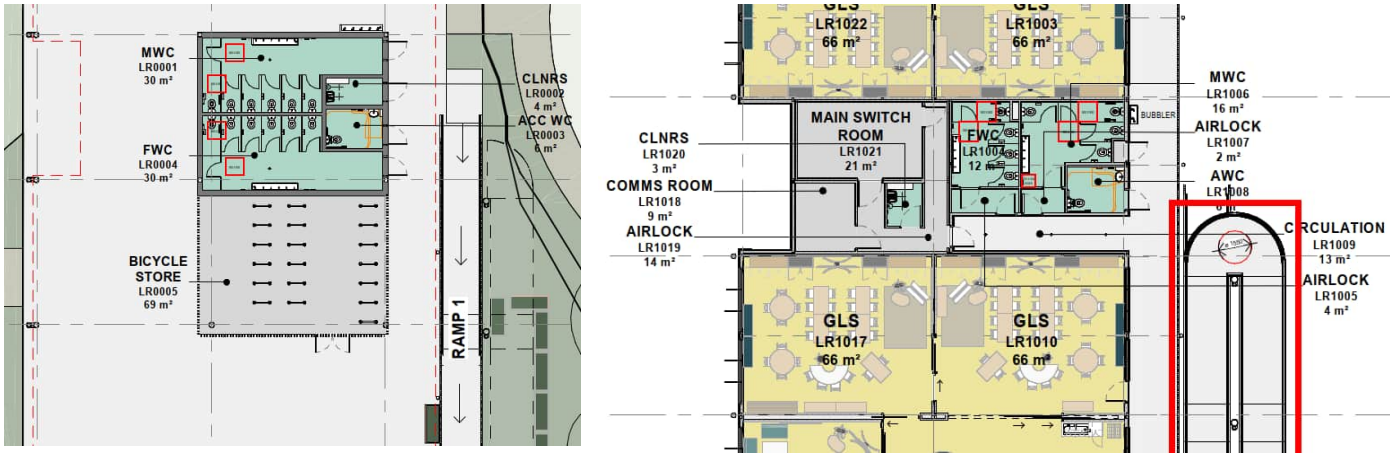


Figure 5.04: Stacked amenities block at GF and L1 (Source: EJE Architecture)

6. PRINCIPLE 6: FLEXIBLE AND ADAPTABLE

6.1. In designing schools, consideration should be given to future needs and take a long-term approach that is informed by site-wide strategic and spatial planning.

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

6.3. Schools should be adaptable to evolving teaching methods, future growth and changes in climate, and should minimise the environmental impact of the school across its life cycle.

6.1 DEVELOPMENT OF THE MASTERPLAN

As part of the Masterplan process, a range of Options were developed and considered by the design team, considering items such as:

- Alternate sites around Lismore and Richmond River area
- Optimum building locations
- Bulk and scale of proposed buildings
- Retention and enhancement of open space
- Links to the Community

Due diligence site investigation had been completed to support and test the design, including: Geotechnical and Contamination assessments; Detailed Site Surveys; Flooding; Aboriginal Cultural Heritage; European Heritage; Social Impact; Arboricultural Assessment; Traffic Generation and Green Travel Plans; and Noise Assessments. Further investigations have since been completed once the site was selected and access to the site was provided.

The Masterplan aims to improve the flood resilience of the school, raising the school above the 2022 flood level, as well as improving the entry into the school, enhancing the street presence and connection to the wider Community. This has been achieved through the positioning of the new buildings to functionally relate to the landscape, local environment, and the development of entry and circulation into the site.

Figure 6.01: Opportunities and Constraints diagram (Source: EJE Architecture)

6.2 POTENTIAL FOR FUTURE GROWTH

The existing site is divided into two parcels separated by Wilson Street. The proposed design only utilises the eastern parcel of land, providing an opportunity for future development on the western parcel of land.

Currently the western site hosts the temporary demountable classrooms, an amenities block, COLA, open sporting field, and play equipment. On completion of the new school on the eastern parcel, the temporary classroom use on the western parcel will cease, and students and staff will decant/move into the new facilities.

Figure 6.02: Existing overall site 3D view (Source: EJE Architecture)

6.3 MODERN METHODS OF CONSTRUCTION, STANDARDISED LAYOUTS, AND THE PATTERN BOOK TEMPLATE

The design of the building has been primarily influenced by the SINSW Modern Methods of Construction (MMoC) Guidelines, the Standardised Hub Layouts, and the Pattern Book Template currently being developed and executed by SINSW. The spaces have been designed to fit within consistent planning grids to create efficiencies across school projects, and encourage innovative MMoC methods, including prefabrication and modular construction.

The SINSW standardised hub layouts include a range of Learning Spaces, Specialist Technical Learning Areas, plus Learning Commons Areas that can be designed and used flexibility by the school, encouraging new teaching and learning approaches and the integration of new technologies. Large sliding doors between Learning Spaces and the Learning Commons provides day to day flexibility to support contemporary learning, including team teaching and problem-based learning. This will allow a group of four General Learning Spaces to provide areas for collaboration, group learning, presentations, display areas, student breakout zones, and reflective / quiet spaces. Specialist Hubs provide facilities such as Support Units, Admin and Staff Hubs, and Library Facilities.

The standardised column grid with non-loading bearing walls allows the building to be reconfigured in the future, allowing for change of use and enable varying educational pedagogies to be adopted.

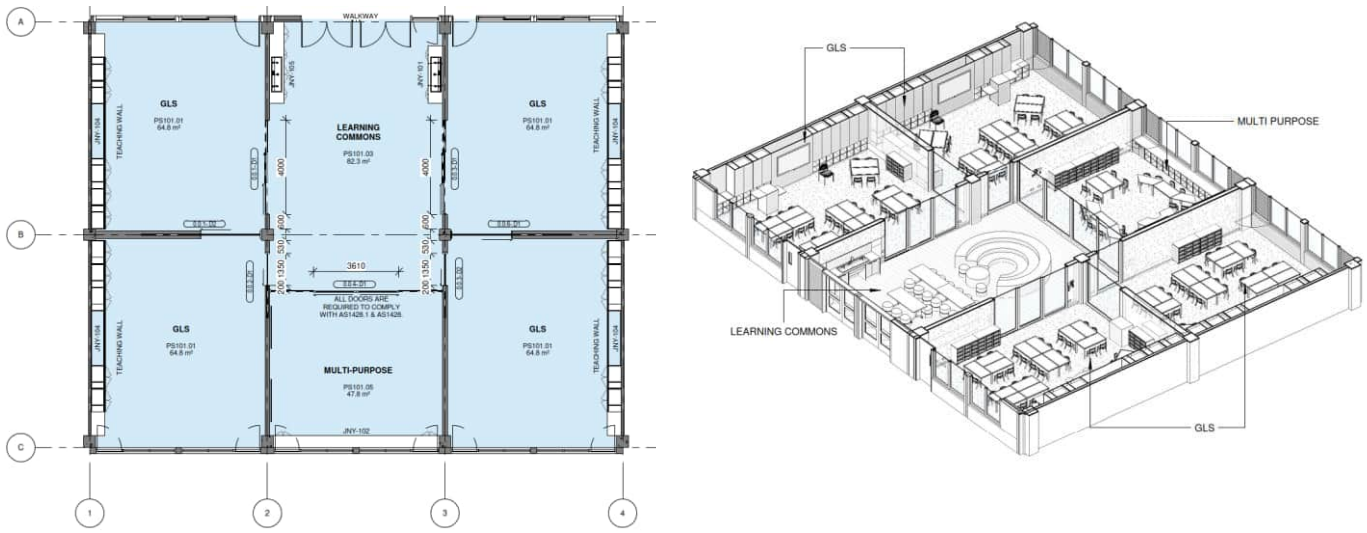


Figure 6.03: Standardised Grid and Templates (Source: NSW DoE)

The 9m x 7.5m grid system for Learning Areas has been applied wherever possible to establish the standard learning unit clusters for consistent module construction and efficient structural spans.

The Standardised hub layouts establish the depth of the building footprint at a typical 18m. This has informed the configuration of the footprint in relation to the site constraints of the street boundaries and significant established trees on three sides. This has led to a 'U' shaped building footprint that addresses the street, but also creates an Outdoor Learning Courtyard that has good access to northern sun, and links the Library, Canteen and COLA, and Support Learning areas.

The proposed buildings will incorporate the following features that provide high environmental performance, spatial planning and allow for community use:

- Use of robust, prefinished cladding materials to maximise their lifecycle
- Good environmental performance with orientation of learning spaces
- Natural Ventilation of Learning Spaces to maximise comfort and minimise need for air-conditioning
- Integrated Architectural and Landscape design to maximise links between indoor and outdoor spaces
- Use of acoustic and thermal insulation to improve the performance of the building
- Flexible Learning Spaces that can be used by a range of students and different subject areas.
- Raised building footprint to provide flood resilience, maximise opportunities for open space, and maximise opportunity for shaded areas in the climate zone 2 environment.

6.4 MULTI-USE FACILITIES AND LINKS TO LOCAL COMMUNITY

The placement of the raised Hall facility on the prominent corner of Wilson Street and Kyogle Street, further strengthens the presence of the School within the Community. It is an opportunity to reflect upon the resilience and development of the site with the existing Lismore South context, whilst enabling the school to embrace a new era of education. Design development of Lismore South Public School has confirmed the appropriate position of the library to be between the Admin/Staff hub and the Support Hub. This provides for visual connection to the surrounding streets and potential access for shared after-hours use with the Community through joint use arrangements.

The Kyogle Street landscape design has been opened to the street to provide the school with a community gathering place. This opportunity provided a place for the school community to come together before and after school events. Within this zone there is provision for six (6) panels which are dedicated to the local Widjabul Wia-bal community family groups and is an opportunity for each family group to share their stories through artwork. Welcoming totems will be placed near the main entrances to the site to welcome the greater school community to the site.

The proposed Hall facility is being investigated as a potential Joint Use Facility with the wider Community. It placed in the southwest corner of the site where it establishes a strong link to the adjacent western parcel of land hosting the sporting fields. The facility will have good access to Kyogle Street, where after hours there will be ample on street parking, which when combined with the proposed pedestrian and bicycle entry points, facilitates good Community access. The building has been designed with the ability to separate the public use areas from School areas after hours. By combining the hall and library facilities, undercroft area, and assembly area, the potential for large School and Community events is maximised through clear circulation paths and entry points with direct connection to each other and the public domain.

Figure 6.05: Perspective view along Kyogle Street (Source: EJE Architecture)

7. PRINCIPLE 7: VISUAL APPEAL

7.1. School buildings and their landscape settings should be aesthetically pleasing by achieving good proportions and a balanced composition of built and natural elements.
7.2. Schools should be designed to respond to and have a positive impact on streetscape amenity and the quality and character of the neighbourhood.
7.3. The identity and street presence of schools should respond to the existing or desired future character of their locations.
7.4. The design of schools should reflect the school's civic role and community significance.

7.1 DESIGN PROCESS AND APPROACH

The proposed activity is the result of an ongoing rigorous design process that commenced at the Master Planning phase and continued through to Concept and Schematic Design phases, resulting in the current design. During the process a wide range of options were explored, examining:

- a variety of sites were explored across the Greater Richmond River Catchment
- option to raise the school to the 2022 flood level or to the PMF level
- maintaining a Preschool School on the site
- Alternate building forms and arrangements

Consultation with a wide variety of stakeholders was also undertaken, including with the local Widjabul Wi-bal Community, Lismore South Public School Staff, Residents and Community members. Lismore City Council, Technical Stakeholder Group (TSG), and Ausgrid were consulted to understand their technical requirements. The design was also presented twice to the State Design Review Panel for their comments, and the current design responds to the feedback of the panel as outlined in Appendix 4 and 5.

7.2 DEVELOPMENT OF STREETSCAPE BUILDING FORM

The proposed design consolidates the new school as a raised 1 storey building that sits over an undercroft. This design was a result of extensive community and stakeholder consultation, an exploration of options within this site and alternative sites, and the need for flood resilience. The form can be broken up into 4 parts: the undercroft, the central body, the western wing, and the eastern wing.

7.2.1 DESIGN PRINCIPLES:

The following design considerations determined the position and form of the proposed Lismore South Public School:

- Establishing a setback that allows the existing boundary trees to be retained and reduces the potential for the building to overshadow neighbouring buildings.
- Retaining the prominence of existing trees along the boundaries
- Establish entry points that allows for easy wayfinding around the site
- Height of the building is minimised by strategic placement and orientation of the roof structure and minimises overshadowing of neighbouring buildings.
- Creating a corner element at the key Kyogle Street and Wilson Street intersection
- Maximising usable outdoor areas within the school
- Not creating outdoor areas that will be difficult to supervise

7.2.2 UNDERCROFT:

The Undercroft has been developed as an essential play area providing shade and shelter from the climate conditions of the Lismore environment. It was welcomed by the schools' staff and community and has since become a vital part of the overarching landscape design. The undercroft design has developed in conjunction with the SDRP feedback, noting the soffit height of four meters, and notches to the building form allows ample light into this space. Connection to adjoining landscape areas and ceiling treatments will create a flexible light filled space that will be highly valued by the school. The Undercroft is now host to an assortment of active and passive play areas including:

- Seating areas
- Waiting zones for bus and car pick up
- Games courts such as handball
- Play equipment with Softfall
- Multipurpose areas

The undercroft areas also spill out to and relate to the landscaped zones, leading to the yarning circle and bush tucker walk to the southwest, the sports court to the northeast via the 4 seasons planter footpath, the central assembly area, and connecting to the western parcel of the site via the supervised Wilson Street crossing.

7.2.3 CENTRAL BODY

The central body of the Lismore South Public School is host to the Hall, Support Hub, Library Hub, and Admin/Staff Hub. It is accessed off Kyogle Street through the main entrance to the east, the car park entrance with stair and lift access from the eastern carpark, or the after-hours entrance to the west.
This zone has the potential to be accessed by the community after hours and can be separated off from the rest of the school for security purposes during these events. The movement corridor to the north has been expanded to 6m to allow for breezeway through this space, as well as spill out space for school and community events. The location of the hall at the corner of Kyogle Street and Wilson Street breaks up the form of the building due to the increased height in this location and is away from residential buildings to minimise impact on overshadowing or the streetscape of adjoining residential areas.
The Admin/Staff hub is located to the opposite corner, overlooking the main entrance and carpark to provide supervision and easy wayfinding around the site. This location also allows it to be easily accessed by the preschool as this relationship was important to the school.
The stairs are set back from the building line to help break up the façade and provide points of interest along the main body of the building. This strategy also provides easy wayfinding around the building and a place for school signage.

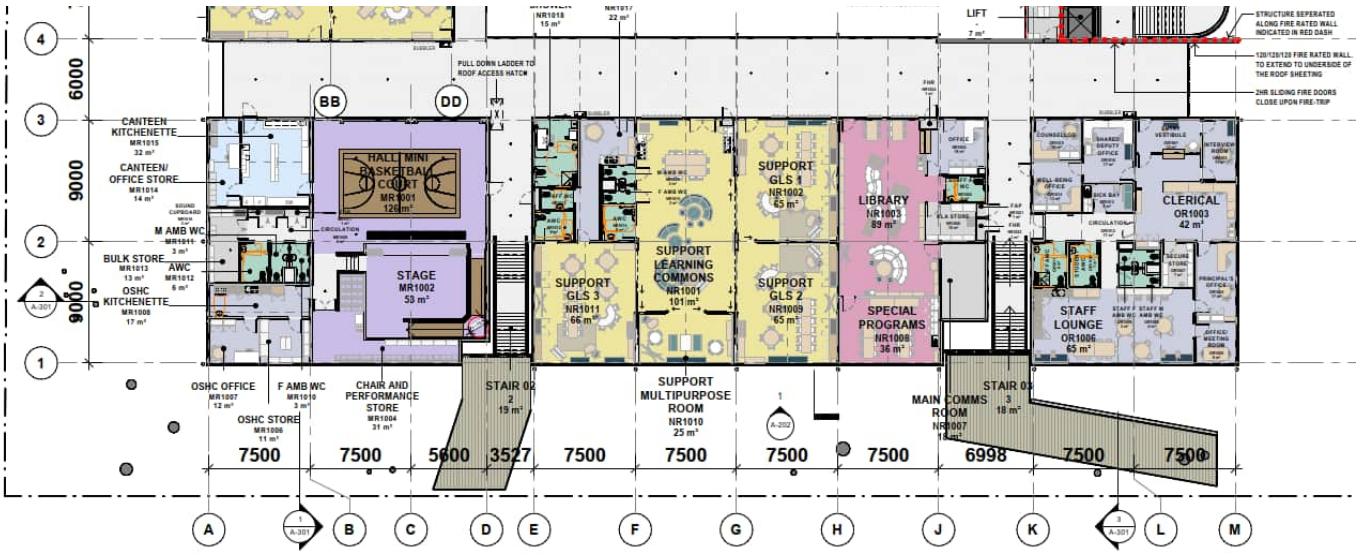


Figure 7.01: Central Body located along the southern boundary (Source: EJE Architecture)

7.2.4 WESTERN WING

The western wing hosts the general learning spaces and the amenities hub for the primary school. There are two sets of stairs as well as a 1 in 14, AS1428.2 compliant ramp for accessible access between the undercroft and the upper level of the school. As there is only one lift provided this ramp was deemed vital to support the lift function. The western wing is located close to the student entrance and bus drop off and provides the students with easy access to their classrooms at the start of the day. The amenities hub is located between two GLS Hubs and is used to both break up the façade and break up the Learning Hubs. This allows the school to easily separate the learning stages within the school and to break up the building form with the recessed amenity and services element. The central amenity block also provides the students with equal access to the amenities and is important for supervision.

Figure 7.02: Western Wing location of the GLS Hubs and Amenity Block (Source: EJE Architecture)

7.2.5 EASTERN WING

The eastern wing of the building is dedicated to the Lismore South Public School Ngulliboo Jarjums Preschool and has been fire separated from the Public School through fire rated walls and automated fire rated sliding doors. This wing opens up to the north and is connected to the ground plane via a stair. The preschool wing is shorter than the western wing and is set back from the eastern boundary to reduce overshadowing of the neighbouring residential buildings. The eastern face has openings which view the extensive tree planting along the boundary. At ground the undercroft below has an amenity and storage block, a nature play area including sand pit, and active and passive play areas for the students to use.
The play area a level 1 has been extended to meet the minimum outdoor play space as required by the school.

Figure 7.03: Eastern Wing Level 1 (Source: EJE Architecture)

Part C

8. CPTED

9. Impact of Outdoor Lighting

10. Signage Strategy

11. Connection with Country

12. Childcare Planning Guidelines

13. Evaluation of Environmental Impact

8. CPTED

8.1 NATURAL SURVEILANCE

Natural Surveillance is a strategy of crime prevention which seeks to inhibit criminal activity by designing an environment such that users of a space can 'see or be seen'. The design of Lismore South Public School incorporates the following principles to address this:

8.1.1 AVOID BLIND CORNERS

The design for Lismore South Primary School is raised from the ground for flood resilience. As such the design generally does not have blind corners. Those elements which have potential be form a visual barrier on site have generally been designed to allow visual permeability. For example, fences are palisade style; and stair balustrades are treated with battens, both of which have a high percentage open. The function of the amenities block requires it to be a solid element, however it has been located is such a way that does not isolate any adjacent space.

8.1.2 PROVIDE ENTRIES WHICH ARE CLEARLY VISIBLE

The main entry to the site is clearly marked with a large awning over the footpath. The main pedestrian entrance to the school, the visitor entrance, and the student entrance are marked clearly with signage. Each of these entrances are proximate to stairways or ramps with access to the building proper.

8.1.3 USE PERMEABLE SECURITY GRILLES AND DOORS

Fences, balustrades & the like are battened & have visual permeability. Doors are glazed with visual permeability minimising areas intruders may be hiding.

8.1.4 ENSURING CLEAR SIGHT LINES IN THE CARPARK

The carpark has clear sightlines throughout. The only element which projects into the carpark area is a stair which is battened ensuring clear sight lines

Figure 8.01: Easy wayfinding around the site (Source: EJE Architecture)

8.2 TERRITORIAL REINFORCEMENT

The design for Lismore South Public School achieves well design territorial re-enforcement by:

- Incorporating fencing which defines the ownership of the space
- Incorporating signage to all entrances which address the street creating a defined & positive image for the school
- Landscaping for entrances & play areas indicating the use of the space as well of the space, & creating a sense of place for students incorporating familiar landscaped landmarks
- The communal landscaped areas incorporate large open spaces as well as smaller intimate nooks allowing for many types of use of the space

Figure 8.02: Undercroft provides lookout to the open play area and provides a diversity of spaces (Source: EJE Architecture)

8.3 SPACE / ACTIVITY MANAGEMENT

Space / Activity management refers to monitoring use of an area as well as maintaining it. Where an area is infrequently used spaces are vulnerable to criminal activity & vandalism.
In the case of Lismore South Public School, the site will be maintained by the department of Education. The use of the site by unauthorised people will be controlled in part by secure fences & gates.

8.4 ACCESS CONTROL

Access Control for a site using physical and symbolic barriers is important part of clearly defining public vs private space. As well as identifying these boundaries, 'Access Control' allows users of a site to recognise pathways into it using landscaping, desire lines & pathways.
As noted above Lismore South Public School uses physical boundaries such as fences gates & landscaping to define the site. In addition, entrances to buildings incorporate signage as well as highly recognisable elements, such as battened stair wells

Figure 8.03: Access control via fences and gates delineates public and school space (Source: EJE Architecture)

9. IMPACT OF OUTDOOR LIGHTING

LCI, the electrical engineers, have provided lighting to the undercroft zone of the LSPS development. Concerns around light pollution to the neighbouring buildings have been considered.

All the outdoor lighting will comply with AS/NZS4282:2019 Control of obtrusive effects of outdoor lighting. This condition applies to the eastern boundary which abuts the residential neighbours. This system must comply with both pre and post curfew requirements as a mitigation measure as outlined by the electrical consultant.

LCI have determined that the Services Contractor is to ensure no external luminaire on the project has an Upward Light Output Ration (ULOR) that exceeds 5%, relative to its actual mounted orientation. The Services Contractor is also to ensure that direct illuminance from external luminaires has a maximum illuminance value no greater than 0.5 lux to the boundary, 0.1 lux to 4.5m beyond the site into the night sky.

10. SIGNAGE STRATEGY

Signage for Lismore South Public School and Lismore South Public School Ngulliboo Jarjums Preschool is proposed at the pedestrian entrances to the site to assist in wayfinding.
Existing boundary signage will be maintained and made good. This signage provides information to the wider community about school events.
A new digital information sign will be provided and located to the southwest corner as indicated in Figure 10.01 below.
Details of the Building Identification signage and Digital Sign are included in the architectural documentation and located as indicated in Figure 10.01 below. More information regarding the signage details can be found in the architectural drawing package included with the REF.

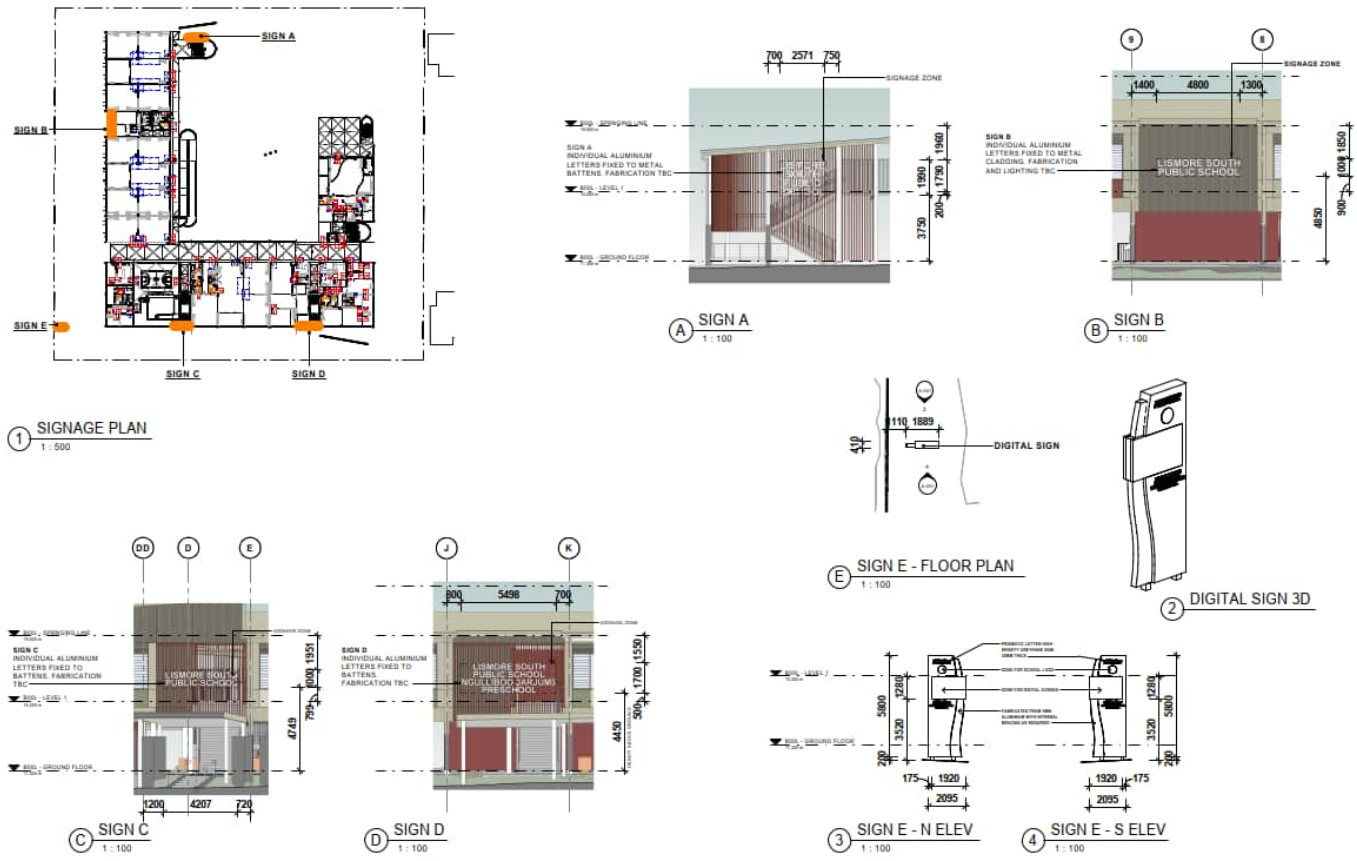


Figure 10.01: Signage Strategy Diagram (Source: EJE Architecture)

11.CONNECTION WITH COUNTRY

Connection with Country meetings have been held during the Schematic design phase and strategies have been developed in conjunction with the Widjabul Wia-bal representatives. There have been both an architectural and landscape response and integration of these strategies within the design. The main strategies developed in the meetings fall under five banners:

1. Gathering on Bundjalung Country
2. Planting for the Bundjalung Seasons
3. Telling Bundjalung Stories
4. Learning about Bundjalung Country and Culture
5. Celebrating Bundjalung Language

More information can be found in Appendix 6.

11.1 ARCHITECTURAL RESPONSE:

The architectural response to these strategies includes:

Making the hall a place that is accessible, welcoming and easy for the broader community to use.

Due to flood constraints the Hall is located on Level 1. Where possible EJE has made the Hall as welcoming and accessible as possible:

- Stairs and the ramp are placed to land adjacent to the hall entrance to provide easy wayfinding around the site.
- The hall can be opened to the COLA area to provide extra space during ceremonies and assemblies for the wider school community to attend.
- The hall is designed to be a key feature on the site, encouraging community engagement and celebration of the school community.

Community use will be determined by the school.

Places for Elders to come in and teach art, cooking dance and tell our stories

The undercroft space and yarning circle are intended to be flexible spaces and could be used to facilitate Elders coming in to teach the students. Additionally, the Learning Commons within the GLS Hubs could be used to facilitate this activity and Community connection. This item will be managed in the future by the school and community.

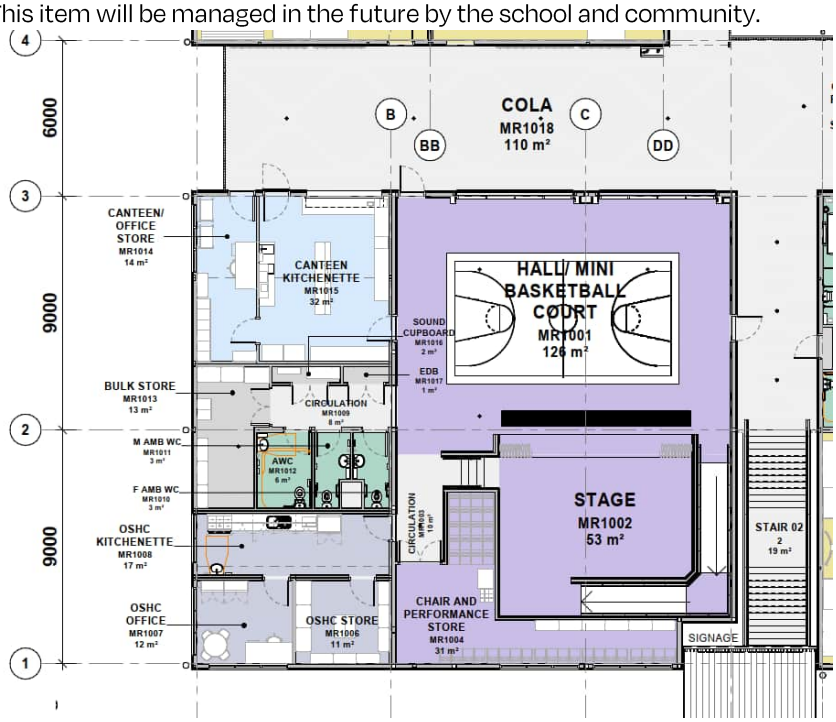


Figure 11.02: Hall Floor Plan (Source: EJE Architecture)

11.2 LANDSCAPE RESPONSE:

The landscape design has been heavily influenced by the response to the Connection with Country report. this has been shown graphically in Figure 11.03 following on from this text. Items incorporated include:

- Welcome signage is included at the main points of entrance for students and visitors to the site.
- The AECG will be consulted on the use of Bundjalung language in signage.
- A gathering zone is located along Kyogle Street between the main entrance and after-hours entrance.
- A yarning circle in included on the ground floor, in a position visible and accessible form the Undercroft area

Figure 11.01: Artistic Render of Yarning Circle (Source: EJE Architecture)

- Two potential locations for new Hoop Pines on the school grounds are identified. There are also opportunities to add imagery referencing the pine.
- Terras documents indicate the desired involvement of the Local Aboriginal Land Council's Ngulingah Nursery. This will be explored with the contractor through design finalisation.
- There is a designated four seasons garden close to the central courtyard. Further information regarding the Bundjalung seasons will need to be provided by the Community.
- A bush medicine zone is included in the landscape plan. Totem plants will need to be chosen with input from the community.
- Documents include note that zones will be left for future planting opportunities for students to learn about and connect with Country.
- Terras and EJE have incorporated into the entry gathering space the 6 artwork panels which are to be designed in collaboration with the six primary family groups within Widjabul Wia-bal. These will be further developed as the project progresses.
- Areas of the landscape are to be left unplanted, providing an opportunity for the children to learn about Country.
- The undercroft space and yarning circle are intended to be flexible spaces and could be used to facilitate Elders coming in to teach the students. This item will be managed in the future by the school and community.
- The inclusion of language through art, engravings, and signage will be further developed in the landscape plan in the

next phase of the design.

- Plant species selection is predominately Australian natives and endemic species to connect to the local character and reflect Country

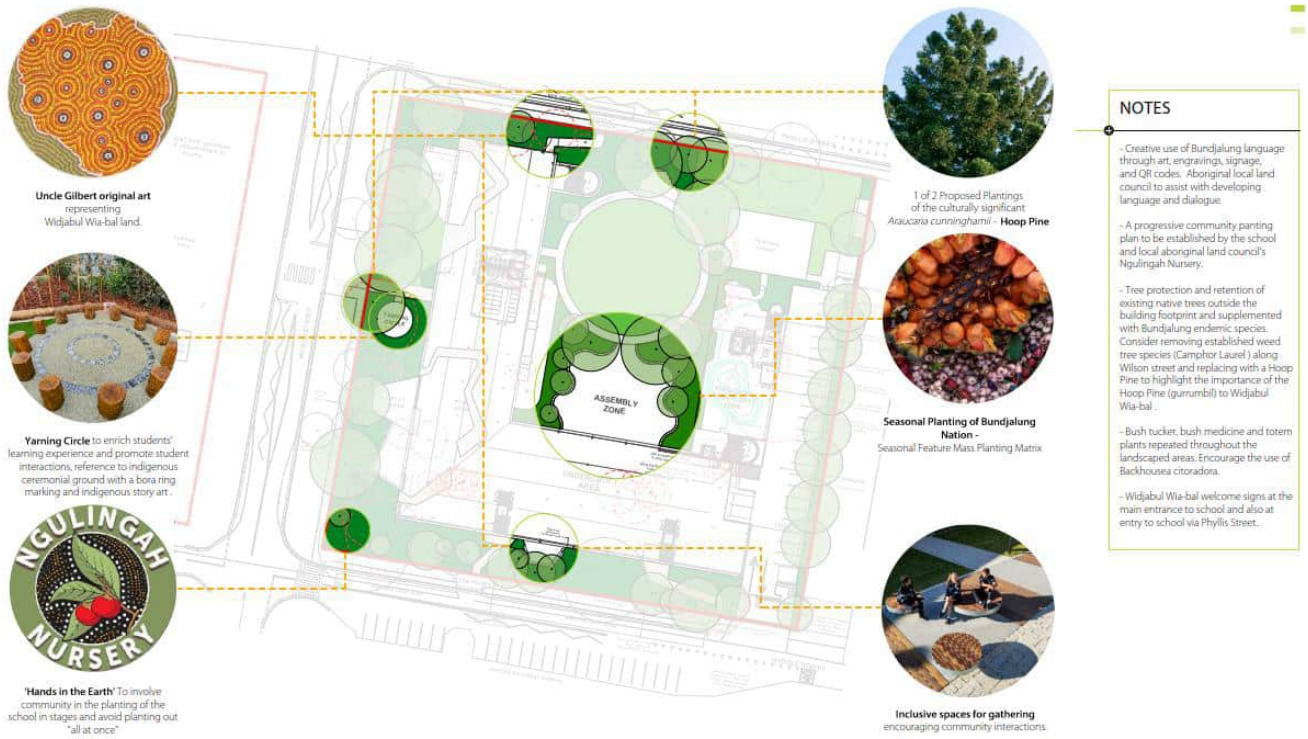


Figure 11.03: Connection with Country Strategies incorporated into landscape design (Source: Terras)

12. CHILDCARE PLANNING GUIDELINES

The Childcare Planning Guidelines have been developed by the Department of Planning, Housing & Infrastructure (DPHI) and are used to ensure consistency of facility amenity for a minimum standard of childcare. The planning guidelines set out items including:

- **Fencing to enclose outdoor spaces**: All outdoor spaces used by preschool aged children will be enclosed by fencing. On the ground floor, this barrier is 2100 high palisade fencing where it separates the carpark area from play spaces. Where fences separate preschool & primary school play spaces on ground floor, they have been shown as 1200 high. The level 1 outdoor play space has been designed with a full height feature balustrade which is compliant with EFSG guidelines. Refer to drawings A-100 and A-101.
- **Laundry and hygiene facilities**: Laundry & hygiene facilities have been provided onsite & utilise the standard SINSW Preschool template. The laundry is located off the foyer away from play areas & as such does not pose a risk to children. Refer to drawing A-101.
- **Unencumbered indoor space**. The unencumbered indoor space exceeds the requirement of 3.25m^2 per child. Whereas the total required space is 65 m^2, the provided space exceeds 100 m^2. Refer to drawing A-101.
- **Unencumbered outdoor space.** The unencumbered outdoor space exceeds the requirements of 7.0m^2 per child. Whereas the total required space is 140 m^2, the provided space exceeds 600 m^2. Refer to drawings A-100 & A-101.
- **Toilet and hygiene facilities**: Facilities have provided on Ground and Level 1. The number of WCs, as well as a trough basin has been shown on plan. An accessible WC and unisex amenities block have been shown on the ground floor. Refer to drawings A-100 & A-101.
- **Access to ventilation and natural light**: Indoor spaces to be used by children have windows on the north and east sides allowing for adequate ventilation and natural lighting. These windows have been indicated on the plans A-100 & A-101 as well as A-201.
- **Administrative spaces**: At Lismore South, the administrative function of the primary school will be shared by the preschool. Parents will sign in at the primary school reception located at Grid L,3. Within the childcare facility, administrative spaces comprise: an office / interview room as well as an admin / staff area. This is in line with the standard SINSW template. Refer to drawing A-101.
- **Nappy change facilities**: A height adjustable nappy change table has been shown within the amenities room. A basin & nappy bin have also been shown. Refer to drawing A-101 at grid M,6.1
- **Outdoor Space: Natural Environment**: An extensive nature play area has been designed by the landscape architect adjacent to the undercroft play space on the ground floor. Refer to Landscape plans as well as Architectural drawing A-100 & A-101.
- **Outdoor Space: Shade**: The outdoor play area is achieved on Level 1, with additional play area provided in the undercroft of the building. As such there is ample shade for the students to play in. Refer to drawing A-100 and A-101.
- **Premises designed to facilitate supervision**: The proposed development including the amenities area, has been designed to the standard template which facilitates supervision of all areas used by children. In the amenities area, windows allow for supervision of the room while low partitions between WCs will allow privacy for children when using the toilets. These panels will be added as the design is detailed further. Refer to drawing A-101.

As noted above, the design of this childcare facility complies with the items noted in the *'Child care planning guideline, – National Quality Framework Assessment Checklist'* – this has been attached in Appendix 7

13. EVALUATION OF ENVIRONMENTAL IMPACT

13.1 VISUAL IMPACT

The building has been designed where possible to mitigate the impact on the visual amenity within the context of the activity. Due to the impact of flooding, the school facilities have been raised above the 2022 floor level but are kept to a single storey at this height to minimise the visual impact.

The local residential buildings in the immediate context are generally raised buildings in response to previous flood events. We note that any future development in this area will need to meet a similar floor level as the Lismore South Primary School.

Additionally, the building is set back from the boundary by 14.5 meters along Wilson Street, 6.5 meters along Phyllis Street, and 9.6 meters along Kyogle Street to maintain the existing boundary trees. Planting at the boundary has been included to increase the privacy, particularly along the eastern boundary which is the key sensitive interface for the site.

Figure 13.01 – Render of proposed planting along the eastern boundary

The design of the roof is pitched away from the boundary to reduce the appearance of the overall height of the building, and to hide the roof plant area. Figure 13.02 indicates a section through the plant zone which shows how this detail has been developed. The building form is set back in key locations to break up the line of the building and create visual interest and zones within the façade.

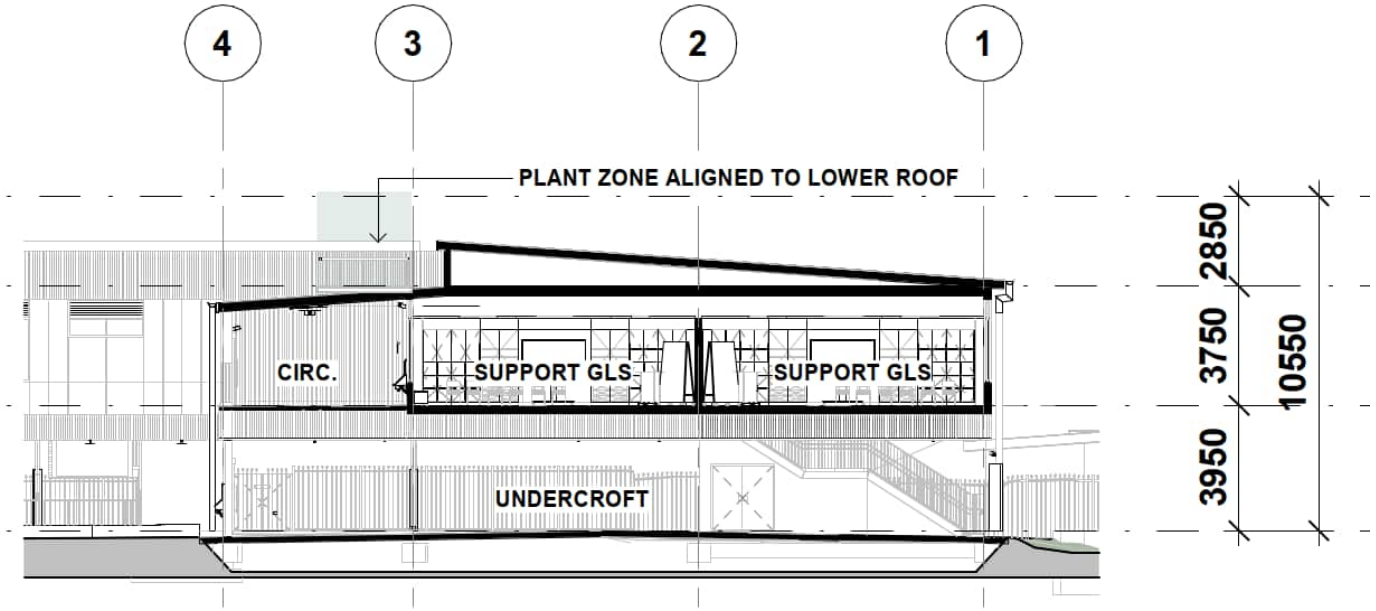


Figure 13.02 – Section through Plant Zone

13.2 LIGHT POLLUTION

The placement and design of the exterior lighting is such to ensure there is no light spill to the surrounding neighbourhood. This is to be further developed in conjunction with the electrical consultant during the next phase of documentation.

