

Appendix G4

**Landscape Strategy
and Design Report**

for

New School Charmhaven



St. Philip's Christian College Charmhaven

Landscape Strategy and
Design Report

St. Philip's Christian College Charmhaven Landscape Strategy and Design Report

Prepared for

St. Philip's Christian Education Foundation

Issue

03

Date

19.07.22



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Revision	Date	Author	Checked	Comment
A	8.07.22	AL	TB	Draft for review
B	15.07.22	AL	TB	Draft for review
C	19.07.22	AL	TB	For SSD submission



01

Overview



1.1 Introduction

This report has been prepared to support a State Significant Development Application for the proposed school, St Philip's Christian College Charmhaven. The school is to cater for students from Kindergarten to Year 12 and also incorporates an Early Education Centre and Prep program as well as a special school for students requiring an alternate learning environment.

The school site is located off Arizona Road and to the west of the Pacific Highway, Charmhaven. It is legally described as Lot 2 DP 809106.

The school is to cover a large portion of the site to the west, with the eastern edge being generally defined by Wallarah Creek. The site's western boundary has frontage to Arizona Road with a length of approximately 240 metres. The site also connects with Depot Road to the south and a proposed access road will provide access to Pacific Highway to the east.

The proposed development, to be constructed in several stages and will consist of eighteen (18) buildings, active play areas, sports courts, sports fields and associated civil and utilities works. The school seeks to service 500 junior, 500 middle and 500 senior students, as well as early learning and Dynamic Alternative Learning Environment (D.A.L.E).

Moir Landscape Architecture were engaged to provide landscape architectural services for the development. For the initial stage of the project, Moir LA has prepared a site-wide Landscape Strategy to accompany the master plan prepared by SHAC Architects, with whom Moir LA has worked closely to develop an integrated design strategy. The design has been prepared in accordance with relevant strategic documents and planning policies, notably the 'Better Placed' policy from the Government Architect NSW (GANSW) and local Central Coast Council planning controls.

As a school campus, the design proposal seeks

to maximise opportunities for a stimulating and engaging learning environment. A detailed analysis of site conditions has informed a design strategy that responds to existing landscape elements, including the site's topography, network of water bodies and resident ecological communities, as well as constraints such as flooding and bush fire.

The site-wide landscape strategy identifies the unique character of each of the five key activity precincts, while ensuring an overall design coherence across the school campus. The design seeks to enhance the site's overall amenity and sustainability through consideration of connectivity, shade, views, materiality and water management using best practice water sensitive urban design.



EXISTING SITE CONDITIONS

1.2 Strategic Approach

Better Placed - Government Architect NSW

The Design Guide for Schools and Environmental Design in Schools are part of a suite of documents developed by the Government Architect NSW (GANSW) as part of the Better Placed design policy. These documents have been prepared by GANSW in collaboration with School Infrastructure NSW (SINSW) and provide specific guidance for good design in NSW schools.

The Design Guide For Schools provides guidance on how to meet the Education SEPP Design Quality Principles, listed as the following:

- Context, built form and landscape
- Sustainable, efficient and durable
- Accessible and inclusive
- Health and safety
- Amenity
- Whole of life, flexible and adaptive
- Aesthetics

The Design Guide provides recommendations for a best practice approach to the design process for schools, emphasising the importance of a holistic and participatory design approach.

Environmental Design in Schools outlines the benefit of environmentally sensitive design for people and their surroundings in schools. The manual presents strategies for designing buildings and landscapes that respond to the natural environment in order to create comfortable and sustainable learning spaces.

The GANSW documents Greener Places Design Guide and Designing with Country discussion paper provide additional guidance that is relevant to certain aspects of the project.

The guidance provided by these documents has informed the design approach for the landscape strategy, ensuring the delivery of a high quality design in line with State Government principles.



Source: Government Architect NSW

02

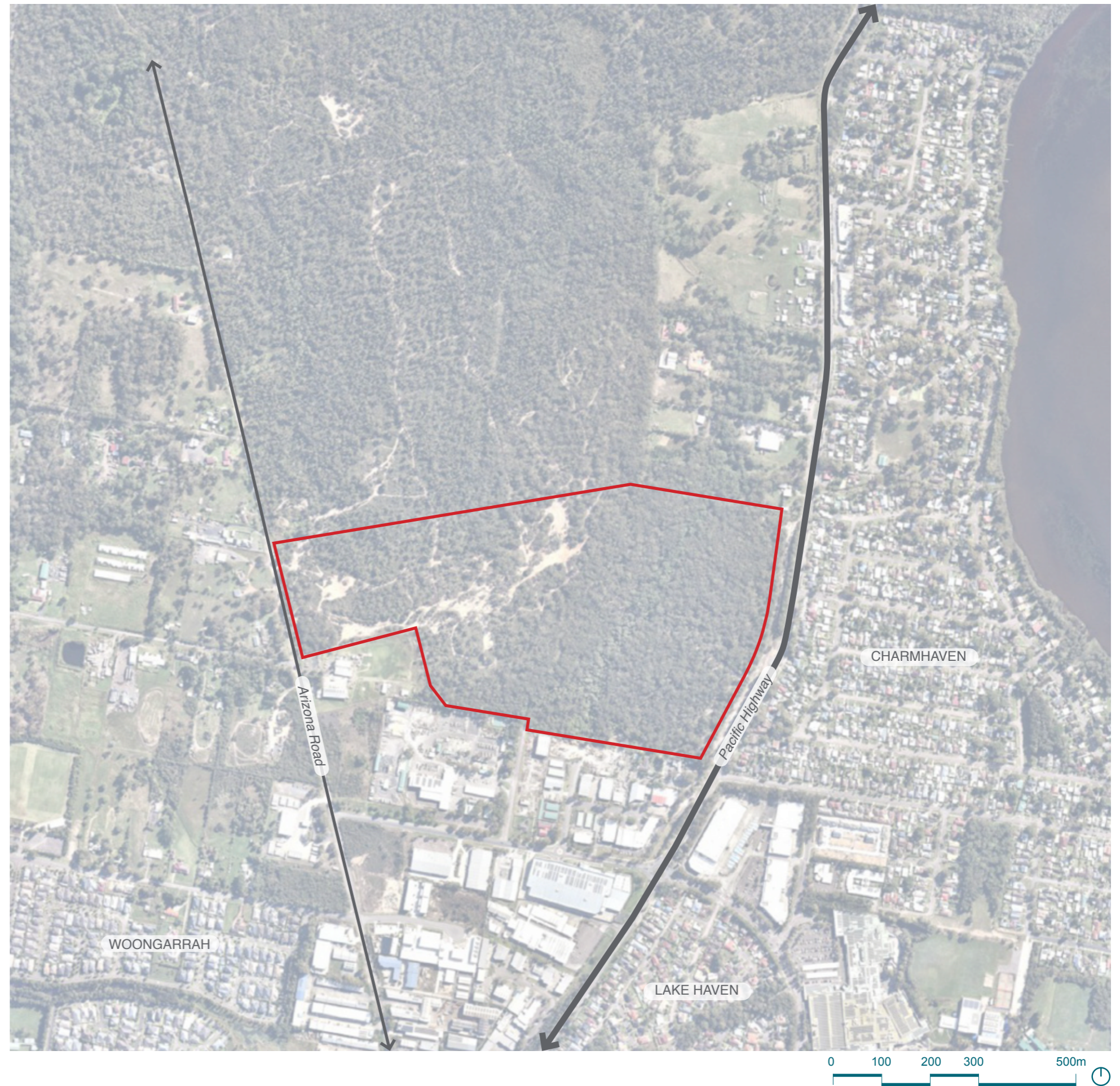
Site



2.1 Context

The site is located close to the town centre of Charmhaven, between Arizona Road and Pacific Highway. Charmhaven is a small suburb of the Central Coast with a number of residential dwellings mostly to the east of the Pacific Highway and commercial/retail to the south of the suburb. Land to the west of Pacific Highway is mostly undeveloped, including the land in which the project site is located.

The architectural design situates the school on the ridgeline and aims to utilise the degraded landscape for development. The landscape which remains undamaged is of high value and is characterised by native grasses, low shrubs and a canopy of tall native trees.



LEGEND

— Site boundary

2.2 Site Photos



Photograph Location



View 1



View 4



View 2



View 5

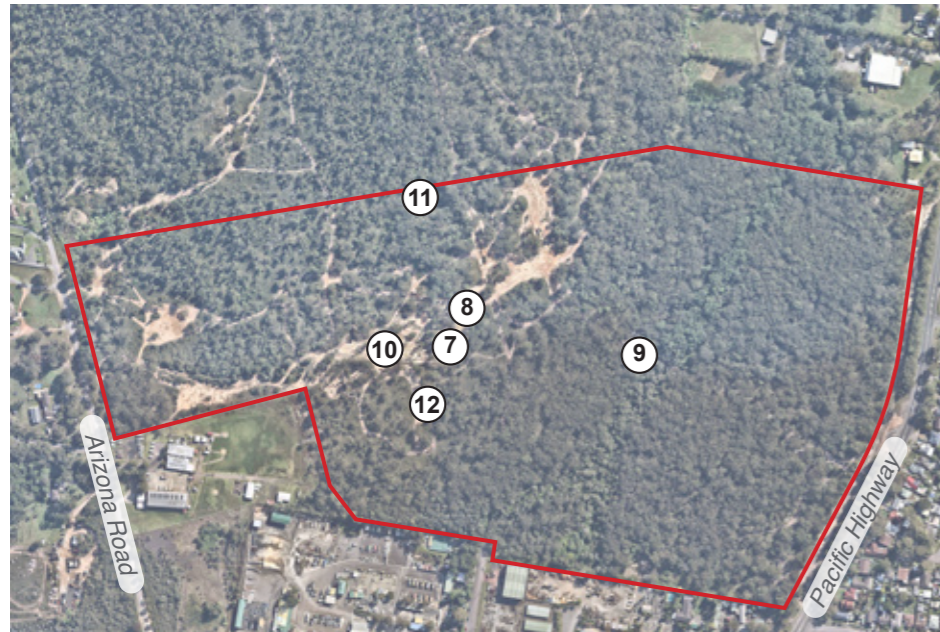


View 3



View 6

2.2 Site Photos



Photograph Location



View 7



View 10



View 8



View 11



View 9



View 12

2.3 Aboriginal Heritage & Cultural Context

The Traditional Custodians of the land that lies within and surrounding the site are the Darkinjung people. They are saltwater people whose Country stretches from north of Sydney Harbour along the coast to the lower reaches of Lake Macquarie. The Darkinjung people use their intimate and complex knowledge of Country to sustainably manage the land and its cultural significance.

The Darkinjung people have inhabited the area for upwards of 40,000 years and therefore the history of the culture is deeply significant to Aboriginal people.

Heritage Now completed an Aboriginal Cultural Heritage Assessment (ACHA) of the site in February 2022. The ACHA report identifies the location of both artefact/s and isolated finds within the site. Almost all of the sites identified in the AHIMS are located within proximity of flowing water. Artefact scatters have been identified within the site and were assessed as having low to moderate archaeological significance at a local level. It is noted that additional artefact finds may be located below the surface.

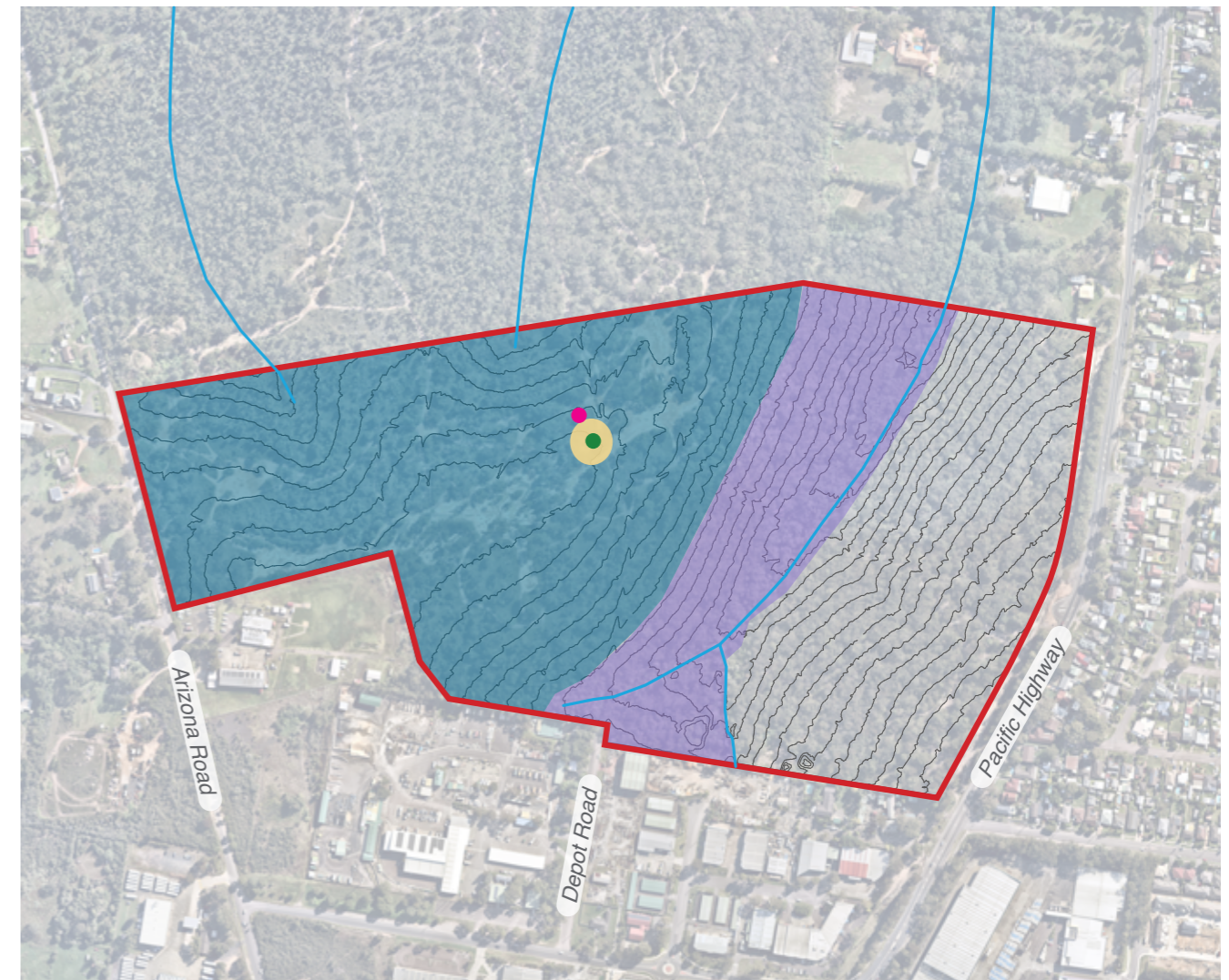
The ACHA finds that the artefact scatter with a small area of Potential Archaeological Deposit, will be impacted by the proposed development and as such, provides the following recommendations on page 1 of the report:

1. An Aboriginal Cultural Heritage Management Plan is to be developed post approval for the management of HN-CH-T01. The Aboriginal

Cultural Heritage Management Plan is to include the collection of the surface artefacts as well as subsurface archaeological investigation and salvage (as needed) of the Potential Archaeological Deposit. The Aboriginal Cultural Heritage Management Plan is to include, amongst others, protocols for unexpected finds and discovery of human remains.

2. All on-site personnel are to be made aware of their obligations under the National Parks and Wildlife Act 1974, through an on-site induction or other suitable format.

3. The works are to be carried out as per the design/ Proposal assessed in this report. Should there be modifications to the design/Proposal then this document is to be updated to assess these changes.



Source: Heritage Now

- LEGEND**
- Site boundary
 - Existing watercourse
 - HN-CH-A01
 - HN-CH-T01
 - Area of PAD

2.4 Vegetation

The vegetation within the site is mostly intact and is considered to be of high biodiversity value. However, some areas particularly along the ridgeline to the west of the site, have been cleared as a result of vandalism, coal under-mining, rubbish dumping and deforestation. Some patches of remnant vegetation are evident in these locations.

Low understory vegetation with minimal midstory and large native trees comprising the upper canopy, is prevalent through the site. Tree species include *Eucalyptus haemostoma* (Scribbly gum), *Angophora inopina* (Charmhaven Apple), *Angophora costata* (Sydney Red Gum) and *Eucalyptus sideroxylon* (Ironbark). Understory species include *Xanthorrhoea* (Grass Tree), *Leucopogon parviflorus* (Coastal Heath), *Lambertia formosa* (Mountain Devil), *Banksia spinulosa* (Hairpin Banksia), *Banksia oblongifolia* (Fern-leaved Banksia) and *Poa Labillardierei* (Tussock Grass).

