

Revision B

23069L

MSM Architects

24 October 2025

# Ascension College - Stage 01

3 Nortons Lane, Wantirna South

*Wurundjeri Woi-wurrung & Bunurong Country*

Landscape Concept Design

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# ratio:

# Acknowledgment of Country

We respectfully acknowledge the Traditional Custodians of the lands where we live and work. We appreciate the rich cultures and deep spiritual connection to Country and pay our respects to Elders past, present, and emerging.

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# Introduction

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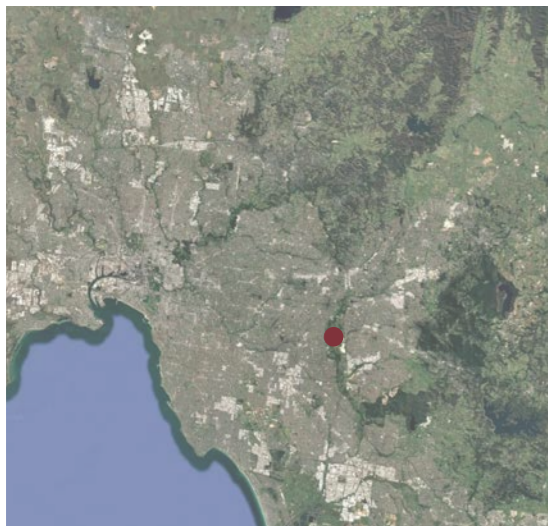
# Site Context

## Nortons Lane, Wantirna

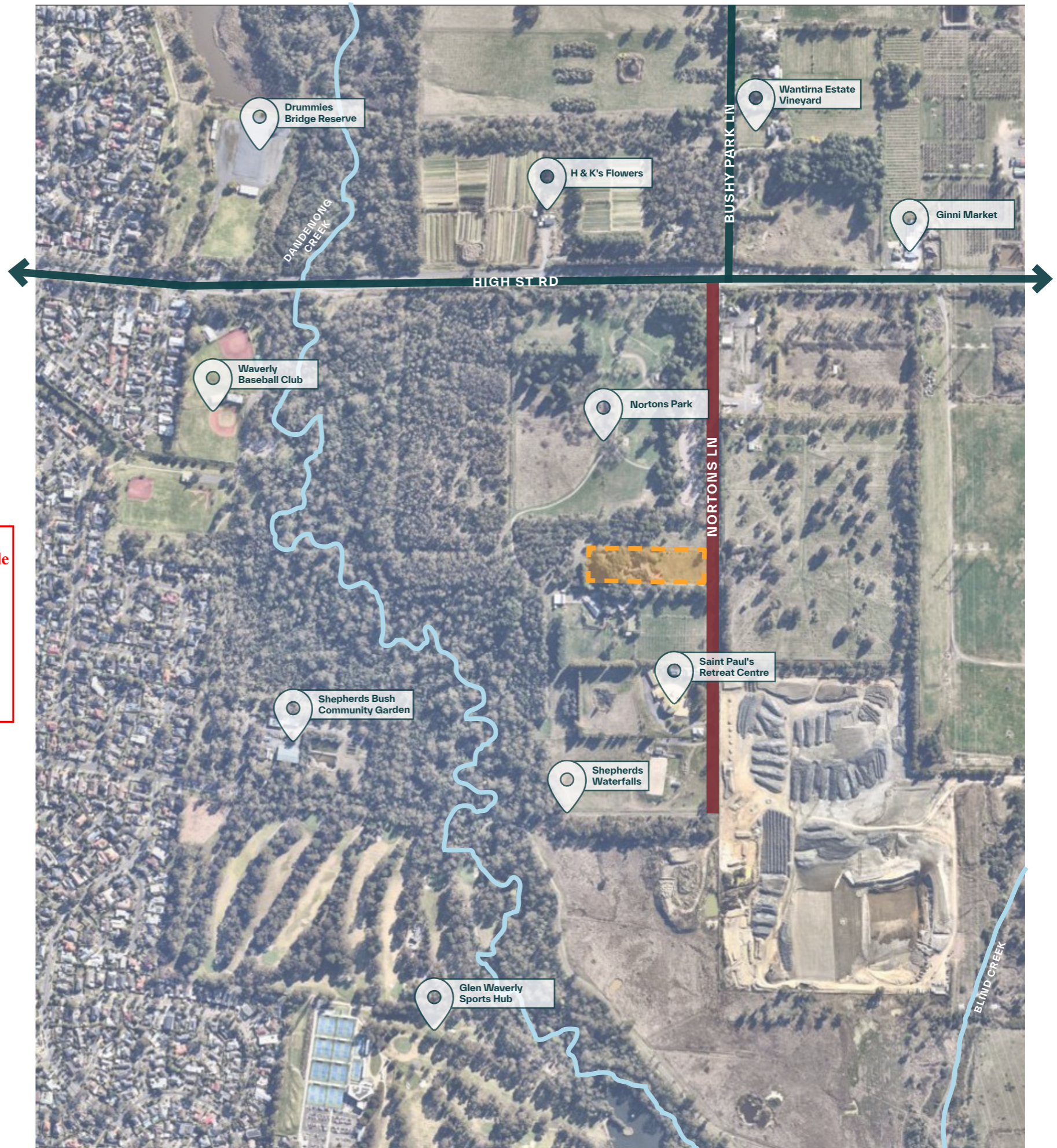
- Nortons Lane in Wantirna South is a quiet, semi-rural street known for its large residential properties and proximity to natural parklands.
- Situated within the Dandenong Valley Parklands, the area offers access to scenic walking and cycling routes, including the Blind Creek Trail and Dandenong Creek Trail, making it popular for outdoor recreation.
- Nortons Park, located nearby, provides open green spaces and links to surrounding reserves such as Koomba Park and the EastLink Trail.
- The area combines spacious living with a strong connection to nature, while still being close to suburban amenities and Melbourne's eastern urban network.

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### KEY PLAN



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# Existing Conditions

## Nortons Lane, Wantirna

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### LEGEND

- ① Existing vegetation on the eastern edge of the site
- ② Nortons Park, looking south towards the site
- ③ Dandenong Creek Trail

- The existing site contains a single storey residential home, with landscaped gardens offering views towards Mt Dandenong.
- Many mature trees exist on site with a selection to be retained during Stage 01 & 02 works. The vegetation outside of the site is a combination of exotic planting and a high percentage of remnant pre-colonial vegetation.
- Nortons Park, adjacent to the site, falls within the Dandenong Valley Parklands, maintaining an essential green corridor along the Dandenong Creek.

