

New Public School in Wagga Wagga



Education



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DOCUMENT/STATUS REGISTER

Issue	Date	Purpose	Written	Approved
A	18-10-19	DAR Draft	JS	SR
B	4-11-19	SSDA	JS	SR

LIST OF ABBREVIATIONS

AS – Australian Standards
BCA – Building Code of Australia
COLA – Covered Outdoor Learning Area
CDR – Concept Design Report
CSU - Charles Sturt University
DDA – Disability Discrimination Act
DoE – Department of Education
EFSG – Education Facilities Standards and Guidelines
GANSW – Government Architect New South Wales
GBA – Gross Building Area
GEA – Gross Envelope Area
GFA – Gross Floor Area (Planning)
HBA – Home Base Unit
HDC – Head Design Consultant
PPA – Perumal Pedavoli Architects
SINSW – School Infrastructure NSW
SSU – School Security Unit
TSG – Technical Stakeholders Group
UFA – Usable Floor Area
WWCC - Wagga Wagga City Council

PROJECT DETAILS

Site Address	Estella Road
	Estella NSW 2650
	(Wagga Wagga)
	Lot 1 DP 1253855
Site Area	3.0 Ha
Land Use & Zoning	SP2 Infrastructure (Educational Establishment)
Project Description	Construction of a new Primary School in Wagga Wagga. The project will provide 16 new permanent teaching spaces (up to 480 students) and core facilities (Core 21) to accomodate up to 720.

1 Project Summary

INTRODUCTION

This Design Analysis Report has been prepared by Perumal Pedavoli Architects as the Project Architect partnered with Hansen Yunken as the head contractor on behalf of the School Infrastructure NSW (SINSW).

This report builds on the work of the previous planning phase architects Hayball.

It is a result of input provided by the key stakeholders SINSW, TSA Management, New Public School in Wagga Wagga PRG, Hansen Yunken and Perumal Pedavoli Architects.

The report collates the concept design approach prepared by Hayball Architects for the project and brings together the input of the entire consultant team.

This report further develops the established project direction to address the Secretary's Environment Assessment Requirements for the submission of a State Significant Development Application.

PROJECT FRAMEWORK

The site is located within Wagga Wagga with adjacency to the Charles Sturt University campus and future Northern Sporting Precinct being developed by CWWCC for the Peter Hastie Oval.

The project was originally developed by Hayball Architects as the planning phase architects and has been subject to community and stakeholder consultation including PRG's, Indigenous consultations, Council, Government Architect reviews and SINSW Technical Stakeholder reviews.

The key relationships of the Hayball design for the SEARS have been maintained however the site boundary was amended requiring adjustment to the site and building planning.

This report has been prepared to accompany the Environmental Impact Statement and SSD Application for the project, in accordance with the SEARs.

The new school will enter into joint and shared use agreements with the Wagga Wagga City Council and the Charles Sturt University.

- WWCC will have joint use of Community Rooms including meeting room, amenities and the use of an enlarged Hall
- CSU will have joint use of Staff Professional Learning space, meeting room and kitchenette.

“The report collates the concept design approach prepared by Hayball Architects for the project and brings together the input of the entire consultant team.”

2 Context and Site Analysis

WIDE CONTEXT

Schools and Education Centres:

1. Charles Sturt University
2. The Riverina Anglican College
3. TAFE Riverina Primary Industries Centre

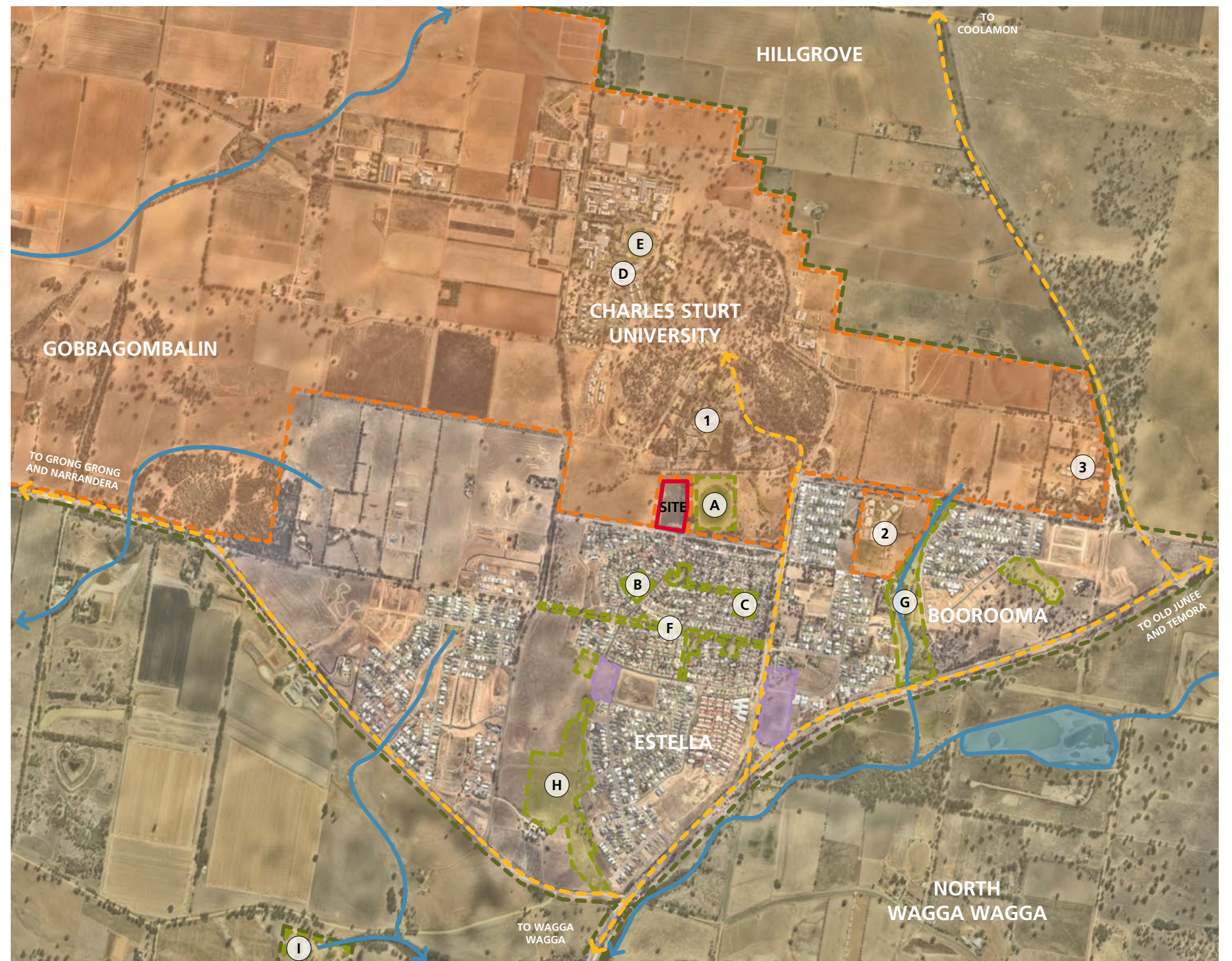
Sporting Facilities:

- A. Peter Hastie Oval
- B. Schooner Place Playground & Tenni Court
- C. Manneke Park & Sports Half Court
- D. Charles Sturt University Gymnasium
- E. Playing Field & Tennis Court

Recreation & Open Space:

- F. Estella Reserve
- G. Boorooma Reserve
- H. Estella Open Space
- I. Gobba Gombalin Lagoon Reserve

Legend	
■	Site
■	Retail / Commercial Centres
■	Recreation / Open Space
■	Main Roads / Transport Corridor
■	Water Course
■	Schools & Education Centres



Source: SHAC Estella Public School Design Brief Package 11/2/2019

2 Context and Site Analysis

CONTEXT

The site for the New School in Wagga Wagga is located in the suburb of Estella within the WWCC northern growth area approximately 4.5km from the Wagga Wagga CBD.

Surrounding land use includes the main CSU campus to the North, the Peter Hastie Oval to the East, an open paddock to the West, and established residential development to the South of Estella Road.

SITE INFORMATION

- Part of future subdivision Lot 1 in DP 1253855
- Site Zoning: SP2 (Education Establishment)
- Local Government Area: Wagga Wagga
- The site has no height limit or floor space ratio

Legend			
	Established Trees		Possible Water Elements
	Recreation / Open Space		Possible Development
	Existing Buildings		Site Boundary
	Existing Residential		



Source: Hayball New Public School, Estella - Design Report 7/12/2018

SITE ANALYSIS

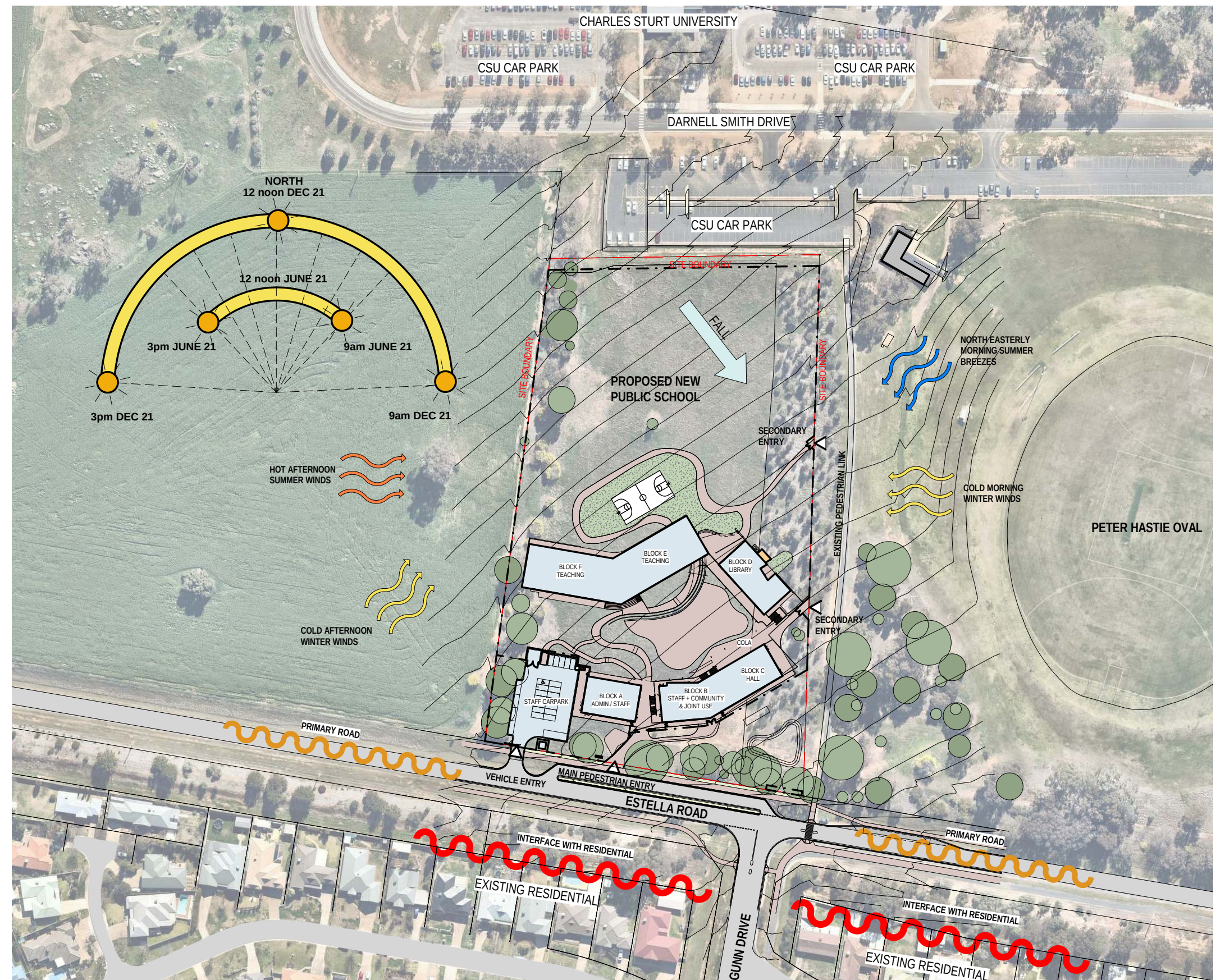
The New Public School is located in the WWCC northern growth area and is on Wiradjuri land. A number of workshops and yarning sessions were undertaken by the previous design team to explore opportunities for meaningful integration of local indigenous Wiradjuri culture within the design. Elements to promote include:

- Language
- Astronomy & Weather
- Fire
- The River
- Landscaping and Scarred Trees
- Fauna including the Murray Cod, Raven and Goanna

The immediate context includes the main CSU campus to the North, the Peter Hastie Oval to the East, an open field to the West, and established residential development to the South of Estella Road. The northern boundary abutts an existing CSU car park and an established pedestrian link exists to the East connecting the CSU campus to the residential zone and associated cycle pathway.

The site slopes at approximately 1:16 from the northwest. Off street vehicle parking entry is positioned to avoid the intersection of Estella Road and Gunn Drive and to avoid tree removal.

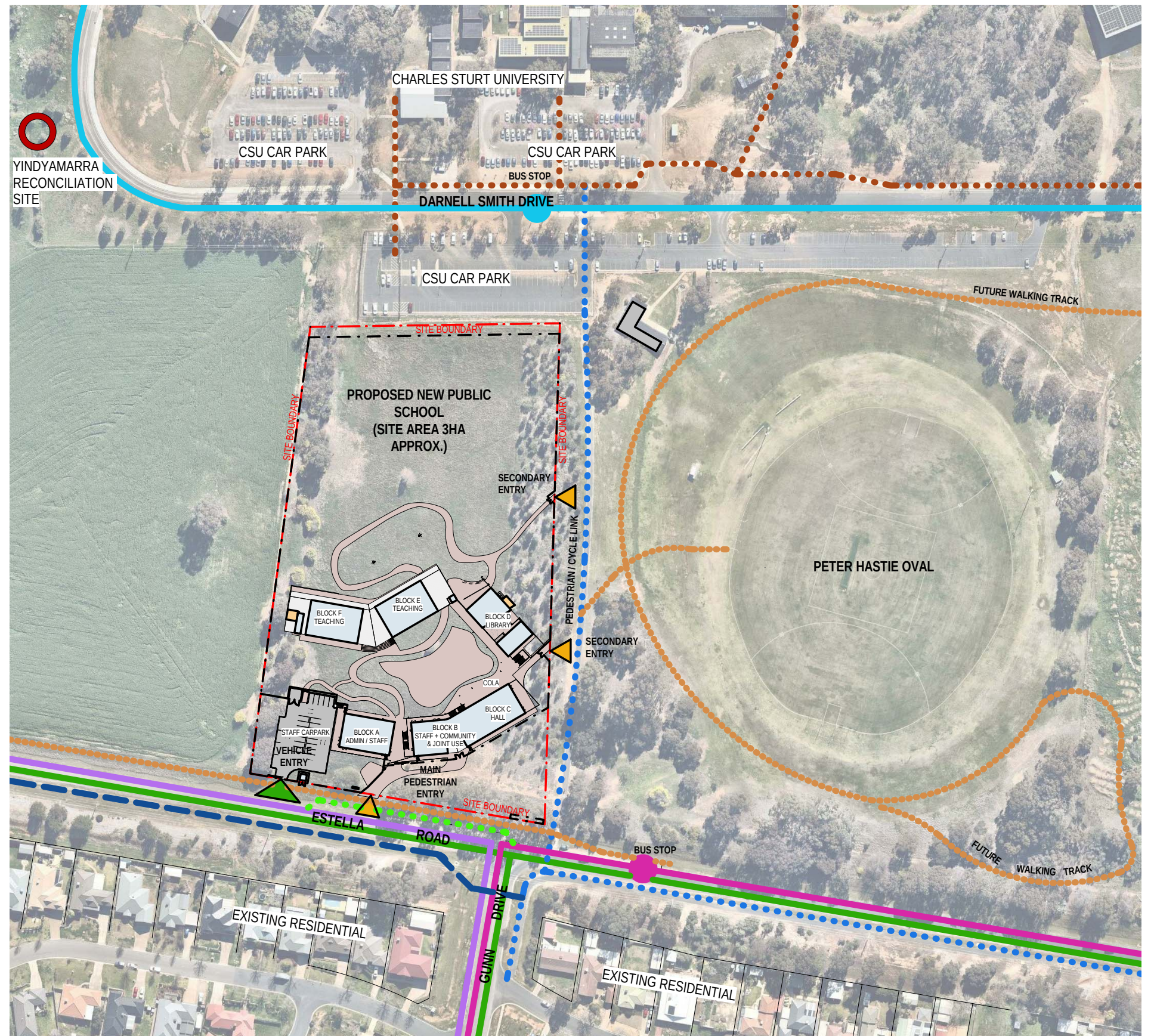
The site enjoys established tree zones which offer both continuity of the native flora and fauna, as well as opportunity for learning, shade, shelter and connection to land. The design aims to minimise removal of trees.