Riparian vegetation also occurs along the creeks and watercourses and includes a number of fern species, melaleucas and macrophyte grasses.

A Biodiversity Development Assessment Report is yet to be prepared to identify plant community types within the land subject to the application.



LEGEND

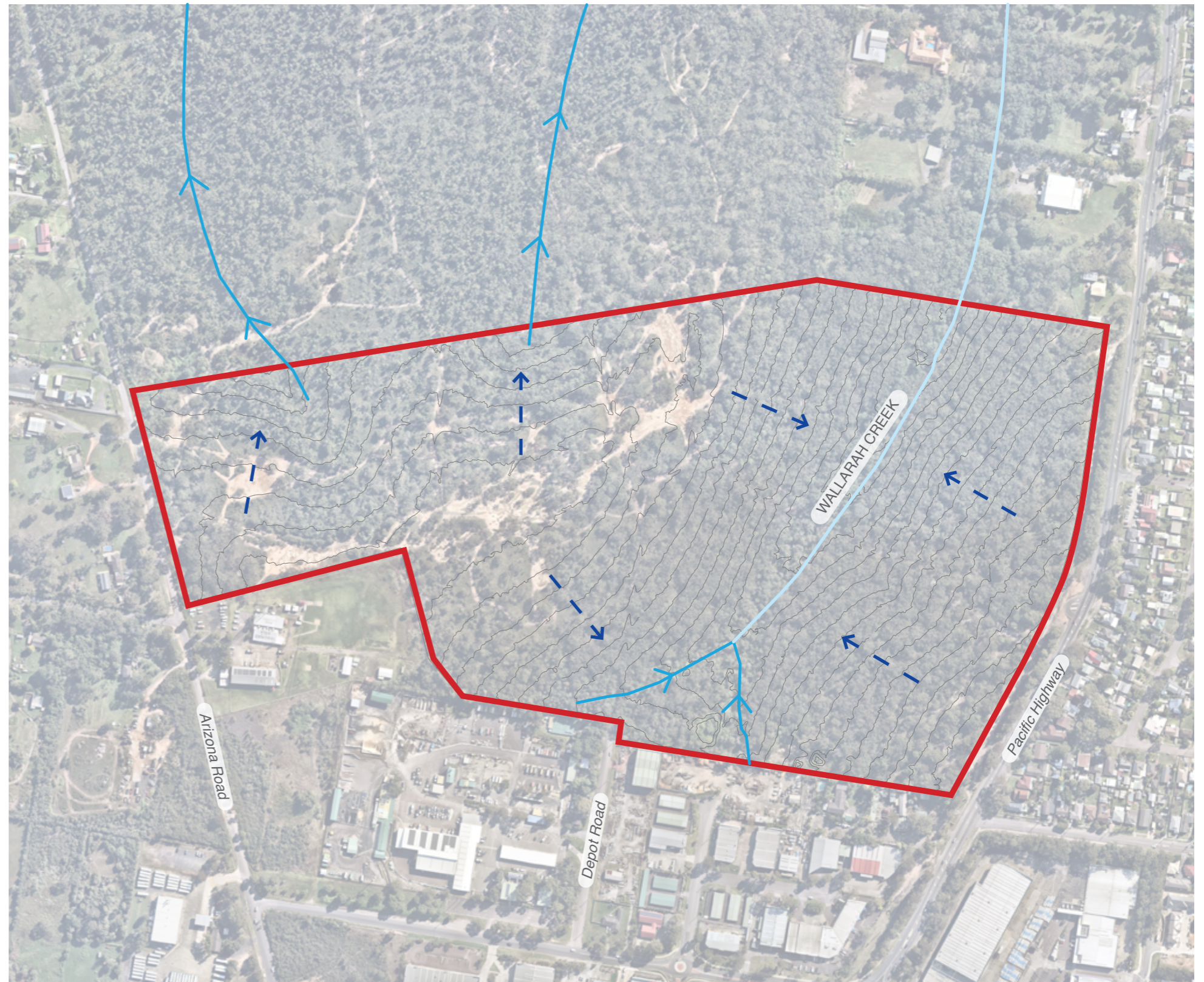
- Site Boundary
- Existing Watercourse
- Existing Native Vegetation
- Disturbed Areas

1:5000 @A3



2.5 Hydrology

There are a number of small creeklines that run through the site, including first order streams to the north and south-east and a second order creekline that flows through the site. This creekline flows into Wallarah Creek, which in turn flows in an easterly direction to Budgewoi Lake. This creekline roughly defines the eastern edge of the proposed school site.



LEGEND

- Site boundary
- 1st Order Stream
- 2nd Order Stream
- > Overland Flow

1:5000 @A3



2.6 Proposed Site Plan

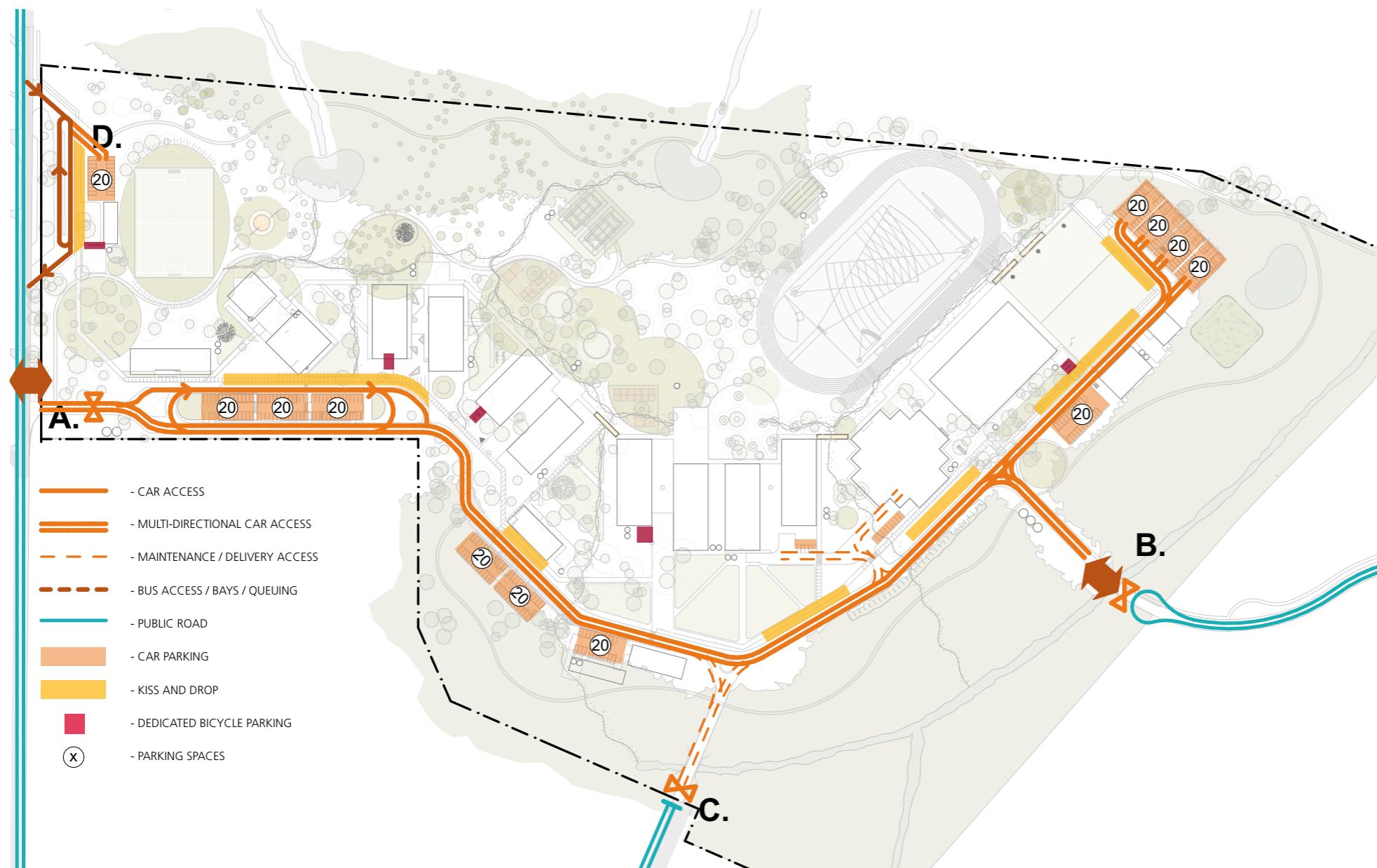
The proposed site plan has been prepared by SHAC Architects.



Source: SHAC Architects



2.7 Proposed Arrival and Approach Sequence



ARRIVAL BY CAR

Two main entry approaches:

- A.** Arizona Road (existing)
- B.** Pacific Highway (proposed)

- A.** Main entry from Arizona Road presents users with the option to drop off at the pedestrianised plaza, or continue on through to Senior School, Sports Precinct or Pacific Highway.
- B.** Secondary entry from the Pacific Highway to allow out of hours Sporting / Community Use and form future links to Industrial Estate.
- C.** Service, deliveries and maintenance access road connecting the ring road to Depot Road.

KISS + DROP ZONES

SPCC has a split campus system with drop off zones for main functioning areas, and each Sub School.

ARRIVAL BY BUS

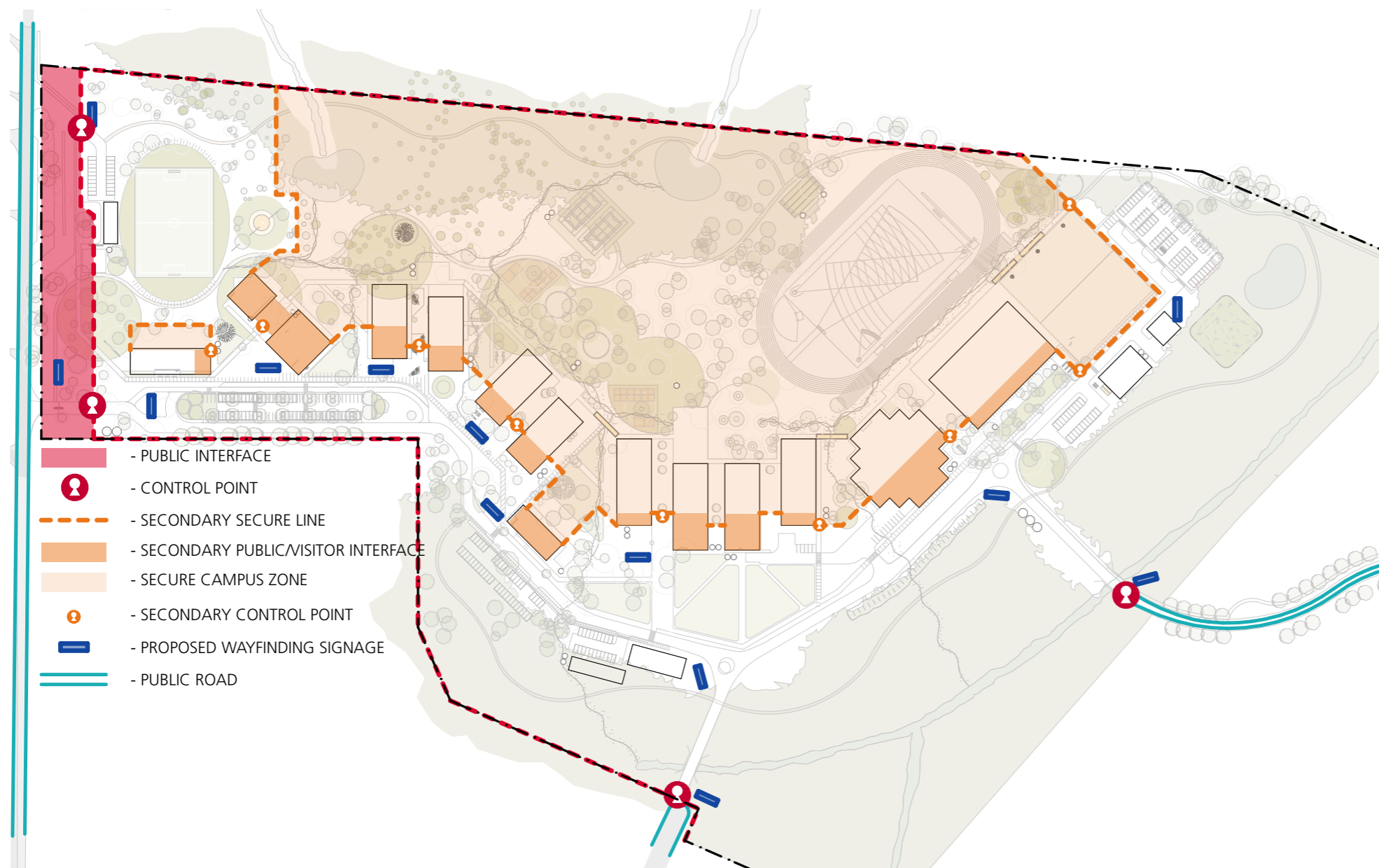
- D.** Turning bus bay on school site off Arizona Road with bus layback, queuing and marshalling.

ON SITE PARKING DISTRIBUTION

- Small clusters of evenly distributed parking around the campus, ensures easy access to each precinct.

Source: SHAC Architects

2.8 Proposed Secure Lines & Wayfinding



SECURE LINES

- OUT OF HOURS FENCING FORMED AROUND THE PERIMETER OF THE SITE
- THE SECURE LINE NEEDED FOR THE DAILY OPERATION OF THE SCHOOL IS INTEGRATED WITHIN THE BUILDING FACADE AND FENCING WITHIN THE LANDSCAPE
- MULTIPLE SECURITY THRESHOLDS ALLOWS AREAS FOR AFTER HOURS TO BE SECURED

WAYFINDING

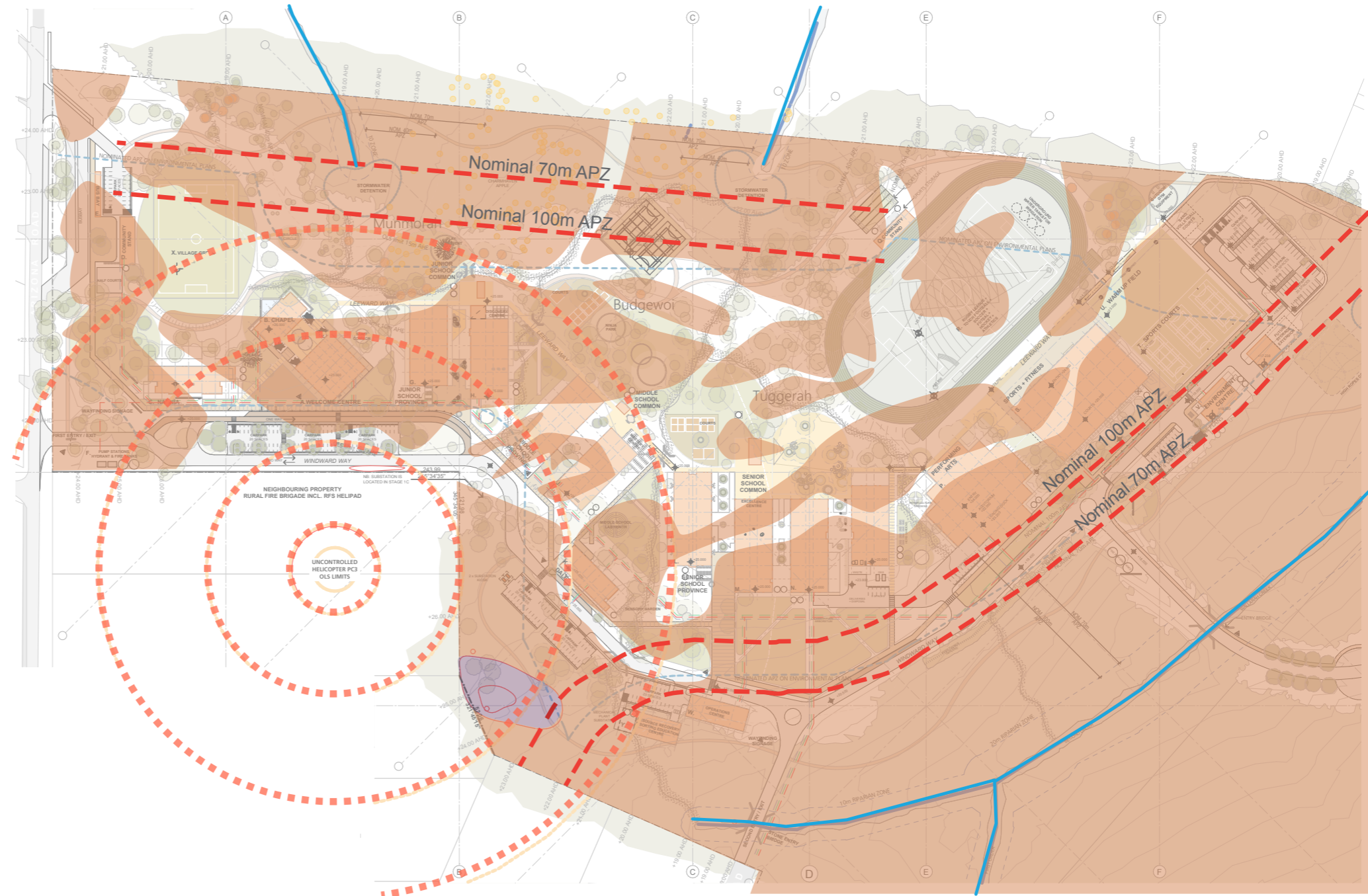
- BUILDING CORNER TREATMENT ASSISTS WITH THE WAYFINDING OF ENTRY TO EACH PRECINCT
- SEQUENTIAL ORDER OF SUB SCHOOLS ALLOWS FOR INTUITIVE WAYFINDING

Source: SHAC Architects

2.9 Constraints

Key Constraints include:

- Asset Protection Zone (APZ)
- Good quality existing native vegetation
- Uncontrolled Helicopter PC3 OLS Limits
- Significant watercourses and associated riparian vegetation
- PFAS contamination



LEGEND

- Existing Native Vegetation
- APZ
- Helicopter PC3 OLS Limits
- PFAS Contamination
- Watercourses



2.10 Opportunities

Key Opportunities include:

- Enhance existing landscape features.
- Integrate outdoor learning opportunities.
- Utilise landscape corridors to improve overall site management such as WSUD principles.
- Create open space that reflects the adjacent building utilisation.
- Utilise cleared land for open space.
- Address key view corridors to surrounding landscape, both within and surrounding the site.
- Anchor primary pedestrian paths by key destinations and entrance points.
- Integrate pedestrian access with existing landscape.
- Use the existing parts of the landscape that contain indigenous cultural links or relevance to develop a program or trail that assists in explaining the concept of 'Design On Country'.
- Create green visual and physical connections between buildings, courtyard spaces and gathering areas.
- Create soft boundaries between sub-school outdoor space.