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# EVC Study

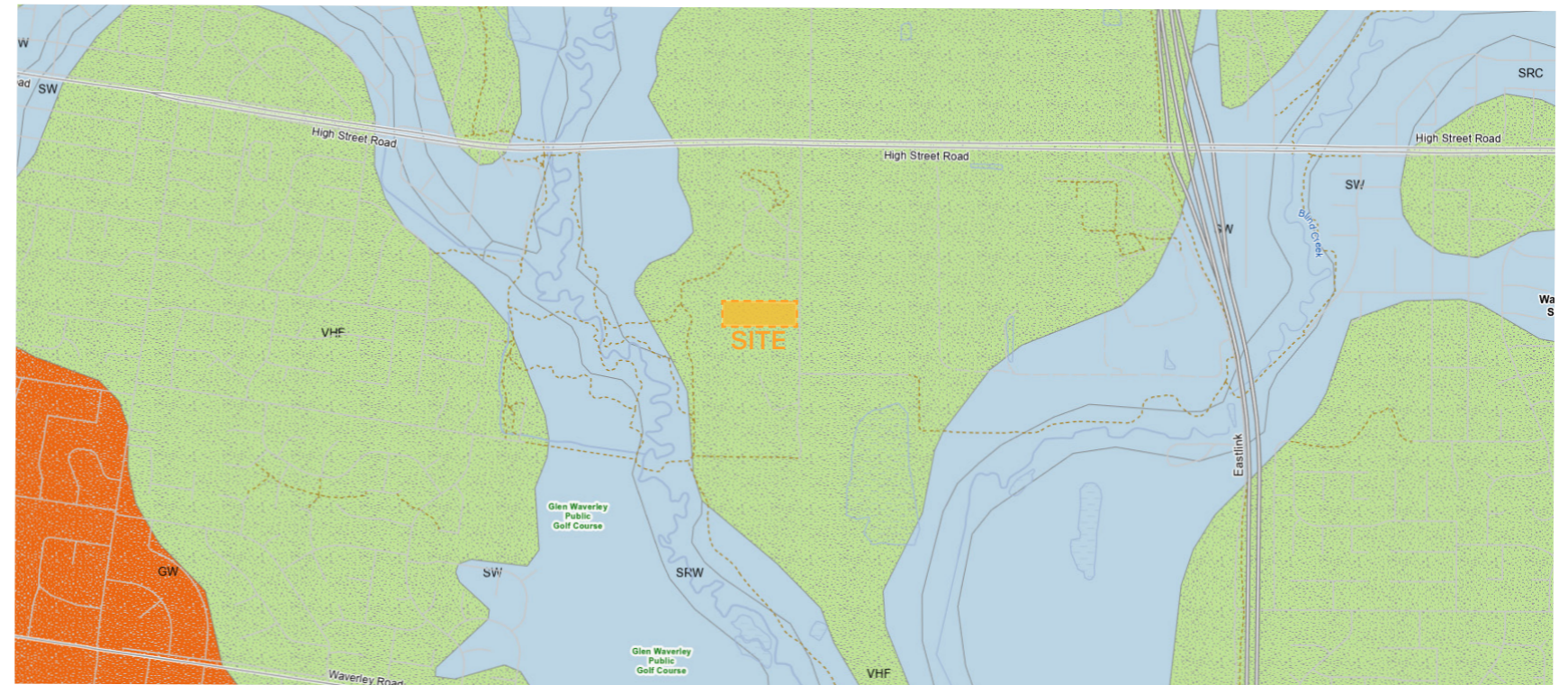
## Indigenous Flora

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## Ecological Vegetation Classes

- Ecological Vegetation Classes (EVCs) are the standard system used in Victoria to describe and map native vegetation.
- Each EVC represents a group of plant communities that occur in similar environmental conditions (such as landform, soil and climate), and share characteristic species, vegetation structure and ecological processes.
- EVCs are benchmarked against their pre-1750 condition and are assigned a conservation status, which helps guide biodiversity planning, impact assessment and ecological restoration.



## EVC 127 - Valley Heathy Forest

- Valley Heathy Forest is a medium to tall open eucalypt forest, typically 15–25 m high, occurring on gentle lower slopes, valleys, and drainage lines in foothill landscapes.
- The canopy is commonly dominated by Messmate Stringybark, White Stringybark, and Narrow-leaf Peppermint.
- A dense to open understorey of heathy shrubs such as Prickly Tea-tree, Common Heath, and Myrtle Wattle is supported, with a sparse ground layer featuring sedges, grasses, and lilies like Mat-rush, Sword-sedge, and Flax-lily.
- Found on moderately fertile, well-drained soils in higher rainfall zones, this EVC provides valuable habitat and often forms a transition between drier foothill forests and wetter gully vegetation, though much of it has been degraded by clearing, logging, and altered fire regimes.



# Landscape Vision

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# Landscape Character

## Nature Play & Outdoor Learning

- Draw inspiration from environments that seamlessly integrate play, exploration, and education within natural settings.
- Emphasize diverse topography, native plantings, and sensory-rich elements such as logs, boulders, water features, and sand areas, encouraging children to interact with their surroundings physically and cognitively.
- Outdoor classrooms, open-air amphitheatres, and interpretive trails support structured learning alongside imaginative, unstructured play.
- Prioritize safety, accessibility, and inclusivity, ensuring all users can engage with the landscape.
- Blend ecological features with playful and educational opportunities to foster curiosity, resilience, and a connection to the natural environment.



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### LEGEND

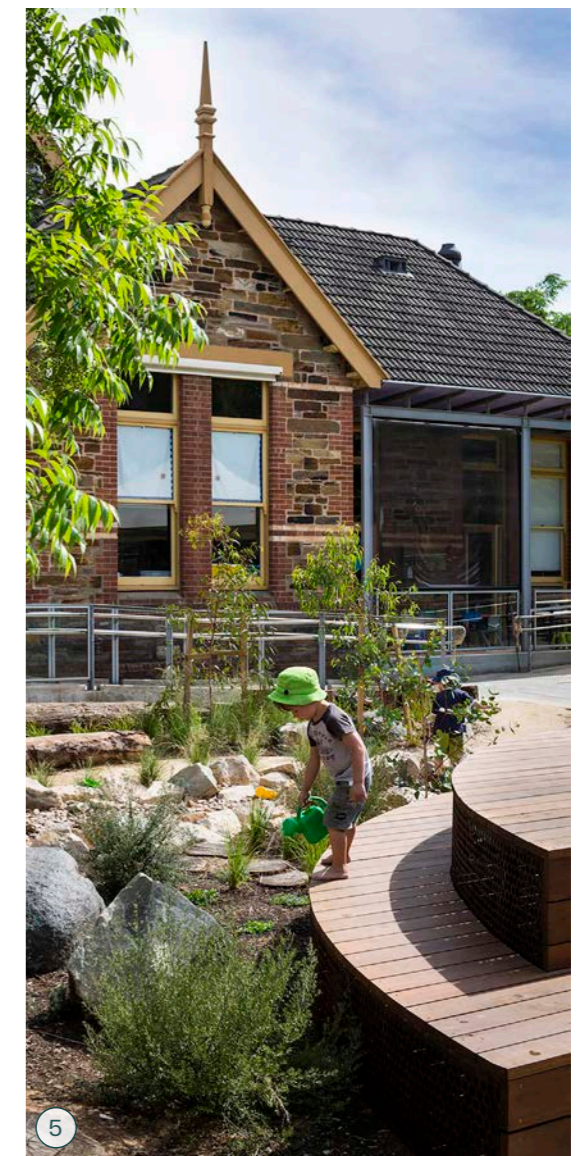
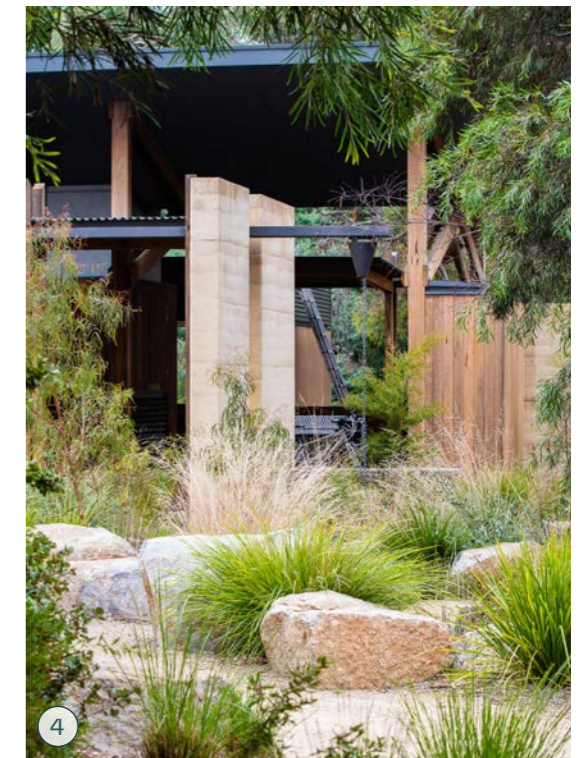
- ① Nature-based play using reclaimed timber for balance and exploration.
- ② Timber steppers to encourage non-competitive play
- ③ Landscape immersion through plant identification tags
- ④ DDA compliance to ensure inclusivity of every play element
- ⑤ Clear site lines across playscape to promote passive surveillance.