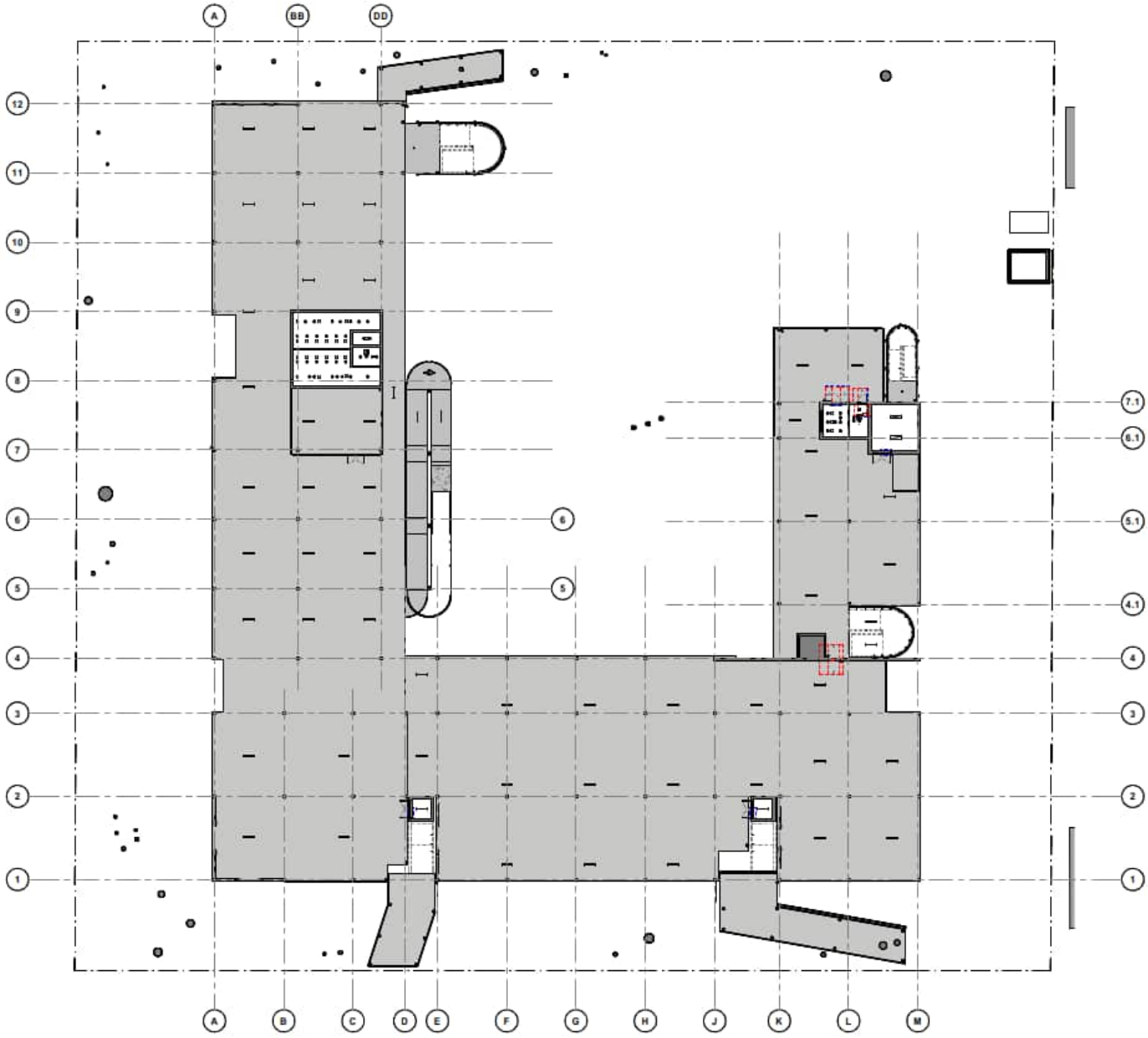


Figure 13.03 – Reflected ceiling plan of ground floor showing location of lighting to undercroft space.

13.3 OVERSHADOWING

The form of the building was purposefully set back from the eastern boundary to reduce the impact of overshadowing on the neighbouring residential buildings. Whilst this has reduced the impact of over shadowing, there is some mid and late afternoon shadowing occurring.

Winter Solstice: Sunlight available from sunrise to 2.30pm equalling approximately 8 hours of daylight. From 2.30pm the building shadow enters the south-eastern residential boundary as indicated in figure 13.01.

Summer Solstice: Sunlight available from Sunrise until 5pm equalling approximately 11 hours of daylight. From 5pm the building shadow enters both residential boundaries. The overshadowing provides some protection from late afternoon hot western sunlight during summer months.

The proposed school design does not interfere with minimum daylight requirements for the neighbouring residential buildings.

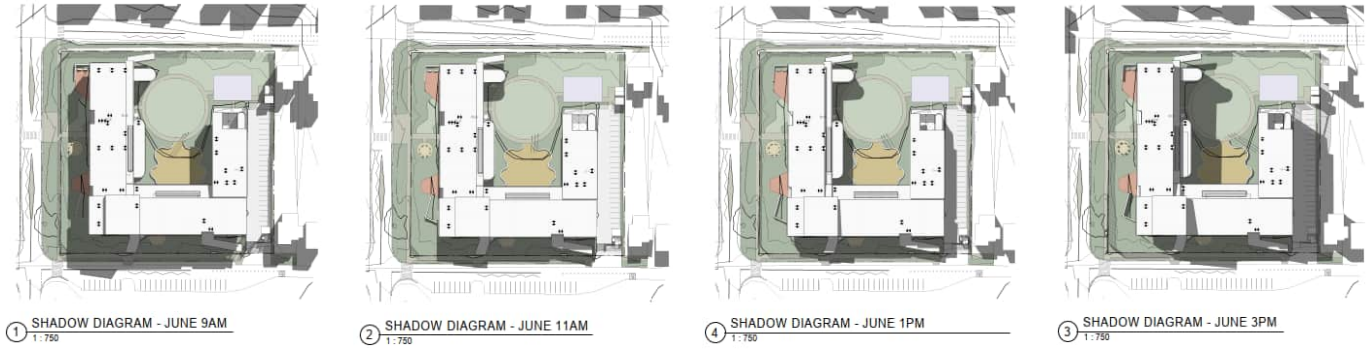


Figure 13.01: Shadow Diagram (Source: EJE Architecture)

13.4 OVERLOOKING

Th risk of overlooking into the neighbouring properties along the eastern boundary have been mitigated through the following strategies:

- Set back of 14.2 meters from the eastern boundary to provide a significant distance from the boundary to reduce overlooking opportunities
- Significant native tree planting along the eastern boundary including Backhousia citriodora (Lemon Myrtle) and Waterhousea floribunda (Lilly Pilly). The canopy of these trees are anticipated to reach up to 8 meters tall at maturity will provide both visual and acoustic privacy between the school and residential buildings once established.
- Primary School Classrooms and major gathering spaces such as the Hall and Library have been placed to the west and south, facing away from residential areas to the east.

13.5 WIND IMPACT

The impact of uncomfortable winds to the undercroft areas have been acknowledged and mitigated where possible in the design through the following strategies:

- Site analysis was undertaken to determine where the predominant summer and winter winds are drawn from. It has been determined that during winter its predominantly from the south-west and Summer has both south-west and north-east winds. Summer wind is a benefit to the design due to the humid conditions of the region.
- Varied planting has been provided particularly around the boundaries of the site. This helps reduce the impact of the winds by creating a natural barrier that slows down wind flows. Internal planting has also been implemented for the same reason. The site has been left more open to the north-east to allow the summer breeze into the site to help cool the students, teachers, and visitors to the site.

13.6 CONCLUSION

EJE conclude that the design and mitigation strategies outlined above result in no significant Environmental Impact on visual amenity, light pollution, overshadowing, overlooking, and wind impact aspects of the project.

Part D

APPENDIX 1: Presentation to SDRP No.1

APPENDIX 2: Comments from SDRP No.1

APPENDIX 3: Presentation to SDRP No.2

APPENDIX 4: Comments from SDRP No. 2

APPENDIX 5: Design Team Response to SDRP No.2

APPENDIX 6: Connection with Country Summary Report

APPENDIX 7: Childcare Guidelines

APPENDIX 1: PRESENTATION TO SDRP NO. 1

LISMORE SOUTH PUBLIC SCHOOL

Kyogle Street, South Lismore, NSW

STATE DESIGN REVIEW PANEL

24th APRIL 2024

TSA

NSW GOVERNMENT Education School Infrastructure

EJE Integrity Innovation Inspiration

CONTENTS

PROJECT INTRODUCTION

Purpose – To provide an overview of the Lismore South Primary School Masterplan Design and to seek input and recommendations from the Panel to inform the Concept Design

BACKGROUND

In response to unprecedented record flooding that occurred in February and March 2022, which had a devastating impact on numerous educational institutions in the Northern Rivers catchment of New South Wales, State Infrastructure and Schools in the Northern Rivers Catchment (SINSW) is committed to the repair and replacement of flood-damaged school buildings.

This comprehensive initiative aims to restore the educational infrastructure to its pre-flood state, ensuring a safe and conducive learning environment for students. The design and delivery of the new Lismore South Public School is a part of this broader program.

OVERVIEW

Lismore South PS (LSPS) is a small Primary School of about 210 students in the Lismore Primary School Community Group (SCG) on Bundjalung Country.

The school experienced significant damage during the 2022 floods and has since relocated into a temporary demountable school to the west across Wilson Street on existing school sports fields. Lismore South PS serves the city district of South Lismore, as well as the nearby country areas around Rock Valley, Tuncester, McKee's Hill, Loftville and Ruthven. Ngulliboo Jarjums Preschool, offering 20 places for local families, is also co-located with the Primary School.

Key Considerations for the Design

- Northern Rivers Flood Recovery Project : Rebuild flood damaged primary school and pre-school. Like-for-like replacement, new school to be built on existing Phyllis St site.
- Inclusion of MfS (Manufacturing for Schools) templates as the basis for the design.
- Connection to Country and design to reflect Indigenous Heritage
- Incorporation of ESD principles
- Creation of open space and enhancement of the existing Landscape
- Design of a Small Primary School to accommodate up to 230 students including:
  - 10 Learning Spaces
  - Support Unit for 3 classes
  - 20 place Preschool
  - Library, Hall
  - Administration/Staff and Student Facilities
  - Site Landscaping, Playground Facilities

APPROACH TO INDIGENOUS CULTURE AND HERITAGE

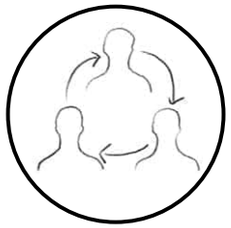
OBJECTIVES

1. Deliver on our commitment to Connect with Country
2. Engage meaningfully with local Elders and our Aboriginal community leaders
3. Explore opportunities to reflect Country in our School Infrastructure Projects
4. Contribute to the process of healing through a commitment to reconciliation

OUR PROCESS

LISTENING

Meeting people, learning from them and collecting those learnings.



COLLABORATING

Sharing our learnings and coordinating with our team to ensure we meaningfully implement what we have heard where possible and capturing the information to pass on where we cannot.

IMPLEMENTATION

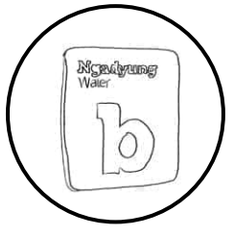
Using the opportunities we have we work with a unique team of passionate consultants to implement what we have heard and collaborated on into the following.

LANDSCAPE

The outdoor learning environments are treated with the same care as the indoor. Flora and Fauna that exist naturally are supported to return to the site. Areas for story telling are created formally and informally over the site.

ARCHITECTURE

The way that students and teachers interact with the natural and built environments. Creating learning environments that inspire curiosity in students and create learning tools for teachers to. The implementation of colour that visually connects the building with it's context.



SIGNAGE AND WAYFINDING

The words and signs that people see over the school are a visual connection to the school, it's context and the people. We consider all signage as an opportunity to teach and learn.

APPROACH TO INDIGENOUS CULTURE AND HERITAGE

LSPS: CONNECTING WITH COUNTRY (CWC) PROCESS

INTIATION:

- Establish and build contact with key Stakeholders
  - Local knowledge holders / representatives
  - Regional and Local Aboriginal Education Consultative Group (AECG)
  - School Principal / Director of Education Leadership (DEL)

ENGAGEMENT:

Workshop 1 – Introductions, Themes and Stories

- Establish and build trust and relationship with local Aboriginal representatives, local AECG and Principal and DEL.
- Identify relevant opportunities CWC and the key stakeholders required to be consulted on design of CWC elements.

- **Workshop 2 – Connecting with Country ideas**
  - Facilitating design consultations with the key CWC stakeholders and design team to implement what we have heard into meaningful interpretations and design elements can be adopted in the overall design for the new school.
  - Developing cultural values and connections with the context of the school site to acknowledge and express the life and culture of the Indigenous peoples past and present.

- **Workshop 3 – Connecting with Country resolution**
  - Presenting the developed implementation of Connection to Country outcomes in School Design for feedback from the key Stakeholders.

OUTCOMES:

- Connecting with Country Engagement Report
  - An engagement report that captures the engagement sessions and the cultural values and design commitments made and agreed upon the key stakeholders incorporated into the design.

"Connecting with Country Draft Framework is a framework for developing connections with Country that can inform the planning, design, and delivery of built environment projects in NSW.

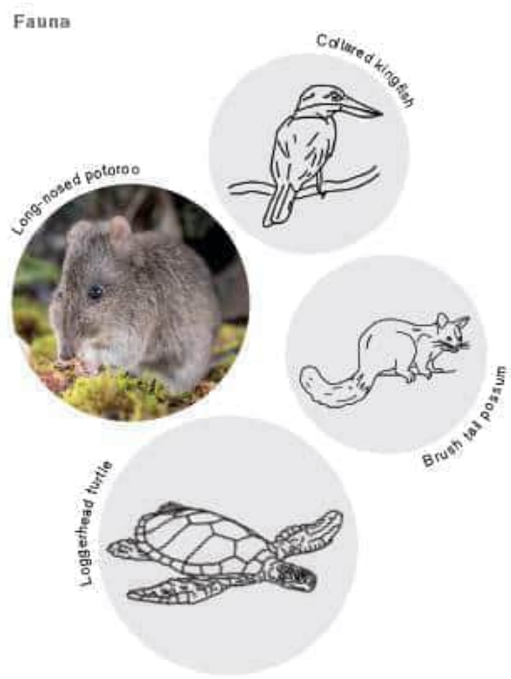
The ambition of Connecting with Country is that everyone who is involved in delivering government projects will adopt the following commitment:

Through our projects, we commit to helping support the health and wellbeing of Country by valuing, respecting, and being guided by Aboriginal people, who know that if we care for Country – it will care for us."

- (Government Architect, New South Wales)

Use of endemic vegetation species and bush tucker gardens.

Creation of yarning circles and gathering places



APPROACH TO INDIGENOUS CULTURE AND HERITAGE

LSPS: CONSULTATION AND OTHER CONSIDERATIONS

COUNTRY:

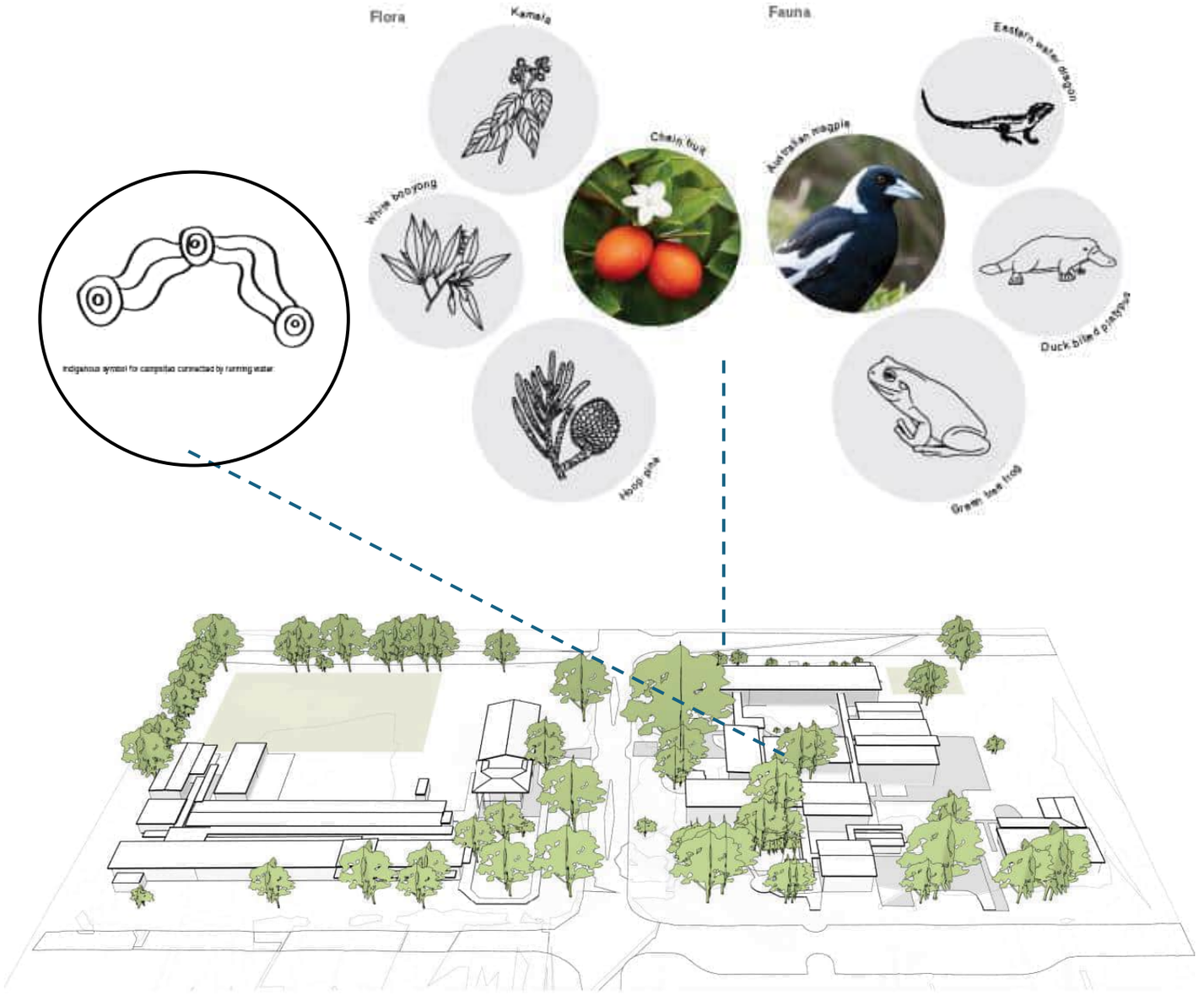
- The site for the new Lismore South Primary School is located on Bundjalung Country.

CONSULTATION:

- Heritage NSW confirmed Widjabul Wia-bal Gurrumbil Aboriginal Corporation (WWGAC) Registered Native Title Body Corporate (RNTBC)

- Aboriginal Cultural Heritage Assessment (ACHA) process has commenced with the Aboriginal Heritage consultant preparing the notice to the Widjabul Wia-bal Gurrumbil Aboriginal Corporation Registered Native Title Body Corporate (RNTBC).

- CwC Workshop 1 is scheduled 1 May 2024 to identify stakeholder with members from the local AECG, Principal, Director of Education Leadership (DEL) and Aboriginal parents/carers, staff and students at the school



LSPS: Key Cultural Considerations Opportunities

KEY CULTURAL OPPORTUNITIES

1. Incorporation of Language and stories
2. Connecting Links
3. Nature – native flora and fauna

CONTEXT

FUTURE RESIDENTIAL SUBDIVISIONS

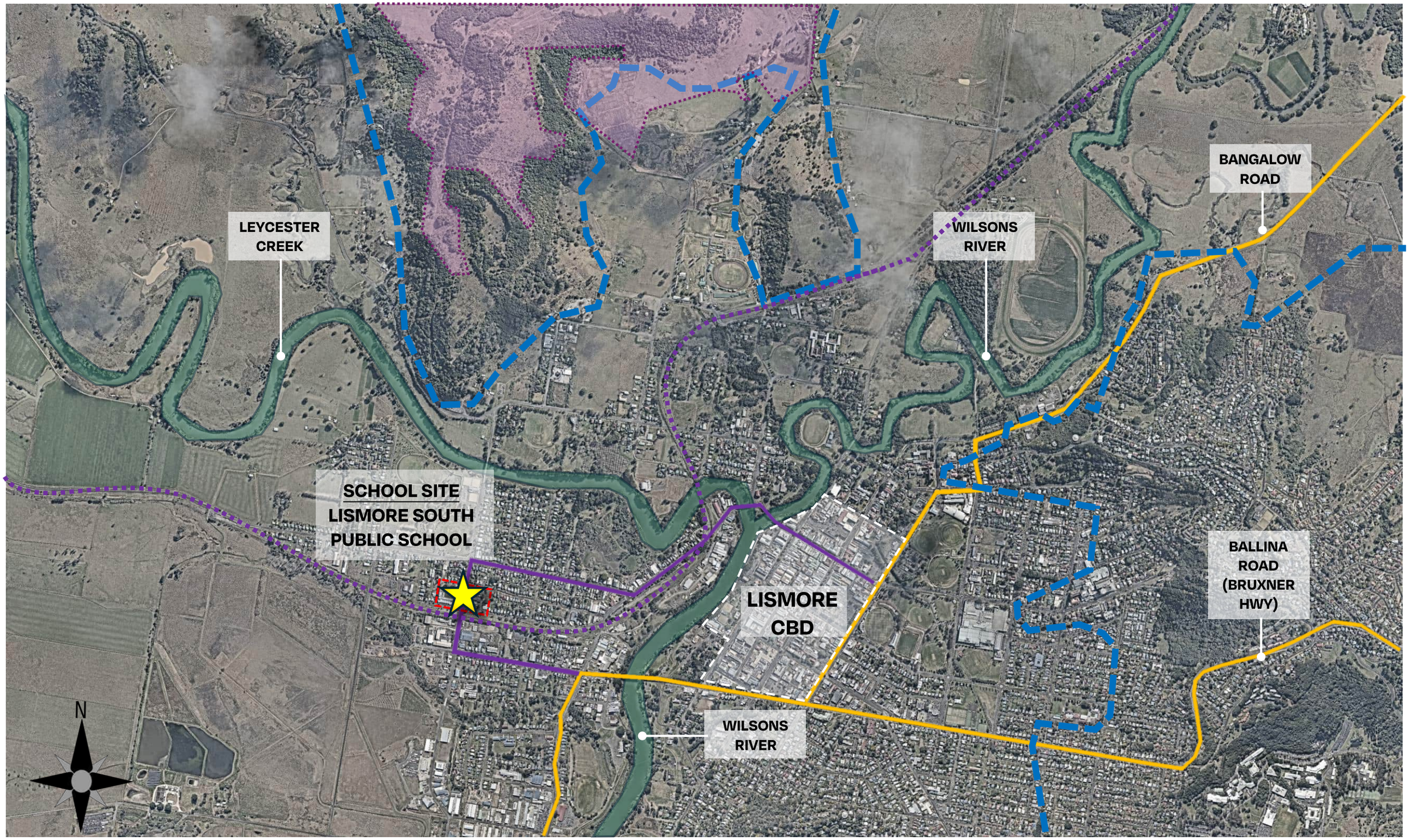
SITE BOUNDARY

OLD RAIL CORRIDOR

MAIN ROAD

ARTERIAL ROAD

PROBABLE MAXIMUM FLOOD



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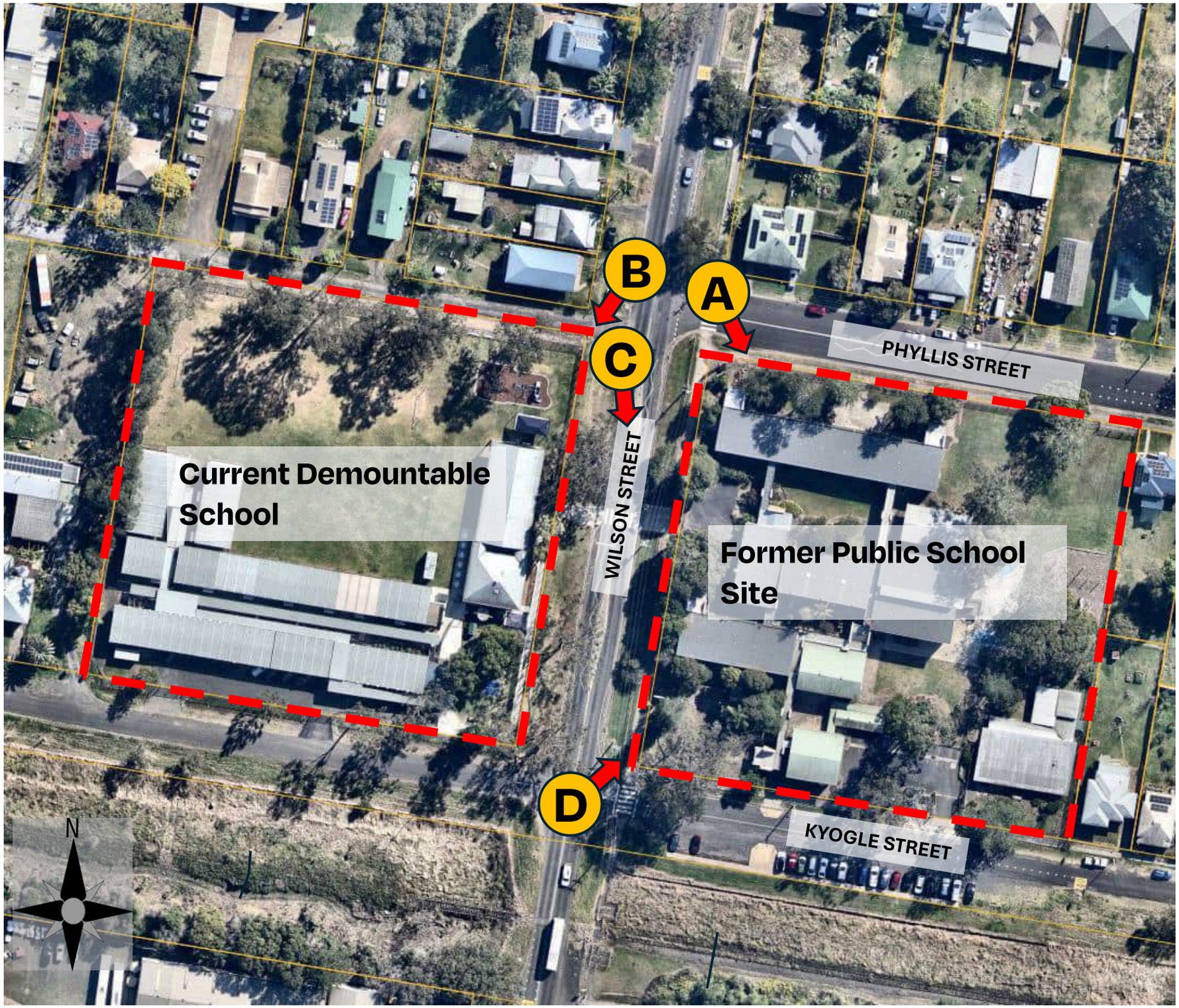
EXISTING CONTEXT



PHYLLIS /WILSON STREET CORNER

WILSON STREET LOOKING WEST TO DEMOUNTABLE SCHOOL

WILSON STREET VIEW LOOKING SOUTH

WILSON/KYOGLE STREET CORNER

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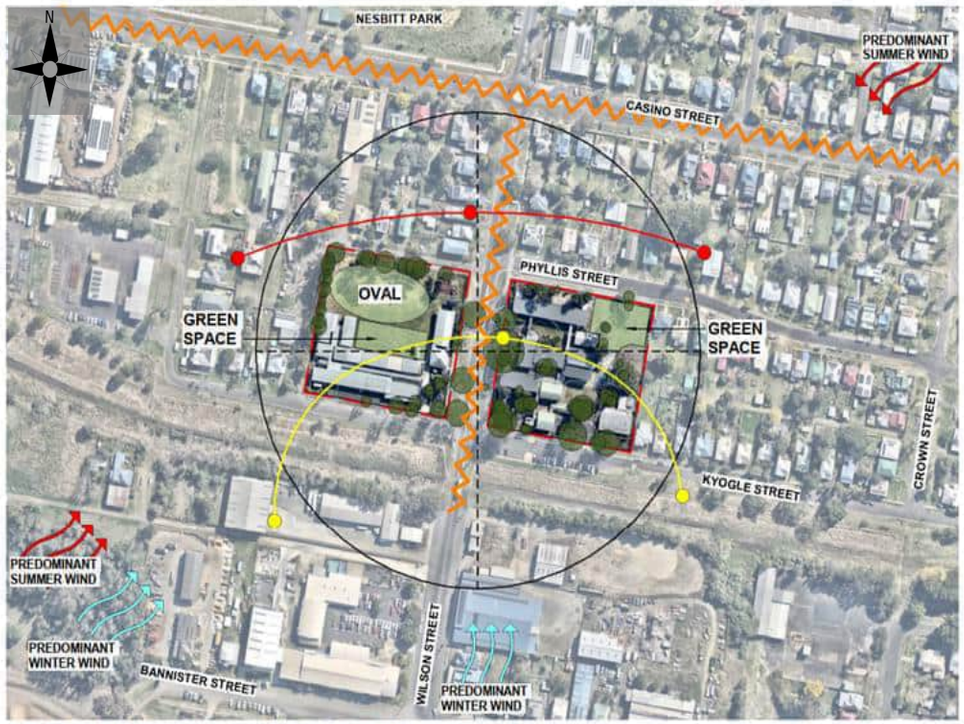
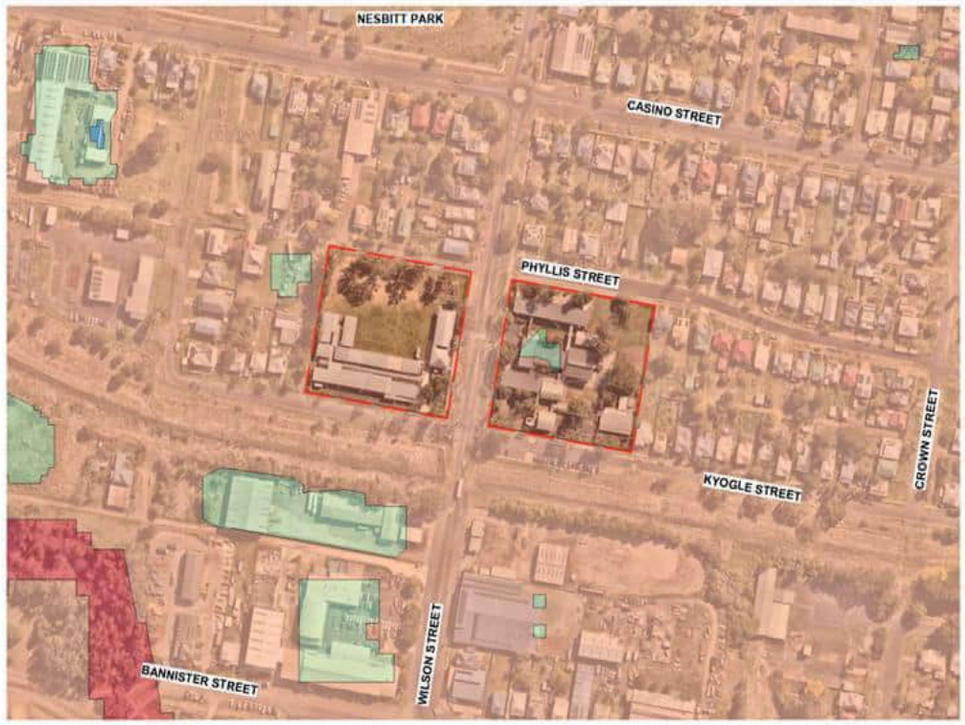
SITE ANALYSIS

TRAFFIC CONDITIONS

PLANNING CONDITIONS



ENVIRONMENTAL CONDITIONS



FLOODING RISK CONDITIONS

PLANNING

- SITE BOUNDARY
- E4 – GENERAL INDUSTRIAL
- R2 – LOW DENSITY RESIDENTIAL
- RE1 – PUBLIC RECREATION
- EXISTING GREEN SPACE
- EXISTING TREES

FLOODING

- LOW FLOODING RISK
- MODERATE FLOODING RISK
- HIGH FLOODING RISK
- EXTREME FLOODING RISK

TRAFFIC

- MAJOR ROAD
- OLD TRAIN LINE
- BUS ROUTE
- PEDESTRIAN FOOTPATH
- BUS STOP

ENVIRONMENT

- NOISE
- WIND DIRECTION
- WINTER SUN
- SUMMER SUN

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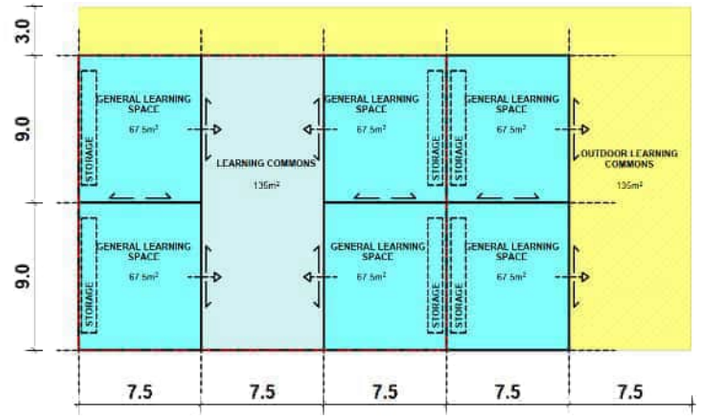
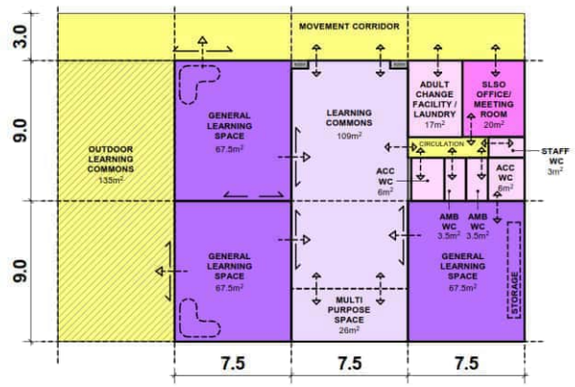
OPPORTUNITIES AND CONSTRAINTS

WORKING WITH MFS

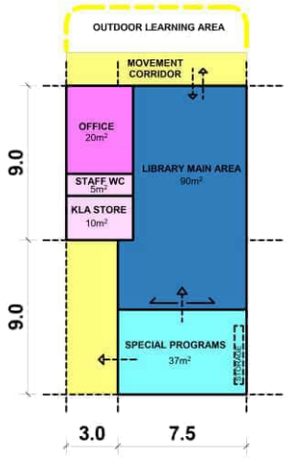
Standardised Design (MANUFACTURING FOR SCHOOLS)



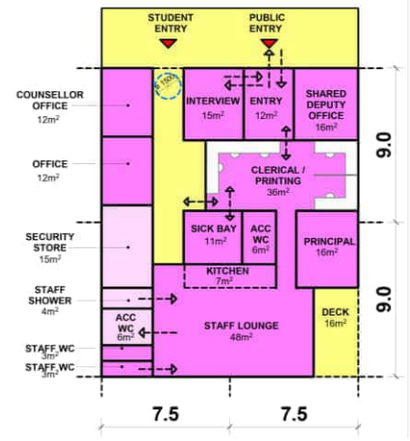
GENERAL LEARNING SPACE HUB



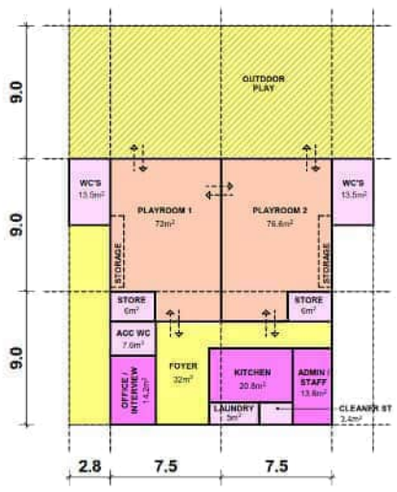
SUPPORT HUB



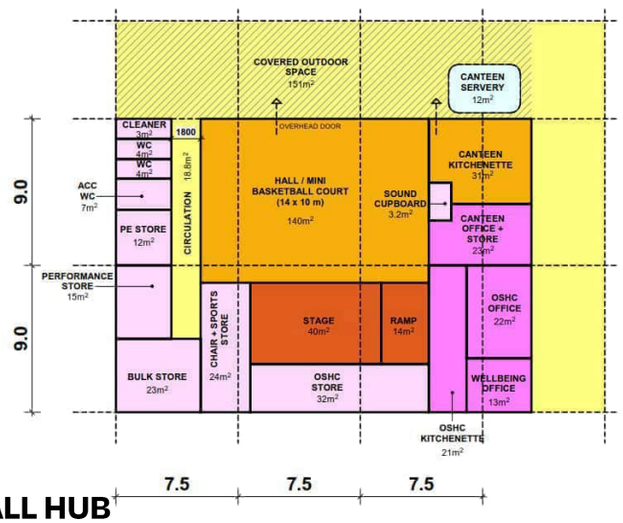
LIBRARY HUB



ADMINISTRATION HUB



PRESCHOOL HUB



HALL HUB

ORAN PARK PUBLIC SCHOOL – 2 STOREY BUILDING

ORAN PARK PUBLIC SCHOOL - FAÇADE MATERIALITY

ORAN PARK PUBLIC SCHOOL - BUILDING CONNECTIONS

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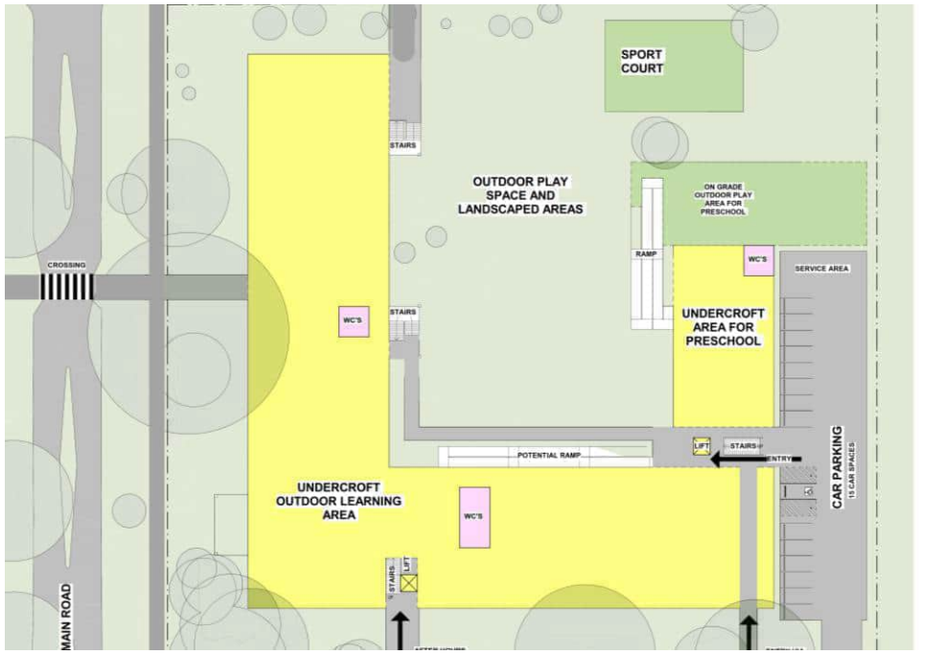
MASTERPLAN OPTIONS

Option 1

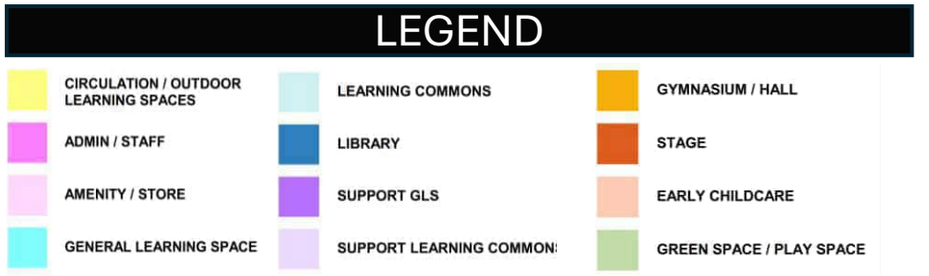
Overview

- School Building elevated 4m above ground with Level 1 500mm above the 2022 flood level
- Raised building provides all learning spaces on one level, plus an expansive undercover area for recreation, gathering, movement and learning
- Building setback from Kyogle and Phyllis St to retain existing significant boundary planting
- The bus stop to the north on Phyllis St is linked to the school building with a covered walkway
- The learning hub is positioned along the western boundary facing Wilson St
- The Preschool is adjacent to the administration, with north facing playrooms and open space. It is provided with separate entry and access ramps
- The hall is positioned on the prominent corner location of Wilson & Kyogle streets allowing greater visual prominence and easier after hours access
- Administration and Support is located to for direct access from carpark and drop-off zones
- Building surrounds a centralised outdoor play space with links to landscaped areas to the north