LEGEND

- Existing Watercourse
- Existing Native Vegetation
- Green Corridor
- Opportunity for open space
- Key View Corridors
- Key Pedestrian Circulation
- Key Entry

1:3000 @A3



03

Landscape Design
Principles



3.1 Landscape Design Principles



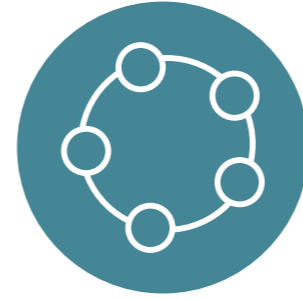
Context, built form and landscape

- Integrate and respond to the sites natural setting by maintaining and enhancing key views to the surrounding forest, creeklines and borrowed views to the surrounding landscape.



Sustainable, efficient and durable

- Bring the unique natural setting into the development by weaving and connecting the forest and creeklines via a series of WSUD principles to enhance the learning opportunities, environmental outcomes and amenity.
- Integrate passive landscape solutions that enhance thermal efficiency and performance.
- Promote biodiversity by using predominantly locally indigenous plant species.



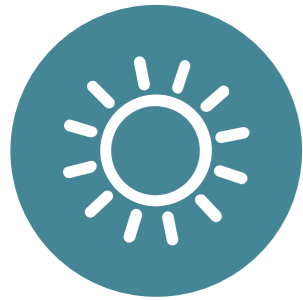
Accessible and inclusive

- Prioritise pedestrian safety and accessibility through the provision of pathways that are logical, inclusive and safe.
- Investigate opportunities to integrate 'designing with country' principles into the landscape.
- Seek opportunities for facilities to be shared with the community outside of school hours.



Health and Safety

- Provide safe and secure spaces that are integrated with the public domain but provide necessary barriers.
- Ensure planting includes low and high planting with cleared mid story to ensure CPTED.



Amenity

- Provide tailored outdoor spaces that complement classroom learning and encourage nature based learning, play and outdoor study.
- Ensure the provision of ample, appropriate, flexible and shaded outdoor spaces that meet the needs of the differing age groups and abilities of students.



Whole of life, flexible and adaptive

- Provide a series of scalable and flexible outdoor spaces that can adapt to the changing learning, technological advances, age groups and demographics of the students.
- Incorporate resiliency through the consideration of plant and tree selections to ensure drought tolerance, provision of ample shading to assist in lowering the ambient temperature as well as WSUD principles.



Aesthetics

- Integrate and complement the building through the provision of landscape interventions that respond to the spatial environment.
- Provide references and cues in the arrangement and material selection that link the new school to its context.

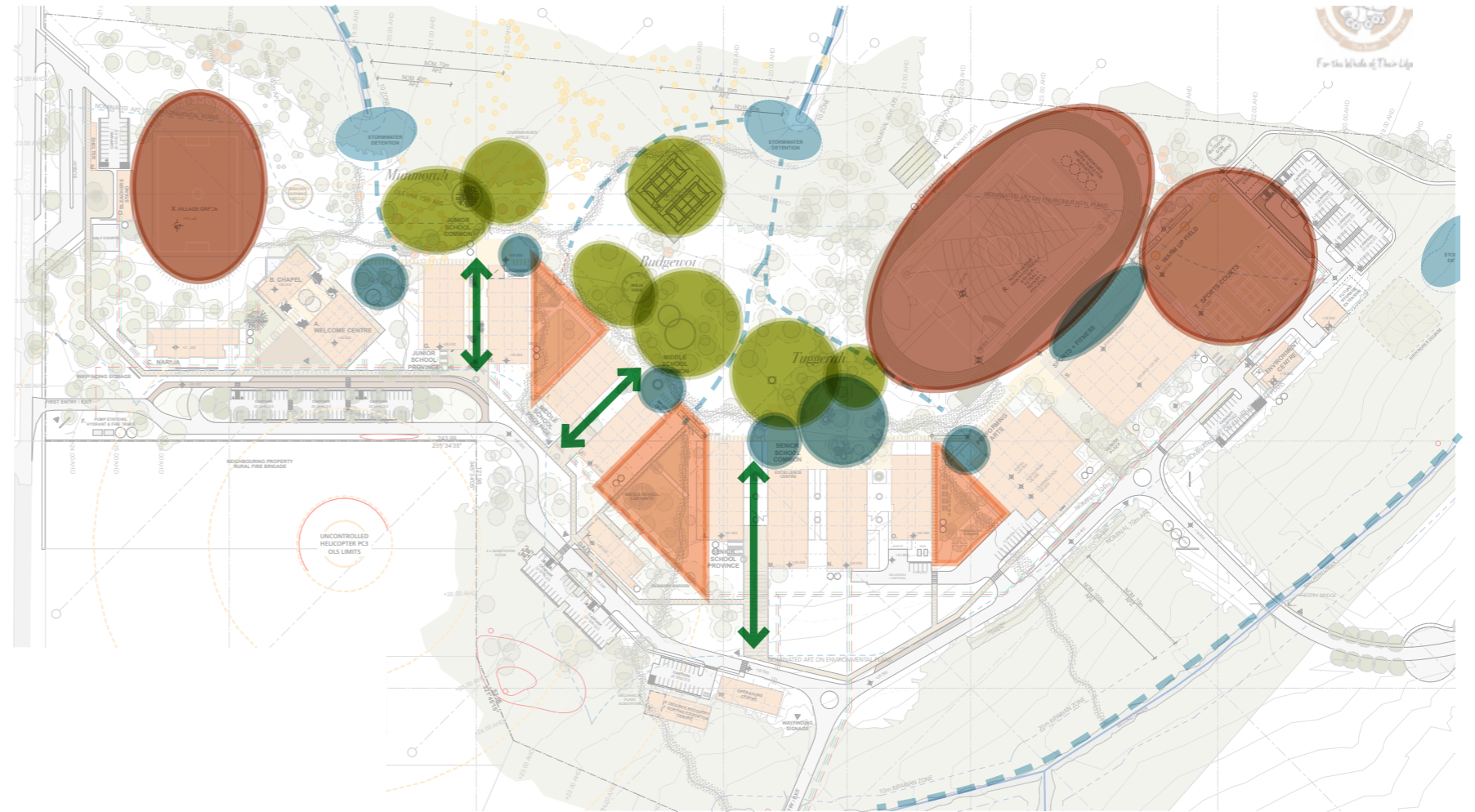
04

Zones



4.1 Spatial Typologies

The adjacent diagram demonstrates the different typologies of outdoor spaces within the school.



Gathering Spaces



Gathering spaces will act as an orientation point for groups to meet and interact before dispersing into other areas of the outdoor space. These spaces are located adjacent to the school buildings, after emerging through the entry into the playground. These spaces also have the ability to be utilised as outdoor classrooms or display space.

Green Links



These spaces act as a breakout space for classrooms allowing for outdoor learning in an intimate, shaded passive space with large trees and seating. These links also provide a visual and physical green link between the front of the school to the rear.

Access Spines



Access spines consist of the courtyard spaces that are welcoming, shaded, green thoroughfares between buildings. Raised planters with native planting, trees that emerge through roof openings and seating.

Play/Social Spaces



Providing spaces for separate age groups and abilities. These provide places for learning, ceremonies and play and run along the main spine/ridge of the site. Open lawns, active play elements, recreation and passive seating areas comprise the play/social spaces.

Sport & Recreation



Flexible sport and recreation zones that include sport courts, sports fields and associated spectator viewing with ample shade and seating amenity.

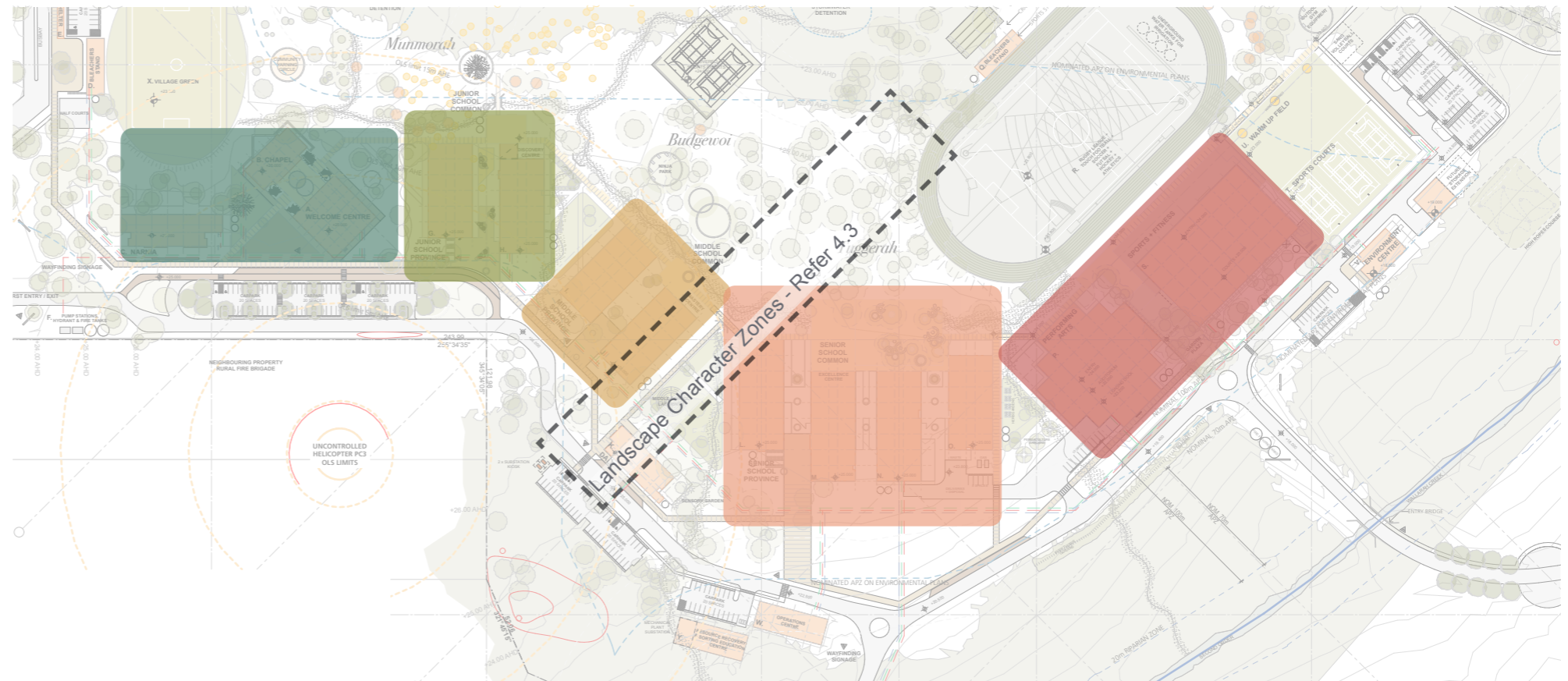
Hydrology Zones



Hydrology zones act as a means of drainage and water quality control, as well as providing outdoor learning and play opportunities within the sub-schools and surrounding bushland. These consist of dry WSUD swales, creeklines and basins.

4.2 Sub-School Identity Zones

Themed precincts within the school to reflect features of the surrounding natural environment of Charmhaven and the Central Coast. The use of locally contextual motifs, plants and themes, anchors the landscape design within its context and assists with the 'Designing on Country' approach. Creating identities with local species and ecosystems for individual zones within the school develops character for each zone, assists with intuitive wayfinding and creates a sequential experience as a user passes through the various spaces.



Welcome



Welcome to Country installation to establish the value and respect of Country at the formal entry and weave the cultural elements through the rest of the school.

Junior School



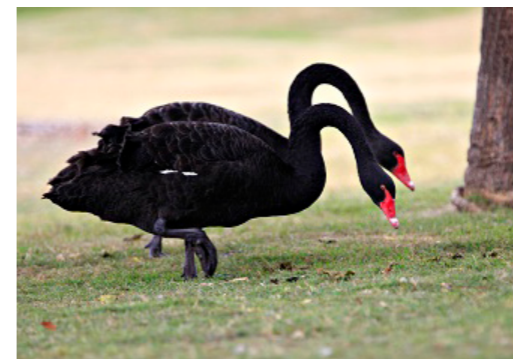
Small scale creatures on the forest floor and planting such as *Poa* and *Xanthorrhoea*. Discovery of ecosystems on and below the ground.

Middle School



Mid-sized natural environment and low canopy life including *Leucopogon* and *Banksia* species.

Senior School



Larger scale forest planting and 'Life on the Lakes' with the inclusion of plant species such as *Eucalyptus* and *Angophora* species.

Performance/Sport



Wider natural environment, migratory species and performance competitive species of which are prevalent in the area, particularly in nearby Wallarah Creek and Budgewoi Lake.

4.3 Landscape Character Zones



05

Precinct
Concepts



5.1 Proposed Precinct Plan

The proposed precinct plan identifies four key precincts defined by different types of activity occurring across the site.

The landscape strategy will identify the unique character of each precinct, while ensuring an overall design coherence across the site.

01 Welcome Precinct

- A welcoming entry sequence for the school to create a distinct sense of arrival through passive seating spaces and shared gathering points, as well as vehicular and pedestrian functional aspects.

