

New Public School in Wagga Wagga



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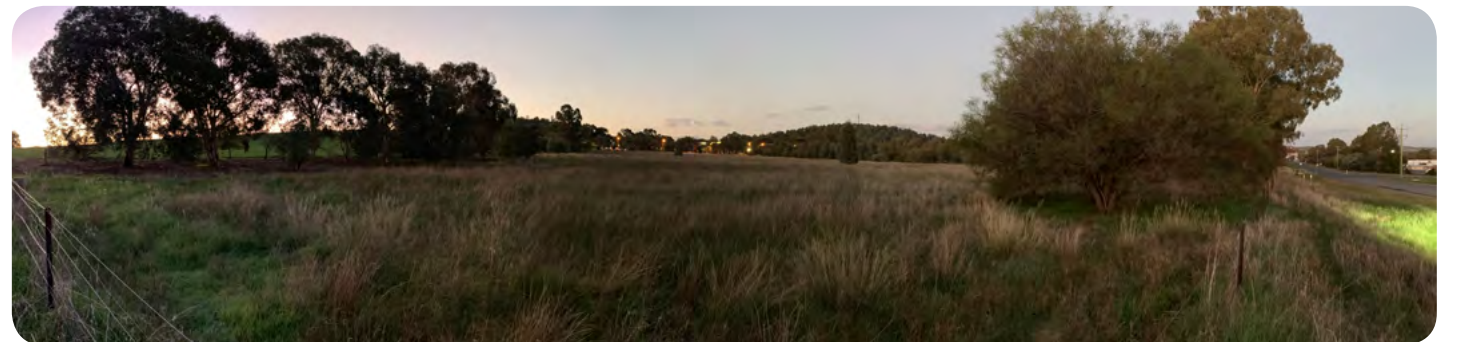
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1.0 Introduction

1.1 GENERAL

The Cultural Narrative in Design report by Michael Mossman (16.11.2018) noted “As we share our systems of knowing, being and doing may we also pay respect to the knowledge embedded forever within the aboriginal custodianship of country”

The Wagga Wagga School site is located within the Wiradjuri nation area- the largest nation in New South Wales. The Cultural Narrative in Design report has been utilised to inform the landscape design narrative as follows:

- Language

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

** Welcoming signage upon arrival and the use of signage to describe local vegetation in Wiradjuri language. Art installations in wiradjuri language.*

- Land

Land of the three rivers - marrambidya (murrumbidgee), kalari (lachlan) and wombool (macquarie) as part of a massive water system in a huge dry land, marrambidya (murrumbidgee river) was and remains a powerful source of life.

**The connecting marrambidya pathway runs through the school landscape, following the contours of the site and tying the various education spaces together.*

- Time

Unlike western concept of linear and measured time, wiradjuri time is circular and without boundaries, there is no singular time. Yindyamarra is a word that is often translated as respect, however, it has multiple meanings including to give respect, go slow, and take responsibility.

**The inclusion of a Yindyamarra space for gatherings, surrounded by local plant species as seasonal indicators.*

- Totems

Gugabul the Murray Cod is Australia’s largest freshwater fish, and an important food source for the Wiradjuri people. Lives & survives in shadows in a fixed local waterway habitat, under a log or rock formation.

** the connecting marrambidya pathway presents the life story of the Gugabul. Differences in textures to the marrambidya pathway create changing sensory experiences that adds Gugabul layer of information.*

- Flora

The Wiradjuri gathered plant species and parts for food, fibre (weaving, string), medicine, shelter, tools and implements (coolamons and weapons), artwork, toys and water supply.

**outdoor classrooms to facilitate education of native plant use and fresh bush food. Outdoor spaces to gather and yarn and produce new knowledge.*