Ground Floor Plan

Level 1 Plan



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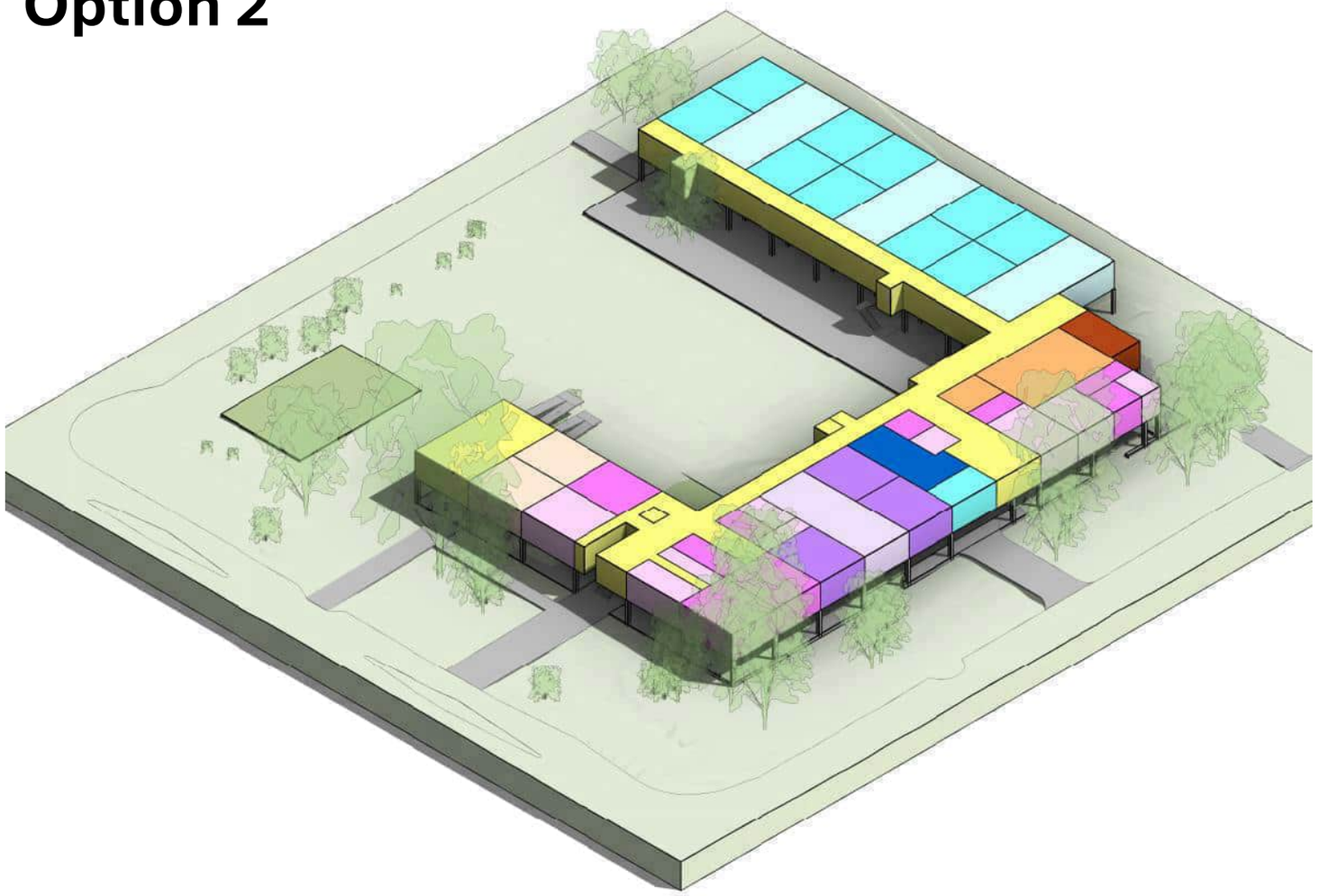
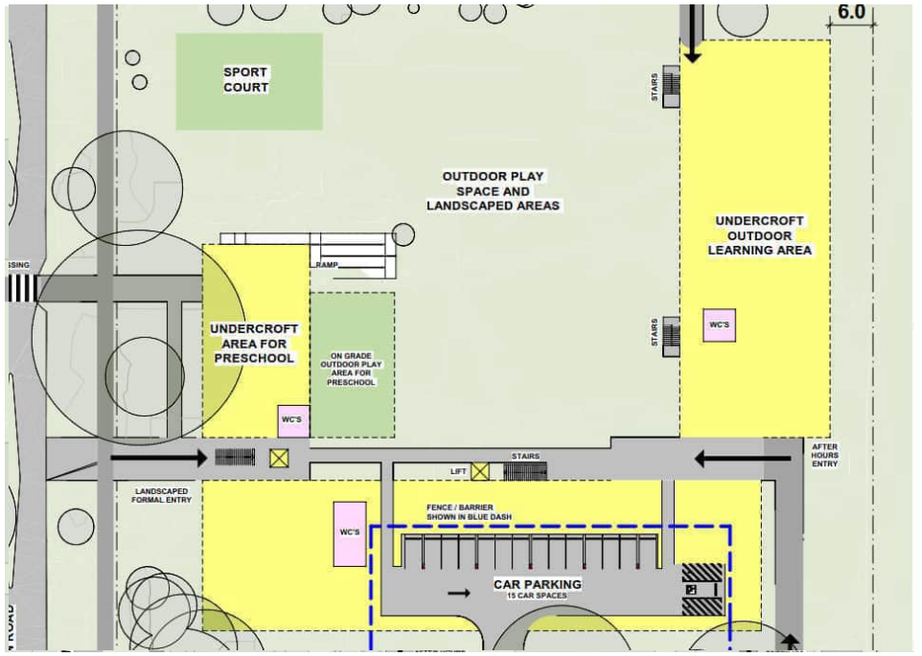
MASTERPLAN OPTIONS

Option 2

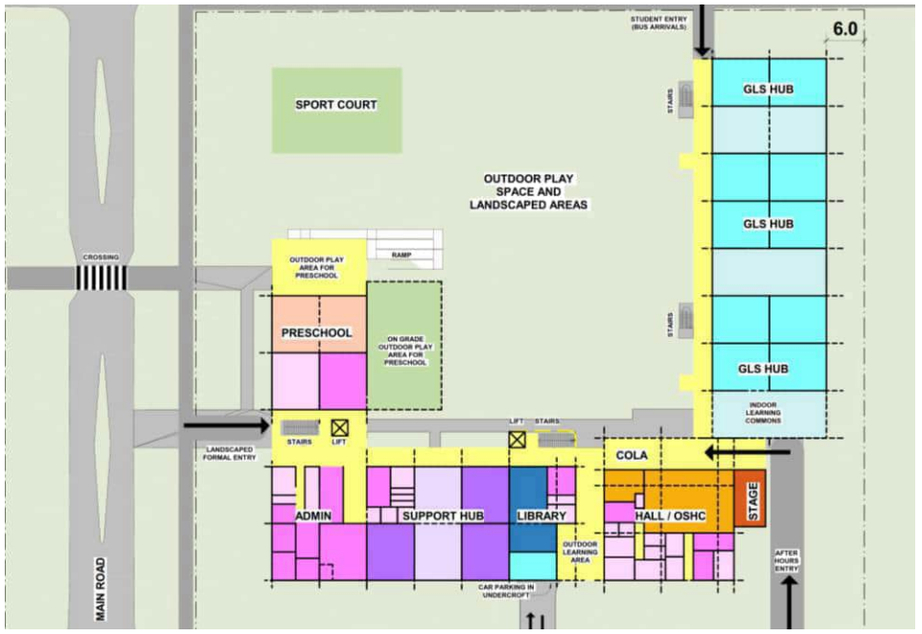


Overview

- This option mirrors Option 1 layout, with the learning hub spaces positioned along the eastern boundary and the preschool adjacent to the western boundary facing Wilson St
- This option provides good visual connection to the community for the preschool and convenient pedestrian access
- Carparking is provided centrally in the undercroft area
- The bus stop to the north on Phyllis St is linked to the school building with a covered walkway
- The building footprint wraps around the centralised outdoor play space that links to sports court and landscaped areas to the north
- Lifts are provided along with ramps and distributed stairs



Ground Floor Plan



Level 1 Plan

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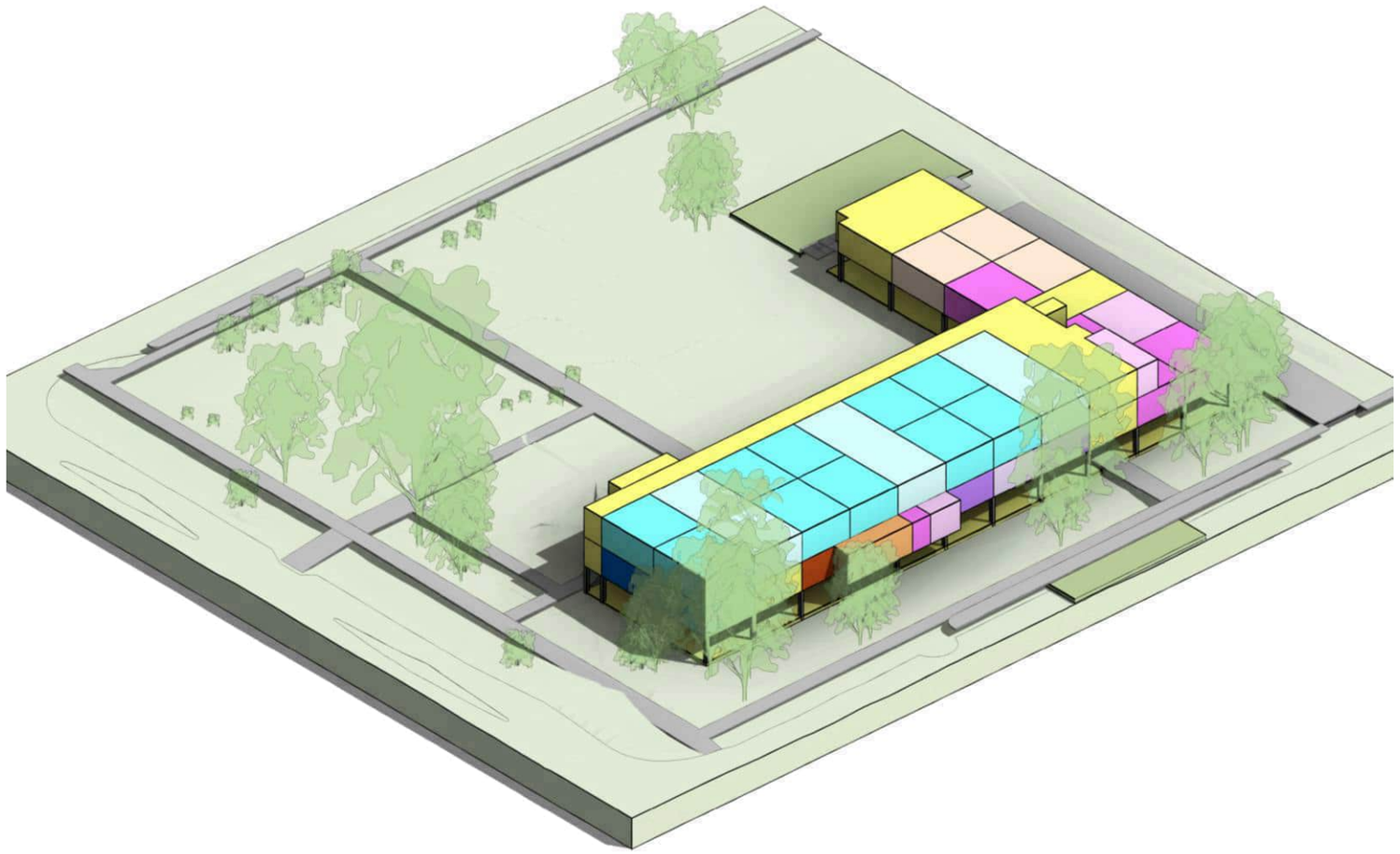
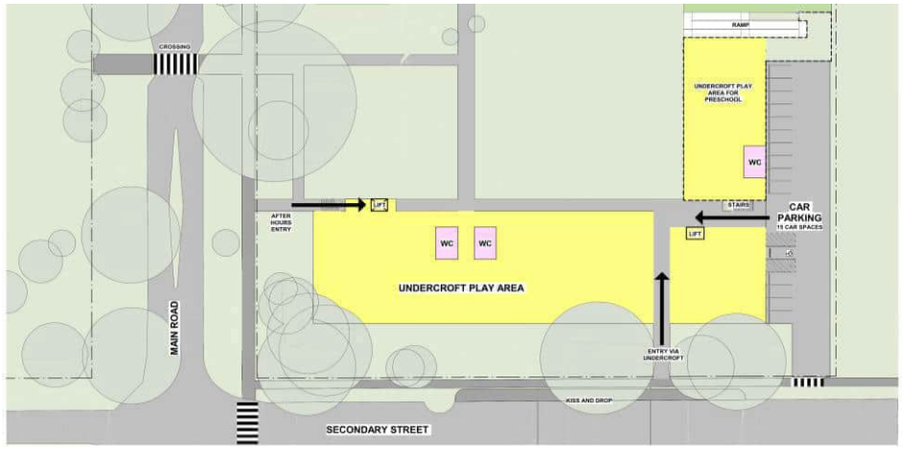
MASTERPLAN OPTIONS
Option 3

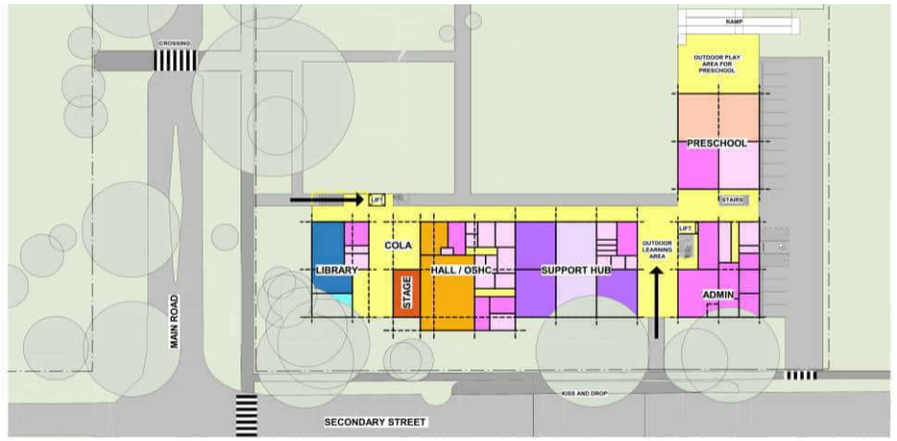


Overview

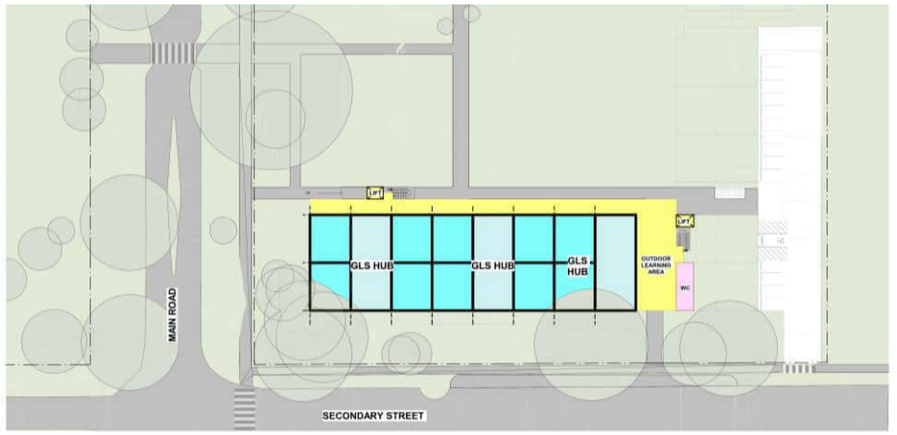
- Three storey building with Level 1 500mm above the 2022 flood level. Two lifts are provided along with ramps and distributed stairs
- The learning hub on the Level 2 is positioned over the core facilities in Level 1
- By providing and additional level, the footprint is reduced freeing up more open space
- The additional level would provide a flood refuge above the PMF
- The library and hall are located near the prominent Kyogle and Wilson Street corner for after hours access



Ground Floor Plan



Level 1 Plan



Level 2 Plan

LANDSCAPE MASTERPLAN

TLA SUBMISSION

14968.5-South Lismore Public School-MP_B

LISMORE SOUTH PUBLIC SCHOOL

SCHOOL INFRASTRUCTURE NEW SOUTH WALES

16 April 2024

terras landscape architects

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01

ANALYSIS

Study of the existing

Local Context

Local Analysis

Site Character

Vegetation Communities

02

LANDSCAPE PRINCIPLES

Study of plan

Connection to Country

Canopy Cover

Landscape Areas and Circulation

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SITE CHARACTER

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View from Wilson St, looking east.

Kyogle St along the southern boundary, looking west.

View of existing COLA and sports field from Wilson St, looking west.

ANALYSIS

The subject site to the east of Wilson St is currently comprised of existing structures and vegetation relating to Lismore South Public School, that are no longer in use while the temporary demountable classrooms are located to the west of Wilson St. Easily accessible for parents to drop off and pick up, an existing parking lot is located south of Kyogle St.

Landscape character within the immediate vicinity of the site includes low density residential fabric, minor road corridors, recreational space in the form ovals and playing fields and mixed use industrial and commercial development.

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VEGETATION COMMUNITIES

Vegetation Communities: Type 1

Richmond Valley Riparian Waterhousea Forest (ID: 3104)

This placeholder PCT is defined from a single plot on a creek plat pf a minor tributary of the Wilson River, itself a tributary of the lower Richmond River, on the southern outskirts of Lismore. The community is a dense, tall rainforest in which *Waterhousea floribunda* is clearly the dominant canopy species, with the highest cover. There is a sparse understorey, including the shrub *Desmodium acanthocladum*.

Species present include, but are not limited to:
Canopy Species: *Waterhousea floribunda , Streblus brunonianus, Cryptocarya triplinervis*
Mid Stratum: *Desmodium acanthocladum, Diospyros australis*
Ground Stratum: *Oplismenus aemulus*

Vegetation Communities: Type 2

Far North Creekflat Paperbark Swamp Forest (ID: 4029)

This community occurs in small remnants in otherwise almost complete cleared landscapes associated with basalt lithology. The plots are highly disturbed and have a high to extremely high proportions of exotic species. Of the two plots defining the PCT, one is an open forest of *Melaleuca quinquenervia* and *Glochidion ferdinandi* with a mainly grassy ground layer, the other is Casuarina glauca with scattered shrubs and a mixed ground layer.

Species present include, but are not limited to:
Canopy Species: *Melaleuca quinquenervia , Glochidion ferdinandi*
Mid Stratum: *Breynia oblongifolia*
Ground Stratum: *Centella asiatica, Hydrocotyle acutiloba, Juncus continuus*

CONNECTION TO COUNTRY

First Nations People

The site lies on Bundjalung Country and the **Widjabul Wia-bal people of the Bundjalung Nation** are the traditional custodians of the Country that the proposed site is located. The Bundjalung people are the traditional custodians of a region from around Grafton in northern coastal NSW to Beaudesert in south-east Queensland.

Traditionally, the Widjabul Wia-bal people of the Bundjalung Nation lived in small family groups and relied on **hunting, fishing**, and **gathering**. They had great skill in crafting tools and weapons from natural resources. They used materials like **stone, wood, shells**, and **animal bones** to create spears, boomerangs, and other tools essential for hunting and fishing.

One of the annual rituals of the Bunjalung people was the movement to the coast during the winter months when the mullet were plentiful. The inland people from around Casino brought back black bean seeds with them to trade for the fish. The Aboriginal people of the Bunjalung Nation used **tea trees** as a traditional medicine by inhaling the oils from the crushed leaves to treat coughs and colds.

The Aboriginal culture of the **Bundjalung Nation** is evident in many aspects, including many bora rings. Casino was an important aboriginal meeting place. Ceremonial grounds are usually marked with a **Bora Ring** which is a raised platform of dirt arranged in a circle. This Bora Ring which was last used in the 1800s is located 15 kilometres south of Lismore on Wyrallah Road.

The beginning of European settlement into the Richmond River area by Red Cedar Cutters (lumbermen) and farmers (pastoralists)

Endemic Planting

The landscape design considers endemic planting, which uses native species that have adapted to the local environment, to support biodiversity conservation. Native plants support the survival of local species by giving habitat to the fauna and assist in restoration of the ecosystems.

Well suited to the local environment, these species require less maintenance. Endemic planting to help preserve and celebrate the unique cultural heritage and identity of the region.

The design also looks at maximising soft surfaces while retaining as many trees on site as possible and incorporating WSUD principals to ensure care for Country is implemented.

Local Materials

The choice of materials is intended to draw from the former site while reducing the extent of high carbon elements and contributing to a more sustainable built environment. The components that categorise the historical, architectural language of the Country are defined by the rich sources of natural materials available at the time including **sandstone and cedar.**

The design aims to foster a connection between the built environment and the local community by using local materials where possible to promote environmental responsibility and preserve local identity. The design looks at provision of opportunities for **art** and celebration of First Nations Culture within the scheme.

CANOPY COVER

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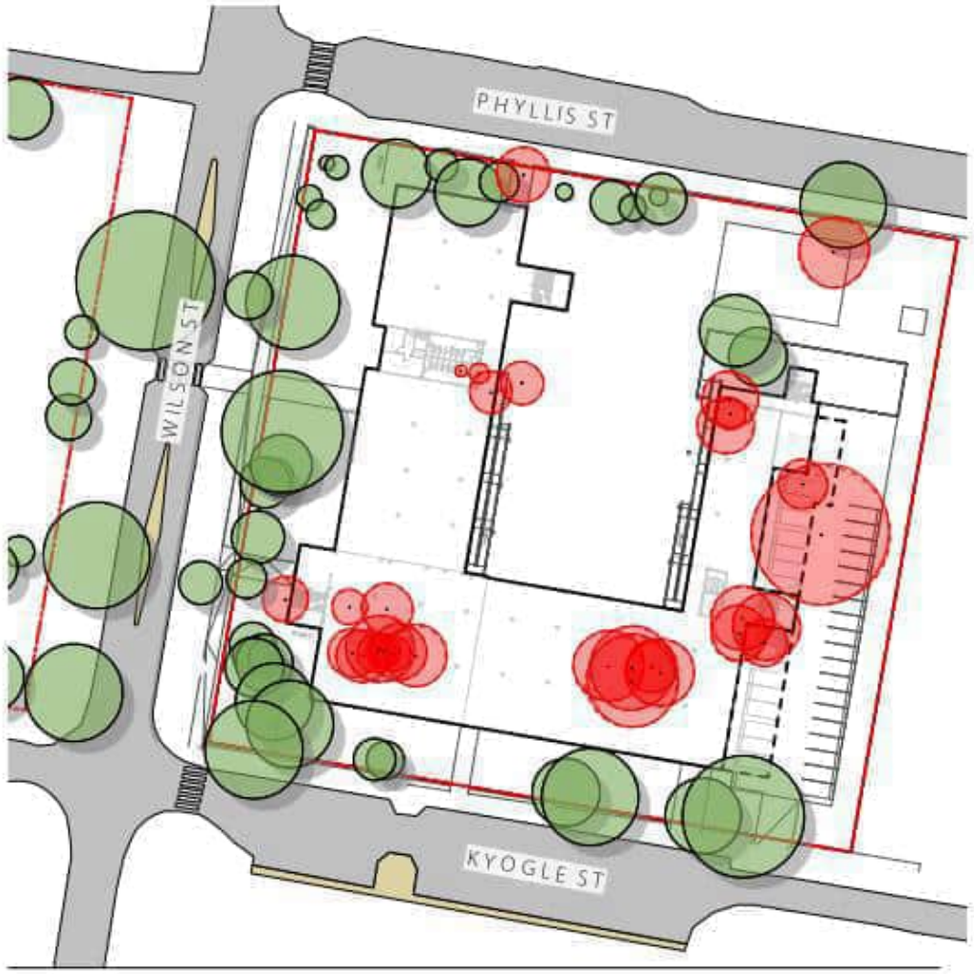

EXISTING CANOPY COVER

SITE BOUNDARY

EXISTING TREE TO BE RETAINED

EXISTING TREE TO BE REMOVED

INTENDED CANOPY COVER

SITE BOUNDARY

EXISTING TREE TO BE RETAINED

PROPOSED TREE

NOTES

The landscape explores opportunities to increase canopy cover in open spaces to offset removal of some of the existing canopies owing to ageing and building footprint.

The design looks at achieving atleast 30 percent canopy cover over the active site to provide shade and reduce the heat island effect.

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LANDSCAPE AREA HIERARCHY

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Maximise canopy planting opportunities by infill endemic planting to provide a visual buffer, and habitat and reduce heat island effect.

Undercover pick-up and bus waiting area with interactive ground games and seating .

Planting of endemic species to create a sense of place unique to the site.

Flexible undercover ball sports area

Multi-purpose courtyard to accommodate assembly gatherings and other events and performances.

Undercroft area to offer a shaded space for students' outdoor eating with removable seating for space flexibility

Existing mature trees to be protected and retained and the addition of an endemic nature walk and education garden to promote cultural awareness and support endemic species

A yarning circle to enrich students learning experience and promote student interactions, reference to Indigenous ceremonial ground with a Bora ring marking and Indigenous story art .

The forecourt is likely to be hard-paved with seating under sculptural trees that form an attractive approach for students coming from Phyllis St allowing them to gather and socialise

Provision of open courts for school

Outdoor play area for preschool

Open turfed area for run around activities.

Planting to create buffer to reduce visual impact and provide vegetative screen to existing residences north and east of site.

Increased canopy cover to reduce heatisland affect from car park.

Main undrcover playground with linked stations

Nature play space

Vehicular linkage to Kyogle St and car parking to south east of site

LEGEND

SITE BOUNDARY
EXISTING TREE TO BE RETAINED
PROPOSED TREE

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CIRCULATION HEIRARCHY

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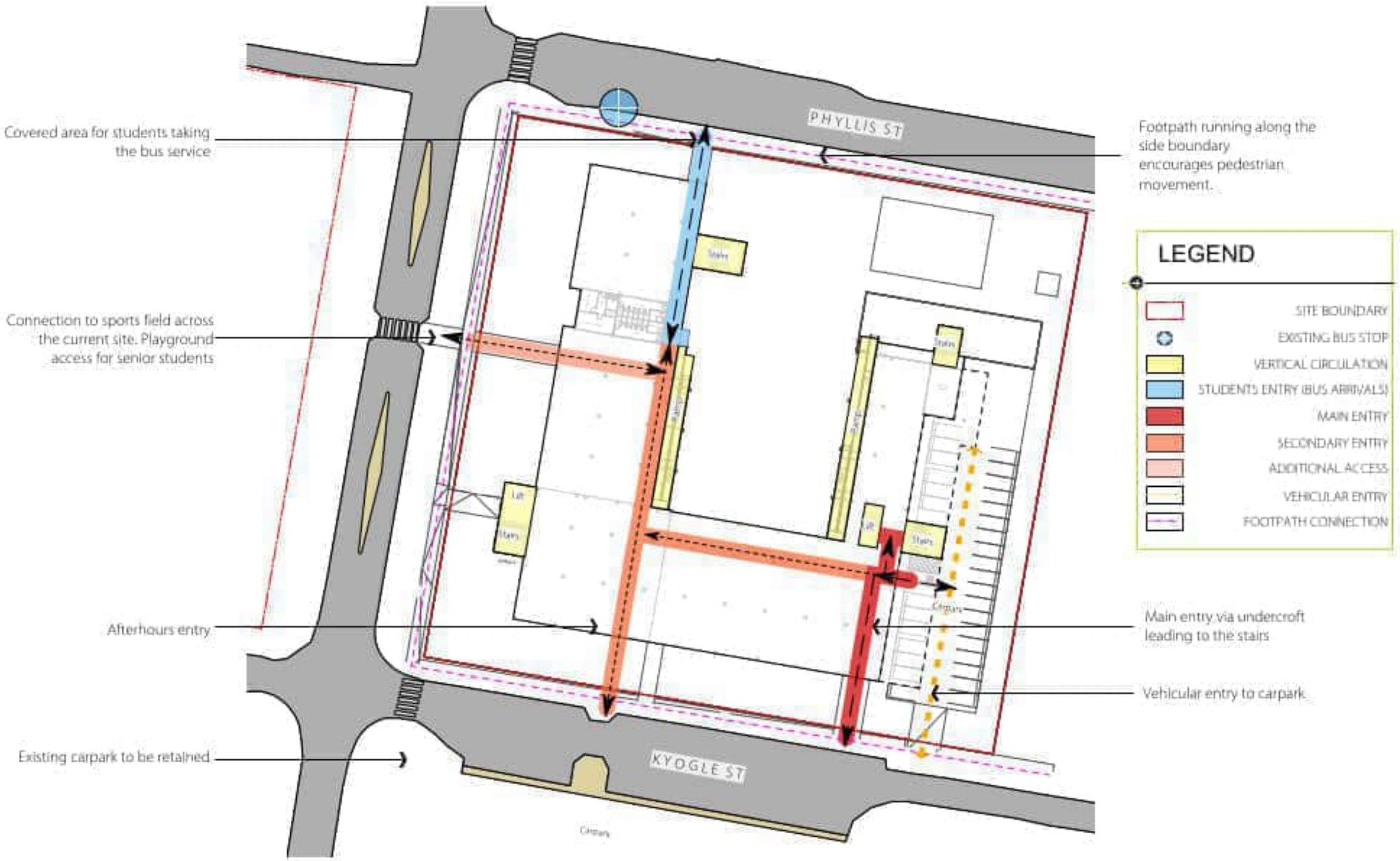

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LANDSCAPE CONCEPT PLAN

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Maximise canopy planting opportunities by infill endemic planting to provide a visual buffer, and habitat and reduce heat island effect.

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Open turfed area for run around activities.

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Preschool undercover area

Increased canopy cover to reduce heatisland affect from car park.

Main undrcover playground with linked stations

Nature play space

Vehicular linkage to Kyogle St and car parking to south east of site

LEGEND

- SITE BOUNDARY
- EXISTING TREE TO BE RETAINED
- SHRUB PLANTING
- FEATURE CANOPY TREES
- CANOPY TREES
- TURFED AREA
- PLANTED GARDEN
- MULCH AND GROUNDCOVERS
- SOFT FALL ASTRO TURF
- SOFT FALL
- CONCRETE PATHWAYS

LANDSCAPE DESIGN

TSA

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LANDSCAPE CONCEPT IMAGERY


Circular planted bench seats


Undercover ball court


Bench Seating


Street tree screening


Indigenous art features


Endemic education walk

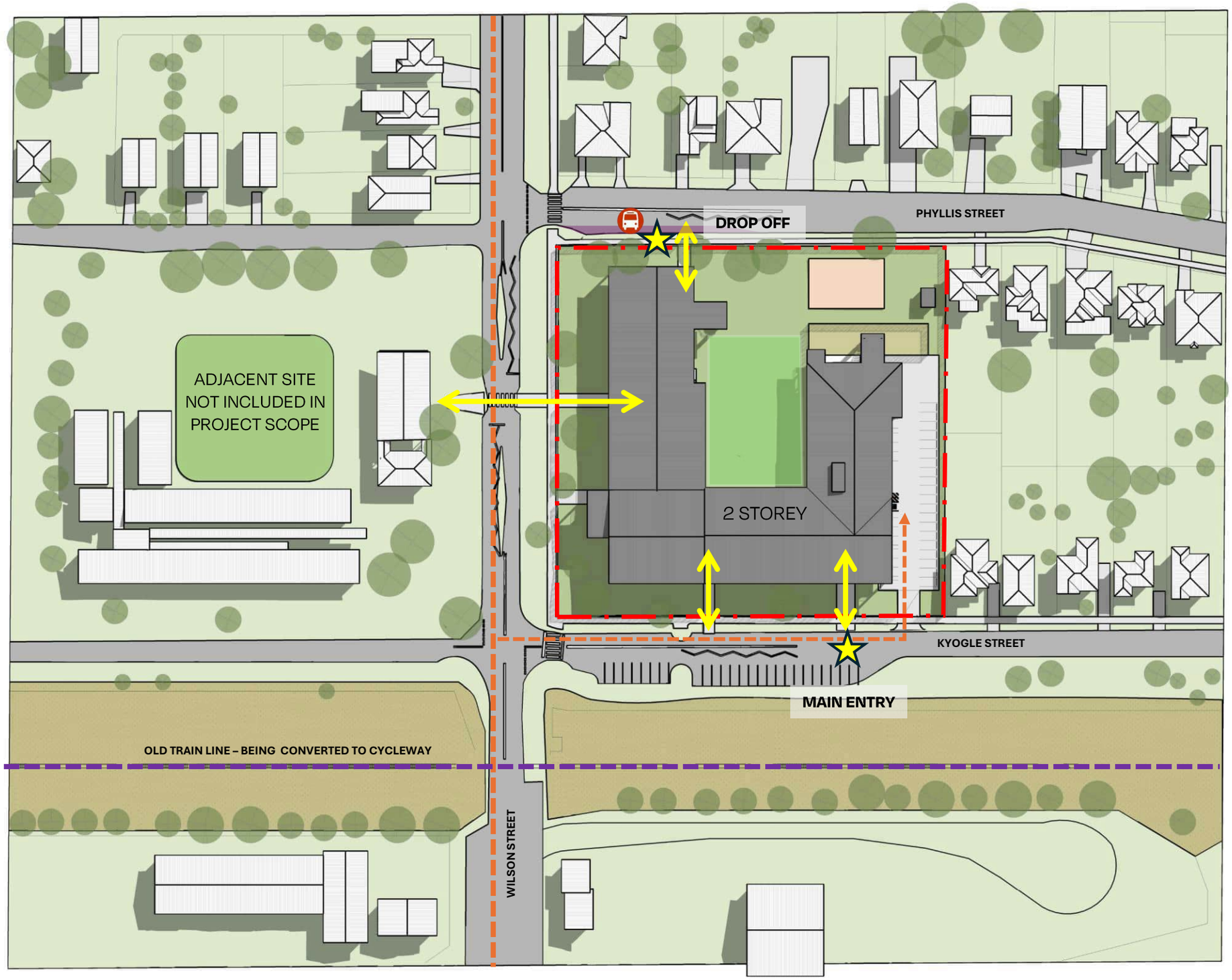

The Yarning Circle


Nature Play Center


Nature Play Center

DEVELOPED OPTION 4 - SITE PLAN

Preferred Option

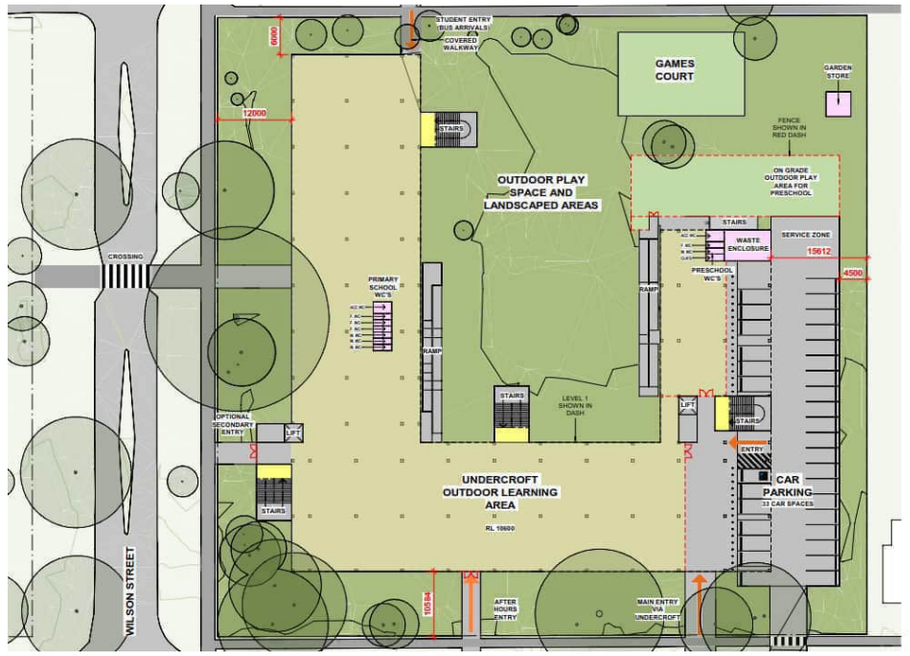


DEVELOPED OPTION 4

Preferred Option

Overview

- This scheme is a developed version of Option 1 based on stakeholder feedback
- The learning hub is located to the west and the preschool to the east, setback from the street frontages and the eastern boundary.
- The Learning hub, Library, Support layouts and preschool are shown to the DAIS/MfS template
- Stage moved to the side of the Hall and an additional office provided
- Outdoor area for the library is combined with the circulation space to the Hall
- Sufficient onsite parking provided
- The Administration and Staff layout is adjusted to meet school requirements
- Stair and lift positions rationalised
- Student amenities are provided on ground level



Ground Floor Plan

Level 1 Plan

TSA

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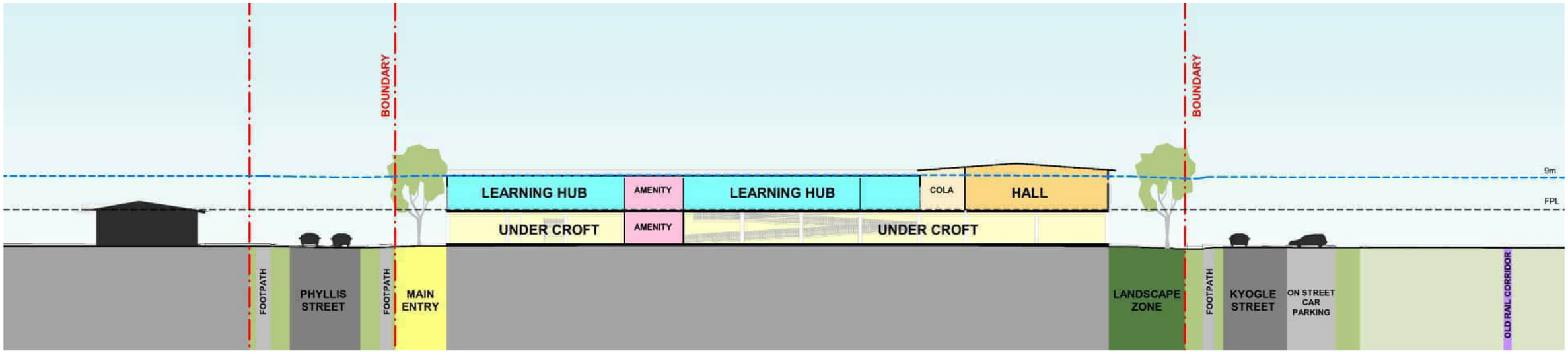
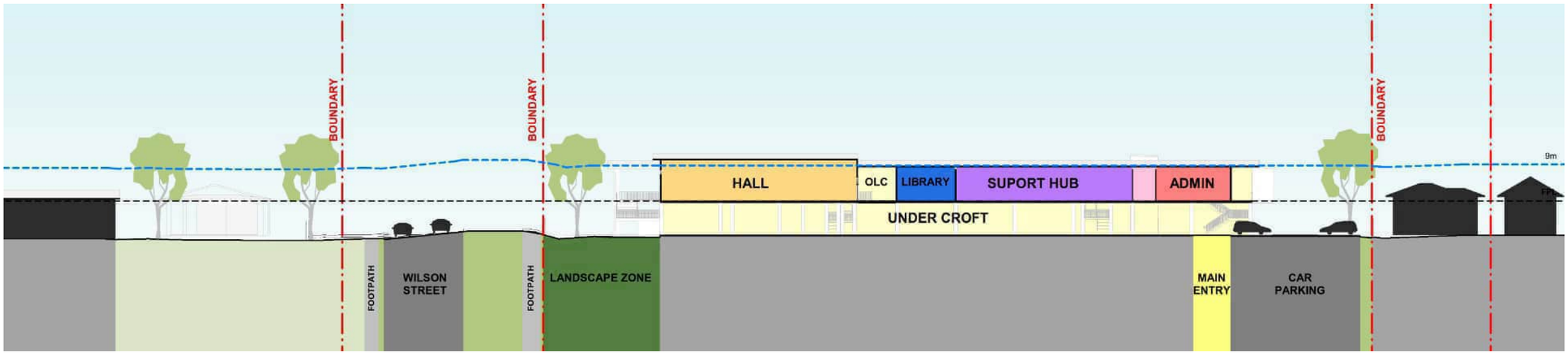
DEVELOPED OPTION 4 – SITE CROSS SECTIONS