02 Learning Precinct

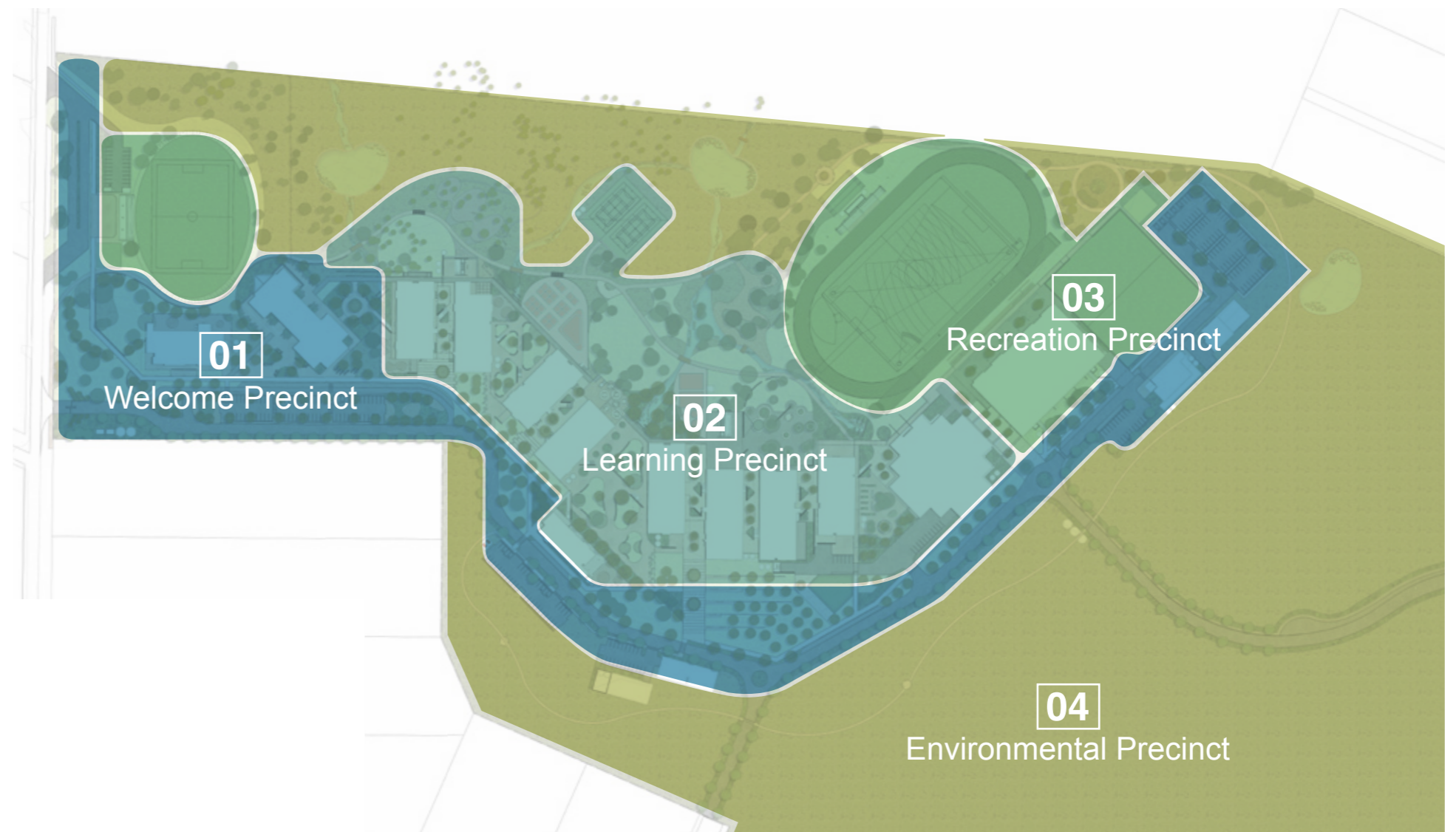
- An inclusive and flexible learning environment for students that caters to individual age groups, through passive and active functions that integrate with the natural environment.

03 Recreation Precinct

- High quality active environment for students and the wider community that is functional, flexible and inclusive and has a strong connection with the surrounding bushland.

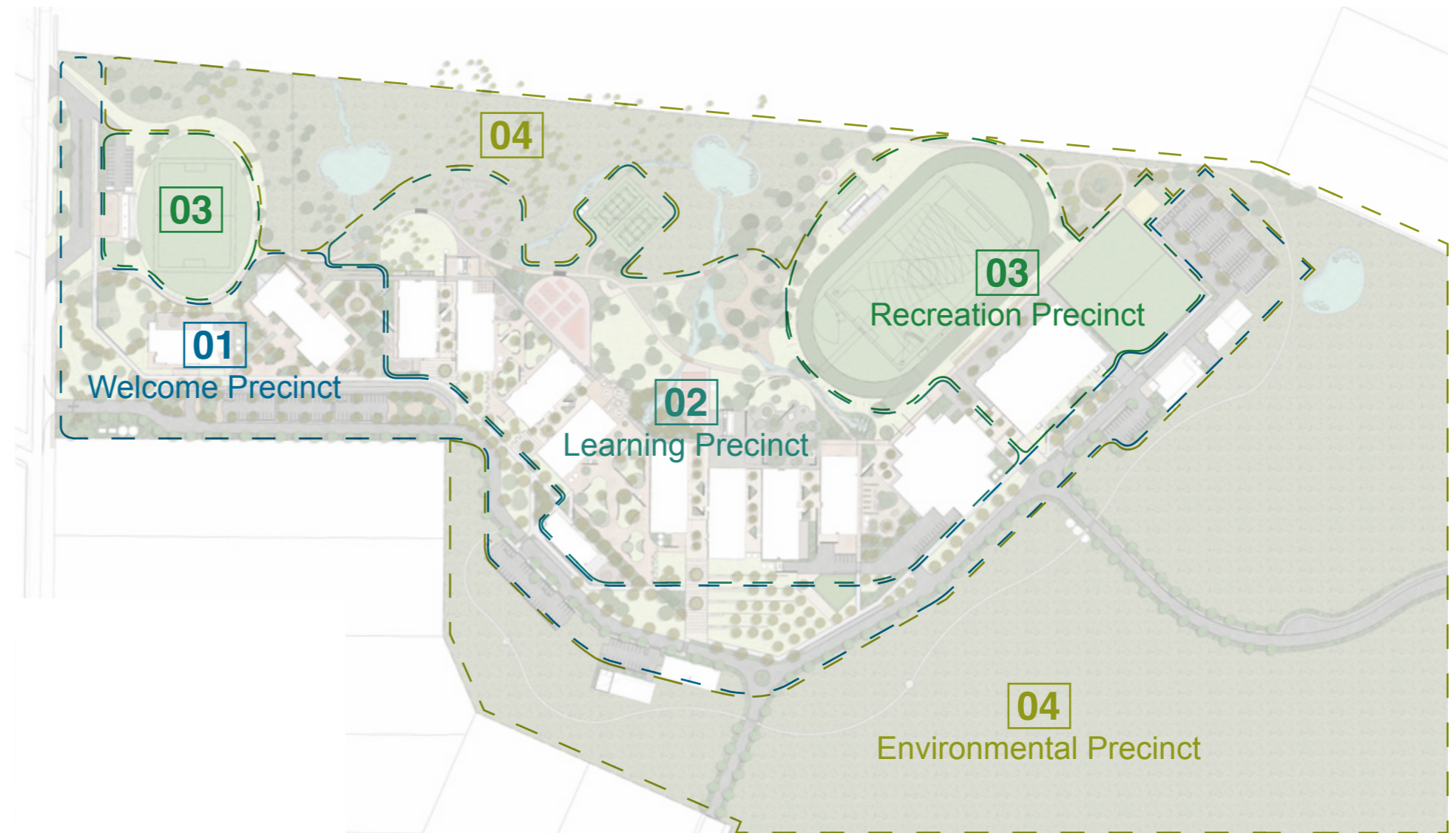
04 Environmental Precinct

- Engagement with the environmental features of the site through reflective and educational spaces that celebrate the site and connection to 'Country'.



5.2 Proposed Overall Concept Plan

The adjacent concept plan shows the overall master plan for the site. This master plan caters to the requirements, functions and amenity of each of the precinct areas and is underpinned by the principles outlined in the previous section of the document.



0 30 60 90 120m

5.3 Learning Precinct

The Learning Precinct aims to provide an inclusive, stimulating and adaptive learning environment for students.

The precinct will provide an opportunity for a unique outdoor learning experience specifically tailored to each age group and will complement the indoor classroom lessons.

The proposed design will include scalable spaces that cater to both small group gathering as well as moments for individual reflection and contemplation.

The design will respond to the passive and active functions of the precinct through the provision of recreation, seating and learning opportunities that integrate the surrounding natural environment.

Access and movement will be underpinned by the desire to maintain and enhance key site lines and to ensure CPTED and user safety principles whilst ensuring inclusive access.

A key aspect of the outdoor learning spaces is to bring the bushland into the campus. With access to green space, whether physical or visual, provides positive health benefits, amenity, educational tool and as a way of celebrating the existing natural assets the site.

Planting arrangement and selection will be a major component within this space and will be reflective of the areas unique vegetation characteristics balanced with the provision of ample shading and sensory qualities.

Cultural elements to be woven through the entirety of the school learning spaces providing an opportunity for students to gain an understanding and respect for the surrounding land.

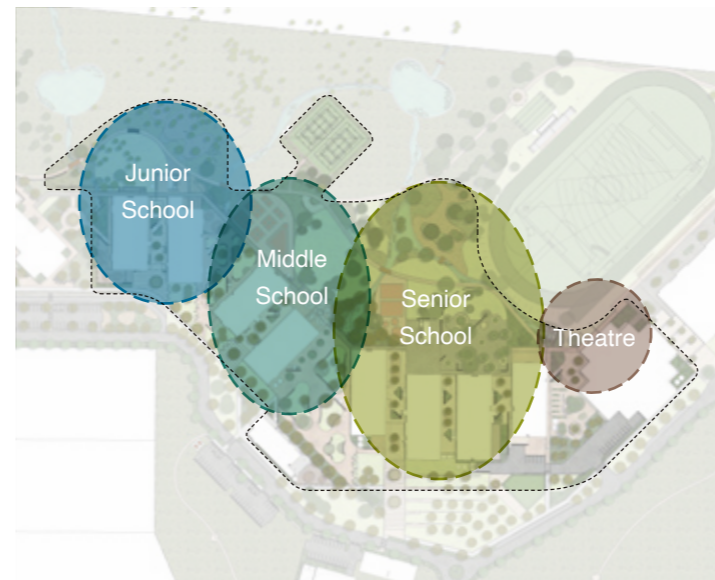


5.3.1 Learning Precinct - Key Design Moves



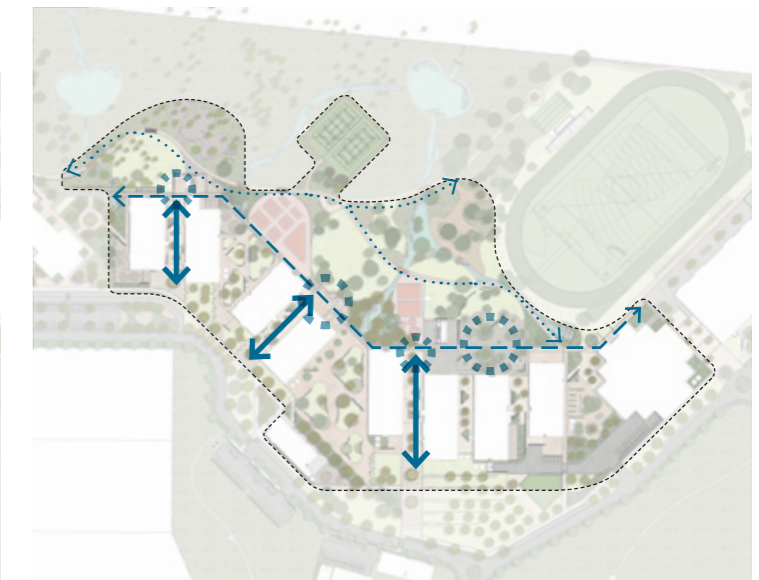
Key plan

1. Zones



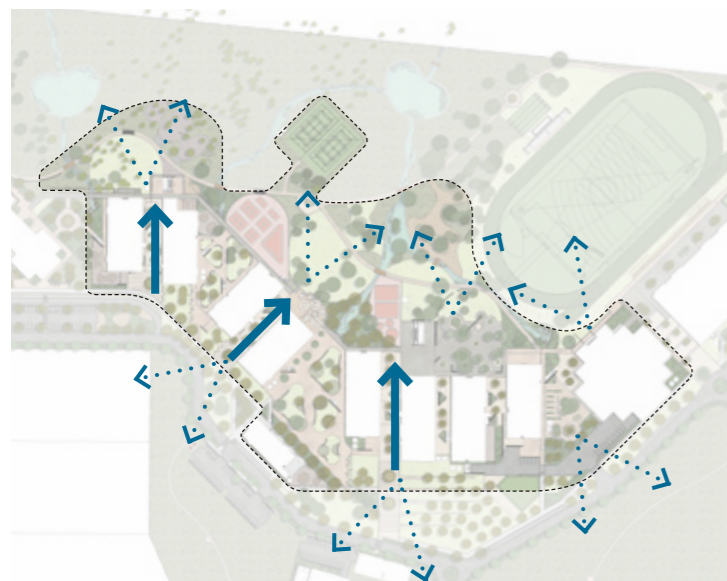
Respond to the requirements of the distinct sub-schools including Junior, Middle, Senior School and the Performance Theatre.

2. Movement



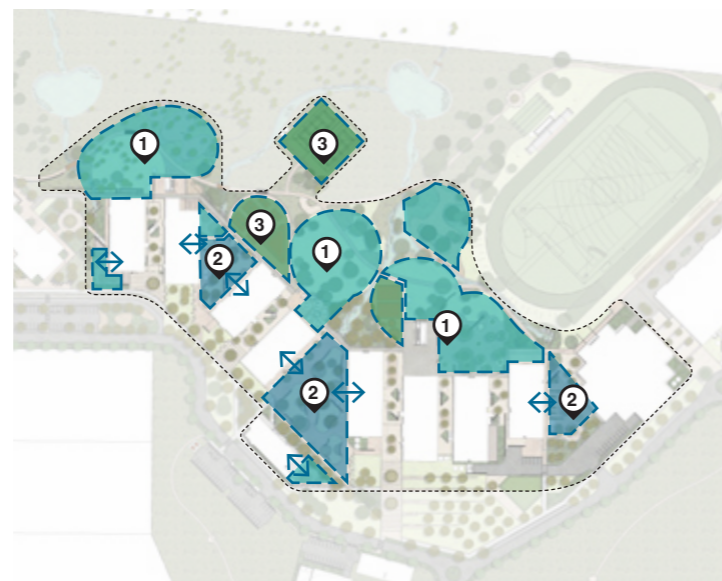
Provide a hierarchy of logical pedestrian thoroughfares. Direct paths between key destinations will be linked by a network of formal pathways connecting buildings and informal pathways across open space.

3. Views



Maintain and enhance views toward the natural landscape as well as through courtyards and breakout learning spaces between sub-schools.

4. Open Space



Integrate a series of tailored outdoor learning spaces that respond to the needs of students abilities and age groups. These include outdoor learning areas including flexible communal areas (1), classroom breakout spaces (2) and active spaces (3).

5. Ecology & Biodiversity



Weave the surrounding natural landscape into the site through a series of landscape (endemic vegetation selection) and WSUD principles and elements.

6. Hydrology / WSUD






Investigate opportunities to enhance the hydrology of the site and improve drainage and levels to increase usability, access and safety.

5.3.2 Learning Precinct - Pedestrian Circulation

Pedestrian access and circulation is underpinned by the desire to create a legible pedestrian network that responds to the key entries and maintains key site lines.



LEGEND

-  Key Entries
-  Major Circulation
-  Minor Circulation

1:2000 @ A1
0 30 60 90 120m



5.3.3 Learning Precinct - Concept Plan

The Concept demonstrates the proposal for the Learning Precinct. The precinct includes a combination of outdoor learning spaces that respond to the requirements of each age group and are centred around the individual sub-schools.

The design will respond to the passive and active functions of the precinct through the provision of recreation, seating and learning opportunities that integrate the surrounding natural environment.

Using the existing green assets of the site as inspiration, the Concept proposes to bring the bushland character further into the heart of the learning spaces. A series of vegetated WSUD dry swales with footbridge crossings and pockets of existing vegetation weave their way through the outdoor spaces allowing opportunities for people to engage with the natural systems.