Connection to People & Place

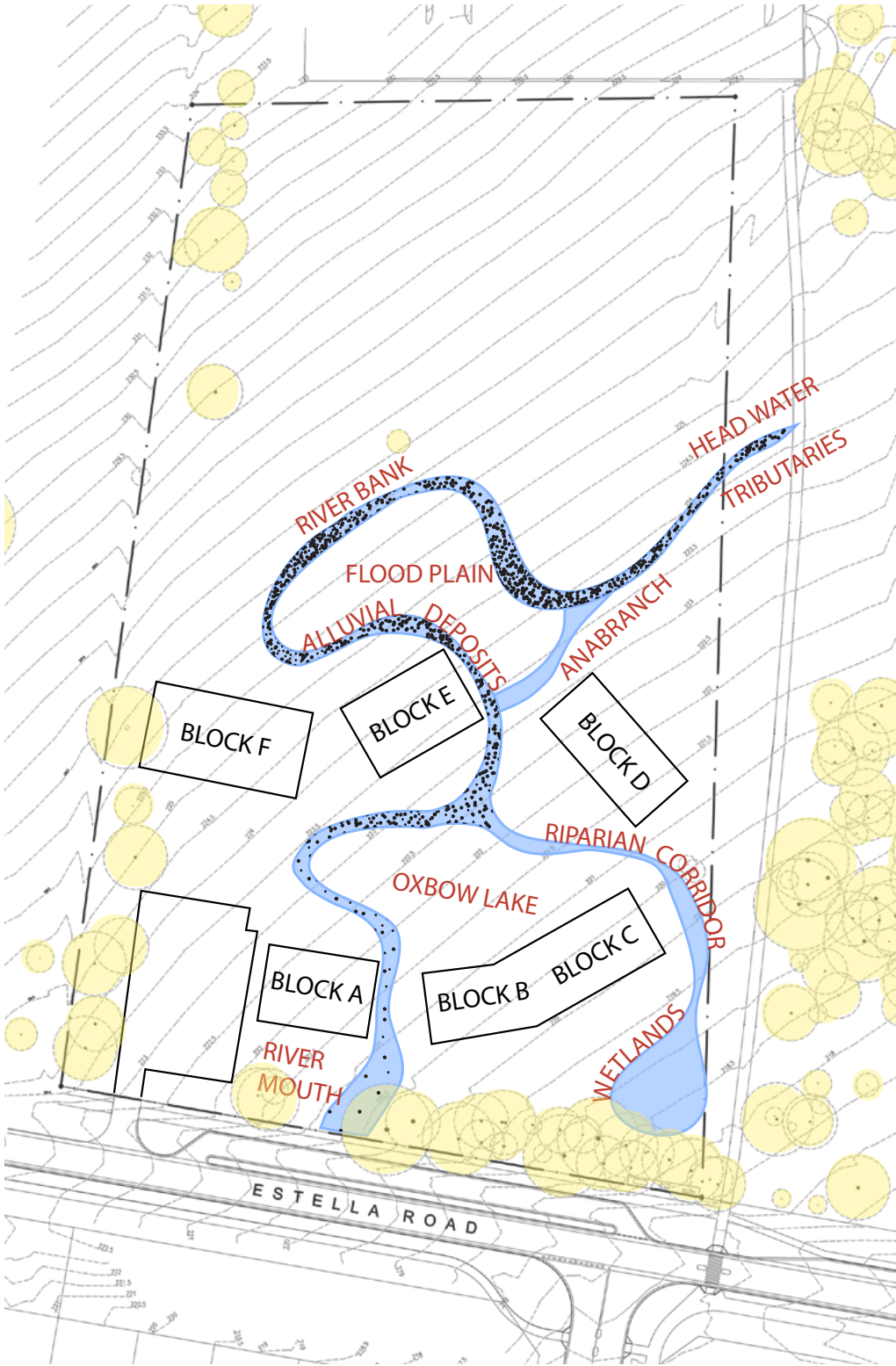
Wiradjuri nation land of the three rivers – marrambidya (murrumbidgee), kalari (lachlan) and wombool (macquarie) In local wiradjuri language, marrambidya means ‘big water’ or ‘plenty water’.