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# Landscape Character

## Active & Passive Amenity

- Focus on creating a balanced mix of recreation, relaxation, and social spaces that support students' physical, mental, and social wellbeing.
- Active areas often include open play fields, running areas, and climbing structures designed to encourage movement, teamwork, and skill development.
- In contrast, passive amenities such as shaded seating areas, quiet gardens, outdoor classrooms, and sensory spaces provide opportunities for rest, reflection, and small-group interaction.
- Highlight the importance of flexibility, accessibility, and inclusivity, ensuring spaces cater to diverse age groups and abilities while supporting a variety of learning and play styles.
- Consider spaces that activate during drop-off and pick-up times, creating vibrant and dynamic places.



### LEGEND

- ① Break-out zones centered around quiet, reflective activities
- ② Central access point affords seating and play elements
- ③ Natural seating elements recessed into garden beds
- ④ Native planting palette and rock works combine play, rest, and education
- ⑤ Dynamic spaces provide a range of activities and learning opportunities

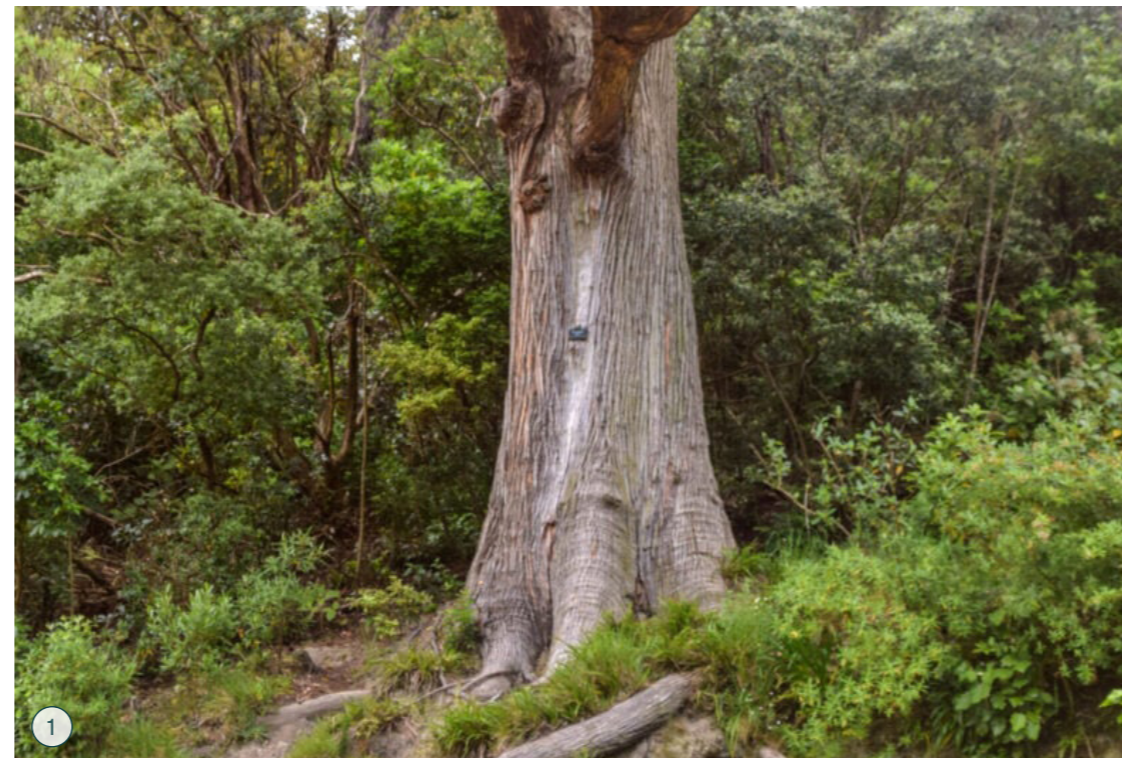
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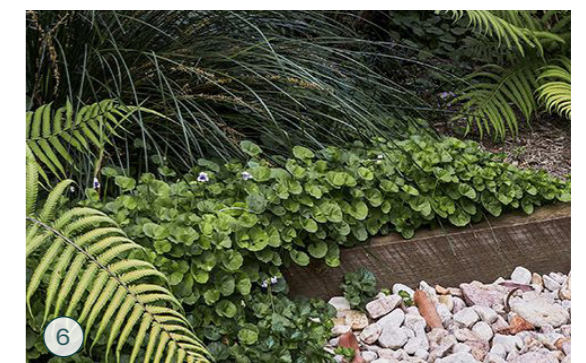
# Landscape Character

## Gardens & Planting

- The landscape design centres around a forest garden concept, creating a lush, immersive retreat that balances ecology, privacy, and softness.
- Messmate (Eucalyptus obliqua) forms a sculptural canopy that visually frames and encloses the space while referencing the local vegetation character.
- Shade-tolerant understorey planting and a small-feature trees help create a cooler microclimate and define a calm transitional edge.
- On northern and western interfaces the planting shifts to a native flowering palette, drawing inspiration from native grasslands.



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### LEGEND

- ① Messmate forest with native understorey
- ② Vibrant native flowering palette
- ③ Shallow soil native planting and rockery
- ④ Native palette to provide enhanced pollination and biodiversity
- ⑤ Native grasses to provide movement and reflect sunlight
- ⑥ Native fernery and groundcovers to south elevation and low light zones

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# Landscape Concept

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# Design Pillars



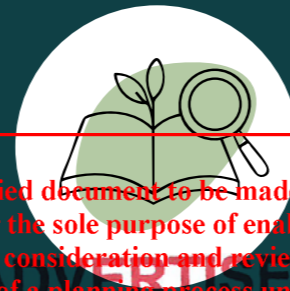
## Celebrate Connection to Country & Dandenong Creek

- Honour the rich cultural heritage of the Wurundjeri Woi-wurrung and Bunurong by embedding indigenous stories and native planting.
- Showcase the Dandenong Creek corridor's biodiversity through native planting palettes and interpretive learning trails.
- Use gathering spaces to share local stories, songlines, and ecological knowledge.
- Incorporate artwork, signage, and play features inspired by Country and local landscapes.



## Child-Centered Play & Exploration

- Integrate nature-based play areas, adventure zones, and open lawns.
- Provide opportunities for imaginative and unstructured play.
- Include climbing structures, sand and water play, and balance elements.
- Design age-appropriate zones to cater to different developmental needs.



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## Learning Through Landscape

- Outdoor classrooms with seating, shade, and flexible teaching zones.
- Native planting gardens for environmental studies and science projects.
- Seasonal gardens and food-growing areas for hands-on learning.
- Signage and interpretive elements to encourage curiosity and knowledge sharing.