The key space typologies are as follows:

LEGEND

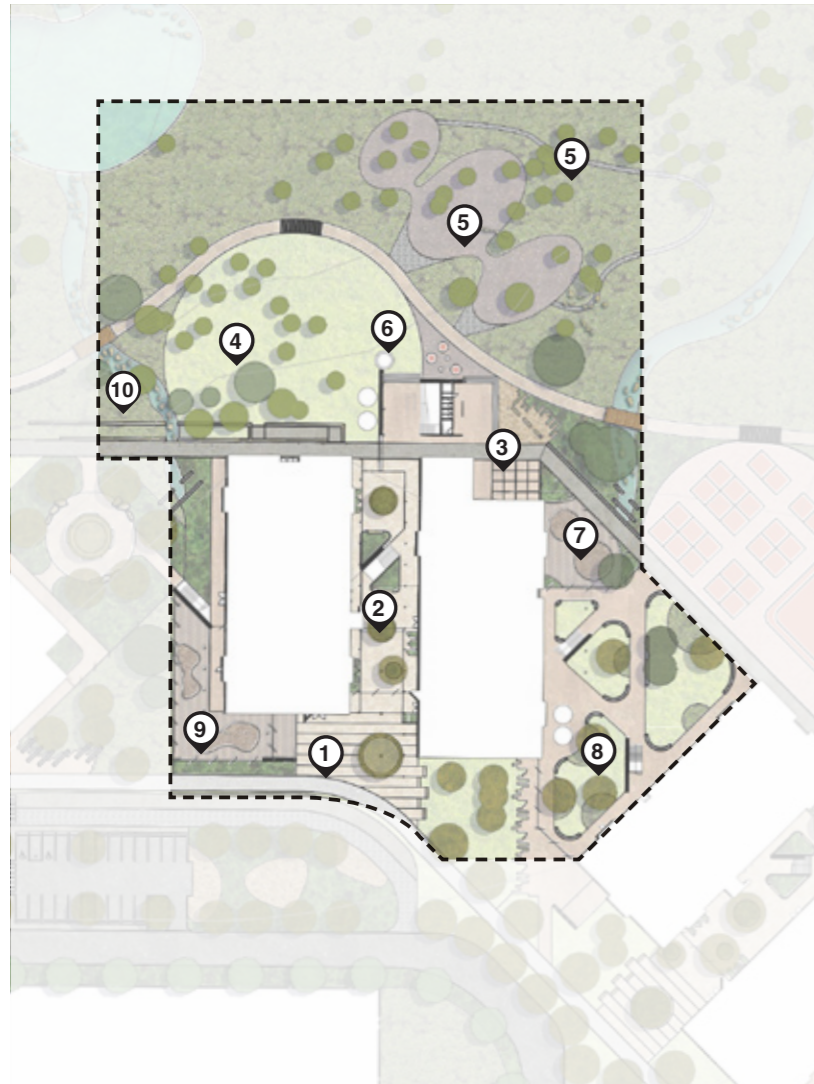
- ① Entries
- ② Covered Walkway
- ③ Central Covered Access Spine
- ④ Open Lawn
- ⑤ Vegetated Dry WSUD Swale
- ⑥ Gathering space
- ⑦ Bushland Seating/Socialisation Space
- ⑧ Hard Ball Courts
- ⑨ Ninja Park Playspace
- ⑩ Breakout Learning and Study Space
- ⑪ Outdoor Event Breakout Space
- ⑫ Vegetable/Herb Gardens
- ⑬ Fenced Prep Play Area
- ⑭ Fenced D.A.L.E Area
- ⑮ Fenced Even Start Area



1:2000 @ A1



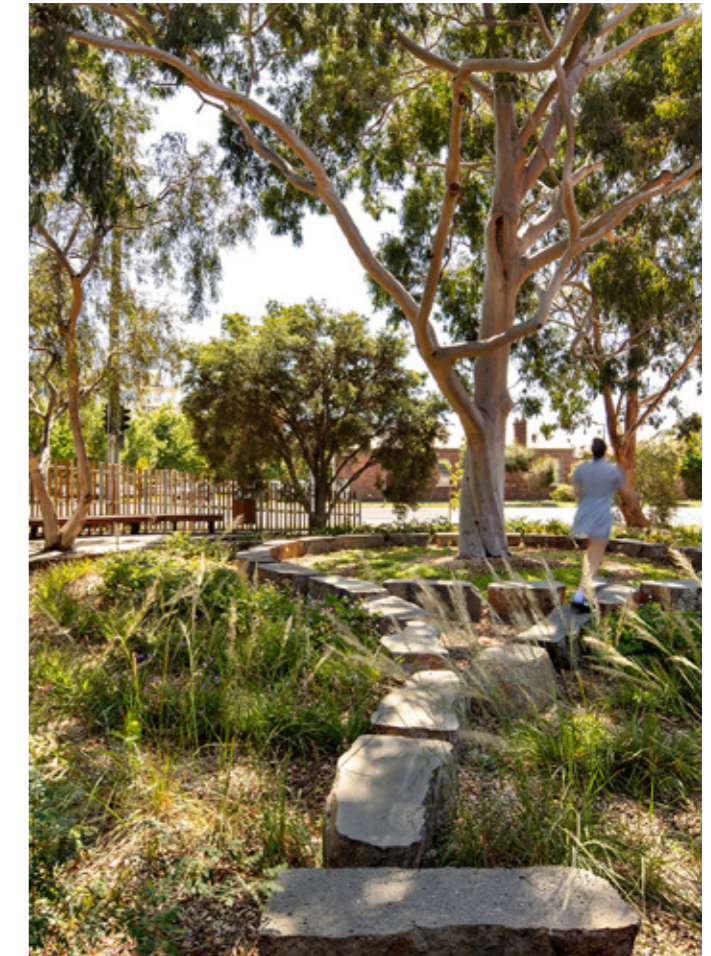
5.3.4 Learning Precinct - Junior School



N.T.S. ⌚

LEGEND

- ① Distinctive Entry
- ② Covered Access Spine
- ③ Covered Seating Space
- ④ Open Lawn Area
- ⑤ Nature and Adventure Play Area
- ⑥ Mud Kitchen
- ⑦ Fenced Area for "Event Start" program
- ⑧ Shared Breakout Learning Space
- ⑨ Fenced PREP Play Area
- ⑩ Vegetated Dry WSUD Swale



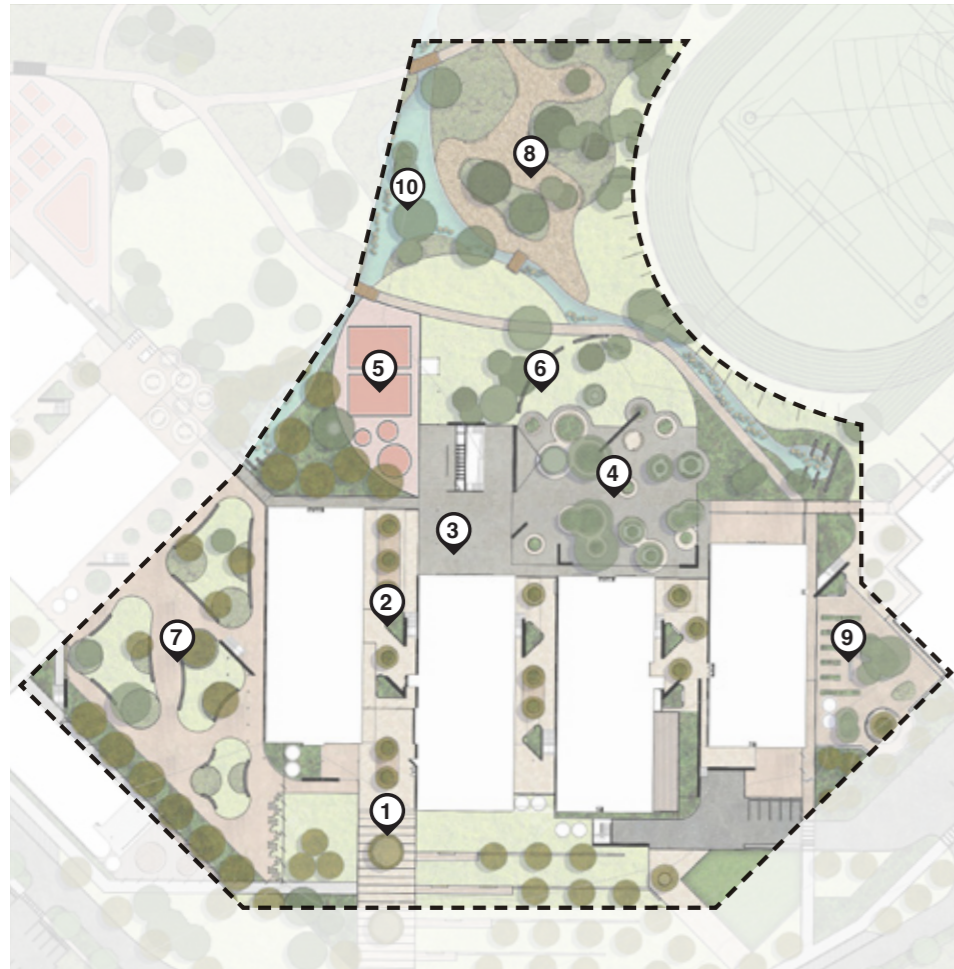
5.3.5 Learning Precinct - Middle School & D.A.L.E



- N.T.S.**
- LEGEND**
- ① Distinctive Entry
 - ② Covered Access Spine
 - ③ Covered Seating Area
 - ④ Open Lawn Area
 - ⑤ Active Play/Ball Courts
 - ⑥ Ninja Park Play
 - ⑦ Shared Breakout Learning Space
 - ⑧ Fenced D.A.L.E Outdoor Area
 - ⑨ Vegetated Dry WSUD Swale



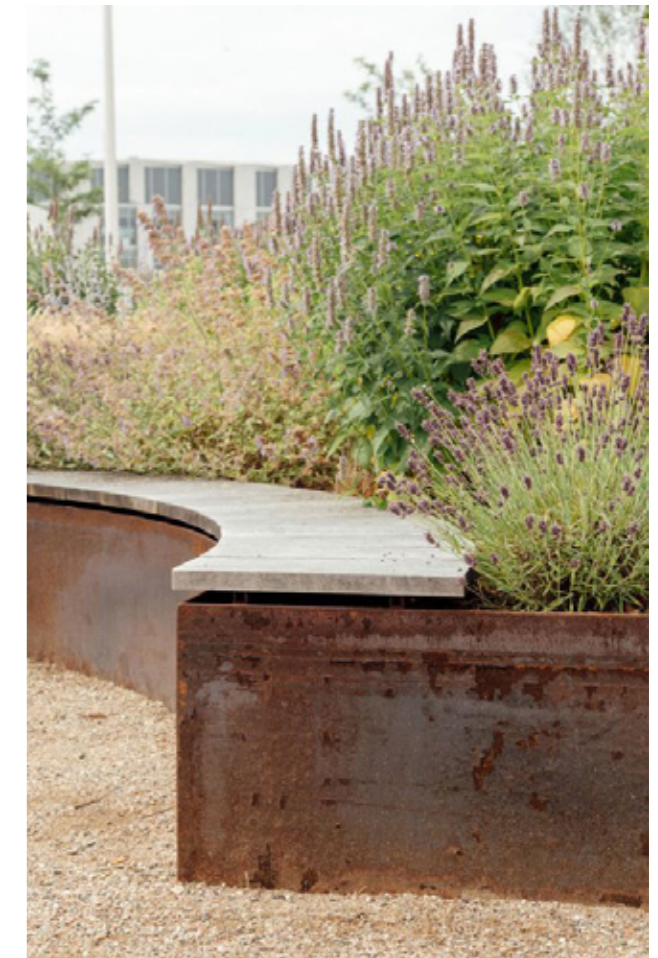
5.3.6 Learning Precinct - Senior School



N.T.S. ⌚

LEGEND

- ① Distinctive Entry
- ② Covered Access Spine
- ③ Gathering Area
- ④ Covered Outdoor Learning and Study Space
- ⑤ Active Play/Ball Courts
- ⑥ Open Lawn Area
- ⑦ Breakout Learning Space
- ⑧ Bushland Seating/Socialisation Space
- ⑨ Vegetable/Herb and Permaculture Gardens
- ⑩ Vegetated Dry WSUD Swale



5.4 Welcome Precinct

The Welcome Precinct provides a welcoming entry point for the school to create a distinct sense of arrival and welcome. It leverages off the area's natural assets to provide a welcoming, tranquil and reflective space for students.

The precinct will welcome students, staff and visitors to the school and include a series of passive seating spaces providing shaded gathering points for reflection and spiritual connection.

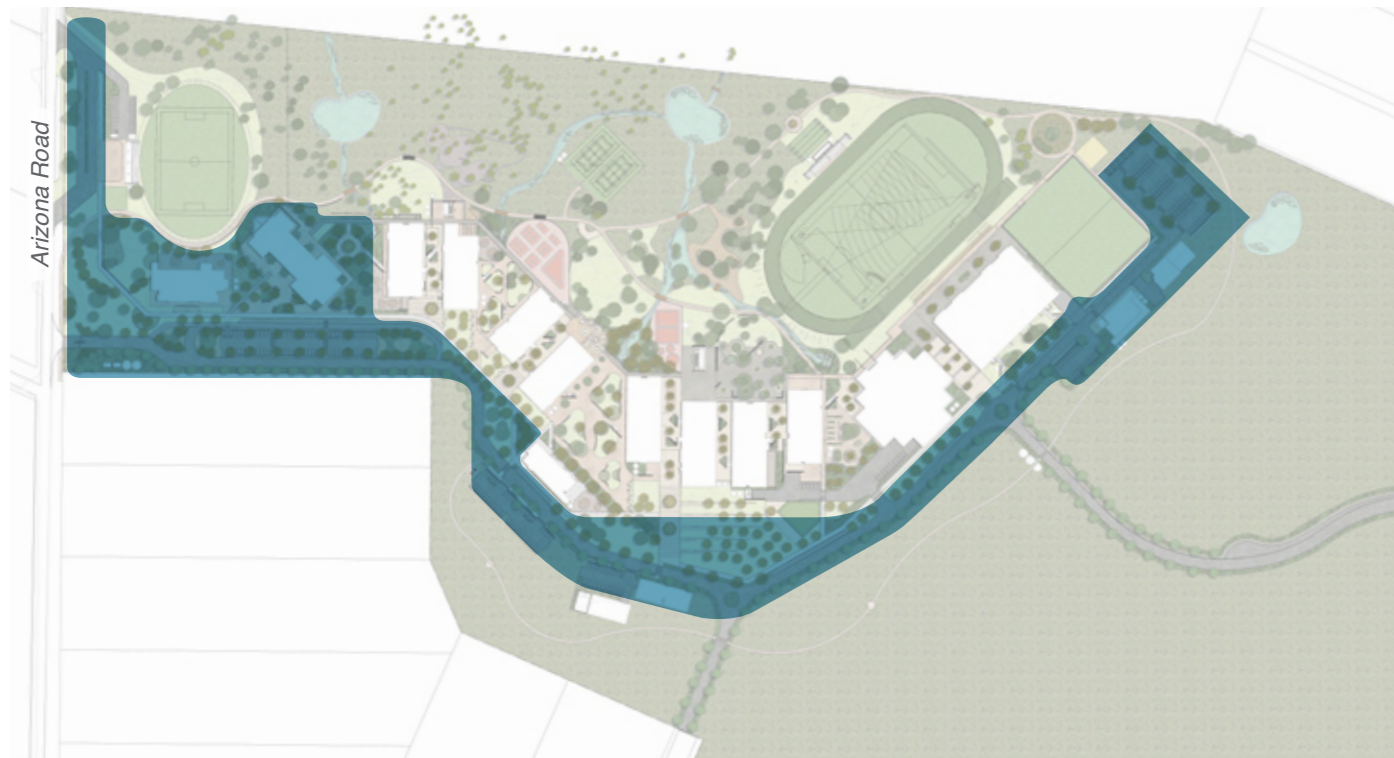
The precinct consists of a formal and sculptural form contrasting with the surrounding natural bushland and organic shapes that occur in the sub-school outdoor spaces and site periphery.

It is envisioned that this area would have a strong emphasis on connecting with country demonstrated through educational signage and place names, to establish value and respect of Country at the spiritual heart of the site.

Vehicular and pedestrian functional aspects of the design such as access and maintenance will be developed to be both sensitive and practical. A series of paths will traverse the front of the school to provide access to each sub-school entry plaza and offer a series of seating and gathering nodes. A desire to maintain and enhance key site lines and to ensure CPTED, user safety principles and ensuring inclusive access is key to all access networks.