1.2 DESIGN APPROACH

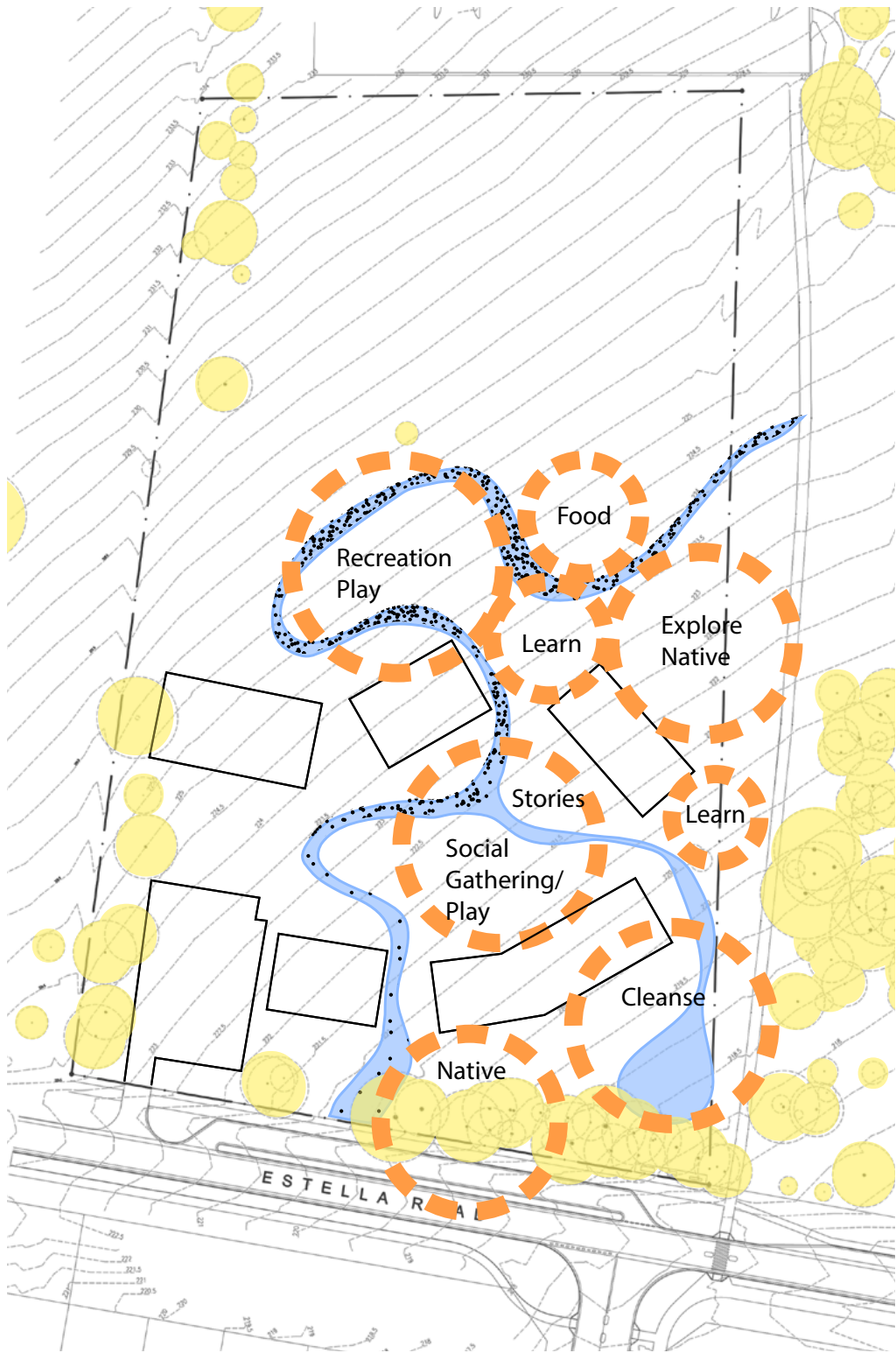
Masterplanning Narrative

Marrambidya River - The meandering path. 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. Presentation of the life story of the Munyag (Murray Cod).



Landscape Narrative

The river brings together cultures for survival and celebration. The landscape spaces flow around, and congregate at the 'river bends' creating spaces for recreation, play, learning and gathering.

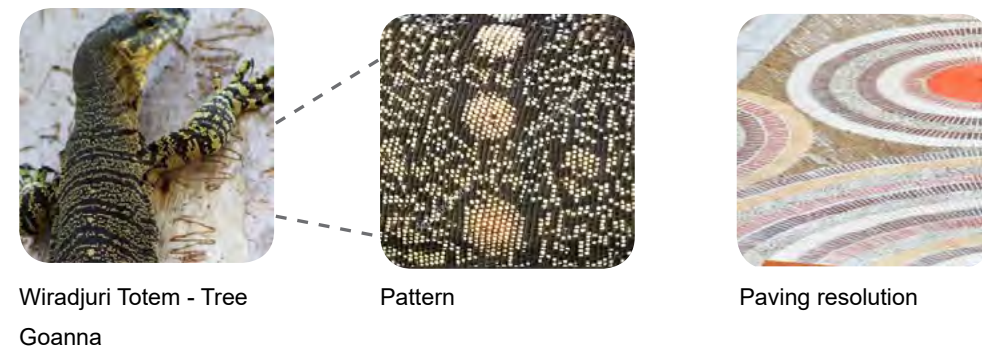


2.0 Design Principles

2.1 WIRADJURI INTERPRETATION



SCHOOL ENTRY AND COURTYARD



2.2 MURRIMBIDGEE RIVER COLOUR PALETTE



3.0 Landscape Master Plan

3.1 DESIGN LAYERS

The master plan for the Wagga Wagga Public School has evolved through extensive research into the needs of the school community and respecting the aboriginal custodianship of country.