Preferred Option





DEVELOPED OPTION

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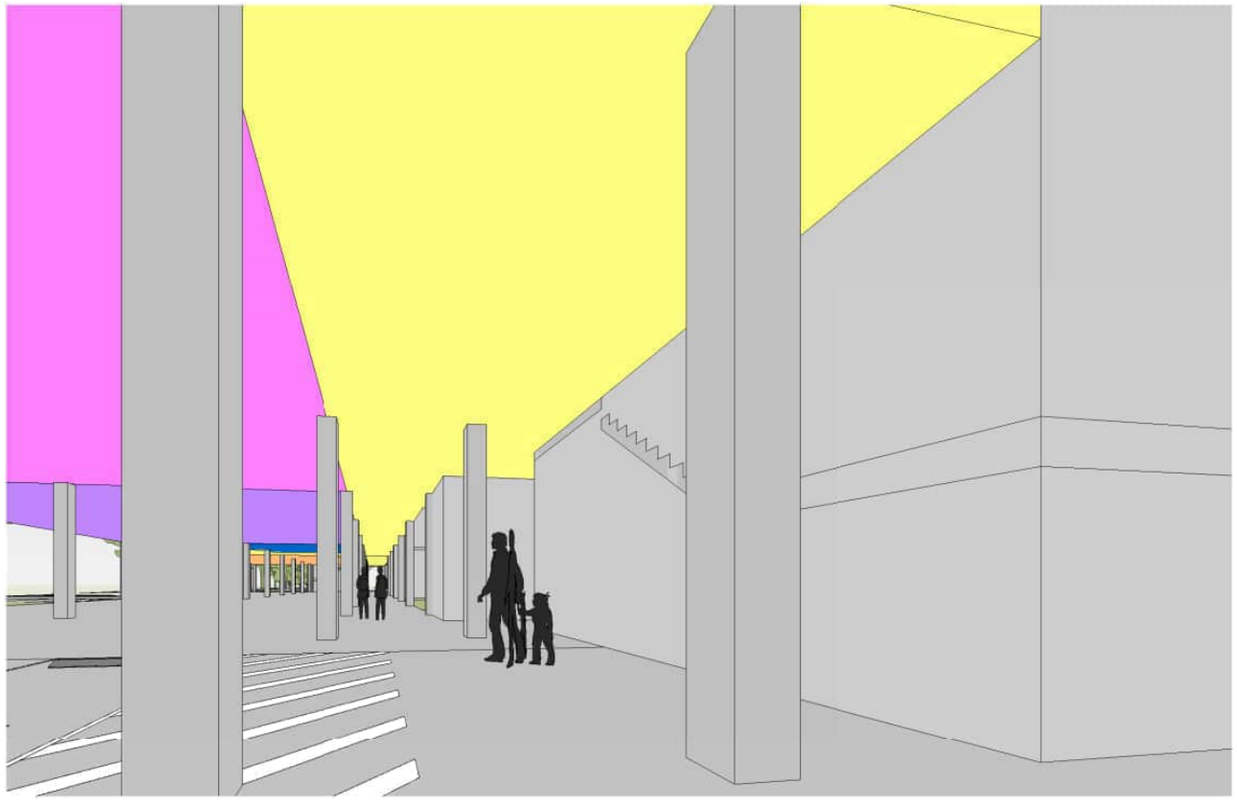
DEVELOPED OPTION 4 – SITE PESPECTIVES

Preferred Option



DEVELOPED OPTION

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DEVELOPED OPTION 4 – ARTIST IMAGERY

Preferred Option

TSA

NSW GOVERNMENT Education School Infrastructure

EJE Integrity Innovation Inspiration

DEVELOPED OPTION 4 – ARTIST IMAGERY

Preferred Option

TSA

NSW GOVERNMENT Education School Infrastructure

EJE Integrity Innovation Inspiration

DEVELOPED OPTION 4 – ARTIST IMAGERY

Preferred Option

TSA

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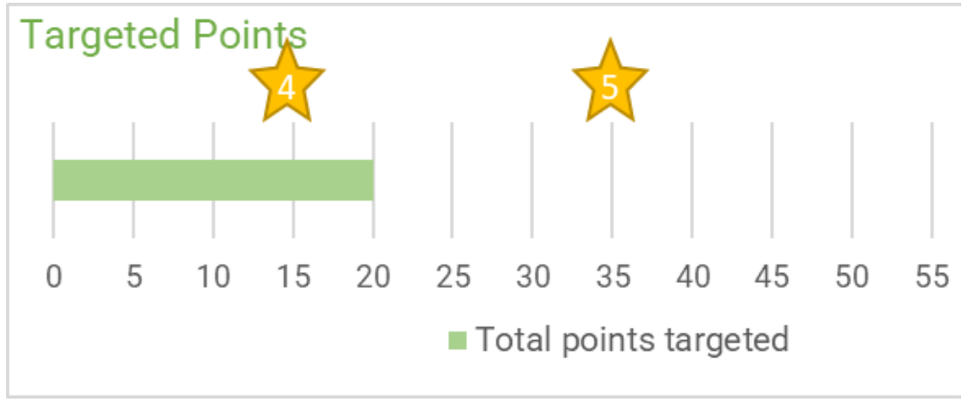
ESD PRINCIPLES

Green Star Buildings

- Mandated 4 Star Certification for Regional NSW Schools
- Minimum Expectations are embedded + 15 points are achieved
- Pathway focuses on:
  - Healthy Conditions – Indoor Environment Quality
  - Resilience
  - People



Points	Available	Targeted
Responsible	17	3
Healthy	14	7
Resilient	8	3
Positive	30	3
Places	8	0
People	9	4
Nature	14	0
Total	**100**	**20**

Section J – High Level Advice

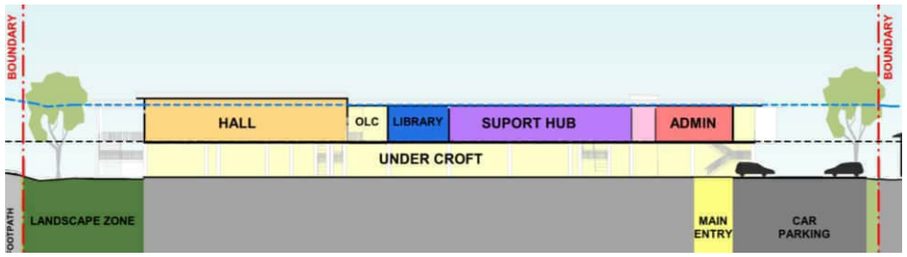
- Window to wall ratio (recommended 30-40%, not to exceed 50%)
- Shadowing Advice (Horizontal for N, Vertical for E & W)
- Insulation Explanation

ESD PRINCIPLES

Resilient

Climate Resilience

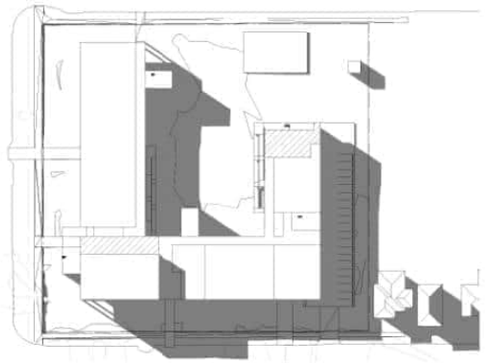
- Major issue on this site is flooding. The entire school has been elevated to the 2022 flood level + 500mm free board.
- All plant space, main switch boards to be located above the PMF line.



Positive

Energy

- Mechanical system
  - Climate zone 2 – Warm Humid Summer, Mild Winter
  - 40km from the coast so less influence from sea-breeze
  - Air conditioning system will be mostly in cooling mode.
  - Therefore, outdoor units should be located in a shaded area
    - Peak temperatures generally occurring in the afternoon (sun in the west)
  - PV system to be defined by SINSW
  - Net-zero ready (fully electric building)



Materials

- Explore the use of PT slabs with concrete with high supplementary cementitious material with structural and MMoC teams.
- Further explore reuse of existing slabs on site.

Nature

Biodiversity Enhancement

- Increasing the long-term biodiversity on the site – Regionally native species to be used
- Strategic placing of deciduous trees to the north – Summer shade / Winter Sun (Toona ciliata, Brachychiton bidwillii)

APPENDIX 2: COMMENTS FROM SDRP NO. 1

GOVERNMENT
ARCHITECT
NEW SOUTH WALES

7 May 2024

Krystal Porteus
Project Officer
Schools Infrastructure NSW
krystal.porteus@
det.nsw.edu.au

PROJECT: Lismore South Public School – Flood Rebuild
RE: State Design Review Panel – 24th April – Review 1

Dear Krystal,

Thank you for the opportunity to review the above project at an early stage. Please find below a summary of advice and recommendations arising from the design review session held on 24th April 2024.

The design team is commended on a clear presentation, including contributions from multiple team members. It was particularly useful to have the context and scope clarified. The decision to choose a 'raised' typology to support a flood resilience model rather than an alternative site presents an opportunity to demonstrate a best practice approach that sets a benchmark for future developments.

The following elements of the masterplan/ design strategy are supported:

- locating the school in the heart of the community, in the location of the original school
- intention to allow for community use of facilities
- organisation and layout of the different uses within the masterplan
- retention of several mature trees (although further tree retention within the site is encouraged subject to the arborist report).

The following commentary provides advice and recommendations for the project:

Connecting with Country

1. The team is commended on the initial strategy for engagement with the Aboriginal community. Continue to explore ways to meaningfully incorporate Connecting with Country strategies to influence the overall site strategy, including:
    a. spatial quality of the undercroft, including maximising light penetration
    b. natural water flow and living systems
    c. community access and participation
    d. internal spaces and functions of buildings.
2. Refer to the updated 'Connecting with Country framework' and case studies on the GANSW website for more information and guidance.

Site Strategy

While raising the school above the probable maximum flood level has some key architectural challenges, rebuilding the school in its original location strengthens its potential as part of the healing process for the Lismore community.

3. Involve the local community in the design and delivery of the school and landscaping as part of the healing and rebuilding process.
4. Clarify wayfinding and the spatial response to the school community and visitors arriving at the school via an undercroft, ensuring this route is legible, safe, inviting and intuitive.

Current and proposed active transport routes, including the disused railway to the south of the site, should be integrated into the overall masterplan of the school.

5. Expand the site analysis to take in the wider catchment active transport routes, including:
    a. key pedestrian arrival points within the catchment
    b. existing cycle routes
    c. proposed cycle paths, including the disused railway to the south of the site.
6. Prepare a detailed landscape plan, addressing the following:

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a. landscape design with a view to heal and repair the community
b. extent of hardscaping resulting from the architectural layouts and how this can be reduced
c. retention of more mature trees within the school grounds.

7. Engage an arborist to inform the tree retention strategy on the site, confirming high value trees that should be retained.
8. Provide shadow diagrams highlighting sunlight access to the undercroft to inform the landscape design and species selection.

The carpark to the east of the site provides poor amenity outcomes for the neighbouring property while increasing the amount of hard landscaping on the school site.

9. Shift the carpark west to sit beneath the undercroft and provide a landscaped buffer between the school and neighbouring residences. This will have the added benefit of consolidating functions beneath the school, noting the vastness of the undercroft.
10. Identify potential zones for future expansion of the school.

Architecture

The undercroft requires careful design to ensure the quality of the space. The long and deep massing of the standardised modules above risks creating a dark and cramped undercroft with limited opportunities for joy.

11. Review the proportions of the undercroft, which may include increasing the ground floor height.
12. Detailed design of the undercroft is required to address the following:
    a. acoustic attenuation
    b. ceiling finishes to conceal services and help with acoustics
    c. glare, particularly when looking north
    d. treatment and cladding of columns to ensure safety for children.

The dominance of built form on the site restricts the open space provision. The use of standardised modules has shifted the proposal to an unmistakeably institutional building when compared to the existing school

and surrounding residential vernacular. This presents an opportunity to vary the built form to reduce the overall footprint and improve articulation.

13. Explore additional height in places to vary the massing of the built form, while creating more open space.
14. Separate the standardised modules, breaking up the massing into smaller buildings relating to the differing uses (preschool, primary school, library and administration). This will improve articulation and enable:
    a. greater light penetration to the undercroft spaces, including the potential for voids
    b. ability to harness breezes and take advantage of the Lismore microclimate
    c. improved relationships with the surrounding streetscape, which is primarily low rise detached residential properties
    d. more intimate spaces which better reflect the existing school
    e. COLAs with a better quality of space.
15. Explore options for the stairs and ramps, making them playful as well as functional.
16. Ensure the simplicity of materials is balanced with architectural expression and articulation to create a school with a unique identity that reflects the community.

Sustainability and Climate Change

17. Increase the provision of soft landscaping on the site to mitigate the urban heat island effect, including consolidating the carpark with the undercroft space.
18. Illustrate how the project will contribute to NSW's Net Zero emissions goal by 2050. Refer to 'NSW, DPIE, Net Zero Plan, Stage 1: 2020-2030' for further information.

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It is recommended that the project return to the SDRP following further development. The issues outlined above are to be addressed at the next SDRP session.

Please contact GANSW Design Advisor, Jeremy Giacomini (jeremy.giacomini@dpie.nsw.gov.au), if you have any queries regarding this advice.

Sincerely,

Emma Kirkman

Principal Design Review

Chair, SDRP

Distribution:

NSW SDRP Panel members	Andrew Nimmo, Elizabeth Carpenter, Roger Jasprizza, Emma Kirkman (Chair)
GANSW Design Advisor	Jeremy Giacomini
DPE	Madeline Thomas, Srishti Jagdale, Dimitri Gotsis
Schools Infrastructure NSW	Mark Coyte, Dean Birkett, Tessa Sharp, Vanessa Levy Mesman, Krystal Porteus, Andrew Robinson
EJE Architecture	Kathy Gresham, Grant Shultz
Terras	Guy Frostick
Elumni Consulting	Brendan Blakeley
TTW	Geoff Bills, Philip McAteer, Daniel Bradford
LCI Consultants	Cynthia Farah, Zac Duryea
TSA Management	Emma Viljoen, Elise Harrison
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APPENDIX 3: PRESENTATION TO SDRP NO. 2

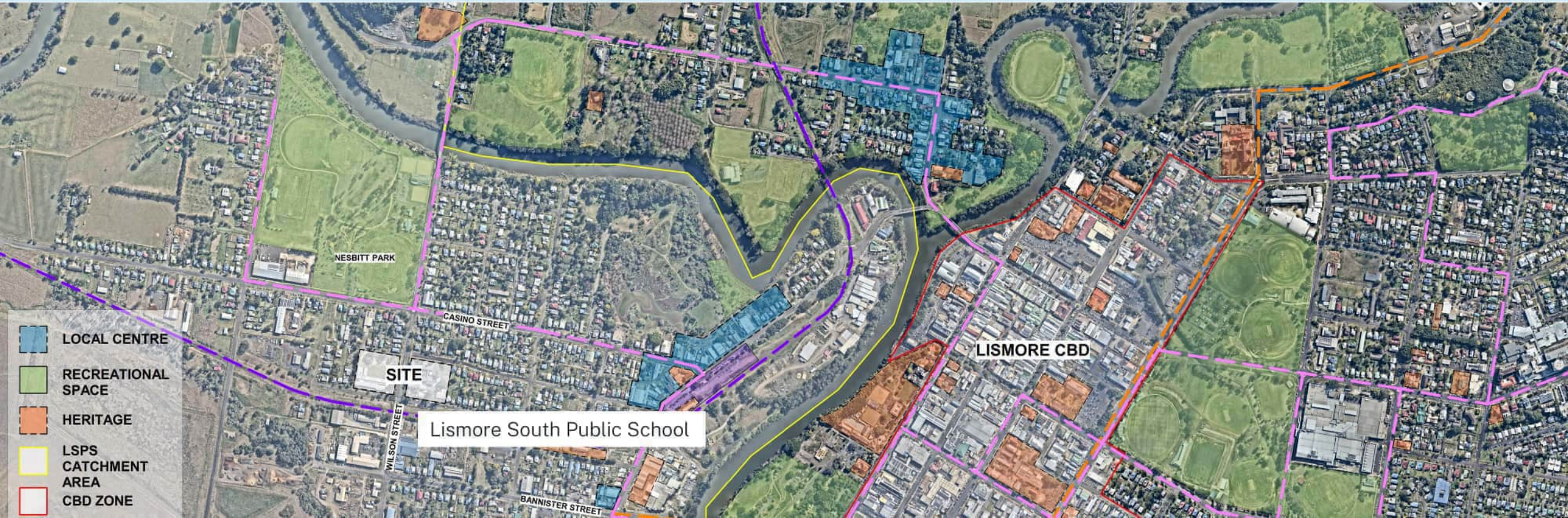
SDRP Planning Meeting
SINSW Lismore South Public School

EJE Integrity Innovation Inspiration

SDRP No 2: 27th November 2024

NSW Department of Education

NSW GOVERNMENT



Terms of Reference and Agenda

SINSW projects are now designed in accordance with School Infrastructure Pattern Book which supports traditional and Modern Methods of Construction delivery strategy.

The Pattern Book articulates a standardised design intent at concept design level for all school buildings including halls whilst enabling industry choice in structural systems and manufacturing product development innovation.

Expandable school designs reference in the Pattern Book are EFSG compliant and are the basis for Election Commitment project designs. The Pattern Book is a live document which will be reviewed and updated on an annual basis.

SDRP reviews are to include commentary on :

- Site masterplanning and landscape design strategies
- Urban design and streetscape context
- Architectural design and materials palette
- Connecting with Country strategy and implementation plan
- Sustainability strategy

SDRP reviews do not include commentary on:

- SI Pattern Book building design including facades, roofs, walkways, stairs, amenities and halls.

Agenda:

1. Project Overview
2. Connecting with Country
3. Site Strategy
4. Architecture
5. Sustainability and Climate Change

Project Overview

Current Design Overview

Lismore South Public School (LSPS)

Purpose of the SDRP Planning Meeting 27th November 2024:
Respond to the comments from the SDRP 7th May 2024, following presentation of the Concept Design for LSPS on 24th April 2024.

Key Components of the Design

- Elevated 500mm above the 2022 Flood Level
- Like-for-like replacement of existing school facilities
- Inclusion of SINSW Pattern Book standardised design.
- Connection to Country design elements to reflect Indigenous Heritage
- Incorporation of ESD principles
- Design of a Small Primary School to accommodate up to 230 students including:
  - 10 Learning Spaces
  - Support Unit for 3 classes
  - 20 place Preschool
  - Library, Hall
  - Administration/Staff and Student Facilities
  - Site Landscaping, Playground Facilities
- Creation of open space, active under croft areas and enhancement of the existing Landscape

Perspective view of main entry from Kyogle St

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Connection with Country

Connection with Country

Incorporating Connecting with Country Strategies

SDRP Comment 1
Continue to explore ways to meaningfully incorporate Connecting with Country strategies to influence the overall site strategy.

Design Team response
The following Connection with Country activities have been held:

- Initiation CwC workshop on 1st May 2024
- CwC Walk on Country with Widjabul Wia-bal Gurrumbil Aboriginal Corporation, teachers and students 23rd August 2024
- CwC workshop 24th October 2024

Further CwC workshops and implementation are to be scheduled for the next design phase.

The Connection with Country consultations developed 5 Working Themes to inform the design:

1. Gathering on Bundjalung Country
2. Planting for the Bunjalung Seasons
3. Telling Bundjalung Stories
4. Learning about Bundjalung Country and Culture
5. Celebrating Bundjalung Language

Terras' landscape plan detailing Connection with Country strategies implemented across the LSPS site.

Connection with Country

Incorporating Connecting with Country Strategies

SDRP Comment 1
Continue to explore ways to meaningfully incorporate Connecting with Country strategies to influence the overall site strategy, including:

a) spatial quality of the undercroft, including maximising light penetration

Design Team response

The undercroft design has been developed, noting that the soffit height of four metres, openness to adjoining landscape areas and ceiling treatments will create a flexible light filled space that will be highly valued by the school.

Perspective view of Undercroft

Connection with Country

Incorporating Connecting with Country Strategies

SDRP Comment 1 (continued)
Continue to explore ways to meaningfully incorporate Connecting with Country strategies to influence the overall site strategy, including:
b) natural water flow and living systems

Design Team response
Reflected in CwC Working Theme:
Planting for the Bunjalung Seasons

- Highlighting the importance of the Hoop Pine (Gurrumbil) to Widjabul Wia-bal
- Sourcing local plants through the Local Aboriginal Land Council's Ngulingah Nursery as they specialise in locally collected species.

Planting for the Bundjalung Seasons – Local Planting

Proposed plant selection highlighting native and endemic species, feature hoop pine plantings and four seasons garden

Connection with Country

Incorporating Connecting with Country Strategies

SDRP Comment 1 (continued)
Continue to explore ways to meaningfully incorporate Connecting with Country strategies to influence the overall site strategy, including:
b) natural water flow and living systems

Design Team response
Reflected in CwC Working Theme:
Planting for the Bunjalung Seasons

- Reflecting the four seasons of Bundjalung Country in the planting – they are our calendar
- Using bush tucker, bush medicine and totem plants

Bush tucker, bush medicine and totem plants repeated throughout the landscaped areas. Encourage the use of Backhousea citoradora.

Planting for the Bundjalung Seasons – Bush Tucker, Medicine and Totem Plants

SHRUB SPECIES


Diospyros australis-Black Plum (Endemic -Edible Berries)


Alpinia caerulea- Native Ginger (Endemic)


Backhousia citriodora - Lemon Myrtle - (Native)


Billardiera scandens- Apple Berry - (Native)

Connection with Country

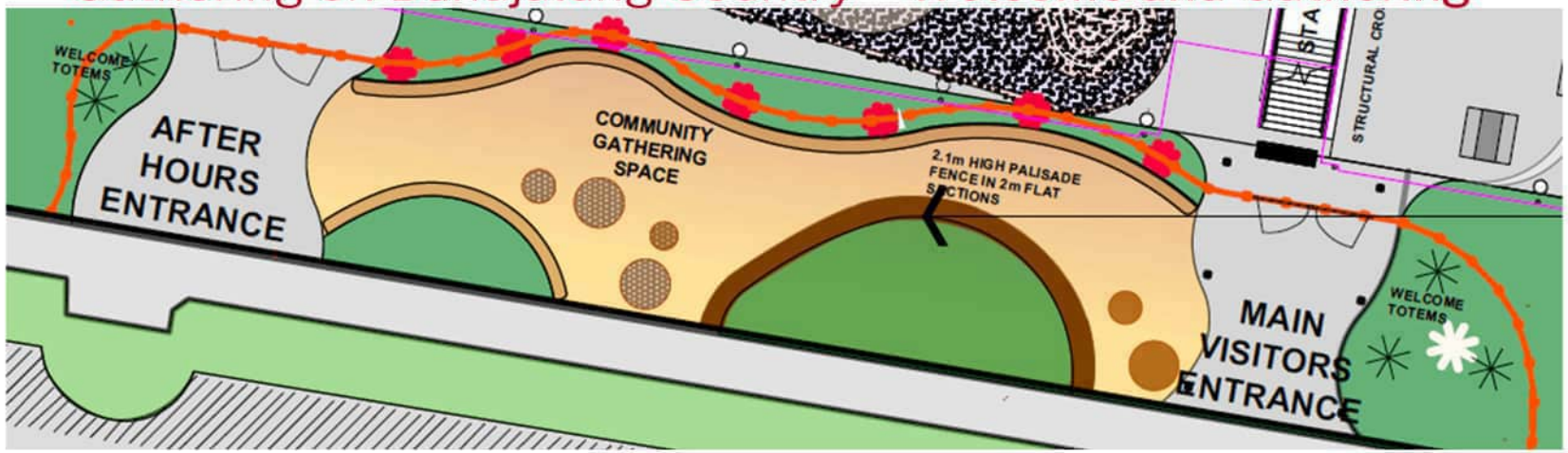
Incorporating Connecting with Country Strategies

SDRP Comment 1 (continued)
Continue to explore ways to meaningfully incorporate Connecting with Country strategies to influence the overall site strategy, including:
c) community access and participation

Design Team response
Reflected in CwC Working Theme:
Gathering on Bundjalung Country

- Having a Widjabul Wia-bal welcome at the entrance to the school
- Creating an area for gathering outside the fence so that parents and community can stay and have a chat after they drop kids off.

Gathering on Bundjalung Country – Welcome and Gathering



Imagery reflecting the materiality of the gathering space, welcome signage, and native planting to be used in this area.

Connection with Country

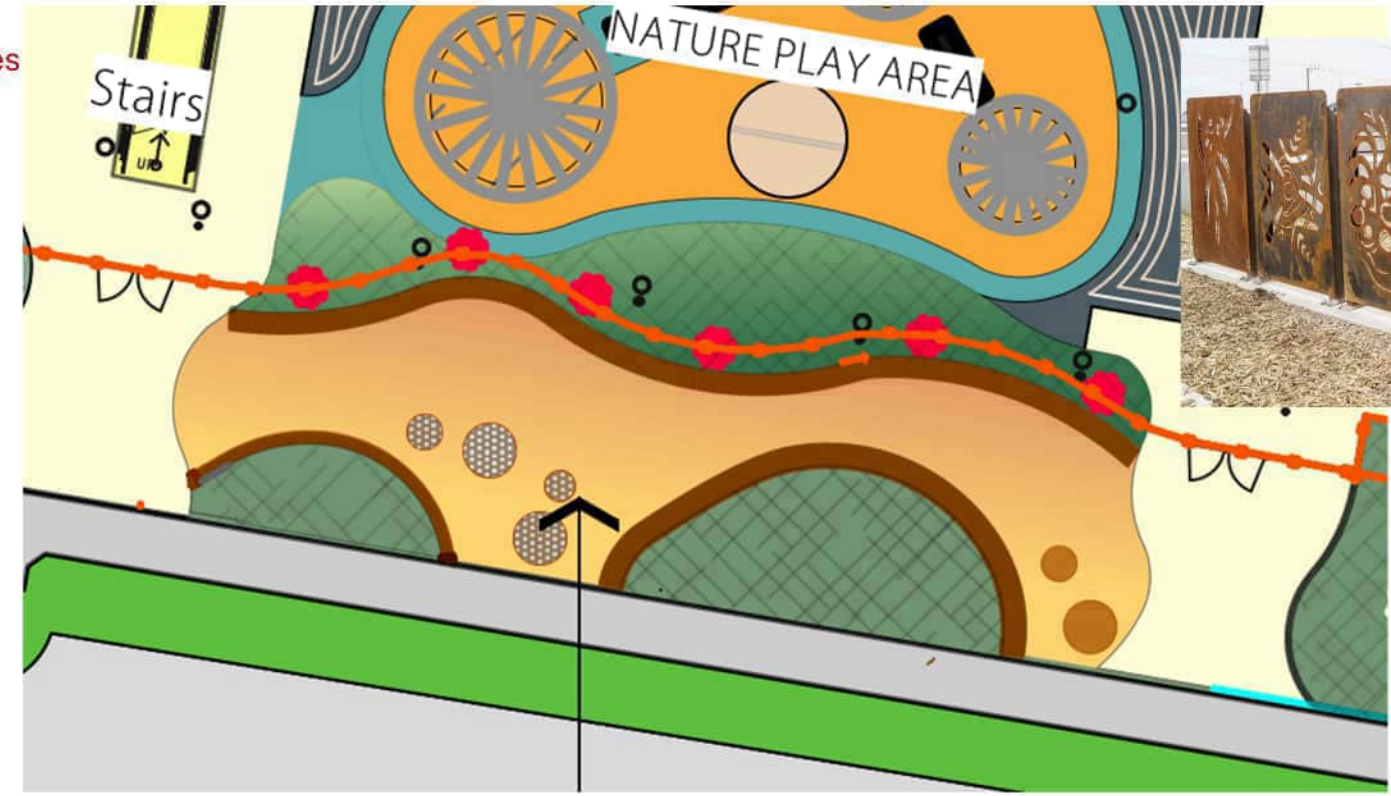
Incorporating Connecting with Country Strategies

SDRP Comment 1 (continued)
Continue to explore ways to meaningfully incorporate Connecting with Country strategies to influence the overall site strategy, including:
c) community access and participation

Design Team response
Reflected in CwC Working Theme:
Telling Bundjalung Stories

- The six primary family groups within Widjabul Wia-bal to nominate stories to be reflected in artworks in the school
- The artworks could be on 6 large panels at the entrance to the school or distributed in different locations around the school.

Telling Bundjalung Stories



The red circles indicate the proposed artwork panel location.
Designs are to be created in collaboration with the six family groups of the Widjabul Wia-bal

Example imagery of Aboriginal artwork panels

Connection with Country

Incorporating Connecting with Country Strategies

SDRP Comment 1 (continued)
Continue to explore ways to meaningfully incorporate Connecting with Country strategies to influence the overall site strategy, including:
c) community access and participation

Design Team response
Reflected in CwC Working Theme:
Learning about Bundjalung Country

- Getting kids learning about Country by being outside and having their hands in the earth
- Involving community in planting and don't plant the grounds out "all out at once" - so that over the years there can be opportunities for new students to continually connect with Country.

Learning about Bunjalung Country and Culture - Student Learning

'Hands in the Earth' To involve community in the planting of the school X in stages and avoid planting out "all at once".

A progressive community panting plan to be established by the School and Local Aboriginal Land Council's Ngulingah Nursery.

The garden bed at the corner of Phyllis and Wilson Street has been identified for a student led staged planting opportunity

Connection with Country

Incorporating Connecting with Country Strategies

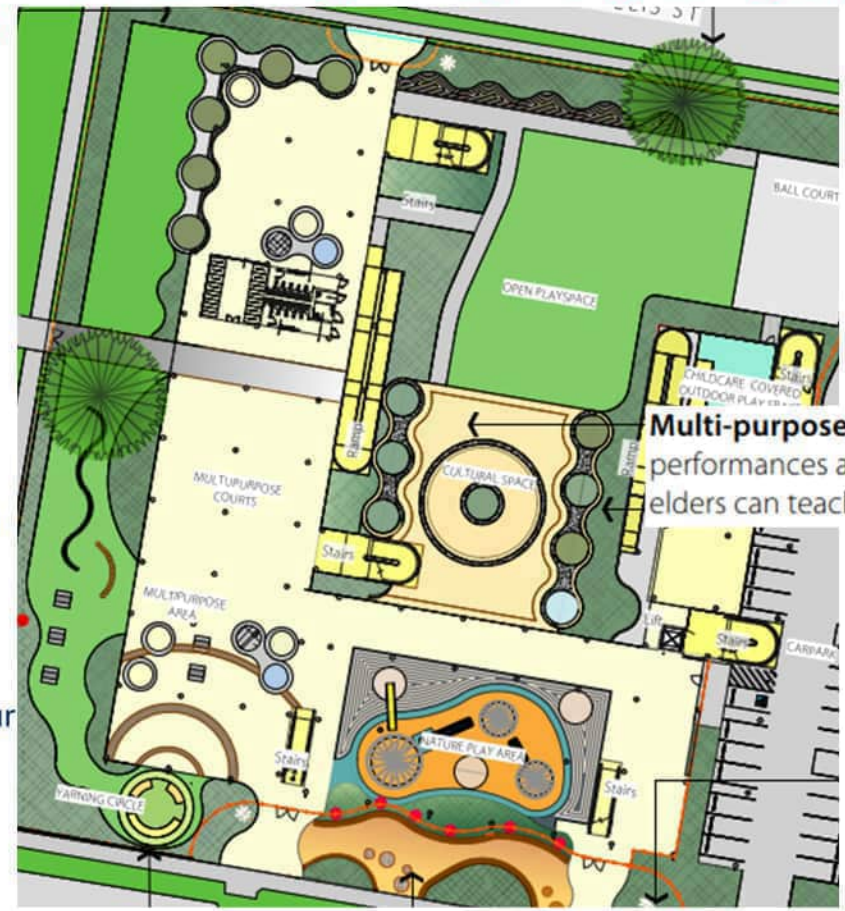
SDRP Comment 1 (continued)
Continue to explore ways to meaningfully incorporate Connecting with Country strategies to influence the overall site strategy, including:

d) internal spaces and functions of buildings

Design Team response

- The buildings have been sited to create visual connection and easy after school access
- The design of the Undercroft is flexible to allow for community and Bundjalung members to hold workshops and lessons.
- Places for Elders to come in and teach art, cooking dance and tell our stories
- Reflected in CwC Working Theme: Celebrating Bundjalung Language

Celebrating Bundjalung Language – Teaching Stories and Language



Multi-purpose courtyard for performances and gatherings where elders can teach art, cooking, and dance.

Creative use of Bundjalung language through art, engravings, signage, and QR codes. Aboriginal Local Land Council to assist with developing Langauge and dialogue.

The under croft is to be a flexible space that can be used to allow local Elders to teach the students.

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Site Strategy

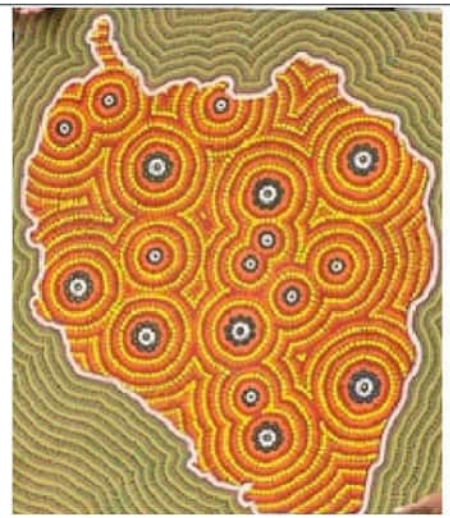
Site Strategy

Healing and Rebuilding

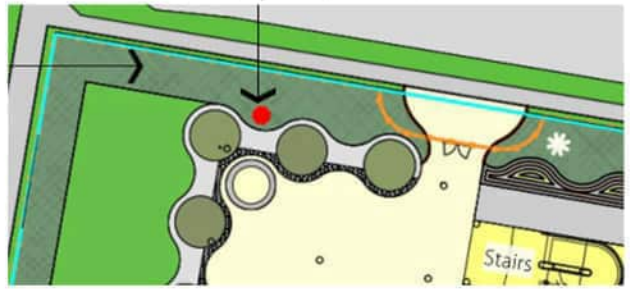
SDRP Comment 3
Involve the local community in the design and delivery of the school and landscaping as part of the healing and rebuilding process.

EJE response

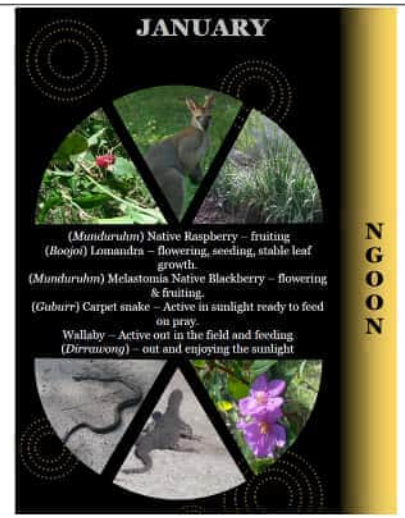
- A range of Reference group meetings have been held with the school and community representatives seeking input into the design
- The next design and subsequent delivery phases will continue to involve the community
-
- Community information sessions have been held to seek feedback in the design
- The school communities will be given the opportunity to be involved in the establishment of gardens and the creating of artworks.
- A progressive planting plan is to be established by the school and ALC Ngulingah nursery



Uncle Gilbert original art representing Widjabul Wia-bal land.



Creative use of Bundjalung language through art, engravings, signage, and QR codes. Aboriginal Local Land Council to assist with developing Langauge and dialogue.



'Hands in the Earth' To involve community in the planting of the school in stages and avoid planting out "all at - once".

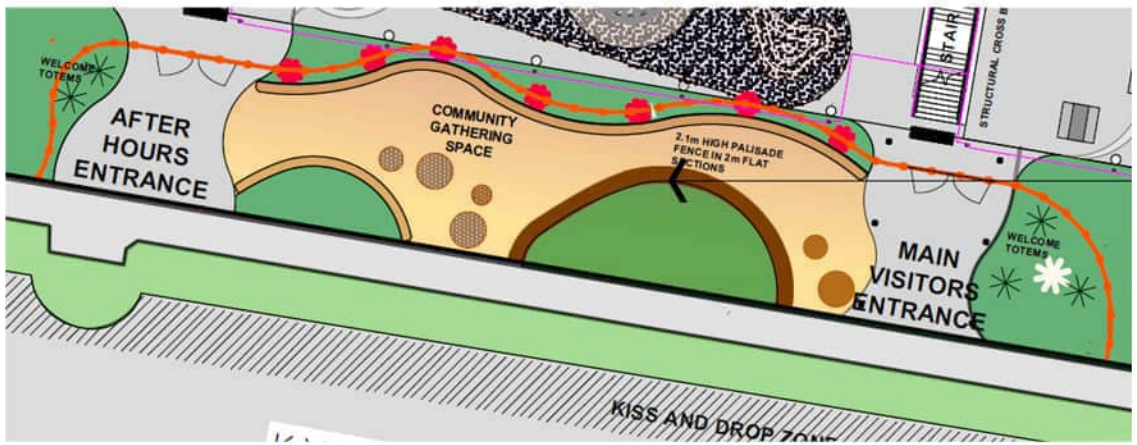
Site Strategy

Entry & Wayfinding

SDRP Comment 4
Clarify wayfinding and the spatial response to the school community and visitors arriving at the school via an undercroft, ensuring this route is legible, safe, inviting and intuitive

EJE response

- An open community gathering space has been created to incorporate feedback from CwC workshops to provide welcoming student & public entry points and gathering spaces.
- The undercroft area has designated key areas that signify their use i.e., games, learning, yarning circle; all of which then connect to the external environment with gardens/bush tucker gardens.
- The design will continue to progress to ensure legible wayfinding and inviting spaces for attendees.



The entrance sequence to the school allows for clear wayfinding. The undercroft layout helps to move people around the site

Site Strategy

Active Transport

SDRP Comment 5

Expand the site analysis to take in the wider catchment active transport routes, including:

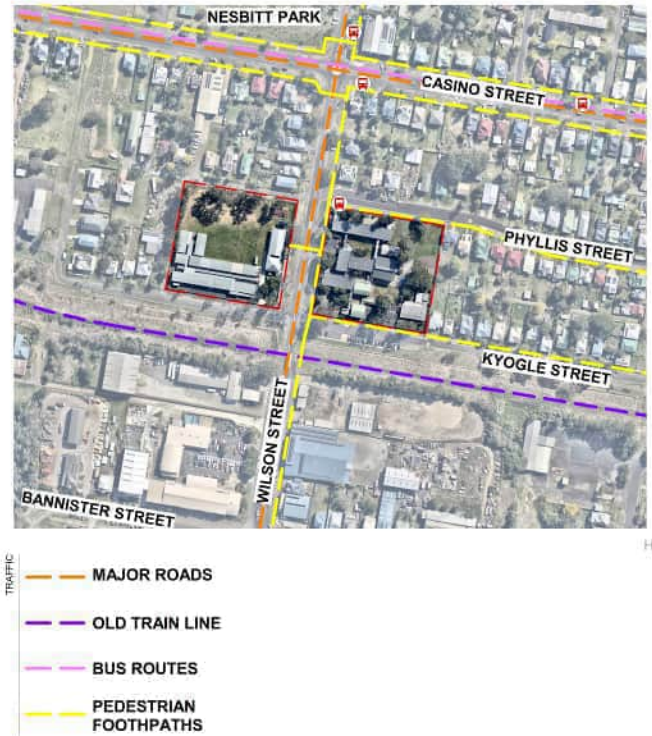
a. key pedestrian arrival points within the catchment

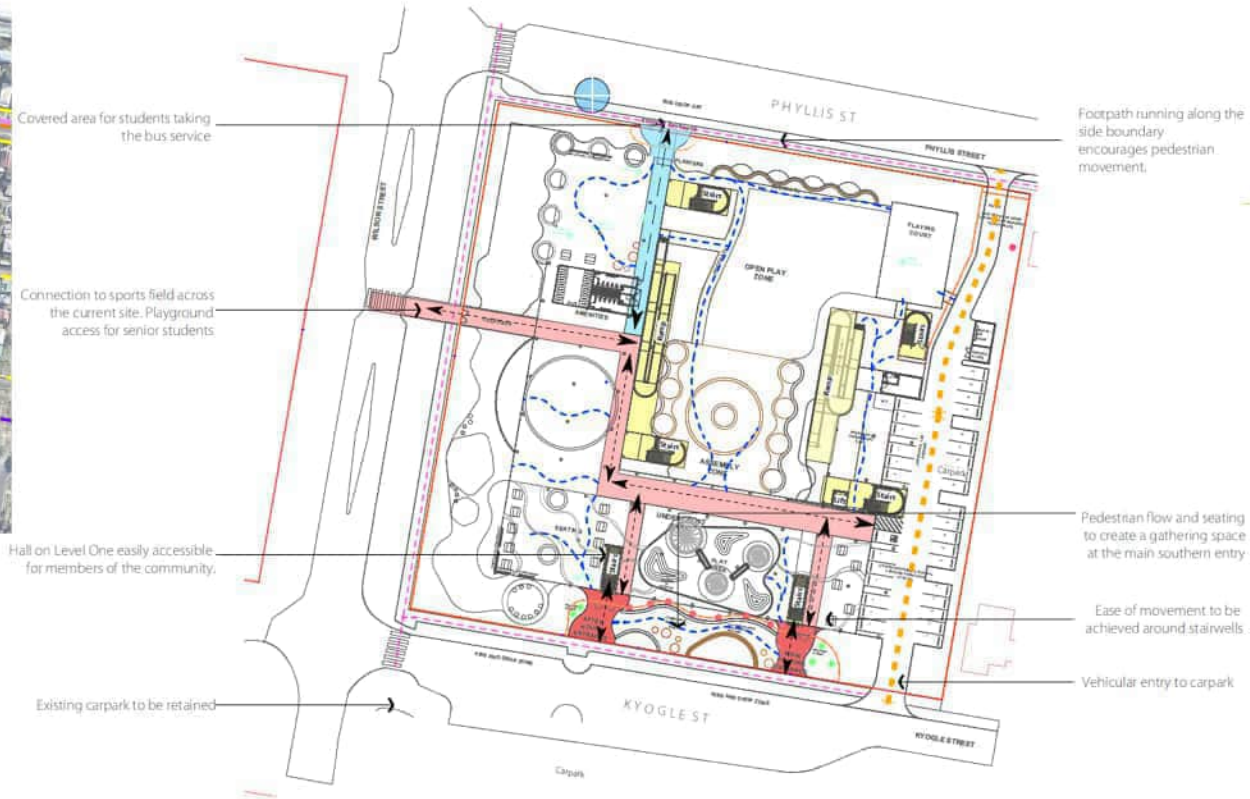
b. existing cycle routes

c. proposed cycle paths, including the disused railway to the south of the site

EJE response

- Site analysis has taken into account active transport routes for the catchment around the school.
- Rapid Transport Assessment, School Transport Plan, Transport Working Groups and design refinement has occurred.