5.4.1 Welcome Precinct - Key Moves



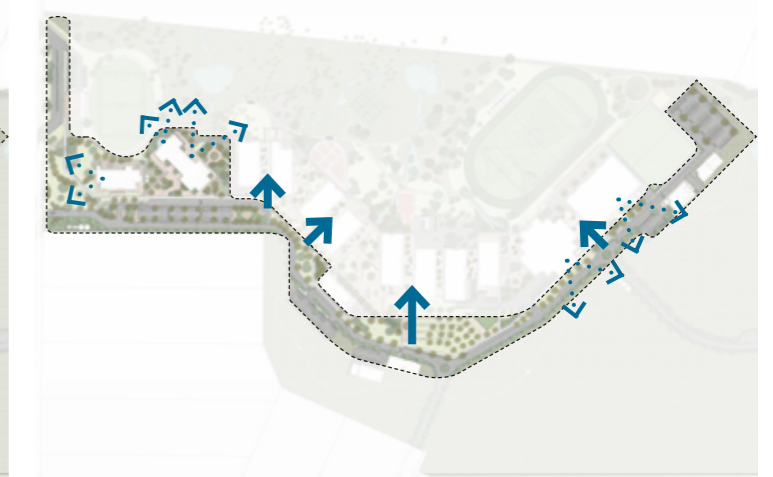
Key plan

1. Movement



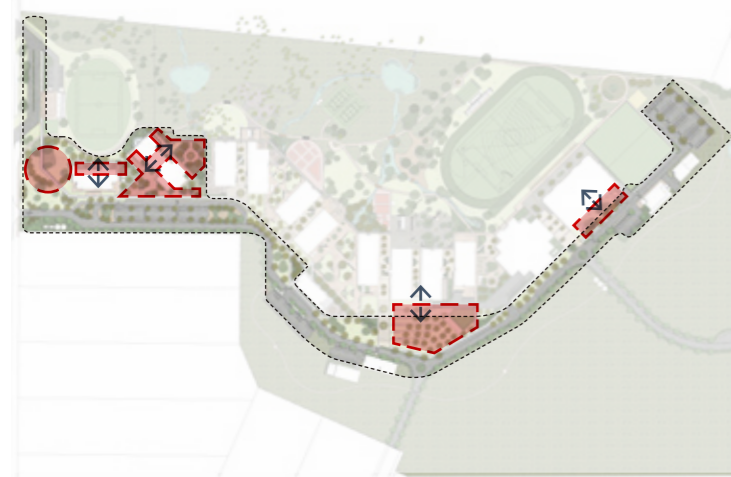
Provide a hierarchy of logical pedestrian thoroughfares. Formal pathways will provide connections between building entries, green corridors and carparks along the school access frontage.

2. Views



Maintain and enhance views toward the natural landscape and consider views into development from the access road and Arizona Road.

3. Open Space



Provide a series of smaller formal and informal passive seating spaces to complement the natural environment and encourage spiritual reflection, environmental education and stewardship.

4. Ecology



Maintain existing canopy and understory vegetation and enhance the environment through revegetation of endemic species on site to retain the ecological function and character of the site.

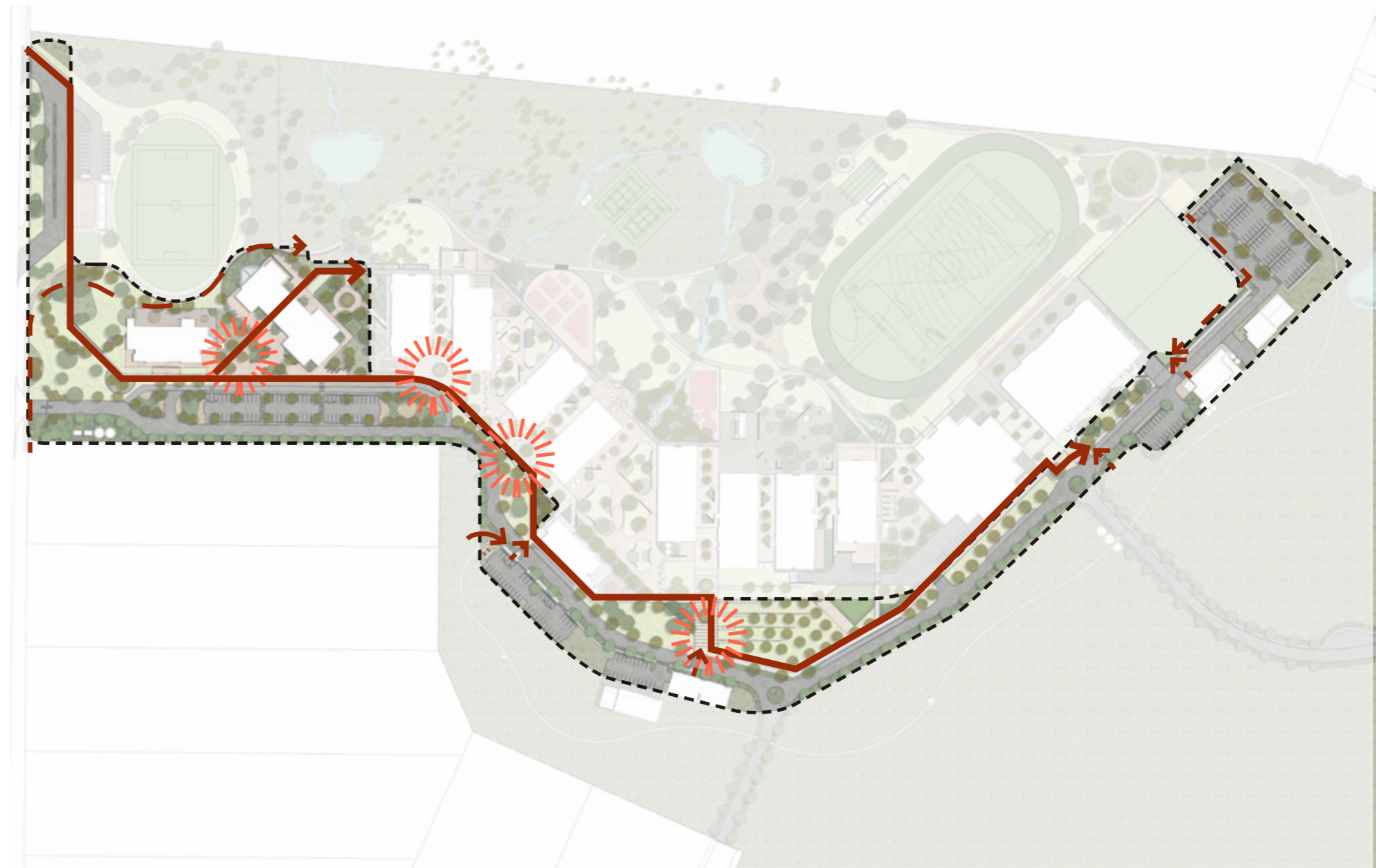
5. Amenity





Provide a series of smaller formal and informal passive seating spaces with ample shade to allow for meeting spaces at the sub-school and welcome entries.

5.4.2 Welcome Precinct - Pedestrian Circulation

Pedestrian access and circulation is underpinned by the desire to create a legible pedestrian network that responds to the key entries and maintains key site lines.



LEGEND

-  Key Entries
-  Major Circulation
-  Minor Circulation



5.4.3 Welcome Precinct - Concept Plan

The Concept demonstrates the proposal for the Welcome Precinct. The precinct includes a series of passive seating spaces for students, staff and visitors to the school. These provide both breakout seating particularly for the cafe and chapel as well as shaded meeting places upon arriving at the school.

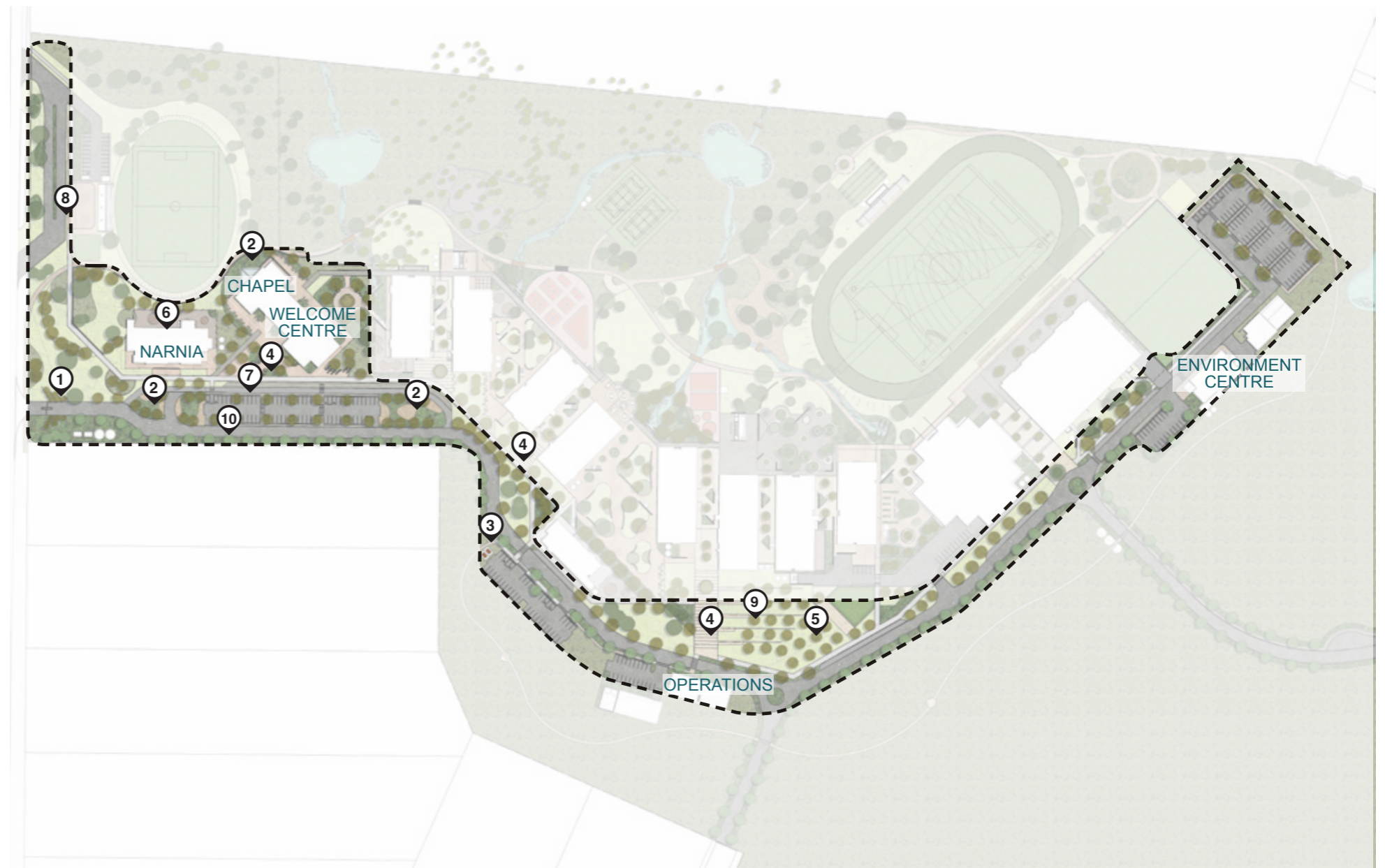
The Welcome Precinct has a focus on reflection and tranquility created through the utilisation of water, seating, shade, sculpture and views.

Views to the surrounding bushland are a key aspect of the design with opportunities for connection to nature both visually and physically. Clear and appealing views from the chapel and welcome centre are of particular significance.

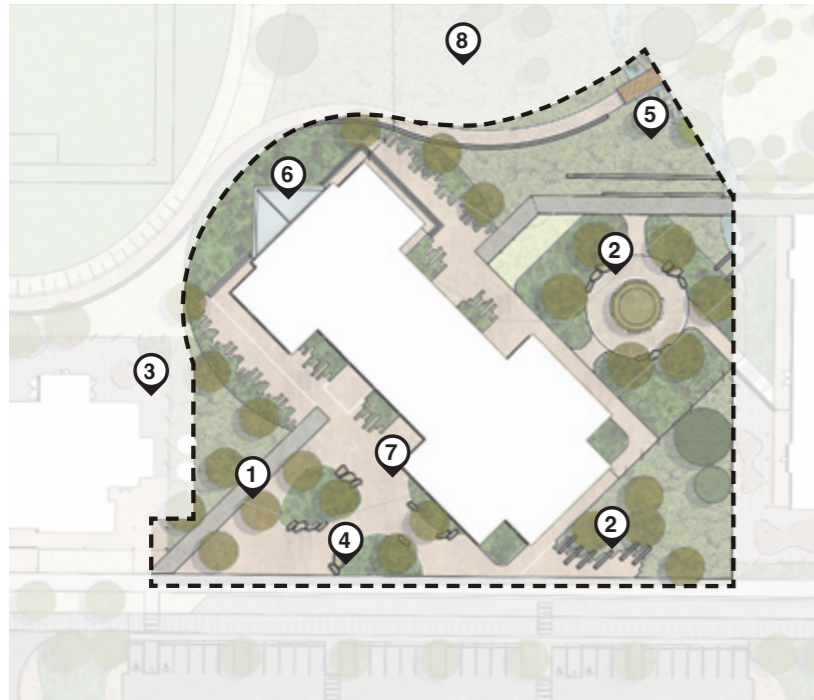
The key space typologies are as follows:

LEGEND

- ① Entry Feature Walls
- ② Native Revegetation Planting
- ③ Bushland Adventure Trail
- ④ Gathering Space
- ⑤ Endemic Species Arboretum
- ⑥ Fenced Narnia Play Area
- ⑦ Drop Off Zone
- ⑧ Bus Bay and Shelter
- ⑨ Formal Terraced Seating
- ⑩ Cobbled Pavement Slow Zone



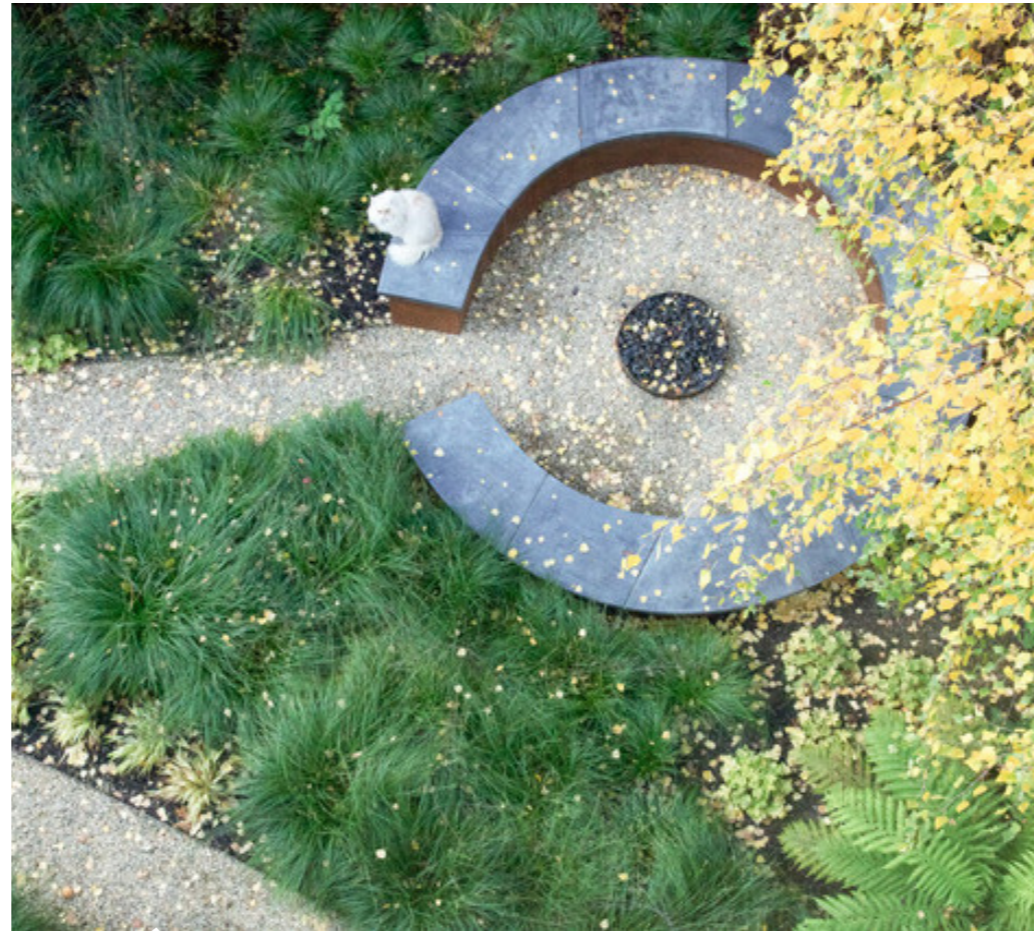
5.4.4 Welcome Precinct - School Entry



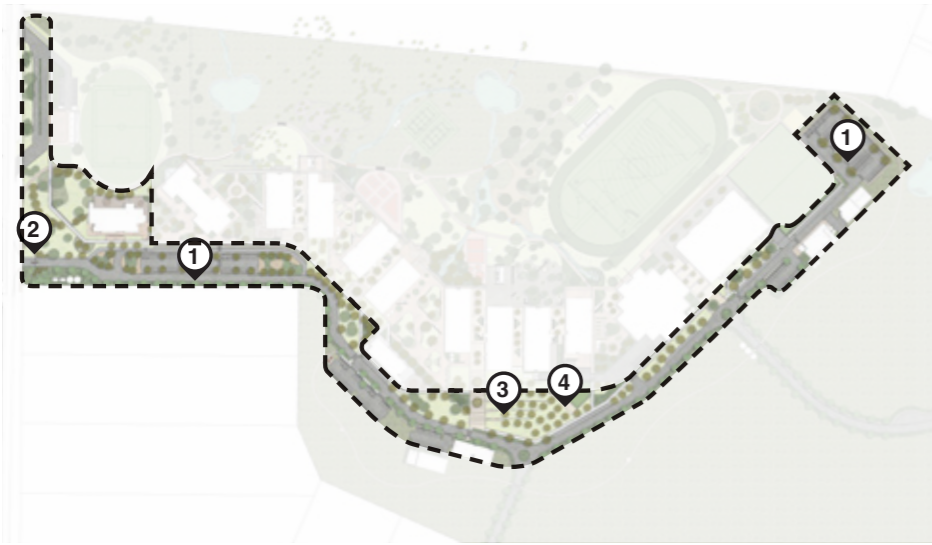
N.T.S. ⌚

LEGEND

- ① Covered Access Spine
- ② Passive Seating Space
- ③ Fenced Narnia Play Area
- ④ Welcome Plaza
- ⑤ Dry Swale
- ⑥ Chapel Reflection Pond and Planting
- ⑦ Cafe Outdoor Dining