The diagram adjacent represents visually the process of design that had evolved into the master plan.

Considerations of the existing site, the school buildings, Wiradjuri influence of forms, learning, play and planting are compiled as layers to create an outcome that respects the exchange between Wiradjuri and European cultures.



EXISTING VEGETATION & TOPOGRAPHY



CAR PARK & BUILDINGS



MURRUMBIDGEE RIVER (*Marrambidya*)



LEARNING



PLAY



OPEN GRASS



NATIVE UNDERSTOREY PLANTING



TREE PLANTING

3.2 MASTER PLAN

- 1 Existing grove of Eucalypts retained to enhance indigenous planting character of school.
- 2 Main pedestrian entry, bicycle parking, and start of the river path and Wiradjuri interpretive paving.
- 3 Public access to hall independent of school access.
- 4 Assembly, play, learning courtyard-The heart of the School.
- 5 Pedestrian access from carpark to school administration.
- 6 Car park sited to retain existing trees.
- 7 River path provides 1 in 20 link joining the bottom and top of the school. Surface finish to interpret Wiradjuri fish totem Murray Cod.
- 8 Yindymarra courtyard-a place of contemplation, respect and learning.
- 9 Library learning courtyard-steps provide multiple gathering spaces facing the bush food learning garden.
- 10 Multi-use games court.
- 11 Grassed viewing bank to court.
- 12 Bush food learning garden.
- 13 Nature play amongst existing trees.
- 14 River path connection to CSU campus.
- 15 Existing native planting corridor established by CSU in 2011.
- 16 Existing open grassland retained to north of the school.
- 17 Shelter provides shaded meeting place between active play and bush food learning areas.
- 18 Gravel basin at end of dry creek bed. Planted with macrophytic plants as an educational tool.
- 19 Dry creek bed to capture stormwater overflow from the central courtyard.
- 20 Vehicular entry to the school.
- 21 Existing bitumen access route between Estella Road and C.S.U.
- 22 Existing Peter Hastie Oval provides active recreation opportunity for the school.
- 23 Pedestrian entry point to C.S.U car park.
- 24 Learning spaces opening off ground floor internal teaching spaces.