Catchment Plan and Landscape Plan indicating key entry path, pedestrian and vehicle movements around and throughout the site

Site Strategy

Landscape Plan

SDRP Comment 6
Prepare a detailed landscape plan, addressing the following:
a. landscape design with a view to heal and repair the community
b. extent of hardscaping resulting from architectural layouts and how this can be reduced
c. retention of more mature trees within the school grounds

EJE/Terras response

- Detailed landscape plans have been developed taking into account feedback from the community.
- The opportunity to walk on country and participate in CwC workshops has informed the location and content of key landscaping items.


UNDERCROFT PICKUP SEATING AREA


NATURE AND EXPLORATORY PLAY


UNDERCROFT MULTI BALL COURT


INTEGRATED NATURE PLAY AND BUSHTUCKER WALK


YARNING CIRCLE WITH ENDEMIC PERIMETER PLANTING

Landscape Plan indicating key features


CULTURAL SIGNIFICANT HOOP PINE PLANING


CONCRETE FEATURE ASSEMBLY AREA WITH TIMBER BENCH SEATS


CANOPY PLANTING FOR SCREENING AND MICROCLIMATE REGULATION


UNDERCROFT MAIN PLAYSPACE WITH SCULPTED SOFTFALL


INCLUSIVE SPACE FOR GATHERING

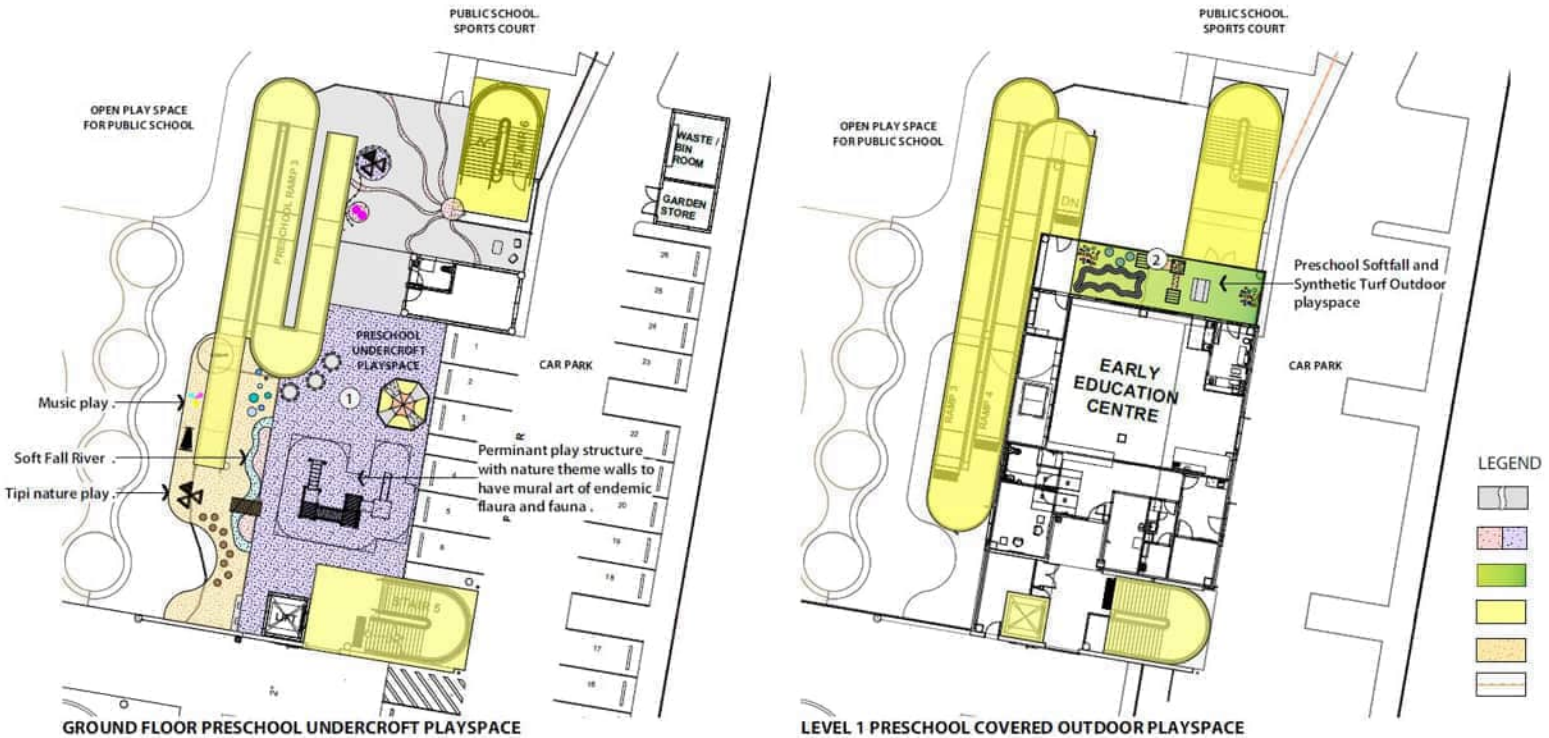
Site Strategy

Landscape Plan

SDRP Comment 6
Prepare a detailed landscape plan, addressing the following:
a. landscape design with a view to heal and repair the community
b. extent of hardscaping resulting from architectural layouts and how this can be reduced
c. retention of more mature trees within the school grounds

EJE/Terras response

- The preschool has been developed to include play areas to the ground floor and on level 1
- The areas will provide a variety of play spaces to offering different play value and to cater for a variety of age groups




Musical Play - (Harmony Flowers)


Sandpit with Integrated Nature Play - Natural Stone and Wood


Undercroft play structure- Nature Theme softfall underlay


River Design Softfall


Colourful structured play elements on softfall


Softfall race track


Softfall colourful game inserts

Landscape Plan indicating key features of the preschool

Site Strategy

Landscape Plan

SDRP Comment 6
Prepare a detailed landscape plan, addressing the following:
a. landscape design with a view to heal and repair the community
b. extent of hardscaping resulting from architectural layouts and how this can be reduced
c. retention of more mature trees within the school grounds

EJE/Terras response

- Natural materials used in response to the connection with CwC process

Landscape Plan indicating material palette included in the landscaping

Site Strategy

Tree Retention

SDRP Comment 7
Engage an arborist to inform the tree retention strategy on the site, confirming high value trees that should be retained.

EJE/Terra response

- An Arborist was engaged and tree values quantified.
- Terras & EJE have endeavored to retain the high value and medium value trees where possible with the placement of the building, driveway and games court
- The landscape explores opportunities to increase canopy cover in open spaces to offset the removal of some of the existing canopies owing to ageing and building footprint.
- The design looks to achieving 30% canopy cover over the active site to provide shade and reduce the heat island effect.

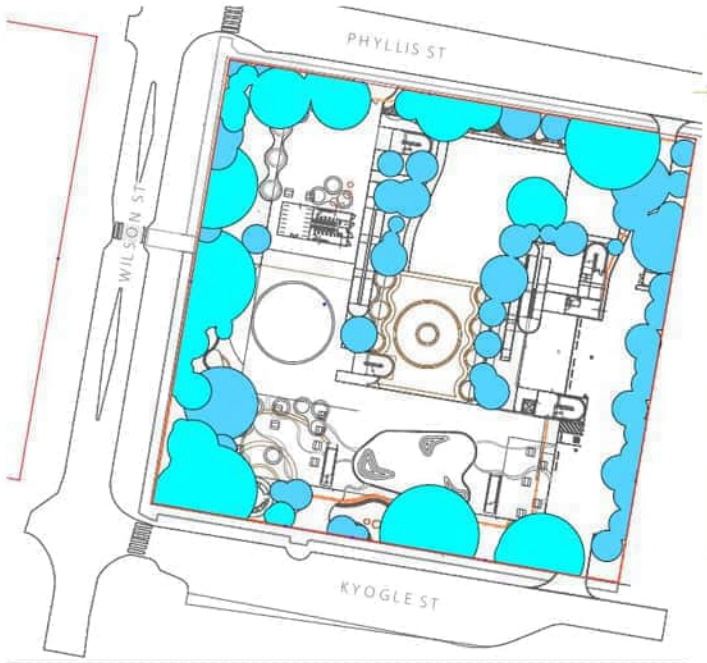
EXISTING CANOPY RETENTION MAP

SITE BOUNDARY

REFER TO:

GHD Preliminary Tree Assessment
Lismore South Public School
24 July 2024

LOW RETENTION VALUE
MEDIUM RETENTION VALUE
HIGH RETENTION VALUE
TO BE REMOVED



INTENDED CANOPY COVER

SITE BOUNDARY

EXISTING TREE TO BE RETAINED
PROPOSED TREE

NOTES

The landscape explores opportunities to increase canopy cover in open spaces to offset removal of some of the existing canopies owing to ageing and building footprint.

The design looks at achieving atleast 30 percent canopy cover over the active site to provide shade and reduce the heat island effect.

Site = 10622.9m²
Canopy Coverage = 3963.7m²

37.3% Canopy Coverage

The tree retention plan and the proposed canopy coverage

Site Strategy

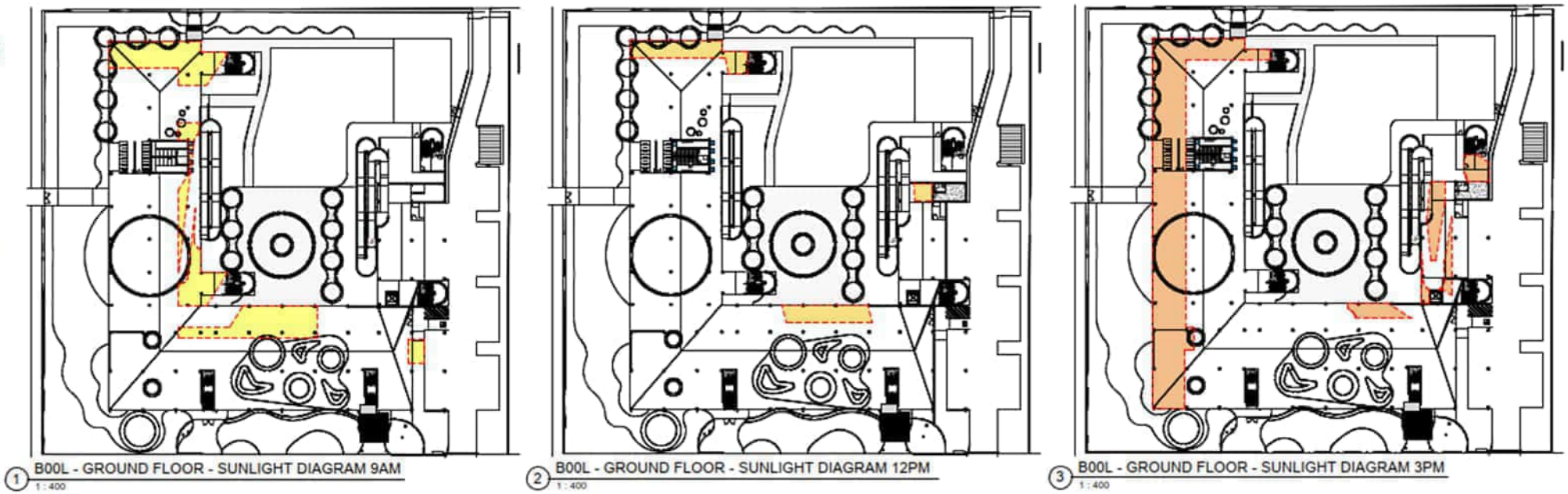
Shadow Diagrams

SDRP Comment 8
Provide shadow diagrams highlighting sunlight access to the undercroft to inform the landscape design and species selection

EJE response

- Due to the 4m height clearance, the undercroft will be provided with natural light and direct sunshine at particular times of the day. (Refer Sunlight Diagrams)

- The flood damaged LSPS had considerable undercroft areas that the school welcomed, and used throughout the year as protection from heat, direct sun and rain in this sub-tropical environment.



Mid Winter Sun Light
Ground Floor Plans indicating the extent of sunlight throughout the day in the Undercroft in Mid Winter

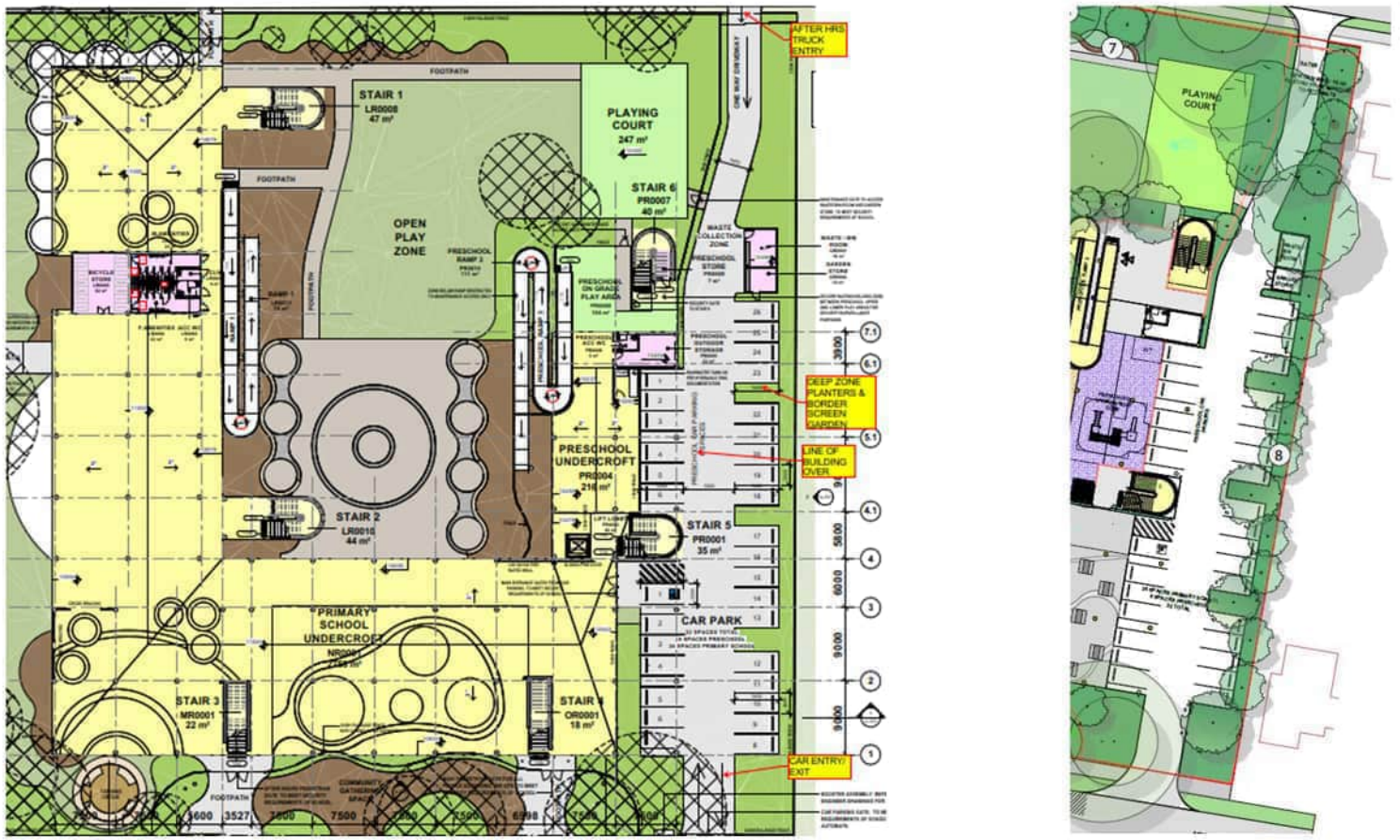
Site Strategy

Carparking

SDRP Comment 9
Shift the carpark west to sit beneath the undercroft and provide a landscaped buffer between the school and neighbouring residences

EJE **response**

- The carpark design has been refined as well as the building location to optimise usable undercroft space and to create enough space for a landscape buffer to the neighboring properties.
- The carpark has shifted west partially into the undercroft whilst maintaining enough separation from adjacent undercroft active areas for safety reasons.
- The amenity of the carpark is enhanced by the use of deep soil zones for shade trees, screening and definition of paths and entries.



Ground Floor Plan indicating the overhang of the building over the carpark, and Landscape treatment to eastern boundary

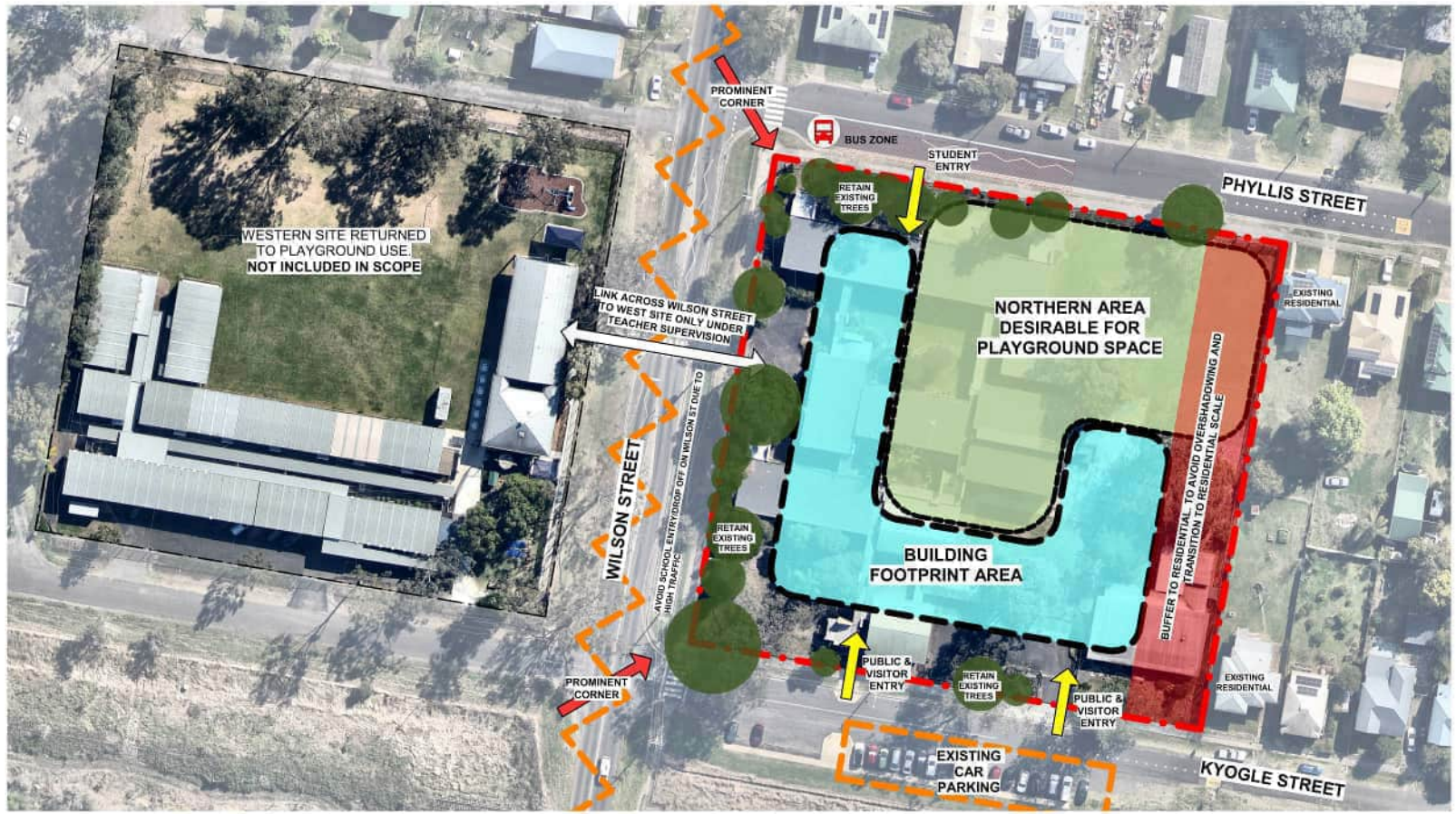
Site Strategy

Expansion

SDRP Comment 10
Identify potential zones for future expansion of the school

EJE **response**

- The scale of the proposed school works well on the eastern part of the site, balancing the available outdoor space and siting of buildings, but it would lose necessary play space and amenity if this part of the school site was to expand.
- The western lot on the other side of Wilson St where the temporary school is located is potentially developable for future expansion.
- However, as the school is located within a high-risk flood zone it is unlikely that the population will grow in the immediate area and would most likely shift to the North Lismore Plateau with proposed future residential developments.



Aerial View of the site showing the redevelopment of the eastern side, with potential expansion zone to the west across Wilson Street (note demountables to be removed)

NSW GOVERNMENT

Architecture

Architecture

Undercroft

SDRP Comment 11
Review the proportions of the undercroft, which may include increasing the ground floor height

EJE response
As Level 1 is already 4m above ground level, it does not assist the access or functionality of the school to increase the height. The proportions have been modelled and reviewed and the design team considers they are appropriate.

SDRP Comment 12
Detailed design of the undercroft is required to address the following:

a. acoustic attenuation
b. ceiling finishes to conceal services and help with acoustics
c. glare, particularly when looking north
d. treatment and cladding of columns to ensure safety for children

EJE response

- Ceiling finishes to the undercroft are incorporated to conceal services, improve light levels and assist acoustic performance.
- Glare is being addressed in the design – pattern ceiling design and varied paint finish
- Columns have been amended to a circular design with varying colours, locations are being reviewed and safety treatments will be explored in detailed design.

Perspective view of Undercroft indicating active uses and ceiling treatment

Architecture

Scale and Massing

SDRP Comment 13
Explore additional height in places to vary the massing of the built form, while creating more open space

EJE response
The design follows the SINSW Pattern Book Facade and Roof Form intent. The following design elements have been adopted to vary the massing of the built form:

- The Hall element on the corner has an increased roof height to reflect its internal use and highlight it as a corner element.
- The roof line along the street front facades is recessed at Service areas and Walkways to break the roofline.
- The direction of the roof pitch alters between the General Learning Spaces and the Hall along Wilson street, and also between the Administration and Preschool on the eastern facade to vary the rooflines of the building components.

Perspective view indicating façade breakup

Architecture

Scale and Massing

SDRP Comment 14
Separate the standardised modules, breaking up the massing into smaller buildings relating to the differing uses (preschool, primary school, library and administration). This will improve articulation and enable:
a. greater light penetration to the undercroft spaces, including the potential for voids
b. ability to harness breezes and take advantage of the Lismore microclimate
c. improved relationships with the surrounding streetscape, which is primarily low rise detached residential properties
d. more intimate spaces which better reflect the existing school
e. COLAs with a better quality of space.

EJE response

- The Design follows the SINSW Pattern Book Layouts, Facade and Roof Forms, adopted for Lismore South PS.
- The compact nature of the site does not make it practical to fully separate buildings, however, recesses in the plan and roof have been incorporated to breakup the building form and highlight different building uses.
- The Hall element on the corner is separated with a higher roof and recessed stairs and COLA on either side.

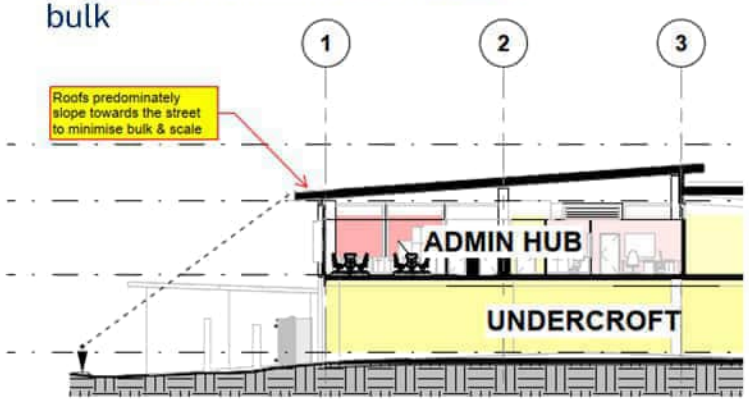
Perspective view from the corner of Kyogle and Wilson Streets

Architecture

SDRP Comment 14 (continued)

EJE response

- The overall floor plan is broken up as much as possible within the constraints of the site and building functions
- Walkways, ramp and stair elements help to provide interest to the form
- Roofs are generally sloped towards the street to minimize scale and bulk



Section indicating roof form

View looking towards the school from the main play space, indicating the forms of ramp and stairs

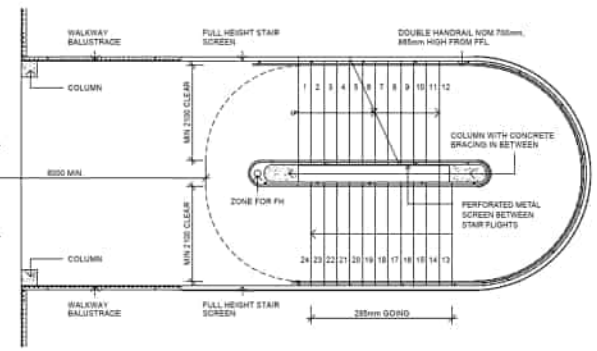
Architecture

Stairs and Ramps

SDRP Comment 15
Explore options for the stairs and ramps, making them playful as well as functional

EJE response

- The external stairs adopt the Pattern Book design, with the opportunity for Bundjalung artwork to be incorporated in areas of perforated metal that enclose the stair
- The ramps adopt elements of the stair design, with curved roof and landing elements.
- It is proposed to incorporate artwork panels within the Primary School ramp balustrades to reflect the 6 local Widjabul Wia-bal families, and the 4 Bundjalung seasons.
- The Preschool ramp is to include artwork reflecting the goanna and echidna totems of the Ngulliboo Jarjums Preschool.
- In addition, for both ramps, variations in balustrade colour and design can evoke a sense of playfulness.



Stair and Ramp Design Imagery

Architecture

Materials

SDRP Comment 16
Ensure the simplicity of materials is balanced with architectural expression and articulation to create a school with a unique identity that reflects the community

EJE response

- The façade composition and break up is adopted from the SINSW Pattern Book.

- Feedback from the School and CwC is incorporated within the design of to create a unique design for the undercroft, landscaping, entries, signage and wayfinding, plus the use of colours and materials to create an identity that reflects the families and community of Lismore.

Perspective view of school at Wilson and Phyllis Street corner, reflecting Pattern Book Design principles, adopted for the Lismore community and environment

NSW GOVERNMENT

Sustainability and Climate Change

Sustainability and Climate Change

Sustainability Targets

SDRP Comment

Demonstrate how sustainability targets will be achieved and how initiatives are integrated into the site planning and design of buildings

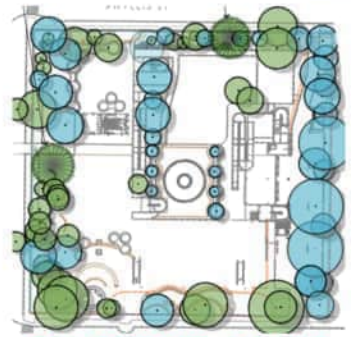
LCI ESD response

- Green Star Buildings v1 – 4 Star Rating
  - Targeting 20 points (15 required) while achieving minimum requirements
  - Project in Climate Zone 2 with Warm Humid Summers and mild winters. Focus on protection from solar radiation
    - Shading devices over external windows
    - Large walkway overhangs
    - 30% Canopy cover target
    - Light coloured roof
  - Focus on Indoor Environment Quality
    - Clean Air
    - Light Quality
    - Acoustic Comfort
    - Exposure to toxins
  - Climate Change Assessment
    - Flood Risk - FFL 500mm above 2022 flood level but below PMF.
  - Biodiversity Enhancement
    - Increasing the long-term biodiversity on site
    - Regionally native species proposed

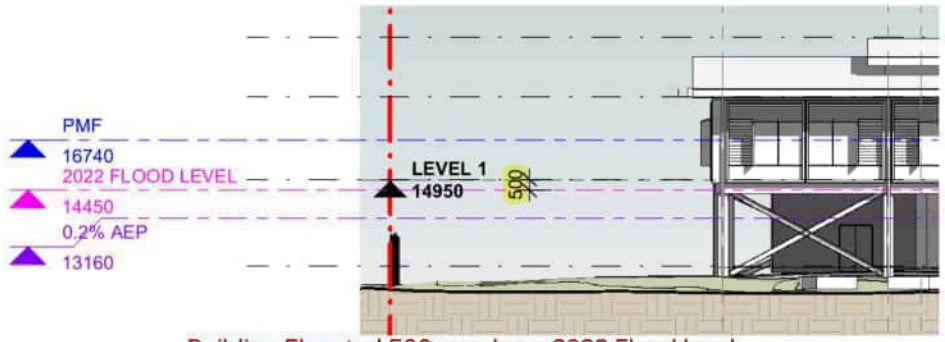
Green Building Council Australia

Points	Available	Targeted
Responsible	17	3
Healthy	14	7
Resilient	8	3
Positive	30	3
Places	8	0
People	9	4
Nature	14	0
Total	100	20

Climate Zone Map



30% Canopy Cover Target



Building Elevated 500mm above 2022 Flood level

External windows shading device

Sustainability and Climate Change

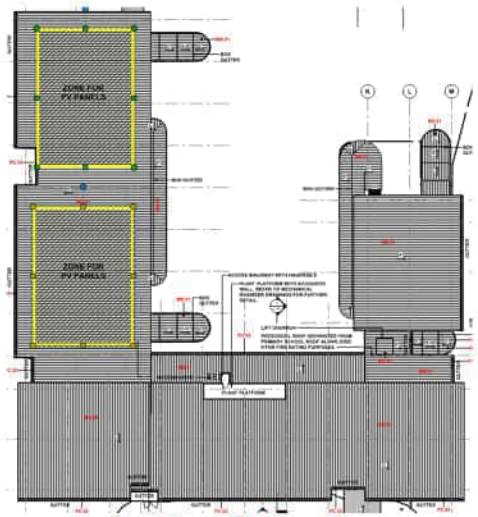
Net Zero by 2050

SDRP Comment 18

Illustrate how the project will contribute to NSW's Net Zero emissions goal by 2050. Refer to 'NSW, DPIE, Net Zero Plan, Stage 1: 2020-2030' for further information.

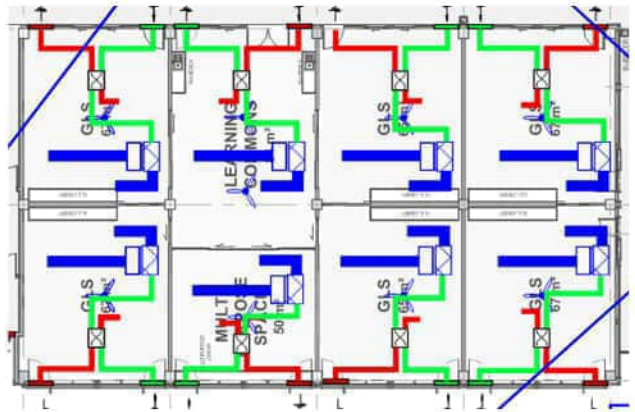
LCI ESD response

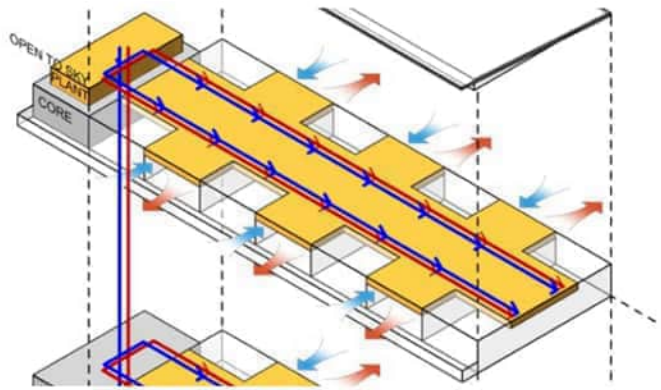
- All systems operate using electricity (net zero ready) and are energy efficient for their purpose
  - Mechanical
    - VRF reverse cycle system allowing both heating and cooling, eliminating any need for gas heating
  - Domestic Hot Water
    - Heat pump hot water systems for the Canteen Kitchen
    - Possible instantaneous units for staff kitchenette
  - Efficient LED light fittings
  - Natural Ventilation
- Provisional space for PV
- School to procure renewable energy or await grid decarbonisation



Provisional PV Location

Natural Ventilation Openings





Mechanical Design Layout

APPENDIX 4: COMMENTS FROM SDRP NO. 2 AND RESPONSES

GOVERNMENT
ARCHITECT
NEW SOUTH WALES

11 December 2024

Tessa Sharp
Schools Infrastructure NSW
Tessa.Sharp2
@det.nsw.edu.au

PROJECT: Lismore South Public School – Flood Rebuild
RE: State Design Review Panel – 27th November – Review 2

Dear Tessa,

Thank you for the opportunity for ongoing review of the above project. Please find below a summary of advice and recommendations arising from the design review session held on 27th November 2024.

Rebuilding the school on the original site close to the existing community and raising the built form to mitigate flood risk continues to be supported.

However, concerns remain around the amount of vertical circulation to the courtyard, the impact of car parking on the safety of the preschool, and the safety and amenity of the undercroft.

Substantial improvements to the quality of the school could be made if onsite car parking was reduced and non-essential car parking moved to the western site, the preschool was moved to the western site, and the budget was increased or prioritised to improve the quality and character of the undercroft and adjacent landscape.

In addition to the previous commentary the following elements of the design strategy are supported:

- Ongoing and careful involvement of community, school and Indigenous knowledge holders.
- The inclusion of a community gathering space at the front of the school.
- The widening of the walkway to the southern block.
- Sourcing local planting and propagating and regrowing the hoop pine.
- Providing 30% canopy cover.

The following commentary provides advice and recommendations for the project:

Connecting with Country

1. Continue to engage with Indigenous Knowledge Holders to provide advice and direction to the development of the project including site strategy, landscape, and ongoing cultural engagement.
2. Ensure all elements that engage with Country are high quality and sufficiently resourced. It is preferable to do fewer things well than attempt too many smaller moves.
3. Incorporate healing in relation to Country, both in terms of land and the community as it recovers after a traumatic event.

Site Strategy and landscape

The proposed layout is dominated by vertical circulation, inefficiently using space on a small site and impacting on the quality of the landscape. Critically, the car parking next to the preschool play area is unsafe.

4. Open up the site and substantially improve the school for students and teachers by considering:
    a. moving the entire preschool building onto the site to the west, which would reduce car parking, simplify the vertical circulation and improve opportunities for play and landscape
    b. moving the car parking onto the site to the west, which would substantially improve safety for students, extend and improve the quality of the landscape and create the opportunity for a better entrance to the preschool.

In addition to moving the preschool and/or car parking, the ramps should be reconsidered. At approximately 80m long, the ramps are not ideal for children to use as part of their routine movements.

5. Further develop the ramps to include platforms and play areas so they are integrated into the landscape.
6. Consider locating stairs or ramps on the exterior of the built form to loosen up opportunities in the courtyard.

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The safety and amenity of the undercroft is key to its success as an area for student play and learning.

7. Review sight lines and consider changes and relocation of ramps and toilets to ensure surveillance of students is not compromised.
8. Undertake acoustic modelling and invest in appropriate acoustic treatment on the ceiling to ensure sound levels are comfortable.
9. Test glare and lighting levels to ensure safety and comfort and introduce mitigation measures where needed.
10. Test column locations and further develop the landscape strategy to address safety such as by introducing a planting or seating buffer.
11. The nature play areas in the undercroft have no nature or direct sunlight. Consider re-casting them as play areas only and introduce nature play where planting and natural light is provided.
12. Increase the amount of bicycle parking, going beyond recommended capacity to anticipate and encourage growth.

The community's desire to avoid being a formal refuge centre in future floods or emergencies is acknowledged, however the school is being rebuilt in a High Flood Risk Precinct and there is a responsibility to protect students, staff and local residents if needed.

13. Ensure the school is being sufficiently planned and funded to be a safe place of refuge, easily cleaned and repaired, and the landscape and structure designed for repeated large flood events.

Architecture

14. Explore further modulation of the built form by bringing elements, such as stairs, forward and between trees and the boundary.
15. Improve the amenity and usability of the COLA, as well as the street presence of the building, by relocating the hall/stage to the periphery and the amenities/back of house internally.
16. Refine the design of the cross bracing to the corners of the school to ensure it is consistent between buildings and doesn't pose a safety issue for students.

The new community gathering space at the southern entrance to the school is supported, however the stairs and public entries to both the school and preschool require further refinement.

17. Reconsider the dimensions and location of the stairs on the southern side of the school to ensure the main entry is easily distinguished.
18. Reconsider the functions adjacent to the stairs on the first level, noting private rooms such as counsellor's and wellbeing offices aren't safe or appropriate for students or visitors to be passing by.
19. Provide more generosity at the entrance by using the building as boundary such as wire mesh as a wall to the undercroft, rather than a fence line a small distance in front of the building.
20. Reconfigure the entrance to the preschool (or relocate to the western site) to address:
    a. the complexity resulting from the firewall
    b. the location of the single lift, which is not easily seen or equitable from the southern entrance
    c. wayfinding and clarity from the car park.

The advice provided is to be addressed as part of the REF submission.

Please contact GANSW Design Advisor, Dr Barnaby Bennett (barnbaby.bennett@dpie.nsw.gov.au), if you have any queries regarding this advice.

Sincerely,

Emma Kirkman

Principal Design Review

Chair, SDRP

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Distribution:

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EJE Architecture	Kathy Gresham, Grant Shultz
Terras	Guy Frostick
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NSW GOVERNMENT

APPENDIX 5: Design Team Response to SDRP No.2

EJE Integrity Innovation Inspiration

DESIGN TEAM RESPONSE TO SDRP No.02

This document has been prepared in response to feedback provided by GANSW for SDRP No.02 which occurred on 27th November 2024. The feedback was received by the design team on 11th December 2024.

Figure 0.01: Artistic render of main entrance along Kyogle Street

Prepared by EJE Architecture
10th June 2025
Ref: 14931

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Newcastle NSW 2300

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Connecting with Country

1. *Continue to engage with Indigenous Knowledge Holders to provide advice and direction to the development of the project including site strategy, landscape, and ongoing cultural engagement.*

Design Team Response:

Workshops with the local Widjabul Wia-bal community, as well as the AECG will continue throughout the design development phase.

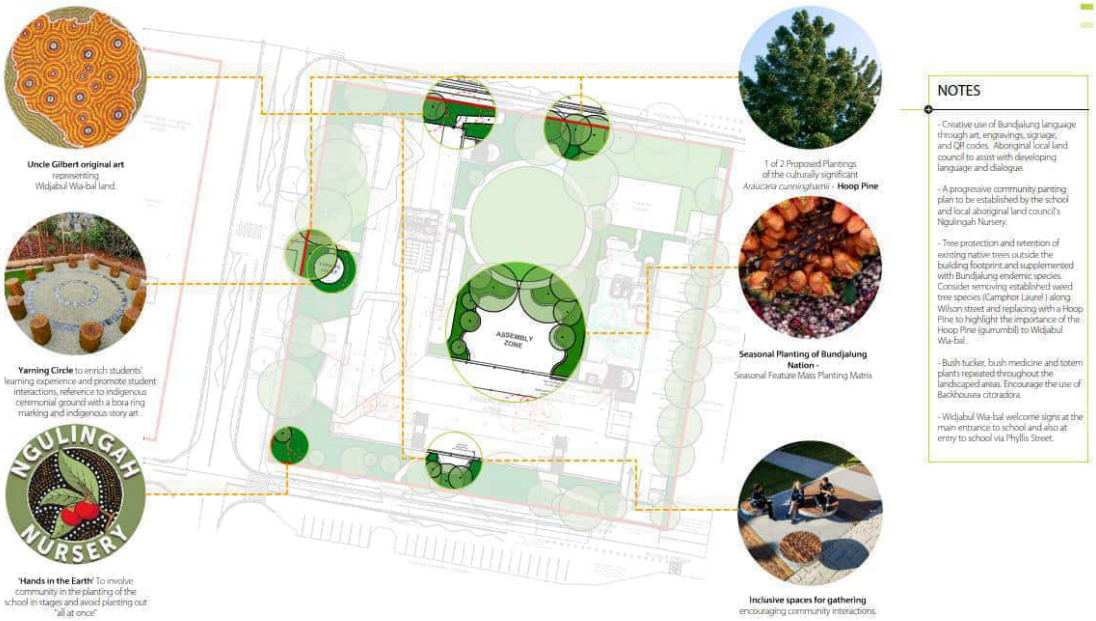
Connecting with Country

2. *Ensure all elements that engage with Country are high quality and sufficiently resourced. It is preferable to do fewer things well than incorporate too many smaller moves.*

Design Team Response:

Seven key areas have been identified in the design and will be developed through CWC Workshops throughout the next phase of design.

- Art representing the Widjabul Wia-bal land located near the student entrance and the community gathering space
- Incorporation of the Hoop Pine in the landscape
- Seasonal Planting of the Bundjalung Nation
- Yarning circle
- Community gathering space
- Staged planting plan to allow the community to regularly engage with Country
- Incorporation of local native species in the planting choices, including bush tucker plants.



Connection with Country strategies from LSPS Landscape Report (Source: Terras)

Connecting with Country

3. Incorporate healing in relation to Country, both in terms of land and the community as it recovers after a traumatic event.