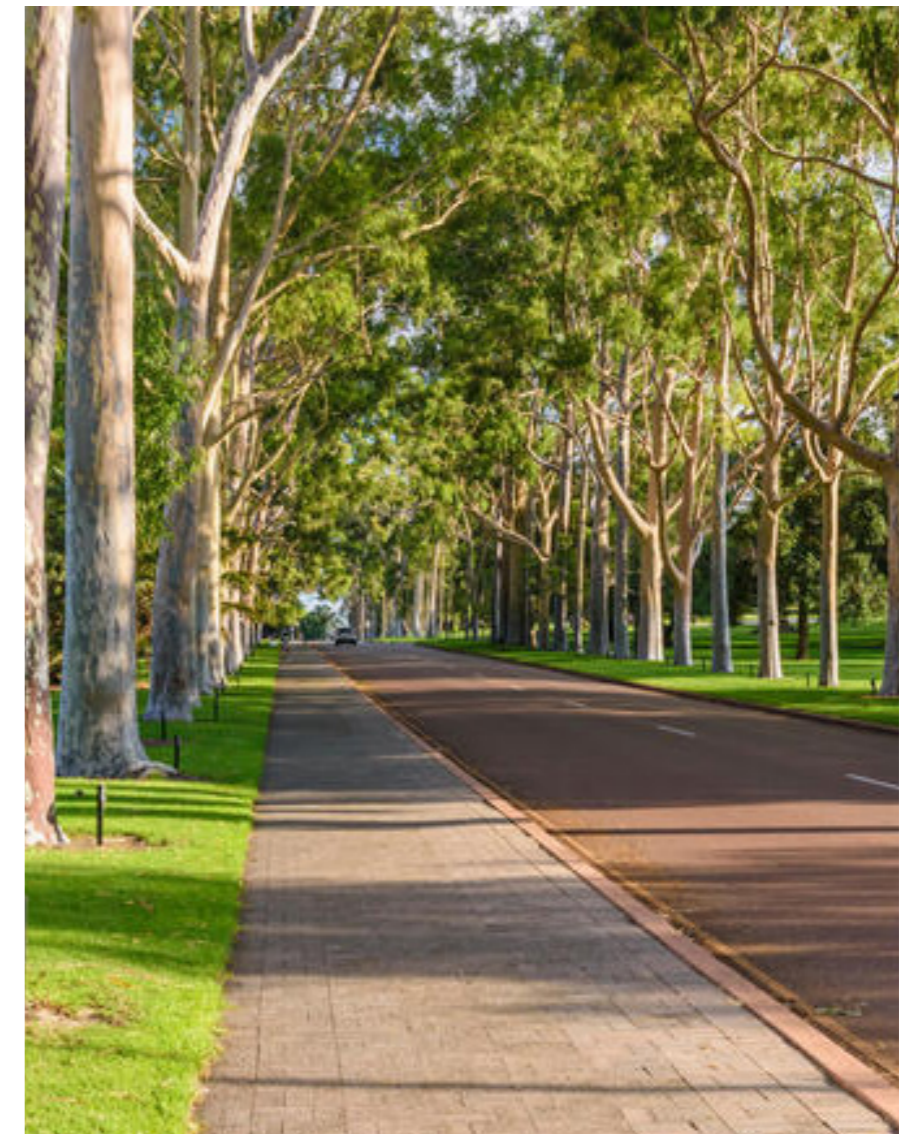
5.4.5 Welcome Precinct - Vehicular Infrastructure



N.T.S. ⌚

LEGEND

- ① Formal canopy shading along roads and carparks
- ② Entry Feature Walls
- ③ Shaded Terraced Seating
- ④ School Arboretum
- ⑤ Bus Bay



5.5 Recreation Precinct

The Recreational Precinct aims to provide a high quality active environment for students and the wider community that is multi functional, flexible and inclusive.

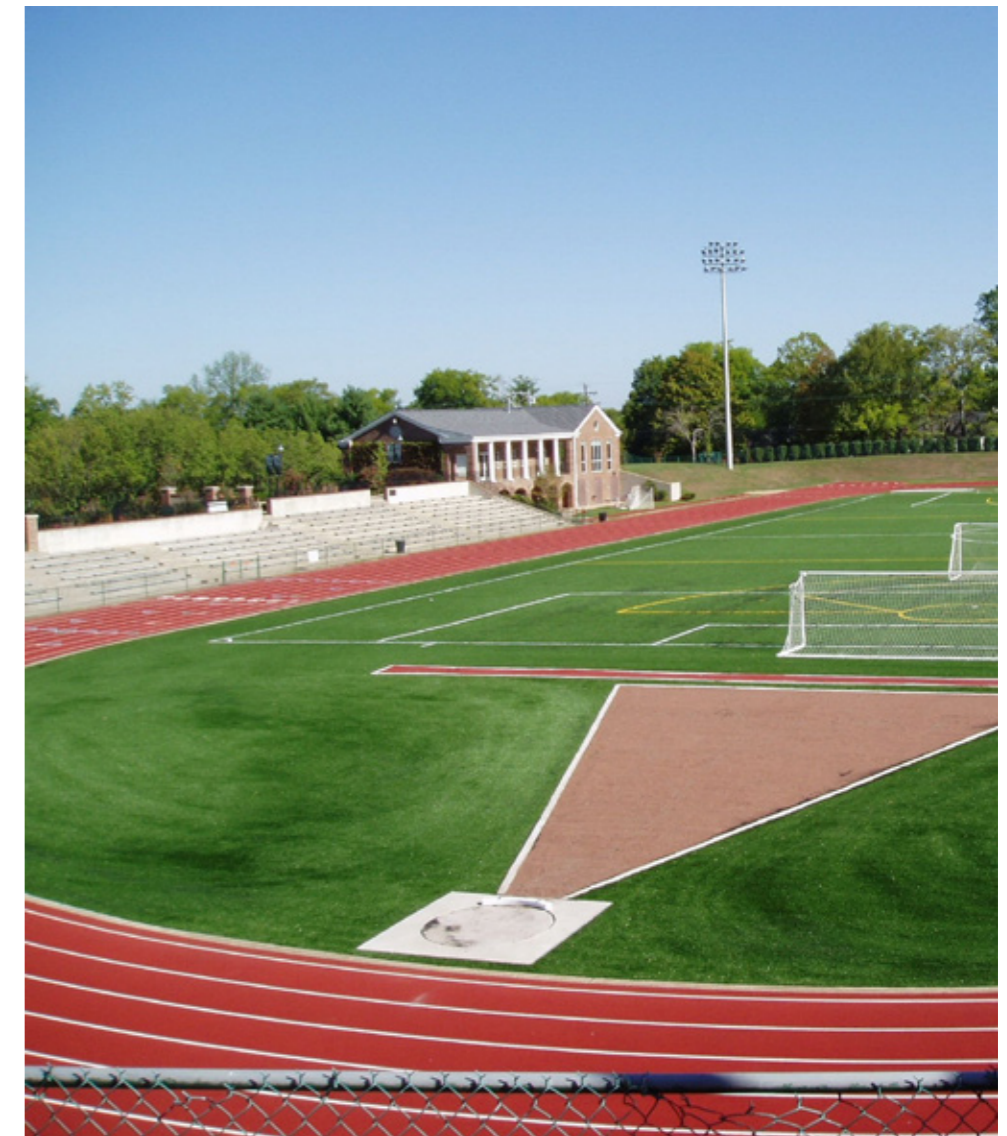
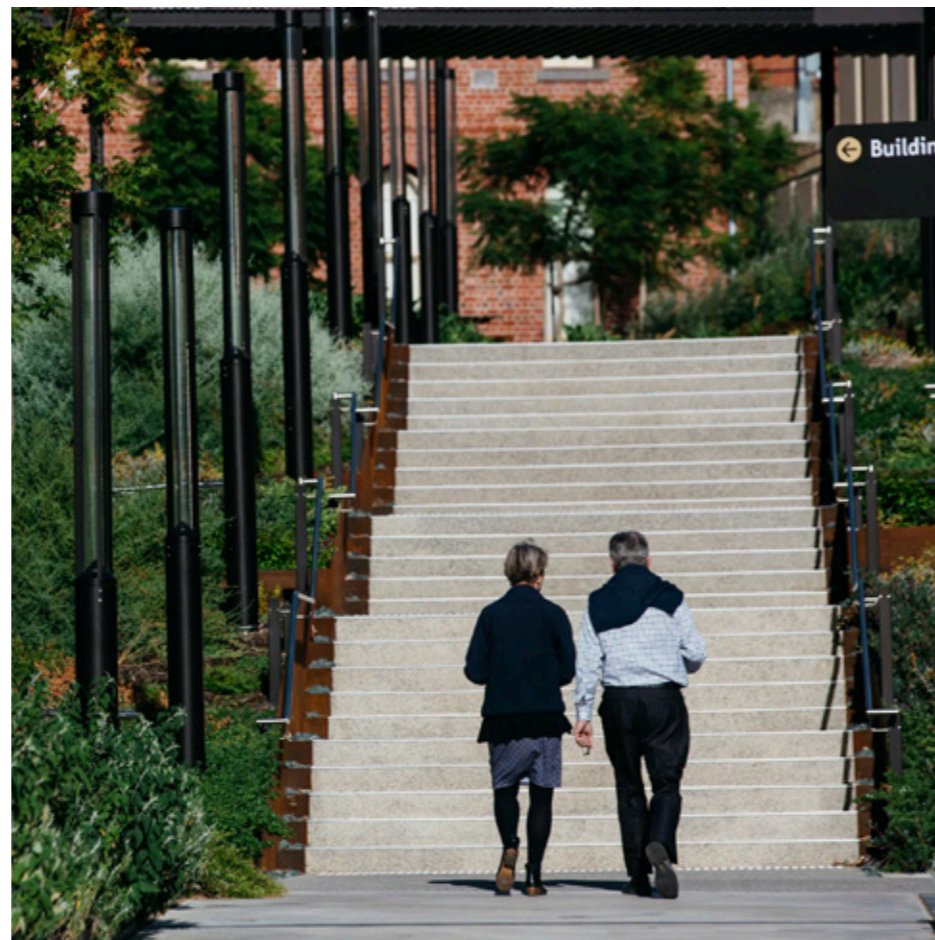
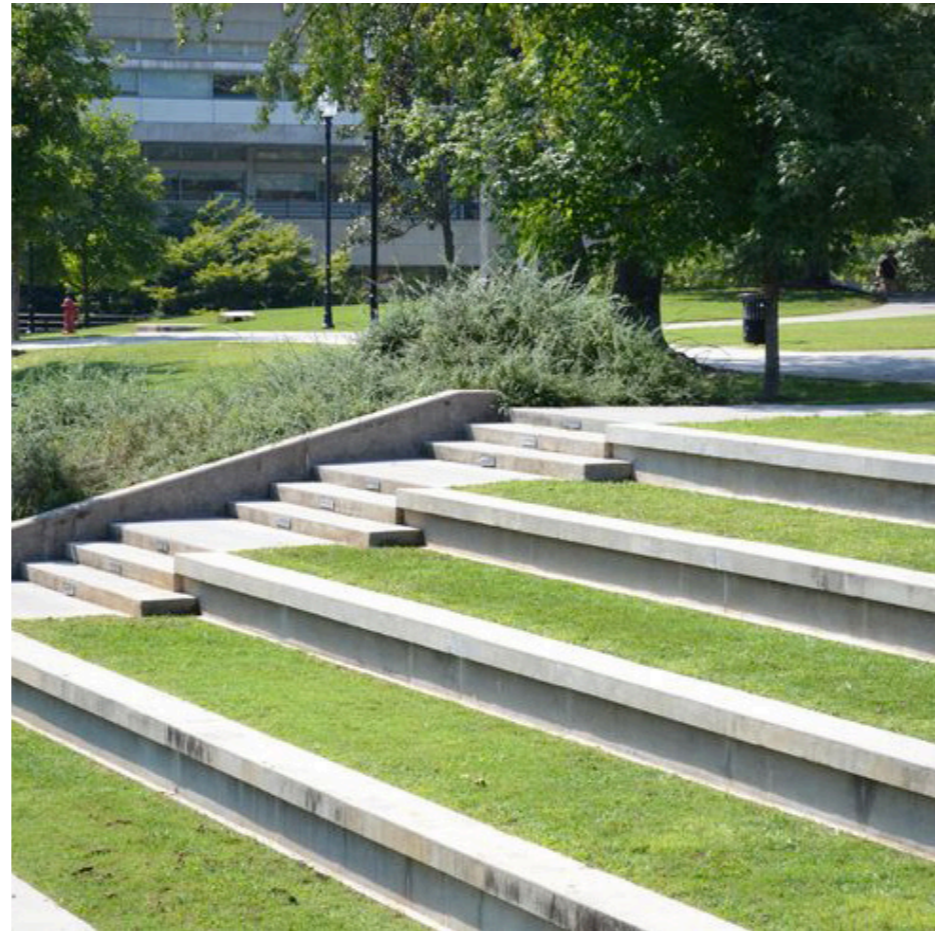
The design will provide sports facilities that are nestled in the bushland to create an idyllic location to engage in recreation. Retention of existing vegetation and provision of additional revegetation pockets will aid in providing ample shade and shelter amenity.

The proposed design considers usage throughout the day and weekend and facilitates out of hours functions such as after school sports and training as well as high quality recreational facilities for students.

The design will provide appropriate amenity to spectators including shade, seating, and parking.

Access and movement will be underpinned by the desire to maintain and enhance key site lines and to ensure CPTED and user safety principles whilst ensuring inclusive access and adequate maintenance access. This will be complemented by appropriate wayfinding and signage to assist visitors.

A focus is placed on enhancement of the sites vegetation with the inclusion of species native to the local region, which is important in maintaining environmental integrity and providing visual integration with the surrounding areas. The design will also celebrate the natural setting through material and furniture selection.



5.5.1 Recreation Precinct - Key Design Moves



Key plan

1. Spectator/Student Amenity



Provide appropriate amenity to spectators including shade, seating, access and parking.

2. Multi-functional Use



Encourage after hours usage by the school and wider community through the provision of elements that support activities such as outdoor fitness equipment, after school sports training and water bottle filling stations.

3. Views



Maintain and enhance views toward the natural landscape and control views into development from the Arizona Road. Ensure adequate views are maintained out of and into the sports fields.

4. Movement





Provide a hierarchy of logical pedestrian thoroughfares to allow for education and reflection. Balance this with inclusive, direct access through pedestrianised accessed roads, maintenance vehicles and parking needs.

5.5.2 Recreation Precinct - Pedestrian Circulation

Pedestrian access and circulation is underpinned by the desire to create a legible pedestrian network that responds to the key entries and maintains key site lines.



LEGEND

-  Key Entries
-  Major Circulation
-  Minor Circulation



5.5.3 Recreation Precinct - Concept Plan

The Concept demonstrates the proposal for the Recreation Precinct. The precinct considers the appropriate amenity to spectators including shade, seating and access as well as a focus on flexible spaces for the school and wider community, encouraging after hours use. The design responds to the natural landscape, through maintenance of existing bushland which are major contributors to the site's character.

The key space typologies are as follows:

LEGEND

- ① Garden Plaza
- ② Covered Passive Seating Space
- ③ Terraced Spectator Seating
- ④ Warm Up Field and Sports Courts
- ⑤ Sand Volleyball Courts
- ⑥ Opportunity for Sports Loop Path
- ⑦ Existing vegetation around perimeter of fields



5.6 Environmental Precinct

The Environmental Precinct involves showcasing and integrating the environmental functions and ecological features into the school and as a reflective and education space for students.