0 5 10 20 30m

3.3 CROSS SECTIONS



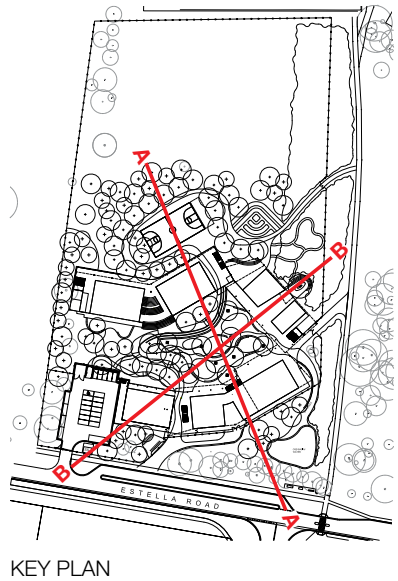
SECTION ELEVATION AA
1:250



SECTION ELEVATION BB
1:250

INDICATIVE PLANT LIST

Symbol	Botanical Name	Common Name (Wiradjuri Name)	Symbol	Botanical Name	Common Name (Wiradjuri Name)	Symbol	Botanical Name	Common Name (Wiradjuri Name)	Symbol	Botanical Name	Common Name (Wiradjuri Name)
	NATIVE TREES			SHRUBS			GRASSES			GROUNDCOVERS/ CLIMBERS	
	<i>Acacia melanoxylon</i>	Blackwood (Mumbil)		<i>Acacia implexa</i>	Hickory Wattle (Gidya)		<i>Bulbine bulbosa</i>	Native Leek (Dirrinan)		<i>Ajuga australis</i>	Australian Bugle
	<i>Acacia pendula</i>	Boree (Buuri)		<i>Adenanthos sericeus</i> 'Silver Streak'	Woolly Bush		<i>Cymbopogon refractus</i>	Barbed Wire Grass		<i>Atriplex semibaccata</i>	Creeping Slatbush (Barrinan)
	<i>Brachychiton populneus</i>	Kurrajong (Yama)		<i>Acacia trineura</i>	Green Wattle (Yulumbang)		<i>Dianella revoluta</i>	Spreading Flax Lily (Nidbul)		<i>Brachycome multifida</i>	Cut Leaf Daisy
	<i>Callitris columellaris</i>	White Cypress Pine (Garraa)		<i>Banksia marginata</i> 'Bright'	Silver Banksia		<i>Dichopogon strictus</i>	Chocolate Lily (Dirramaay)		<i>Chryscephalum apiculatum</i>	Yellow Buttons
	<i>Casuarina cristata</i>	Belah		<i>Citrus australasica</i>	Finger Lime		<i>Ficinia nodosa</i>	Knobby Club Rush		<i>Casuarina 'Cousin It'</i>	Prostrate Sheoak
	<i>Eucalyptus albens</i>	White Box (Birri)		<i>Callistemon brachyandrus</i>	Prickly Bottlebrush (Galgang)		<i>Lomandra filiformis</i>	Wattle Matt-Rush (Dirramay)		<i>Carpobrotus glaucescens</i>	Pig Face
	<i>Eucalyptus blakelyi</i>	Blakely's red gum		<i>Eremophila longifolia</i>	Emu Bush (Birrigan)		<i>Lomandra longifolia</i>	Matt Rush		<i>Grevillea lanigera</i> 'Mt Tamboritha'	Woolly Grevillea
	<i>Eucalyptus camaldulensis</i>	River Red Gum (Binyal)		<i>Enchylaena tomentosa</i>	Ruby Saltbush (Barrinan)		<i>Phragmites australis</i>	Common Reed (Dyirill)		<i>Hibbertia scandens</i>	Guinea Flower
	<i>Exocarpos cupressiformis</i>	Native Cherry (Ballot)		<i>Grevillea rosmarinifolia</i>	Rosemary Grevillea		<i>Poa labillardieri</i>	Common Tussock-grass		<i>Hardenbergia violacea</i>	Happy Wanderer (Ngawang)
	<i>Eucalyptus melliodora</i>	Yellow Box (Baagang)		<i>Grevillea wilkinsonii</i>	Turnut Grevillea		<i>Poa sieberiana</i>	Grey Tussock Grass		<i>Microseris lanceolata</i>	Native Yam (Bading)
	<i>Eucalyptus cinerea</i>	Argyle Apple (Gundghay)		<i>Leucophyta brownii</i>	Cushion Bush		<i>Themeda triandra</i>	Kangaroo Grass		<i>Mentha satruoides</i>	Native Mint
	<i>Eucalyptus microcarpa</i>	Grey Box (Birribee)		<i>Leucopogon fletcheri</i>	Australian Heath		<i>Typha domingensis</i>	Bull Rush (Cumbing)		<i>Rosmarinus officinalis prostratus</i>	Rosemary
	<i>Eucalyptus sideroxylon</i>	Mugga Ironbark (Magaa)		<i>Leptospermum scoparium</i>	Tea Tree (Bimbun)		<i>Xanthorrhoea glauca</i>	Grass Tree (Binda)		<i>Sarcocolla praecox</i>	Pig Face (Biradur)
	<i>Geijera parviflora</i>	Wilga (Wlga)		<i>Muehlenbeckia florulenta</i>	Lignum (Gweergal)						
	<i>Melaleuca lanceolata</i>	Black Paper Bark (Mudah)		<i>Pimelea glauca</i>	Smooth Rice Flower						
	<i>Pittosporum angustifolium</i>	Butterbush		<i>Rhaphiolepis 'Oriental Pearl'</i>	Indian Hawthorn						
	<i>Santalum acuminatum</i>	Quandong (Guwandang)		<i>Rhagodia spinescens</i> 'Silver Border'	Thorny Saltbush (Galgang)						
	DECIDUOUS TREES			<i>Westringia fruticosa</i> 'Smokey'	Coastal Rosemary						
	<i>Fraxinus 'Urbanite'</i>	Urbanite Ash									
	<i>Ulmus parvifolia</i> 'Yarralumla'	Weeping Chinese Elm									



3.4 PLANTING SELECTION

The plant species included for use on the proposed school site have been carefully selected from the local Indigenous Plant Community Type species list for ‘Blakely’s Red Gum and Yellow Box Grassy Woodland of the NSWs south Western Slopes.’