Design Team Response:

Areas where this has been considered include:

- Bringing the community together for the staged planting events
- Creation of an inclusive gathering space at the main entrance of the school for parents and guardians to use whilst waiting to drop off or pick up their children.
- Inclusion of a yarning circle in the landscape design to facilitate conversations about Country and Connection with Country for the students.
- Rehabilitation of the landscape through the incorporation of local native plants to increase biodiversity of flora and fauna on the site.

Community Gathering Space at the main entrance of the school (Source: Terras)

Yarning Circle along the western boundary of the school (Source: Terras)

Site Strategy and Landscape

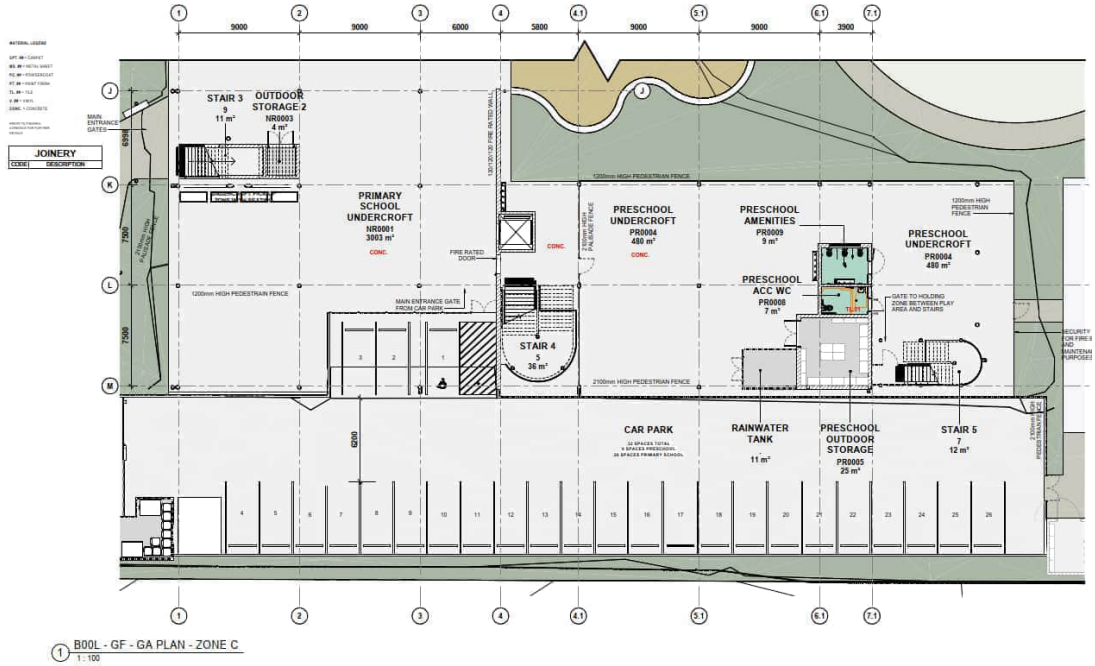
4. *Open up the site and substantially improve the school for students and teachers by considering:*
   a. *Moving the entire preschool building onto the site to the west, which would reduce car parking, simplifying the vertical circulation and improve opportunities for play and landscape*

Design Team Response:

This is unable to be achieved as the Preschool needs to be located close to the Primary School admin hub. This has been requested by stakeholders as the Preschool staff are supported by the Primary School administration staff. This connection between the two schools is well established and is vital to the smooth operation of the Preschool.

   b. *Moving the car parking into the site to the west, which would substantially improve safety for students, extend and improve the quality of the landscape and create the opportunity for a better entrance to the preschool.*

This is unable to be achieved as the close proximity of the car park to the Preschool and Primary school allows for key staff access, preschool drop off, and accessible parking. This is important for the smooth operation of the school. Additionally, the car parking location on the eastern parcel allows for waste collection and management procedures to occur.
Instead, the number of car park spaces was reduced and the car parking next to the preschool undercroft and primary school undercroft was moved out of the undercroft. This improves the safety of the undercroft areas.



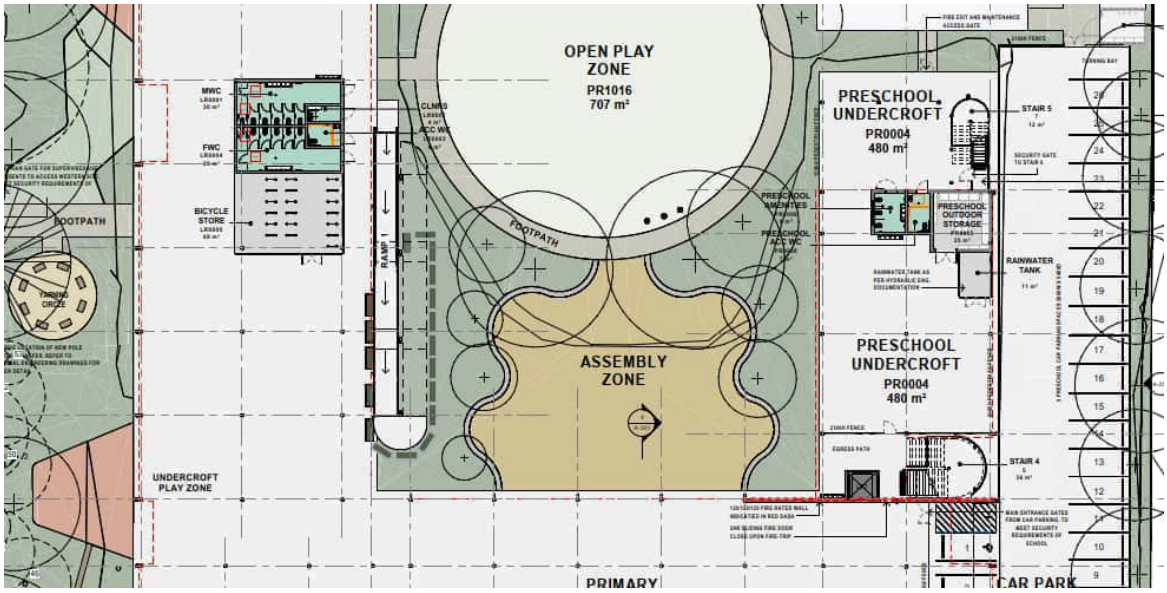
Preschool undercroft design with car parking removed from undercroft (Source: EJE Architecture)

Site Strategy and Landscape

5. *Further develop the ramps to include platforms and play areas so they are integrated into the landscape.*

Design Team Response:

The extent and position of the ramps was reviewed following SDRP comments. As a result, the ramp to the preschool was removed to allow better integration of play spaces and landscaping at the ground level. Incorporating play areas on the ramps is also not suitable for supervision of the students, instead students will be encouraged to play in the undercroft or open play zones.



New ramp layout around assembly zone (Source: EJE Architecture)

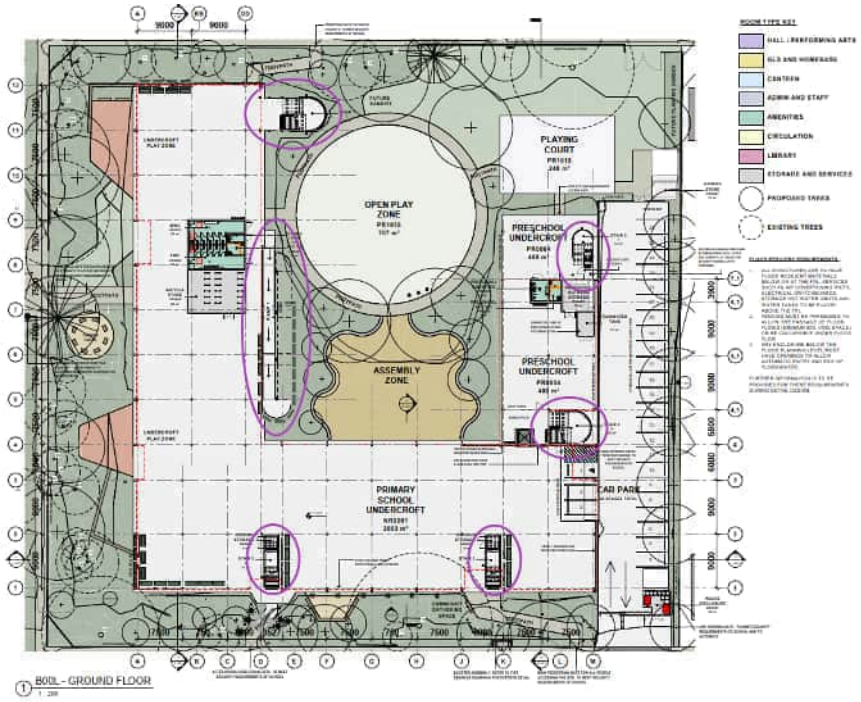
Site Strategy and Landscape

6. *Consider locating stairs or ramps on the exterior of the built form to loosen up opportunities in the courtyard.*

Design Team Response:

Stair 2 which as located internally and next to the assembly area has been removed and the Primary School ramp has been moved south. The Preschool ramp has been removed from the plan and Stair 6 has been reduced in width. This results in only Stair 1 and the Primary School ramp located internally. All other stairs are located externally.

The stairs could not be pushed out of the building line further as the exiting trees are important to keep along the boundary to maintain the character of the site. Additionally, surveillance of the stairs is of concern to the school so locating them outside of the building line was not supported from a safety and security perspective.



New ramp and stair layout (Source: EJE Architecture)

Site Strategy and Landscape

7. *Review sight lines and consider changes and relocation of ramps and toilets to ensure surveillance of students is not compromised.*

Design Team Response:

The primary school ramp has been moved south with the ground floor landing located next to the amenities block. This allows for easier surveillance of the amenities block as sight lines are no longer impeded by the ramp. The amenities block has remained in the same location as it is efficient to stack the amenities over levels.

Site Strategy and Landscape

8. *Undertake acoustic modelling and invest in appropriate acoustic treatment on the ceiling to ensure sound levels are comfortable.*

Design Team Response:

Acoustic modelling will be undertaken in the Design Development phase. Acoustic treatment to the ceiling will be addressed in response to the modelling outcomes. Additionally, the landscape architects are proposing wet our soft fall in several locations within the undercroft. Soft landscaping on the edges will also help to mitigate noise reverberation and transfer.

Site Strategy and Landscape

9. *Test glare and lighting levels to ensure safety and comfort and introduce mitigation measures where needed.*

Design Team Response:

Glare and lighting levels will be further considered in the Design Development phase. Mitigation measures will be developed to address any identified issues relating to glare and lighting. This includes the use of colour and contrast on elements such as columns, furniture, and play equipment.

Site Strategy and Landscape

10. *Test column locations and further develop the landscape strategy to address safety such as by introducing a planting or seating buffer.*

Design Team Response:

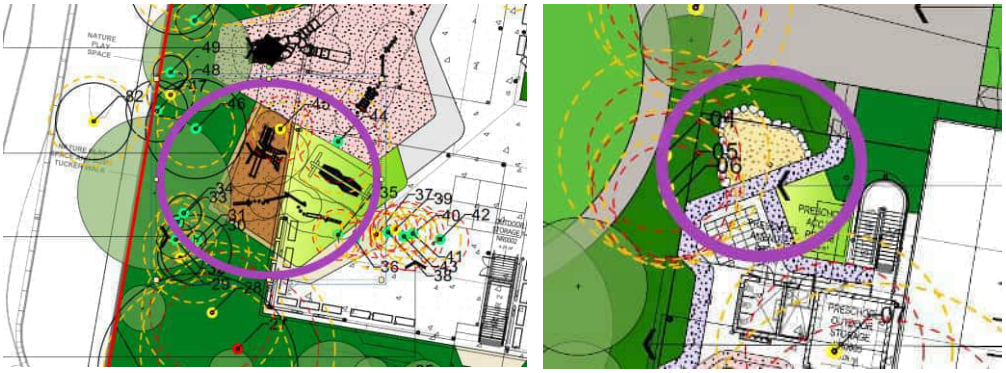
Column locations have been determined by the structural grid of the modular design prescribed by SINSW. The landscape and design strategies will be further developed to consider potential safety around columns and structural elements in the design development phase.

Site Strategy and Landscape

11. The nature play areas in the undercroft have no nature or direct sunlight. Consider recasting them as play areas only and introduce nature play where planting and natural light is provided.

Design Team Response:

The Primary School nature play space has been located along the western boundary of the site and will receive adequate sunlight exposure. The Preschool nature play space has been located to the north. Areas which were not suitable for nature play spaces have been recast as play areas. Additionally, plants will be chosen to suit the specific micro-climates of these areas.



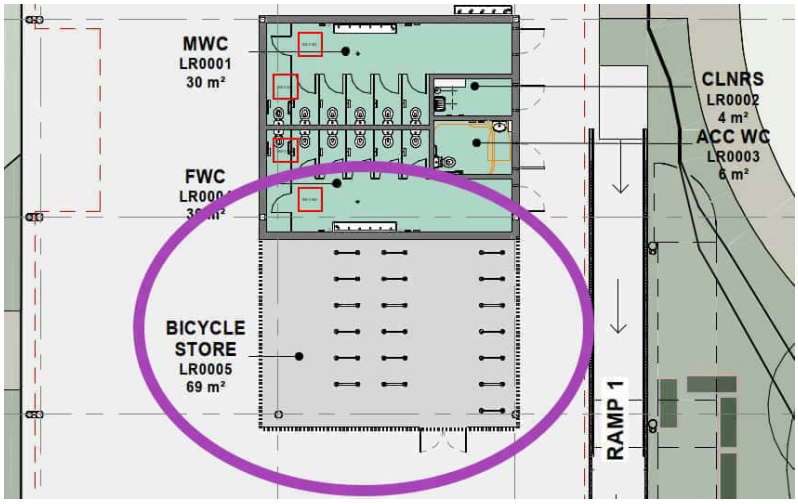
Nature Play Locations (Source: Terras)

Site Strategy and Landscape

12. Increase the amount of bicycle parking, going beyond recommended capacity to anticipate and encourage growth.

Design Team Response:

Bicycle parking has been increased from 28 spaces to 38 spaces to encourage bicycle trips to school . This is beyond the recommended capacity in the Transport Assessment.



Bicycle Store (Source: EJE Architecture)

Site Strategy and Landscape

13. Ensure the school is being sufficiently planned and funded to be a safe place for refuge, easily cleaned and repaired, and the landscape and structure designed for repeated large flood events.

Design Team Response:

The school has been raised a further 300mm to sit a total of 800mm above the 2022 flood level. The structure has been tested against flood events in flood modelling undertaken during each phase of the design and will continue to be tested as the design progresses. Materials for the building are durable and selected considering flood resilience. They are designed either to be also able to withstand flood events, or easy to clean and to repair or replace if required.

Meetings with the council and SES have concluded that the school will not be used as a community refuge. Refuge in safer locations should be provided. The school is expected to receive notice of rising flood waters at least 12 hours before a flood event, enabling the school to either evacuate if in operation or close if outside school hours.

Flood Levels (Source: EJE Architecture)

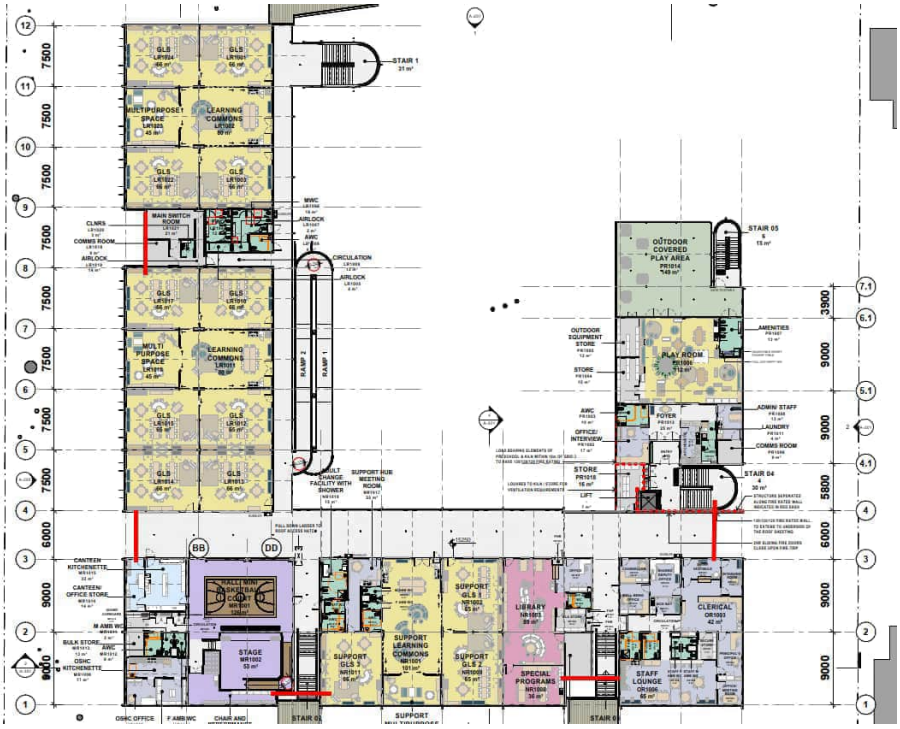
Architecture

14. Explore further modulation of the built form by bringing elements, such as stairs, forward and between trees and the boundary.

Design Team Response:

Stairs are not being moved outside of the building line due to concerns over surveillance of students around these elements. Instead, the building form has been further undulated to help break-up the form of the building. This is located at the primary school amenities, the COLA, the after-hours entrance, and the Main entrances for visitors and staff. These areas have been made to appear recessive by using darker colours, and different materials to the main body of the school.

Additionally, the hall roof has been rotated 90 degrees which helps further break up the building form facing Kyogle Street. The configuration of solid cladding, windows, and battens along with existing trees and proposed planting creates an appropriately scaled dynamic façade and form.



Building Recesses (Source: EJE Architecture)

Architecture

15. Improve the amenity and usability of the COLA, as well as the street presence of the building, by relocating the hall/stage to the periphery and the amenities/back of house internally.

Design Team Response:

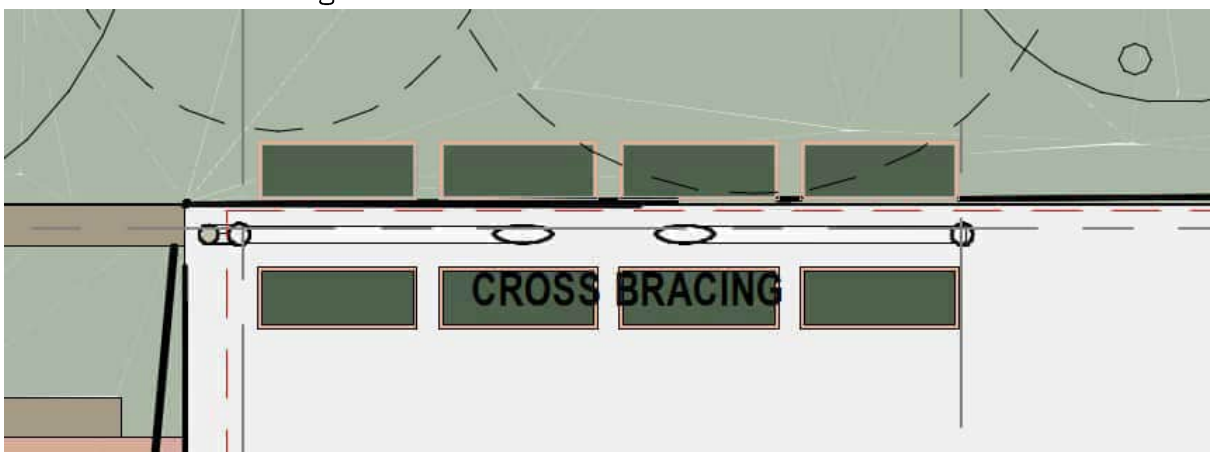
The location of the hall and amenities will not be changed. The step in the COLA design has been placed to meet the above concern (14) and would result in less "breakout" space for the hall if the layout was mirrored. Additionally, the fire evacuation path relies on being able to cross the hall and exit next to the stairs. Without this exit path, the hall will not meet the evacuation requirements.

Architecture

16. Refine the design of cross bracing to the corners of the school to ensure it is consistent between buildings and does not pose a safety issue for students.

Design Team Response:

The cross-bracing elements have been considered. Planters have been placed around these elements to stop students, teachers, and visitors from injuring themselves by walking below these elements, and to prevent students from climbing on these elements.



Cross Bracing Planter Beds (Source: EJE Architecture)

Architecture

17. Reconsider the dimensions and location of the stairs on the southern side of the school to ensure the main entry is easily distinguished.

Design Team Response:

Dimension and location of the stairs on southern side are unable to be changed due to width restrictions of the site. The main entrance is to be distinguished via signage and landscaping elements which lead community to the appropriate entrance location. Additionally, operational factors will result in the main entrance being easily distinguishable.

Architecture

18. *Reconsider the functions adjacent to the stairs on the first level, noting private rooms such as councillors and wellbeing offices aren't safe or appropriate for students or visitors to be passing by.*

Design Team Response:

Admin block and layout has been extensively workshopped with the school and their operational requirements.

The counsellor's office and well-being office will only be operational during key hours, not during peak drop-off and pick-up hours. This will reduce the chance of breaches in privacy due to passersby.

Architecture

19. *Provide more generosity at the entrance by using buildings as boundary such as wire mesh as a wall to the undercroft, rather than a fence line a small distance in front of the building.*

Design Team Response:

Due to security, safety, and insurance requirements of the school, the fence-line is to remain at the boundary of the site. The community gathering space previously outside of the fence-line is now positioned within the fence-line for security, safety, and surveillance purposes.

Architecture

20. *Reconfigure the entrance to the preschool (or relocate to the western site) to address:*
    a. *The complexity resulting from the firewall*

Design Team Response:

Relocation of the Preschool to the western parcel is not desirable from an operational point of view. Fire separation is required for BCA compliance between the Primary School and Preschool.

    b. *The location of the single lift, which is not easily seen or equitable from the southern entrance*

Design Team Response:

Signage will be placed around the school to make wayfinding to the lift easy. The lift has been rotated 90 degrees to the south and will be visible from the street and car park. The lift is intended to be used predominantly for disabled access and access with a pram to the Preschool. Both user types are anticipated to enter from the car parking entrance and in this circumstance the lift is easily visible and accessed from this entrance.

c. Wayfinding and clarity from the car park.

Design Team Response:

Signage and wayfinding will be further developed in the detailed design phase. The sliding fire door is intended to only close during a fire emergency, allowing for sight lines to the lift and stair to be clear and easily understood from both the car parking and the main entrance on Kyogle Street. The lift is rotated 90 degrees to the south and is therefore visible from both the street and the car park.

APPENDIX 6: CONNECTION WITH COUNTRY SUMMARY REPORT

Lismore South Public School

Connecting with Country Summary Consultation Report

Client: School Infrastructure NSW
Date: 18 September 2024

Contents

Acknowledgment of Country

We acknowledge the Widjabul Wia-bal people of the Bundjalung Nation as the Traditional Custodians of the lands where we work and the places in which we live. We celebrate the First Peoples' unique cultural and spiritual relationship to Country, and their rich contribution to Australia. We pay respect to Ancestors and Elders past, present and future.

	Name	**Date**	**Signature**
Prepared by:	Brendan Blakeley	18 September 2024	
Reviewed by	Lawrence Gilbert	September 2024	
Client manager approval (if required):	Dean Birkett	September 2024	

Revision V3:

Prepared for

SINSW

Elumni Consulting

Brendan Blakeley
Director
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1 Consultation overview

School Infrastructure NSW (SINSW) have agreed to rebuild the Lismore South Public School (LSPS) on the location of the existing flood damaged school at Wilson and Phyllis Streets in South Lismore. A master plan for the school has been prepared to support a planning application for the new school. SINSW is using the NSW Government's "Connecting with Country framework" to inform detailed design and ensure that when the school is rebuilt, it:

» appropriately acknowledges the Widjabul Wia-bal Gurrumbil Aboriginal Corporation RNTBC and its members.

» celebrates the broader Bundjalung Nation.

» provide safe and inclusive learning environments for all students.

To develop the Connecting with Country approach for the school, SINSW has consulted with members of the local Aboriginal community and school representatives through the following forums:

1. An **Initiation Workshop** with Aboriginal and Torres Strait Islander staff and representatives of the Lismore Local Aboriginal Education Consultative Group (AECG) to explore opportunities for how the new school could continue to respond to the needs of Aboriginal students and families, be a place of pride and safety for them and promote greater understanding of Bundjalung Country and Culture for all students. This workshop was held on 01 May 2024.
2. A **briefing to the board** of the Widjabul Wia-bal Gurrumbil Aboriginal Corporation (RNTBC) on the proposal.
3. At the request of the board, SINSW convened **a consultation meeting with Widjabul Wia-bal members** to discuss the proposed rebuild of both LSPS and Richmond River High Campus. The meeting was held on 7th June 2024. The meeting was notified as per direction Widjabul Wia-bal Gurrumbil Aboriginal Corporation RNTBC.
4. A **Walk on Country** at LSPS on 23 August 2024, notified as per the direction of Widjabul Wia-bal Gurrumbil Aboriginal Corporation RNTBC.

The initiation workshop was facilitated by Brendan Blakeley from Elumni Consulting with subsequent sessions co-facilitated by Lawrence Gilbert, Director of Naree Consulting and Event Management and Brendan Blakeley from Elumni Consulting.

These sessions have provided valuable guidance to SINSW about:

» The work LSPS is already doing to promote learning about Bundjalung Culture and Country.

» Why this work is important to students, community and staff.

» Specific ideas for connecting the new school with Bundjalung Culture and Country.

» The process for further refining the approach to connect LSPS with Country.

This report highlights the outcomes of this consultation program and outlines the next steps in the process for incorporating these suggestions into a Connecting with Country framework that will guide detailed design and the eventual realisation of these ideas in the rebuilt school.

2 Methodology

Consultation and collaboration are core underpinnings of iteratively developing a Connecting with Country Framework for LSPS. It is intended the framework will evolve from concepts to detailed design across the following stages.

1. **Connecting with Country Introduction & initiation Workshop**

» Purpose: The focus of this workshop was to introduce the Connecting with Country Framework and seek input from AECG members and staff at LSPS about how Bundjalung Culture and Country could be embodied within the new school.

» Outcomes: Please see Section 3.1 of this report.

2. **Walk on Country with RNTBC**

» Purpose: The focus of this workshop was to introduce the Connecting with Country Framework and seek input from Widjabl Wia-bal members about how the new school could:

- appropriately acknowledge the Widjabul Wia-bal Gurrumbil Aboriginal Corporation RNTBC and its members.
- celebrate the broader Bundjalung Nation.
- provide safe and inclusive learning environments for all students.

» Outcomes: Please see Section 3.2 of this report.

3. **Walk on Country with AECG and RNTBC No 2**

» Purpose: The focus of this workshop was to:

- explore in detail key themes and opportunities to be reflected in a school specific Connecting with Country framework for LSPS.
- discuss the process through which themes and stories can be appropriately refined and realised within the development of the new school.

» Outcomes: Please see Sections 3.3 and 4 of this report.

4. **Workshop/s with Identified Groups – Introductions, themes & stories**

» Purpose: To continue to build relationships with stakeholders, share experiences and identify specific stories and initiatives that will connect LSPS with Country

5. **Workshop/s – Connecting with Country ideas**

» Purpose: To present initial design opportunities & receive feedback.

6. **Consultation & verification of designs with persons of authority in community**

» Purpose: Verify wording, stories & design intent as per the process agreed in earlier workshop.

7. **Workshop/s – Connecting with Country resolution**

» Purpose: Present final designs developed through the LSPS Connecting with Country Framework.

3 Workshop Outcomes

3.1 Initiation workshop with AECG and LSPS Staff (May 2024)

This workshop highlighted the work LSPS is already doing to connect with Bundjalung Country and Culture including using language, having Aunties and Uncles visit the school and outdoor learning. It was very important for Aboriginal students and their families to see Culture reflected in the life of the school and to know they are valued and belong in a place that once wasn't as accepting of Aboriginal students.

Connecting with Country was seen as a way to:

» provide a strong foundation for young Aboriginal people to navigate being in two worlds.

» foster shared learning where all students develop a greater understanding about the Country they live on.

» create a welcoming and inclusive school community.

Opportunities for further investigation identified in the workshop included:

» Taking learning outside to bring education and Country together.

» Having a prominent artwork on a very visible building so that there is a Bundjalung journey that starts from the moment you see the school.

» Telling Bundjalung stories throughout the school – places, significant animals and plants as well as stories about Aunties and Uncles. To identify the right stories for telling there will need to be discussions with Elders who have the authority to do this.

» Language should be used throughout the school - names of buildings, plants and a Welcome to Country. This information could be provided through signs, art and QR codes.

» Interactive learning about Country through QR codes and bush tucker gardens

» A yarning circle or gathering place that can be used by the community.

The full Outcomes Report of the Initiation Workshop is included in **Appendix 1.**

3.2 Consultation meeting with Widjabul Wia-bal members (June 2024)

Feedback at this session was focused primarily on the relocation of Richmond River High Campus. Matters relevant to LSPS included a strong desire to see the school connected with Bundjalung Culture and Country so Aboriginal students and their families feel safe, valued and respected at school. Reflecting Country was also a way to build connections between young people and the Elders.

There was an aspiration for the school to be a place where this generation can absorb Bundjalung Culture and learn about Country and language, so all students have a better knowledge of Aboriginal culture and history. It was noted that with the school and Community *working together and walking together* broader outcomes for Aboriginal people could be achieved.

Opportunities for further investigation identified in the workshop included:

» Using Bundjalung language in the school.

» Working with Elders to capture stories that could be told in different ways throughout the school.

» Using QR codes and new technology to “tell these stories”.

» Growing bush tucker gardens. - work with Ngulingah Nursery to propagate and plant out local species.

» Creating a yarning circle/s for different age groups.

» Acknowledge that part of the history of these schools is that Aboriginal people were not always welcome in them.

The full Outcomes Report of this meeting is included in **Appendix 2.**

3.3 Walk On Country (September 2024)

At this session there was strong agreement around continuing to make LSPS a school with a strong community focus. Connecting with Country was seen as a way of ensuring the school is a place where students and families are welcome and feel safe, valued and respected. There was support for the design of the school and the opportunities the design provides for learning outdoors in Country.

Opportunities to Connect with Country identified in the workshop included:

» Spaces to Gather and Connect

» Bundjalung Plantings

» Telling Bundjalung Stories through Art

» Learning about Bundjalung Country and Culture

» Bundjalung Naming and Language

» Using Bundjalung language in the school.

These are described in detail in the next section of this report.

The full Outcomes Report of this meeting is included in **Appendix 3.**

4 Working Themes to Connect LSPS with Country

Note the following ideas and opportunities were raised through consultation. The Department undertakes to consider and incorporate them where complementary to the project brief.

4.1 Gathering on Bundjalung Country

Consider:

» Having a Widjabul Wia-bal welcome at the entrance to the school.

» Creating an area for gathering outside the fence so that parents and community can stay and have a chat after they drop kids off.

» Making the hall a place that is accessible, welcoming and easy for the broader community to use.

» Creating a yarning circle in proximity to the hall.

4.2 Planting for the Bundjalung Seasons

Consider:

» Highlighting the importance of the Hoop Pine (Gurrumbil) to Widjabul Wia-bal

» Sourcing local plants for landscaping the school grounds through the Local Aboriginal Land Council's Ngulingah Nursery as they specialise in locally collected species.

» Reflecting the four seasons of Bundjalung Country in the planting – they are our calendar

» Using bush tucker, bush medicine and totem plants

» Involving community in planting and don't plant the grounds out "all out at once" - so that over the years there can be opportunities for new students to continually connect with Country.

» Longer term, think about linking plantings within the school to the rail trail

4.3 Telling Bundjalung Stories

Consider:

» To avoid division in the community, establish a process for the six primary family groups within Widjabul Wia-bal to nominate stories to be reflected in artworks in the school. Lawrence could assist further dialogue with the Corporation.

» The artworks could be on 6 large panels at the entrance to the school or distributed in different locations around the school.

4.4 Learning about Bundjalung Country and Culture

Consider:

- Getting kids learning about Country by being outside and having their hands in the earth
- Aboriginal names for rooms, plants and animals around school through signs and QR codes
- Truth telling - we could acknowledge the strength of Widjabul Wia-bal and that our schools have not always been places that welcomed Aboriginal people
- Places for Elders to come in and teach art, cooking dance and tell our stories
- Traditional games as part of the sport program
- Embedded cultural learning across schools in Lismore, e.g. develop cultural learning model that staff can use.

4.5 Celebrating Bundjalung Language

Consider:

- Using dual naming and language in the school.
- Being creative about ways to highlight Bundjalung language – through art, engravings of words in paths, signage and QR codes
- Ensuring consistency in Bundjalung spelling across the school network
- Sporting houses at LSPS could be named after local mountains, these could be changed to the Bundjalung names for these mountains.

5 Next Steps

SINSW is strongly committed to engaging with all stakeholders in this important community project. SINSW has committed to:

- Ongoing discussions with the RNTBC including seeking structured input to identify suitable stories that could be told at LSPS and how these may be appropriately realised.
- Having the architects progress some initial ideas identified within the working themes section of this report to be tested with AECG members.
- Incorporating Connecting with Country suggestions where compatible with the project brief.

Appendix 1 – AECG Initiation Workshop Outcomes Report (May 2024)

Appendix 2 – Meeting with Widjabul Wia-bal Members Outcomes Report (June 2024)

Appendix 3 – Walk On Country Outcomes Report (August 2024)

APPENDIX 7: DPIE CHILDCARE GUIDELINES

Government Gazette

of the State of

New South Wales

Number 501–Planning and Heritage
Friday, 1 October 2021

The New South Wales Government Gazette is the permanent public record of official NSW Government notices. It also contains local council, non-government and other notices.

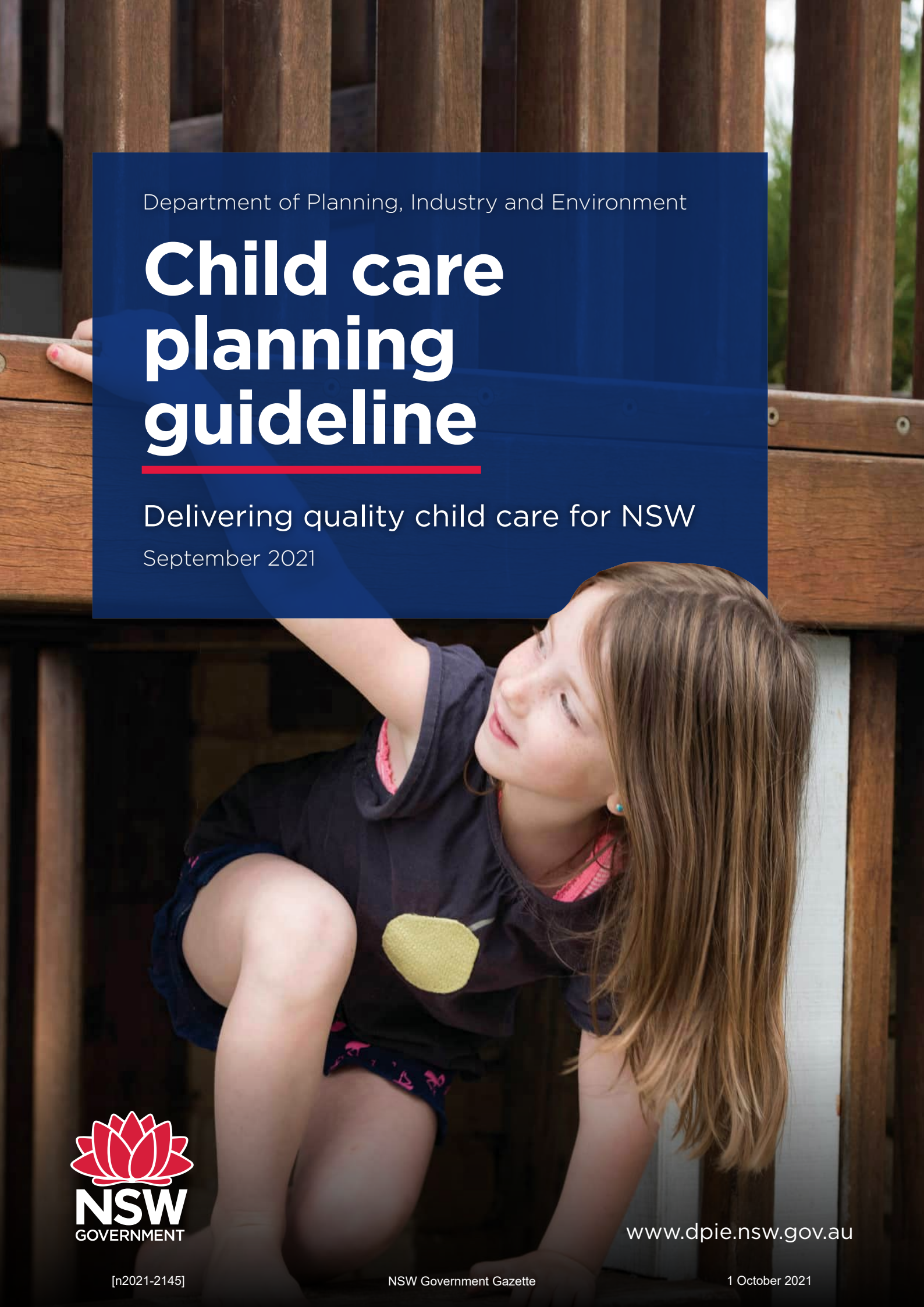
Each notice in the Government Gazette has a unique reference number that appears in parentheses at the end of the notice and can be used as a reference for that notice (for example, (n2019-14)).

The Gazette is compiled by the Parliamentary Counsel's Office and published on the NSW legislation website (www.legislation.nsw.gov.au) under the authority of the NSW Government. The website contains a permanent archive of past Gazettes.

To submit a notice for gazettal, see the Gazette page.

ISSN 2201-7534

By Authority
Government Printer



Department of Planning, Industry and Environment

Child care planning guideline

Delivering quality child care for NSW

September 2021

NSW GOVERNMENT

www.dpie.nsw.gov.au

Acknowledgement of country

The Department of Planning, Industry and Environment acknowledges the traditional custodians of the land and pays respect to Elders past, present and future.

We recognise Australian Aboriginal and Torres Strait Islander peoples' unique cultural and spiritual relationships to place and their rich contribution to society.

Find out more:
www.dpie.nsw.gov.au

Child care planning guideline -
Delivering quality child care for NSW

First published: 2017

Contents

Photography:
NSW Department of Planning, Industry and Environment

1. Introduction

1.1 About this Guideline

This Guideline establishes the assessment framework to deliver consistent planning outcomes and design quality for centre-based child care facilities in NSW.

State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 (the Education SEPP) determines that a consent authority must take into consideration this Guideline when assessing a development application (DA) for a centre-based child care facility ('child care facility').

It also determines this Guideline will take precedence over a Development Control Plan, with some exceptions, where the two overlap in relation to a child care facility.

Child care facilities are essential pieces of economic and social infrastructure that support better labour participation and allow communities to thrive. They bring significant social benefits including support for working families and a focal point for building social connections in communities. However, these facilities can have other impacts on the neighbours and the surrounding environment that need to carefully considered through the design and assessment of the facilities.

This Guideline informs state and local government, industry and the community about how good design can maximise the safety, health and overall care of young children. At the same time, it aims to deliver attractive buildings that are sympathetic to the streetscape and appropriate for the setting while minimising any adverse impacts on surrounding areas. It will help achieve a high level of design that is practical and aligned with the National Quality Framework.

The Guideline will provide a consistent statewide planning and design framework for preparing and considering DAs for child care facilities.

1.2 Who is the Guideline for?

The Guideline is to assist and inform:

- developers, builders, child care providers and other professionals when preparing DAs for child care facilities
- planning professionals in state and local government when assessing development proposals by ensuring they know what defines a quality and compliant child care facility that can achieve subsequent service approval
- the wider community about planning and design considerations for the delivery of quality child care facilities.

1.3 What are the planning objectives?

The planning objectives of this Guideline are to:

- promote high quality planning and design of child care facilities in accordance with the physical requirements of the National Regulations
- ensure that child care facilities are compatible with the existing streetscape, context and neighbouring land uses
- minimise any adverse impacts of development on adjoining properties and the neighbourhood, including the natural and built environment
- deliver greater certainty to applicants, operators and the community by embedding the physical requirements for service approval into the planning requirements for child care facilities.

1.4 Where does this Guideline fit?

The Education SEPP generally provides that Development Control Plans seeking to regulate development for a child care facility will not apply, except for controls relating to building height, rear and side setbacks and car parking rates. For child care facilities in R2 Low Density Residential zones a floor space ratio of 0.5:1 applies, unless the relevant council's Local Environmental Plan or Development Control Plan specify an alternative floor space ratio. The following table helps different users understand how the Guideline fits with the Education SEPP, and how they should apply it.

The Guideline will also assist users whose proposals do not require development consent choose appropriate sites and locations and raise awareness of potential issues and impacts (for example providers seeking to temporarily re-locate after an emergency).