2 Context and Site Analysis

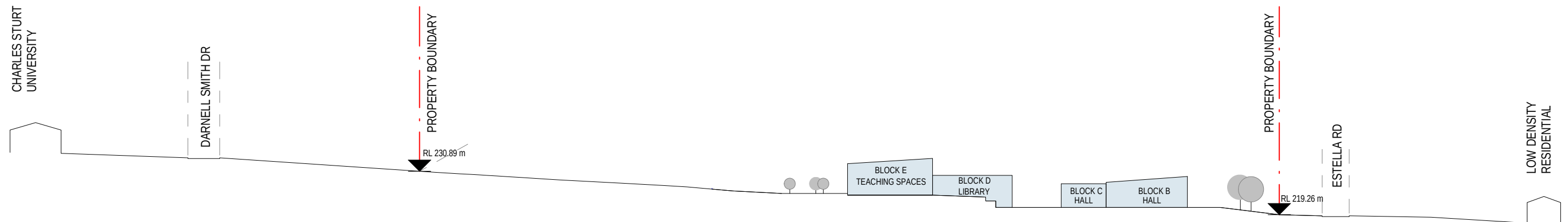
ACCESS AND CIRCULATION

Legend	
	Site Boundary
	Public Vehicular Route
	School Drop Off
	Bus Route 966
	Bus Route 967
	Bus Route 968
	Existing Pedestrian Footpath
	Proposed Pedestrian Footpath
	Existing Shared Cycle / Footpath
	Proposed Shared Cycle / Footpath
	Pedestrian Entry
	Vehicular Entry
	Significant Site



2 Context and Site Analysis

SITE CROSS SECTION



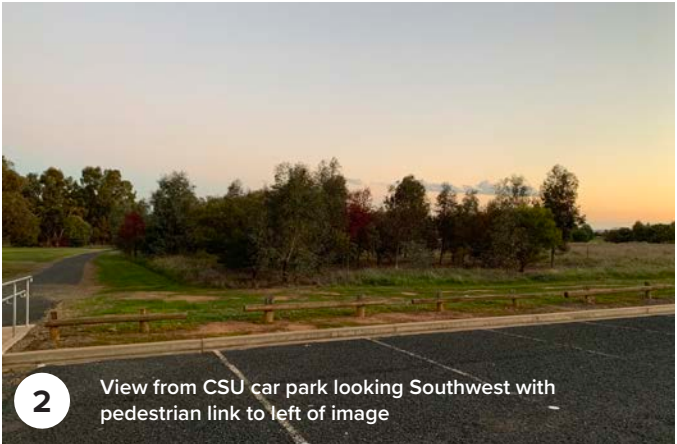
SITE IMAGES



Source: Nearmap (Satellite Image from July, 2019)



1 View from CSU car park looking South



2 View from CSU car park looking Southwest with pedestrian link to left of image



3 Connecting pedestrian footpath to East of site. Established trees and CSU biodiversity corridor



4 View of southwest site corner at Estella Road



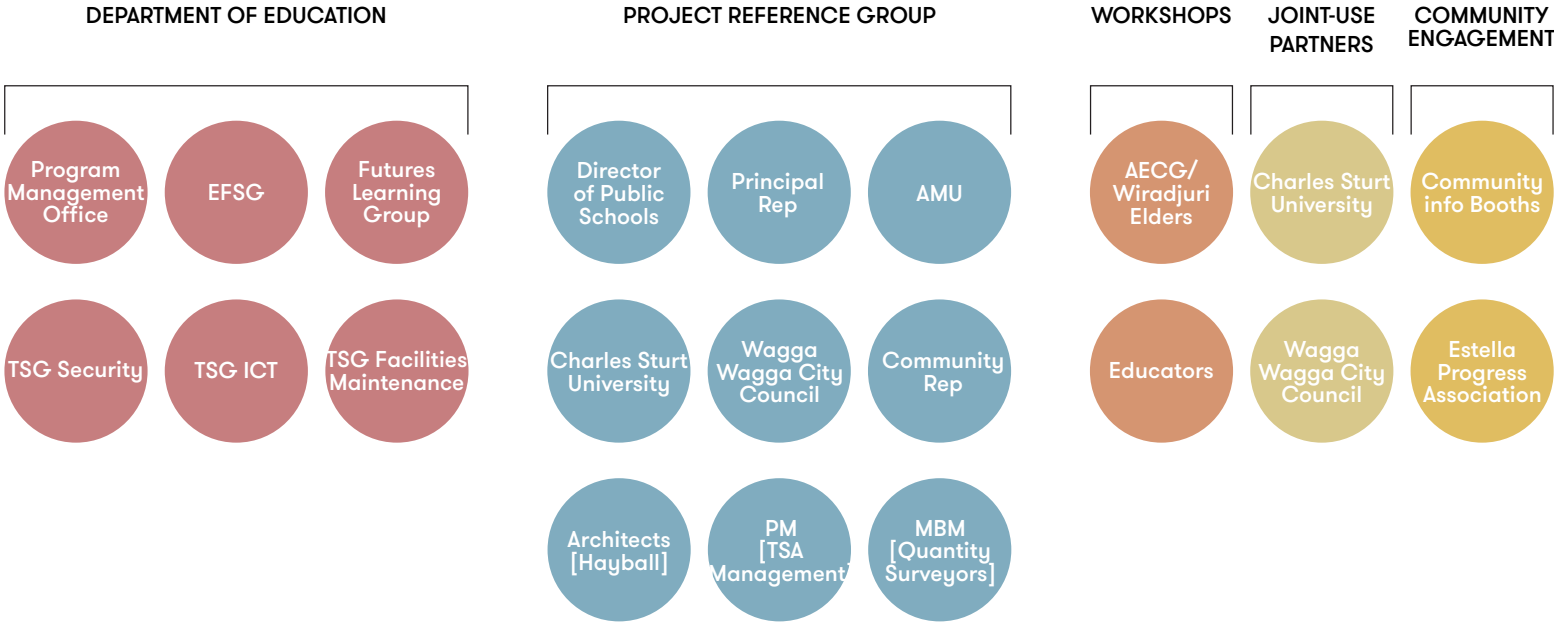
5 View of the site from Estella Road. Approximate location of off street vehicle entry point



6 View of Estella Road frontage with established trees. Approximate location of main pedestrian entry point left

3 Key Consultations

A COLLABORATIVE BRIEF



The design presented in this report is the result of a collaborative process with the Department of Education, the project's Joint-Use partners, the community, and specialist consultants; which has been refined through interdisciplinary reviews. Collaboration has occurred with :

- DoE Program Management Office
- DoE Educational Facilities Standards and Guidelines Group
- DoE Technical Stakeholders Group
- The PRG, including the DoE Directors of Educational Leadership [Wagga and Gundagai], Wagga Wagga City Council representatives, Charles Sturt University representatives, Community representative and Asset Management Unit representatives.
- Local Educators, for the purposes of a series of Education Workshops
- Local Wiradjuri Elders and Aboriginal Education Consultative Group members, for the purposes of a series of Aboriginal Narratives in Design Workshops

In addition to the above stakeholder workshops, we also conducted regular internal design workshops throughout the process to ensure the most learner centric design is delivered. This includes the following internal reviews:

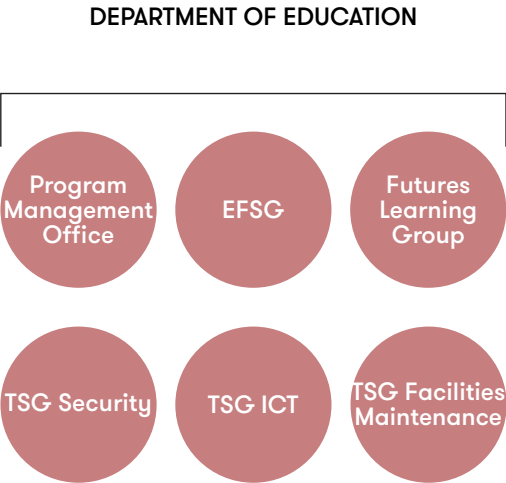
- Hayball Directors Reviews
- Hayball Redbook Reviews [National Office]
- Safety In Design Review
- SINSW EFSG + TSG
- Safety in Design

Finally, the design team also participated in the GANSW SDRP process.

Source: Hayball New Public School, Estella - Design Report 7/12/2018

3 Key Consultations

DEPARTMENT OF EDUCATION
STAKEHOLDERS



Through the Business Case / Concept Design / Schematic Design phases, Hayball attended 8 meetings with Department of Education stakeholders. The meetings included representatives from the PMO, EFSG, Learning and Engagement , Facilities Management, ICT, Security and WHS, ensuring that the design aligns with the Department’s framework for the delivery of school infrastructure (as encapsulated in the Educational Facility Standards and Guidelines).

Key outcomes from the Department of Education meetings include:

1. Determining and refining scope
2. Determining the size and location of core facilities, considering pedestrian + vehicular access, shared + joint-use arrangements (CSU, WWCC and the general community) and the potential for future growth.
3. Determining building locations, functional relationships, building heights and overall site strategies.
4. Supporting Future -Focused learning spaces for all users of the site (students, staff and community)
5. Advising on spatial allowances for electrical, communications, air conditioning and security within the floorplan of buildings.
6. Advising on maintenance requirements and their implications in material selection, design and detailing:
 - Selection of external materials which have low maintenance and longevity.
 - Avoiding paint finishes which require ongoing maintenance.
 - Roof drainage strategy utilising eave gutters and maintaining appropriate pitches.
 - Safety roof access systems and independent access to AC plantrooms at roof level.
 - Selection of internal materials with resilient finishes to allow cleaning and provide durability.

Source: Hayball New Public School, Estella - Design Report 7/12/2018

3 Key Consultations

PROJECT REFERENCE GROUP (PRG)

PROJECT REFERENCE GROUP



Through the Business Case/ Concept Design / Schematic Design phases Hayball attended regular Project Reference Group (PRG) meetings.

Regular meetings ensure the design aligns with local conditions and specific operational needs. The PRG include the Regional Director of Schools, a proxy School Principal (Gundagai DoE), Community representative (Estella Progress Association, in lieu of P&C Representative), Asset Management Unit representatives from the Department of Education, representatives from CSU and WWCC.

- Key outcomes from the Project Reference Group discussions include:
1. Determining educational principles for the project (refer to following page).
 2. Assessment of Master Plan building locations, and overall site and building relationships.
 3. Establishing key relationships with adjacent sites, namely CSU, Yindjamurra Reconciliation Site and the future proposed WWCC recreational facilities.
 4. Establishing specific requirements for the Community Meeting Rooms, Professional Learning Space, Hall, Library and Special Programs to facilitate both school and community use.
 5. Determining the key issues relating to safety, accessibility, separation + integration, management and operational needs of the new school.
 6. Establishing a functional brief, priorities, limitations, opportunities and challenges for the landscape/ external spaces design, including the extreme weather conditions experienced in Wagga.
 7. Determining traffic design and exploring the challenges relating to the limited road frontage of the site.

Source: Hayball New Public School, Estella - Design Report 7/12/2018

3 Key Consultations

PROJECT REFERENCE GROUP (PRG): DEVELOPING THE EDUCATION PRINCIPLE



Learners and Learning

Pedagogical focus

- Provide a range of learning environments which are conducive to the varied needs of 21C teaching and learning to support a variety of pedagogies.
- Offer a range of explicit, collaborative and presentation learning settings to support learning cohorts sizes up to around 60 students.
- Facilitate larger gathering and collaboration.

Specialism: Support an integrated curriculum and develop an 'Education Precinct' that promotes:

- Lifelong learning for all
- Establishes close links to the trainee teacher programs at the Education Faculty of Charles Sturt University.
- Establishes a partnership with CSU to make the school unique, providing the students and teachers with many wonderful opportunities.
- The partnership between the school and the university should be a reciprocal relationship, which focuses on bridging the gap between theory and practice and valuing ongoing professional learning.

Professional development + teaching goals:

- Create a sense of belonging for staff
- Focus on teacher learning and wellbeing
- Provide contemporary collaboration settings that encourage congregation and collaborative practice, both within the school and with the adjacent CSU



- Facilitate professional development for teachers in association with CSU.

Indigenous Learning Opportunities

- Promote learning opportunities associated with the culture and heritage of the Wiradjuri people, including links to nearby Wiradjuri significant sites, including the Yindyamarra Reconciliation Place, on Bald Hill, Charles Sturt University.

Technology

- Interconnect the entire campus and fully embrace available new technology into teaching and learning.
- Enable seamless, albeit secure, wireless access across the school and CSU, to enable an integrated education precinct.

Outdoor learning

- Create stimulating landscapes that enhance outdoor learning, inquiry-based play and group gathering including, possibly 'campfire' or 'yarning circle' settings.
- Enable community access to external learning settings (outside the secured school core) after hours



Environment

Specific Programs: Engage in practical environmental learning programs

- Combine environmental education with practical programs to assist in learning around how we grow, harvest and cook, including possible links to the Nutrition department at CSU.
- Utilise environmentally sustainable measures in the design to reduce the ecological footprint of the school, and to concurrently act as tools for the classroom.

Behavioural: Encourage environmentally responsible behaviour

- Create a culture of environmental sustainability which continues into life outside of school, creating responsible citizens, possibly including recycling and reuse, sustainable transport options, end of journey facilities etc.

"Caring for Country":

- Design environments that are sensitive to Wiradjuri culture, involving the notion of "caring for Country", which was the basis for much of traditional Wiradjuri existence.

Links to Ecological Corridors:

- Provide links to and an awareness of nearby ecological corridors, which protect endangered species.



Community

Educational Precinct: Develop the site as a new Educational Hub for the community

- Create a vibrant community education facility that breaks down traditional barriers between the school and the community
- Create and utilise open shared facilities with the school, university and the wider community, eg hall, sporting facilities, lecture rooms etc
- Engage and foster partnerships with Charles Sturt University and Wagga Wagga Council

An outward-facing campus

- Seamlessly integrate the school with Charles Sturt University learning opportunities and Council recreation areas, so that boundaries are blurred.