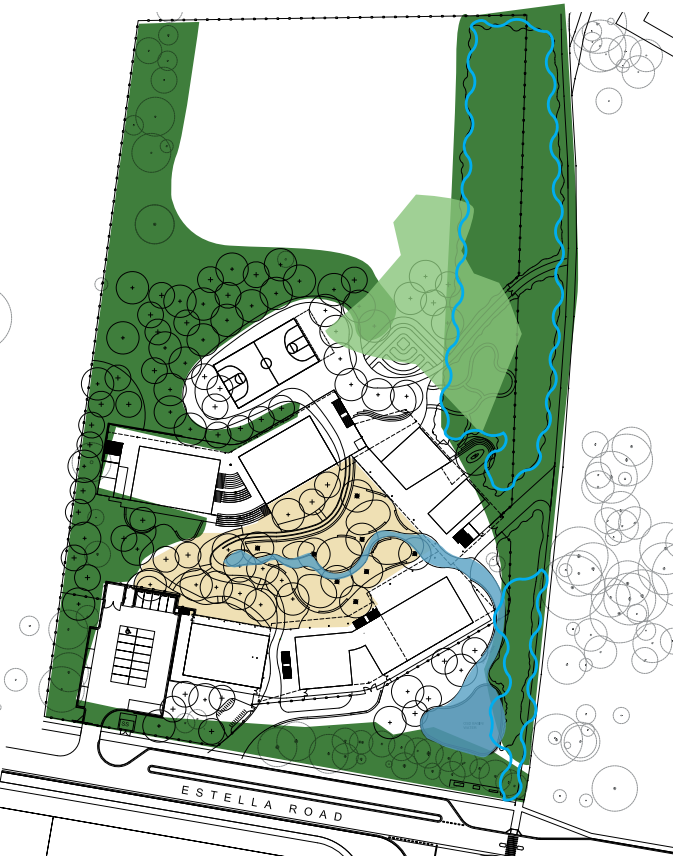
The inclusion of local indigenous species will also tie in to the existing planting of the biodiversity habitat corridor planted in 2011 by Charles Sturt University.

Consideration has also been given to utilising deciduous shade trees as cover for the larger paved areas to reduce the heat island effect and provide amenity to the buildings.

The plant species selected will also provide much needed habitat for native Fauna in the area and add great educational value to the school.

The greatest inspiration comes from the Wiradjuri People who utilised plant species and their parts for food, fibre (weaving, string), medicine, shelter, tools and implements (coolamons and weapons), artwork, toys and water supply.

Wiradjuri people were highly dependent on roots and tubers as plant food sources and less on seeds and fruits, necessitating the women and children using digging sticks in gathering them.



- Nature Play/Bush Foods
- Courtyard Planting
- Perimeter Planting
- Riparian Planting
- Biodiversity Habitat Corridor Planted in 2011

Important plants to the Wiradjuri include:

Cumbungi: Bull Rush Typha domingensis
The long leaves are excellent for weaving to make mats and baskets

Magga: Mugga Ironbark Eucalyptus sideroxylon
Resin mixed with ochre to stain rock for communication and ceremonial purposes

Binyai: River Red Gum Eucalyptus camaldulensis
Used for building large bark canoes and coolamons resulting in scarring on the trunk.

Mumbil: Blackwood Acacia melanoxylon
The very hard wood used to make spear throwers and shields. The bark used to make string. The bark is also heated in water to treat aching joint. Seeds ground into flour

Buuri: Boree Acacia pendula
The hard wood used to make baddawal (boomerangs), digging sticks, and clubs.

Yulumbang: Green wattle Acacia trineura
The bark tannin is used to make a fish poison, for trapping in waterways.

Garraa: White Cypres Pine Callitris columellaris
The resin produced by the tree is used as glue for binding tools and other implements.

To treat broken bones a piece of bark, from the larger roots, can be removed from the tree and while wet, be bound around the broken limb. As the bark dries it moulds to the shape of the limb, acting as a splint and holding the broken bones in place. The bark is also useful for making torches to carry fire or provide light.

Birribee: Grey Box Eucalyptus macrocarpa
The bark of Birribee is one of the easiest to remove to make coolamons, shields, canoes and bark slabs for shelters.

The wood is also considered long lasting and useful in tool making.

Birri : White Box Eucalyptus albens
The rough bark was used to make a range of tools and implements, from small bowls to large canoes.

The resin from Birri could also be used for many purposes including sealing bowls and cups so that they were watertight. Aboriginal people use Birri for medicine as well, some parts of the tree that are used are fresh, young leaves.

Baagang : Yellow Box Eucalyptus melliodora
The wood is used by Aboriginal people to make a range of tools and implements. Baagang is also known to be used as a medicine tree.

Reports by Michael Mossman ‘New Public School in Estella’ 16.11.2018 and ‘New Public School, Estella Road’ by BIOSIS 18.12.2018 have been invaluable in providing details on the local Wiradjuri people’s cultural practices and connection to land.