Table 1 - Application of Child Care Planning Guideline

Education SEPP Provision	Applicants	Consent authorities	Regulatory authority: Concurrence / Service Approval
Guideline as a consideration	Use the Guideline when preparing a development application to ensure once built, the development meets the physical requirements for the subsequent service approval application.	Consider Parts 2, 3 and 4 of the Guideline. Review the National Quality Framework Assessment Checklist.	Assess Concurrence request against relevant sections of Part 4 and the National Quality Framework Assessment Checklist
Controls in Development Control Plans	The provisions of the Child Care Planning Guideline will generally take precedence over a Development Control Plan, other than building height, side and rear setbacks and car parking rates. For child care facilities in R2 Low Density Residential zones a floor space ratio of 0.5:1 applies, unless the relevant council's Local Environmental Plan or Development Control Plan specify an alternative floor space ratio. Where there is no Development Control Plan, use all Parts of the Guideline to inform DA preparation.	The provisions of the Child Care Planning Guideline will generally take precedence over a Development Control Plan, other than building height, side and rear setbacks and car parking rates. For child care facilities in R2 Low Density Residential zones a floor space ratio of 0.5:1 applies, unless the relevant council's Local Environmental Plan or Development Control Plan specify an alternative floor space ratio. Where there are no Development Control Plan provisions consider the development application against the matters in the Guideline.	N/A
Concurrence	Complete and submit National Quality Framework Assessment Checklist. Prepare DA in accordance with Part 4 of the Guideline and Regulations 107 and 108 of the National Regulations.	Check National Quality Framework Assessment Checklist to assess need for concurrence. Refer to regulatory authority if insufficient unencumbered indoor or outdoor space provided.	Check National Quality Framework Assessment Checklist to review unencumbered space provisions – indoor and outdoor. Advise consent authority of determination regarding concurrence.

Note: The regulatory authority, as defined in the National Law and Regulations, is the Secretary of the NSW Department of Education.

2. Design quality principles

This Part outlines the design quality principles.

The design quality principles establish the broad design context guide of all new proposals for child care facilities, regardless of whether they are stand alone, part of a mixed-use development, modifications or retrofits of existing buildings or seeking to occupy premises without incurring new building works.

Good design is integral to creating sustainable and liveable communities. There is growing appreciation of the significant role that good design can play in education with increasing evidence that learning outcomes are closely related to the quality of learning environments. Factors such as air quality, ventilation, natural lighting, thermal comfort and acoustic performance have been shown to have a profound impact on learning, engagement, social interactions and competencies. They also contribute to wellbeing through creating a sense of belonging, self-esteem and confidence.

Principle 1 - Context

Good design responds and contributes to its context, including the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions.

Well-designed child care facilities respond to and enhance the qualities and identity of the area including adjacent sites, streetscapes and neighbourhood.

Well-designed child care facilities take advantage of its context by optimising access by walking and public transport, public facilities and centres, respecting local heritage, and being responsive to the demographic, cultural and socio-economic makeup of the facility users and surrounding communities.

Principle 2 - Built form

Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the surrounding area.

Good design achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements. Good design also uses a variety of materials, colours and textures.

Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

Contemporary facility design can be distinctive and unique to support innovative approaches to teaching and learning, while still achieving a visual appearance that is aesthetically pleasing, complements the surrounding areas, and contributes positively to the public realm.

Principle 3 - Adaptive learning spaces

Good facility design delivers high quality learning spaces and achieves a high level of amenity for children and staff, resulting in buildings and associated infrastructure that are fit-for-purpose, enjoyable and easy to use. This is achieved through site layout, building design, and learning spaces' fit-out.

Good design achieves a mix of inclusive learning spaces to cater for all children and different modes of learning. This includes appropriately designed physical spaces offering a variety of settings, technology and opportunities for interaction.

Principle 4 - Sustainability

Sustainable design combines positive environmental, social and economic outcomes.

This includes use of natural cross ventilation, sunlight and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs. Other elements include recycling and re-use of materials and waste, use of sustainable materials and deep soil zones for groundwater recharge and vegetation.

Well-designed facilities are durable and embed resource efficiency into building and site design, resulting in less energy and water consumption, less generation of waste and air emissions and reduced operational costs.

Principle 5 - Landscape

Landscape and buildings should operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A contextual fit of well-designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood.

Well-designed landscapes make outdoor spaces assets for learning. This includes designing for diversity in function and use, age-appropriateness and amenity.

Good landscape design enhances the development's environmental performance by retaining positive natural features which contribute to the local context, co-ordinating water and soil management, solar access, micro-climate, tree canopy, habitat values and preserving green networks.

Principle 6 - Amenity

Good design positively influences internal and external amenity for children, staff and neighbours. Achieving good amenity contributes to positive learning environments and the well-being of children and staff.

Good amenity combines appropriate and efficient indoor and outdoor learning spaces, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, service areas and ease of access for all age groups and degrees of mobility.

Well-designed child care facilities provide comfortable, diverse and attractive spaces to learn, play and socialise.

Principle 7 - Safety

Well-designed child care facilities optimise the use of the built and natural environment for learning and play, while utilising equipment, vegetation and landscaping that has a low health and safety risk, and can be checked and maintained efficiently and appropriately.

Good child care facility design balances safety and security with the need to create a welcoming and accessible environment. It provides for quality public and private spaces that are inviting, clearly defined and allow controlled access for members of the community. Well-designed child care facilities incorporate passive surveillance and Crime Prevention Through Environmental Design (CPTED).

Well designed vehicular parking and access minimise traffic safety risks on children and staff.

3. Matters for consideration

This Part covers matters for consideration.

The considerations give guidance to applicants on how to design a high quality proposal that takes account of its surroundings and any potential environmental impacts the development may cause and to be mindful of potential impacts that may arise from existing uses and conditions within a locality.

The matters support the design principles and must be considered by the consent authority when assessing a DA for a child care facility. Child care facilities can be developed in a broad range of locations and need to be flexible in how they respond to the requirements and challenges this brings.

3.1 Site selection and location

Not all sites will be suitable for child care facilities. This Guideline aims to help applicants choose a suitable site for a new service or facility. The most important question for each applicant is: Is the neighbourhood a good "fit" for the proposal?

The location and physical context of a child care facility should be safe and healthy for children. There are several environmental hazards to be aware of when locating a new proposal, for example, bush fire and flood prone land, and contaminated land. In addition, local councils may identify areas of significant hazard in their planning instruments and policies.

Child care facilities should also be compatible with the surrounding land uses. The predominant issues will vary depending on the location and setting of the site, the type of development being proposed, and the type of surrounding land use.

Issues will differ depending on how urbanised or how rural the area is. While matters such as fire safety and evacuation may be a priority in a multi-storey building in metropolitan areas, impact on residential amenity may be more significant in suburban areas and potential impacts from agricultural activities such as aerial spraying or odours may be more important in rural areas.

Another important consideration is the location of child care facilities with regard to road safety. Child care facilities should be located where pedestrian and vehicular conflicts are minimised. Appropriately locating child care facilities and pedestrian paths can reduce the likelihood of incidents involving pedestrians and traffic from occurring and can reduce the severity of these incidents.

Road safety and traffic efficiency concerns can arise from child care facilities being located with direct access to roads with higher traffic volumes, higher operating speeds and more heavy vehicles. Where possible, locating child care facilities on sites adjoining and with access to local roads minimises the potential for conflicts between child pedestrians and traffic in the first instance.

Considerations

Objective: To ensure that appropriate zone considerations are assessed when selecting a site.

C1

For proposed developments in or adjacent to a residential zone, particularly if that zone is for low density residential uses consider:

- the acoustic and privacy impacts of the proposed development on the residential properties
- the setbacks and siting of buildings within the residential context
- visual amenity impacts (e.g. additional building bulk and overshadowing, local character)
- traffic and parking impacts of the proposal on residential amenity and road safety

For proposed developments in commercial and industrial zones, consider:

- potential impacts on the health, safety and wellbeing of children, staff and visitors with regard to local environmental or amenity issues such as air or noise pollution and local traffic conditions
- the potential impact of the facility on the viability of existing commercial or industrial uses.

For proposed developments in public or private recreation zones, consider:

- the compatibly of the proposal with the operations and nature of the community or private recreational facilities
- if the existing premises is licensed for alcohol or gambling
- if the use requires permanent or casual occupation of the premises or site
- the availability of on-site parking
- compatibility of proposed hours of operation with surrounding uses, particularly residential uses
- the availability of appropriate and dedicated sanitation facilities for the development.

For proposed developments on school, TAFE or university sites in Special Purpose zones consider:

- the compatibly of the proposal with the operation of the institution and its users
- the proximity of the proposed facility to other uses on the site, including premises licensed for alcohol or gambling
- proximity to sources of noise, such as places of entertainment or mechanical workshops
- proximity to odours, particularly at agricultural institutions
- previous uses of a premises such as scientific, medical or chemical laboratories, storage areas and the like.

Objective: To ensure that the site selected for a proposed child care facility is suitable for the use.

C2

When selecting a site, ensure that:

- the location and surrounding uses are compatible with the proposed development or use
- the site is environmentally safe including risks such as flooding, land slip, bushfires, coastal hazards
- there are no potential environmental contaminants on the land, in the building or the general proximity, and whether hazardous materials remediation is needed
- the characteristics of the site are suitable for the scale and type of development proposed having regard to:
    - length of street frontage, lot configuration, dimensions and overall size
    - number of shared boundaries with residential properties
- the development will not have adverse environmental impacts on the surrounding area, particularly in sensitive environmental or cultural areas
- where the proposal is to occupy or retrofit an existing premises, the interior and exterior spaces are suitable for the proposed use. Where the proposal relates to any heritage item, the development should retain its historic character and conserve significant fabric, setting or layout of the item.
- there are suitable and safe drop off and pick up areas, and off and on street parking
- the characteristics of the fronting road or roads (for example its operating speed, road classification, traffic volume, heavy vehicle volumes, presence of parking lanes) is appropriate and safe for the proposed use
- the site avoids direct access to roads with high traffic volumes, high operating speeds, or with high heavy vehicle volumes, especially where there are limited pedestrian crossing facilities

- it is not located closely to incompatible social activities and uses such as restricted premises, injecting rooms, drug clinics and the like, premises licensed for alcohol or gambling such as hotels, clubs, cellar door premises and sex services premises.

Objective: To ensure that sites for child care facilities are appropriately located.

C3

A child care facility should be located:

- near compatible social uses such as schools and other educational establishments, parks and other public open space, community facilities, places of public worship
- near or within employment areas, town centres, business centres, shops
- with access to public transport including rail, buses, ferries
- in areas with pedestrian connectivity to the local community, businesses, shops, services and the like.

Objective: To ensure that sites for child care facilities do not incur risks from environmental, health or safety hazards.

C4

A child care facility should be located to avoid risks to children, staff or visitors and adverse environmental conditions arising from:

- proximity to:
  - heavy or hazardous industry, waste transfer depots or landfill sites
  - Liquefied Petroleum Gas (LPG) tanks or service stations
  - water cooling and water warming systems
  - odour (and other air pollutant) generating uses and sources or sites which, due to prevailing land use zoning, may in future accommodate noise or odour generating uses
  - extractive industries, intensive agriculture, agricultural spraying activities
- any other identified environmental hazard or risk relevant to the site and/ or existing buildings within the site.

3.2 Local character, streetscape and the public domain interface

A detailed understanding of the overall site context will help create a well-designed and integrated child care facility. Context is the character and setting of the area within which the facility will sit. This character and setting is influenced by environmental, physical, economic and social factors.

Local character is what makes an area distinctive. It is created by the way built and natural elements in both the public realm and private domain interrelate with one another. Built form, bulk, scale and height as well as landscaping and good design all play a part in ensuring the character of an area is maintained while still allowing for new development to occur. Good design in the built environment is informed by and derived from its location, context and social setting.

The key priorities when responding to character and context are:

Communities - understanding social dynamics can help developments reinforce local communities.

Place - drawing inspiration from indigenous character and heritage can strengthen local identity.

Natural resources - maximising use of the intrinsic resources of the site can create more sustainable developments.

Connections - understanding existing street and road linkages can help develop an effective and integrated movement framework.

Feasibility - ensuring schemes are economically viable and deliverable.

Vision - understanding the aspirations of the site within the setting of the wider area.

Streetscape impacts are integral to local character and identity. Streetscape is particularly important in areas with a strong unified, environmental, architectural, design, planting or cultural character such as scenic protection areas, environmental protection areas or heritage and urban conservation areas.

The public domain interface is the transition area between the child care facility, its private or communal space at the street edge and the public domain. The interface contributes to the quality and character of the street.

Key components to consider when designing the interface include entries, fences and walls, changes in level, service locations interactions with outdoor play spaces and the location and size of street facing windows.

New development should also appropriately consider surrounding identified heritage items and identified heritage conservation areas. Local heritage provisions may apply to the proposal.

Consideration of local character

The local character of the surrounding neighbourhood should be considered when designing a child care facility. Child care facilities can have impacts on a local area, including traffic, noise, privacy impacts. These facilities may affect different localities in different ways depending on the existing development types and local character of the area.

Neighbours - Adjoining neighbours and those immediately surrounding the site may experience impacts from a proposed child care facility. Well-designed child care facilities reflect the local character, including adjacent sites and properties. Design should consider elements such as building orientation, building envelope (height and setbacks), floor space ratios, roof facades, construction material, positioning of open play space, if the site is a heritage item or in a heritage conservation area and car parking.

Neighbourhood - Well-designed child care facilities minimise adverse impacts, including on the natural and built neighbourhood. Facilities should reflect the neighbourhood, streetscapes and local character of the area, including nearby heritage items and heritage areas. The contextual fit of well-designed facilities can also be achieved by using landscaping to positively contribute to neighbourhood amenity.

Considerations

Objective: To ensure that the child care facility is compatible with the local character and surrounding streetscape.

C5

The proposed development should:

- contribute to the local area by being designed in such a way to respond to the character of the locality and existing streetscape
- build on the valued characteristics of the neighbourhood and draw from the physical surrounds, history and culture of place
- reflect the predominant form of surrounding land uses, particularly in low density residential areas
- recognise and respond to predominant streetscape qualities, such as building form, scale, materials and colours
- include design and architectural treatments that respond to and integrate with the existing streetscape and local character
- use landscaping to positively contribute to the streetscape and neighbouring and neighbourhood amenity
- integrate car parking into the building and site landscaping design in residential areas
- in R2 Low Density Residential zones, limit outdoor play space to the ground level to reduce impacts on amenity from acoustic fences/barriers onto adjoining residence, except when good design solutions can be achieved.

Objective: To ensure clear delineation between the child care facility and public spaces

C6

Create a threshold with a clear transition between public and private realms, including:

- fencing to ensure safety for children entering and leaving the facility
- windows facing from the facility towards the public domain to provide passive surveillance to the street as a safety measure and a connection between the facility and the community
- integrating existing and proposed landscaping with fencing.

C7

On sites with multiple buildings and/or entries, pedestrian entries and spaces associated with the child care facility should be differentiated to improve legibility for visitors and children by changes in materials, plant species and colours.

C8

Where development adjoins public parks, open space or bushland, the facility should provide an appealing streetscape frontage by adopting some of the following design solutions:

- clearly defined street access, pedestrian paths and building entries
- low fences and planting which delineate communal/private open space from adjoining public open space
- minimal use of blank walls and high fences.

Objective: To ensure that front fences and retaining walls respond to and complement the context and character of the area and do not dominate the public domain.

C9

Front fences and walls within the front setback should be constructed of visually permeable materials and treatments. Where the site is listed as a heritage item, adjacent to a heritage item or within a conservation area front fencing should be designed in accordance with local heritage provisions.

C10

High solid acoustic fencing may be used when shielding the facility from noise on classified roads. The walls should be setback from the property boundary with screen landscaping of a similar height between the wall and the boundary.

3.3 Building orientation, envelope, building design and accessibility

Orientation refers to the position of a building and its internal spaces in relation to its site, the street, the subdivision and neighbouring buildings, vistas and weather factors such as sun and wind. Building orientation influences the urban form of the street and building address. In residential areas, orientation of the facility may directly affect residential amenity including solar access and visual and acoustic privacy.

The building envelope is determined by the permissible building height and site setbacks. The following elements of building design make up the overall form.

Building height - helps shape the desired future character of a place relative to its setting and topography.

Setbacks - are usually expressed as the distance of a building from property boundaries. Setbacks are important to the amenity of new development and buildings on adjacent sites. Setbacks to the street establish the alignment of buildings along a street frontage. Combined with building height and road reservation, street setbacks define the proportion and scale of the street and contribute to the character of the public domain.

Floor space ratios - of buildings on a site is the ratio of the gross floor area of all buildings within the site to the site area. Floor space ratios can be used to define and regulate the bulk and scale of developments.

Architectural form - defines a building as viewed from a distance and makes a strong contribution to local character. Aesthetics and articulation can assist in refining the form and enhancing it with scale and proportion by providing a balanced composition of solid and void.

Roof design - forms an important part of the skyline and may provide opportunities for open space. Roof design can reduce a building's bulk and visual impact.

Facades - contribute to the visual interest of the building and the character of the local area. They have an impact on the public domain where they face the street and may influence the amenity of neighbouring buildings.

Materials and finishes - including consistency of finish, durability of surface finishes and fixtures, resistance to damage and vandalism, and minimal recurrent maintenance provide visual interest and create good amenity and a positive visual impact.

Buildings for child care services must be designed so that they are safe and secure for children, staff and other users.

Child care facilities need to allow equitable access by all members of the community, including those with disabilities. They should also provide suitable play areas for children with disabilities.

Considerations

Objective: To respond to the streetscape and site, mitigate impacts on neighbours, while optimising solar access and opportunities for shade.

C11

Orient a development on a site and design the building layout to:

- ensure visual privacy and minimise potential noise and overlooking impacts on neighbours by
  - facing doors and windows away from private open space, living rooms and bedrooms in adjoining residential properties
  - placing play equipment away from common boundaries with residential properties
  - locating outdoor play areas away from residential dwellings and other sensitive uses
- optimise solar access to internal and external play areas
- avoid overshadowing of adjoining residential properties
- minimise cut and fill
- ensure buildings along the street frontage define the street by facing it
- ensure where a child care facility is located above ground level, outdoor play areas are protected from wind and other climatic conditions.

Objective: To ensure that the scale of the child care facility is compatible with adjoining development and the impact on adjoining buildings is minimised.

C12

The following matters may be considered to minimise the impacts of the proposal on local character:

- building height should be consistent with other buildings in the locality
- building height should respond to the scale and character of the street
- setbacks should allow for adequate privacy for neighbours and children at the proposed child care facility
- setbacks should provide adequate access for building maintenance
- setbacks to the street should be consistent with the existing character.

Where a Local Environmental Plan or Development Control Plan do not specify a floor space ratio for the R2 Low Density Residential zone, a floor space ratio of 0.5:1 is to apply to a child care facility in the R2 zone.

Objective: To ensure that setbacks from the boundary of a child care facility are consistent with the predominant development within the immediate context.

C13

Where there are no prevailing setback controls minimum setback to a classified road should be 10 metres. On other road frontages where there are existing buildings within 50 metres, the setback should be the average of the two closest buildings. Where there are no buildings within 50 metres, the same setback is required for the predominant adjoining land use.

C14

On land in a residential zone, side and rear boundary setbacks should observe the prevailing setbacks required for a dwelling house.

Objective: To ensure that buildings are designed to create safe environments for all users.

C15

Entry to the facility should be limited to one secure point which is:

- located to allow ease of access, particularly for pedestrians
- directly accessible from the street where possible
- directly visible from the street frontage
- easily monitored through natural or camera surveillance
- not accessed through an outdoor play area.
- in a mixed-use development, clearly defined and separate from entrances to other uses in the building.

Objective: To ensure that child care facilities are designed to be accessible by all potential users.

C16

Accessible design can be achieved by:

- providing accessibility to and within the building in accordance with all relevant legislation
- linking all key areas of the site by level or ramped pathways that are accessible to prams and wheelchairs, including between all car parking areas and the main building entry
- providing a continuous path of travel to and within the building, including access between the street entry and car parking and main building entrance. Platform lifts should be avoided where possible
- minimising ramping by ensuring building entries and ground floors are well located relative to the level of the footpath.

Note: The National Construction Code and the Disability (Access to Premises – Buildings) Standards 2010 set out the requirements for access to buildings for people with disabilities.

3.4 Landscaping

Landscaping of child care facilities can play an important role in integrating facilities into the surrounding streetscape and context. Good integration of facilities benefits neighbours and future residents.

Special attention is required when designing landscaping for sites on bush fire prone land (for detailed guidance refer to Planning for Bush Fire Protection and NSW Rural Fire Service website.) The type, location and ongoing maintenance of landscaping within the Asset Protection Zone (APZ) is a necessary Bush Fire Protection Measure.

Considerations

Objective: To provide landscape design that contributes to the streetscape and amenity.

C17

Appropriate planting should be provided along the boundary integrated with fencing. Screen planting should not be included in calculations of unencumbered outdoor space.

Use the existing landscape where feasible to provide a high quality landscaped area by:

- reflecting and reinforcing the local context
- incorporating natural features of the site, such as trees, rocky outcrops and vegetation communities into landscaping.

C18

Incorporate car parking into the landscape design of the site by:

- planting shade trees in large car parking areas to create a cool outdoor environment and reduce summer heat radiating into buildings
- taking into account streetscape, local character, pedestrian safety and context when siting car parking areas within the front setback
- using low level landscaping to soften and screen parking areas.

3.5 Visual and acoustic privacy

Visual privacy is about allowing residents on adjacent properties to occupy their private space without being overlooked by child care facilities and ensuring child care facilities are not overlooked by neighbouring properties. Privacy is influenced by the activities in each of the spaces where overlooking may occur, the times and frequency these spaces are being used, the expectations of occupants for privacy and residents' willingness to reduce overlooking with screening devices.

Acoustic privacy involves reducing sound transmission between activity rooms and outdoor play areas of the child care facility and its neighbours. Design and site layout are the main ways of reducing acoustic impacts for example:

- site context and orientation of the building
- building design including the location of public and private open spaces and the arrangement of internal spaces
- physical relationship to surrounding uses
- building separation and providing physical barriers between the outdoor areas and the noise receivers.

Outdoor areas near residential uses can be designed to encourage more passive activities. Acoustic attenuation measures can be used to reduce reflected noise and once a facility is operating the installation of public address systems should be discouraged.

Considerations

Objective: To protect the privacy and security of children attending the facility.

C19

Open balconies in mixed use developments should not overlook facilities nor overhang outdoor play spaces.

C20

Minimise direct overlooking of indoor rooms and outdoor play spaces from public areas through:

- appropriate site and building layout
- suitably locating pathways, windows and doors
- permanent screening and landscape design.

Objective: To minimise impacts on privacy of adjoining properties.

C21

Minimise direct overlooking of main internal living areas and private open spaces in adjoining developments through:

- appropriate site and building layout
- suitable location of pathways, windows and doors
- landscape design and screening.

Objective: To minimise the impact of child care facilities on the acoustic privacy of neighbouring residential developments.

C22

A new development, or development that includes alterations to more than 50 per cent of the existing floor area, and is located adjacent to residential accommodation should:

- provide an acoustic fence along any boundary where the adjoining property contains a residential use. An acoustic fence is one that is a solid, gap free fence
- ensure that mechanical plant or equipment is screened by solid, gap free material and constructed to reduce noise levels e.g. acoustic fence, building, or enclosure.

C23

A suitably qualified acoustic professional should prepare an acoustic report which will cover the following matters:

- identify an appropriate noise level for a child care facility located in residential and other zones
- determine an appropriate background noise level for outdoor play areas during times they are proposed to be in use
- determine the appropriate height of any acoustic fence to enable the noise criteria to be met.

3.6 Noise and air pollution

Child care facilities located near major roads, rail lines, and beneath flight paths are likely to be subject to noise impacts. Other noisy environments such as industrial areas and substations may impact on the amenity and well-being of the children and staff. The location of child care facilities should be selected to avoid or minimise the potential impact of external sources of significant noise.

The Protection of the Environment Operations Act 1997 provides the statutory framework for managing air emissions in NSW and should be consulted when proposing facilities in or close to industrial areas. The Protection of the Environment Operations (Clean Air) Regulation sets air emission standards for different industries.

Considerations

Objective: To ensure that outside noise levels on the facility are minimised to acceptable levels.

C24

Adopt design solutions to minimise the impacts of noise, such as:

- creating physical separation between buildings and the noise source
- orienting the facility perpendicular to the noise source and where possible buffered by other uses
- using landscaping to reduce the perception of noise
- limiting the number and size of openings facing noise sources
- using double or acoustic glazing, acoustic louvres or enclosed balconies (wintergardens)
- using materials with mass and/or sound insulation or absorption properties, such as solid balcony balustrades, external screens and soffits
- locating cot rooms, sleeping areas and play areas away from external noise sources.

C25

An acoustic report should identify appropriate noise levels for sleeping areas and other non-play areas and examine impacts and noise attenuation measures where a child care facility is proposed in any of the following locations:

- on industrial zoned land
- where the ANEF contour is between 20 and 25
- along a railway or mass transit corridor, as defined by State Environmental Planning Policy (Infrastructure) 2007
- on a major or busy road
- other land that is impacted by substantial external noise.

Objective: To ensure air quality is acceptable where child care facilities are proposed close to external sources of air pollution such as major roads and industrial development.

C26

Locate child care facilities on sites which avoid or minimise the potential impact of external sources of air pollution such as major roads and industrial development.

C27

A suitably qualified air quality professional should prepare an air quality assessment report to demonstrate that proposed child care facilities close to major roads or industrial developments can meet air quality standards in accordance with relevant legislation and guidelines.

The air quality assessment report should evaluate design considerations to minimise air pollution such as:

- creating an appropriate separation distance between the facility and the pollution source. The location of play areas, sleeping areas and outdoor areas should be as far as practicable from the major source of air pollution
- using landscaping to act as a filter for air pollution generated by traffic and industry. Landscaping has the added benefit of improving aesthetics and minimising visual intrusion from an adjacent roadway
- incorporating ventilation design into the design of the facility.

3.7 Hours of operation

The hours of operation of child care facilities should not adversely impact the amenity of surrounding properties, particularly in residential areas. However, there is increasing demand for child care services outside the standard 7.00am – 7.00pm period as working hours become increasingly flexible for both shift and office workers. Hence there is a need to strike a balance between the needs of families and compatibility with the surrounding uses in an area.

Considerations

Objective: To minimise the impact of the child care facility on the amenity of neighbouring residential developments.

C28

Hours of operation where the predominant land use is residential should be confined to the core hours of 7.00am to 7.00pm weekdays. The hours of operation of the proposed child care facility may be extended if it adjoins or is adjacent to non-residential land uses.

C29

Within mixed use areas or predominantly commercial areas, the hours of operation for each child care facility should be assessed with respect to its compatibility with adjoining and co-located land uses.

3.8 Traffic, parking and pedestrian circulation

Site access from the public road to the site is important to ensure safety. At the same time, a safe pedestrian environment is essential on the site.

Car parking areas need to ensure the safety of all visitors to the site, whether it is a stand-alone facility or part of a mixed use residential, commercial or industrial development.

On- and off-site conflicts with children, visitors and users of the facility should be minimised through a combination of design and management plans. For example, drop off, parking, play areas and pedestrian access points in light industrial or commercial areas need to be carefully sited, away from heavy vehicle traffic and main roads to minimise risk of accidents.

Providing suitable parking arrangements for staff, parents and visitors will facilitate a quality environment and convenience for users. Car parking rates are generally measured as a function of capacity, that is, spaces per number of children and staff. The capacity of a facility will be determined by several factors dictated by compliance with requirements under the National Quality Framework. These include:

- the amount of unencumbered space provided within a facility
- the reigning staff / child ratio provisions.

The number of car parking spaces provided on the site should be determined relative to the availability, frequency and convenience of public transport and the safety and amenity consequences of parking overflowing into adjoining streets. Facilities located in inner urban and high-density areas may require fewer off street car parking spaces than in lower density areas with limited access to transport, employment and services.

Car parking within a basement can provide optimum use of the site area and minimise visual impacts.

Where basement car parking is provided, design should aim to:

- locate car park entries behind the building line
- integrate entries with the overall building façade. Design options include ventilation grills, louvres, screening devices, 'hit and miss' brickwork and similar cladding finishes
- minimise visual prominence. This can be done by stepping car park levels or using split levels on sloping sites
- direct visitors to this parking to minimise on-street parking.

Bicycle parking should be provided suitable for the context and user needs of the centre.

Considerations

Objective: To provide parking that satisfies the needs of users and the demand generated by the centre and to minimise conflicts between pedestrians and vehicles.

C30

Off street car parking should be provided at the rates for child care facilities specified in a Development Control Plan that applies to the land.

Where a Development Control Plan does not specify car parking rates, off street car parking should be provided at the following rates:

Within 400 metres of a railway or Metro station within Greater Sydney:

- 1 space per 10 children
- 1 space per 2 staff. Staff parking may be stack or tandem parking with no more than 2 spaces in each tandem space.

In other areas:

- 1 space per 4 children.

A reduction in car parking rates may be considered where:

- the proposal is an adaptive reuse of a heritage item
- the site is in a B8 Metropolitan Zone or other high-density business or residential zone
- the site is in proximity to high frequency and well connected public transport
- the site is co-located or in proximity to other uses where parking is appropriately provided (for example business centres, schools, public open space, public or commercially operated car parks)
- there is sufficient on street parking available at appropriate times within proximity of the site.

C31

In commercial or industrial zones and mixed use developments, on street parking may only be considered where there are no conflicts with adjoining uses, that is, no high levels of vehicle movement or potential conflicts with trucks and large vehicles.

C32

A Traffic and Parking Study should be prepared to support the proposal to quantify potential impacts on the surrounding land uses, to optimise the safety and convenience of the parking area(s) and demonstrate how impacts on amenity will be minimised. The study should also address any proposed variations to parking rates and demonstrate that:

- the amenity of the surrounding area will not be affected
- there will be no impacts on the safe operation of the surrounding road network.

Objective: To provide vehicle access from the street in a safe environment that does not disrupt traffic flows.

C33

Alternate vehicular access should be provided where child care facilities are on sites fronting:

- a classified road
- roads which carry freight traffic or transport dangerous goods or hazardous materials.

The alternate access must have regard to:

- the prevailing traffic conditions
- pedestrian and vehicle safety including bicycle movements
- the likely impact of the development on traffic.

C34

Child care facilities proposed within cul-de-sacs or via narrow lanes or roads should ensure that safe access can be provided to and from the site, and to and from the wider locality in times of emergency.

Objective: To provide a safe and connected environment for pedestrians both on and around the site.

C35

The following design solutions may be incorporated into a development to help provide a safe pedestrian environment:

- separate pedestrian access from the car park to the facility
- defined pedestrian crossings and defined/ separate paths included within large car parking areas
- separate pedestrian and vehicle entries from the street for parents, children and visitors
- pedestrian paths that enable two prams to pass each other
- delivery, loading and vehicle turnaround areas located away from the main pedestrian access to the building and in clearly designated, separate facilities
- minimise the number of locations where pedestrians and vehicles cross each other
- in commercial or industrial zones and mixed-use developments, the path of travel from the car parking to the centre entrance physically separated from any truck circulation or parking areas
- vehicles can enter and leave the site in a forward direction
- clear sightlines are maintained for drivers to child pedestrians, particularly at crossing locations.

C36

Mixed use developments should include:

- driveway access, manoeuvring areas and parking areas for the facility that are separate to parking and manoeuvring areas used by trucks
- drop off and pick up zones that are exclusively available for use during the facility's operating hours with spaces clearly marked accordingly, close to the main entrance and preferably at the same floor level. Alternatively, direct access should avoid crossing driveways or manoeuvring areas used by vehicles accessing other parts of the site
- parking that is separate from other uses, located and grouped together and conveniently located near the entrance or access point to the facility.

C37

Car parking design should:

- include a child safe fence to separate car parking areas from the building entrance and play areas
- provide clearly marked accessible parking as close as possible to the primary entrance to the building in accordance with appropriate Australian Standards
- include wheelchair and pram accessible parking.

4. Applying the National Regulations to development proposals

This part covers:

Internal physical environment

This section describes the specific regulations that apply to internal physical environment matters, references related construction standards and provides design guidance on how the regulations may be met.

External physical environment

This section describes the specific regulations that apply to external physical environmental matters, references related construction standards and provides design guidance on how the regulations may be met.

Best practice example

This section outlines the recommended layout for a stand-alone child care facility by bringing together the internal and external physical environmental matters. The underpinning principles may also be applied to mixed use developments which include a centre-based child care facility in commercial, industrial or high-density zones.

National Quality Framework Assessment Checklist

The checklist will assist applicants to demonstrate that the development is designed to achieve the requirements of Part 4.3 Physical Environment of the Education and Care Services National Regulations.

The physical environment of a child care facility must be safe, suitable and provide a rich and diverse range of experiences that promote children's learning and development.

This fundamentally underpins the National Regulations covering education and care services, which need to be met before a child care facility can be given service approval to operate. The good design of a child care facility is a major contributor to ensuring these Regulations are addressed and service approval processing is quick and efficient.

The SEPP states that if the requirements of the National Regulations relating to the amount of unencumbered indoor and outdoor space are not met in a DA in NSW, the concurrence of the regulatory authority will be required. In determining whether to grant or refuse concurrence, the authority must consider all requirements applicable to the proposal under the Regulations.

The following advice and information will assist child care developers and operators in applying the requirements of the National Regulations when preparing DAs. The minimum construction standards contained in the National Construction Code relating to child care facilities also apply.

A. Internal physical environment

4.1 Indoor space requirements

Regulation 107

Education and Care Services National Regulations

Every child being educated and cared for within a facility must have a minimum of 3.25m^2 of unencumbered indoor space.

If this requirement is not met, the concurrence of the regulatory authority is required under the Education SEPP.

Unencumbered indoor space excludes any of the following:

- passageway or thoroughfare (including door swings) used for circulation
- toilet and hygiene facilities
- nappy changing area or area for preparing bottles
- area permanently set aside for the use or storage of cots
- area permanently set aside for storage
- area or room for staff or administration
- kitchens, unless the kitchen is designed to be used predominately by the children as part of an educational program e.g. a learning kitchen
- on-site laundry
- other space that is not suitable for children.

All unencumbered indoor spaces must be provided as a secure area for children. The design of these spaces must allow for the safe supervision of children, within each space.

When calculating indoor space requirements, the area required for any additional child may be waived when the child is being cared for in an emergency circumstance as set out in Regulation 123(5) or the child is being educated or cared for in exceptional circumstances as set out in Regulation 124(5) and (6) of the National Regulations.

Applicants should also note that Regulation 81 requires that the needs for sleep and rest of children at the service be met, having regard to their ages, development stages and individual needs. Development applications should indicate how these needs will be accommodated.

Verandahs may be included when calculating indoor space with the written approval from the regulatory authority.

Design guidance

Verandahs as indoor space

For a verandah to be included as unencumbered indoor space, any opening must be able to be fully closed during inclement weather. It can only be counted once and therefore cannot be counted as outdoor space as well as indoor space (refer to Figure 1).

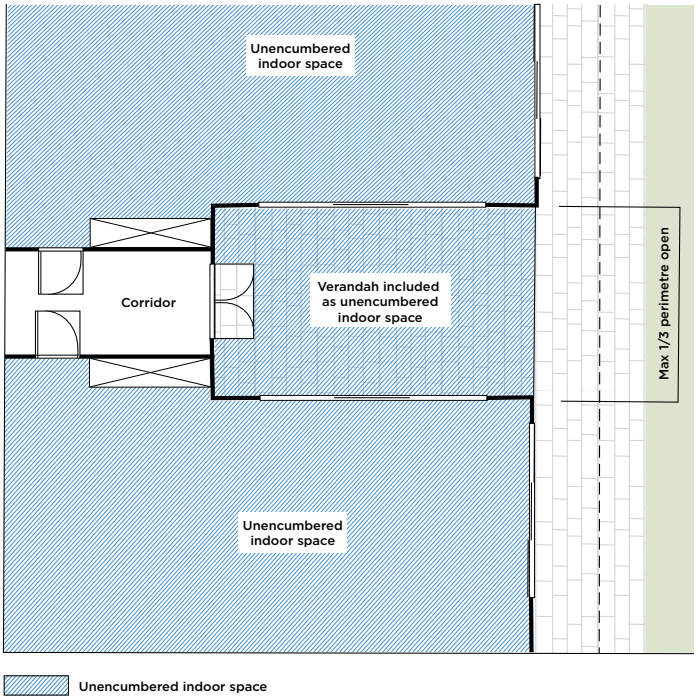


Figure 1 An outdoor verandah can be included as unencumbered indoor space with written approval. In spatial calculations this can only be counted once.

Storage

Storage areas including joinery units are not to be included in the calculation of indoor space. To achieve a functional unencumbered area free of clutter, storage areas need to be considered when designing and calculating the spatial requirements of the facility. It is recommended that a child care facility provide:

- a minimum of 0.3m^3 per child of external storage space
- a minimum of 0.2m^3 per child of internal storage space.

Storage does not need to be in a separate room or screened, and there should be a mixture of safe shelving and storage that children can access independently.

Storage of items such as prams, bikes and scooters should be located adjacent to the building entrance.

Where an external laundry service is used, storage and collection points for soiled items should be in an area with separate external access, away from children. This will prevent clothes being carried through public areas and reduce danger to children during drop off and collection of laundry.

4.2 Laundry and hygiene facilities

Regulation 106

Education and Care Services National Regulations

There must be laundry facilities or access to laundry facilities; or other arrangements for dealing with soiled clothing, nappies and linen, including hygienic facilities for storage prior to their disposal or laundering. The laundry and hygienic facilities must be located and maintained in a way that is not accessible by, and does not pose a risk to, children.

Child care facilities must also comply with the requirements for laundry facilities that are contained in the National Construction Code.

Design guidance

Laundry and hygiene facilities are a key consideration for education and care service premises. The type of laundry facilities provided must be appropriate to the age of children accommodated.

On site laundry

On site laundry facilities should contain:

- a washer or washers capable of dealing with the heavy requirements of the facility
- a dryer
- laundry sinks
- adequate storage for soiled items prior to cleaning
- an on-site laundry cannot be calculated as useable unencumbered play space for children (refer to Figure 2).

External laundry service

A facility that does not contain on site laundry facilities must make external laundering arrangements. Any external laundry facility providing services to the facility needs to comply with any relevant Australian Standards.

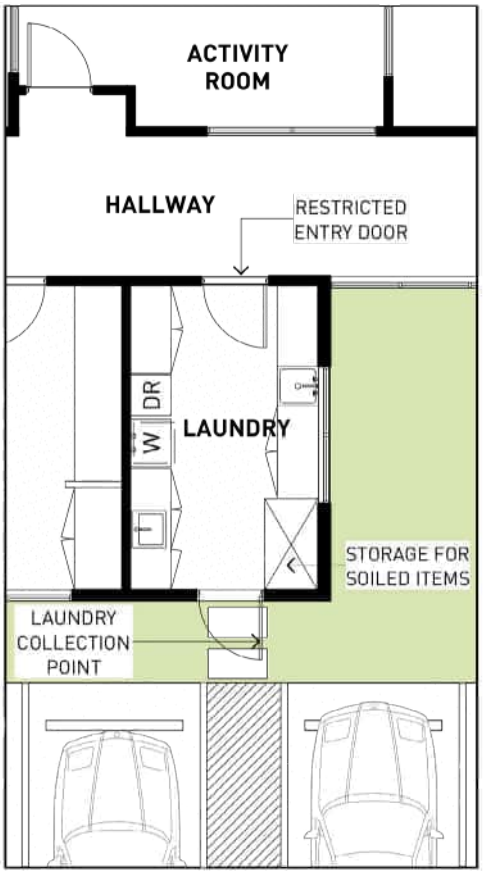


Figure 2 A typical child care facility laundry layout. External access may be provided if laundry is done off site or for deliveries.

A typical child care facility laundry with plenty of storage.

Windows from activity rooms provide adequate supervision into the bathrooms.

4.3 Toilet and hygiene facilities

Regulation 109

Education and Care Services National Regulations

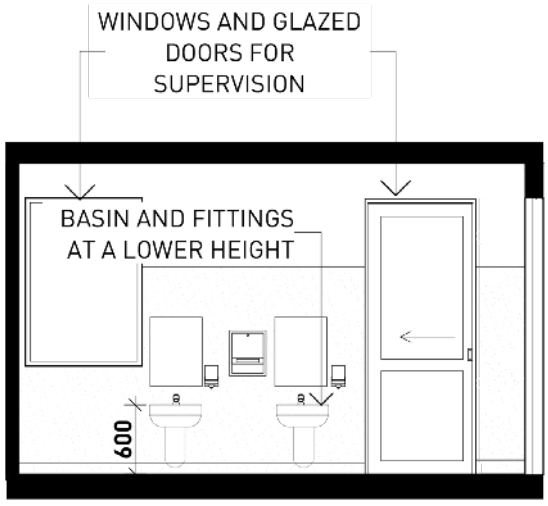
A service must ensure that adequate, developmentally and age-appropriate toilet, washing and drying facilities are provided for use by children being educated and cared for by the service; and the location and design of the toilet, washing and drying facilities enable safe use and convenient access by the children.

Child care facilities must comply with the requirements for sanitary facilities that are contained in the National Construction Code.

Design guidance

Toilet and hygiene facilities should be designed to maintain the amenity and dignity of the occupants (refer to Figure 3). Design considerations could include:

- junior toilet pans, low level sinks and hand drying facilities for children
- a sink and handwashing facilities in all bathrooms for adults
- direct access from both activity rooms and outdoor play areas
- windows into bathrooms and cubicles without doors to allow adequate supervision by staff
- external windows in locations that prevent observation from neighbouring properties or from side boundaries.