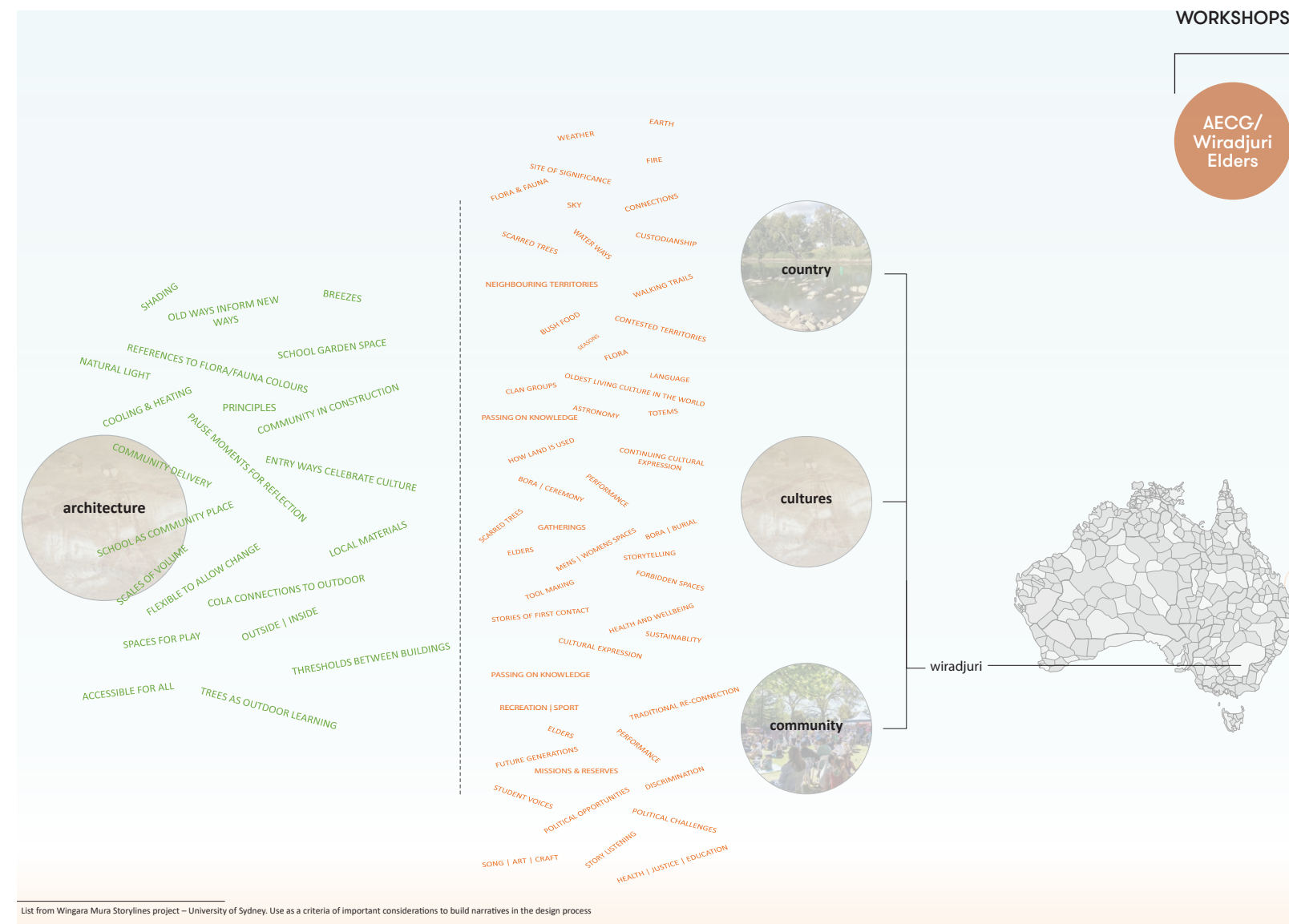
Place within a cultural context: Engage with the cultural heritage of the site

- Promote learning opportunities associated with the local Wiradjuri heritage to provide environmental learning opportunities
- Provide accessible links to the Yindyamarra Reconciliation Place, on Bald Hill at Charles Sturt University
- Promote awareness and respect, integrating cultural diversity into the fabric of everyday school life.

Source: Hayball New Public School, Estella - Design Report 7/12/2018

3 Key Consultations

ABORIGINAL CULTURAL NARRATIVES WORKSHOP: COMMUNITY INTEGRATION



Through the Schematic Design phase Hayball attended 2 workshops facilitated by Michael Mossman, our Facilitating Indigenous Narratives in Design (FIND) Consultant.

These workshops included representatives from the local Aboriginal Education Consultant Group [AECG], including the President, VP, Treasurer, Network Specialist and Educators, Hayball, the DoE Local Education Director, and representatives from CSU and Wagga Wagga City Council.

Additionally, separate conversations were also held between Michael Mossman and CSU Indigenous Learning Centre Director, Lloyd Dolan and Peter Ingram, a Traditional Owner Representative.

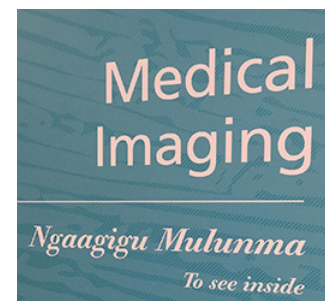
The purpose of the workshops was to:

- acknowledge that the building is situated in Wiradjuri country, and seeking opportunities to reinforce this culture through the architecture.
- engage with the local Aboriginal members of the community, with the intent to discuss topics of importance and interest, which can inform the design of the environment.
- facilitate the delivery of cultural narrative design drivers that align with the educational principles for the new public school.
- discover an interface of country, culture and community with architecture to promote deeper understandings and an acknowledgement of place.

Source: Hayball New Public School, Estella - Design Report 7/12/2018

3 Key Consultations

ABORIGINAL CULTURAL NARRATIVES WORKSHOP: COMMUNITY INTEGRATION



MARRAMBIDYA

[MURRUMBIDGEE RIVER]

Marrambidya was, and is, a powerful source of life

In the local Wiradjuri language, marrambidya means 'big water'

The meandering water course has been utilised and maintained to great effect to resource sustainable communities and economies.

The river brings together cultures for survival and celebration.

This can be represented in the master plan, embedding in the design the richness of place.

Qualities can be expressed through colour, materiality and texture, also expressing its running and still nature.

The idea of the educational 'watering hole' could be embraced, where students come together as equals, and share information and celebrate.

LANGUAGE

Language carries the culture of a people, providing a basis for communication, group and individual identity and security.

Wayfinding and building naming in Wiradjuri language will enhance connections to place. Bilingual signage will be an educational tool.

Encourage the continued use of language so that it is not lost or disrupted.

SCARRED TREES

The process by which bark is cut out and removed from a living tree for the creation of shelter, canoes, containers, fishing platforms and shields.

Scarring could be referenced through material and detailing, whereby underlayers are revealed by subtraction.

Could be expressed in facades, floor finishes, joinery etc

FIRE

Fire places were central, and close to shelters.

It signifies warmth and bringing people together.

Bimbali/ Guyyang : Fire was used to manage and control bush, tree and shrub cover from developing, to extend habitable space, to attract grazing animals and the growth of yams and other root foods.

The idea of the 'campfire' learning settings could be integrated, where students come together for the telling of stories and sharing of knowledge.

Facade treatments in dark neutral colours allow for the narrative of charred remains after a fire, which is a source of regeneration. Pops of colour highlight the regeneration narrative.

Key outcomes from the Cultural Narratives Workshops included:

1. Establishing relationships and developing a channel of two-way communication for the project.
2. Listening to the stories of the local area.
3. Discussing narratives and elements that have significance to the locals, which could be interpreted into the design, including:
 - The river narrative, with relevance to aboriginal and non-aboriginal community, past and present, as a source of sustainance and life', achieved through form and movement, materiality, colour, texture and plant species.
 - Aboriginal naming could be considered (potentially for the school name, block names, wayfinding etc). This should be part of an ongoing discussion with SINSW in the Detailed Design Phase.
 - Referencing scarred trees, for example through the layering of facade materials.
 - Referencing fire as a source of regeneration and new life. The buildings are representative of charred trees, with the 'river of fire' winding through the site, bringing regeneration. Additionally, integrating the idea of the campfire as a yarnning circle, for the telling of stories and sharing knowledge.

Source: Hayball New Public School, Estella - Design Report 7/12/2018

3 Key Consultations

EDUCATION WORKSHOP: DEVELOPING THE LEARNING BRIEF

"We talk about the welcome mat... We need to take people on a journey of what that feels like and looks like, from the moment they step out of their car. So what are the important features?... What is this school all about? Is it about connection to community? Connection to CSU?... You have to tell that story by the time you get out of your car, to the moment you walk in the front door of the office... Parents get a perception of a school before they enter the front door... So you're actually telling a story, and creating a feeling from the car to the front door."

Workshop Participant

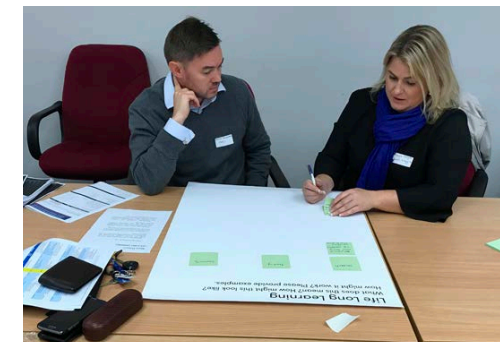
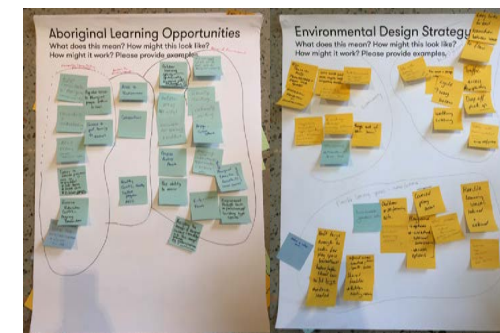
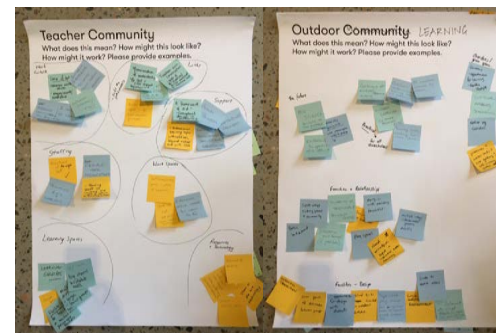
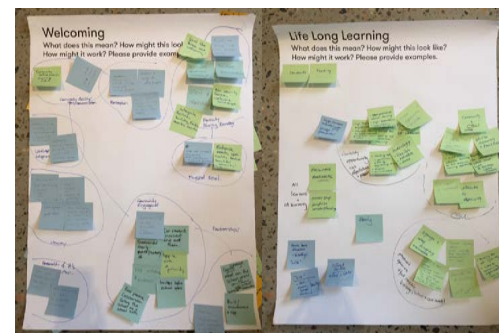
WORKSHOPS



Through the Business Case / Concept Design / Schematic Design phases Hayball facilitated 2 education workshops, in association with Kate Bertram (Education Consultant) to unpack the education principles, proposed pedagogy and its spatial implications. The workshops included teacher representatives from local primary schools, representatives from CSU Education Faculty, representatives from WWCC and a community representative.

Key outcomes included:

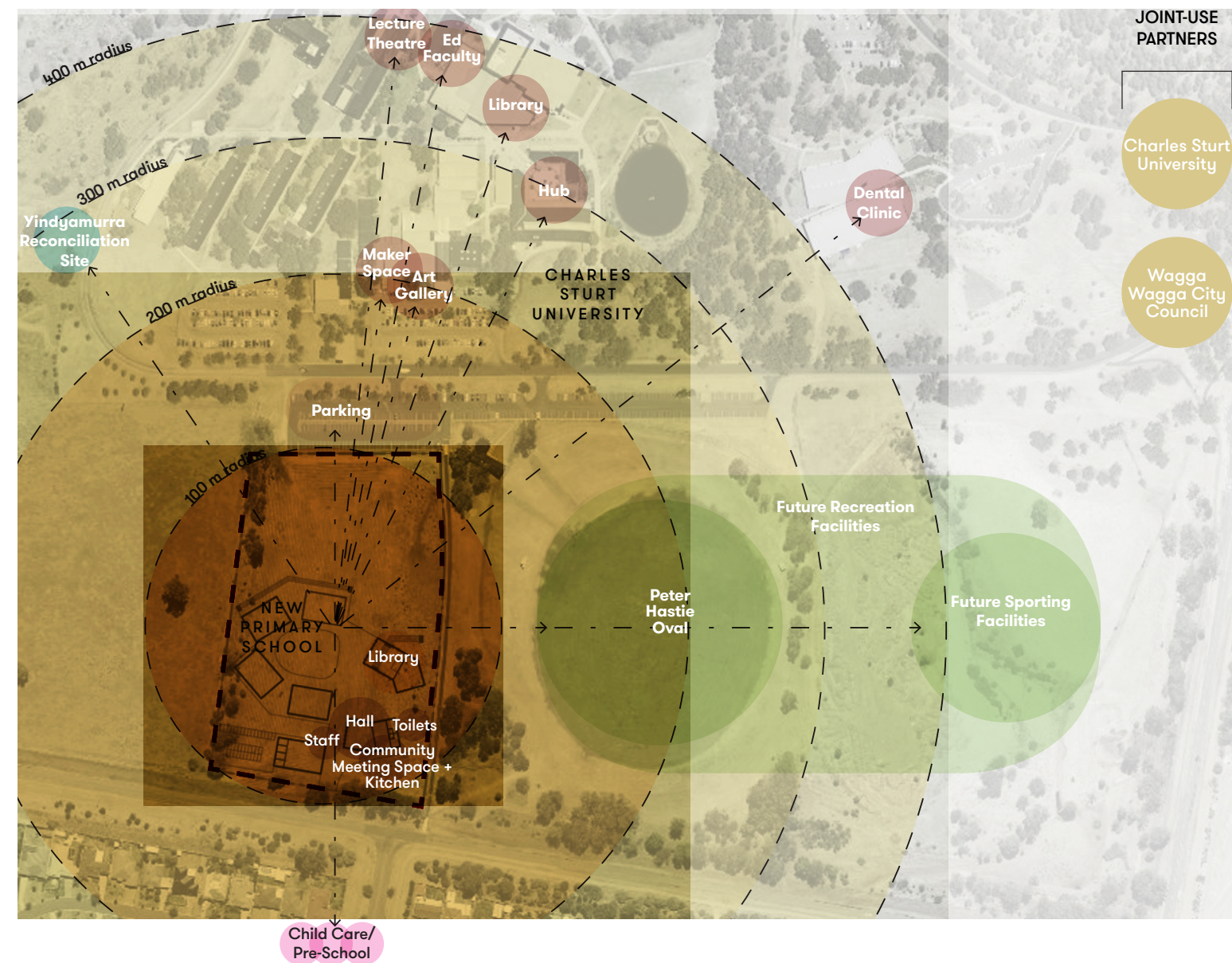
1. Unpacking the key education principles for the proposed school: welcoming, lifelong learning, teacher community, outdoor learning, Aboriginal learning opportunities and environmental design strategy.
2. Establishing clarity around the future-focused pedagogy and the use of space within the school, including:
 - Promote learning for students and teachers through collaboration and social interaction.
 - Encourage learner self-management and self-direction.
 - Support a full range of teaching strategies from direct explicit instruction to facilitation of inquiry and authentic project and problem based learning.
 - Facilitate learning and connection anywhere, anytime by providing seamless access to ICT and integration of learning resources throughout the learning spaces.
 - Be integrated into, and maximise the use of the natural environment.
 - Enable aspects of the buildings, building design and outdoor spaces to be learning tools in themselves - for example, learning from the ecologically sustainable features of the design and associated energy management systems.