SYMBOL	BOTANICAL NAME	COMMON NAME (WIRADJURI NAME)	HIEGHT X WIDTH	LOCAL INDIGENOUS SPECIES	NATURE PLAY BUSH FOODS	COURTYARD	RIPARIAN	PERIMETER
TREES								
AME	Acacia melanoxylon	Blackwood (Mumbil)	12m x 5m	y				
APE	Acacia pendula	Boree (Buuri)	8m x 4m	y				
BPO	Brachychiton populneus	Kurrajong (Yama)	10m x 10m	y				
CCO	Callitris columellaris	White Cypress Pine (Garraa)	10m x 3m	y				
CCR	Casuarina cristata	Belah	15m x 8m	y				
EAL	Eucalyptus albens	White Box (Birri)	25m x 10m	y				
EBL	Eucalyptus blakelyi	Blakely's red gum	20m x 8m	y				
ECA	Eucalyptus camaldulensis	River Red Gum (Binyal)	25m x 10m	y				
ECU	Exocarpos cupressiformis	Native Cherry (Ballot)	8m x 4m	y				
EME	Eucalyptus melliodora	Yellow Box (Baagang)	30m x 15m					
EME	Eucalyptus cinerea	Argyle Apple (Gundghay)	15m x 10m	y				
EMI	Eucalyptus microcarpa	Grey Box (Birribee)	25m x 10m	y				
ESI	Eucalyptus sideroxylon	Mugga Ironbark (Magaa)	35m x 15m	y				
FUR	Fraxinus 'Urbanite'	Urbanite Ash	15m x 8m					
GPR	Geijera parviflora	Wilga (Wilga)	10m x 6m	y				
MLA	Melaleuca lanceolata	Black Paper Bark (Mudah)	10m x 6m	y				
PAN	Pittosporum angustifolium	Butterbush	6m x 2m	y				
SAC	Santalum acuminatum	Quandong (Guwandang)	5m x 2m	y				
UPY	Ulmus parvifolia 'Yarralumla'	Weeping Chinese Elm	15m x 10m					
SHRUBS								
AIM	Acacia implexa	Hickory Wattle (Gidya)	3m x 2m	y				
ASE	Adenanthos sericeus 'Silver Streak'	Woolly Bush	2m x 1.5m					
ATR	Acacia trineura	Green Wattle (Yulumbang)	3m x 2m	y				
BMA	Banksia marginata 'Bright'	Silver Banksia	2m x 2m					
CAU	Citrus australasica	Finger Lime	2m x 1.5m					
CBR	Callistemon brachyandrus	Prickly Bottlebrush (Galgang)	2m x 2m	y				
ELO	Eremophila longifolia	Emu Bush (Birrigan)	1.5m x 1.5m	y				
ETO	Enchylaena tomentosa	Ruby Saltbush (Barrinan)	1m x 1m	y				
GRO	Grevillea rosmarinifolia	Rosemary Grevillea	2m x 2m	y				
GWl	Grevillea wilkinsonii	Tumut Grevillea	2m x 2m	y				
LBR	Leucophyta brownii	Cushion Bush	1m x 1m					
LFL	Leucopogon fletcheri	Australian Heath	1.5m x 1.5m	y				
LSC	Leptospermum scoparium	Tea Tree (Bimbun)	2m x 2m					
MFL	Muehlenbeckia florulenta	Lignum (Gweergal)	2m x 2m	y				
PGL	Pimelea glauca	Smooth Rice Flower	1m x 1m	y				
ROP	Raphiolepis 'Oriental Pearl'	Indian Hawthorn	1m x 1m					
RSP	Rhagodia spinescens 'Silver Border'	Throny Saltbush (Galgang)	1m x 1m	y				
WFR	Westringia fruticosa 'Smokey'	Coastal Rosemary	1m x 1m					
GRASSES								
BBU	Bulbine bulbosa	Native Leek (Dirrinan)	0.5m x 0.5m	y				
CRE	Cymbopogon refractus	Barbed Wire Grass	0.7m 0.7m	y				
DRE	Dianella revoluta	Spresaing Flax Lily (Nidbul)	0.7m 1m	y				
DST	Dichopogon strictus	Chocolate Lily (Dirramaay)	0.5m x 0.5m	y				
FNO	Ficinia nodosa	Knobby Club Rush	1m x 1m					
LFI	Lomandra filiformis	Wattle Matt-Rush (Dirramay)	0.5m x 0.5m	y				
LLO	Lomandra longifolia	Matt Rush	1m x 1m					
PAU	Phragmites australis	Common Reed (Dyirill)	2m x 1m	y				
PLA	Poa labillardieri	Common Tussock-grass	0.7m 0.7m					
PSI	Poa sieberiana	Grey Tussock Grass	0.5m x 0.5m	y				
TAU	Themeda triandra	Kangaroo Grass	0.7m 0.7m	y				
TDO	Typha domingensis	Bull Rush (Cumbingi)	2m x 1m	y				
XGL	Xanthorrhoea glauca	Grass Tree (Binda)	1m x 1m	y				
GROUND COVER/CLIMBERS								
AAU	Ajuga australis	Australian Bugle	0.3m x 0.5m	y				
ASE	Atriplex semibaccata	Creeping Slatbush (Barrinan)	0.5m x 1m	y				
BMU	Brachyscome multifida	Cut Leaf Daisy	0.2m x 0.5m	y				
CAP	Chrysocephalum apiculatum	Yellow Buttons	0.2m x 0.5m	y				
CCI	Casuarina 'Cousin It'	Prostrate Sheoak	0.1m x 0.5m					
CGL	Carpobrotus glaucescens	Pig Face	0.1m x 0.5m					
GMT	Grevillea lanigera 'Mt Tamboritha'	Woolly Grevillea	0.5m x 1m					
HSC	Hibbertia scandens	Guinea Flower	0.5m x 1m					
HVI	Hardenbergia violacea	Happy Wanderer (Ngawang)	0.5m x 1m	y				
MLA	Microseris lanceolata	Native Yam (Bading)	0.3m x 0.5m	y				
MSA	Mentha satruiodes	Native Mint	0.1m x 0.5m					
ROF	Rosmarinus officinalis prostratus	Rosemary	0.5m x 1m					
SOF	Sarcozona praecox	Pig Face (Biradur)	0.1m x 0.5m	y				