## Safety, Accessibility & Inclusivity

- Apply universal design principles: step-free paths, wide circulation zones, and smooth transitions between surfaces.
- Use clear wayfinding systems with colour coding, icons, and multilingual signage.
- Design sensory-friendly retreats where students can regulate emotions or take breaks from overstimulation.
- Provide shaded seating, safe fencing, and lighting to ensure comfort and security.



## Integrated Water Management

- Prioritises the integration of sustainable water management into the school landscape, using strategies such as rain gardens, swales, wetlands, permeable surfaces, and water harvesting systems.
- Design as interactive learning and play spaces, allowing students to engage directly with natural water cycles and ecological processes.
- Incorporate native vegetation and habitat zones to supports biodiversity while enhancing the aesthetic and educational value of the campus.
- Ensure that water management is resilient, multifunctional, and seamlessly embedded within both active and passive outdoor environments.

# Landscape Plan

## Masterplan - Stage 01

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#### LEGEND

- |   |                         |   |                     |
|---|-------------------------|---|---------------------|
| ① | Grades 1 & 2 Playground | ⑥ | Car Park & Entrance |
| ② | Prep Playground         | ⑦ | Tree Planting       |
| ③ | Grades 3-6 Playground   | ⑧ | Raised Garden Bed   |
| ④ | Soccer Field 32 x 23m   | ⑨ | Fire Tanks & Pump   |
| ⑤ | Seating Nodes           | ⑩ | Stage 02 Works      |



# Landscape Plan

## Detail Plan - Grades 1 & 2 Playground

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### LEGEND

- ① DDA compliant ramp
- ② Gathering circle
- ③ Monkey bars
- ④ Rope bridge
- ⑤ Rope tower
- ⑥ Timber log steppers
- ⑦ Stone steppers & seating
- ⑧ Slide
- ⑨ Seating node & quiet zone
- ⑩ Feature tree
- ⑪ Dandenong Creek story
- ⑫ Perimeter fence 2100mm



# Landscape Plan

## Detail Plan - Prep Playground

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### LEGEND

- ① DDA compliant ramp
- ② Play house & interactive beams
- ③ Balance beam & stepper garden
- ④ Water course
- ⑤ Timber bridge
- ⑥ Sunken sand pit
- ⑦ Stone steppers & seating
- ⑧ Rope tunnel
- ⑨ Seating node & quiet zone
- ⑩ Feature tree
- ⑪ Dandenong Creek story
- ⑫ Perimeter fence 2100mm



# Landscape Plan

## Detail Plan - Grades 3-6 Playground

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### LEGEND

- ① Play tower
- ② Rope bridge
- ③ Climbing wall
- ④ Rope tower
- ⑤ Raised play house
- ⑥ Seating node & quiet zone
- ⑦ Feature tree
- ⑧ Perimeter fence
- ⑨ Tiered seating
- ⑩ Soccer field



# Landscape Plan

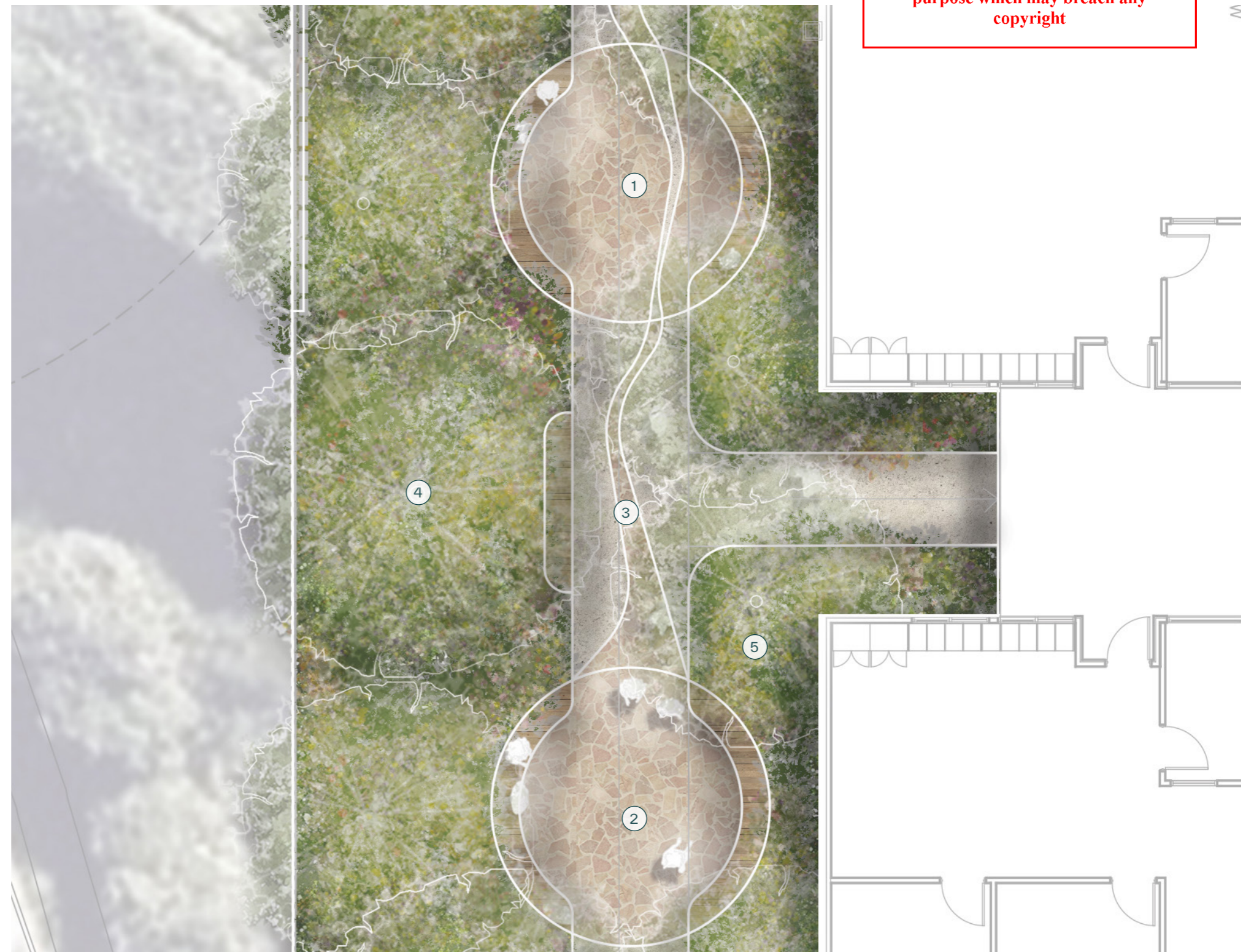
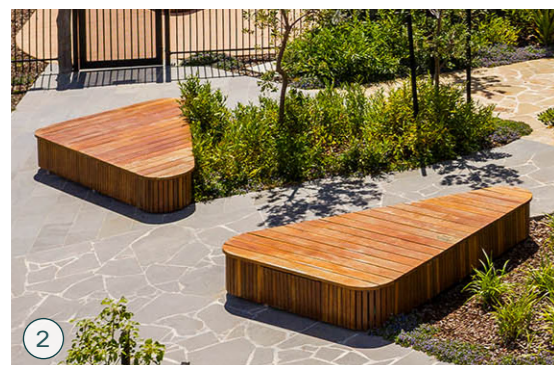
## Detail Plan - Seating Nodes

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### LEGEND

- ① Seating node
- ② Feature paving
- ③ Dandenong Creek story
- ④ Feature tree
- ⑤ Planter beds