Source: Hayball New Public School, Estella - Design Report 7/12/2018

3 Key Consultations

JOINT USE PARTNERS: COMMUNITY INTEGRATION

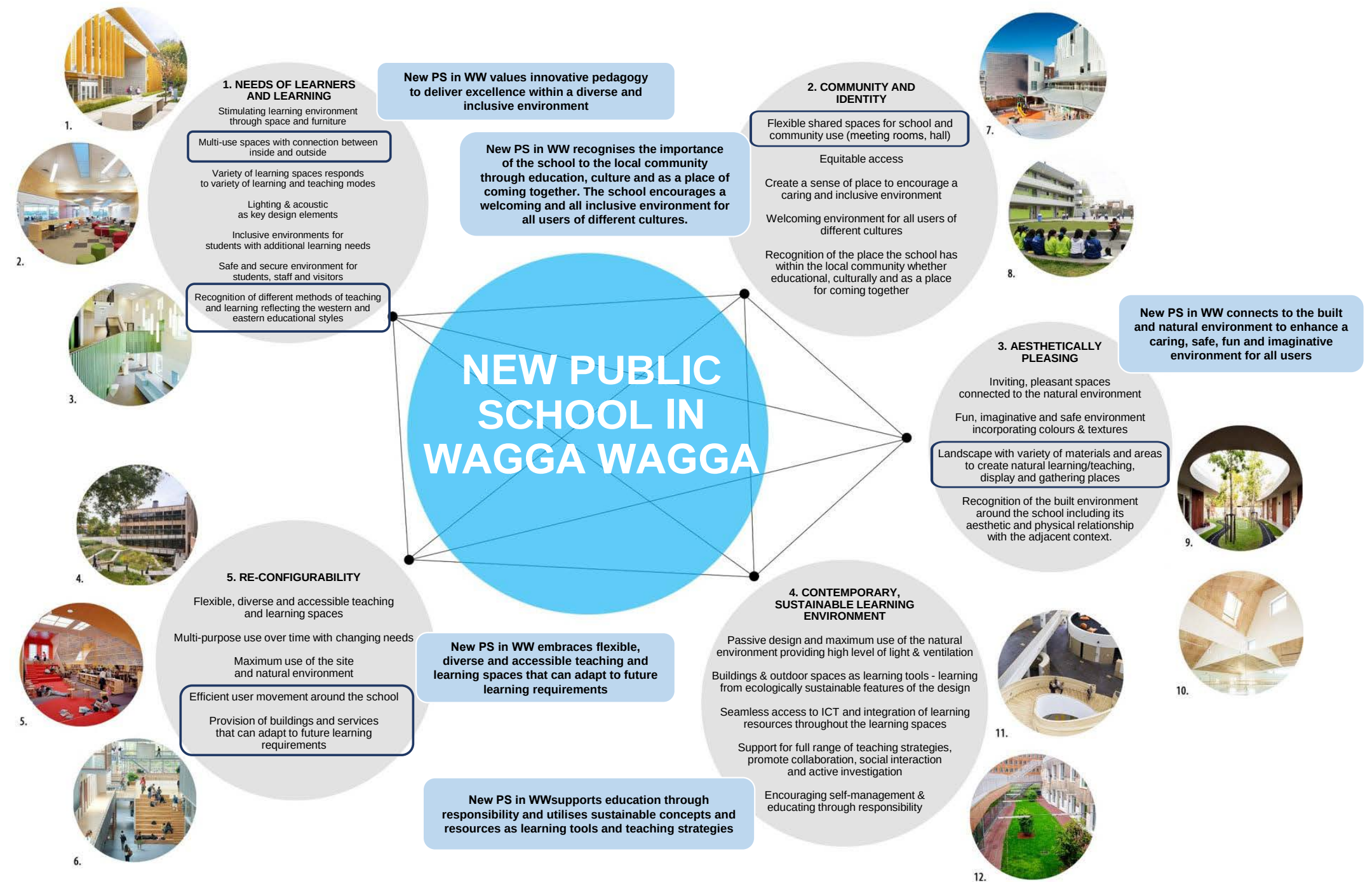


Source: Hayball New Public School, Estella - Design Report 7/12/2018

4 Design Principles

EDUCATION PRINCIPLES

Education principles have been developed for the project and form the foundation of the design.



4 Design Principles

DESIGN STATEMENT

This Design Analysis Report has been prepared on behalf of the Department of Education (DoE) and Schools Infrastructure NSW (SINSW) in support of a new school known as Wagga Wagga Primary School, located on Estella Road, Estella, Wagga Wagga NSW (the project).

Note: SINSW has since advised that the school's working title is to be "New Public School in Wagga Wagga". This replaces any reference to 'Estella Public School'.

The project is a new school and is State Significant Development (SSD). The SSD Application for the project is identified as SSDA 9494. This Design Analysis Report is to be read in conjunction with the Environmental Impact Statement (EIS) that accompanies SSDA 9494. Perumal Pedavoli Architects (PPA) have been engaged as delivery phase architects. The proposed school design builds on the thoughtful concept design prepared by Hayball Architects. The design intent is respected and retained. Therefore the following text is inherited from hayball's original concept design and is relevant to the current design.

CELEBRATING PLACE

Wagga Wagga is a regional city straddling the Murrumbidgee River, the second longest river in Australia. The flows of the Murrumbidgee and the history of the Wagga Wagga area are inextricably linked. It was considered entirely appropriate to borrow the form of the Murrumbidgee River as a site ordering device, but also reflect on its significance as a source of sustenance. As Kath Bowmer, chairperson of the Murrumbidgee River Management Committee has said, "a river is a reflection of its catchment". In this way, the school is also a reflection of its catchment: its community.

The original inhabitants of Wagga were the Wiradjuri people. The Wiradjuri are river people, who have become practically, emotionally and spiritually connected to the ways of the river over thousands of years. The river's name, Marrambidya, means 'big water' in the Wiradjuri language. The river was a primary source of food for the first inhabitants.

European inhabitation in Wagga began with the arrival of Captain Sturt during his expedition along the Murrumbidgee River. The river continued [and continues] to be essential to Wagga: it was a transport route that allowed the export of goods; it is an important source of irrigation water for the Riverina farming area and it is also a source of recreation, with Wagga beach being a popular swimming and picnic spot.

The meandering river has been reinterpreted on the site, flowing from 'headwaters' or high ground at the junction with Charles Sturt University to the north of the site, to

the low point at the south-east corner of the site. It is meaningful that the source of the 'river' is the university, which was originally founded as a Teaching College in 1947.

The river form on the site is the circulation spine that links the buildings on the site, bringing students together, encouraging collaboration and promoting social encounters. Its meandering form allows for the creation and definition of the outdoor learning spaces on the 'river flats', within the 'bends of the river'. It is also metaphorically the source of learning and essential sustenance.

The river form, the circulation spine, is the focus of the design, delineated with colour and texture. The patterning on sections of balustrade along its length is derived from a photo of the tree line on the banks of the river, whilst in abstract form it seems to also emulate the ripples of the river.

The juxtaposition of contextually inspired hues along the river walkway intentionally demonstrates the strength of colour and its relevance in the Australian landscape. These colours are also picked up as a way-finding device – defining an identity for each building on the site, through the interior, with small glimmers of colour expressed externally. Thus, colour in this project has meaning, in its environmental context as well as its functional context, and exemplifies its ability to contribute to a sense of place.

The buildings along its length are deliberately restrained. Clad in strips of charcoal FC, the buildings are also representative of the charred remains of trees after a regenerating fire, a practice undertaken by the early inhabitants in addition to the latter. They form a recessive backdrop to the river and the landscape.

It is intended to continue to develop the metaphor of the river throughout the detailed design phase, further exploring materiality and surface texture, and integrating educational play along its length. The juxtaposition of contextually inspired hues along the river walkway intentionally demonstrates the strength of colour and its relevance in the Australian landscape. These colours are also picked up as a way-finding device – defining an identity for each building on the site, through the interior, with small glimmers of colour expressed externally. Thus, colour in this project has meaning, in its environmental context as well as its functional context, and exemplifies its ability to contribute to a sense of place.

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Source: Hayball New Public School, Estella - Design Report 7/12/2018

4 Design Principles

EMBRACING THE COMMUNITY

In seeking to serve this community, we sought to engage with this community at the early stage, to involve them through the design journey, in the hope that the school would represent their culture, their needs and aspirations, and that the end result would be that the whole community would feel embraced by, and welcomed into, the school in the future.

The school will enjoy a reciprocal partnership with Charles Sturt University and Wagga Wagga City Council, having established physical links between the school, the university and the planned Council recreational area, having integrated Wi-Fi networks in the precinct, planning shared and joint-use facilities and planned programs of professional and community learning.

Joint-Use facilities within the school include community meeting rooms, an enlarged hall and professional learning spaces. In this way, the community will be integrated into the daily life of the school. Additionally, they will be encouraged to use some of the shared-use facilities outside of school hours, including community gardens, the hall, the library and open spaces.

Throughout the design process, we have sought to respect of Wiradjuri culture, and facilitating connections to the Wiradjuri people, their stories and their heritage. A series of workshops were held during the design process, with the intent of incorporating Aboriginal knowledge systems, language, stories and cultural values into the built and natural environment of this school.

EMBODYING THE EDUCATIONAL PRINCIPLES

One of the main drivers for the school in Estella is to be a unique learning environment that will foster and support the use of collaborative and innovative teaching practices, and will promote extended learning opportunities for students and teachers, and will also facilitate learning collaborations with the wider community.

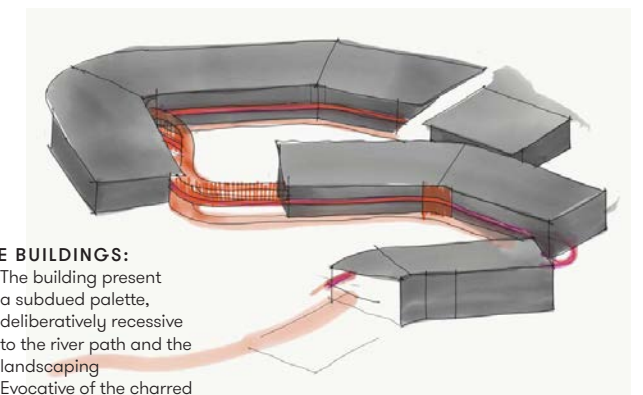
The layout of the buildings, with two primary courtyards (the social court and the learning court) promotes collaboration and the social nature of learning. Through the design, we have offered a range of learning settings [explicit instruction, collaborative, presentation, reflective etc] within the buildings and the landscape to support flexible learning.

The core facilities, available for shared and joint use, are deliberately placed at the public edge of the school, encouraging interaction at the edges, whilst maintaining a secure and safe school environment. Learning is deliberately visible and exposed, with glazed openings into the Hall, Library, within the Learning Clusters, but also the staff areas, so that teachers can demonstrate positive interaction, collaboration and ultimately show that everyone is a learner. The learning activities of the school are, in this way, made visible and accessible to the whole school, and the community.

The learning spaces are grouped in clusters, supported by informal learning spaces, like learning neighbourhoods. It is generally recognised that teaching

and learning works best in teams. The proposed model encourages students to get out of the classroom into specific, purposeful ancillary spaces and the outdoors... recognising that you need to be active to learn. Additionally, the landscape and buildings themselves can be learning tools, with visible sustainability features, educational info-graphics, way-finding signage that embodies the Wiradjuri language, kitchen gardens, rainwater gardens...

Thereby, the design of the new Public School in Estella [Wagga Wagga], its layout, forms, materials and colours, are not just arbitrary form-making experiments, but grew out of an aspiration to create a meaningful and welcoming gathering place for the specific community that is centred on life-long learning.



THE BUILDINGS:

- The building presents a subdued palette, deliberately recessive to the river path and the landscaping
- Evocative of the charred remains of trees after a regenerating fire

Source: Hayball New Public School, Estella - Design Report 7/12/2018

4 Design Principles

SITE NARRATIVE AND PLANNING

THE RIVER NARRATIVE

The following design principle 'The River Narrative' has been developed from Hayball New Public School, Estella
- Design Report 7/12/2018



the concept: a meandering path [river], connecting and containing outdoor space

COMMUNITY:

"The river is a reflection of its catchment"

The flows of the Murrumbidgee and the history of the Wagga Wagga area are inextricably linked.

It was considered entirely appropriate to borrow the form of the Murrumbidgee River as a site ordering device, but also reflect on its significance as a source sustenance to its community.

ABORIGINAL NARRATIVES

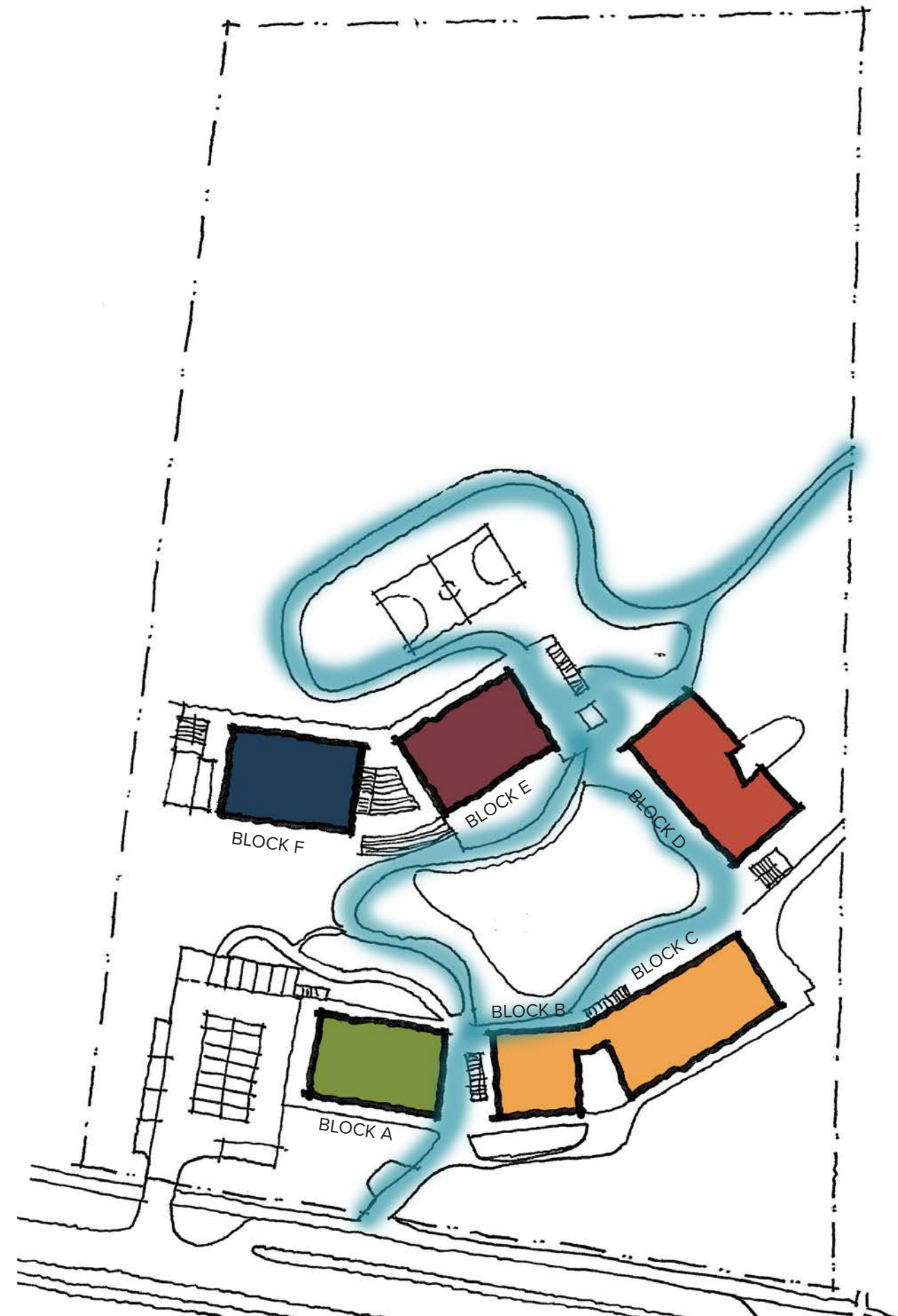
The indigenous Wiradjuri are river people, who have become practically, emotionally and spiritually connected to the ways of the river over thousands of years.

The river's name, Marrambidya, means 'big [or 'long'] water' in the Wiradjuri language.

PEDAGOGY

The watering hole as an archetypal learning space; the place where we learn from our peers. The river is the element that brings people together to learn and collaborate, where we are teacher and learner at the same time.

The river as a source of sustenance/ source of learning. The river as a conduit, the relaying of information.