The precinct will focus on engagement with the environment for quiet reflection and spiritual repose. The existing bushland contains a number of significant species such as *Xanthorrhoea*, *Eucalyptus haemostoma*, *Leucopogon parviflorus* and threatened species including *Angophora inopina*, as well as local fauna inhabiting the site.

A more intimate adventure and discovery trail that is sensitive to the natural environment will be developed to provide connection with nature and opportunity for educational programs such as local flora and fauna, water systems and revegetation schemes that includes cultivation and propagation within an on-site arboretum. The trail will include a range of smaller flexible informal passive seating spaces complemented by signage and sculptural elements encourage environmental education and stewardship.

The existing creeklines located on the site will be enhanced and celebrated, providing additional elements including dry swales and basins to provide water quality and drainage systems that can be visually appreciated as well as interacted with for play and education purposes.

It is envisioned that this area would have a strong emphasis on connecting with country demonstrated through educational signage and place names.



5.6.1 Environmental Precinct - Key Design Moves



Key plan

1. Movement



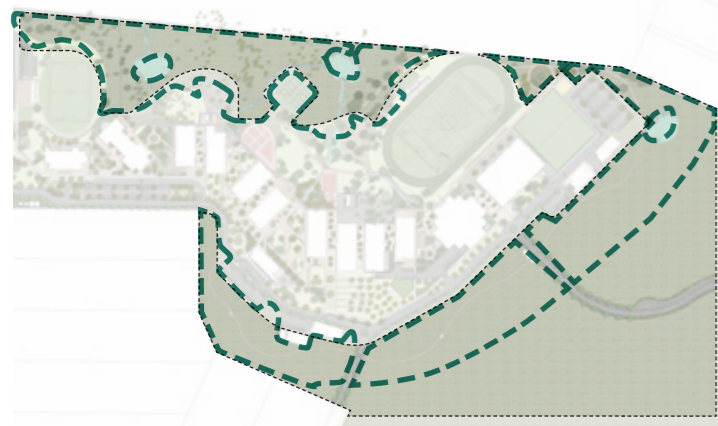
Provide logical pedestrian thoroughfares that provide connection to the existing environment and to key destinations.

2. Views



Maintain and enhance views toward the natural features of the landscape and consider framed views into development.

4. Ecology



Retain existing vegetation and enhance the environment through revegetation of endemic species on site to retain the ecological function and character of the site.

5. Hydrology



Investigate opportunities to enhance the hydrology of the site and improve drainage and levels to increase usability, access and safety.

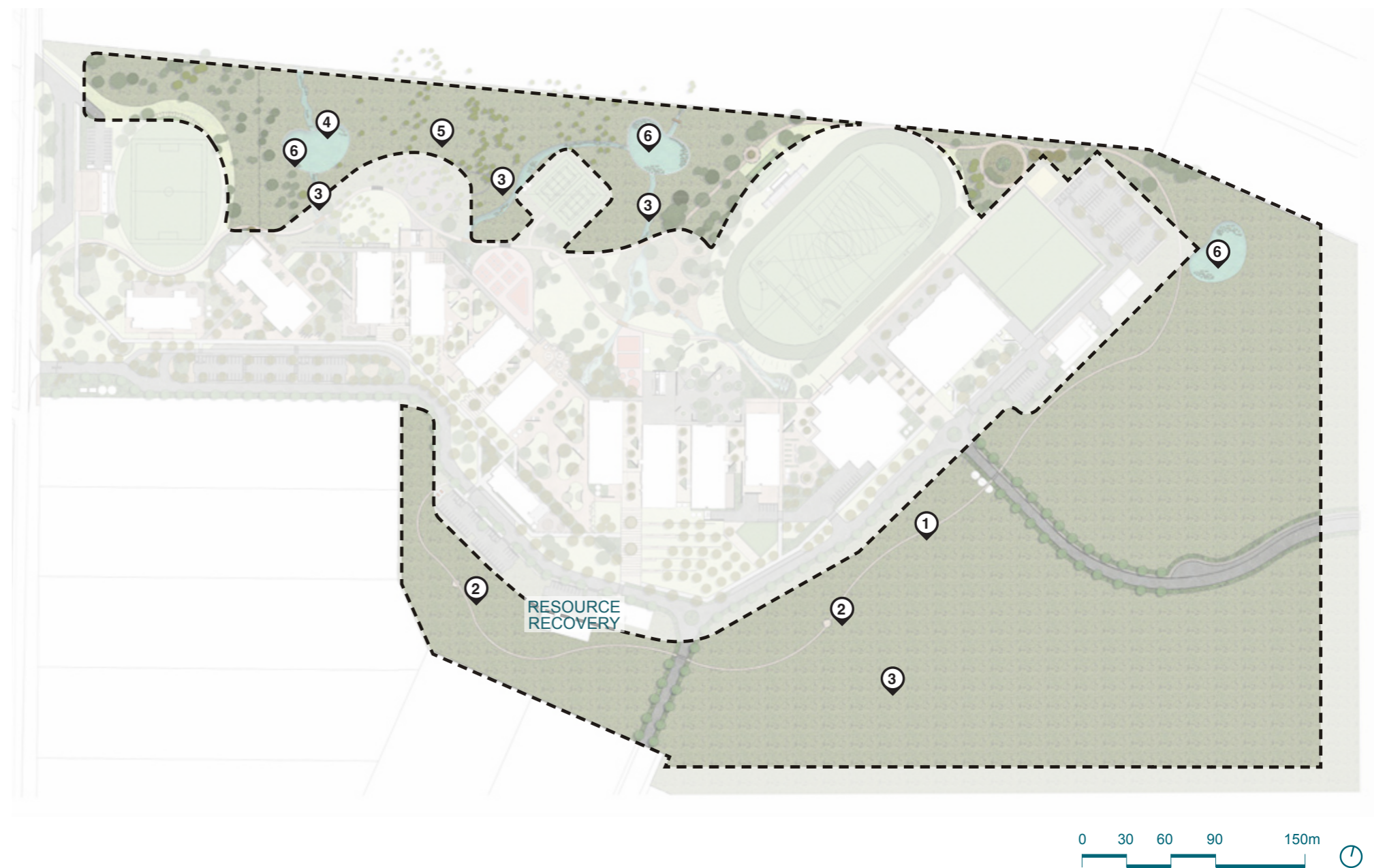
5.6.2 Environmental Precinct - Concept Plan

The adjacent Concept demonstrates our initial ideas for the Environmental Precinct. The precinct includes a combination of trails, passive seating areas, swales and footbridges to enhance, celebrate and improve the area's natural assets to provide a space for students and visitors to engage in quiet reflection and spiritual repose.

The key space typologies are as follows:

LEGEND

- ① Bushland Adventure Trail with opportunity for Cross Country
- ② Informal Passive Seating and Outdoor Learning Nodes
- ③ Vegetated Dry WSUD Swale
- ④ Basin Observation Point
- ⑤ Existing Charmhaven Apple tree cluster
- ⑥ Stormwater Detention Basin



06

Theming



6.1 Plant Palette

Trees



Eucalyptus sideroxylon
Mugga Ironbark



Eucalyptus haemostoma
Scribbly Gum



Eucalyptus gummifera
Red Bloodwood



Angophora costata
Smooth-Barked Apple



Melaleuca linarifolia
Snow-in-Summer



Allocasuarina littoralis
Black She-Oak



Tristaniopsis laurina
Water Gum

Shrubs



Leucopogon parviflorus
Coast Beard-Heath



Banksia oblongifolia
Fern Leaf Banksia



Banksia spinulosa
Hairpin Banksia



Acacia longifolia
Sydney Golden Wattle



Lambertia formosa
Mountain Devil



Leptospermum trinervium
Flaky-barked Tea-tree



Isopogon anemonifolius
Drumsticks

Groundcovers and Grasses



Dillwynia tenuifolia
Parrot Pea



Myoporum parvifolium
Creeping Boobialla



Entolasia stricta
Wiry Panic



Dianella caerulea
Blue Flax-Lily



Poa labillardieri
Tussock Grass



Xanthorrhoea gracilis
Grass Boy



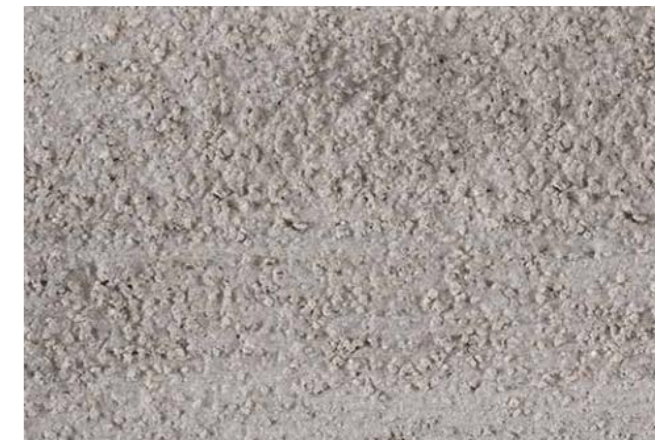
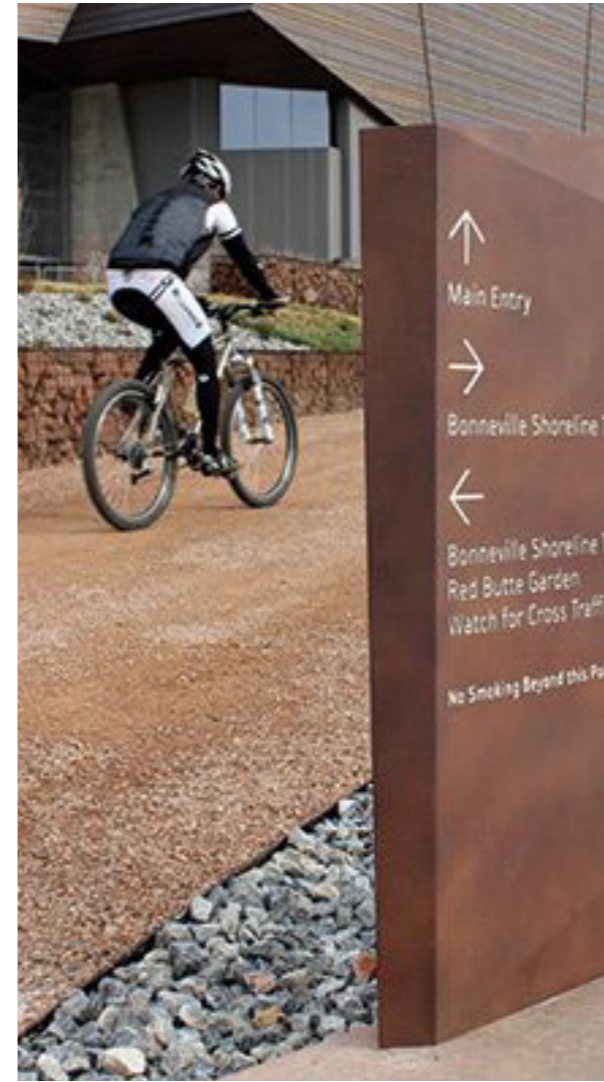
Themeda australis
Kangaroo Grass



Baumea rubiginosa
Soft Twig Rush

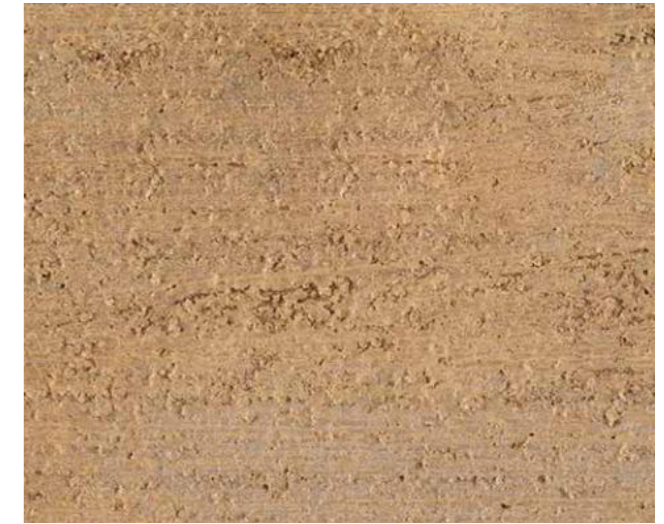
6.2 Material & Furniture Palette - Welcome Precinct

The material and furniture palette for the Welcome Precinct will consist of a refined and linear form with materials and furniture of a slightly more formal nature than the Learning Precinct to create contrast. Paved access spines, concrete linear pathways, concrete seating walls and connection to country through things like feature pavement inlays and place naming.



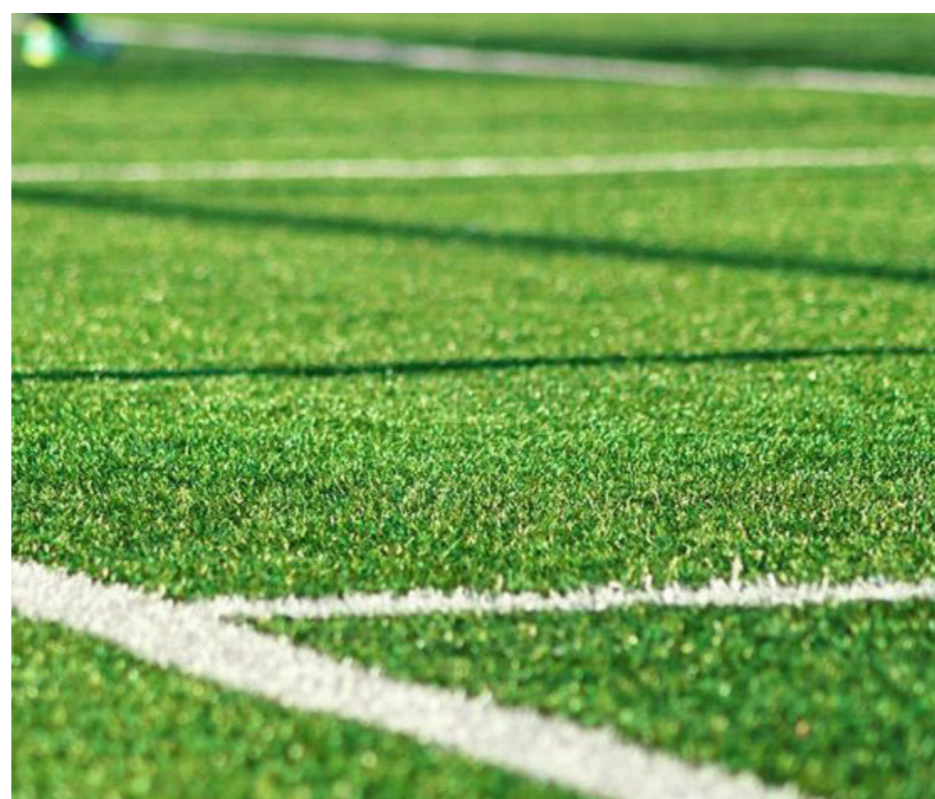
6.3 Material & Furniture Palette - Learning Precinct

The material and furniture palette for the Learning Precinct consists of a number of natural materials including mulch, gravel and natural coloured concrete paths. Furniture including rammed earth and sandstone seating as well as the use of large boulders provides informal seating options and a connection to the existing landscape.



6.4 Material & Furniture Palette - Recreation Precinct

The material and furniture palette for the Recreation Precinct consists of turf fields, artificial turf sport courts and rubber athletics track. A series of sandstone seating walls provide amenity for spectators and furniture such as water bottle filling stations and fitness equipment encourages further utilisation of the active zones.



6.5 Material & Furniture Palette - Environmental Precinct

The Environmental Precinct will seek to establish a series of curated spaces to allow people to break away, contemplate and immerse themselves in the natural beauty of the site. A decomposed granite discovery trail with timber footbridges across swales, will weave through the existing bushland. This will include a number of informal seating nodes that allow for learning spaces, contemplation and immersing themselves in the beauty of the site.



6.3 Play Structures & Fitness Palette

The play structures and fitness palette will consist of nature play elements including boulders, timber logs, timber hoppers and rope climbing and balance elements as well as structure play such as towers and slides. The palette will also feature multi-purpose ball court equipment, ninja park and outdoor fitness equipment stations.



07

Staging



7.1 Staging

The School will be developed in stages as the student enrolment increases and the School's population expands. The intention is to develop the building units and associated landscapes in sequential blocks as illustrated, with the time frames shown.

For details of the building development sequence refer to the Architectural design package.





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