Scale: 1:100 @A3



# Landscape Sections

## Section AA - Prep Playground

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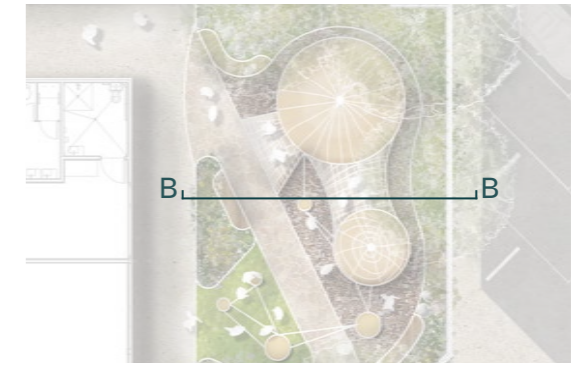
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# Landscape Sections

## Section BB - Grades 3-6 Playground

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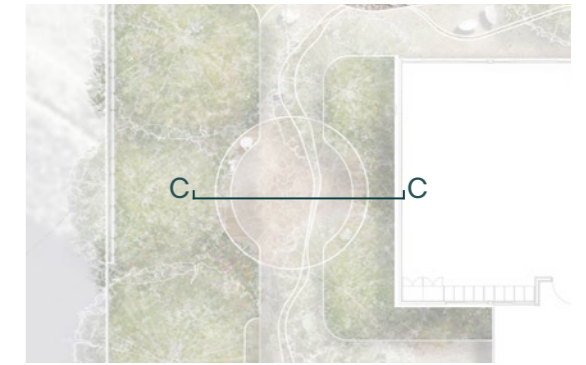
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# Landscape Sections

## Section CC - Seating Nodes

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# Planting & Materials

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# Planting

## Indicative Tree Selection

- Emphasise the use of diverse native and feature species to create a landscape that supports biodiversity, shade, and learning opportunities.
- Trees such as *Elaeocarpus reticulatus*, *Eucalyptus obliqua*, and *Viminaria juncea* provide habitat, seasonal interest, and screening, while *Fraxinus griffithii* offers shade and formal structure for playgrounds, courtyards, and open play areas.
- Tree ferns like *Cyathea cooperi* and *Dicksonia antarctica* contribute vertical structure, microclimate cooling, and tactile, sensory experiences, ideal for outdoor classrooms and nature play zones.
- Collectively, these plantings support active and passive recreation, ecological education, and a connection to the natural environment within the school grounds.



### LEGEND

- ① *Elaeocarpus reticulatus*
- ② *Eucalyptus obliqua*
- ③ *Viminaria juncea*
- ④ *Fraxinus griffithii*
- ⑤ *Dicksonia antarctica*

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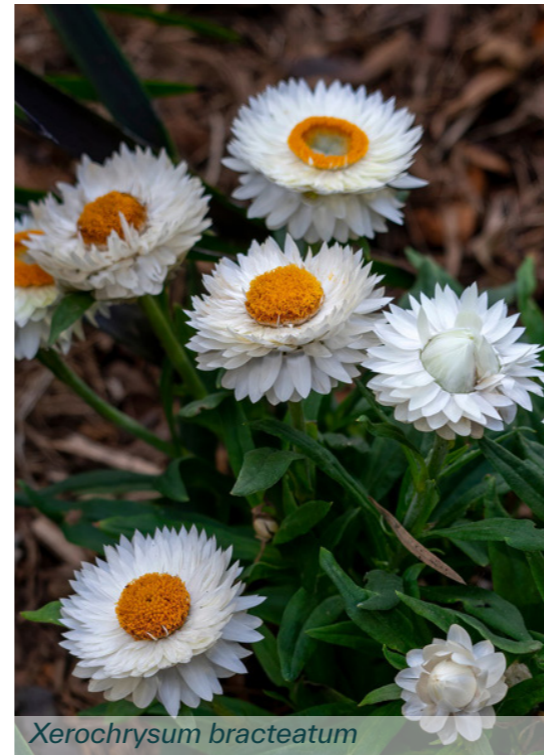
# Planting

## Indicative Plant Selection

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### Car Park & Entrance

- At ground level, the soft landscape builds on a calm and inviting character through a considered palette of native species,
- A tapestry of grasses and groundcovers bring softness and ecological function.
- Low, spreading forms provide a sense of cohesion and subtle formality without losing the overall naturalistic feel.
- Together, these layers avoid visual rigidity, allowing the landscape to respond to wind, light, and season in a soft, fluid way—creating a welcoming, grounded experience that complements the architectural language.



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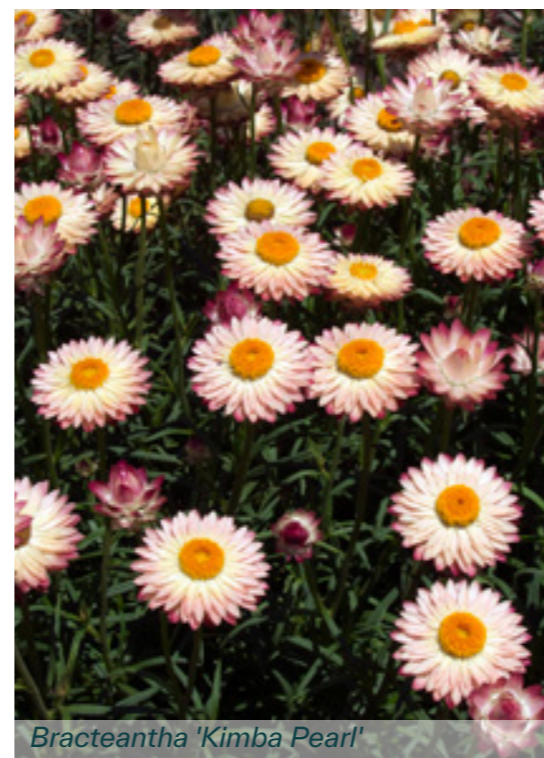
# Planting

## Indicative Plant Selection

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### Nature Play & Outdoor Learning

- The soft landscape design draws inspiration from a forest garden character, creating a layered and immersive planting experience that celebrates texture, movement, and seasonal variation. This approach blends canopy trees, mid-storey species, and low groundcovers in a way that feels organic and naturalistic, yet spatially coherent.
- At the heart of the design, the compact form and distinctive smooth bark of *Eucalyptus obliqua* (Messmate) serve as the feature tree, offering year-round visual interest and anchoring the space with a subtle yet iconic Australian identity.
- The resulting design is a resilient, richly layered planting scheme that echoes the dynamics of a forest garden while responding to aspect, microclimate, and architectural context.