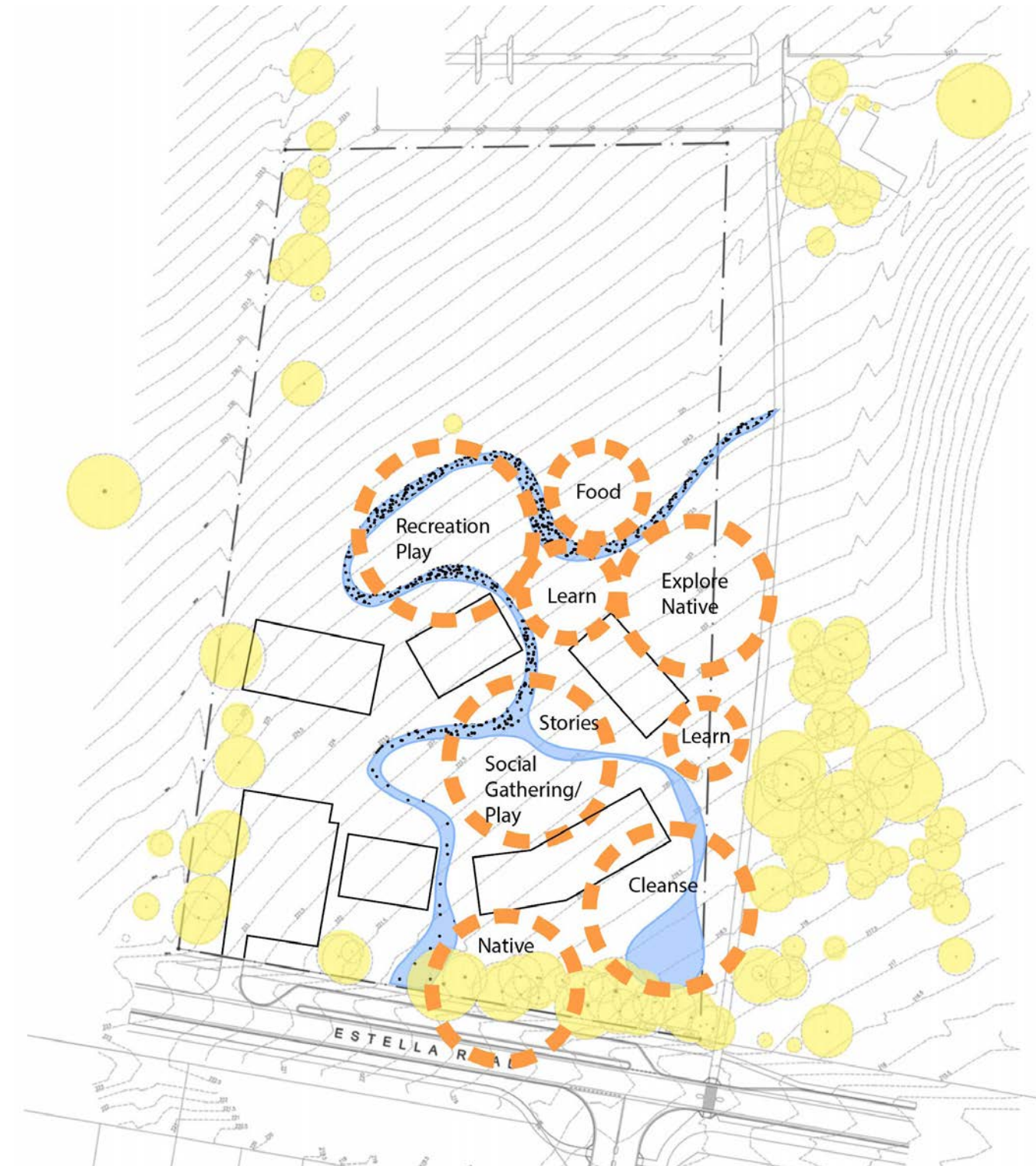


4 Design Principles

LANDSCAPE

The landscape concept has been developed in parallel with the architecture. Both underpinned by the cultural narratives identified in the report The Cultural Narrative in Design report prepared by Michael Mossman. The idea of connecting people to place via Language, Land, Time, Totems and Flora is explored in the landscape.

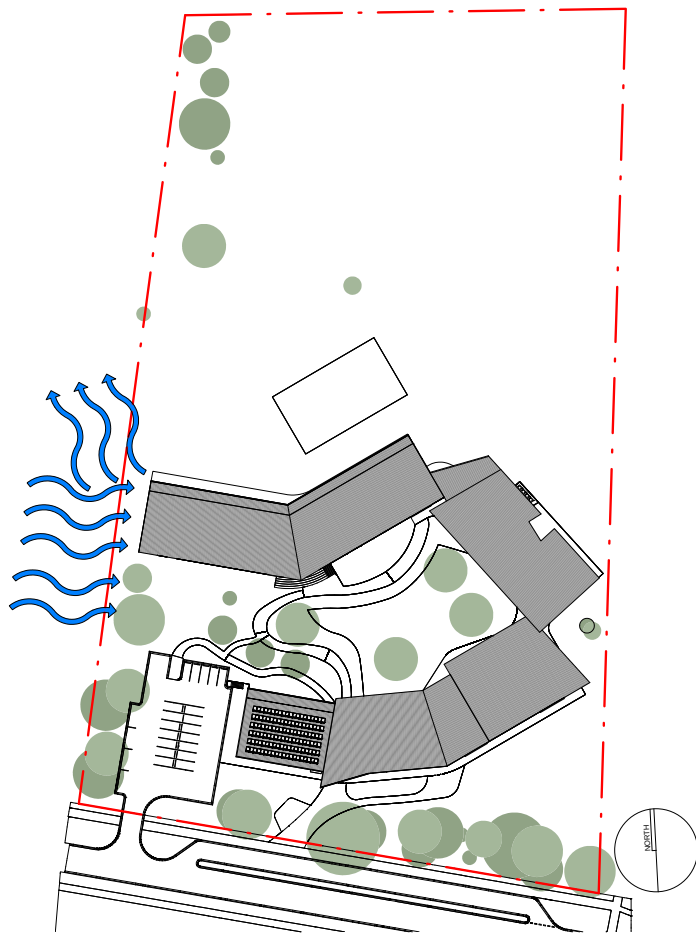
Refer to the Landscape report included with the SSDA submission prepared by Taylor Brammer Landscape Architects for further information relating to the landscape design.



Source: Taylor Brammer Landscape Concept Package

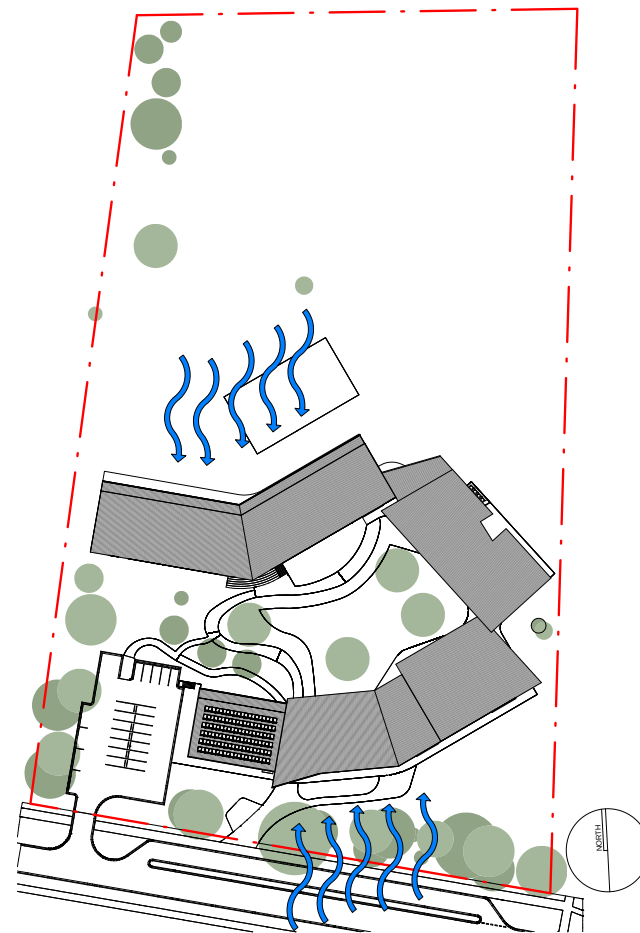
4 Design Principles

ESD



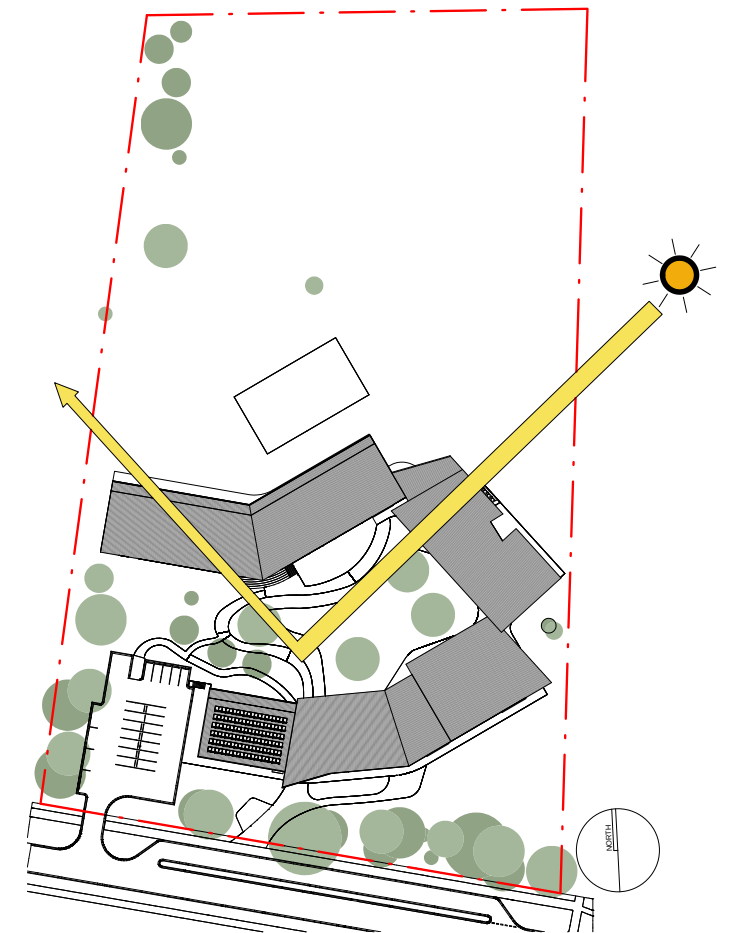
PROTECT FROM EASTERLY & WESTERLY WINTER WINDS

Consider appropriate planting, e.g. thick coverage at pedestrian level along Western edge of site to protect from cold winter winds.



PATH FOR EAST/WEST SUMMER WINDS

To allow air movement for natural ventilation and to increase thermal comfort.



MITIGATE HEAT ISLAND EFFECT

Consider high solar reflectance index materials, e.g. roof materials, playing court and carpark surface; provide vegetation; provide shade with vegetation and external shading elements within the architectural design.

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

CPTED consists of four (4) universal design principles which are aimed at assessing crime risk and reducing preventable risk before a development is approved. The proposed development has been designed with regard for these CPTED principles.

Territorial Re-Enforcement

The Site has frontage to the public domain along the southern boundary to Estella road. The site is fenced in accordance with the SINSW security requirements therefore delineating ownership and access. The entry points are clearly defined by built form, signage and with access to the site via controlled points in the perimeter fence. The main entry to the school is located on Estella road.

Surveillance

The principles relating to surveillance relate to spaces in public areas where people can see and interact with others. The proposal, with clear circulation paths, promotes strong natural surveillance of both the public domain and the interior areas of the site. During weekend and after-hours periods, the site will be secured with site fencing and the buildings will be fitted with a Back to Base Alarm System. Furthermore, the external lighting for night time crime deterrence will be designed in accordance with the relevant Australian Standard & Schools Security Unit (SSU) requirements.

Access Control

The proposed development intends to utilise fencing to all boundaries and with gates, thus providing controlled access points. Fencing around the boundary of the site will not restrict surveillance opportunities and will be constructed with optically permeable materials in accordance with EFSG & SSU requirements.

Space/Activity Management

The proposed development achieves this through the design of buildings orientated to the exterior of the site and promotion of interior open spaces, protected from the public domain. During school operation, the students will be contained generally to the interior of the site. Graffiti resistant materials will be used wherever practicable to assist in removal.

EXTERNAL LIGHTING STRATEGY

Key Considerations for External Lighting

AS 4282:

- Light falling on surrounding properties
- The brightness of luminaires in the field of view to nearby residents
- Glare to users of adjacent transport systems
- Effects of astronomical observations

Control of Effects:

- Level of lighting
- Times of operation for proposed lighting
- Type of lighting technology

CPTED (Crime prevention through environmental design)

- Ensuring correct categorisation of areas
- Ensuring robust quality fittings
- Ensuring compatibility with security

Design Objectives:

The implementation of a new exterior lighting design will be in accordance with the following Australian Standards:

- AS/NZS 1158:2005 Lighting for the roads and public spaces and
- AS/NZS 4282:2019 Control of the obtrusive effects of outdoor lighting.

The design will consider surrounding properties and residents and work to mitigate the negative effects of this through careful and considered selections of luminaires and control strategies, appropriate lighting levels and lighting locations.

The new exterior lighting system will also consider crime prevention and work to eliminate cause through the implementation of correct lighting categorisations, a cohesive lighting system that is compatible with security system requirements as well as through the use of quality robust luminaires.



External Pole Top Led Luminaire with full cut-off and back spill control

EXTERNAL LIGHTING AS/NZS 1158 PROPOSED P CATEGORY CLASSIFICATION

- P11b
- P2
- P3 -ANY STAIRS FALL UNDER P9 CATEGORY
- P12
NOTE: AREAS NOT INDICATED, NO LIGHTING PROPOSED



NOTE: ALL PUBLIC ROADS AND FOOTPATHS OUTSIDE OF THE SITE BOUNDARY ARE NOT CURRENTLY INCLUDED IN SCOPE

Steensen Varming: Electrical and Lighting Services Site Plan – Exterior Categorisation

5 Option Analysis

MASTER PLAN OPTIONS ANALYSIS

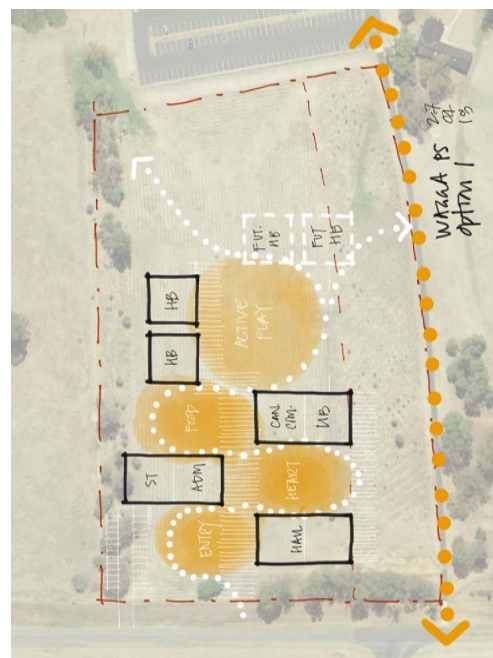
During the planning phase, Hayball Architects prepared numerous site planning options.

Through their design process, Option 1 was selected as the preferred site strategy.

Option 1: The Meandering River



Option 2: The Pinwheel - Containment + Release



Option 1A



Option 1B



Option 2A



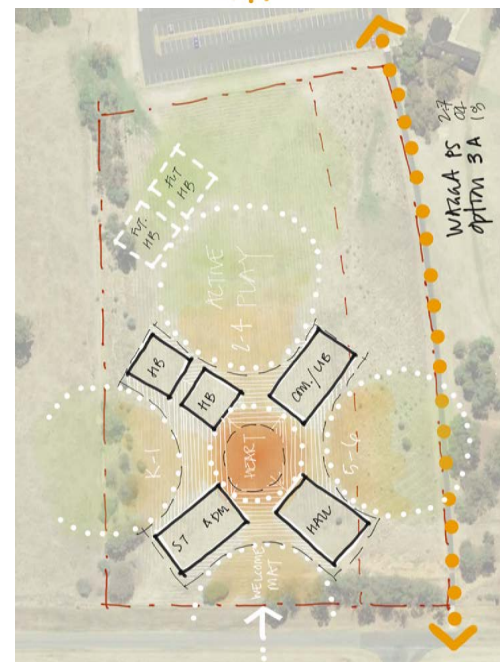
Option 2B

Source: Hayball New Public School, Estella - Design Report 7/12/2018

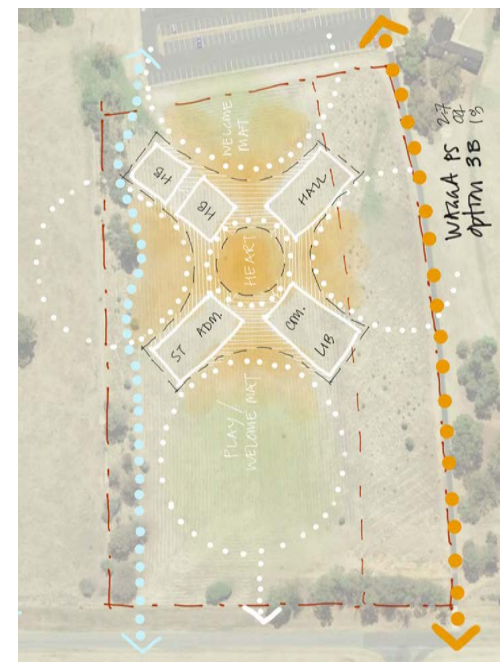
5 Option Analysis

MASTER PLAN OPTIONS ANALYSIS

Option 3: 'X' Marks the Spot



Option 3A



Option 3B

Option 4: The Boundary Threshold



Option 4A

Note that Option 1 was the Preferred Option, for the following reasons:

- The River analogy was considered a strong site ordering device, and meaningful narrative.
- It best allowed for the design to address topography
- It best allowed for future expansion.
- It gave physical form to the desired connectivity.