3.5 DESIGN STATEMENT & MATERIALITY

The new Wagga Wagga Public School provides a link between the northern residential suburbs of Wagga Wagga and the southern end of the Charles Sturt University Campus. Siting of the school adjacent to Peter Hastie Oval makes good use of an existing playing field for student benefit.

The master planning of the school retains the principles developed by the previous design team and the Cultural Narrative report prepared by Michael Mossman (16.11.2018) that formed part of the briefing package.

The updated design's master planning principles still use the Murrumbidgee River as the basis for organising buildings, spaces and pedestrian access across the site.

The sinuous form of the river inspires the meandering pathway that connects the buildings on the ground plane. Landscape spaces "hang off" the corners of the river with "ox bow lakes" providing areas for active recreation and meeting/Learning. Materiality is also inspired by colours of the Murrumbidgee River environment.

The front entry to the school retains the existing stand of Eucalyptus to effectively frame the entry from the street. Fencelines are associated with building edge rather than on the front boundary maintaining the natural parkland character of the site. Stormwater is controlled from the site via a natural dry creek bed and wetland OSD basin in the south east corner. Bike storage will be carefully integrated into the landscape adjoining the main entry path. Separate community access is provided to the hall to enable public use while not interfering with school function.

After moving through the school entry, people enter into an "enclosed courtyard" that provides a range of sitting/ meeting spaces, assembly areas and spaces for informal court games. Terraced gardens provide sitting opportunities along its northern edge. The canteen area also opens onto this assembly courtyard area where series of circular seating elements around shade trees reflect campfire gathering and storytelling. To the east of the canteen undercroft a separate quiet amphitheatre space provides further outdoor learning opportunities. The meandering river walk moves long the western and northern edge of the space to provide an accessible (1 in 20) walkway linking Blocks A, B, C, D to E & F.

Halfway along the river pathway there is stepped access to Blocks E and F with potential for outdoor performances. The top of the river pathway arrives at a stepped learning space to the north of the library that then links to the Oval to the east. To the north of this space the indigenous food and medicine garden gives further connection to the indigenous heritage of the place. Nature play is provided within the native forest running along the eastern edge of the school site. Following the river pathway to the west pedestrians move around the multi-use games court with a grassed embankment to provide viewing to court games. This space can also be used for assemblies if needed. The pathway continues in a north easterly direction to meet the existing CSU campus access pathway and Peter Hastie Oval beyond. The remainder of the site to the north of the pathway will remain in its current condition being open grassland leaving its flexible for future development if needed.

Plant selection for the project will predominantly be indigenous and suitable for this site's particular microclimate. Some deciduous trees will be utilised to allow for winter sun and summer shade in Main courtyard. The edges of the school will be strengthened with indigenous planting to ensure the buildings are embedded in the landscape.

3.6 MATERIALITY

GROUND



WALLS AND SEATING



FENCES & FIXTURES



SOFTSCAPE & NATURE PLAY