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# Planting

## Indicative Plant Schedule

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TREE SCHEDULE					
CODE	BOTANIC NAME	COMMON NAME	MATURE SIZE (h x w) (m)	POT SIZE (mm or L)	Native Status
<b>TREES</b>					
ELA ret	<i>Elaeocarpus reticulatus</i>	Blueberry Ash	4 x 3	20L	Native
EUC obl	<i>Eucalyptus obliqua</i>	Messmate Stringybark	20 x 10	50L	Native
VIM jun	<i>Viminaria juncea</i>	Golden Spray	4 x 3	20L	Native
FRA gri	<i>Fraxinus griffithii</i>	Evergreen Ash	10 x 6	20L	Native
<b>FERNS</b>					
CYA coo	<i>Cyathea cooperi</i>	Rough Tree Fern	4 x 2.5	20L	Native
DIC ant	<i>Dicksonia antarctica</i>	Soft Tree Fern	4 x 2	20L	Native
SHRUB SCHEDULE					
CODE	BOTANIC NAME	COMMON NAME	MATURE SIZE (h x w) (m)	POT SIZE (mm or L)	Native Status
<b>SHRUBS &amp; ACCENTS</b>					
Acc	<i>Acacia cognata</i> 'Lime Light'	Dwarf River Wattle	1 x 1	140mm	Native
Anf	<i>Anigozanthos flavidus pulcherimus</i> Yellow Gem	Kangaroo Paw 'Yellow Gem'	1.5 x 8	140mm	Native
Brk	<i>Bracteantha</i> 'Kimba Pearl'	Strawflower 'Kimba Pearl'	0.4 x 0.4	140mm	Native
Brm	<i>Brachyscome microcarpa</i>	Creeping Daisy	0.2 x 0.8	140mm	Native
Cha	<i>Chrysocephalum apiculatum</i> 'Desert Flame'	Common Everlasting	0.3 x 0.5	140mm	Native
Ern	<i>Eremophila nivea</i> 'Gubburra Bells'	Silky Eremophila	1.5 x 1.5	140mm	Native
Grh	<i>Grevillea x hybrida</i> 'Bronze Rambler'	Bronze Rambler	0.5 x 3	140mm	Native
Men	<i>Melaleuca nesophila</i>	Showy Honey Myrtle	4 x 2.5	140mm	Native
Pla	<i>Plectranthus argentatus</i>	Silver Spurflower	0.8 x 1	140mm	Native
Tal	<i>Tasmania lanceolata</i>	Mountain Pepper	1 x 1	140mm	Native
Wac	<i>Wahlenbergia communis</i>	Tufted Bluebells	0.3 x 0.3	140mm	Native
Wef	<i>Westringia fruticosa</i> 'Flat n' Fruity'	Coastal Rosemary	0.3 x 0.8	140mm	Native
Xeb	<i>Xerochrysum bracteatum</i> 'Pilbara Lemon'	Paper Daisy 'Pilbara Lemon'	0.4 x 0.4	140mm	Native
<b>GRASSES &amp; RUSHES</b>					
Aus	<i>Austrodanthonia spp.</i>	Wallaby Grass	0.5 x 0.5	140mm	Native
Lol	<i>Lomandra longifolia</i> 'Tanika'	Mat Rush 'Tanika'	1 x 1	140mm	Native
Pol	<i>Poa labillardierei</i>	Tussock Grass	1 x 1	140mm	Native
<b>GROUNDCOVERS</b>					
Dia	<i>Dichondra argentea</i> 'Silver Falls'	Silver Falls	0.1 x spreading	140mm	Native
Dir	<i>Dichondra repens</i> 'Emerald Falls'	Emerald Falls	0.1 x spreading	140mm	Native
Vib	<i>Viola banksii</i>	Native Violet	0.1 x spreading	140mm	Native

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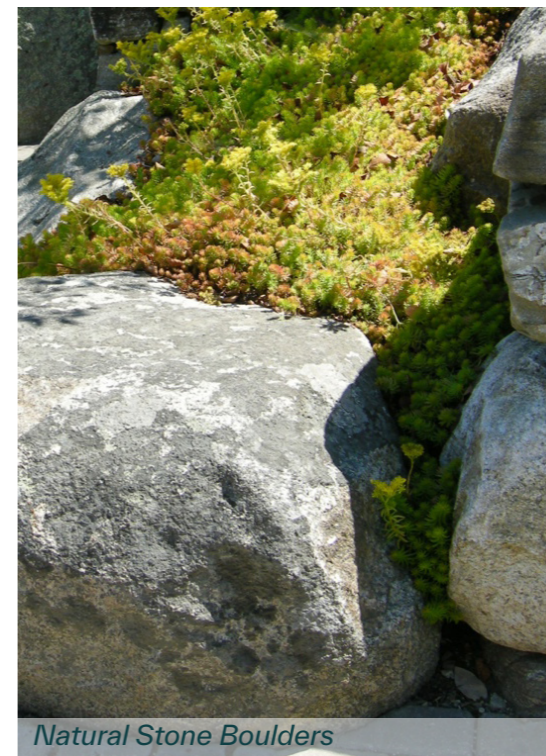
# Materials

## Indicative Material Palette

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### HARDSCAPING

### SOFTSCAPING & PLAY ELEMENTS



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# Details & Specifications

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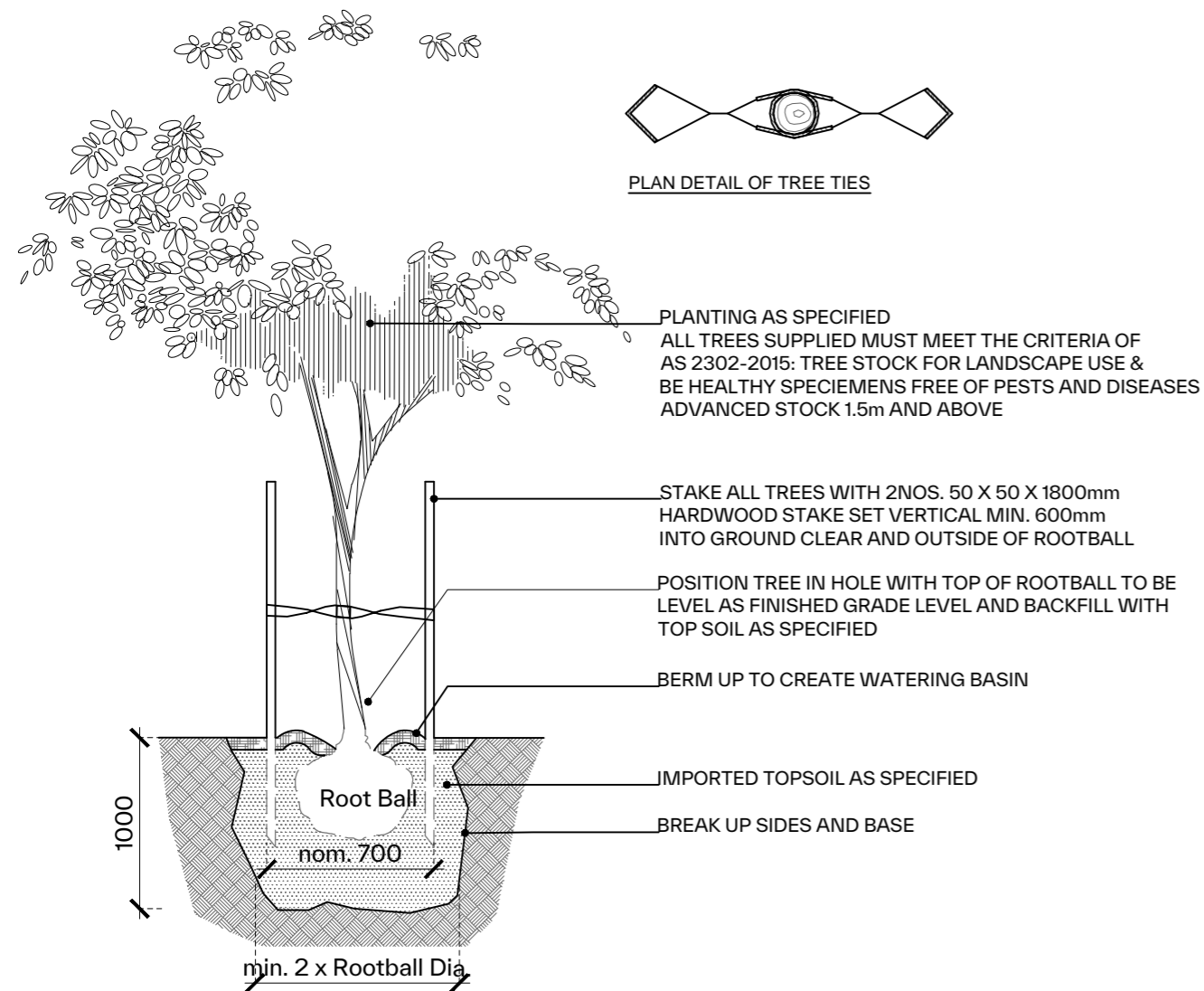
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# Typical Details