The following comments were made for further development of the scheme:

- Consider moving staff + admin block so that they are closer to the front of the site for direct access
- Consider the eastern pedestrian link as an additional site frontage. Create additional access points along this boundary.
- Consider orienting the courtyards more towards CSU
- Accommodate dedicated staff parking on school site. Staff parking cannot be accommodated on CSU land. CSU would be amenable to allowing parent parking for drop-off and pick-up.
- Consider drop-off/ pick-up and bus parking, noting that the site frontage is restricted.
- Consideration of site levels and accessibility.

Source: Hayball New Public School, Estella - Design Report 7/12/2018

5 Option Analysis

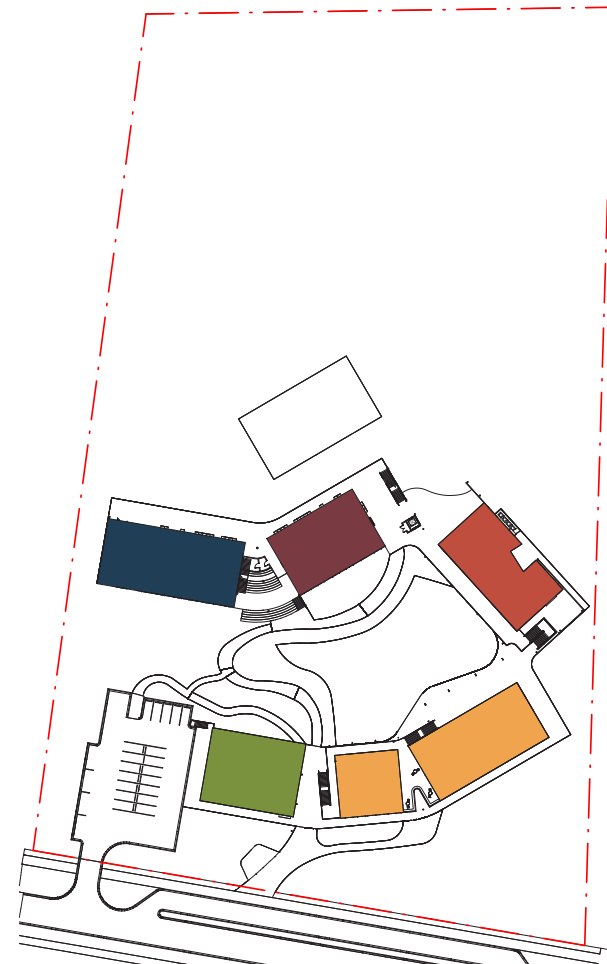
Legend

	Block A - Administration
	Block B - Community
	Block C - Hall
	Block D - Library
	Block E - Homebase
	Block F - Homebase

Previous Site Plan (Hayball)



Proposed Site Plan (PPA)



OPTION COMPARISON

Site planning has been adapted from the original Hayball design to align with the revised eastern site boundary and to incorporate feedback provided by the NSW Government Architect Design Review Panel. The narrower site width required the car park to be re-orientated and the buildings to be re-positioned. In addition, 3 x Home Base clusters have been consolidated into 4 x Home Base clusters organised around a central practical activity area allowing the removal of 'Block G'. The new arrangement improves circulation including the more central location of vertical transportation for equitable access and has been developed and endorsed by the PRG. The Library and Hall buildings have been rationalised based on PRG feedback to improve functionality and flexibility while still retaining the original design intent.

The front setback to Estella Road has been maintained at 20m. Building massing, articulation and the creation of open play courtyards within the interstitial spaces is carried through from the original concept. The northern most portion of the site will remain undeveloped.

6 Built Form

SITE PLANNING

The school enjoys the benefit of a stand of mature eucalyptus trees within the site frontage of Estella Road which are all to be retained in the proposal.

The school has a generous setback from the Estella Road frontage of 20m which is driven by the existing trees. This also provides an opportunity to enhance the visitor entry experience by allowing the landscape to be integrated into the pedestrian pathway and for the indigenous narrative to be established within the school frontage. The school presents as a combination of single and double storey facades to Estella Road.

The school is designed over three distinct levels which step over the land as a series of one and two storey buildings, relating to the landscape levels.

As the buildings weave and step around the site breaks are provided to allow views between or under buildings to the landscape beyond. The Library (Block

D) building becomes the anchor point between the Staff & Community (Block B) areas, and the Learning spaces located at the upper level in Blocks E & F. The Library building with canteen below is a focal point within the campus. This building is also the frontage that will be view from the Peter Hastie Oval and will be tied into the established eastern biodiversity planting established by the CSU.

The new school buildings and landscape will occupy approximately 60% of the total school site. The remaining area to the north will be retained as open field with no development. This will connect to the existing biodiversity planting. The various building step up the site linked by clear circulation and vertical transportation to make all school areas accessible.

The school will benefit from, and contribute to, the local community by providing an active integration of the joint and shared use areas of the school with the adjacent

sports precinct and the CSU campus to the north. The Community room and Professional Learning Space (Block B), the Hall (Block C) and library (Block D) are located along the street frontage and eastern pedestrian link to facilitate integration and access with the broader community. The school has two pedestrian access points along the eastern boundary to allow for a direct connection.

The off street staff car parking entry point is located at the most elevated position along the street frontage and positioned to avoid any requirement to remove trees. The layout is designed to allow entry and forward exit to the street for both delivery and waste removal vehicles. The school will be provided with a dedicated Pick Up and Drop Off zone along the full Estella Road frontage separated front the main road by a raised median strip. This arrangement will allow both east and west direction traffic to safely leave the road to allow for peak school hour traffic movements. A separate school bus bay is

proposed to the east of the school along Estella Road. This position will segregate 'parent' vehicles from both public and school bus routes. A pedestrian crossing is proposed on Estella Road to facilitate pedestrian access to residential development to the south.

The main hydraulic services supply point will be within a landscaped and screened enclosure in the southeast corner of the site adjacent to available street services. The site will be serviced by a standalone electrical substation to be located adjacent the vehicle entry point and in close proximity to the main switch room located in Block A (Administration Building).

Fibre optic connectivity from the street is direct form the provider's Estella Road service, and a secondary direct link is to be established from the school into the CSU via a separate dedicated trench. Rain water will be harvested and stored in the southeastern corner of the siteand reused across the site.

6 Built Form

SITE PLANNING

1. Main Pedestrian Entry
2. Plant area with Screen
3. Substation
4. Waste Store
5. Social Courtyard - Community Assembly and Play
6. Lift
7. Learning Courtyard and Games Court
8. Bicycle Parking
9. Main School Sign
10. Location of Future Digital Sign
11. Carpark
12. Underground Rainwater Storage



6 Built Form

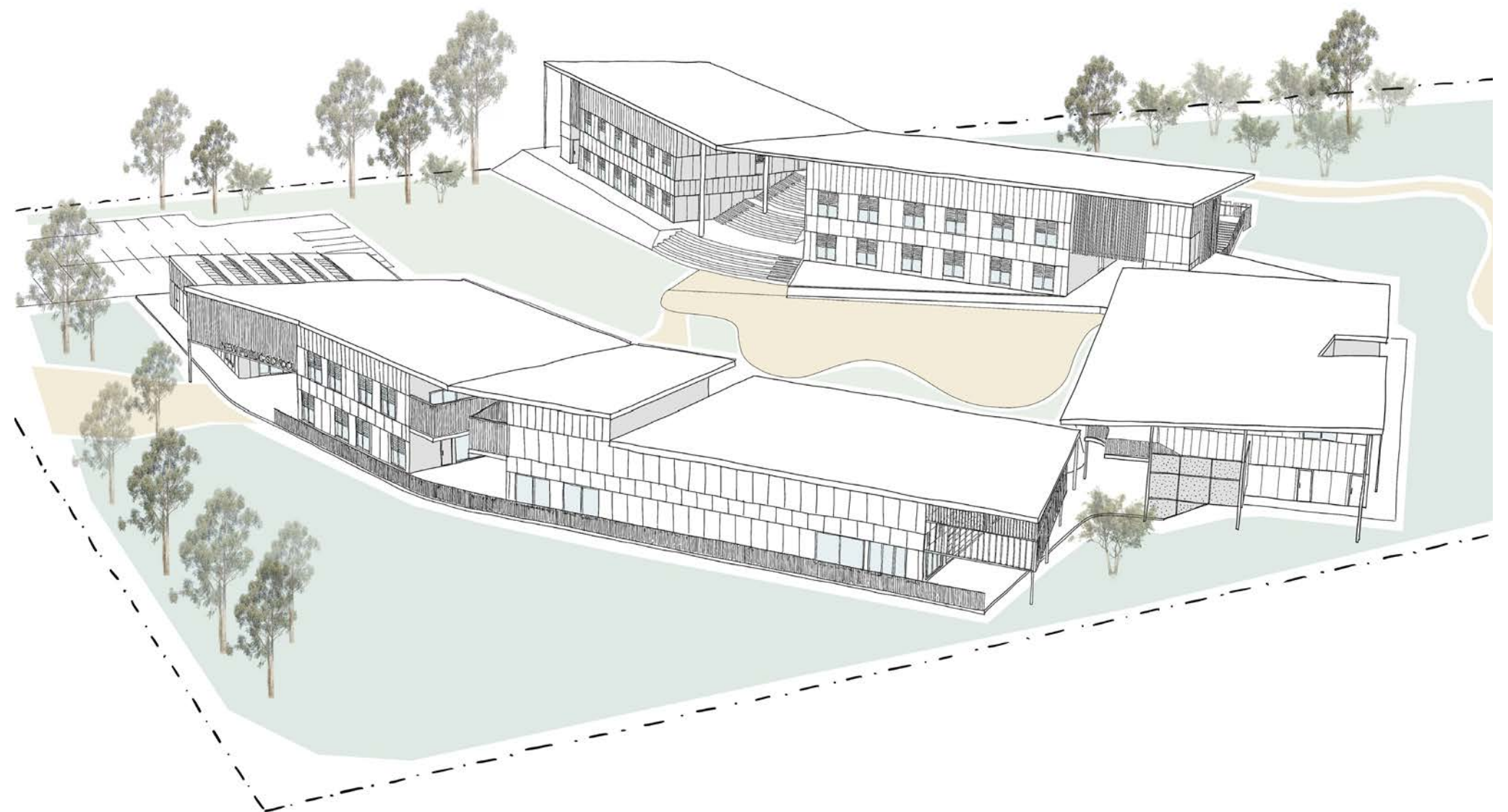
3D MASSING

The site has a cross fall of approximately 1:16. To reduce visual bulk and to achieve on grade access points the buildings step up the site towards the north.

The school is designed over three distinct levels which step over the land as a series of one and two storey buildings, relating to the landscape levels. Roof forms are simple skillions that extend to create internal covered outdoor areas. The consistent external cladding theme and external screen elements tie each building to the next. Gaps between buildings provide visual connection between the main school courtyard areas and wider context beyond.

Elevated walkways and generous verandas will provide summer shading to the northern facades and are extended to provide weather protection over main open circulation stairways.

The hall and adjacent community rooms will have joint and shared use opportunities with the local community and are located at the accessible perimeter of the site. The main school entry on Estella Road is well defined by the landscape treatment and by an extended entry canopy roof form with an external screen.



6 Built Form

MATERIALS AND FINISHES

The concept for the materials is to provide robust, low maintenance materials. The colours are based on a neutral palette with selected highlight accent materials and colours.

The materials and finishes are designed to work with the landscape and wayfinding to create a coherent language that will define the school and can be used to form the basis of the school branding and identity.

Refer elevation Architectural Drawing 00_401 for location of external finishes.

1. Wall Cladding (CFC1)

2. Wall Cladding (CFC2)

3. Screen (SCR1)

4. Roofing (MR)

5. Accent Colour 'Green' (ACC1)

6. Concrete (CON)

7. Perforated Metal Screen (PMS)

8. Balustrade (BAL01)

9. Accent Colour 'Orange' (ACC2)

10. External Door & Windows Frames Powdercoat

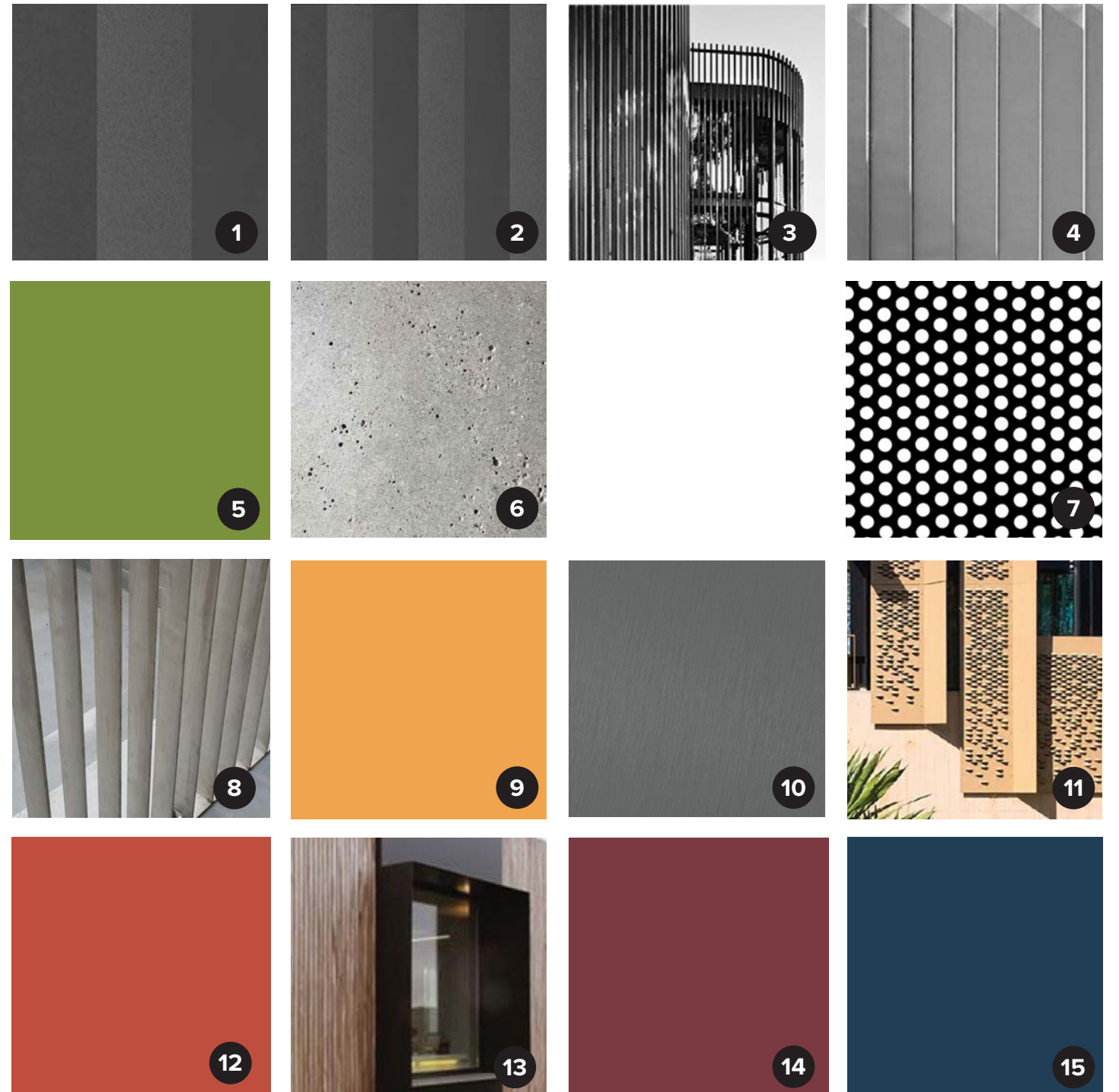
11. Balustrade (BAL02)

12. Accent Colour 'Burnt Orange' (ACC3)

13. Window Surround

14. Accent Colour 'Crimson' (ACC4)

15. Accent Colour 'Blue' (ACC5)



6 Built Form

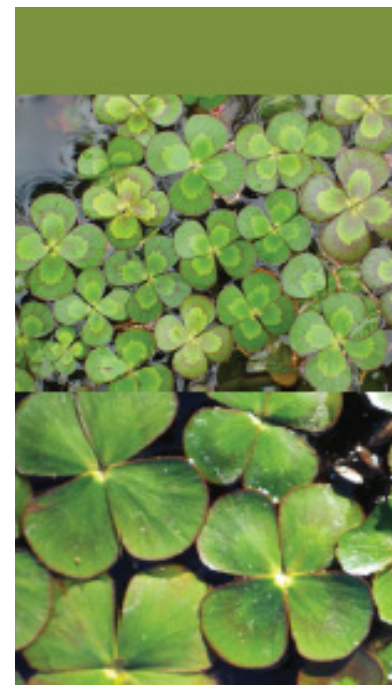
WAYFINDING

Indigenous Heritage Narrative: Wayfinding Strategy

Colour wayfinding defining the identity of each building on the site.