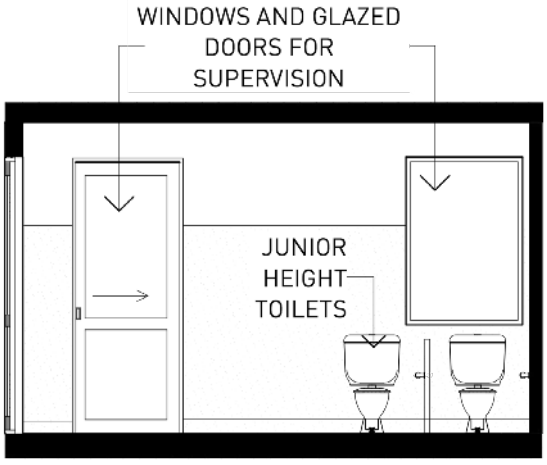


Figure 3 Bathroom facilities including toilet pans for use by children at a lower height.

4.4 Ventilation and natural light

Regulation 110

Education and Care Services National Regulations

Services must be well ventilated, have adequate natural light, and be maintained at a temperature that ensures the safety and wellbeing of children.

Child care facilities must comply with the light and ventilation and minimum ceiling height requirements of the National Construction Code. Ceiling height requirements may be affected by the capacity of the facility.

Design guidance

Ventilation

Good ventilation can be achieved through a mixture of natural cross ventilation and air conditioning. Encouraging natural ventilation is the basis of sustainable design; however, there will be circumstances where mechanical ventilation will be essential to creating ambient temperatures within a facility.

To achieve adequate natural ventilation, the design of the child care facilities must address the orientation of the building, the configuration of rooms and the external building envelope, with natural air flow generally reducing the deeper a building becomes. It is recommended that child care facilities ensure natural ventilation is available to each indoor activity room.

Natural light

Solar and daylight access reduces reliance on artificial lighting and heating, improves energy efficiency and creates comfortable learning environments through pleasant conditions. Natural light contributes to a sense of well-being, is important to the development of children and improves service outcomes. Daylight and solar access changes with the time of day, seasons and weather conditions. When designing child care facilities consideration should be given to:

- providing windows facing different orientations
- using skylights as appropriate
- ceiling heights.

Designers should aim to minimise the need for artificial lighting during the day, especially in circumstances where room depth exceeds ceiling height by 2.5 times. It is recommended that ceiling heights be proportional to the room size, which can be achieved using raked ceilings and exposed trusses, creating a sense of space and visual interest.

Louvres can be incorporated to allow for ventilation when doors are closed.

Clerestory windows are effective at adding natural light to activity rooms.

High ceiling heights provide good proportion in long and wide rooms.

4.5 Administrative space

Regulation 111

Education and Care Services National Regulations

A service must provide adequate area or areas for the purposes of conducting the administrative functions of the service, consulting with parents of children and conducting private conversations.

Design guidance

Design considerations could include closing doors for privacy and glass partitions to ensure supervision.

Note: Areas or rooms for staff and administration are excluded in the calculation of unencumbered indoor space under National Regulation 107.

When designing administrative spaces, consideration should be given to functions which can share spaces and those which cannot (refer Figure 4). Sound proofing of meeting rooms may be appropriate where they are located adjacent to public areas, or in large rooms where sound can easily travel.

Administrative spaces should be designed to ensure equitable use by parents and children at the facility. A reception desk may be designed to have a portion of it at a lower level for children or people in a wheel chair.

Reception spaces in administrative areas should be welcoming to adults and children and be designed for equitable access by all.

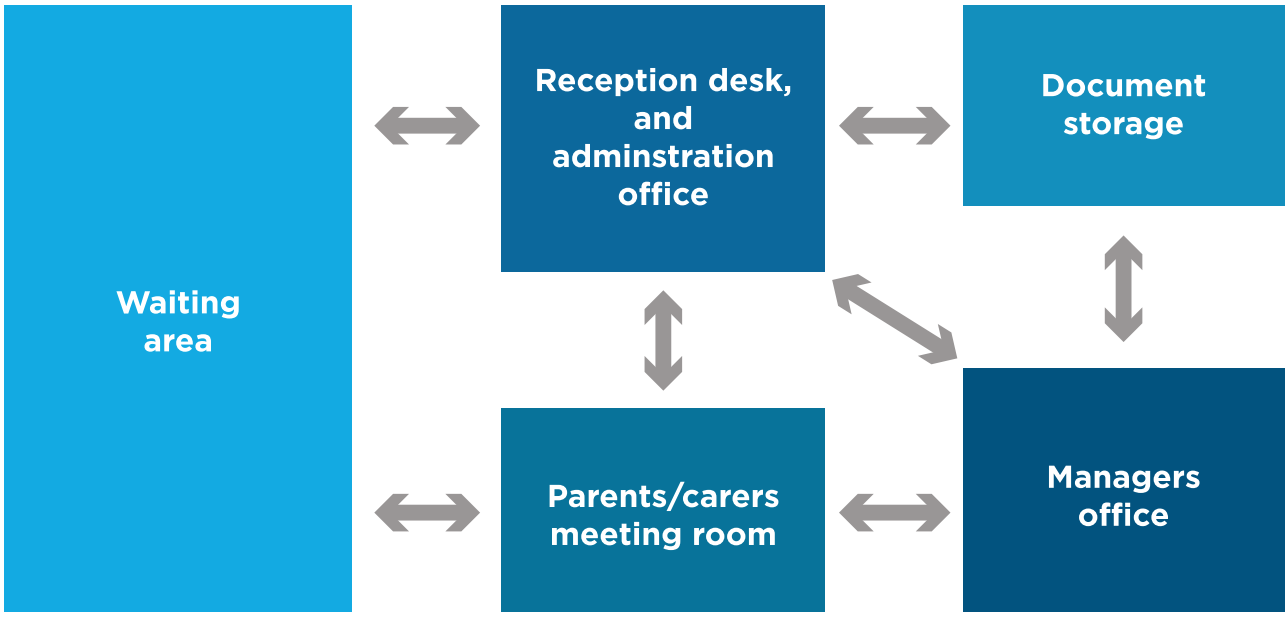


Figure 4 Diagram showing relationships between administrative spaces within a child care facilitiy. Requirements of rooms and functions may vary depending on the size and individual requirements of the facility.

4.6 Nappy change facilities

Regulation 112

Education and Care Services National Regulations

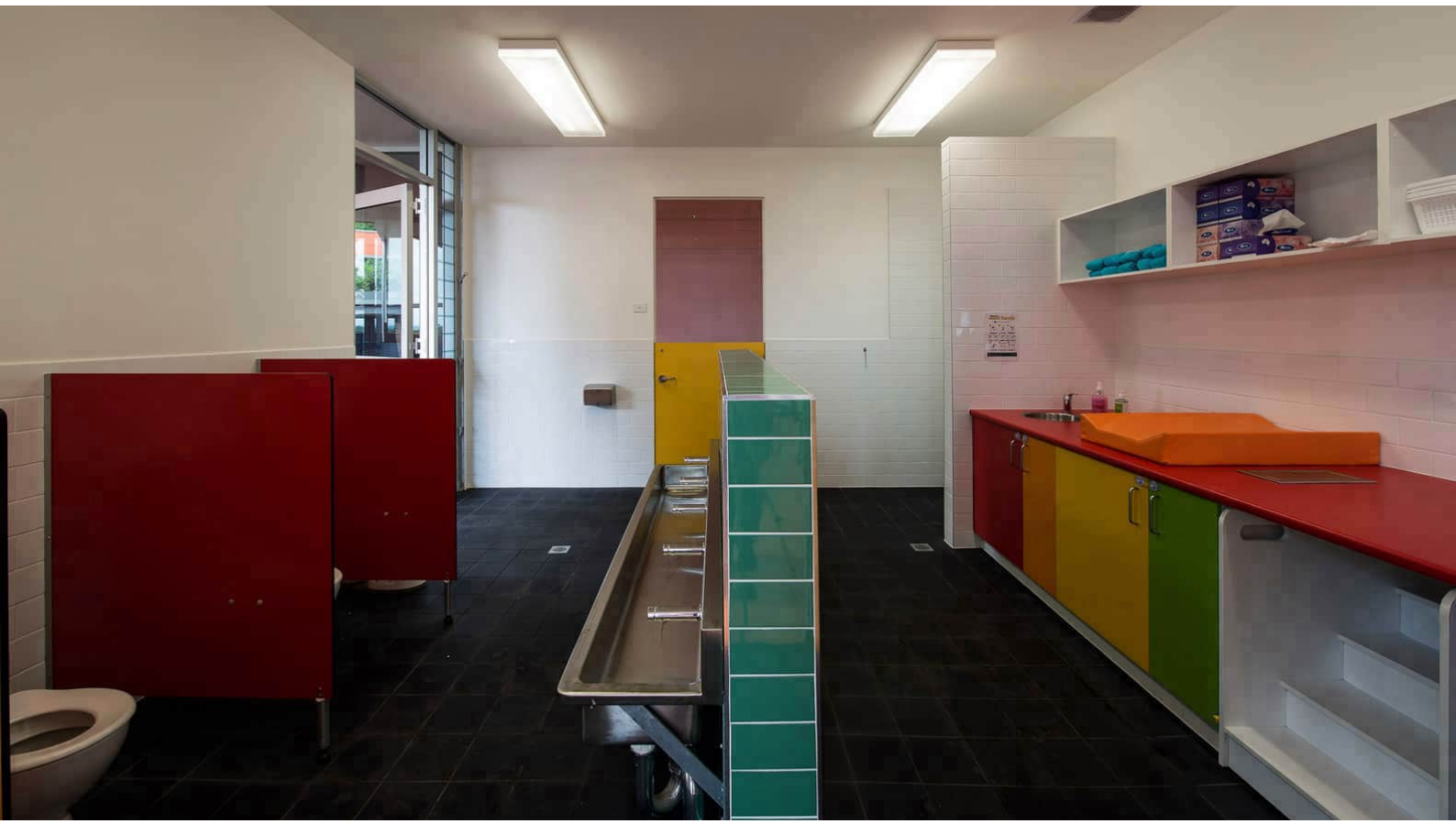
Child care facilities must provide for children who wear nappies, including appropriate hygienic facilities for nappy changing and bathing. All nappy changing facilities should be designed and located in an area that prevents unsupervised access by children.

Child care facilities must also comply with the requirements for nappy changing and bathing facilities that are contained in the National Construction Code.

Design guidance

In circumstances where nappy change facilities must be provided, design considerations should include:

- properly constructed nappy changing bench or benches
- a bench type baby bath within one metre from the nappy change bench
- the provision of dedicated hand cleansing facilities for adults in the immediate vicinity of the nappy change area
- a space to store steps
- positioning to enable adequate supervision of the activity and play areas.



4.7 Premises designed to facilitate supervision

Regulation 115

Education and Care Services National Regulations

A centre-based service must ensure that the rooms and facilities within the premises (including toilets, nappy change facilities, indoor and outdoor activity rooms and play spaces) are designed to facilitate adequate supervision of children at all times, having regard to the need to maintain their rights and dignity.

Child care facilities must also comply with any requirements regarding the ability to facilitate supervision that are contained in the National Construction Code.

Design guidance

Design considerations should include:

- solid walls in children's toilet cubicles (but no doors) to provide dignity whilst enabling supervision
- locating windows into bathrooms or nappy change areas away from view of visitors to the facility, the public or neighbouring properties
- avoiding room layouts with hidden corners where supervision is poor, or multi room activity rooms for single groups of children
- avoiding multi-level rooms which compromise, or require additional staffing, to ensure adequate supervision. If multi-level spaces are proposed, consideration should be given to providing areas that can be closed off and used only under supervision for controlled activities (refer to Figures 5, 6 and 7).

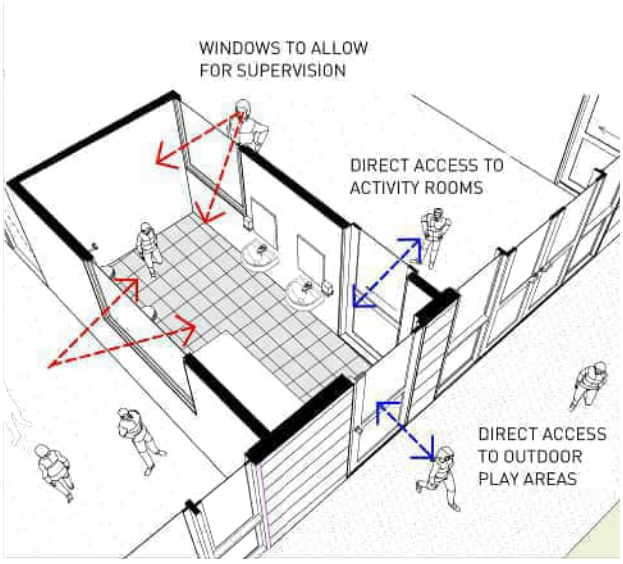


Figure 5 Bathroom facilities to have direct access to outdoor areas and activity rooms. Supervision requirements need to be considered in the design to prevent blind spots.

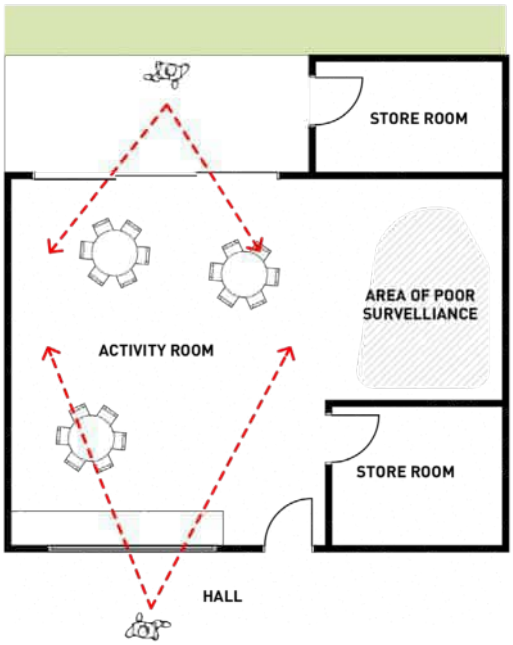


Figure 6 Avoid tucked away areas as these reduce effective supervision.

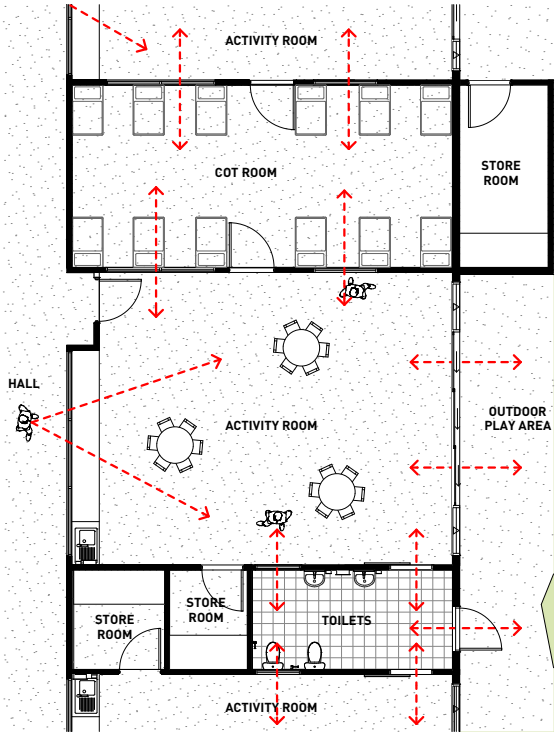


Figure 7 Good design of spaces allows for effective supervision between all areas children will occupy.

4.8 Emergency and evacuation procedures

Regulations 97 and 168

Education and Care Services National Regulations

Regulation 168 sets out the list of procedures that an education and care service must have, including procedures for emergency and evacuation.

Regulation 97 sets out the detail for what those procedures must cover including:

- instructions for what must be done in the event of an emergency
- an emergency and evacuation floor plan, a copy of which is displayed in a prominent position near each exit
- a risk assessment to identify potential emergencies that are relevant to the service.

Risks associated with multi-storey buildings, including the appropriate child-to-staff ratios and emergency and evacuation plans, need to be assessed in the context of the service approval. These matters need to be considered by the Quality Assurance and Regulatory Services Directorate, Early Childhood Education on behalf of the Secretary of the NSW Department of Education.

There are circumstances where a service approval may approve a maximum number of children that is lower than the development consent, for example due to complexities related to evacuation. The lowest maximum number of children should prevail, whether it be in the development consent or the service approval to further the health, safety and well being of children. That said, the applicant may still apply to modify either the service approval or the development consent to increase the maximum number of children.

Design guidance

Facility design and features should provide for the safe and managed evacuation of children and staff from the facility in the event of a fire or other emergency.

This should take into consideration the number and age of the occupants, emergency and evacuation plans, the location of the facility and the relevant fire safety measures within the building.

Multi-storey buildings with proposed child care facilities above ground level may consider providing additional measures to protect staff and children. For example:

- independent emergency escape routes from the facility to the ground level that would separate children from other building users to address child protection concerns during evacuations
- child appropriate handrails and barriers if shared fire stairs are utilised
- a safe haven or separate emergency area where children and staff can muster during the initial stages of a fire alert or other emergency. This would enable staff to account for all children prior to evacuation.

For all child care facilities, an emergency and evacuation plan should be submitted with a DA and should consider:

- the mobility of children and how this is to be accommodated during an evacuation
- the location of a safe congregation/assembly point, away from the evacuated building, busy roads and other hazards, and away from evacuation points used by other occupants or tenants of the same building or of surrounding buildings
- how children will be supervised during the evacuation and at the congregation/assembly point, relative to the capacity of the facility and governing child-to-staff ratios.

Fire safety of centres in high rise buildings

The design and construction of new child care facilities must comply with the requirements of the National Construction Code. Specific fire safety provisions apply to certain child care facilities including those in multi-storey buildings.

B. External physical environment

4.9 Outdoor space requirements

Regulation 108

Education and Care Services National Regulations

An education and care service premises must provide for every child being educated and cared for within the facility to have a minimum of 7.0m^2 of unencumbered outdoor space.

If this requirement is not met, the concurrence of the regulatory authority is required under the Education SEPP.

Unencumbered outdoor space excludes any of the following:

- pathway or thoroughfare, except where used by children as part of the education and care program
- car parking area
- storage shed or other storage area
- laundry
- other space that is not suitable for children.

When calculating outdoor space requirements, the area required for any additional child may be waived when the child is being cared for in an emergency circumstance as set out in Regulation 123(5) or the child is being educated or cared for in exceptional circumstances as set out in Regulation 124(5) and (6) of the National Regulations.

Applicants should also note that Regulation 274 (Part 7.3 NSW Provisions) states that a centre-based service for children preschool age or under must ensure there is no swimming pool on the premises, unless the swimming pool existed before 6 November 1996. Where there is an existing swimming pool, a water safety policy will be required.

A verandah that is included within indoor space cannot be included when calculating outdoor space and vice versa.

Design guidance

Calculating unencumbered space for outdoor areas should not include areas of dense hedges or plantings along boundaries which are designed for landscaping purposes and not for children's play (refer to Figure 9 and 10).

When new equipment or storage areas are added to existing services, the potential impact on unencumbered space calculations and service approvals must be considered.

Verandahs (covered outdoor space) as outdoor space

Where a covered space such as a verandah is to be included in outdoor space it should:

- be open on at least one third of its perimeter
- have a clear height of 2.1 metres
- have a wall height of less than 1.4 metres where a wall with an opening forms the verandah perimeter
- have adequate flooring and roofing
- be designed to provide adequate protection from the elements (refer to Figure 8).

Outdoor play areas are important for growth and development.

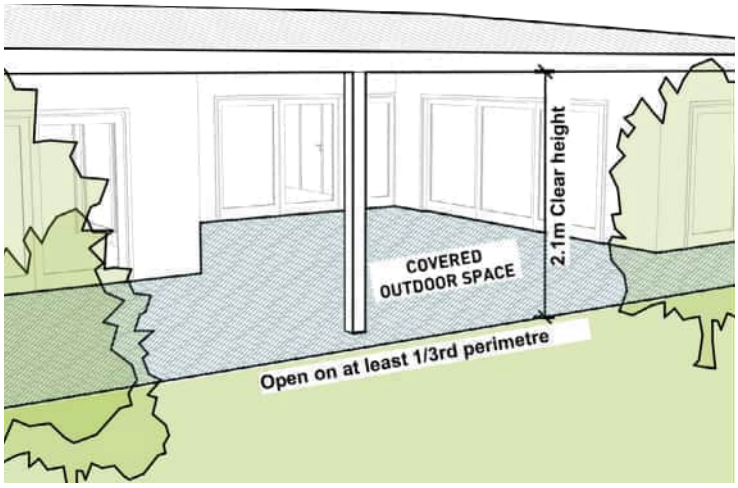


Figure 8 Covered areas such as verandahs can be included in outdoor space calculations.

Figure 9 Dense planting along boundaries and other areas not suitable for children should be excluded when calculating outdoor unencumbered space.

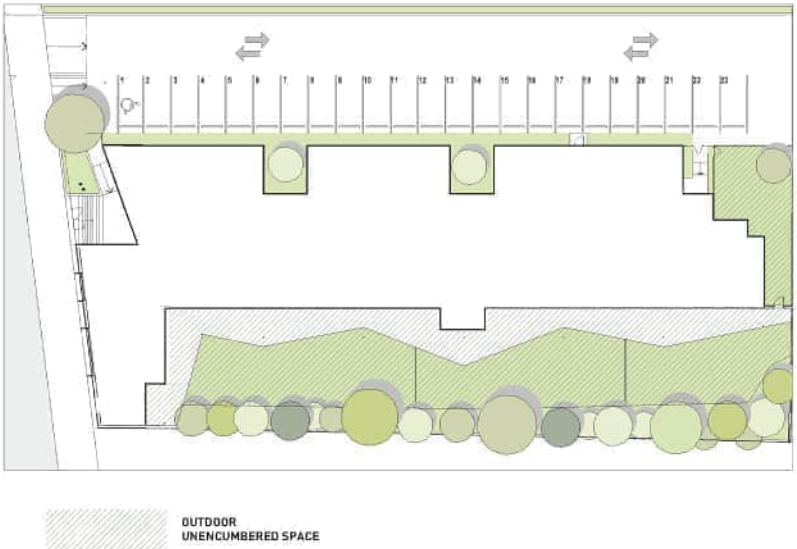


Figure 10 Areas to be included when calculating outdoor unencumbered space.

Simulated outdoor environments

Applicants should aim to provide the requisite amount of unencumbered outdoor space in all development applications.

A service approval will only be granted in exceptional circumstances when outdoor space requirements are not met. For an exemption to be granted, the preferred alternate solution is that indoor space be designed as a simulated outdoor environment.

Simulated outdoor space must be provided in addition to indoor space and cannot be counted twice when calculating areas.

Simulated outdoor environments are internal spaces that have all the features and experiences and qualities of an outdoor space. They should promote the same learning outcomes that are developed during outdoor play. Simulated outdoor environments should have:

- more access to natural light and ventilation than required for an internal space through large windows, glass doors and panels to enable views of trees, views of the sky and clouds and movement outside the facility
- skylights to give a sense of the external climate
- a combination of different floor types and textures, including wooden decking, pebbles, mounds, ridges, grass, bark and artificial grass, to mimic the uneven surfaces of an outdoor environment
- sand pits and water play areas
- furniture made of logs and stepping logs
- dense indoor planting and green vegetated walls
- climbing frames, walking and/or bike tracks
- vegetable gardens and gardening tubs.

Simulated outdoor environments contain sand pits, rocks and elements from the natural environment.

An indoor space designed to be a simulated outdoor space.

4.10 Natural environment

Regulation 113

Education and Care Services National Regulations

The approved provider of a centre-based service must ensure that the outdoor spaces allow children to safely explore and experience the natural environment.

Design guidance

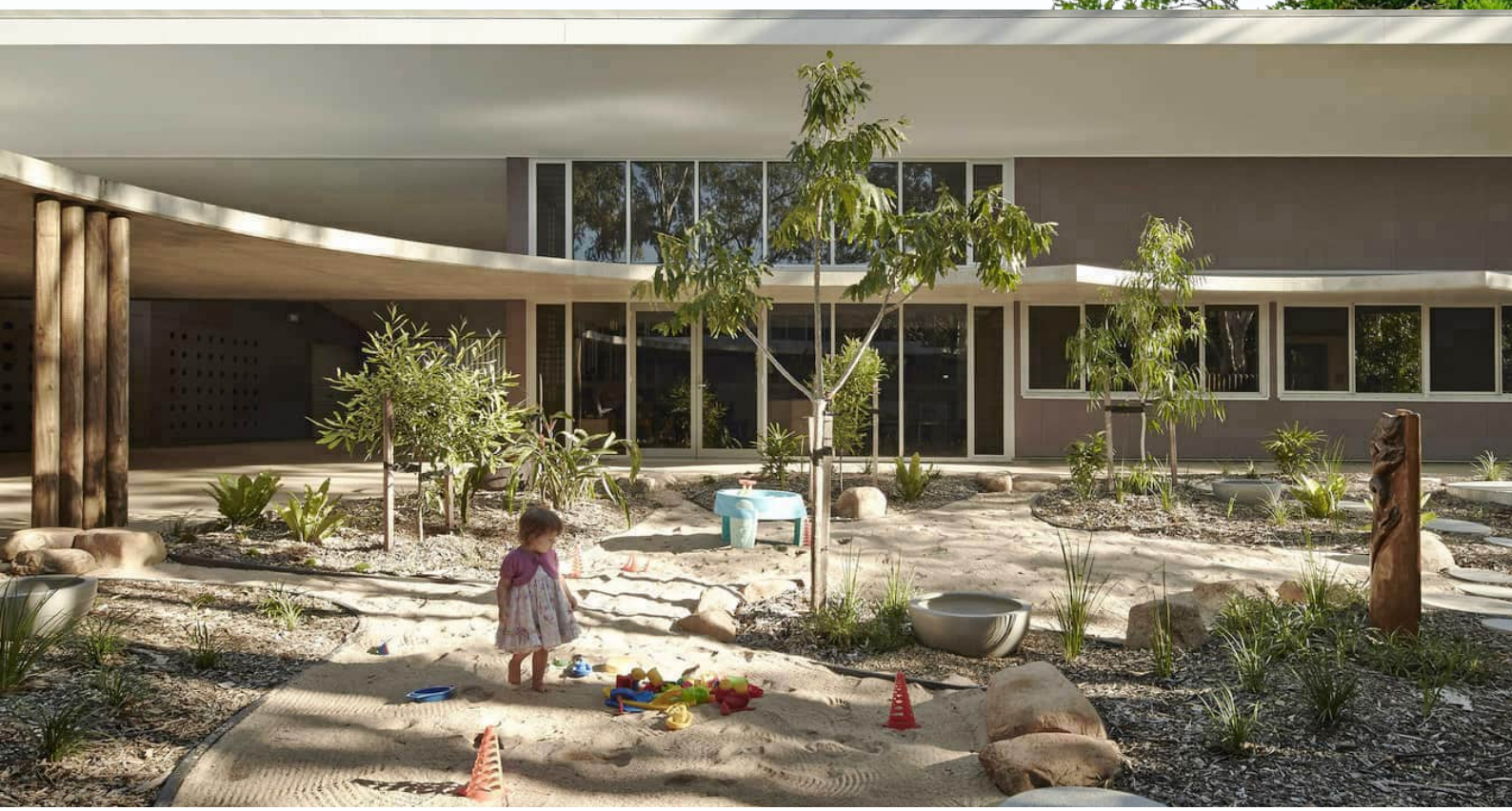
Creating a natural environment to meet this regulation includes the use of natural features such as trees, sand and natural vegetation within the outdoor space.

Shrubs and trees selected for the play space must be safe for children. Avoid plant species that risk the health and safety of the centre's occupants, such as those which:

- are known to be poisonous, produce toxins or have toxic leaves or berries
- have seed pods or stone fruit, attract bees, have thorns, spikes or prickly foliage or drop branches.

The outdoor space should be designed to:

- provide a variety of experiences that facilitate the development of cognitive and physical skills, provide opportunities for social interaction and appreciation of the natural environment
- ensure adequate supervision and minimise opportunities for bullying and antisocial behaviour
- enhance outdoor learning, socialisation and recreation by positioning outdoor urban furniture and play equipment in configurations that facilitate interaction.



Natural environments are important for growth and play.

4.11 Shade

Regulation 114

Education and Care Services National Regulations

The approved provider of a centre-based service must ensure that outdoor spaces include adequate shaded areas to protect children from overexposure to ultraviolet radiation from the sun.

Design guidance

Providing the correct balance of sunlight and shade to play areas is important for the health and well-being of children and staff. Combining built and natural shade will often be the best option.

Solar access and sun protection

Controlled exposure to daylight for limited periods is essential as sunlight provides vitamin D which promotes healthy muscles, bones and overall wellbeing. However, exposure to ultraviolet radiation in childhood significantly increases the chances of getting skin cancer later in life.

Outdoor play areas should be provided with controlled solar access throughout the year, including protecting children and staff from ultraviolent radiation from the sun and play equipment from becoming hot. Well-designed play spaces provide comfortable and safe areas for children to engage in activities for improved health and well-being.

Outdoor play areas should:

- have a minimum of 2 hours of solar access between 8.00am and 4.00pm during winter months, for at least 30% (or 2.1m^2) of the 7.0m^2 of outdoor space per child required.
- adequate shade for outdoor play areas is to be provided in the form of natural shade such as trees or built shade structures giving protection from ultraviolet radiation to at least 30 per cent of the outdoor play area
- have evenly distributed shade structures over different activity spaces.

Natural shade

Natural shade should be a major element in outdoor play areas. Trees with dense foliage and wide-spreading canopies provide the best protection. Existing stands of trees, particularly in rear setbacks, should be retained to provide shaded play areas. Species that suit local soil and climatic conditions and the character of the environment are recommended.

Dense shrubs can also provide shade. They should be planted around the site perimeter so they don't obstruct supervision. Pruning shrubs on the underside may create shaded play nooks underneath.

Planting for shade and solar access is enhanced by:

- placing appropriately scaled trees near the eastern and western elevations
- providing a balance of evergreen and deciduous trees to give shade in summer and sunlight access in winter.

Built shade structures

Built structures providing effective shade include:

- permanent structures (pergolas, sails and verandahs)
- demountable shade (marquees and tents)
- adjustable systems (awnings)
- shade sails.

Shade structures should not create safety hazards. Support systems such as upright posts should be clearly visible with rounded edges or padding. Vertical barriers at the sides of shade structures should be designed to prevent children using them for climbing. Shade structures should allow adults to view and access the children's play areas, with a recommended head clearance of 2.1 metres. The floor area underneath the structure should be of a sufficient size and shape to allow children to gather or play actively.

Shade structure can be a fixed structural element or a shade sail.

4.12 Fencing

Regulation 104

Education and Care Services National Regulations

Any outdoor space used by children must 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.

This Regulation does not apply to a centre-based service that primarily provides education and care to children over preschool age, including a family day care venue where all children are over preschool age.

Child care facilities must also comply with the requirements for fencing and protection of outdoor play spaces that are contained in the National Construction Code.

Design guidance

Fencing at child care facilities must provide a secure, safe environment for children and minimise access to dangerous areas. Fencing also needs to positively contribute to the visual amenity of the streetscape and surrounding area. In general, fencing around outdoor spaces should:

- prevent children climbing over, under or though fences
- prevent people outside the facility from gaining access by climbing over, under or through the fence
- not create a sense of enclosure
- if the outdoor space is being fenced internally, then the fence must be at least 1.2m high.

Design considerations for side and rear boundary fences should include:

- being made from solid prefinished metal, timber or masonry
- having a minimum height of 1.8 metres
- having no rails or elements for climbing higher than 150mm from the ground.

Fencing and gates should be designed to ensure adequate sightlines for vehicles and pedestrian safety in accordance with Australian Standards, Austroads and Transport for NSW traffic management guidance. Gates should be designed to prevent children leaving/entering unsupervised by use of childproof locking systems (refer to Figure 11).

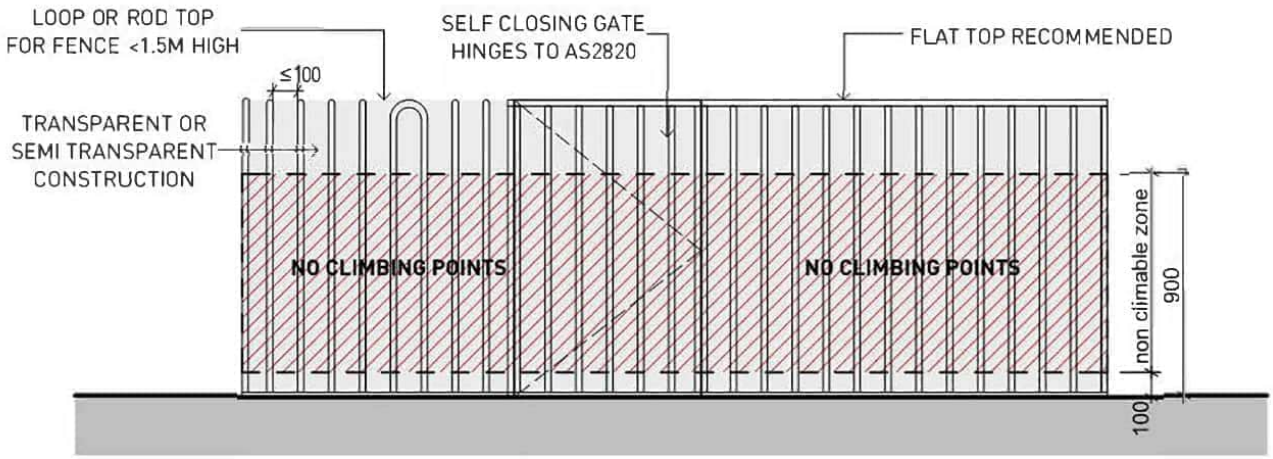


Figure 11 Heights and requirements for child care facility fencing.

4.13 Soil assessment

Regulation 25

Education and Care Services National Regulations

Subclause (d) of Regulation 25 requires an assessment of soil at a proposed site, and in some cases, sites already in use for such purposes as part of an application for service approval.

With every service application one of the following is required:

- a soil assessment for the site of the proposed education and care service premises
- if a soil assessment for the site of the proposed child care facility has previously been undertaken, a statement to that effect specifying when the soil assessment was undertaken
- a statement made by the applicant that states, to the best of the applicant's knowledge, the site history does not indicate that the site is likely to be contaminated in a way that poses an unacceptable risk to the health of children.

Design Guidance

To ensure consistency between the development consent and the service approval application, a soil assessment should be undertaken as part of the development application process.

Where children will have access to soil the regulatory authority requires a preliminary investigation of the soil. This includes sites with or without buildings and existing approved children's services where:

- the application is to alter or extend the premises
- the alteration or extension requires earthworks or deep excavations (exceeding a depth of one metre)
- the works are going to take place in an area used for children's outdoor play or will be used for children's outdoor play after the work is completed
- a soil assessment has not been undertaken at the children's service.

Minor landscaping, creation of sand pits, movement of play equipment and so on do not qualify as earthworks and do not require a soil assessment.

An assessment of soil for a children's service approval application may require three levels of investigation:

- Stage 1 - Preliminary investigation (with or without soil sampling)
- Stage 2 - Detailed site investigation
- Stage 3 – Site specific human health risk assessment.

C. Best practice example

Figure 12 is a sample plan of a facility designed with a best practice layout. The arrangement of rooms is linear with activity rooms and administration areas located off a central hallway.

Children's bathrooms and cot rooms are located between activity rooms to allow direct and easy access from both internal and external play areas.

Administration and services rooms such as the laundry and kitchen are located nearest the parking. This allows for separate access for deliveries away from children and their play areas.

The best practice example shows an optimal layout for new single storey, standalone developments. However, many of the underpinning principles apply equally to modifications of existing facilities, mixed use developments, and conversions of buildings to new facilities.

Figure 12 Cutaway plan showing arrangement and relationship between rooms within a child care facility.

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.	
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**	On-site Off-site 
107. Unencumbered indoor space The proposed development includes at least 3.25m² 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: **20** Required area: **65m²** Provided Area: **121m²**	
108. Unencumbered outdoor space The proposed development includes at least 7.0m² 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: **20** Required area: **140m²** Provided Area **376m²**	
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	

Table 2 - Assessment checklist

REGULATION	PROPOSED	COMPLIES (TICK OR CROSS)
110. Ventilation and natural light The proposed development includes indoor spaces to be used by children that — • will be well ventilated; and • will have adequate natural light; and • can be maintained at a temperature that ensures the safety and well-being of children.	Indicate on plans and elevations how natural ventilation and lighting is achieved.	
111. Administrative space The proposed development includes an adequate area or areas for the purposes of conducting the administrative functions of the service; and consulting with parents of children; and conducting private conversations. Note: This space cannot be included in the calculation of unencumbered indoor space – see Regulation 107.	Indicate administrative space on plans	
112. Nappy change facilities (To be completed only if the proposed development is for a service that will care for children who wear nappies) The proposed development includes an adequate area for construction of appropriate hygienic facilities for nappy changing including at least one properly constructed nappy changing bench and hand cleansing facilities for adults in the immediate vicinity of the nappy change area. The proposed nappy change facilities can be designed and located in a way that prevents unsupervised access by children.	Indicate nappy change on plans	
113. Outdoor space—natural environment The proposed development includes outdoor spaces that will allow children to explore and experience the natural environment.	Indicate on landscape plans	
114. Outdoor space—shade The proposed development includes adequate shaded areas to protect children from overexposure to ultraviolet radiation from the sun.	Indicate shade on landscape plans	
115. Premises designed to facilitate supervision The proposed development (including toilets and nappy change facilities) are designed in a way that facilitates supervision of children at all times, having regard to the need to maintain the rights and dignity of the children.	Indicate on floor plans	

5. Glossary of terms

Table 3 - Glossary

Word	Meaning
Acoustic privacy	A measure of sound insulation between dwellings, between dwellings and communal areas, and between external and internal spaces.
Adaptive reuse	The conversion of an existing building or structure from one use to another, or from one configuration to another.
Amenity	The 'liveability', comfort or quality of a place which makes it pleasant and agreeable to be in for individuals and the community. Amenity is important in the public, communal and private domains and includes the enjoyment of sunlight, views, privacy and quiet. It also includes protection from pollution and odours.
ANEF	Australian Noise Exposure Forecast (refer www.airservicesaustralia.com). Aircraft noise is identified as contours on the Australian Noise Exposure Forecast (ANEF) Map. The higher the ANEF contour value, the greater the exposure to aircraft noise.
Building line	The predominant line formed by the main external face of the building. Balconies or bay window projections may or may not be included depending on desired streetscape.
Building height	As defined in the Standard Instrument - Principal Local Environmental Plan.
Busy road or rail line	As defined in State Environmental Planning Policy (Infrastructure) 2007 and Development Near Rail Corridors and Busy Roads – Interim Guideline.
Centre-based service	As defined in the *Education and Care Services National Regulations*.
Child care facility	Term used as an abbreviation of *centre-based child care facility*.
Centre-based child care facility	As defined in the Standard Instrument - Principal Local Environmental Plan.
Classified Road	As defined in the Roads Act 1993. (Note: Classified road includes all State Roads and specified Regional Roads. Regional roads comprise two categories: those regional roads that are classified under the Roads Act 1993 and those regional roads that are not classified. Local roads are not classified.)
Concurrence	State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 includes a provision that consent cannot be given by a local council for a centre-based child care facility under certain circumstances unless the Regulatory Authority (currently NSW Department of Education) grants concurrence.
DA	Development Application.
Daylight	Consists of both skylight (diffuse light from the sky) and sunlight (direct beam radiation from the sun). Daylight changes with the time of day, season and weather conditions.
Dwelling	Dwelling means a room or suite of rooms occupied or used or so constructed or adapted as to be capable of being occupied or used as a separate domicile (as defined in the Standard Instrument).

Table 3 - Glossary

Word	Meaning
Education and care service	As defined in the *Children (Education and Care Services) National Law (NSW) 104a.*
Education and care service premises	As defined in the *Children (Education and Care Services) National Law (NSW) 104a*
Facade	The external face of a building, generally the principal face, facing a public street or space.
Floor Space Ratio	As defined in the Standard Instrument - Principal Local Environmental Plan.
Landscaped Area	As defined in the Standard Instrument - Principal Local Environmental Plan.
National Construction Code	The National Construction Code contains the minimum technical provisions for the design and construction of new buildings, and plumbing and drainage systems in new and existing buildings. The National Construction Code is made up of the Building Code of Australia and the Plumbing Code of Australia.
National Law	Refers to the *Children (Education and Care Services) National Law (NSW) 104a.*
National Regulations	Refers to the *Education and Care Services National Regulations*.
National Quality Framework (NQF)	'National Quality Framework' is made up of the Children (Education and Care Services) National Law, the Education and Care Services National Regulations, the National Quality Standard (Schedule 1 of the Regulations), an assessment and rating scheme, and an approved learning framework. The National Quality Framework regulates children's education and safety, staffing, partnerships with families and the community, the physical environment and use of child care facilities throughout Australia.
Regulatory authority	As defined in *Children (Education and Care Services) National Law (NSW) 104a and Children (Education and Care Services National Law Application) Act 2010 No 104*. In NSW, this is the Secretary of NSW Department of Education.
Education SEPP	*State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017.*
Sloping site	A site with a slope of 15 per cent or greater.
Solar access	The ability of a building to continue to receive direct sunlight without obstruction from other buildings or impediments, not including trees.
Street setback	The space along the street frontage between the property boundary and the building. Refer to building line or setback as defined in the Standard Instrument - Principal Local Environmental Plan.
Sunlight	Direct beam radiation from the sun
Unencumbered indoor space	As defined by Regulation 107 of the *Education and Care Services National Regulations.*
Unencumbered outdoor space	As defined by Regulation 108 of the *Education and Care Services National Regulations.*

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