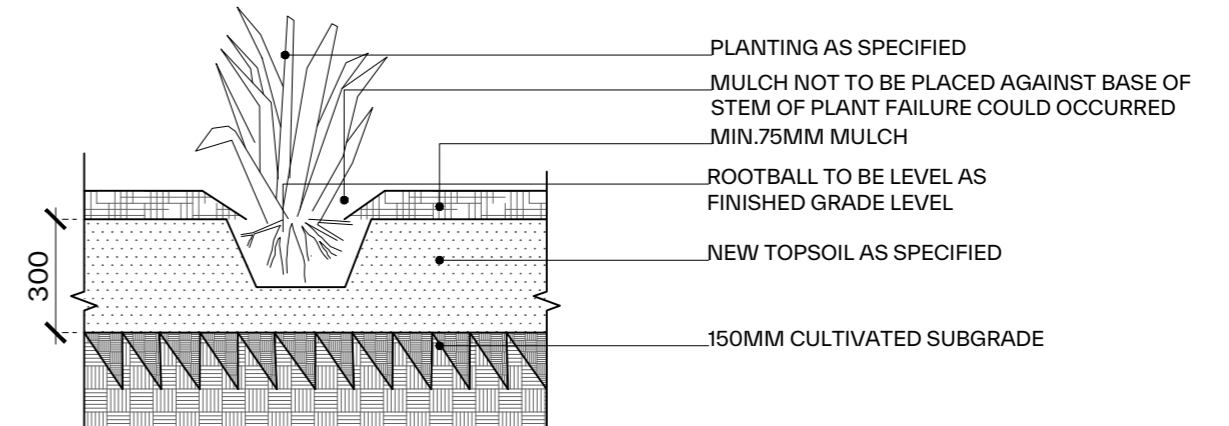
## Planting

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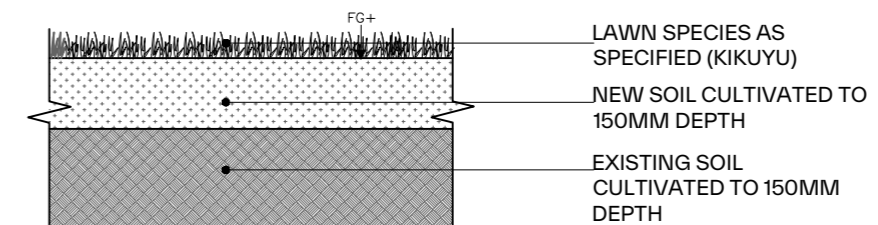


Typical Tree Planting  
Detail

## ADVERTISED PLAN



Typical Shrub Planting  
Detail



Typical Lawn Planting  
Detail

# Specifications

## Performance Notes

### PLANTING

These notes are to read as a general guide for implementation of the landscape plan. This drawing is not for construction and is to be used for Town Planning purposes only. Final locations of all services and other assets may not be known at the Town Planning stage. It is the responsibility of the contractor to locate and identify all services prior to commencement of works and protect all services during the works. Contractor shall undertake dial before you dig before commencing work.

### SOIL PREPARATION

Imported topsoil is to be free of weeds, rubble and other materials damaging to plant. Imported top soil is to be laid over a prepared sub-base which has had any materials damaging to plant growth (e.g. rubble and large rocks) removed, spread to the appropriate depth and cultivated into the existing site soil to a minimum depth of 150mm. Ensure the soils comply with the latest Australian Standards (AS 4419-2018-Soils for landscaping and garden use). Imported top soil is to be lightly and uniformly compacted in 150mm layers.

### PLANTING

Planting shall be carried out using accepted horticultural practices with all plants conforming to the species, size and quantities indicated on the Landscape Plan and Plant Schedule. Plants should be locally sourced. Plants shall be thoroughly soaked through immersion in water prior to planting and if the planting soil is very dry then the planting hole is also to be filled with water and allowed to drain completely. Deep watering will encourage deep rooting. Use plants with the following characteristics: Large healthy root systems with no evidence of root curl or pot bound restriction or damage, vigorous, well established, free from disease and pests and of good form, consistent with the species or variety. Planting holes for shrubs and groundcovers are to be of minimum size 75mm larger than the planting pot in all directions. Semi-advanced tree planting holes are to be the same depth as the rootball and planting hole to be twice as deep as root ball with at least 150mm around sides for backfilling with imported soil.

### MULCH

Fine 'Euchy Mulch' is to be supplied to all garden beds laid to a minimum depth of 75mm, with a surrounding berm constructed at edge of root-ball to hold water. Mulch is to consist of fine dark coloured chipped or shredded euca with not more than 5% fines content by volume (preferably zero fines). Mulch is to be kept back 100mm from the stems of all plants to prevent collar rot. Alternative non-combustible mulch materials from sustainability sourced pebbles, finely crushed recycled bricks or similar.

### IRRIGATION

#### GENERAL

All garden bed, turf areas and raised planters are to be irrigated.

#### RESPONSIBILITIES

General Requirement: Provide automatically controlled, dripline irrigation systems, as documented.

Performance Requirements:

Achieve the documented flow rates over the irrigated area.

Meet statutory requirements for backflow prevention.

### STANDARDS

Water supply General: To AS/NZS 3500.1 (2021).

Backflow prevention and water efficiency: To PCA (2022).

### INTERPRETATION

Abbreviations General: For the purposes of this worksection, the following abbreviations apply:

LDPE: Low-density polyethylene.

Definitions General: For the purposes of this worksection, the following definitions apply:

Emitter: A device used to control the rate at which water is applied to a specific area.

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### SUBMISSIONS

Shop drawings General: Submit drawings and schedules showing the layout and details of the system, including the following:  
Micro-irrigation stake layout.  
Irrigation controller cabinets.

### INSPECTION

Notice Inspection: Give notice so that inspection may be made of the following:  
Excavated surfaces ready for installation.

Concealed or underground services ready for backfilling.

### AUTOMATIC CONTROL VALVES

**General Type:** 24 V solenoid actuated hydraulic valves with flow control and a maximum operating pressure rating of at least 1 MPa and able to be serviced without removal from the line.

#### Materials:

≤ DN 50: Dezincification resistant copper alloy body and bonnet, screwed ends. Stainless steel bonnet holding down bolts and internal metal parts.

≥ DN 65: Cast iron body and bonnet, flanged ends. Stainless steel bonnet holding down bolts and internal metal parts.

Isolating valve: Provide a ball or gate valve of the same size immediately upstream of each automatic control valve.

Housing: House both valves in the same valve box large enough to permit easy operation and servicing of the valves.

### SOIL MOISTURE SENSORS

Type: Fixed ceramic moisture sensors.

Connection: Fit to the irrigation controller via moisture control units.

### IRRIGATION CONTROLLERS

Type: Automatic controllers that are easily programmed and include the following:

Manual cycle and individual control valve operation.

Manual on/off operation of irrigation without loss of program.

≥ 4 on/off cycles per day.

Day omit.

240 V input and 24 V output capable of operating 2 control valves simultaneously.

Not less than 24 hour battery program backup.