- Wayfinding Block Signage
- Internal colour schemes including finishes / furniture

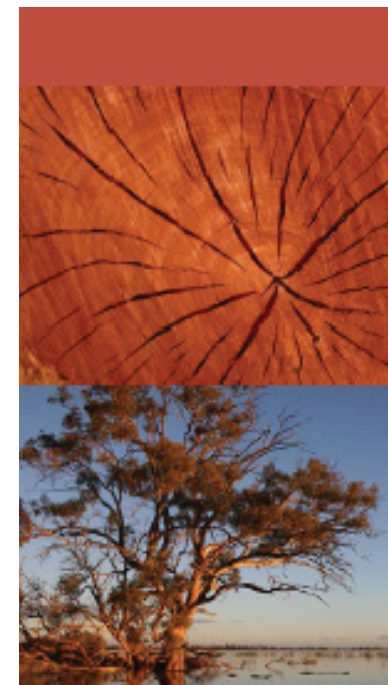
Details based on Hayball Design



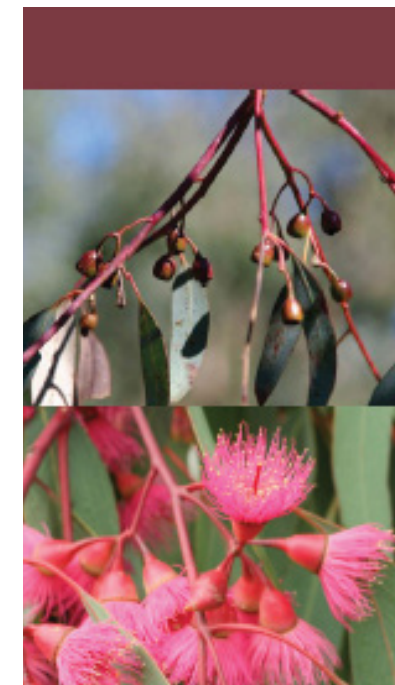
BLOCK A : ADMINISTRATION
'NAGAADHA' (NARDOO)



BLOCK B & C : HALL + COMMUNITY
'BERRE' (SILVER BANKSIA)



BLOCK D : LIBRARY
'BINYAL' (RIVER REDGUM)



BLOCK E : LEARNING CLUSTER
'MAGGA' (IRONBARK)



BLOCK F : LEARNING CLUSTER
'NIDBUL' (NATIVE FLAX LILY)

ENTRY SIGNAGE

THE STRATEGIES ARE DRAWN IN RESPONSE TO THE SITE NARRATIVE, SITE CONDITIONS AND CONTEMPORARY WAYFINDING PRINCIPLES

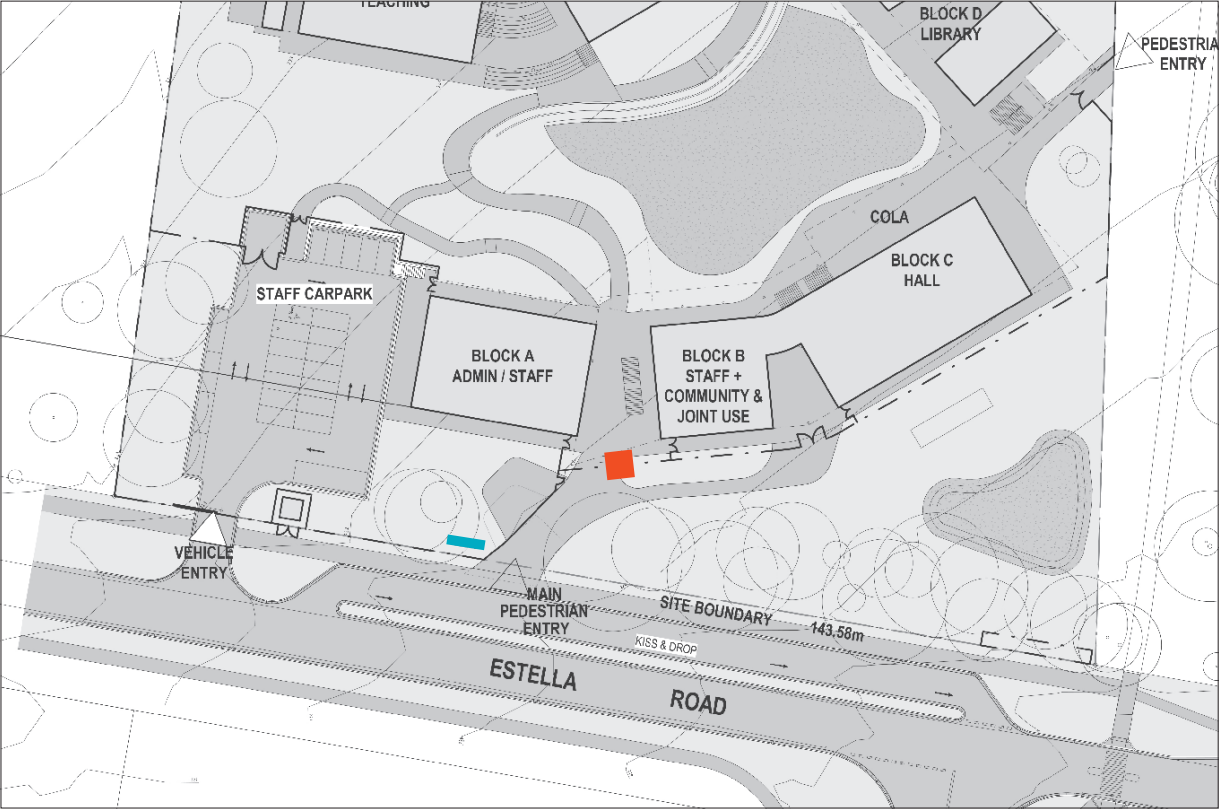


Note: the school name shown in signage to the facade to be determined and advised by the school.



1.0 SIGN ELEVATION: ENTRY FACADE SIGNAGE

The facade entry signage is a contemporary sign form aligned with the progressive learning environment reflected in the architecture of the school form and interiors and provides a restrained, high-level branding for the school site. The lettering fabrication is proposed in 30mm acrylic painted in durable weather proof paint finish. The dimensioned letterforms are proposed to be fixed directly to the vertical facade detailing or where required mounted to two concealed horizontal rails. The aqua blue colour for the lettering references the meandering water course that forms the basis for the site narrative and provides an important links to the indigenous heritage. In addition to this it provides contrast with the earthy colours drawn from the landscape to be utilised throughout the site.



1.1 SITE PLAN: SIGN LOCATION

Red square: Entry sign located to the school facade. Blue square: Proposed location for digital school sign.

BLOCK A ADMINISTRATION 'NAGAADHA' (<i>Nardoo</i>)	BLOCK B + C: HALL + COMMUNITY 'BERRE' (<i>Silver Banksia</i>)	BLOCK D: LIBRARY 'BINYAL' (<i>River Red Gum</i>)	BLOCK E: LEARNING CLUSTER 'MAGGA' (<i>Ironbark</i>)	BLOCK F: LEARNING CLUSTER 'NIDBUL' (<i>Native Flax Lilly</i>)

1.2 WAYFINDING COLOUR SCHEME

The suite of colours proposed for the school site have drawn inspiration from the local landscape and indigenous heritage providing important contextual links to the environment and building a stronger sense of place. The colours may be used to brand each building within the complex and to be carried through to the interior schemes and with the potential for building names to be drawn from native flora associated with the colours. The wayfinding scheme for the site will also adopt this colour coding where practical and will be applied to directional and identification signage elements throughout the site.

WAGGA WAGGA PUBLIC SCHOOL

Gotham Ultra

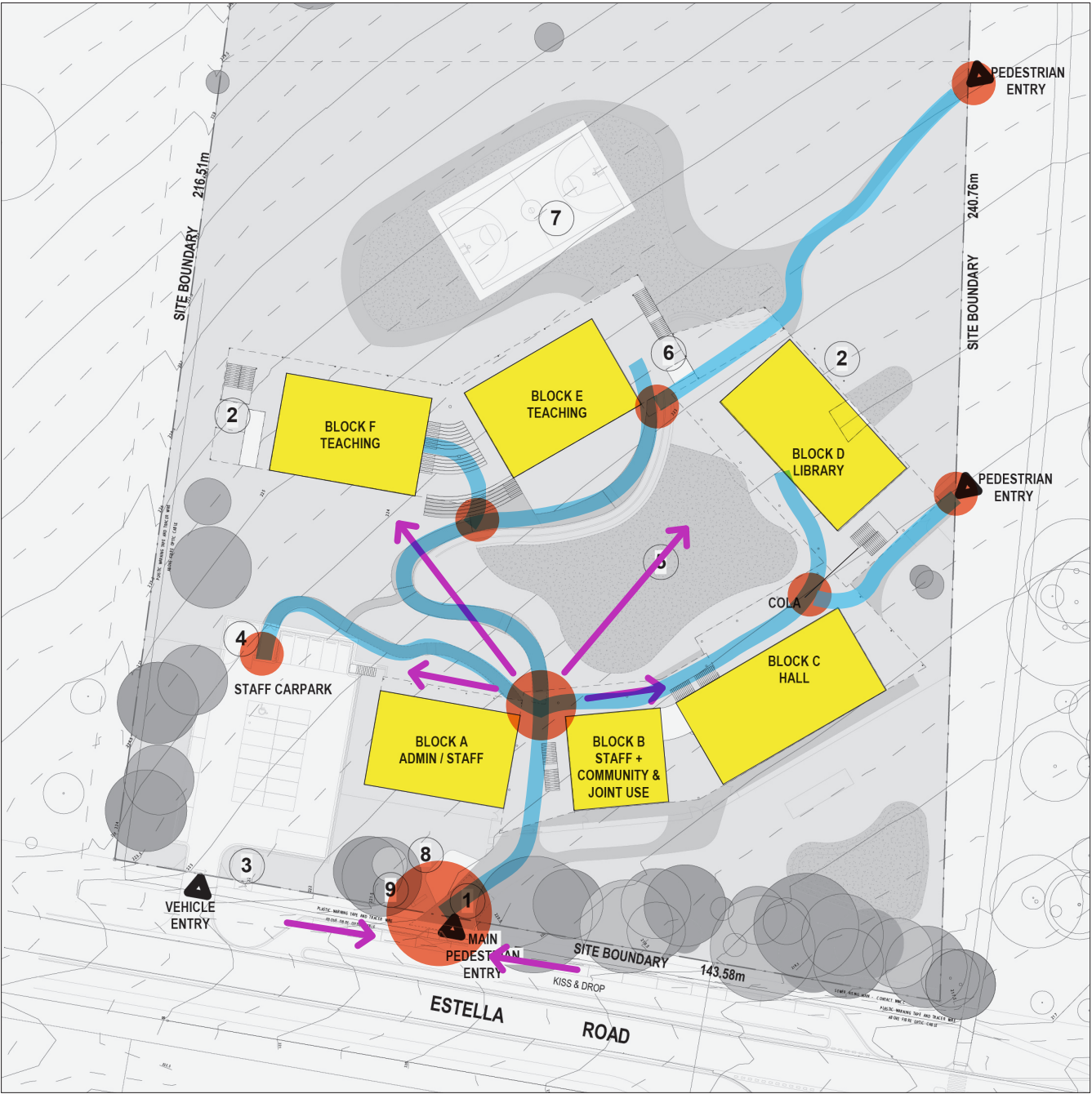
Gotham Medium

1.3 TYPOGRAPHIC NAMESTYLE FOR LETTERING

The namestyle is proposed in the contemporary font Gotham and comprising two weights: Wagga Wagga – set in Gotham Ultra and Public School – set in Gotham Medium

WAGGA WAGGA PUBLIC SCHOOL WAYFINDING AND SIGNAGE
WAYFINDING STRATEGY

THE STRATEGIES ARE DRAWN IN RESPONSE TO THE SITE NARRATIVE, SITE CONDITIONS AND CONTEMPORARY WAYFINDING PRINCIPLES



Note: site plan is indicative only. Final locations to be confirmed with resolved site plans.

1.0 SITE ANALYSIS: Circulation and nodal points

The above diagram identifies **Circulation Pathways**: tracing the movement of users throughout the site, **Nodal points**: highlighting the intersection of circulation pathways and therefore the location of signage forms and according to the scale of the nodal point and the level of information required, **Primary destinations**: which forms the basis for navigation throughout the site and **Primary site lines**: which influences the location of Type 2 Block signage and Entry signage. These four factors will guide the location and development of a signage system.

	Circulation pathways
	Nodal points: Primary / Secondary / Tertiary
	Primary destinations
	Primary site lines

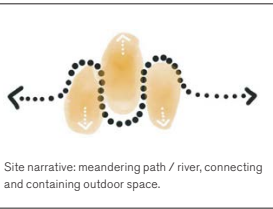
TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 5	TYPE 6	TYPE 7	TYPE 8
ENTRY BOLLARD	BLOCK SIGNAGE	DIRECTIONAL PLINTH	DIRECTIONAL BOLLARD	DOOR SIGNAGE	FLOOR NUMBERS	SUPER GRAPHICS	IDENTIFICATION SIGNAGE
IDENTIFICATION	IDENTIFICATION	DIRECTIONAL	DIRECTIONAL	IDENTIFICATION	IDENTIFICATION	ARTWORK	IDENTIFICATION
Supports the clear identification and branding of the school at main entry visible on both approaches to the entry.	Supports the clear identification and branding of school blocks visible from the central grounds within the school.	Ensures provision of high level information supporting navigation to and from primary destinations within the site.	Ensures provision of detailed information supporting navigation to and from secondary destinations within the site if required.	Signage system that supports the clear identification of classrooms detailing the floor level and room number.	Signage system that supports the clear identification of floor levels in each building adjacent to vertical circulation.	Graphics may be considered that draw upon the site narrative of a meandering river and contribute broadly to the site aesthetics, amenity and specifically to learning and placemaking.	Signage system that supports the clear identification of destinations throughout the site.
3650mm x 300mm x 300mm	1200mm x 600mm x 50mm	2000mm x 400mm x 50mm	1600mm x 150mm x 150mm	300mm x 150mm	2000mm x 600mm	2700mm x 8000mm	200mm letter height
4 x sided sign form with graphics to each face. Welded 15mm mild steel sign faces front, back and top, paint finished. Sides as 4mm aluminium sheet fixed to 100mm SHS galvanized frame carrying graphics panel full height. Dimensioned lettering to sign face from 10mm acrylic, 2 pack paint finished. Engineering and footing details to be resolved.	1 x sided sign form with graphics to face that may wrap around the corner of a building. Sign face as 3mm aluminium sheet finished with durable, high build external paint, concealed fixed to 50mm SHS galvanized frame. Dimensioned lettering to sign face finished with durable, high build external paint.	2 x sided sign form with graphics to front and reverse faces. Sign face as 3mm aluminium sheet, finished with durable, high build external paint, concealed fixed to internal 50mm SHS galvanized frame. Graphics to sign face with clear protective coating over to seal. Engineering and footing details to be resolved.	Square, 2 x sided sign form with graphics to front and reverse faces. Bollard is standard SHS post finished with durable, high build external paint. Graphics to sign face with clear protective coating over to seal. Engineering and footing details to be resolved.	1 x sided sign form with graphics to front face only. Sign face as 4mm aluminium sheet, finished with durable, high build external paint. Sign form chemically fixed to wall or glazed surface. Graphics to sign face with clear protective coating over to seal.	1 x sided sign form with graphics to front face only. Sign face as 6mm aluminium sheet, finished with durable, high build external paint. Base plate mechanically fixed to wall surface with sign face chemically fixed to base plate.	Graphic to be digitally printed die sublimation to synthetic wallpaper product such as 3M. Require drops in 1200 or 1500mm width to full heights of walls. Require means to conceal ends of graphics to avoid lifting or picking.	1 x sided sign form. Dimensioned lettering from 10mm acrylic, finished with durable, high build external paint, chemically fixed to wall or glazed substrate.