Power surge protection.

Mounted in a lockable cabinet of minimum IP54 to AS 60529 (2004) in external locations.

Electrical connection: If connected to wall outlets, provide 3 core 10 A, 240 V flexible cord and plug. Provide an isolating switch at the controller.

### DRIP IRRIGATION SYSTEMS

#### INTEGRATED DRIP LINE SYSTEMS

Type: Tubing with integral drippers inserted into the tube during manufacture.

Discrete drip emitter systems

Tubing: Polyethylene micro-irrigation pipe.

Drippers: Turbulent flow types, easily dismantled for cleaning.

Emitters Type: If the difference in elevation between the control box and all emitters is:

Less than 1500 mm: Pressure compensated or non-pressure compensated type.

Not less than 1500 mm: Pressure compensated type only.

Fittings Type: Barbed fittings rated for the pressure class of the pipe, fastened with ratchet type clamps.

Valve boxes Requirement: Provide the following in each valve box:

- Automatic control valve.
- Isolating valve.
- Filter: 100 µm.
- Pressure-reducing valve with 170 kPa outlet pressure.

## GENERAL CONDITIONS

Contractor and staff Representative: Nominate a senior partner/person experienced in maintenance nursery practices and horticulture, to be responsible for taking and carrying out instruction, and reporting to the principal.

Special instructions

Priority: If instructed by the principal, attend to certain areas and procedures as a priority.

Obtain approval for additional costs before starting the works.

Notice Inspection: Give at least two working days' notice of the following operations:

Application of herbicide.

Application of fertiliser.

Each site maintenance visit.

Work affecting public access or amenity on the Thursday of the week before the work is planned.

Water restrictions: Give immediate notification of any new restrictions that affect maintenance.

Reporting

Monthly report: Submit regular reports by the last Friday of each month to SELECTIONS, MAINTENANCE REPORT, Monthly reports schedule and as follows:

General status of the works.

Soil test results included as required for the fertilising programs.

Any plant replacement requirements.

Irrigation operation schedules and water consumption.

Incident reports: Report immediately, verbally and confirm in writing, any disturbance or incidence affecting or likely to affect the scheduling of the works.

Records

Logbook: Keep on site and make available for inspection a logbook, recording the following on a weekly basis:

Description, time and method of application of toxic material.

Maintenance work details.

Inclement weather to verify inability to carry out work within the specified time frame.

Replacement plants

Plant species: Submit the supplier's certification as evidence that plants are true to the required species and type, and free from diseases, pests and weeds at the time of delivery.

Coordination with others

Other contractors: Coordinate work with other contractors to minimise conflicting activities and delays. If disturbances to planned works are unavoidable, make arrangements to work around them.

## PRODUCTS

### FERTILISER

General Description: Proprietary fertilisers, delivered to the site in the manufacturer's labelled and unopened bags or containers.

Labelling

General: To the applicable statutory requirements, including manufacturer or supplier, weight, fertiliser type, N:P:K ratio, recommended uses and application rates. Label type: To withstand transit without erasure or misplacement

## EXECUTION

### GENERAL

#### Weeding

Requirement: Remove unwanted broad-leaf plants and grasses considered invasive to the locality.

Program:

Lawns: Quarterly and as required to maintain the general lawn condition.

Trees and shrubs: As required for planted, paved and mulched areas to be weed-free when observed at fortnightly intervals.

Vigorous ground covers: Keep 200 mm clear from the base of any shrub or tree. Remove as follows:

Small areas: By hand.

Large areas: Proprietary herbicides.

Herbicide application: Apply to the manufacturer's recommendations.

Pest and disease control

Requirement: Control any pests or diseases affecting the lawn and garden bed areas as follows:

Identify the problem.

Execute the correct treatment until the problem has been eliminated.

Apply hazardous material out of normal working hours.

Protect staff and public from exposure to hazardous materials.

## GRASS SURFACES

### Mowing and trimming

Preparation: Remove litter and fallen branches before mowing.

Grass height: Consistent with the growth habit of the grass variety and maintained at 25 to 40 mm throughout the year. Do not remove more than one-third of the grass height at any one time.

Program: Weekly during the mowing season, November to March and at fortnightly intervals from April to October. Do not mow during wet conditions.

Raking: Once every month before mowing during the mowing season, rake the grass with a flexible rake. On alternate mowings, adopt a north-south and east-west pattern.

Edge trimming: At the same time as mowing, trim lawn edges to plant beds, pathways, base of trees and other obstacles. Do not damage trees and shrubs.

Non-selective herbicide: Make sure application does not exceed the area limits of normal manual trimming. Repair any damage from overuse or over spray.

### Fertilising Program:

Regular application: Each September and April.

Additional application: Each November and February at reduced rates.

Soil pH adjustment: Apply additional fertilisers and soil conditioners as indicated from soil testing or from the physical soil structure. Maintain a pH range of 5.5 to 6.5.

pH testing program: Two year schedule starting in the first year of the contract.

Application: Spread as follows:

Dry: Crush lumps and broadcast dry material by hand or mechanically when the lawn is dry.

Spray: Acceptable.

Prevent fertiliser from leaching to adjoining planted beds, particularly those with sensitive native trees and shrubs.

Top dressing

Top dressing for established lawns: Weed-free imported sandy topsoil to a depth of 5 mm.

Top dressing for remediation of depressions or irregularities: Apply coarse or medium texture soil to AS 4419 (2018), suitable for application to turf or grass seeded areas.

### Renovation

Established lawns of sandy soil profile: Renovate by dethatching or verticutting.

## TREES AND SHRUBS

### Pruning and trimming

General: Prune to reflect the natural growth, flowering and regrowth habit of the individual species.

Program generally: Spring and Summer and on a spot basis as required.

Shrubs: Prune after flowering.

Hedge trimming: Schedule trimming at times that maintains the character and design of hedges. Allow up to three times per season.

Tip pruning:

Purpose: To encourage development of new shoots during the active growing season.

Method: Removal of the top 25 mm or growing tip of each branch.

Restriction: Do not remove buds before the flowering season in those plants that have terminal flowers.

Radical pruning:

Purpose: To maintain a hedge or formal shape or if a particular problem, growth habit, damage, or disease requires branch removal.

Tree pruning:

Purpose: To eliminate diseased or damaged growth, avoid inter-branch contact and thin out crowns in a natural manner.

Maintain sight lines to signs and lights.

Maintain visibility for personal security.

Crown-lifting or tree branch removal:

To AS 4373 (2007).

Give notice and engage a suitably qualified arborist.

### Fertilising

Fertilising program: Base the program on soil testing results.

Soil testing: Test soil as follows:

At the start of the contract.

Take samples from a cross-section of planting beds.

Soil pH adjustment: Apply additional fertilisers and soil conditioners as indicated.

## RAINGARDEN

The bioretention soil media specifications require three layers of media. Filter media (600mm deep or as specified in the engineering design), a transition layer (100mm deep) and a drainage layer (150mm deep). The biofiltration system will operate so that water will infiltrate into the filter media and move vertically down through the profile.

Maintaining the prescribed hydraulic conductivity is crucial. Permeability testing using the Australian Standard (AS4419-2003) method will generally be suitable for determining the hydraulic conductivity of a particular soil.

In general the media should be a sandy loam to loamy sand soil with an appropriately high permeability under compaction and should be free of rubbish and deleterious material. The soils should contain some organic matter for increased water holding capacity but be low in nutrient content. In general appropriate material is likely to be approximated by a mix of 80-90% sand, 10-20% loam soil and 3-10% composted organics or peat.

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