1.1 SIGNAGE REQUIREMENTS AND SPECIFICATION: SCALE 1:20

1.2 THE WAYFINDING STRATEGY

PRIMARY OBJECTIVES: The primary objective for the wayfinding is to facilitate the autonomous navigation and movement throughout the site of a range of users supporting a positive visitor experience.

USER GROUPS: The signage will support a range of user groups comprising students, parents, staff and broader community. It is expected that the requirements will be higher for first time visitors to the site and as familiarity increases with subsequent visits the dependence upon information and signage will decrease.



characterised by: 1. transitions between spaces and zones: ie public/school & internal/ external, 2. transition between transport modes: ie vehicular/pedestrian, and 3. at the

CIRCULATION AND NODAL POINTS: A range of circulation pathways are evident within the site typically tracing the movements from a number of entries to a range of key destinations. As the school site contains no through vehicular access the signage will preference pedestrian movement and, where relevant, guide visitors through the site from designated car parks. A high reliance on directional information (to/from destinations) is typical at circulation nodal points which are

intersection of circulation pathways. To support good site navigation a range of signage is required that accommodates a range of varying types and scale of information providing clear identification of destinations throughout the site and the movement between them. Primary site lines are noted in the heart of the school grounds and main entry that will guide location of entry signage and situation of high level block signage.

INTEGRATED SIGNAGE SUITE: A draft, functional signage suite is detailed above that responds broadly to the site narrative and to the specific site conditions. The suite consists of a set of scaled forms, categorised as either directional or identification, that respond to the identification and navigation to and from a range of primary and secondary destinations.

MATERIALS, AESTHETICS AND FORM: Whilst the design of signage satisfies primarily functional requirements and will preference the autonomous navigation of visitors throughout the site, it is important also that the signage respond to the architectural, material and spatial scale and consider this in its design, materiality and construction. The signage will importantly contribute to the sense of place and strengthen the site narrative.

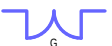
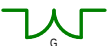
BRAND AND SIGNAGE: A secondary though important function of a signage system is to appropriately brand the site. At a basic level this means the clear representation of the school brand but also to reflect the aspirations, character and positioning of the school through its design. This will be further developed with user groups.

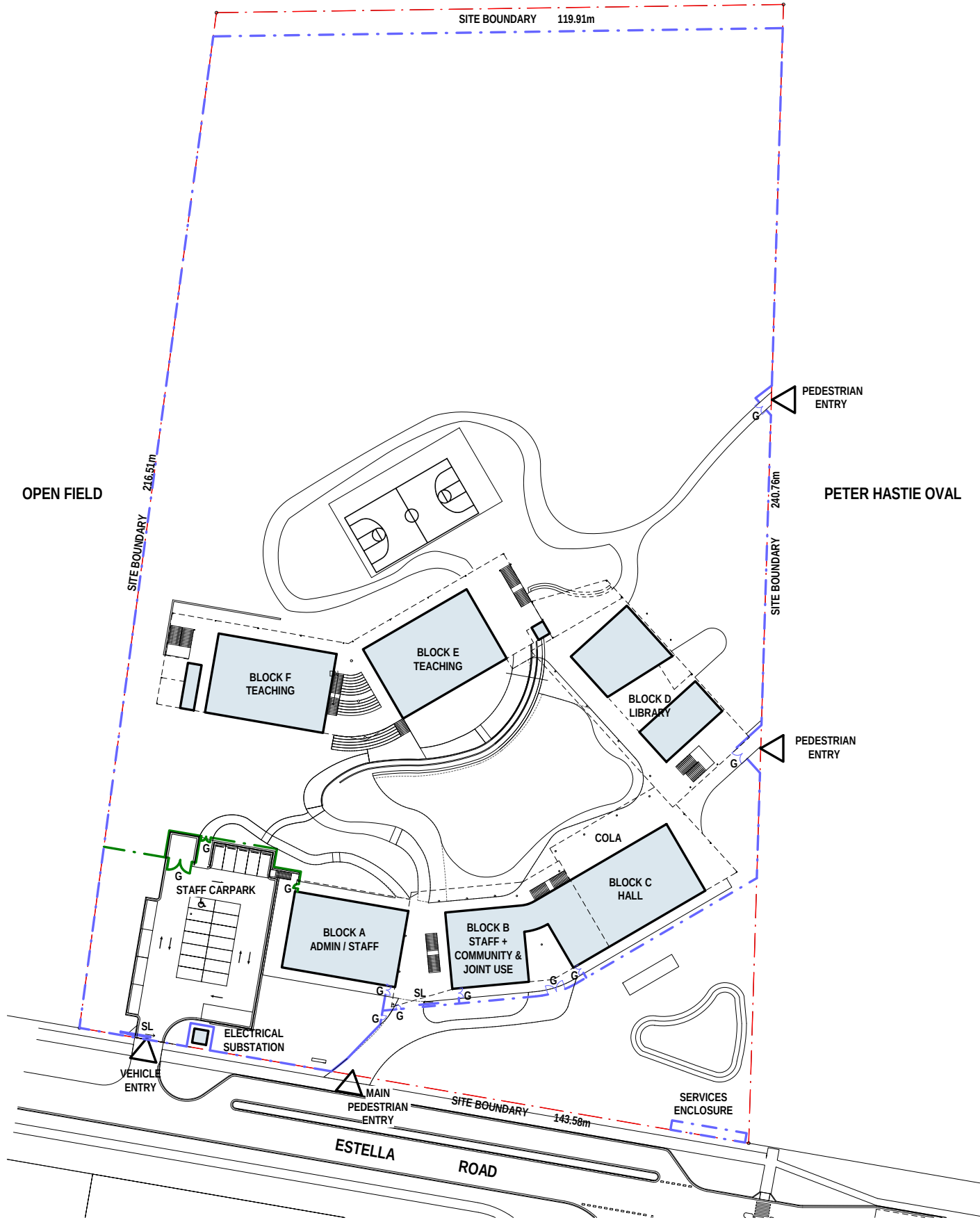
6 Built Form

FENCING PLAN

The school site will have a perimeter fence as required by SSU. The front fencing is set back from the boundary at the main entry to ensure a landscaped presentation to the street. Multiple entry points facilitate students, staffs and community pedestrian movement across the site.

LEGEND

-  SITE BOUNDARY
-  PROPOSED FENCE 2.1m HIGH
-  PROPOSED FENCE 1.2m HIGH
-  PROPOSED 2.1m SWING GATE PEDESTRIAN ENTRY
-  PROPOSED 1.2m SWING GATE PEDESTRIAN ENTRY
-  PROPOSED 2.1m SLIDING GATE



7 Visualisations & Streetscape

3D VISUALISATION: ESTELLA ROAD



SOUTH ELEVATION: MAIN ENTRY VIEW

7 Visualisations & Streetscape

3D VISUALISATION: ESTELLA ROAD



SOUTHEAST CORNER ELEVATION: BLOCK C & D

7 Visualisations & Streetscape

STREETSCAPE ELEVATION: ESTELLA ROAD



8 Design Verification

DESIGN QUALITY PRINCIPLES

Below are PPA's responses to the Design Quality Principles of State Environmental Planning Policy (Educational Establishments and Child Care Facilities (2017) and the Government Architect NSW Design Guide for Schools.

The response to these principles is adapted from Hayball's original design response.

CONTEXT, BUILT FORM & LANDSCAPE

Schools should be designed to respond to and enhance the positive qualities of their setting, landscape and heritage. The design and spatial organisation of buildings and the spaces between them should be informed by site conditions such as topography, orientation and climate. Landscape should be integrated into the design of school developments to enhance on-site amenity, contribute to the streetscape and mitigate negative impacts on neighbouring sites.

Wagga Wagga is a regional city straddling the Murrumbidgee River, the second longest river in Australia. The flows of the Murrumbidgee and the history of the Wagga Wagga area are inextricably linked. It was considered entirely appropriate to borrow the form of the Murrumbidgee River as a site ordering device, but also reflect on its significance as a source sustenance. As Kath Bowmer, chairperson of the Murrumbidgee River Management Committee has said, "a river is a reflection of its catchment". In this way, the school is also a reflection of its catchment, its community.

There is no significant built context for the school, as the site is surrounded predominantly by open space. Residences to the south are discretely hidden behind verge planting. However, the new built environment respects the medium and low density scale and form of the wider neighbourhood, with single and double-storey forms. The school incorporates a simple language of monopitched buildings, with dark-coloured light weight cladding that is intentionally recessive, and secondary to the overall design analogy [the meandering river] and the site's landscaping.

The site's existing mature trees are retained. Additional landscaping will reinforce the native plantings, but also intentionally injects elements of play and structured outdoor learning, which will contribute positively to the precinct as an educational and recreational hub. Refer to Section 2 [Context and Site Analysis], Section 4 [Design Principles] and Section 6 [Built Form] of this report for further information.

SUSTAINABLE, EFFICIENT & DURABLE

Good design combines positive environmental, social and economic outcomes. Schools and school buildings should be designed to minimise the consumption of energy, water and natural resources and reduce waste and encourage recycling. Schools should be designed to be durable, resilient and adaptable, enabling them to evolve over time to meet future requirements.

The new school is designed with regard to the principles of environmentally sustainable development. The building orientation, sun shading and passive thermal design elements are the first step to creating a sustainable building. This is further enhanced by the inclusion of a rainwater tank to be used for irrigation and toilet flushing, solar power and the selection of long lasting, low maintenance materials. The structural system for the buildings is a mixture of concrete frame and steel framing. The benefit of these systems is that the internal walls are non-loading bearing allowing for reconfiguration in the future if deemed necessary.

Together with Steensen Varming, the buildings have been optimised to facilitate good daylighting and natural ventilation. The ESD report that forms part of this submission outlines these ideas in more detail including energy conservation, water conservation and other sustainability initiatives.

ACCESSIBLE & INCLUSIVE

School buildings and their grounds should provide good wayfinding and be welcoming, accessible and inclusive to people with differing needs and capabilities. Note: Wayfinding refers to information systems that guide people through a physical environment and enhance their understanding and experience of the space. Schools should actively seek opportunities for their facilities to be shared with the community and cater for activities outside of school hours.

Inclusion and accessibility are key issues in the design and functionality of the facility. The site includes a significant cross-fall, but all buildings are physically accessible, through the use of sloping walkways (ground level) and lifts (to levels 1 and 2). Level site access is provided both from Estella Road and the eastern pedestrian pathway.

Community inclusion and permeability is especially showcased in the Community Meeting Rooms, enlarge Hall and Professional Learning Spaces, which are joint-use facilities, shared with CSU and Council.

The whole school creates an environment of integration and porosity, and will encourage community use of school facilities outside of school hours. The adjacent sports and recreation precinct, and CSU facilities, will also be available for school shared use by arrangement, creating an educational and recreational precinct where traditional boundaries are blurred.

A comprehensive wayfinding strategy is proposed, with colour utilised to orient the staff, students and visitors.

8 Design Verification

HEALTH AND SAFETY

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

The School design ensures that natural light, ventilation & acoustics are used to create healthy and safe learning and teaching environments. Following DoE guidelines, a security plan has been designed to maintain a safe school with secure fencing, pedestrian and vehicular gates and electronic devices. Setbacks at the front will create a welcoming school entry, with large gates to the south and east allowing for controlled access points. The School boundaries provide a visually porous perimeter that will allow for views into and out of the school, aiding passive surveillance. The design allows for good teacher supervision and the elimination of blind spots.

CPEED and external lighting strategies provide additional safety outlined in this report under section 4 - Design Principles CPTED.

AMENITY

Schools should provide pleasant and engaging spaces that are accessible for a wide range of educational, informal and community activities, while also considering the amenity of adjacent development and the local neighbourhood. Schools should include appropriate, efficient, stage and age appropriate indoor and outdoor learning and play spaces, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage and service areas.

The layout of school campus is designed around the principles developed through workshops with the Project Reference Group (PRG), building on the design work undertaken by the previous project team. The school environment has been designed to provide a range of pleasant and engaging spaces, both internally and externally, which will be available for learning, social and collaborative activities and play. These spaces will also be available to the school and the wider community, through joint and shared use. Consideration has been given to orienting spaces for appropriate solar gain, both internal spaces and external courtyards. It is recognised that Wagga has both extremes of temperatures, and both solar inclusion and exclusion [shading devices, screening, shade structures and trees] have been considered. Additionally, large areas of covered outdoor learning have been provided to enable outdoor learning opportunities and recreational use. Additionally, during the workshopping process, large hard paved areas were requested, to accommodate external access, learning and play to occur during periods of wet weather or frost events. These paved spaces include substantial tree canopy to aid with shading in summer.

Refer to specific consultant reports in relation to Landscape, ESD, Acoustic and Waste-related amenity issues.

WHOLE OF LIFE, FLEXIBLE & ADAPTIVE

School design should consider future needs and take a whole-of-life-cycle approach underpinned by site wide strategic and spatial planning. Good design for schools should deliver high environmental performance, ease of adaptation and maximise multi-use facilities.

The site massing applies the design and sustainability principles described throughout this report. The planning for the school on the site has taken into consideration future expansion requirements.

The school is being constructed as a Core 21 school (which caters for up to 720 students), although the initial provision in this proposal will be for only 16 home bases (up to 480 students). In this way, the core facilities such as the administration, staff area, hall, library and parking will cater for future growth.

Additionally, the master planning of the site has considered the placement of the possible future 8 home bases, such that their location is considered in the overall scheme. The design of the Learning Clusters is purposefully flexible, allowing for a variety of teaching and learning styles to occur within any given day with minimal set-up.

The school is designed to be adaptable and flexible, for both school and community use. All spaces within the school are considered appropriate for either joint or shared use. Construction of buildings will incorporate long lasting, low maintenance materials to ensure its use stand up to the impacts associated with school buildings, and framed structure that allows the internal walls to be reconfigured in the future.

AESTHETICS

School buildings and their landscape setting should be aesthetically pleasing by achieving a built form that has good proportions and a balanced composition of elements. Schools should respond to positive elements from the site and surrounding neighbourhood and have a positive impact on the quality and character of a neighbourhood. The built form should respond to the existing or desired future context, particularly, positive elements from the site and surrounding neighbourhood, and have a positive impact on the quality and sense of identity of the neighbourhood.

The new school presents to Estella Road as a combination of single storey and double storey buildings, set back approximately 20 metres from the boundary. This setback enables the existing mature Yellow Box trees to be retained along the front boundary, and subsequently allows for an engaging and welcoming front entry court. A raised roof and latticework of battens greets the visitor at the entry, drawing them into the school. This aesthetic continues throughout the school. The buildings are dark-coloured and deliberately recessive to the landscape and the ‘river narrative’ experience. They are also reminiscent of the charred remains of trees after a regenerative fire, as a reference to Wiradjuri practice with accent colours for each block (A to F) based on the site narrative and wayfinding strategy. Screening and shading devices add a feathered edge, crafted detail and fine grain texture to the buildings.

The river walkway is the focus of the design, with colour representative of river-side vegetation [or regeneration after a fire], and a textural pattern that is derived from the river itself. The landscape design allows for maximum retention of existing landscape elements to be aesthetically pleasing, and to blend with the site surrounds. The landscaping is intentionally a mix of natural elements [encouraging nature play], constructed play and outdoor learning and recreational elements.

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